

NORTH INDIAN RIVER COUNTY GREENWAYS MASTER PLAN

Trans-Florida Central "Rails to Trails"

Cincinnati Railroad corridor (C. 1900)
Fellsmere Railroad corridor, the "Dinky Line" (C. 1910)
Trans-Florida Central Railroad corridor (C. 1926)

Abandoned as a railroad corridor C. 1977
Established as a Rails to Trails 2005

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Prepared for



AUGUST 2008



Kimley-Horn
and Associates, Inc.



North Indian River County Greenways Master Plan

Prepared for:

Indian River County Metropolitan Planning Organization



Prepared by:

Kimley-Horn and Associates, Inc.



In conjunction with:

Alta Planning + Design



CivaTerra, Inc.



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EXECUTIVE SUMMARY

The purpose of this Study is to develop a conceptual master plan that will serve as a guide for local officials and future partners for selecting appropriate areas for greenways; prioritizing the greenway corridors; identifying funding opportunities; and forming an oversight committee to carry out the construction, maintenance, and management of the greenways.

The goal is to establish an interconnected system of greenways and blueways in Indian River County that promotes multi-modal transportation, connects urban and rural areas locally and regionally, and enhances recreation and conservation opportunities.

The study area boundaries are defined by the following limits.

- To the North – North County Line
- To the South – North Relief Canal (east of 82nd Avenue), S.R. 60 (west of 82nd Avenue)
- To the East – Atlantic Ocean
- To the West – western limits of the MPO’s Planning Area Boundary

Greenways are defined as linear open space along natural or manmade corridors with facilities for non-motorized travel, including walking, bicycling, running, horseback riding, and other uses. Trails are often developed within greenways to provide pathways for people to move from one place to another.

The North Indian River County (NIRC) Greenways Master Plan is part of the overall master plan for greenways in Indian River County. In February 2007, the Metropolitan Planning Organization (MPO) adopted the Central Indian River County (CIRC) Greenways Master Plan, whose study area adjoins the NIRC plan to the south. In addition, several initiatives are already underway in the NIRC study area to build upon, including State-designation of the Trans-Florida Central rails-to-trail corridor, the St. Sebastian River Greenway Plan, the Fellsmere Trailhead Preserve grant, and the Sebastian conservation boardwalk near City Hall.

Public involvement for the Plan consisted of two advertised public meetings to gather input from the community, three project steering committee (PSC) meetings, three rounds of MPO

committee presentations, and interviews with key officials and stakeholders within the study area.

The proposed greenways system includes 118 miles of active transportation and recreation facilities, including 31 miles of paved shared-use trails. The proposed greenways system represents a diverse range of projects, including the proposed rails-to-trail project along the Trans-Florida Central Railroad Corridor connecting Fellsmere and Sebastian; the South and North Sebastian Corridors that include portions of the Sebastian Stormwater Park, Sebastian Harbor Preserve, Powerline corridor, and North Sebastian Conservation Area; a section of the East Coast Greenway (a national trail from Maine to Key West), and part of the Florida Circumnavigational Saltwater Paddling Trail (a water trail around the state's perimeter).



Green berm in the Sebastian Stormwater Park

A prioritization process was developed based on the Greenways Evaluation Criteria, such as benefits, constructability, and cost. Five projects that scored above a certain threshold in the Greenways Evaluation Criteria were named Tier 1 projects. These projects were identified for implementation activities within the first five years of the Plan. The Tier I projects include the Trans-Florida Central Railroad Corridor, the South Sebastian Corridor, and the 82nd Avenue Corridor (connector to the CIRC network).

An implementation plan was developed that included project phasing; potential funding sources; integration with ongoing capital improvements; environmental impacts; and partnership strategies, such as publishing a trail guide for Indian River County and developing a non-profit organization Friends of Indian River Greenways.

The Indian River MPO recognizes the importance and critical value of interested parties and advocacy groups in encouraging the implementation of the Greenways Master Plan. The concept of a Greenways Management Committee was developed by MPO staff as an informal group of advocates who will oversee the implementation, public support, legal resources, technical assistance, and maintaining of greenways in Indian River County.



Centennial Trail Pelican Island National Wildlife Refuge

INTRODUCTION

The Indian River County Metropolitan Planning Organization (MPO) recognizes the importance of providing transportation connections between urban areas and rural areas, as well as providing linkages between urban areas and state parks, water management areas, rivers, wetland systems, and other natural areas. One way to accomplish this is by providing a network of greenways that can serve as an alternative to on-road motorized travel.

Greenways and Trails

A greenway is defined as linear open space along natural or manmade corridors with facilities for non-motorized travel, including walking, bicycling, running, horseback riding, and other uses. Greenways serve a dual-nature as both a link in the transportation system and a park for recreational purposes. Greenways can exist in both rural and urban areas. Rural greenways, including abandoned railroad corridors, rivers, large state parks, and ecologically significant natural corridors that provide for hiking and wildlife migration, are often associated with long-distance travel and recreation. Protected linear greenway corridors can be more challenging to provide in urban areas than in rural areas due to land constraints and other obstacles; however, urban greenways are just as vital as rural greenways because of the critical need for the environmental and human benefits associated with greenways in modern urbanized areas. In addition, the population base in urbanized areas often furnishes a higher number of greenway users within close proximity than in rural areas. Trails are often developed within greenways to provide pathways for people to move from one place to another. Trails can be made of natural surfaces, such as grass or dirt, or hard surfaces, such as concrete or asphalt.



Unpaved trail in Pelican Island National Wildlife Refuge provides users with a natural experience

Bicycling and pedestrian facilities are increasingly important components of a well-rounded multimodal transportation system. Many people in Indian River County take advantage of favorable weather throughout much of the year by walking and bicycle riding for leisure and mobility. Providing appropriate facilities can encourage people to make short trips by bicycle or on foot rather than in an automobile, and this helps contribute to a healthy citizenry.



Bicycling is a popular activity throughout much of the year in Indian River County

Nearly one-half of all trips taken in the United States are less than three miles in length, according to trip data reported by the *2001 National Household Travel Survey*. Furthermore, 28 percent of trips are less than one mile in length. These short trips represent a potential market for greenway travel. There is also a safety benefit from providing greenway facilities separated from automobile travel. Currently, bicyclists and pedestrians represent 13 percent of all traffic fatalities, but comprise less than 5 percent of all

trips according to *2007 Traffic Safety Facts* compiled by the National Highway Traffic Safety Administration. A lack of off-road greenway trails can increase exposure for traffic conflicts.

Purpose

The purpose of the North Indian River County (NIRC) Greenways Master Plan is to serve as a guide for local officials and future partners for selecting appropriate areas for greenways; prioritizing the greenway corridors; identifying funding opportunities; and forming an oversight committee to carry out the construction, maintenance, and management of the greenways. The plan establishes an interconnected system of greenways and blueways within North Indian River

County that promotes multi-modal transportation, connects urban and rural areas, and enhances recreation and conservation opportunities. The consultant team of Kimley-Horn and Associates, Inc., Alta Planning+Design, and CivaTerra, Inc. was retained by the Indian River County MPO to prepare the North Indian River County Greenways Master Plan.

The study area for this project is defined by the North County Line in the north; the North Relief Canal (from the Atlantic Ocean to 82nd Avenue) and S.R. 60 (from 82nd Avenue to the western limits of the MPO Planning Area) in the south; the Atlantic Ocean in the east; and the western limits of the MPO's Planning Area Boundary in the west.

Benefits

The Florida Department of Environmental Protection (FDEP) includes the Office of Greenways and Trails (OGT), which provides grants for the development of non-motorized trail projects, maintains a database of Florida greenways, and designates corridors for inclusion in the statewide greenways network. OGT has prepared the following summary of the benefits and greenways and trails.

The Benefits of Greenways and Trails:

- Increased economic activity through local spending by recreational users
- Reduced costs to government through lower infrastructure spending in areas where greenways and trails take place of development
- Increased revenues to government by sales taxes associated with local spending
- Increased property values near greenways and trails
- Increased environmental benefits, including protection of ecological corridors to help support wildlife and protection of watersheds
- Enhanced quality of life through increased alternative transportation opportunities
- Increased public health benefits through recreational use and physical activity
- Increased access to cultural and historical resources

Source: Florida Office of Greenways and Trails: *OGT Reference and Resource Guide*

The State of Florida has been working on developing a state wide system of greenways and trails for transportation, recreation, and conservation purposes. Both the Department of Environmental Protection (FDEP) and the Department of Transportation (FDOT) have encouraged the improvement of greenways in order to provide access to conservation lands communities, parks, other recreational facilities, and cultural and historic sites.

Greenways and trails can play an important role for economic development and tourism in Indian River County. According to a 2006 survey by the National Association of Homebuilders, the most desired amenity of prospective buyers is walking, bicycling and jogging trails – over swimming pools, golf courses, and exercise rooms. Similar case studies have shown the value of greenways and trails for attracting and maintaining businesses, especially technology companies that can choose to locate in communities that provide the quality of life amenities they prefer.



“The Real Florida” sign in St. Sebastian River Preserve State Park

With Indian River County’s location, climate, topography, and population, the greenways system should be seen as an integral part of the region’s efforts to attract businesses, residents, and visitors. With the East Coast Greenway, the Florida Circumnavigational Saltwater Paddling Trail, and a connected local system of shared use pathways, there are significant opportunities for attracting tourists to the “Real Florida” in Indian River County. This will be especially favorable for eco-tourism and heritage tourism, both of which are significant markets.

When implemented, the greenways identified in the North Indian River County Plan will increase and enhance multi-modal transportation, tourism, education, recreation, economic development, health, physical fitness, and environmental conservation throughout the area. The greenways system will provide opportunities for seniors to be more physically active, for children to walk or bike to school, for people to commute to work without their cars, and to connect local communities together.

PUBLIC INVOLVEMENT

The public involvement plan for the North Indian River County Greenways Master Plan was based on the principles outlined in the *Public Involvement Plan for the Indian River Metropolitan Planning Organization*. The MPO public involvement plan makes the following statement:

“To ensure that the public is afforded adequate opportunity for public input into MPO matters, the advisory committees represent the fundamental means for the public to become involved. In addition to citizens, others interested in or affected by transportation planning may become involved through attendance in committee meetings and review of committee activities.”

With input and guidance from the MPO, a Project Steering Committee (PSC) was established, including members of County staff, local governments, and the public. The PSC met four times during the project, and included the following representatives:

- Phil Matson – Indian River County MPO, Project Manager
- Libby Harrow – MPO Bicycle/Pedestrian Advisory Committee
- Bob Keating – Indian River County
- Jim Davis – Indian River County
- Cliff Crawford – Indian River County
- Roland DeBlois – Indian River County
- Sutapa Chatterjee – Indian River County MPO
- Jason Nunemaker – City of Fellsmere
- Rebecca Grohall – City of Sebastian
- David Fisher – City of Sebastian

The PSC participated in the planning process throughout the development of the North County Greenways Plan. In addition, special outreach efforts including individual meetings and field reviews were held with local government staff, the Indian River Historical Society, and OGT.

Meetings were also held with the MPO’s committees, including the Citizens Advisory Committee (CAC), the Technical Advisory Committee (TAC), and the Bicycle Advisory

Committee (BAC). Three presentations were given to each committee. The first round of presentations was held at the outset of the study to present the data collection maps and to gather initial input and ideas. The second round of presentations was given to gather input on the draft plan maps. The third round of presentations presented the final plan.

A project website was established by Alta Planning+Design to post maps and documents related to the Plan development. Local media were involved in publicizing the Plan development through press releases, attendance at meetings, and articles in local newspapers.

Two advertised public meetings were held during the course of the Plan development. The first meeting was held on November 8, 2007, to inform the public of the NIRC Greenways Plan, present the data collection maps, and gather initial input and ideas. Meeting attendees were given the opportunity to mark ideas on the data collection maps for greenway trails and opportunities for connections to parks, natural areas, and other destinations. The second meeting was held on April 9, 2008, to present the draft plan maps and gather input to be incorporated into the final report. Outreach efforts included direct mailings by the consultant team to special needs populations, utilizing the 2004 IRC MPO *Community Outreach / Development of Communities Profiles*.



Public meeting for North Indian River County Greenways Master Plan

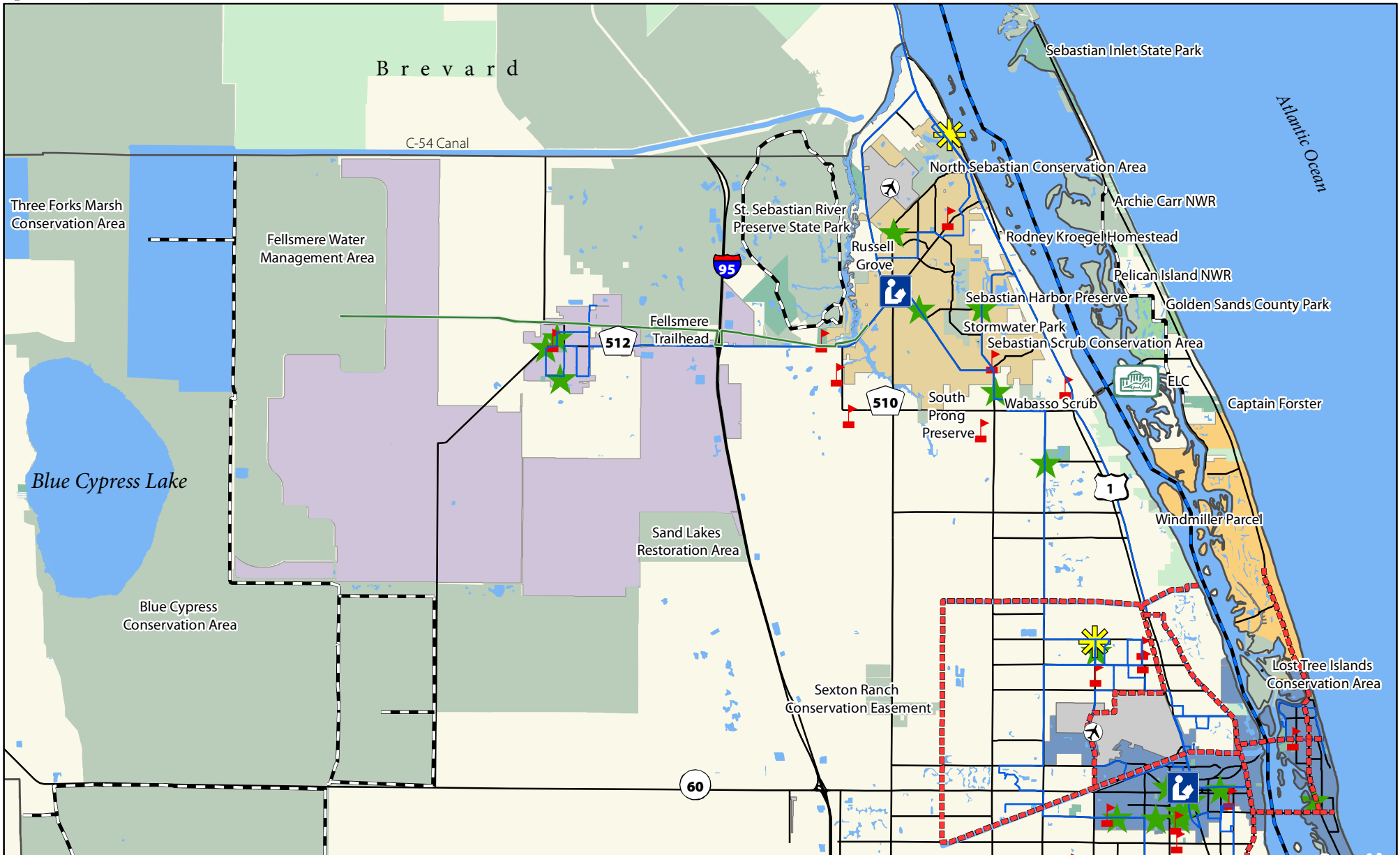
EXISTING CONDITIONS / DATA COLLECTION

In support of Indian River County's development of a Greenways Plan for the North County area, pertinent base data were collected to define the existing conditions. In accordance with Task 2 – Data Collection, the following information has been gathered from existing available data. This task consisted largely of gathering pertinent planning, environmental, land use, and engineering information necessary to develop the Greenways Plan. The information gathered included data necessary to perform adequate evaluations of the environmental, transportation, and recreation aspects of potential greenways. To the extent possible, the existing conditions data were collected as geospatial data compatible with ArcGIS. Data not available in this format were scanned for supplemental information purposes.

Sheets 1 through 3 on the following pages present the base data collection maps.

Following Sheets 1 through 3 is a Table that lists data collected for use in the greenways planning process. The format, name, source, and supplemental notes are identified when available. Metadata were collected for GIS shape files to provide detailed information regarding the source and potential use of GIS data.

North Indian River County Greenways Master Plan Baseline Data

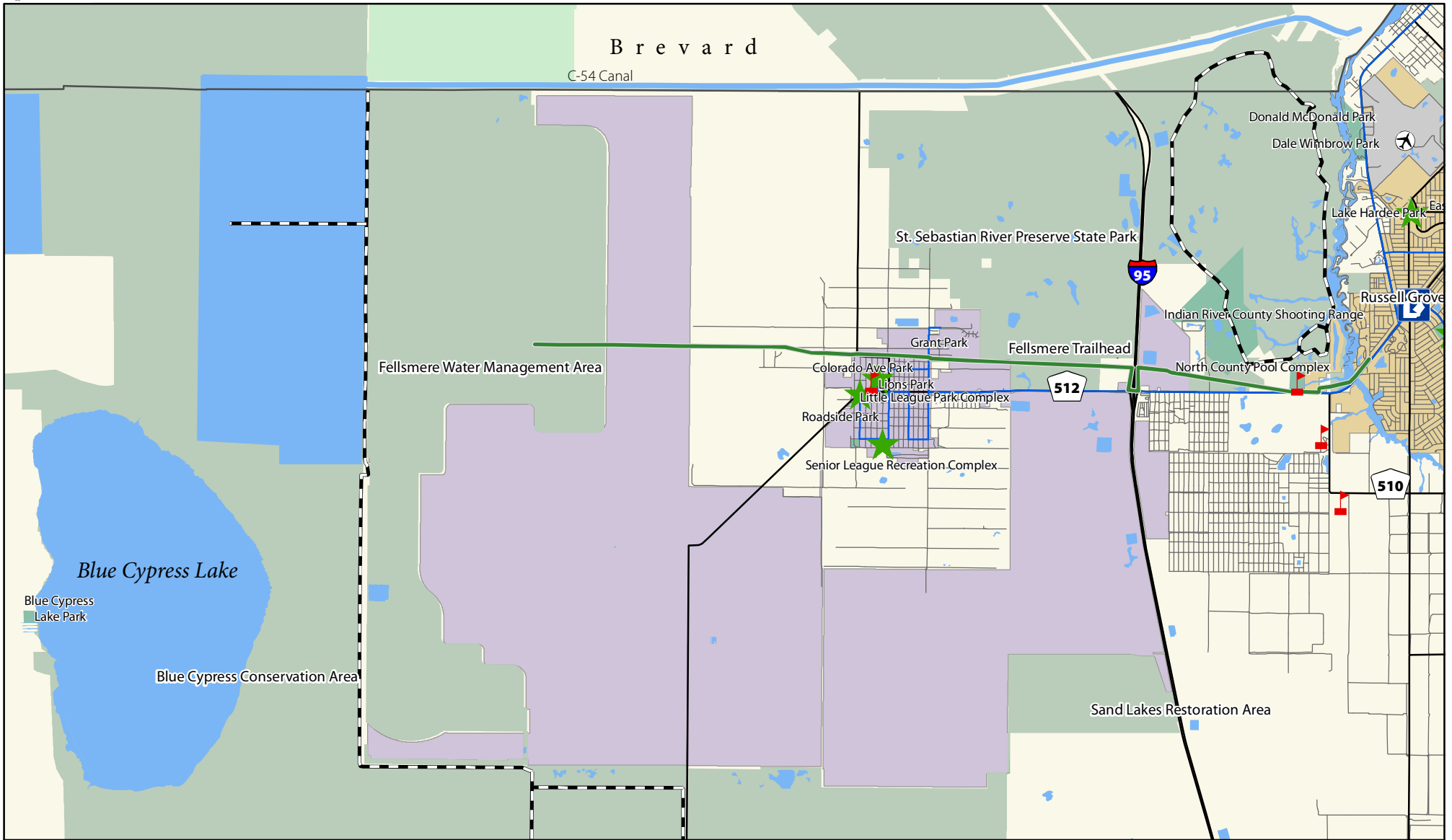


Existing Trails 	Major Roads 	Public Schools 	Community Centers 	Municipal Boundaries 	Orchid
Trans-Florida Railroad Greenway 	Transit Routes 	Libraries 	Playgrounds 	Fellsmere	Sebastian
				Indian River Shores	Vero Beach

Sheet 1: North County Study Area

Prepared for the Indian River County MPO by:

November 1, 2007



Existing Trails



Trans-Florida Railroad Greenway



Major Roads



Transit Routes



Public Schools



Libraries



Community Centers



Playgrounds



Municipal Boundaries



Indian River Shores



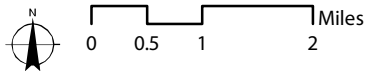
Orchid



Sebastian



Vero Beach



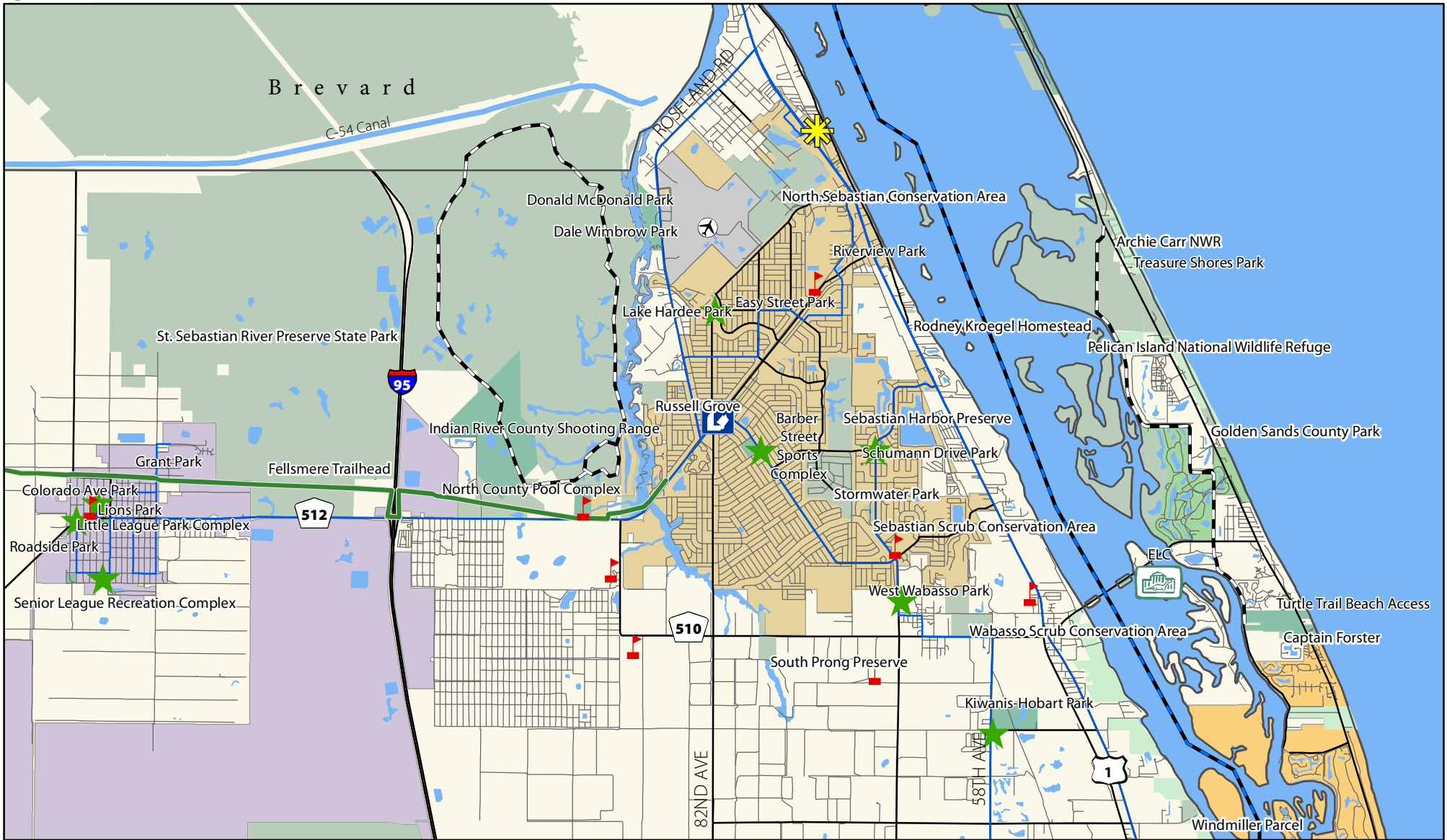
Sheet 2: Fellsmere Study Area

Prepared for the Indian River County MPO by:



November 1, 2007

North Indian River County Greenways Master Plan Baseline Data



Existing Trails



Trans-Florida Railroad Greenway



Major Roads



Transit Routes



Public Schools



Libraries



Community Centers



Playgrounds



Municipal Boundaries



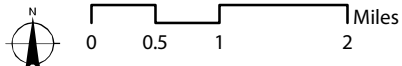
Orchid



Sebastian



Vero Beach



Sheet 3: Sebastian Study Area

Prepared for the Indian River County MPO by:



November 1, 2007

Data Collection: Existing Conditions GIS Base Map Layers

Shape File	Source	Date
Parcels	Indian River County	2007
Subdivisions	Indian River County	2007
Parks	Indian River County, City of Sebastian, City of Fellsmere	2007
FFBOT	FNAI	2007
FLMA	FNAI	2007
FNAIcc	FNAI	2000
Existing Trails	Florida Geographic Data Library	2007
City Boundaries	Indian River County	2007
Streets and Roads	Indian River County	2007
IRC Schools (Public)	Kimley-Horn and Associates, Inc.	2006
National Register of Historic Places	SHPO	2006
IRC Historic Structures	SHPO	2006
Hydrographic Data (HY24L31)	Florida Geographic Data Library	2000
Hydrographic Data (HY24P31)	Florida Geographic Data Library	2000
Transit Routes and Transit Stops	Indian River County	2007
Bike Lanes and Bike Paths	Indian River County	2007
Proposed Greenways and Trails	Alta Planning+Design, Kimley-Horn and Associates, Inc.	2007
Trans Florida Railroad Right-of-Way	CivaTerra, Inc.	2008

FFBOT – Florida Forever Board of Trustees

FNAI – Florida Natural Areas Inventory

FLMA – Florida Managed Areas (term refers to a managed conservation land)

FNAIcc – Florida Natural Areas Inventory Conservation Areas Zone C

SHPO – State Historic Preservation Officer

Florida Geographic Data Library is a depository for Geographic Information System data.

<http://www.fgd.org/>

The road and water control district right-of-ways are the spaces between the parcels.

It is important to note the following observations derived from the GIS data collection and field review process:

- There are many existing natural areas that represent potential connection opportunities for the greenways network. These include the St. Sebastian River Preserve State Park, North Sebastian Conservation Area, Sebastian Harbor Preserve, Sebastian Stormwater Park, Wabasso Scrub Conservation Area, Captain Forster Hammock Preserve, Pelican Island National Wildlife Preserve, Fellsmere Water Management Area, Sand Lakes Restoration Area, and Blue Cypress Conservation Area.
- The Trans-Florida Central abandoned railroad corridor connects Fellsmere and Sebastian and is comprised of several different landowners. However, significant components are controlled by public agencies. The City of Fellsmere is working with private landowners along certain sections of the corridor. The City of Fellsmere has an agreement with Fellsmere Joint Venture for public access along the abandoned railroad corridor to the Water Management Area.
- There are several existing hiking trails, but few off-road bicycling trails. There are existing unpaved marked trails in the St. Sebastian River Preserve State Park (Red Trail in the southwest area and Blue Trail in the southeast area), the North Sebastian Conservation Area, Pelican Island National Wildlife Refuge, and Blue Cypress Conservation Area.
- The Wabasso Jungle Trail is a scenic trail along the Indian River on Orchid Island. The unpaved trail is the first county road on the island. The Jungle Trail is frequented by motorized traffic.
- The Fellsmere Grade is an unpaved roadway similar in width and surface to the Wabasso Jungle Trail. Built in 1919, the Fellsmere Grade was the first public road across the St. John's River marsh and connected Fellsmere with areas as far west as Kissimmee. Today, the Fellsmere Grade serves as public recreational access to the marshes, a boat launch, and hiking trails along the levees.
- Indian River County's demographics include approximately 2% of residents who walk or bike to work, more than 13,000 workers living in households with one or no motor vehicle, more than 25% of residents above age 65, and a per capita income level that is

slightly above the national average. These data provide additional support for improved facilities for walking and bicycling. A summary of demographic data is provided in the Appendix.

A public survey of Indian River County residents ranked bicycle and pedestrian improvements as the #2 transportation issue. The survey also showed that 70% of respondents do not think that their community has safe areas for walking and bicycling and that a similar amount believes that traffic congestion is negatively impacting the quality of life in Indian River County.

Source: 2004 IRC MPO *Community Outreach / Development of Communities Profiles*

Unit Cost Data

Cost data were collected from prior greenway and trail projects to provide planning-level unit cost estimates to assist with future budgeting and implementation activities. The unit cost data are provided as guidelines based on similar projects in Florida; more precise cost estimates are typically developed during the design and permitting phase of a trail project.

Paved Shared-Use Paths:	\$300,000 - \$400,000 per mile
Natural Surface Shared-Use Paths:	\$200,000 - \$250,000 per mile
Single Track Mountain Bike or Hiking Trail:	\$10,000 - \$20,000 per mile
Staffing / Program Costs:	\$6,000 per mile of trail per year
Maintenance Costs:	\$15,000 per mile of trail per year ⁽¹⁾

Notes –

⁽¹⁾ – Costs for shared use paths include usage of maintenance equipment, surface repairs, vegetation management, tree/shrub replacement, and bench/kiosk/trash receptacle replacement. Single track trails can be maintained at lower costs. Volunteers can also be utilized for routine litter pickup and trail patrols. Staffing costs include emergency management, trail user programs,

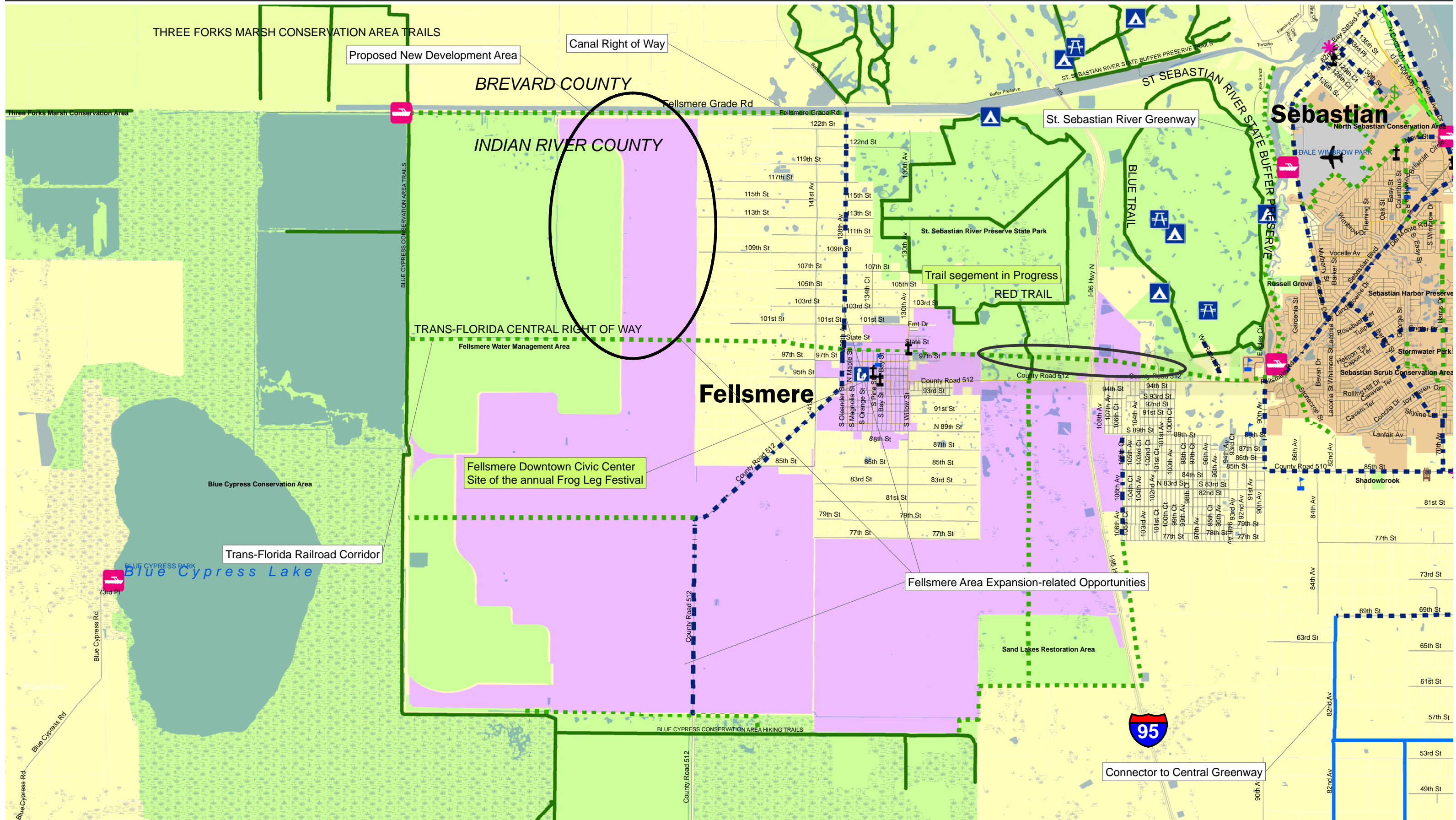
and system management costs. Trails built in areas where less landscaping is needed will incur lower annual maintenance and staffing costs.

Programmed Roadway Projects

Programmed roadway widening projects identified in the FY 2007/2008 Indian River County Transportation Improvement Program (TIP) that may affect potential greenway corridors include the following.

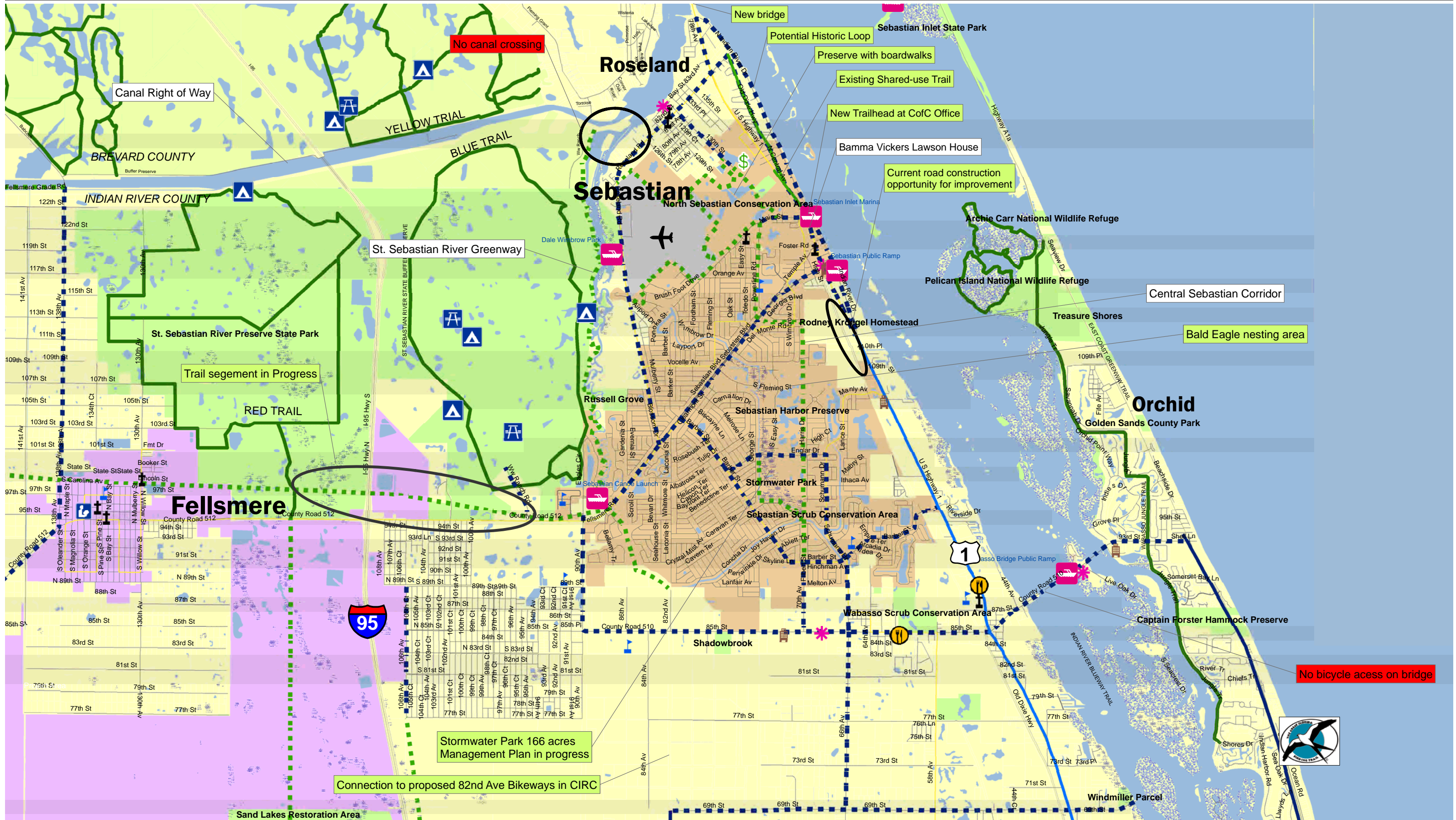
- Interstate 95 from north of CR-512 to Brevard County Line (Add lanes and reconstruct)
- Interstate 95 from SR-60/Osceola Boulevard to north of CR-512 (Add lanes and reconstruct)
- CR 510/Wabasso Road, .5 mile east of SR-5/US1 to SR A1A
- CR 510, Intracoastal Waterway Bridge (Transfer to FDOT) Repair
- CR 510, 61st Drive to Indian River (4 lanes)
- CR 510, 75th Court to 61st Drive (4 lanes)
- CR 510, CR 512 to 75th Court (4 lanes)
- CR 512 Phase 3, Roseland Rd. to Sebastian Middle (4 lanes)
- CR 512 Phase 4, Sebastian Middle School to I-95 (4 lanes)
- CR 512 Phase 5, I-95 to 130th Ave (4 lanes)
- Powerline Rd., Barber Street. to CR 510 (2 lanes)
- 77th Street, 90th Avenue to 66th Avenue (2 lanes)
- 81st Street, 66th Avenue to 58th Avenue (2 lanes)
- 58th Avenue, 77th Street to 53rd Street (4 lanes)
- 58th Avenue, CR 510 to 77th Street (4 lanes)
- 66th Avenue, 77th Street. to 59th Street (4 lanes)
- 66th Avenue, 77th Street to Barber Street (4 lanes)
- 66th Avenue, Widening Includes Bridges at 33,37,41,45,53,57,
- 74th Avenue, 77th Street to 26th Street (2 lanes)
- 82nd Avenue, CR 510 to 77th Street (2 lanes)
- U.S. 1, 49th Street to 65th Street (6 lanes)

Opportunities and constraints maps are shown on the following pages. Sample studies of successful greenways considered in the development of the Plan are presented in the Appendix.



Airports	Campsites	Library	Schools	Potential off-road bikeways	Streets
Apartment Complexes	Churches	Major Shopping Centers	Transit Routes	Potential on-road bikeways	Blvds and Pkwy
Boat Ramps	Community Centers/Clubs	Picnic Area	Existing Greenways	Proposed on-road Facilities	Hwys and Tnps
Historic Railroad Station	Restaurants		Shared-Use Path	Park & Conservation Land	

Map Prepared by: Alta Planning + Design & Kimley Horn & Associates | Data Sources: Indian River County, State of Florida, ESRI | Date: January, 2008



Airports	Campsites	Library	Schools	Shared-Use Path	Roads
Apartment Complexes	Churches	Major Shopping Centers	Transit Routes	Bike Lanes	Blvds and Pkwy
Boat Ramps	Community Centers/Clubs	Picnic Area	Existing Greenways	Potential off-road bikeways	Hwys and Tnps
Historic Railroad Station	Restaurants	20	Potential on-road bikeways	Park & Conservation Land	

Map Prepared by: Alta Planning + Design & Kimley Horn & Associates
 Data Sources: Indian River County, State of Florida, ESRI
 Date: January, 2008

GREENWAY SELECTION AND EVALUATION PROCESS

As part of the planning process, potential greenway corridors were identified based on information obtained from site visits, field work, stakeholder meetings, public involvement, and the Project Steering Committee. Criteria were developed to evaluate potential corridors for inclusion in the draft Greenways Plan. The evaluation criteria were intended to be quantitative, understandable to the public, and sensitive to the potential differences between various greenway elements (bicycling, equestrian, hiking, and multi-use). These tools helped the Project Steering Committee to understand the relative value of potential projects so that a system could be developed that is appropriate to local issues. A copy of the evaluation criteria is included in the Appendix of this document.

The Florida Office of Greenways and Trails (OGT) *Reference and Resource Guide* and other national models identify the following types of Greenways and Trail corridors:

Ecological Corridors: Corridors whose primary purpose is for natural resource protection, agricultural use, or wildlife conservation. These corridors may also contain trails or other amenities aimed at serving the human population.

Alternative Transportation Trail Corridors: Rights-of-way primarily for walking, bicycling, equestrian, and other non-motorized travel, including facilities along roads, railroads, utilities, and other corridors.

Recreational Corridors: Corridors used primarily for recreation, although these corridors may contain natural buffers that provide some ecological and/or habitat benefits.

Connectors: Walkways, trails, or on-road routes in heavily built environments that provide key connections between or within greenways corridors.

Water Trails: Recognized water routes with access points, resting places, and destination spots along marine and inland waterways, designed for appropriate watercraft in accordance with the natural characteristics of each specific area.

These corridor types were considered in the development of the proposed greenway system alternatives for North Indian River County. Local projects that meet the guidelines of Florida OGT can be included in the State's greenways system through an application process. State designated greenways are eligible for a variety of funding sources, and can offer improved liability indemnification and other benefits.

PROPOSED GREENWAYS SYSTEM

Potential Greenways Corridors

Based on input from the PSC, available GIS data, and field reviews, maps were created for the Fellsmere and Sebastian areas showing the proposed greenways system in the North Indian River County Area. Two maps are provided on the following pages.

- North Indian River County Greenways Plan – Fellsmere
- North Indian River County Greenways Plan – Sebastian

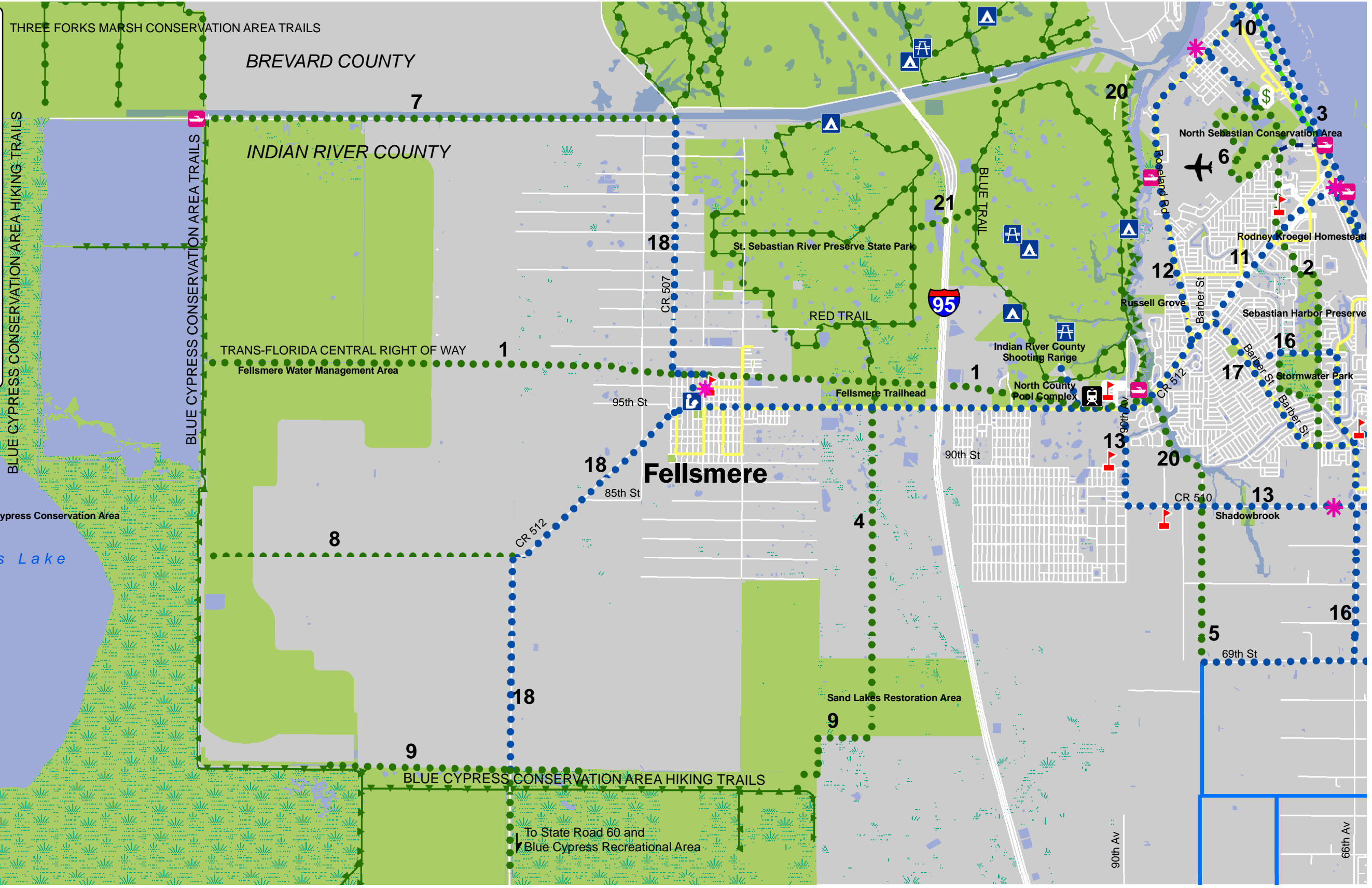


Powerline Road Trail in the North Sebastian Greenway Corridor

The Trans-Florida Central Railroad right-of-way is a rails-to-trail project that could connect Fellsmere and Sebastian

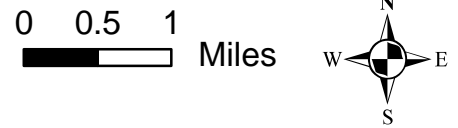


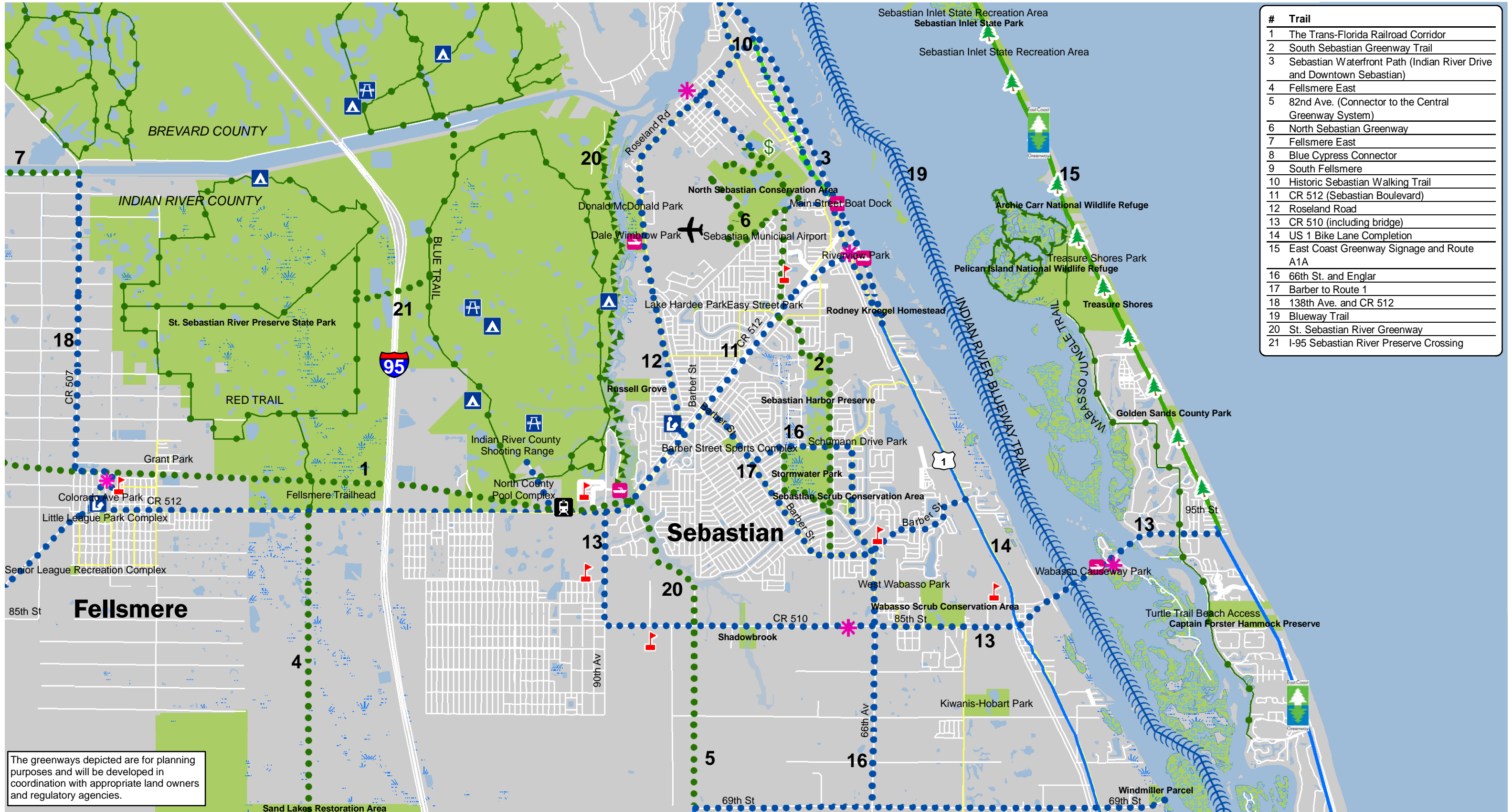
#	Trail
1	The Trans-Florida Railroad Corridor
2	South Sebastian Greenway Trail
3	Sebastian Waterfront Path (Indian River Drive and Downtown Sebastian)
4	Fellsmere East
5	82nd Ave. (Connector to the Central Greenway System)
6	North Sebastian Greenway
7	Fellsmere East
8	Blue Cypress Connector
9	South Fellsmere
10	Historic Sebastian Walking Trail
11	CR 512 (Sebastian Boulevard)
12	Roseland Road
13	CR 510 (including bridge)
14	US 1 Bike Lane Completion
15	East Coast Greenway Signage and Route A1A
16	66th St. and Englar
17	Barber to Route 1
18	138th Ave. and CR 512
19	Blueway Trail
20	St. Sebastian River Greenway
21	I-95 Sebastian River Preserve Crossing



The greenways depicted are for planning purposes and will be developed in coordination with appropriate land owners and regulatory agencies.

Airports	Campsites	Library	Schools	Existing Bikeways	Existing Greenways	NIRC proposed greenways
Boat Ramps	Community Centers/Clubs	Major Shopping Centers	Park & Conservation Land	Existing Shared-Use Path	Hiking	River Greenway
Historic Railroad Station	Picnic Area	Transit Routes	Multi-use	Proposed CIRC Bikeways	Off-road Multi-use	On-road Multi-use

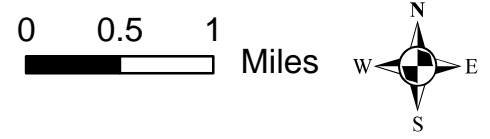




#	Trail
1	The Trans-Florida Railroad Corridor
2	South Sebastian Greenway Trail
3	Sebastian Waterfront Path (Indian River Drive and Downtown Sebastian)
4	Fellsmere East
5	82nd Ave. (Connector to the Central Greenway System)
6	North Sebastian Greenway
7	Fellsmere East
8	Blue Cypress Connector
9	South Fellsmere
10	Historic Sebastian Walking Trail
11	CR 512 (Sebastian Boulevard)
12	Roseland Road
13	CR 510 (including bridge)
14	US 1 Bike Lane Completion
15	East Coast Greenway Signage and Route A1A
16	66th St. and Englar
17	Barber to Route 1
18	138th Ave. and CR 512
19	Blueway Trail
20	St. Sebastian River Greenway
21	I-95 Sebastian River Preserve Crossing

The greenways depicted are for planning purposes and will be developed in coordination with appropriate land owners and regulatory agencies.

Airports	Campsites	Library	Schools	Existing Shared-Use Path	Existing Greenways	NIRC proposed greenways
Boat Ramps	Community Centers/Clubs	Major Shopping Centers	Park & Conservation Land	Existing Bike Lane	Hiking	River Greenway
Historic Railroad Station	Picnic Area	Transit Routes	East Coast Greenway Trail	Multi-use	Blueways	Off-road Multi-use
						On-road Multi-use



1. The Trans-Florida Central Railroad Corridor from Sebastian west to the Fellsmere Water



Kitching Switch Trailhead includes a rustic building with historical displays

Conservation Area. A substantial amount of work has been done on this corridor by state and local officials. Portions of the abandoned right-of-way are in public ownership and traverse a state park, a county park, conservation areas, and the City of Fellsmere. The eastern end of this corridor is near a canoe launch park on the St. Sebastian River. The Kitching Switch Trailhead, located at North County Park, could serve as a trailhead with existing parking for the Trans-Florida Central Trail.

2. The South Sebastian Greenway Corridor, which includes the St. John’s River Water Management District (SJRWMD) Sebastian Stormwater Park and passes north through the Sebastian Harbor Preserve. This corridor connects two significant conservation areas and could tie into the North Sebastian Conservation Area (NSCA) via the North Sebastian Greenway. Numerous destinations are located along or proximate to this corridor, including Sebastian City Hall, Schumann Drive Park, Easy Street Park, and Sebastian Elementary. Additionally, it may be possible to connect to Roseland Road through the NSCA and link up with the St. Sebastian River Greenway and the numerous features along that corridor. This corridor can make use of the Powerline Road, a dedicated right-of-way that has not been improved.



The Central Sebastian Corridor includes the Sebastian Stormwater Park and the Sebastian Harbor Preserve

3. Sebastian Waterfront Path (Indian River Drive and Downtown Sebastian)

Indian River Drive runs parallel to the Indian River Lagoon and passes by several waterfront parks and historic sites. This greenway could build on the “working waterfront” aspect of this portion of the Lagoon and utilize the county’s recently purchased Archie Smith Fish House Property. The Kroegel Homestead could function as



Local bicyclist preparing for a ride along the Sebastian Waterfront

the southern terminus of this greenway. There are historic destinations to the west of this area across U.S. 1, and this greenway could connect to a “Historical Landmarks Trail” through destinations in Sebastian.

4. Fellsmere East includes areas of undeveloped land, and historic resources that provide excellent greenway opportunities. The proposed greenway will bisect recently incorporated lands in the City of Fellsmere and will connect to the Sand Lakes Restoration Area and the Blue Cypress Conservation Area Hiking Trails.

5. 82nd Avenue (Connector to the Central County Greenway System) connects the southern portion of the study area to the Central Indian River Greenway System. The 82nd Avenue corridor is being studied by FDOT for future improvements that will likely include a shared-use pathway within the roadway right-of-way.

6. North Sebastian Greenway will provide connectivity through the North Sebastian Conservation Area (NSCA). This corridor can connect the on-road facility on Roseland Road via 130th Avenue, the NSCA, and the Powerline corridor, to the South Sebastian Greenway. A

loop trail would also be provided within NSCA. Several unpaved nature trails already exist within the NSCA as shown in the Appendix.



Boardwalk near Sebastian City Hall in the North Sebastian Conservation Area (NSCA)

7. Fellsmere Grade runs west from C.R. 507 (138th Avenue) to the marshes along the northern edge of Indian River County. The facility will provide access to the canal where the local high school crew team practices and will connect to the Blue Cypress Conservation Area Trails, including hiking trails along the marsh levee.

8. Blue Cypress Connector would connect C.R. 512 west to the Blue Cypress Conservation Area through areas recently incorporated into the City of Fellsmere.

9. South Fellsmere corridor will run along the south edge of the City of Fellsmere's recently annexed lands and will connect the Blue Cypress Conservation Area Trails on the east and west side of the city.

10. Historic Loop will navigate the historic sites in the City of Sebastian identified by the Sebastian Historical Society.

11. C.R. 512 (Sebastian Boulevard) is an important facility for non-motorized travelers, connecting the City of Fellsmere and western sections of the county with the U.S. 1 bike lanes, Sebastian Waterfront Path, and other greenways on the east side of the county.

12. Roseland Road is currently being used by many local cyclists as part of their regular ride around the Indian River County. Bike lanes will provide additional space for bicyclists on the road and will connect with the Sebastian River Greenway at access points such as Dale Wimbrow Park. Roseland Road links C.R. 512 with U.S. 1. Additional connectivity to the North Sebastian Conservation Area can be provided along 130th Avenue.



Unpaved fitness trail in Dale Wimbrow Park along Roseland Road

13. C.R. 510 (including bridge) will connect C.R. 512 to the only bridge crossing to the barrier islands. The route will pass the Shadowbrook and the Wabasso Scrub Conservation areas and will lead travelers across the Indian River Lagoon to the Jungle Trail and the East Coast Greenways.

14. U.S. 1 Bike Lane currently exists along portions of the roadway and will eventually become a complete bike lane running the length of U.S. 1. U.S. 1 is a major north-south thoroughfare in Indian River County and while many sections do have an existing bike lane, there are still a number of sections where the bike lane is dropped resulting in a confusing and potentially unsafe facility.

15. East Coast Greenway Signage and Route A1A is heavily used by cyclists and provides excellent connections to Brevard County to the North and St. Lucie County to the South. The East Coast Greenway spans 3,000 miles from Calais, Maine to Key West, Florida and aims to connect cities and towns of the East Coast with a continuous accessible path for non-motorized travelers.



S.R. A1A has bike lanes and a wide sidewalk

16. 66th Avenue and Englar is a north-south connection running from 69th Street to Barber Street and will also cross the C.R. 510 route as well as the Central Sebastian Corridor.

17. Barber to U.S. 1 will connect C.R. 512 to U.S. 1, the Old Dixie Highway and is a route that is currently favored by local bicyclists.

18. 138th Avenue & C.R. 512 is a major north-south route through the City of Fellsmere connecting the Fellsmere Grade on the north side of town to the Blue Cypress Conservation Area Trails and southward to S.R. 60.

19. Blueway Trail runs the length of the Indian River Lagoon and will provide water access and scenic paddling between the mainland the barrier islands. The Blueway Trail forms a portion of the Florida Circumnavigational Saltwater Paddling Trail.

20. St. Sebastian River Greenway generally runs along the St. Sebastian River from its northern connection with the Indian River Lagoon south to the county-owned Shadowbrook conservation property. This corridor may include Roseland Road, which could connect to the Trans-Florida Railroad Corridor at C.R. 512. The Indian River Land Trust is actively pursuing the creation of this greenway. Several County parks and the Russell

Grove conservation area are located along Roseland Road and access the St. Sebastian River. A canoe launch park is provided north of the intersection of C.R. 510 and C.R. 512. The St. Sebastian River Greenway has been identified by the Friends of the St. Sebastian River and conservation efforts are ongoing.

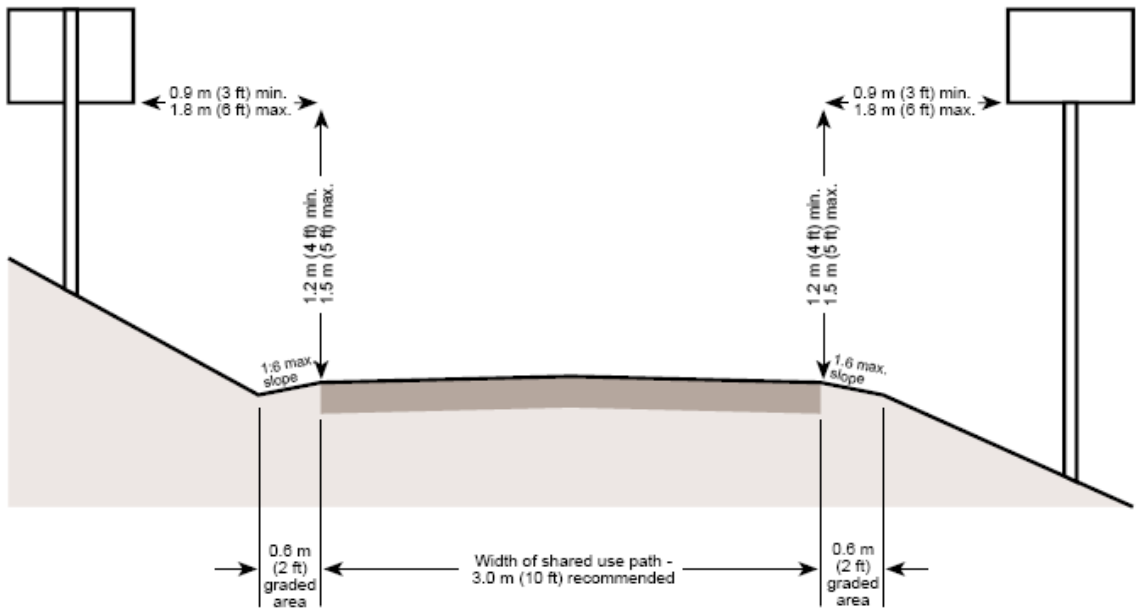


Trailhead parking area with information kiosks for the Blue Trail at St. Sebastian River Preserve State Park

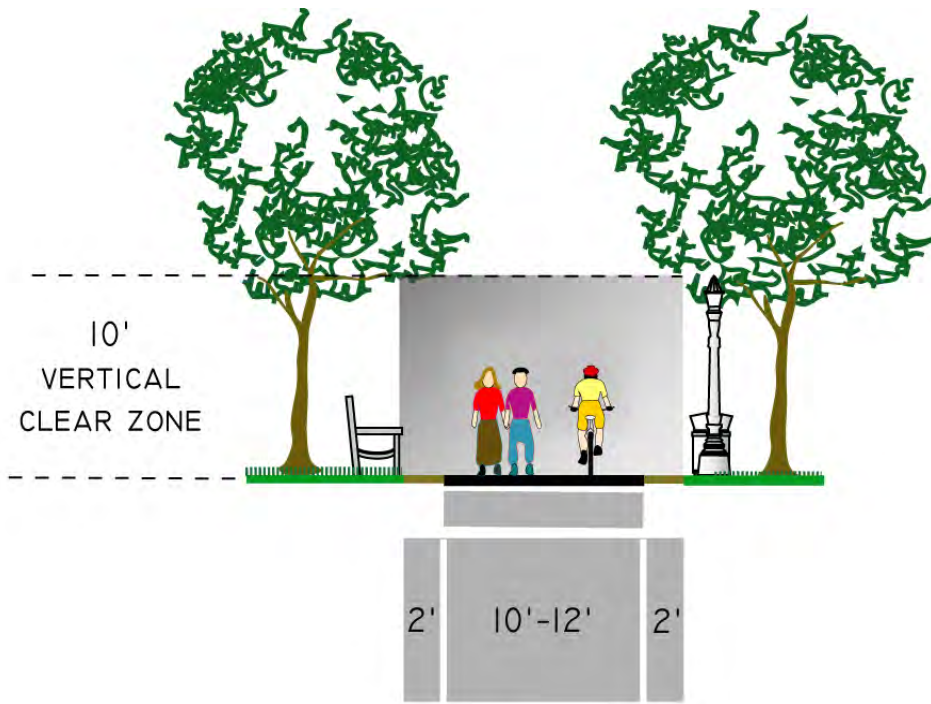
21. I-95 Sebastian River Preserve Crossing is proposed as a long-term facility that will connect the east and west sides of the St. Sebastian River Preserve State Park, which is divided by I-95. The I-95 Sebastian River Preserve Crossing would provide non-motorized access between the Red Trail (west of I-95) and the Blue Trail (east of I-95).

Typical Sections

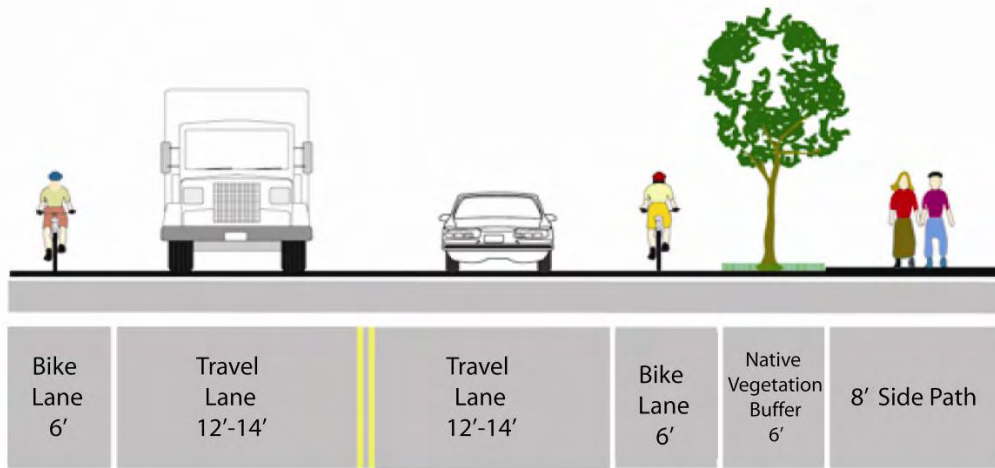
Based on the results of the previous tasks, public input, agency comments, and applicable design guidelines, a series of typical sections was developed for various locations on the greenways network. A variety of typical cross-sections are required to provide the flexibility needed to respond to site conditions and design opportunities. The typical sections include single track trails, shared-use paths, trails adjacent to roadways, rails-with-trails, trails adjacent to canals, and water trails. Typical sections provide information on elements to be included in the planned corridors.



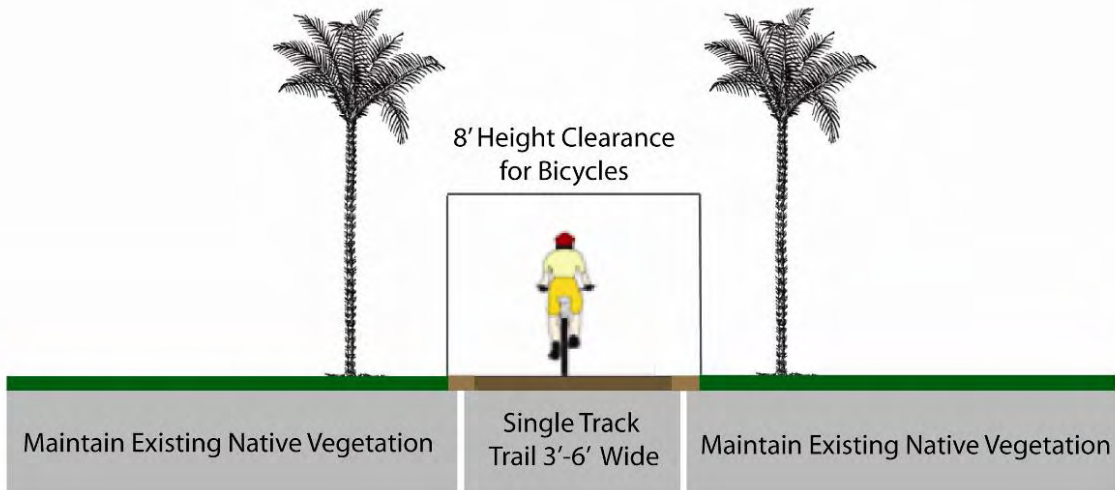
Shared-use path cross-section from the *AASHTO Guide for the Development of Bicycle Facilities*. This is the most commonly used trail facility guideline in the U.S. Projects built to this cross-section are eligible for most federal and state transportation funding sources.



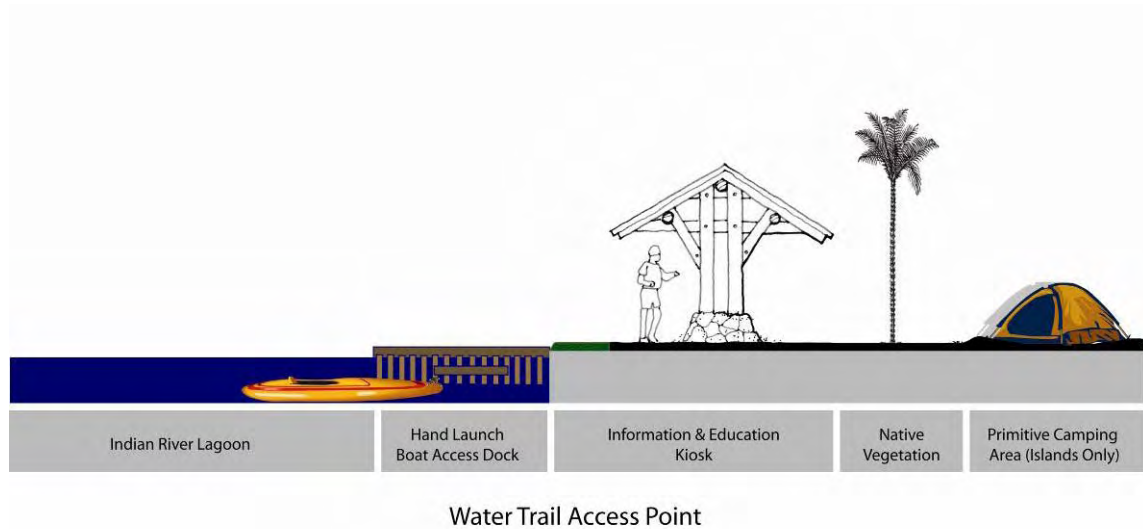
Shared Use Path



2 Lane Road with Bike Lanes & 8' Side Path



Single Track Trail



Security, Property Values, and Maintenance

One of the most effective ways to provide support for greenways and trails is to have police and other community services use bicycles for their routine activities. Studies of community policing activities have shown that police on bikes are very effective in deterring crime. Officers have a chance to connect with residents when they are in the community on bikes. In addition, law enforcement officers can be great models to encourage more people to ride their bikes more often. The International Police Mountain Bike Association (IPMBA) provides training and resources for police, EMS, and other community service workers on bikes. An important aspect of linear parks and trails that can address the crime and intrusion issue is that trails offer natural surveillance of the area by trail users. Perpetrators of property intrusion crimes tend to seek concealed locations with little chance of surveillance by others. Furthermore, there is very little security within the existing unimproved canal right-of-way that would stop a would-be intruder from wandering along the canal bank.

Trail safety has been studied on a national level. According to national crime statistics documented by the Rails-to-Trails Conservancy, parks and trails are among the safest public places in the country – people are two to three times safer on a trail than in a parking lot or on a street. According to *The Impacts of Rail-Trails: A Study of Users and Nearby Property Owners from Three Trails*, the majority of local property owners would rather live near a trail than live

near an unimproved right-of-way. In addition, the majority of frequent users of the trails are adjacent landowners.

According to historical information gathered from City of North Miami Beach officials, concerns of crime, property value reduction, and intrusion were raised by adjacent landowners along the Snake Creek Canal before construction of bike trails within a canal right-of-way. Due to the benefits brought by frequent maintenance of the canal right-of-way, the positive atmosphere



Snake Creek Trail in North Miami Beach, Florida

in the linear park, and proximity to the tranquil recreational environment, the area homeowners have not expressed opposition to the trails since implementation. In addition, the City of North Miami Beach Police Department operates a bicycle patrol that monitors the bike trails and other locations throughout the City.

Studies have shown no negative effect on property values following the implementation of a trail, and in some cases property values have increased. In fact, trails have consistently been shown to increase property values, to have no measurable negative effect on public safety, and to have an overwhelming positive influence on the quality of life for trail neighbors as well as the larger community. Several sources are listed below.

- *Evaluation of the Burke-Gilman Trail's Effect on Property Values and Crime*, Seattle Engineering Department, 1987.
- *The Effect of Greenways on Property Values and Public Safety*, The Conservation Fund and Colorado State Parks, 1995.

- *Effects of Three Cary Greenways on Adjacent Residents*, Lauren A. Tedder, University of North Carolina, 1995.
- *The Impact of the Brush Creek Trail on Property Values and Crime*, Michelle Miller Murphy, Sonoma State University, 1992.
- *The Economic and Social Benefits of Off-Road Bicycle and Pedestrian Facilities*, National Bicycle and Pedestrian Clearinghouse, 1995.
- *The Impacts of Rail-Trails, A Study of Users and Nearby Property Owners from Three Trails* (including St. Mark’s Trail in Tallahassee, Florida), National Park Service, 1992.

Trail maintenance is a valid concern of adjacent residents and potential trail users. If the proposed trail is not properly maintained, it could fall into a state of disrepair that could reduce the positive community aspect of the trail. It is important to maintain a consistent and frequent maintenance program after construction of the trail to maintain the appearance and positive public perception of the trail.

Projected Costs

Based on the recommended greenway corridors and the typical sections, cost estimates to construct and maintain the system of greenways, trailheads, and trail amenities, were developed. These costs provide as much detail as possible based on planning level data and field observations. Additional engineering design and feasibility studies will be required to advance individual projects to construction. Facility management and maintenance costs are included based on available data from projects in the region. Total greenway system costs are shown in the following table.

Greenway System Construction Costs	Annual System Operations and Maintenance
\$13,783,650 - \$18,352,750 ⁽¹⁾	\$459,360 - \$1,330,380 ⁽²⁾

⁽¹⁾ – Based on construction costs outlined in the Unit Cost Data section including \$300,000 to \$400,000 per mile for paved shared use paths, \$200,000 to \$250,000 per mile for natural surface trails, \$130,000 to \$170,000 per mile for sidewalks, and \$15,000 to \$25,000 per mile for bike lanes.

⁽²⁾ – Based on \$15,000 per mile per year for maintenance costs and \$6,000 per mile per year for administration staffing costs for Shared Use Paths. The costs for the NIRC Greenway System range from the first phase implementation to the full Paved Surface Trail and Natural Surface Trail system.

Planning level cost estimate ranges by segment are summarized in the table below.

#	Trail	Distance (miles)	Type	COST	
				Low	High
1	The Trans-Florida Railroad Corridor	12.0	Paved Surface Trail	\$3,600,000	\$4,800,000
2	South Sebastian Greenway	4.6	Paved Surface Trail	\$1,380,000	\$1,840,000
3	Sebastian Waterfront Path	5.0	Sidewalks	\$650,000	\$850,000
4	Fellsmere East	4.3	Paved Surface Trail	\$1,290,000	\$1,720,000
5	82nd Avenue Connector	2.0	Paved Surface Trail	\$600,000	\$800,000
6	North Sebastian Greenway	4.0	Paved Surface Trail	\$1,200,000	\$1,600,000
7	Fellsmere Grade	6.0	Natural Surface Trail	\$1,200,000	\$1,500,000
8	Blue Cypress Connector	4.0	Paved Surface Trail	\$1,200,000	\$1,600,000
9	South Fellsmere	6.0	Natural Surface Trail	\$1,200,000	\$1,500,000
10	Historic Sebastian Walking Trail	4.2	Sidewalks	\$546,000	\$714,000
11	CR 512 (Sebastian Boulevard)	4.1	Bike Lanes	\$61,500	\$102,500
12	Roseland Road	5.5	Bike Lanes	\$82,800	\$138,000
13	CR 510 (including bridge)	8.4	Bike Lanes	\$126,000	\$210,000
14	US 1 Bike lane completion	5.9	Bike Lanes	\$89,100	\$148,500
15	East Coast Greenway and A1A	6.4	Signage	\$25,000	\$25,000
16	66th St and Englar	3.0	Bike Lanes	\$45,000	\$75,000
17	Barber to Route 1	4.2	Bike Lanes	\$62,250	\$103,750
18	138th Ave and CR 512	11.6	Bike Lanes	\$174,000	\$290,000
19	Blueway Trail	10.3	Blueway	cost and infrastructure varies	
20	St. Sebastian River Greenway	6.5	River Greenway	cost and infrastructure varies	
21	I-95 Sebastian River Preserve Crossing	0.8	Paved Surface Trail	\$252,000	\$336,000
Total Proposed Paved Surface Trail		31.7	Total	\$9,522,000	\$12,696,000
Total Proposed Natural Surface Trail		12.0	Total	\$2,400,000	\$3,000,000
Total Sidewalks		9.2	Total	\$1,196,000	\$1,564,000
Total Bike Lanes		42.7	Total	\$640,650	\$1,067,750
Total Other		23.1	Total	\$25,000	\$25,000
All Facilities		118.8	Total	\$13,783,650	\$18,352,750

Prioritize Greenway Alternatives

Once a network plan was developed, potential projects were prioritized using a scoring matrix. This allowed the Project Steering Committee to have input into the process of recommending projects for implementation, and provided the consultant team with input for the implementation section of the plan. Based on the proposed system and using the information presented in the project descriptions, projects were prioritized based on the following criteria:

- Transportation
- System Connectivity
- Quality of Life Benefits
- Multiple Use
- Agency Support
- Cost
- Constructability

Using these criteria, projects were ranked in priority order. These rankings were then used to group the proposed projects into phased recommendations as follows:

- Tier 1 projects are the highest potential greenway projects for near-term project implementation within 1-5 years.
- Tier 2 projects are moderately challenging projects that can supplement the core network within 6-10 years.
- Tier 3 projects are projects that are not currently ready to be implemented, but are included as long-term potential projects over the next 11-20 years.

Based on the outcome of this process, the results of the previous tasks, and input received from the public and affected jurisdictions, the prioritization matrix and associated scores are listed below. The top five scoring projects were selected as the Tier 1 projects and are described in greater detail in the Appendix.

North Indian River County Greenways Prioritization Matrix: Proposed Projects									
Project Number	Projects	Criteria							
		Transportation (15)	System Connectivity (20)	Regional Benefits (15)	Multiple Use (10)	Agency Support (20)	Cost (10)	Construct- ability (10)	Total / 100
1	Trans-Florida Railroad Corridor	15	20	15	8	20	10	5	93
2	South Sebastian	15	20	15	8	10	10	5	83
3	Sebastian Waterfront Path	12	10	15	8	20	10	5	80
4	Fellsmere East	9	10	12	6	20	10	5	72
5	82nd Ave	12	20	12	6	20	10	5	85
6	North Sebastian	9	10	12	8	10	10	5	64
7	Fellsmere Grade	6	10	12	10	10	10	5	63
8	Blue Cypress Connector	6	10	9	8	10	10	5	58
9	South Fellsmere	6	10	9	8	10	10	5	58
10	Sebastian Historic Loop	12	10	15	6	10	10	5	68
11	CR 512 Sebastian Boulevard	15	20	9	6	10	10	5	75
12	Roseland Road	15	20	9	8	20	10	5	87
13	CR 510 including bridge	15	20	12	6	10	5	5	73
14	US 1 Bike Lane Completion	12	20	15	6	20	10	10	93
15	East Coast Greenway Signage	12	20	15	6	10	10	10	83
16	66th & Engler	15	20	6	6	10	10	5	72
17	Barber to Route 1	15	20	6	6	10	10	5	72
18	138th Ave and CR 512	15	20	9	6	10	10	5	75
19	Blueway Trail	3	10	12	2	20	10	10	67
20	Sebastian River Greenway	6	5	15	10	10	5	5	56
21	I 95 Sebastian River Preserve Crossing	6	5	6	8	10	0	5	40

GOALS AND OBJECTIVES

Goals and objectives will help the IRCMPO guide the implementation process for the Greenways system. Physical implementation, user safety, and quality of service benchmarks can become part of the infrastructure management systems utilized by IRCMPO. These benchmarks are based on the proposed greenway and trail system presented in the plan, and include the following performance measures:

Goal 1: Build a connected greenway trail system in Northern Indian River County.

Discussion: Connectivity is a vital element to the success and use of the greenway system. In order for the proposed projects to reach the greatest number of people for use as both a recreation and transportation based facility, users will need available access points and connectivity to other facilities.

Objective 1-1: Complete the Tier 1 Priority projects identified in the Greenways Plan in the next five years.

Objective 1-2: Complete the entire system within 20 years

Benchmark: Number of miles of trail completed.

Goal 2: Increase the number of people walking and bicycling for transportation and recreation in Northern Indian River County.

Discussion: The proposed projects offer residents and visitors alike the option of non-motorized travel and the health benefits of regular exercise. The recreational opportunities and benefits can help to keep the senior population active and healthy later into life and can help to combat obesity in children and trail users of all ages.

Objective 2-1: Double the percentage of work and recreational trips made by non-motorized modes by 2020.

Objective 2-2: Increase the number of trail users by 5% per year as measured through count data.

Benchmark: Conduct annual counts of pedestrian and bicycle travel at key locations on the trail system using the National Bicycle and Pedestrian Documentation Project methodology; utilize 10-year U.S. Census Journey-to-Work data.

Census 2000 found that 0.7% of Indian River County workers reported using a bicycle for work trips; 1.3% of Indian River County workers reported walking for work trips.

Goal 3: Ensure public perception that IRCMPO is making the community safe for bicycling and walking and promote the area and the new facilities as a resource to drive tourism.

Objective 3-1: Improve the public opinion of bicycle and pedestrian safety in the County and achieve a positive rating of more than 60% within five years.

Objective 3-2: Promote the greenway network in the County as a tourism resource to draw more visitors to the area.

Benchmark: Bi-annual update of the IRCMPO survey of community perceptions on bicycle/pedestrian safety.

GREENWAYS MANAGEMENT COMMITTEE

The creation of the North County Greenways Plan is the first step on the path to a successful greenways system in northern Indian River County. The Greenways Plan details numerous trail opportunities, but without the support of a network of interested parties, the greenways identified in the Plan may never be developed. To facilitate the development of the greenways identified in the Plan, a Greenways Management Committee (GMC) was established to serve as an advocacy group for the implementation of the North County Greenways Plan.

A wide range of stakeholders were identified as potential members of the GMC. These individuals include representatives from state and local government agencies, environmental groups, cycling and recreation advocates, and interested public citizens. Potential GMC members were either involved in the development of the Greenways Plan or recruited to participate based on their areas of expertise and interest in greenways. The following is an initial list of potential GMC members.

- Indian River Land Trust
- Friends of the St. Sebastian River
- landscape architect
- Civa Terra, planner
- St. John's River Water Management District (SJRWMD)
- Indian River County, Environmental Planning Division
- City of Sebastian, Planning Department
- City of Fellsmere, Community Development Department
- St. Sebastian River Buffer Preserve
- Indian River County MPO Bicycle Advisory Committee
- Historical Society
- Pelican Island Audubon Society

It is anticipated that participation and membership of the GMC will fluctuate based on the group's success and involvement in project-specific tasks and objectives. However, it is

expected that a core group of citizens will emerge as greenway advocates and will guide the efforts of the GMC. Actions taken by the GMC are likely to include:

- holding regular meetings,
- initiating a local greenways publicity campaign,
- establishing a group website,
- distributing press releases and letters to local media outlets,
- monitoring the implementation of the Greenways Plan,
- evaluating the greenways priority list,
- coordinating with government agencies,
- obtaining funding for the development of greenways,
- identifying new greenway opportunities,
- beautifying the greenways,
- organizing recreational events, and
- ensuring regular maintenance activities occur on the greenway system.

The creation of a successful greenway system involves both a sustained planning effort and the advocacy work of a dedicated group of individuals. As devised, an active GMC will endeavor to implement the plan and convert the greenway opportunities into reality.

As an example, one of the activities or projects that may be undertaken by the GMC could be to further an idea that has been developed by MPO staff and local officials to relocate historic structures onto the greenway trail system for their scenic and cultural value. Key landowners and businesses could be contacted to determine if surplus property could be donated and re-located along a greenway trail at strategic locations – such as re-locating an old railroad car along the Trans-Florida Central rails-to-trail project, which would have relevant historic value.

IMPLEMENTATION PLAN

This section of the Plan provides a guide for implementation of the greenway system and actions that will support the ongoing development of greenways and trails in Indian River County. These actions are intended as both ‘stand alone’ efforts and as integrated elements in ongoing infrastructure projects.

Project Phasing

The NIRC Greenways network will be implemented in phases. The prioritization process identified five Tier 1 projects. The project phasing is based on the prioritization process, with some slight tweaks to the order within the Tier to focus on shared-use path projects. The Plan is intended to be flexible enough to allow portions or segments of other projects to be implemented as opportunities are presented. For example, there are segments of the Trans-Florida Central Railroad Corridor where the right-of-way is well preserved. Those segments may be implemented at an earlier date while the remainder of the project may be implemented in phases or in conjunction with other scheduled projects.

The table on the following page demonstrates the jurisdictional authority for each corridor identified in the plan and the time frame identified in the prioritization process. Additional implementation notes and corridor ownership details are provided in the Appendix.

Potential projects for implementation within the first five years of the plan include:

- **Trans-Florida Central Railroad Corridor** – The Trans-Florida Central Railroad Corridor runs from Sebastian west to the Fellsmere Water Conservation Area. Portions of the abandoned railroad right-of-way are in public ownership and traverse a state park, a county park, conservation areas, and downtown Fellsmere. This project could be a strong early win for the NIRC Greenway Plan and could ultimately connect the NIRC communities of Sebastian and Fellsmere via an off-road shared use trail. The two largest landowners are the State of Florida and Fellsmere Joint Venture. State of Florida lands include St. John’s River Water Management District and the Department of

Environmental Protection’s (DEP) St. John’s River Buffer Preserve. Fellsmere Joint Venture (FJV) is a private entity that owns significant portions of the corridor in the west. The annexation agreement between the City of Fellsmere and FJV has contributed the railroad right-of-way east of U Canal of the Fellsmere Water Control District by June 2008 with an allowance for the future co-location of transportation facilities. In addition, west of U Canal, FJV has agreed to provide public access to the Fellsmere Water Management Area, including a public boat ramp. Other key implementation steps include:

- Secure access to the segments of the trail where the right-of-way is not preserved.
- Coordinate with current repaving and rebuilding projects along C.R. 512 to safely accommodate short-term trail access across the I-95 corridor.
- Coordinate with design efforts along I-95 to determine if the interstate gradient can be raised to allow a tunnel under the interstate along the railroad right-of-way.

Priority	Proposed Greenway Corridor	Type of Facility	Agency Ownership	Timeframe
1	Trans-Florida Central Railroad Corridor	Shared-Use Path	Various public/private	1-5 years
2	South Sebastian Greenway Corridor	Shared-Use Path	SJRWMD, IRC, Seb.	1-5 years
3	82 nd Avenue (CIRC Connector)	Shared-Use Path	Seb. Riv. WCD	1-5 years
4	Roseland Road	Bike Lanes	IRC	1-5 years
5	US 1 Bike Lane Completion	Bike Lanes	FDOT	1-5 years
6	Sebastian Waterfront Path	Sidewalks	IRC, Seb.	6-10 years
7	Fellsmere East	Shared-Use Path	SJRWMD, Ro-Ed, Fells.	6-10 years
8	East Coast Greenway Signage	Signage	FDOT	6-10 years
9	66th & Englar	Bike Lanes	IRC, Seb.	6-10 years
10	Barber to Route 1	Bike Lanes	IRC, Seb.	6-10 years
11	138th Ave and CR 512	Bike Lanes	IRC, Fells.	6-10 years
12	Blueway Trail	Water Paddling Trail	USACOE, Fla. OGT	6-10 years
13	CR 510 including bridge	Bike Lanes	IRC	6-10 years
14	Sebastian Historic Loop	Sidewalks	IRC, Seb.	6-10 years
15	CR 512, Sebastian Blvd.	Bike Lanes	IRC	6-10 years
16	North Sebastian Greenway	Shared-Use Path	IRC, Seb.	11-20 years
17	Fellsmere Grade	Natural Surface Trail	SJRWMD, IRC	11-20 years
18	Blue Cypress Connector	Shared-Use Path	Fells. Joint Venture	11-20 years
19	South Fellsmere	Natural Surface Trail	FDEP, SJRWMD	11-20 years
20	Sebastian River Greenway	River Greenway	FDEP, IRC, J.M. Russell	11-20 years
21	I 95 Sebastian River Preserve Crossing	Shared-Use Path	FDEP, FDOT	11-20 years

- **South Sebastian Greenway Corridor** – This corridor includes two critical opportunities – the Sebastian Stormwater Park and Sebastian Harbor Preserve. In addition, the corridor includes potential linkages along the powerline corridor. The corridor can extend to the north to connect to Sebastian City Hall and the North Sebastian Conservation Area (NSCA) along the North Sebastian Greenway Corridor.
 - The corridor can make use of Powerline Road, a dedicated right-of-way that has not been improved.
 - The Stormwater Park represents a potential early win project with a potential trail around the lakes and along an old roadway bed along the south and west sides of the park. A small natural-surface parking area exists at the northwest corner of the Stormwater Park that could serve as a trailhead.
 - Numerous destinations are located along or proximate to this corridor, including City Hall, Schumann Drive Park, Easy Street Park, and Sebastian Elementary.

- **82nd Avenue (CIRC Connector)** – 82nd Avenue is the selected roadway for the southern portion of the study that will connect to the Central Indian River Greenway System. The 82nd Avenue corridor is being studied by FDOT and Indian River County for future improvements that will likely include a shared-use pathway within the future roadway right-of-way.

- **Roseland Road** – Roseland Road is currently being used by many local cyclists as part of their regular ride around Indian River County. Roseland Road currently has 3-foot paved shoulders. Bike lanes could be added as part of the next roadway re-surfacing.

- **U.S. 1 Bike Lane Completion** – Coordinate with FDOT. U.S. 1 Bike Lane Completion is an ongoing process which will eventually lead to complete bike lanes running the length of U.S. 1. U.S. 1 is a major thoroughfare in Indian River County and while many sections do have an existing bike lane, there are still a number of sections where the bike lane is not continuous, which could lead to bicyclist confusion and safety concerns.
 - Insure that bike lanes are included in any future reconstruction or repaving projects on U.S. 1.

Funding Sources

A range of general and specific funding opportunities have been identified for the development and operation of the greenways system in Indian River County. Funding opportunities can include public and private sources, public/private partnerships, municipal agreements, grants, and other funding sources. A list of funding resources is provided in the Appendix of this document.

Perhaps the most common non-local transportation funding source for greenways and trail projects is the federal Transportation Enhancements (TE) program. TE funds are apportioned by state departments of transportation for the Federal Highway Administration (FHWA). TE activities have been similar for the past three federal transportation legislations, including the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU). The TE program funds 12 categories of programs, including:

- pedestrian and bicycle facilities,
- pedestrian and bicycle safety and education programs, and
- landscaping and scenic beautification.

TE funding for Indian River County can be combined into one project each year that may have more of an impact than programming several smaller projects. Examples of potential projects that could be implemented by a combined allocation of TE funds are listed below.

- Developing a coordinated program of bike lane striping improvements.
- Providing bicycle racks and trailhead kiosks at destinations throughout the County.
- Implementing priority trail projects identified in the NIRC Greenways Master Plan.

Integrate Greenways in Ongoing Infrastructure Projects

One of the most common ways for local governments to implement greenway projects is through integration with other ongoing infrastructure projects. These may include roadway widening, roadway resurfacing, utilities projects, or land development and re-development. A review of programmed roadway improvements in the Transportation Improvement Program (TIP) was

provided in the Existing Conditions / Data Collection section of this report. This list includes the following potential bike lanes projects along roadways identified for on-street bicycle facilities:

- CR 510/Wabasso Road, .5 mile east of SR-5/US1 to SR A1A
- CR 510, Intracoastal Waterway Bridge (Transfer to FDOT) Repair
- CR 510, 61st Drive to Indian River (4 lanes)
- CR 510, 75th Court to 61st Drive (4 lanes)
- CR 510, CR 512 to 75th Court (4 lanes)
- CR 512 Phase 3, Roseland Rd. to Sebastian Middle (4 lanes)
- CR 512 Phase 4, Sebastian Middle School to I-95 (4 lanes)
- CR 512 Phase 5, I-95 to 130th Ave (4 lanes)
- Powerline Rd., Barber Street. to CR 510 (2 lanes)
- 66th Avenue, 77th Street. to 59th Street (4 lanes)
- 66th Avenue, 77th Street to Barber Street (4 lanes)
- 66th Avenue, Widening Includes Bridges at 33,37,41,45,53,57,
- 82nd Avenue, CR 510 to 77th Street (2 lanes)
- U.S. 1, 49th Street to 65th Street (6 lanes)

Develop Greenway Connections to the North, West, and South

One of the great appeals of greenways and trails lies in the concept of connectivity. Greenways and trails can connect people with the region's conservation areas, parks, and open spaces. The North Indian River County Greenways Master Plan includes potential connections to the north, west, and south to identify important links to and from other areas of IRC and the neighboring Counties.

North

Several greenways identified in this study can provide potential connections to the north. Examples include the East Coast Greenway along S.R. A1A, the Indian River Blueway Trail along the Indian River Lagoon, U.S. Route 1, and C.R. 507. These corridors provide connectivity to the Brevard County Greenways Master Plan. The northern portion of Indian River County includes the St. Sebastian River Preserve State Park, the St. Sebastian River Greenway, and the North Sebastian Conservation Area. These parks and conservation areas are

a key element of the Greenway Plan but also provide an opportunity connecting to the Canal along the Brevard County line to the north. In addition, the Blue Cypress Conservation Area Trails connect to trails in the Three Forks Marsh Conservation Area Trails in Brevard County.

West

The western portion of Indian River County is largely comprised of agricultural and conservation lands, including the Blue Cypress Water Management Area (BCWMA). These rural areas provide a potential ecological connection for the greenways network that could promote awareness of “Old Florida” and provide possible eco-tourism destinations. Western Indian River County offers many popular fishing destinations.

South

A Greenways Plan was previously completed for Central Indian River County and the NIRC plan proposes to connect to those facilities by way of shared use trail on 82nd Avenue. Additional connectivity to the south and the CIRC plan can be provided from the East Coast Greenway along S.R. A1A, the Indian River Blueway Trail along the Indian River Lagoon, and the bike lanes on U.S. 1.

Apply for Designation with the Florida Office of Greenways and Trails (OGT)

The Indian River MPO should apply for designation of the NIRC Greenways Plan with the Florida Department of Environmental Protection (FDEP). The Florida Office of Greenways and Trails (OGT) is a division within FDEP. The mission of the Florida Greenways and Trails program is to create a network of greenways and trails throughout Florida, connecting one end of the state to the other, from Key West to Pensacola. The Florida Greenways and Trails Designation Program provides for the designation of public lands and waterways and private lands.

The OGT Designation program was established to raise public awareness of the greenway network, provide recognition for individual components of the system, and encourage partnerships in the conservation, development, and management of system components. In addition to raising public awareness of the greenway network, OGT Designation offers

incentives such as liability protection; assistance from FDEP in identifying funding sources; and additional consideration in grant programs such as the Florida Communities Trust Land Acquisition Program, Recreational Trails Grant Program, and the Florida Recreation Development Assistance Program. The application process for designation and grants is described on the Florida OGT website.

Florida Statute 260.0125 provides liability protection for landowners whose land is designated by the Florida OGT according to the designation requirements of Florida Statute 260.026(2)(d). Landowners in designated greenway corridors are not required to provide warnings of any hazardous conditions, structures, or activities on the designated land. In addition, Florida Statute 375.251 (Florida Recreational Use Statute, or RUS) limits liability for landowners opening up their lands to free public recreation access. A copy of the RUS is found in the Appendix of this report.

Comprehensive Plan Revisions

Indian River County has adopted a comprehensive plan that is consistent with Florida's Growth Management Act. The Comprehensive Plan is designed to act as a guide to proper growth management. The Plan contains eleven chapters, or elements, that document Indian River County's planning regulations. Indian River County's Comprehensive Plan refers to bicyclists, pedestrians, and trails in various elements of the Plan, including Transportation, and Recreation and Open Space.

The Transportation Element contains the Bicycle/Pedestrian System section that defines the existing bicycle and pedestrian system in place in 1998. The Plan indicates that the ideal bicycle/pedestrian system would be five-foot paved shoulders and five-foot sidewalks on each side of all thoroughfares. Objective 6 of the Transportation Element stated: "*By 2000, the county will have a continuous pedestrian/bicycle system providing access throughout the urbanized area of the county.*" Policies included under Objective 6 include evaluating utility easements, railroad rights-of-way, and drainage canal rights-of-way as locations for off-road trails, and ensuring that pedestrian and bicycle access is provided to all park areas.

The Recreation and Open Space Element lists foot paths and bicycle trails as outdoor recreational activities that are available at certain parks throughout the County. Within the North Indian River County study area, only Riverview Park, Lake Hardee Park, Donald McDonald Park, and the North Beach Complex are listed as having foot trails. Policy 6.4 of the Recreation and Open Space Element establishes the Indian River Lagoon and the associated coastal resources as a greenway and water trail system.

Overall concepts that should be considered for future comprehensive planning efforts include the following.

- Indian River County recognizes the need to encourage bicycle and pedestrian travel for both transportation and recreation. These uses conserve energy, contribute to cleaner air, reduce traffic, reduce the need for automobile parking, and improve personal fitness.
- The Comprehensive Plan of Indian River County should assure safe and convenient access to all areas of the County. In addition, the Plan should promote the use of bicycling and walking as viable and attractive alternatives to the use of automobiles.

Policies that should be implemented in the Indian River County Comprehensive Plan include the following.

- Provide marked bicycle lanes, sidewalks and safe crossings (not just paved shoulders) along collector and arterial roadways.
- Consider bicycle-operating characteristics and Americans with Disabilities Act (ADA) compliance in the design of intersections and traffic control systems.
- Add bicycle and pedestrian facilities to the list of design characteristics necessary for traditional neighborhood design (TND) areas.
- Develop and implement bicycle parking standards for traditional neighborhood design (TND) areas.
- Implement an education program to promote bicyclist and pedestrian safety.
- Require compliance with appropriate policies and standards for new development including bicyclist, pedestrian, and trail facilities within residential communities. Ensure interconnection of new facilities with the proposed greenway system.

Analysis of Environmental and Permitting Impacts

The proposed greenway network for North Indian River County consists of corridors that have been identified within existing rights-of-way and portions of some corridors that are currently in private ownership. Corridors that are in public ownership are currently being utilized for transportation, utility, or recreational purposes. Therefore, environmental impacts from implementing greenways and trails are expected to be minimal. However, an environmental review should be conducted before the design phase for off-road trails and unimproved corridors. Portions of trail corridors that are currently in private ownership can be developed only with approval of the existing landowner, which may include agreements such as the annexation agreement between the City of Fellsmere and Fellsmere Joint Venture, or through public purchase of private property to bring the corridor segment into public right-of-way.

A field reconnaissance would be required to identify vegetative communities, wildlife, wetlands, and potential listed species or listed species habitat within the proposed project area. Wetlands and other surface waters would fall under the jurisdiction of the St. Johns River Water Management District (SJRWMD) and the US Army Corp of Engineers (USACOE). Mitigation for impacts to wetlands would be required. Mitigation is determined based on the quality of the habitat being impacted.

The Florida Department of Environmental Protection (FDEP) has identified the Trans-Florida Central Railroad Corridor as a potential rails-to-trails project. The environmental permitting process must be followed to ensure protection of sensitive habitats in the vicinity of the rails-to-trails project including the St. Sebastian River Preserve State Park and the Fellsmere Water Management Area. The SJRWMD typically restricts vertical structures, such as shelters, information kiosks, and landscaping, within 40 feet of the edge of water surface for maintaining access for maintenance vehicles.

The Indian River Blueway Trail should be implemented within the framework established for the Florida Circumnavigational Saltwater Paddling Trail, managed by the FDEP, Office of Greenways and Trails. The Saltwater Paddling Trail includes individual blueway trails identified in local plans, such as NIRC Greenways. The Saltwater Paddling Trail is a strategic long-term

priority for FDEP, but it relies heavily on the involvement of local governments, private organizations, paddling clubs, and volunteers.

Trails implemented along canal rights-of-way must be designed and permitted in accordance with the Sebastian River Water Control District or the Fellsmere Farms Water Control District. Drainage and maintenance concerns must be considered during the design and permitting process.

Remaining corridors are within property owned by the City of Sebastian, City of Fellsmere, Indian River County, or the Florida Department of Transportation (FDOT).

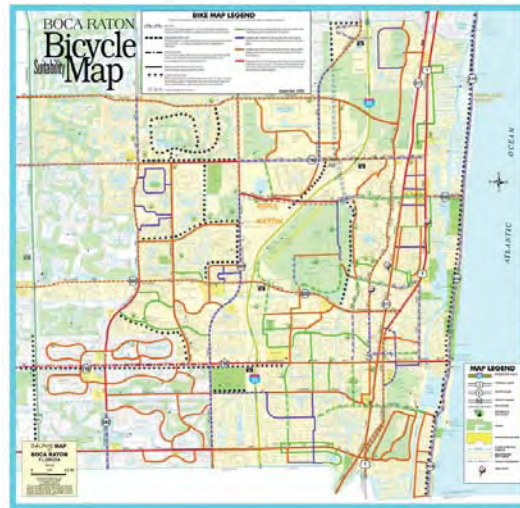
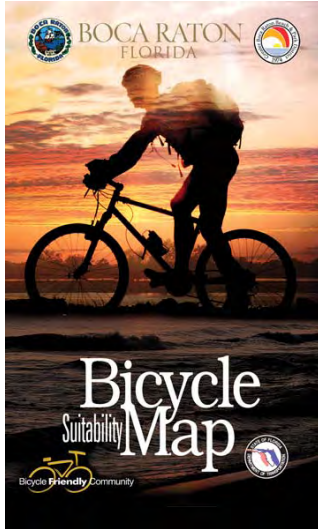
Partnerships Strategies

The success of the North Indian River County (NIRC) Greenways Master Plan will depend upon developing community partnerships for implementation, fundraising, and promotion of the trail system. Establishing the Greenways Management Committee is an excellent first step by the Indian River County MPO to pursue the community framework that will allow planning and implementation activities to flourish. Potential opportunities for marketing and promotion of the greenways system for the Greenways Management Committee and local governments to consider are listed below.

Adopt-a-Trail / Maintenance Program: An ‘adoption’ program can be established so organizations, individuals and businesses can adopt a mile of trail, an engraved brick or trail marker, a bench, a bike rack, a trailhead or other elements of the trail system. This can facilitate fundraising and maintenance of the trail system, and is a good way to built support for trails with a cross section of community partners. Since IRCMPO is a planning agency, cooperative maintenance agreements will be needed with the Parks & Recreation Department for off-street trails, and with Transportation facilities departments for on-road facilities.

Publish a Trail Guide for Indian River County: An ‘early win’ for Indian River County would be to provide literature and trail maps for public use. A trail guide would provide information on access points, existing trails, rental equipment locations, and other information

for residents and visitors. This information could be provided in electronic format online, or could be published and made available in hard copy. The map can be funded and produced by revenue from advertising, or can be funded as a public service promotional item.



This user map was produced for bicyclists in Boca Raton, Florida.

Friends of Indian River Greenways: Most successful trail programs have the support of a local non-profit organization that can advocate, raise funds and collaborate with local officials. A ‘friends’ organization can serve as a focal point for community support and outreach. The board of this organization can include a broad range of community interests, such as health providers, schools, businesses, bike clubs and other partners.

Annual Events: There are numerous opportunities for North Indian River County to promote special events related to the greenways system. These could include a Greenway 5k along the beach or a proposed trail corridor or an Indian River County Triathlon that included kayaking, running and bicycling. These types of events can provide public awareness, visibility for sponsors and fundraising opportunities for the trail system.

Active Living Seniors: With the significant local population of seniors and retirees, and the need for this population to remain physically active, it will be important to develop programs that connect this population to the greenways. Walking and physical fitness programs can be linked to guided tours of existing trails, as well as increased use of new trails as they are developed.

Trips for Kids: Trips For Kids provides the materials, moral support and inspiration that an individual or group needs to help disadvantaged kids discover the joy of mountain biking. Operating in the United States and Canada, they open the world of cycling to at risk youth through mountain bike rides and Earn-A-Bike programs. The more than forty Trips for Kids chapters combine lessons in personal responsibility, achievement and environmental awareness through the development of practical skills and the simple act of having fun on a bike. Additional information is available at the organization's website, www.tripsforkids.org.



Trips for Kids and bike racks adopted by local partners are examples of opportunities to promote the North Indian River Greenways system.

The first steps of implementing the Greenways Plan, and the probable lead agency are summarized as follows:

1. First Phase Projects

Lead: IRCMPO staff; GMC

2. Transportation Enhancements Funding

Lead: IRCMPO staff

3. Friends of Indian River Greenways

Lead: New non-profit (or partnership with an existing 501(c) organization); GMC

4. Maintenance Agreements

Lead: Parks & Recreation and Engineering staff

5. Florida OGT Designation

Lead: IRCMPO Staff

6. Indian River Trails Map

Lead: GMC; Friends of Indian River Greenways

7. Annual Event

Lead: GMC; Friends of Indian River Greenways

These actions will provide North Indian River County with the foundation of a greenway and trail system that will provide lasting benefits to residents, businesses, and visitors. Moving this plan forward will take cooperation, innovation, and leadership. Over time, short-term priorities will get completed, and future phases will build upon early successes. With the vision developed in this plan, Greenways will be an important part of the future for Indian River County.



People enjoying the amenities at the North Sebastian Conservation Area (NSCA)

APPENDIX

- Demographic and Transportation Data
- Sample Successful Greenway Examples
- NIRC Greenway Evaluation Criteria
- North Sebastian Conservation Area Brochure
- Tier I Project Description Sheets
- Right-of-Way and Implementation Notes
- Funding Sources
- Florida Recreational Use Statute

Indian River County Demographic and Transportation Data

CENSUS TRANSPORTATION PLANNING PACKAGE (CTPP 2000)

Geographic Area: Working in Indian River County, Florida

SELECTED CHARACTERISTICS BY PLACE OF WORK, 1990 and 2000

Selected Characteristics (Universe: All Workers)	1990		2000		Change 1990 to 2000	
	Number	Percent	Number	Percent	Number	Percent
Workers 16 years or over	36,308	100	48,120	100	11,812	32.5
Sex						
Male	19,140	52.7	24,805	51.5	5,665	29.6
Female	17,168	47.3	23,315	48.5	6,147	35.8
Mode to work						
Drove alone	28,756	79.2	38,645	80.3	9,889	34.4
2-person carpool	3,962	10.9	4,945	10.3	983	24.8
3-or-more-person carpool	1,160	3.2	1,410	2.9	250	21.6
Bus or trolley bus	102	0.3	100	0.2	-2	-2.0
All other transit ¹	7	0.0	0	0.0	-7	-100.0
Bicycle or walked	839	2.3	850	1.8	11	1.3
Taxicab, motorcycle, or other mode	494	1.4	480	1.0	-14	-2.8
Worked at home	988	2.7	1,685	3.5	697	70.5

MODE TO WORK BY VEHICLES AVAILABLE IN HOUSEHOLDS

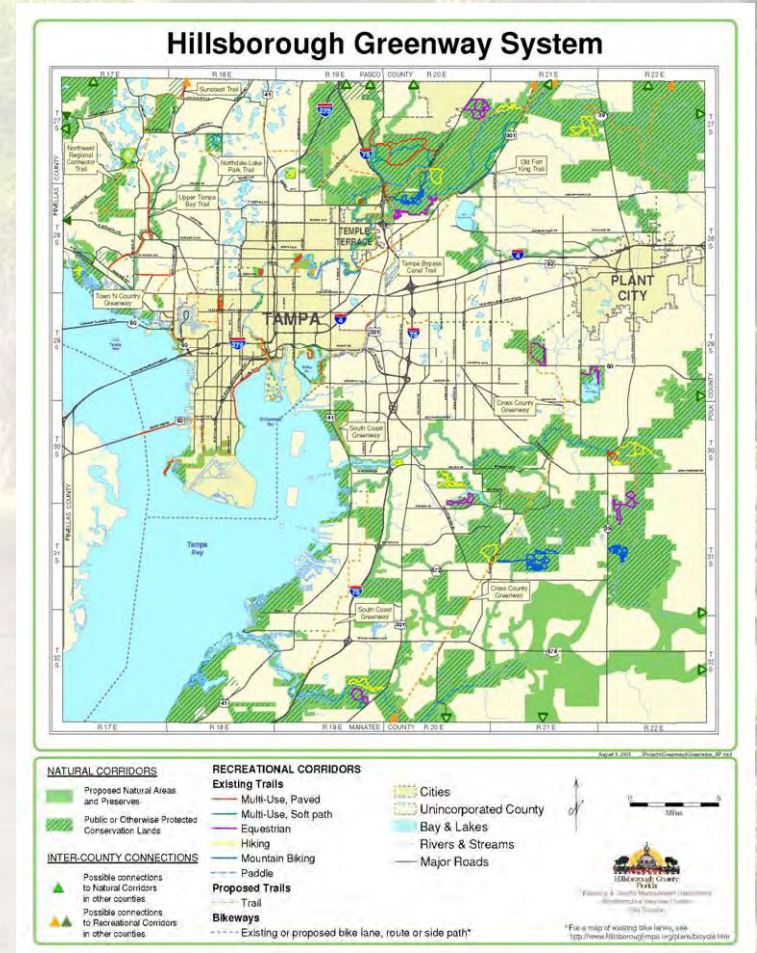
Mode to Work (Universe = Workers living in households)	Workers living in households...			
	Total	Without a vehicle	With 1 vehicle	With 2+ vehicles
Total	47,940	1,310	12,330	34,300
Drove alone	38,590	610	9,340	28,645
2-person carpool	4,875	195	1,685	2,995
3-or-more-person carpool	1,410	140	420	855
Bus or trolley bus	70	20	15	30
Streetcar, trolley car, subway, or elevated, Railroad or Ferryboat	0	0	0	0
Bicycle or walked	835	215	210	410
Taxicab, motorcycle or other means	480	95	100	280
Worked at Home	1,685	35	555	1,090

	2005	2000		
2005 American Community Survey				
Data Profile Highlights:				
Narrative Profile Reference Map				
Note: The 2005 American Community Survey universe is limited to the household population and excludes the population living in institutions, college dormitories, and other group quarters.				
General Characteristics - show more >>				
	Estimate	Percent	U.S.	Margin of Error
Total population	126,258			*****
Male	61,342	48.6	49.0%	+/-735
Female	64,916	51.4	51.0%	+/-735
Median age (years)	46.1	(X)	36.4	+/-0.7
Under 5 years	5,803	4.6	7.0%	+/-659
18 years and over	101,910	80.7	74.6%	+/-223
65 years and over	33,800	26.8	12.1%	+/-477
One race	125,694	99.6	98.1%	+/-429
White	112,435	89.1	74.7%	+/-1,026
Black or African American	10,314	8.2	12.1%	+/-435
American Indian and Alaska Native	231	0.2	0.8%	+/-288
Asian	1,188	0.9	4.3%	+/-189
Native Hawaiian and Other Pacific Islander	0	0.0	0.1%	+/-301
Some other race	1,526	1.2	6.0%	+/-941
Two or more races	564	0.4	1.9%	+/-429
Hispanic or Latino (of any race)	10,707	8.5	14.5%	*****
Household population	126,258			*****
Group quarters population	(X)	(X)	(X)	(X)
Average household size	2.20	(X)	2.60	+/-0.07
Average family size	2.59	(X)	3.18	+/-0.11
Total housing units	70,487			*****
Occupied housing units	57,315	81.3	89.2	+/-1,724
Owner-occupied housing units	44,296	77.3	66.9	+/-2,053
Renter-occupied housing units	13,019	22.7	33.1	+/-1,822
Vacant housing units	13,172	18.7	10.8	+/-1,724

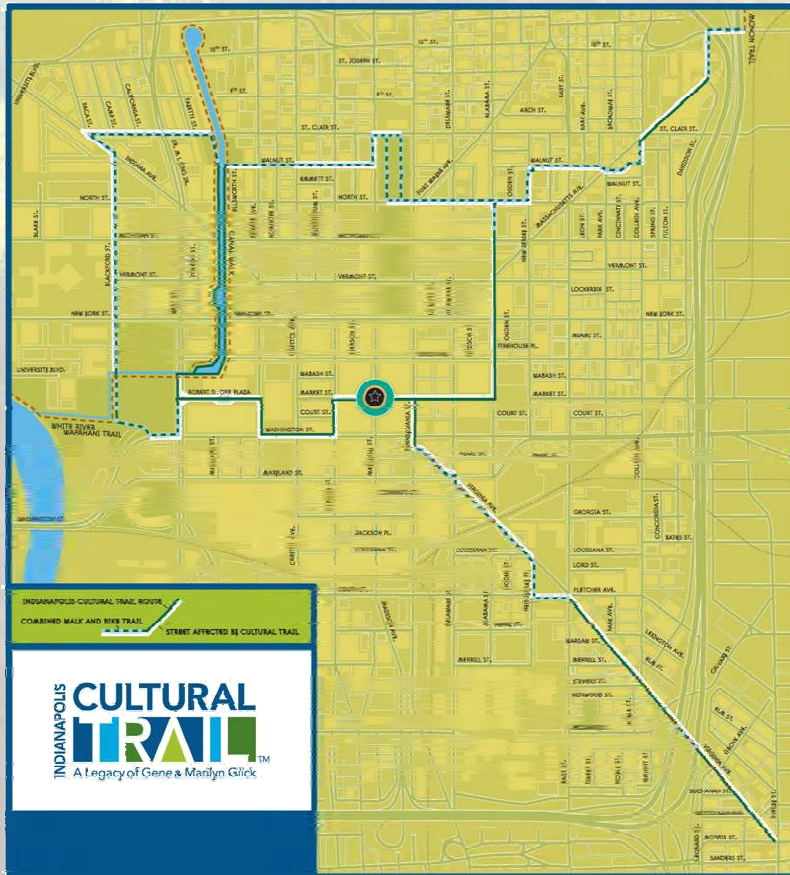
Economic Characteristics - show more >>				
	Estimate	Percent	U.S.	Margin of Error
In labor force (population 16 years and over)	55,745	53.3	65.9%	+/-2,401
Mean travel time to work in minutes (workers 16 years and over)	19.4	(X)	25.1	+/-1.7
Median household income (in 2005 inflation-adjusted dollars)	45,040	(X)	46,242	+/-3,162
Median family income (in 2005 inflation-adjusted dollars)	51,162	(X)	55,832	+/-3,874
Per capita income (in 2005 inflation-adjusted dollars)	29,394	(X)	25,035	+/-2,374
Families below poverty level	(X)	11.6	10.2	(X)
Individuals below poverty level	(X)	13.2	13.3	(X)
Housing Characteristics - show more >>				
	Estimate	Percent	U.S.	Margin of Error
Owner-occupied homes	44,296			+/-2,053
Median value (dollars)	193,500	(X)	167,500	+/-9,818
Median of selected monthly owner costs				
With a mortgage (dollars)	1,130	(X)	1,295	+/-83
Not mortgaged (dollars)	446	(X)	369	+/-30

Successful Examples: *Hillsborough County, FL*

- Greenways Master Plan completed in 1994
- Greenways Program established to implement the plan
- Greenways Committee meets quarterly
- 5 trails
- <http://www.hillsboroughcounty.org/parks/greenways/>



Successful Examples: *Indianapolis, IN*



- Indianapolis Cultural Trail
- Urban trail for walking and biking
- “A cultural connection to the great outdoors” – Indianapolis Business Journal, March 15-21, 2004
- Serves as a signature facility for the Central Indiana Greenway System
- <http://www.indyculturaltrail.info/>



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and Associates, Inc.

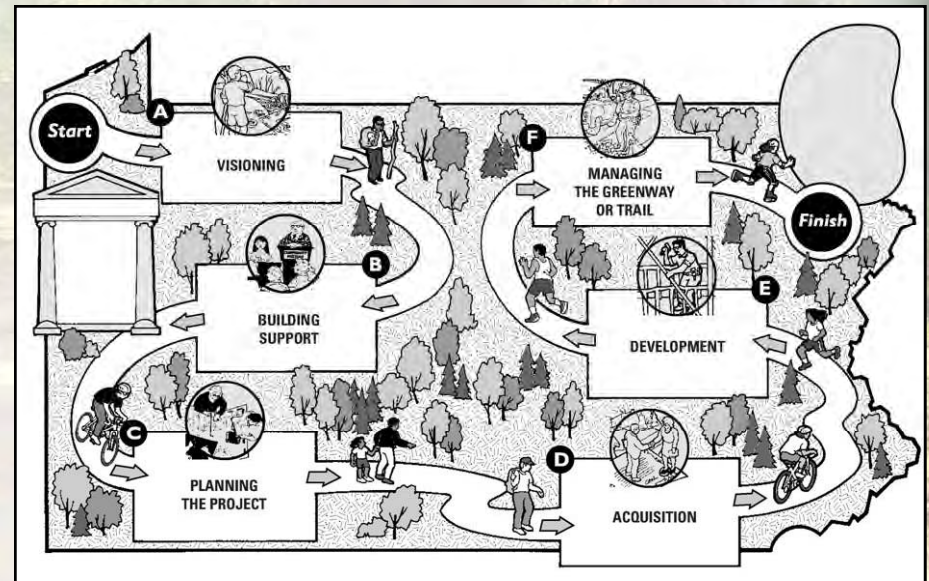


PLANNING • DESIGN

Successful Examples:

Pennsylvania Greenways Partnership

- Creating Connections: The Pennsylvania Greenways and Trails How To Manual
- Thousands of miles of rural and urban greenway paths implemented
- Highlights 6 steps of creating a trail
- <http://www.pagreenways.org/>



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Successful Examples: *Boston's Emerald Necklace*



Source: Emerald
Necklace Conservancy

- 1100-acre chain of parks linked by greenways and waterways
- Approx. 7 miles from Boston Common to Franklin Park
- Designed by Frederick Law Olmstead in the late 1800s
- <http://www.cityofboston.gov/parks/emerald/>



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North IRC Greenways: Evaluation Criteria		
Criteria	Description / Points	Maximum Score
Transportation Benefits	Increases use of non-motorized travel by providing access to the following destinations within .5 mile of the proposed corridor: Access to Schools: 3 Access to Major Destinations: 3 Access to Parks & Recreation: 3 Access to Transit: 3 Bike/Ped Safety: 3	15
System Connectivity	Provides an essential link in the proposed network: 20 This link is important as a 'stand alone project, but not critical to the overall system 10 This is a long-term element and potential future link 5	20
Regional Benefits	Tourism: 3 Environmental: 3 Economic: 3 Health / Fitness: 3 Quality of Life: 3	15
Multiple Use	Bicyclists: 3 Pedestrians / Runners: 3 Water Trail: 2 Equestrian: 2	10
Agency Support	Project currently has support (20) Project has potential to receive agency support (10) Project is not likely to receive support (0)	20
Cost	Project can be implemented for: < \$200k / mile (10) \$200k - \$500k / mile (5) > \$500k / mile (0)	10
Constructability	Project requires further study but is likely to be advanced (5) Project is feasible and ready for implementation (10)	10

Welcome to the North Sebastian Conservation Area!

The North Sebastian Conservation Area was purchased by Indian River County in 1996 with cost-share funds from the Florida Communities Trust.

The habitats throughout the Conservation Area provide visitors many opportunities to see a diverse array of plant and animal species. Trails are rated by difficulty and distance to the trailhead. As always, please use caution when visiting the conservation area. You may encounter poisonous snakes, feral hogs, alligators and poisonous plants. Sturdy walking shoes and a supply of drinking water are a must for a long hike. Also remember that ALL plants and animals on the conservation area are protected. Taking, harassing or otherwise disturbing any plant or animal on site is strictly prohibited and is enforced. There are many state and federally protected animals and plants on site and harassment of any kind will not be tolerated.

1 SEBASTIAN TRAIL - Easy

The trailhead begins in an area adjacent to a freshwater lake with a perimeter of Pine Flatwoods. Great Blue Herons and other wading birds are typically aloft in the Sand Pines or on the Lake's edge. Osprey and otters may be encountered searching for their lunch as well. This is a shady area perfect for a picnic or outdoor classroom activities. Two picnic tables are located here.



2 BROMELIAD BOULEVARD - Easy

This trail takes visitors from the trailhead entrance through Pine Flatwoods that surrounds the freshwater lake. Be sure to keep an eye open for Pileated and Red-bellied Woodpeckers and other songbirds. This area is typically quiet and shady and the northern edge of the trail begins to transition into Rosemary Scrub. The trees are laden with bromeliads, all of which are protected



by state law. You may also find Sky Blue Lupine blooming in the late winter and early spring on this trail.

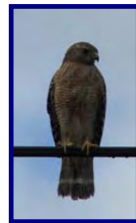
3 JAYS WALK - Easy

The Jays Walk is an area where platted roads for a subdivision were installed. (nesting jay photo right) This area is an easy walk within xeric oak scrub and is home to a family of scrub jays. Some of these jays are "banded", so if you see them, you may notice that some of the family members have "bracelets" on their legs. These bands are placed in a sequence that is unique to each bird. The Jays Walk Trail gives visitors a glimpse of prime Xeric Oak Scrub inhabited by many species that are becoming increasingly rare. Some of these species such as the Florida Scrub Jay are restricted to Florida's unique scrub habitat and are not found anywhere else in the world! Xeric Oak Scrub is composed primarily of Chapman's Oak, Scrub Oak and Myrtle Oak. While these trees can get taller, in optimal scrub-jay habitat, they should be no taller than 6' high. This area was successfully burned with assistance from the Florida Division of Forestry. Prior to the prescribed burn, there were no scrub jays using this area; a true sign of success was when the current family of jays moved in and began defending and nesting in this area. This family of jays is relatively tame, but please stay on the trails and respect their home.



4 CACTUS CAUSEWAY - Moderately Difficult

Walking through the Cactus Causeway, visitors will see an exceptional scrub area restored by timbering. The entire conservation area was timbered in 2001. There are remnant piles of logging debris left for a future prescribed burn. This area is a wonderful example of high quality scrub habitat. Also in this area, Curtiss' Milkweed was discovered in 2005, a State listed



Endangered species. It is very hard to find except when blooming because it resembles a small scrub oak seedling (photo right).



5 REINDEER RIDGE - Moderately Difficult

This trail is a beautiful walk through a variety of habitats including Rosemary Scrub and a freshwater wetland at the north end. The trail winds up a coastal ridge remnant, visitors will encounter a variety of plant species including coral bean and scrub hickory. Look for nesting osprey and foraging tortoises.

6 HOLLY'S HOLLOW - Moderately Difficult

This trail has a beautiful boardwalk that takes visitors through a native holly area surrounded by a freshwater marsh and scrub. When on the boardwalk, visitors get a unique view of the scrub to the south, distant pine flatwoods and a beautiful holly filled wetland. This is a special treat in the winter months when the holly is laden with bright red berries that the migrating songbirds adore.



7 MALLARD'S MARK - Moderately Difficult

This trail crosses the central wetland by way of a 200 foot boardwalk with observation deck. Be sure to visit this area where ducks, cranes, wood storks (photo left), wading birds and other wildlife abound in the freshwater marsh that lies centrally within the conservation area. The wetland dries periodically throughout the year and provides a feeding area for many wildlife species. This area is a must see any time of the year!

8 ROSELAND TRAIL - Easy

This trail ends (or begins) at 130th Street and may be used by Roseland residents for access to the conservation area. The trail gives visitors an opportunity to see scrub jays, gopher tortoises, osprey and restored scrub.

9 HIDEAWAY HILL - Difficult

This trail takes adventurers next to a freshwater wetland and up the ancient coastal ridge. Inhabitants of this area include Osprey, Red-Tailed Hawks, and many songbirds. Keep an eye open for Bobcat, Raccoon, Opossum and other tracks from creatures who ventured through the previous night. This trail is sandy, may have trip hazards and is relatively steep, please watch your step.

10 OSPREY HIDEAWAY - Difficult

Osprey Hideaway runs along the top of an ancient dune line. The trail is adjacent to the Florida East Coast Railroad. The area is full of Scrub Hickory and other scrub endemic species. Watch for Osprey nests and gopher tortoises, they abound in this area. **FUN FACT:** Osprey can be distinguished from Bald Eagles by having a white belly and a black stripe along their eye. Adult Bald Eagles have a black belly, an all white tail and all white head and neck, with no black stripe on their eye. They are also larger than an Osprey. Osprey feed primarily on fish.

11 TERRITORY TRAIL - Moderately Difficult

This trail runs through an edge of scrub and saw palmetto. It is occupied by a family of scrub jays and sometimes one may see two families disagreeing over territorial boundaries, especially during the spring months. This trail is a beautiful trail that you won't want to miss.

12 POWERLINE ROAD - Easy (to water's edge)

Although you may not be able to cross the Powerline Road trail, it is certainly worth walking to the water's edge. This area is full of pond lilies, St. Johns Wort and other freshwater species. The wetland is typically 3-4 feet deep and makes a perfect feeding spot for herons (Great Blue Heron photo to left), egrets and ducks. If you are lucky, you may even find Roseate Spoonbills, Wood Storks and Sandhill Cranes in this area.

13 PALMETTO PATH - Difficult

Palmetto Path is a difficult trail that runs on the outer boundary of the conservation area. This



area is home to a family of scrub jays and many gopher tortoises.

14 GOPHER'S GALLEY – Moderately Difficult

The footpath of this trail is relatively easy to traverse, but does take visitors further from the trailhead. This area is a beautiful area of native grasses, sedges and rushes and when in full bloom, you will encounter a beautiful array of yellow bachelor buttons, white hat pins, and other native wildflowers. This area seems to be a favorite spot for our Gopher Tortoises (photo right) who relish the abundant variety of vegetation they can eat. This trail may be wet during parts of the year.



15 PRAIRIE PATH – Moderate to Difficult

Prairie Path is a beautiful trail that takes visitors through a freshwater wet prairie full of Bachelor Buttons, Bog Buttons, Road Grass, Hollies and other wetlands species. Just after or during a rain, you will hear a chorus of native frogs singing their love songs to attract a mate. This path may become significantly wet. When the trail crosses 14, you will enter an area to the north that is full of native holly, bay and oaks.

16 LITTLE LOOP – Moderate to Difficult



Due to the distance to the trailhead, this trail is rated as moderate to difficult. A trek through this area will take you through a Pine Flatwoods full of Sand Pine, Saw Palmetto, Gallberry and other native species.

Florida Scrub Jays may be found in the small patch of scrub here. This area is an excellent area to see a great variety of migrating songbirds in the fall, winter and spring.

17 CRANE CROSSING – Difficult

This trail takes visitors to the edge of a freshwater depression. Walk quietly and you may catch a glimpse of wading birds including Great Blue Herons, Egrets, Tri-Colored Herons and other birds feasting on freshwater fish. This

trail may not be passable during the summer months due to deep water.

18 THE OUTERBANKS – Difficult

This trail is a multi-use trail for horses, bicyclists and hikers. Use caution, as trails may be hazardous. This trail is the longest and runs along the outer edge of the Conservation Area. Users will traverse an array of habitats including Hydric and Mesic Pine Flatwoods, freshwater wetlands and scrub.

TRAIL DEFINITIONS:

Easy Trails (white on map) are easier to traverse, receive more maintenance to remove trip hazards, have accessible boardwalks and are relatively close to the trailhead. Equestrian users are discouraged from using these trails frequently. Trails 1, 2 & 3 are approximately 1mile round trip from the Friendship Park Trailhead.

Moderately Difficult Trails may be sandy or wet, have uneven surfaces and may have objects, roots or other trip hazards.

Difficult Trails are furthest from the trailhead, receive less maintenance, may be wet throughout parts of the year and are more difficult to traverse. Trail markers are also spaced further apart. Trails may also be less distinct and are narrower. Before venturing onto these trails make sure you have plenty of water and a first aid kit. Equestrian users are encouraged to use these trails.

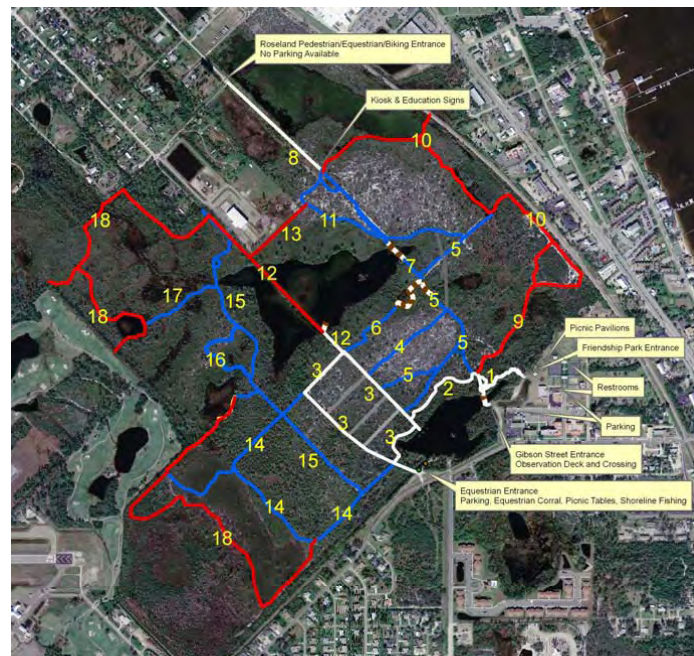
Trails that are color coded in Gray are connector trails that may be used for variety.

PET OWNERS: When you visit the conservation area come prepared to pick up your pet's waste and dispose of it properly. Trash bins are located at the trailheads.

ALL DOGS MUST BE KEPT ON A LEASH. FAILURE TO DO SO MAY RESULT IN HAVING TO PROHIBIT DOGS FROM THE CONSERVATION AREA IN THE FUTURE.

- Trail conditions are rustic: be prepared for uneven ground, exposed tree roots and primitive conditions.
- Bicyclist are welcome, but please use caution on the trails and be cautious of other visitors.
- Horses are welcome, please stay on designated trails and be cautious of other users. Horses are not allowed on the boardwalks.
- You may encounter bees, poison ivy, alligators, rattlesnakes or other dangerous wildlife, please use caution and don't feed the wildlife.
- Taking of any plant or animal is strictly prohibited.
- Motorized vehicles of any kind (including boats) are strictly prohibited.
- Please report damages or violations to the conservation lands manager or Sebastian Police Department immediately.
- Bringing wildlife to the conservation area is strictly prohibited. Please contact the conservation lands manager if you are concerned about native wildlife.
- Please be respectful of the area, this is home to many species of animals and plants.

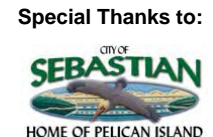
**TAKE ONLY PICTURES,
LEAVE ONLY FOOTPRINTS
DESTROY NOTHING and
ENJOY EVERYTHING!**



NORTH SEBASTIAN CONSERVATION AREA



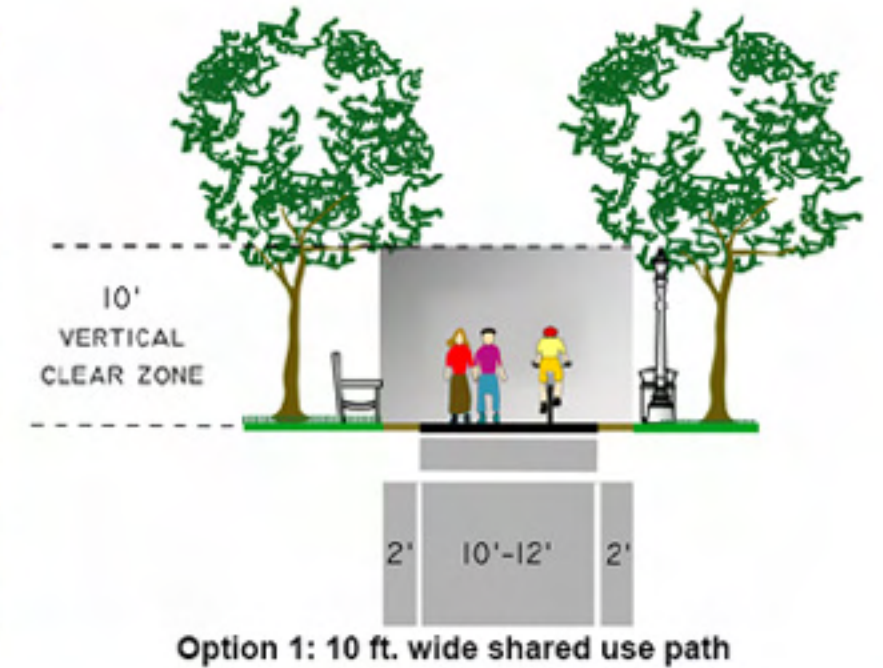
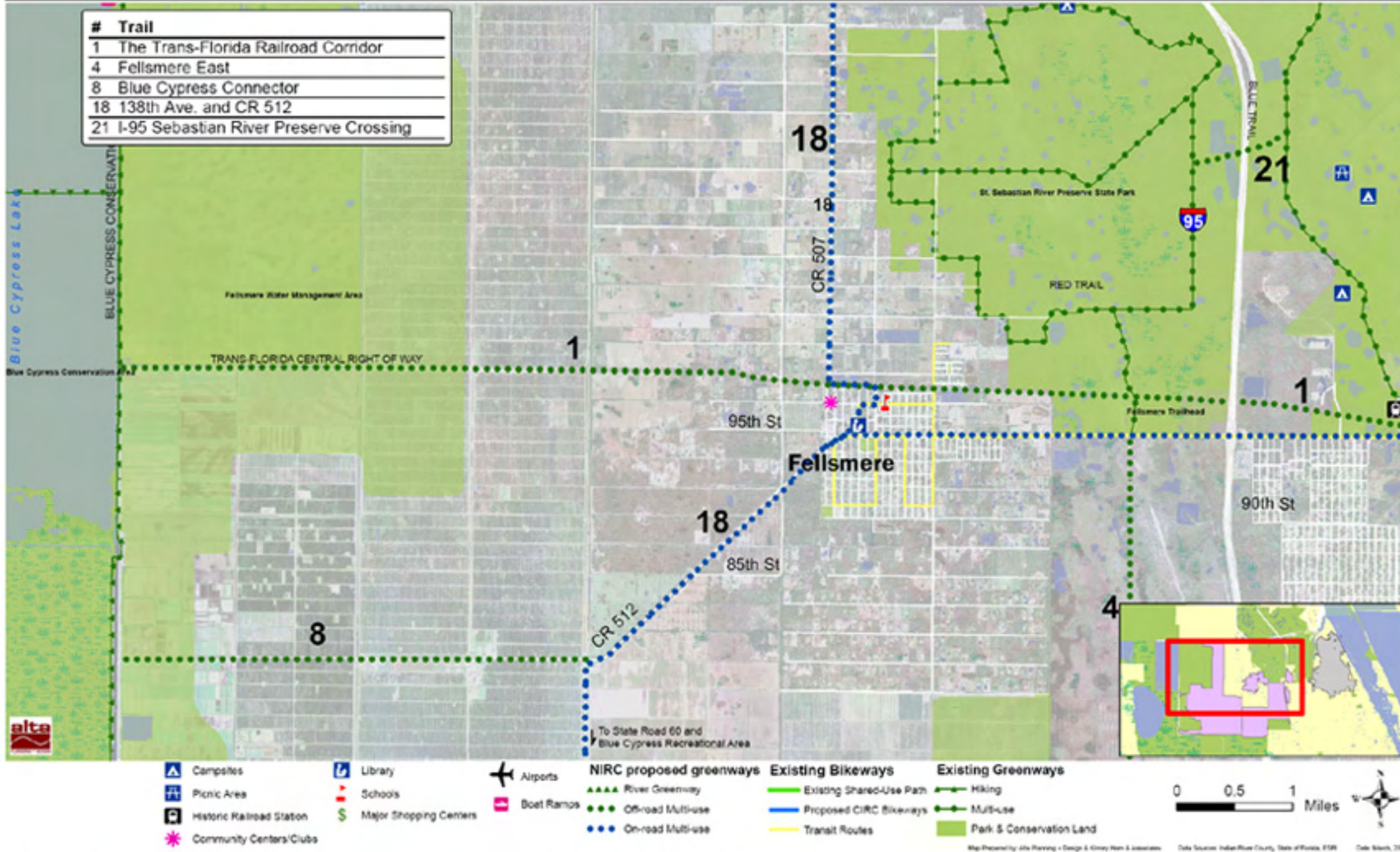
This project was partially funded by the Land & Water Conservation Fund through the U.S. Department of Interior and the Florida Department of Environmental Protection.



Special Thanks to:

For more information or to schedule group tours, please contact the Indian River County Conservation Lands Manager at 772-589-9223; bpowell@ircgov.com or visit www.irgov.com/conservation

The Conservation Area is open from dawn until dusk each day.



Description
The Trans-Florida Railroad Corridor runs from Sebastian west to the Fellsmere Water Conservation Area. The railroad was also known as the "DINKY Line." A substantial amount of work has been done on this corridor. Portions of the abandoned ROW are in public ownership and traverse a state park, a county park, conservation areas, and downtown Fellsmere.

Type/Width	Length
Asphalt shared use path / 10 ft	~12 miles

Context
Sections of the right-of-way are cleared while others are overgrown or built upon.

Ownership
Varied

Key Land Uses / Destinations
The Trail connects Fellsmere to Sebastian passing across Interstate 95 and also provides access to state and county parks, conservation areas and the local middle school.

Issues

- Right-of-way
- Abandoned sections
- Safe Routes to Schools
- Trail/Roadway Xings
- A crossing at I-95 should be considered during highway reconstruction

Planning-Level Cost Estimate

The unit cost data are provided as guidelines based on similar projects in Florida; more precise cost estimates are typically developed during the design and permitting phase of a trail project.

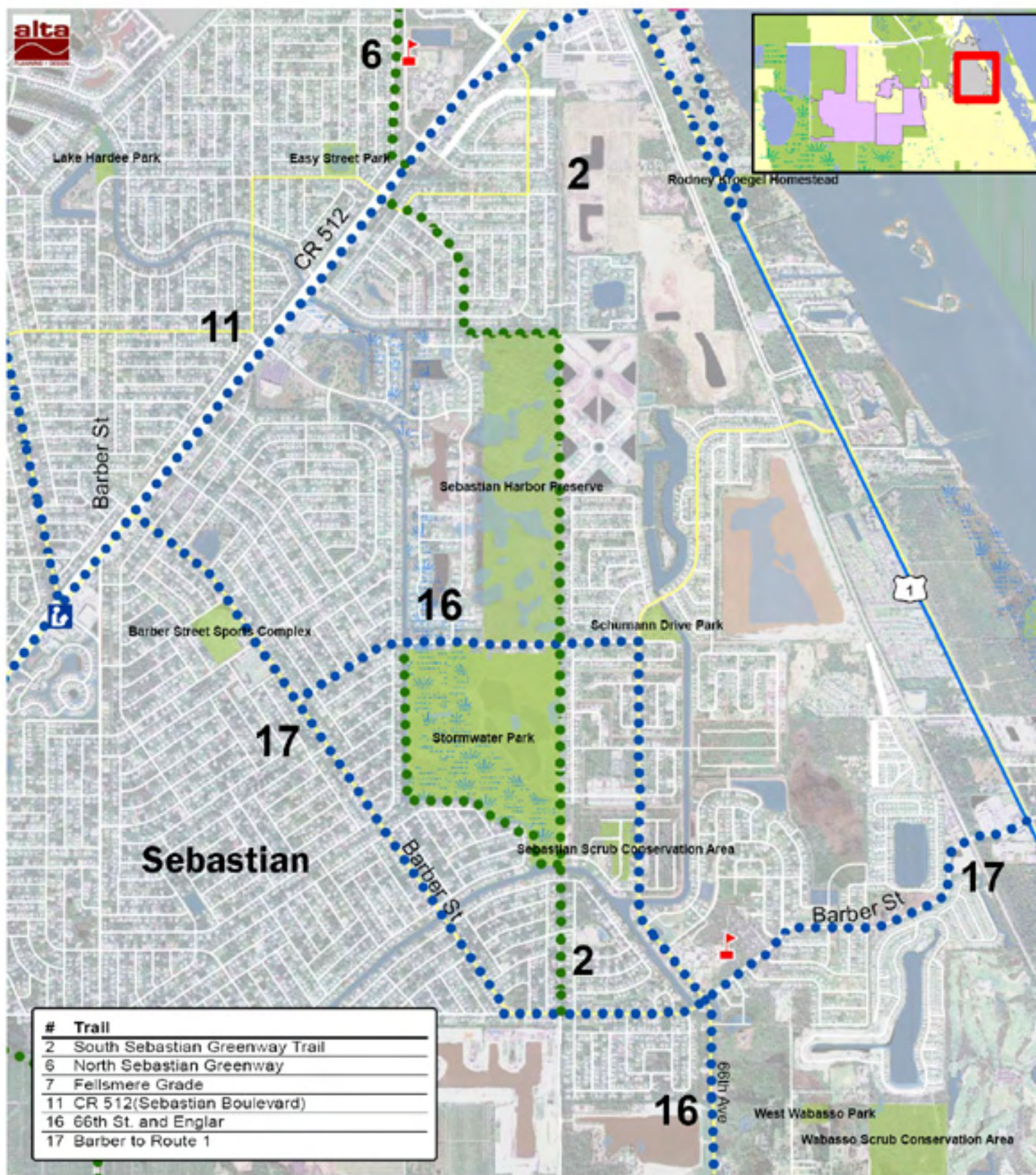
Paved Shared-Use Paths \$300,000 - \$400,000 per mile
\$3,600,000 - \$4,800,000

Staffing / Program Costs: \$6,000 per mile of trail per year
\$72,000 per year

Maintenance Costs: \$15,000 per mile of trail per year(1)
\$180,000 per year



NIRC Greenways Plan - South Sebastian Greenway Trail



Project 2: South Sebastian Greenway Trail

Description

The South Sebastian Greenway Trail travels from the Sebastian Stormwater Park (Easy Street and Thunderbird Drive) north to the North Sebastian Conservation Area (NSCA). This corridor connects three significant conservation areas including Sebastian Harbor Preserve. Numerous destinations are located along or proximate to this corridor, including Sebastian City Hall, Schumann Drive Park, Easy Street Park, and Sebastian Elementary. Additionally, it may be possible to connect to Roseland Road through the NSCA and link up with the St. Sebastian River Greenway and the numerous features along that corridor. This corridor can make use of Powerline Road, a dedicated ROW that has not been improved.

Type/Width	Length
Asphalt shared use path / 10 ft	~4.6 miles

Context

Sections of the right-of-way are cleared while others are overgrown or built upon.

Ownership

Varied

Key Land Uses / Destinations

The corridor bisects much of the City of Sebastian and provides connections to a number of central destinations including City Hall, Sebastian Elementary School and the North Sebastian Conservation Area.

Issues

- Right-of-way
- Discontinuous sections
- Sensitive Habitat
- Safe Routes to Schools
- Environmental interpretation and stewardship

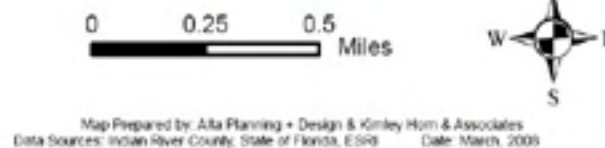
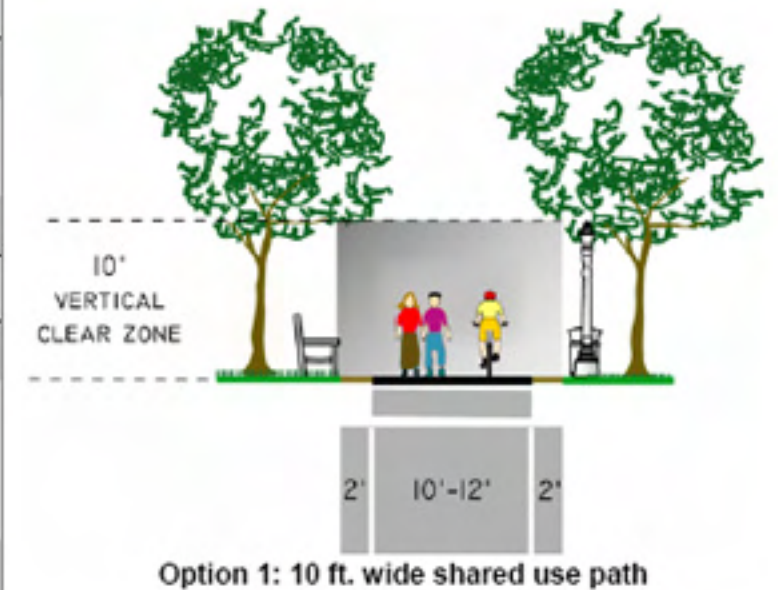
Planning-Level Cost Estimate

The unit cost data are provided as guidelines based on similar projects in Florida; more precise cost estimates are typically developed during the design and permitting phase of a trail project.

Paved Shared-Use Paths \$300,000 - \$400,000 per mile
\$1,380,000 - \$1,840,000

Staffing / Program Costs: \$6,000 per mile of trail per year
\$27,600 per year

Maintenance Costs: \$15,000 per mile of trail per year(1)
\$69,000 per year



NIRC Greenways Plan = 82nd Ave CIRC Connector

Project 5: 82nd Ave CIRC Connector

Description

82nd Avenue (Connector to the Central Greenway System) is the selected roadway for the southern portion of the study that will connect to the Central Indian River Greenway System. The 82nd Avenue corridor is being studied by FDOT for future improvements that will likely include a shared-use pathway within the roadway right-of-way.

Type/Width	Length
Asphalt shared use path / 10 ft	~2 miles

Context

On-road bikeway / pedestrian improvements

Ownership

Varied

Key Land Uses / Destinations

CIRC Greenway System connector
CR 510 Corridor

Issues

- Available right-of-way
- Intersections at CR 510, 69th St, 77th
- Adjacent property owners

Planning-Level Cost Estimate

The unit cost data are provided as guidelines based on similar projects in Florida; more precise cost estimates are typically developed during the design and permitting phase of a trail project.

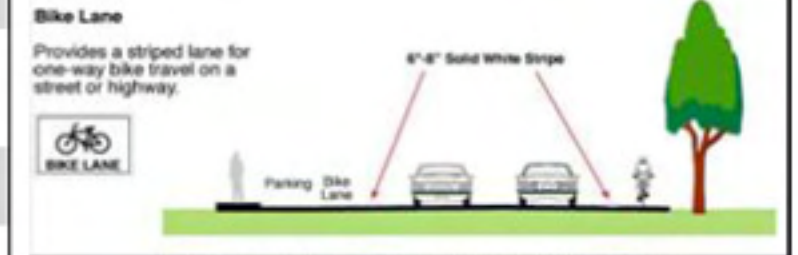
Paved Shared-Use Paths \$300,000 - \$400,000 per mile
\$600,000 - \$800,000

Staffing / Program Costs: \$6,000 per mile of trail per year
\$12,000 per year

Maintenance Costs: \$15,000 per mile of trail per year(1)
\$30,000 per year

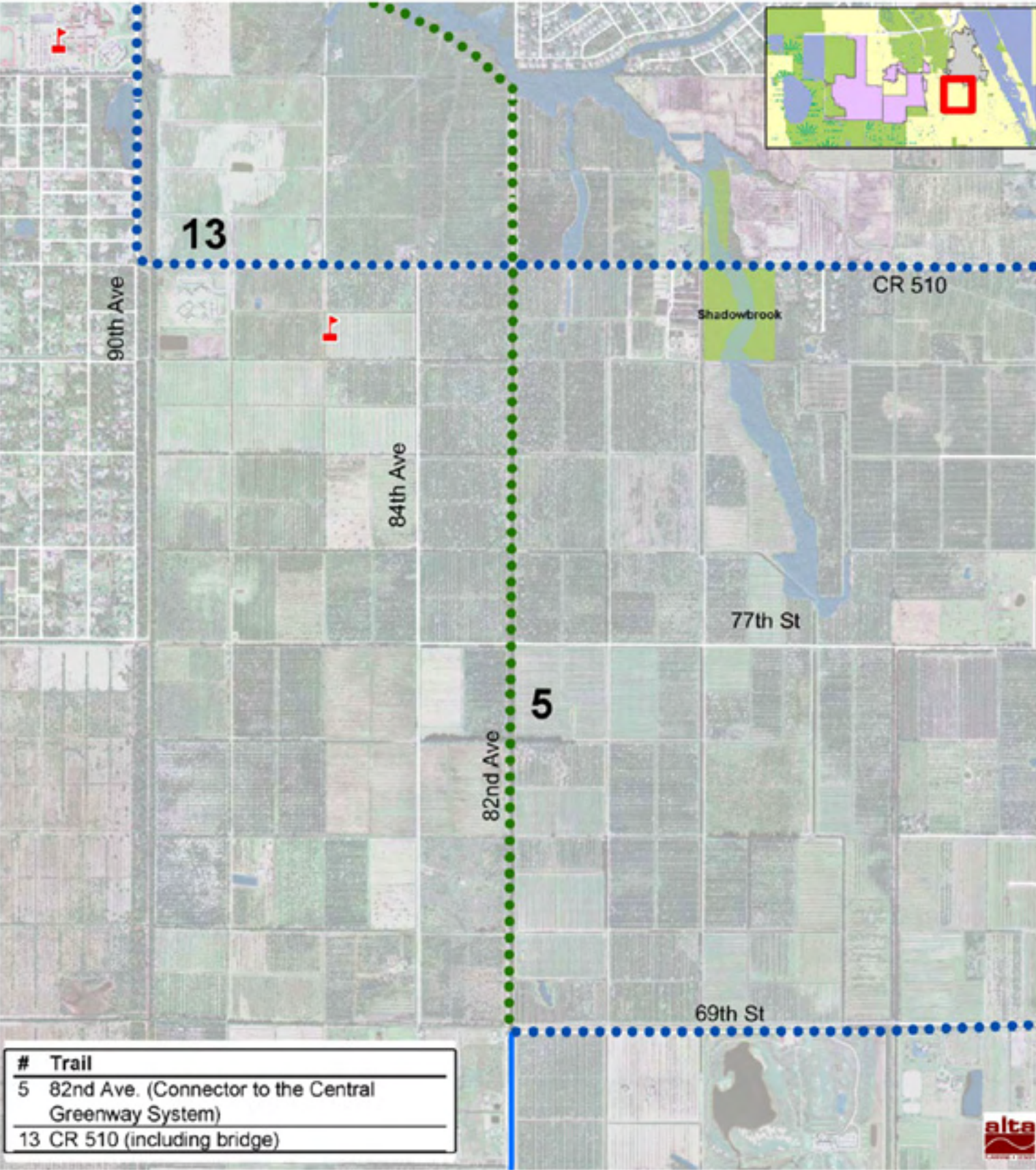


The 82nd Avenue corridor can become an important connection for residents and visitors who want to walk or bike



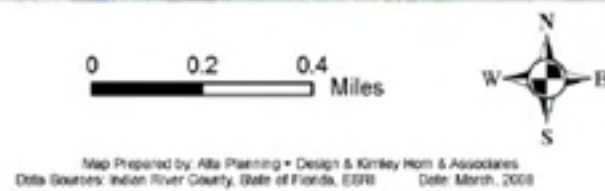
Option 1: New sidewalk and bike lanes

This option will create safe non-motorized options by providing bike lanes and sidewalks as elements of a redesigned roadway.



#	Trail
5	82nd Ave. (Connector to the Central Greenway System)
13	CR 510 (including bridge)

- 🚩 Schools
- 🌳 Park & Conservation Land
- 🚊 Transit Routes
- Existing Bike Lane
- NIRC proposed greenways
- Off-road Multi-use
- On-road Multi-use



NIRC Greenways Plan - Roseland Road



Project 12: Roseland Road

Description

Roseland Road is currently being used by many local cyclists as part of their regular ride around the Indian River County. The facility will provide additional space for bicyclists on the road and will connect with the proposed Airport Loop trail and the Sebastian River Greenway at access points such as the Dale Wimbro Park.

Type/Width	Length
On-road bike lanes	~5.5 miles

Context
On-road bikeway or paved shoulder

Ownership
Sebastian

Key Land Uses / Destinations
Local parks and connections to CR 512 and the north sections of Sebastian

- Issues**
- Right-of-way
 - Drainage
 - Intersection design

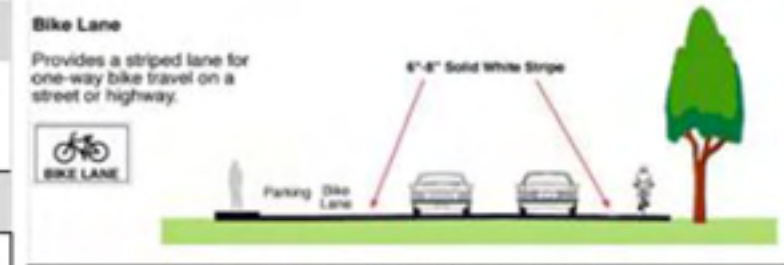
Planning-Level Cost Estimate

The unit cost data are provided as guidelines based on similar projects in Florida; more precise cost estimates are typically developed during the design and permitting phase of a trail project.

Bicycle Lanes: \$15,000 - \$25,000 per mile
\$82,800 - \$138,000



Consistent design of intersections with driveways, side roads and streets is an important safety issue



Option 1: New sidewalk and bike lanes
This option will create safe non-motorized options by providing bike lanes and sidewalks as elements of a redesigned roadway.

NIRC Greenways Plan - US 1 Bike Lane Completion

Project 14: US 1 Bike Lane Completion

Description

US 1 Bike Lane Completion is an ongoing process which will eventually lead to complete bike lanes running the length of US 1. US 1 is a major thoroughfare in Indian River County and while many sections do have an existing bike lane, there are still a number of sections where the bike lane is not continuous resulting in a confusing and potentially unsafe facility.

Type/Width	Length
On-road bike lanes	5.9 miles

Context

On-road bikeway

Ownership

FDOT

Key Land Uses / Destinations

CIRC Greenways
Commercial corridor / serves commuters and retail jobs

Issues

- Complete Streets
- Roadway lane re-allocations

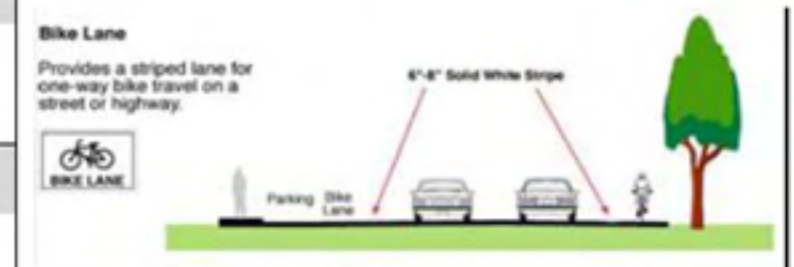
Planning-Level Cost Estimate

The unit cost data are provided as guidelines based on similar projects in Florida; more precise cost estimates are typically developed during the design and permitting phase of a trail project.

Bicycle Lanes: \$20,000 - \$40,000 per mile
\$89,100 - \$148,500

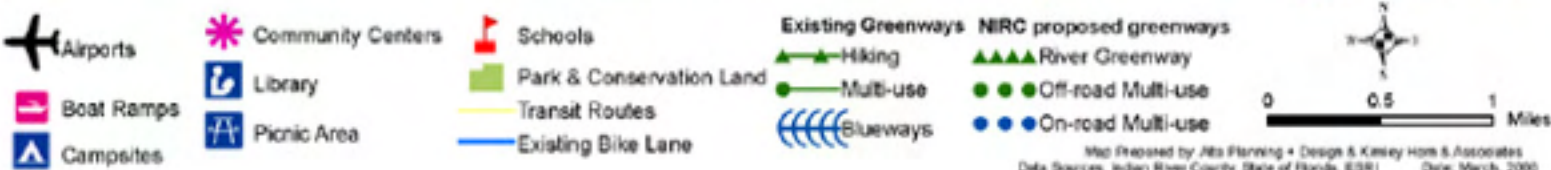


The existing bike lanes along Route 1 can be connected into a continuous bikeway



Option 1: New sidewalk and bike lanes

This option will create safe non-motorized options by providing bike lanes and sidewalks as elements of a redesigned roadway.



Trail #	Name	Type	Right-of-Way Ownership	Implementation Notes	Prioritization Score	Prioritization Ranking
1	The Trans-Florida Central Railroad Corridor	Off-road multi-use	<ul style="list-style-type: none"> St. John's River Water Mgmt Dist Fellsmere Joint Venture Patel Associates Florida DEP Dean Luethje Fellsmere 392 LLC State Trust Fund of Florida Indian River County Indian River County School Board 	<ul style="list-style-type: none"> the two largest landowners are the State of Florida and Fellsmere Joint Venture two segments of this corridor remain in private ownership on either side of I-95 the potential exists to connect to CR 512 through the St. Sebastian River State Preserve and Fellsmere Trailhead to provide a connection across I-95 and to avoid Fellsmere 392 LLC and Luethje private properties in the short-term 	93	t1
14	US 1 Bike Lane completion	On-road multi-use	Florida DOT	striping modifications and additional pavement in certain areas along U.S. 1	93	t1
12	Roseland Road	On-road multi-use	Indian River County	striping modifications and additional pavement along Roseland Road to create bike lanes; project could also be accomplished during re-surfacing	87	3
5	82nd Avenue (CIRC Connector)	Off-road multi-use	Sebastian River Water Control District (future roadway right-of-way)	develop multi-use trail in future 82nd Avenue roadway right-of-way	85	4
2	South Sebastian Greenway Corridor	Off-road multi-use	<ul style="list-style-type: none"> St. John's River Water Mgmt Dist Indian River County City of Sebastian 	<ul style="list-style-type: none"> Stormwater Park trail is a potential early win project (SJRWMD and City) would connect Power Line corridor with Barber/Englar corridor use existing road where possible around south and west sides of Stormwater Park 	83	t5

15	East Coast Greenway	On-road multi-use	Florida DOT	signage	83	t5
3	Sebastian Waterfront Path (Indian River Drive and Downtown Sebastian)	On-road multi-use	City of Sebastian; Indian River County	portions have wide sidewalks; adjacent property owner resistance to sidewalks along the northern portion of corridor	80	7
11	CR 512 (Sebastian Boulevard)	On-road multi-use	Indian River County	bike lanes	75	t8
18	138th Avenue and CR 512	On-road multi-use	Indian River County	bike lanes	75	t8
13	CR 510 (Wabasso)	On-road multi-use	Indian River County	bike lanes	73	10
4	Fellsmere East	Off-road multi-use	RO-ED Corp; St. John's River Water Mgmt Dist	recently incorporated into City of Fellsmere; develop greenway corridor as area develops	72	t11
16	66th Street and Englar	On-road multi-use	City of Sebastian; Indian River County	bike lanes	72	t11
17	Barber Street	On-road multi-use	City of Sebastian; Indian River County	bike lanes	72	t11
10	Historic Sebastian Walking Trail	On-road multi-use	Florida DOT; City of Sebastian	sidewalks	68	14
19	Blueway Trail	Blueway	Florida Department of Environmental Protection; US Army Corps of Engineers	construct access points such as boat ramps and canoe launches	67	15

6	North Sebastian Greenway Corridor	Off-road multi-use	City of Sebastian; Indian River County	two main sections of trail - in Powerline Road corridor and in NSCA	64	16
7	Fellsmere Grade	Off-road multi-use	St. John's River Water Mgmt Dist	multi-use trail in SJRWMD ROW; appropriate for natural surface trail	63	17
8	Blue Cypress Connector	Off-road multi-use	Fellsmere Joint Venture	passes through recently incorporated area of City of Fellsmere; currently owned by Fellsmere Joint Venture; would likely only be developed into a public greenway trail in conjunction with potential future development in the area	58	t18
9	South Fellsmere	Off-road multi-use	Florida DOT; Indian River County	multi-use trail along boundary between Fellsmere Joint Venture and Blue Cypress Recreation Area; appropriate for natural surface trail	58	t18
20	St. Sebastian River Greenway	River Greenway	Florida Department of Environmental Protection; Indian River County; John M. Russell	River Greenway – Conservation corridor; continue acquisition efforts to obtain continuous public river buffer	56	20
21	I-95 Sebastian River Preserve Crossing	Off-road multi-use	Florida Department of Environmental Protection; Florida DOT	Potential multi-use trail with grade-separated crossing of I-95 to link Blue Trail and Red Trail	40	21

Funding Sources for Greenways and Trails

Source: <http://www.enhancements.org/rctfunding.asp>

Funding Type: State	Jurisdiction: FL
Funding Program: Florida Communities Trust	
Implementing Agency: Florida Department of Community Affairs	
Intended for: a portion for recreation trails	
<p>Description: The Florida Communities Trust (FCT) helps local governments implement their comprehensive plans through the acquisition of land, utilizing funds from the state's Preservation 2000 Act and Florida Forever Act. The Florida Communities Trust differs from other acquisition programs, focusing exclusively on locally selected acquisition projects. Each year, the program makes grants to local governments to help them buy coastal, conservation, recreation, greenways, and open space land. Since few local governments have land-buying experience, Trust staff also provide technical assistance. They help cities and counties put grant applications together and are part of the negotiation and acquisition team during the purchase process.</p>	
Web site: http://www.dca.state.fl.us/ffct/	

Funding Type: State	Jurisdiction: FL
Funding Program: Florida Recreation Development Assistance Program	
Implementing Agency: Florida Department of Environmental Protection, Division of Recreation & Parks, Bureau of Design & Recreation Services	
Intended for: includes the construction or renovation of recreational trails	
<p>Description: The Florida Recreation Development Assistance Program (FRDAP) is a competitive program which provides grants for acquisition or development of land for public outdoor recreation use. The program is administered by the Florida Department of Environmental Protection (DEP). The Bureau of Design and Recreation Services of DEP's Division of Recreation and Parks has direct responsibility for FRDAP. Funds from FRDAP may be used to acquire or develop land for public outdoor recreation or to construct or renovate recreational trails. Municipal or county governments or other legally constituted entities with the legal responsibility to provide public outdoor recreation may apply for FRDAP funds. FRDAP grant applications may be submitted during an announced submission period, usually early fall each year. The applicant is required to supply a match at certain funding levels. The local match requirement is based upon the total project cost.</p>	
Web site: http://www.dep.state.fl.us/parks/bdrs/frdap.htm	

Funding Type: Federal	Jurisdiction: Nationwide
Funding Program: Recreational Trails Program	
Implementing Agency: U.S. Department of Transportation's Federal Highway Administration (FHWA)	
Intended for: Trails	
Description: The U.S. Congress first authorized the Recreational Trails Program in the Intermodal Surface Transportation Efficiency Act of 1991. It was reauthorized in 1998 under the Transportation Equity Act for the 21st Century (TEA-21). The Recreational Trails Program provides funds to the States to develop and maintain recreational trails and trail-related facilities for both nonmotorized and motorized recreational trail uses. Examples of trail uses include hiking, bicycling, in-line skating, equestrian use, cross-country skiing, snowmobiling, off-road motorcycling, all-terrain vehicle riding, four-wheel driving, or using other off-road motorized vehicles.	
Web site: http://www.fhwa.dot.gov/environment/rectrails/index.htm	

Funding Type: Federal	Jurisdiction: Nationwide
Funding Program: Land and Water Conservation Fund (LWCF) Grants	
Implementing Agency: National Park Service	
Intended for: includes trails and greenways	
Description: This Federal funding source was established in 1965 to provide "close-to-home" park and recreation opportunities to residents throughout the United States. Money for the fund comes from the sale or lease of nonrenewable resources, primarily federal offshore oil and gas leases and surplus federal land sales. LWCF grants can be used by communities to build a variety of parks and recreation facilities, including trails and greenways. LWCF funds are distributed by the National Park Service to the states annually. Communities must match LWCF grants with 50 percent of the local project costs through in-kind services or cash. All projects funded by LWCF grants must be used exclusively for recreation purposes, in perpetuity. Projects must be in accordance with each State's Comprehensive Outdoor Recreation Plan. \$140 million dollars is available to states through this program in Fiscal Year 2002. Through the life of this program, \$3.2 billion dollars has been allocated, nearly 2.5 million acres have been acquired, and 38,000 land and water projects have been funded.	
Web site: http://www.nps.gov/nrcr/programs/lwcf/	

Funding Type: Federal	Jurisdiction: Nationwide
Funding Program: Transportation Enhancements (TE)	
Implementing Agency: Federal Highway Administration via FDOT & IRCMPO	
Intended for: includes trails and other bicycle/pedestrian facilities	
Description: Created in 1991 under the Intermodal Surface Transportation Efficiency Act (ISTEA), renewed in 1998 with the Transportation Equity Act for the 21st Century (TEA-21), then renewed again in 2005 with the Safe, Accountable, Flexible, Efficient Transportation Equity Act, A Legacy for Users (SAFETEA-LU), Transportation Enhancements (TE) require every State to reserve at least 1 percent of their Federal surface transportation funds for designated	

Transportation Enhancements Activities, such as pedestrian and bicycle facilities, pedestrian and bicycle safety and education, and the conversion of abandoned railway corridors to trails. Between Fiscal Year 1992 and Fiscal Year 2005, the Federal government provided approximately \$437 million in TE funds to Florida. As with other Federal-aid funding, the Federal government typically pays for 80 percent of project costs. The project sponsor – a State, a local government or a non-governmental organization – pays the balance. Bicycle and pedestrian facility improvements represent the largest of the twelve eligible transportation enhancement activities (approximately 47 percent of TE spending).

Web site: <http://www.enhancements.org/>

Funding Type: Private	Jurisdiction: Nationwide
Funding Program: AmeriCorps' National Civilian Community Corps (NCCC)	
Implementing Agency: AmeriCorps' National Civilian Community Corps (NCCC)	
Intended for: includes trail building or trail improvements	
Description: One project that NCCC members work on is the building or improving of trails. AmeriCorps' NCCC members created or improved more than 200 miles of hiking trails in 25 states nationwide. Teams cleared trees and brush, leveled trails to comply with federal guidelines on handicapped access, implemented erosion control techniques, and created and updated signs. These trails are located in rural, urban, and national parks from California to Maine, and are used by tens of thousands of Americans each year.	
Web site: http://www.americorps.org/nccc/	

Funding Type: Private	Jurisdiction: Nationwide
Funding Program: Kodak American Greenways Awards	
Implementing Agency: The Conservation Fund	
Intended for: planning and design of greenways	
Description: The Kodak American Greenways Awards, a partnership project of Kodak, The Conservation Fund, and the National Geographic Society, provides small grants to stimulate the planning and design of greenways in communities throughout America. The annual awards program was instituted in response to the President's Commission on Americans Outdoors recommendation to establish a national network of greenways. Made possible by a generous grant from Eastman Kodak, the program also honors groups and individuals whose ingenuity and creativity foster the creation of greenways.	
Web site: http://www.conservationfund.org	

Funding Type: Private	Jurisdiction: Nationwide
Funding Program: Bikes Belong Coalition	
Implementing Agency: Bikes Belong Coalition	
Intended for: bicycle facilities projects	
Description: The Bikes Belong Coalition seeks to assist local organizations, agencies, and citizens in developing bicycle facilities projects that will be funded by TEA-21, the Transportation Equity Act for the 21st Century. The Bikes Belong Coalition will accept applications for grants of up to \$10,000 each, and will consider successor grants for continuing projects. Funding decisions are made on a rolling basis.	
Web site: http://www.bikesbelong.org	

Funding Type: Private	Jurisdiction: Nationwide
Funding Program: Fish America Foundation	
Implementing Agency: Fish America Foundation	
Intended for: can include greenways that enhance or conserve water resources	
Description: Fish America Foundation provides funding to public and private organizations for projects that enhance or conserve water and fisheries resources, including community efforts. In the last 18 years, the Foundation has provided 620 grants totaling more than \$4.9 million to improve the fisheries resource in all 50 states and Canada. To apply for a grant, send a completed application, a letter of support from a state resource agency, and evidence of your organization’s nonprofit status. The grant award is approximately \$10,000.	
Web site: http://www.asafishing.org/content/conservation/fishamerica/	

Funding Type: Private	Jurisdiction: Nationwide
Funding Program: Oracle Corporate Giving Program	
Implementing Agency: Oracle	
Intended for: can include trails/greenways	
Description: Oracle provides grants to medical research, endangered animal protection, environmental protection, and K-12 math, science, and technology education. Past recipients have included trail groups.	
Web site: http://www.oracle.com/corporate/giving/community/index.html?giving.html	

Funding Type: Private	Jurisdiction: Nationwide
Funding Program: The Global ReLeaf Heritage Forest Program	
Implementing Agency: American Forests	
Intended for: planting tree seedlings on public lands	
Description: The Global Relief Heritage Forest Program, American Forestry Association, provides funding for planting tree seedlings on public lands. Emphasis is placed on diversifying species, regenerating the optimal ecosystem for the site, and implementing the best forest management practices.	
Web site: http://www.americanforests.org/global_releaf/grants/	

Funding Type: Private	Jurisdiction: Nationwide
Funding Program: National Trails Fund	
Implementing Agency: American Hiking Society	
Intended for: hiking trails	
Description: The American Hiking Society's National Trails Fund is the only privately funded national grants program dedicated solely to hiking trails. National Trails Fund grants have been used for land acquisition, constituency building campaigns, and traditional trail work projects. Since the late 1990's, the American Hiking Society has granted nearly \$200,000 to 42 different organizations across the U.S. For more information, please see the Web site.	
Web site: http://www.americanhiking.org/alliance/fund.html	

Funding Type: Federal	Jurisdiction: Nationwide
Funding Program: Safe Routes to Schools	
Implementing Agency: Florida Department of Transportation	
Intended for: Alternative transportation for children	
Description: The Safe Routes to School Program (SRTS) was authorized in August 2005 by Section 1404 of the federal transportation act, SAFETEA-LU (the <i>Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users</i>). This program will provide a total of \$612 million in Federal-aid highway funds to State Departments of Transportation (DOTs) over five Federal fiscal years (FY2005-2009), to make it safer, easier, and more fun for children in grades K through 8, to walk or bicycle to and from school. The Florida Department of Transportation will be receiving approximately \$28.7 million for SRTS, through FY 2009. These funds will be administered through the seven FDOT Districts and overseen by the State Safe Routes to School Coordinator. Program guidelines and an application are being developed, which will result in a competitive application process for infrastructure projects and non-infrastructure programs.	
Web site: http://www.dot.state.fl.us/safety/SRTS_files/SRTS.htm	

Florida Recreational Use Statute

FLORIDA STATUTES TITLE XXVIII NATURAL RESOURCES; CONSERVATION, RECLAMATION, AND USE CHAPTER 375 OUTDOOR RECREATION AND CONSERVATION

375.251 Limitation on liability of persons making available to public certain areas for recreational purposes without charge.

(1) The purpose of this act is to encourage persons to make available to the public land, water areas and park areas for outdoor recreational purposes by limiting their liability to persons going thereon and to third persons who may be damaged by the acts or omissions of persons going thereon.

(2)(a) An owner or lessee who provides the public with a park area or other land for outdoor recreational purposes owes no duty of care to keep that park area or land safe for entry or use by others, or to give warning to persons entering or going on that park area or land of any hazardous conditions, structures, or activities thereon. An owner or lessee who provides the public with a park area or other land for outdoor recreational purposes shall not by providing that park area or land:

1. Be presumed to extend any assurance that such park area or land is safe for any purpose,
2. Incur any duty of care toward a person who goes on that park area or land, or
3. Become liable or responsible for any injury to persons or property caused by the act or omission of a person who goes on that park area or land.

(b) This section shall not apply if there is any charge made or usually made for entering or using such park area or land, or any part thereof, or if any commercial or other activity, whereby profit is derived from the patronage of the general public, is conducted on such park area or land, or any part thereof.

(3)(a) An owner of land or water area leased to the state for outdoor recreational purposes owes no duty of care to keep that land or water area safe for entry or use by others, or to give warning to persons entering or going on that land or water of any hazardous conditions, structures, or activities thereon. An owner who leases land or water area to the state for outdoor recreational purposes shall not by giving such lease:

1. Be presumed to extend any assurance that such land or water area is safe for any purpose,
2. Incur any duty of care toward a person who goes on the leased land or water area, or

3. Become liable or responsible for any injury to persons or property caused by the act or omission of a person who goes on the leased land or water area.

(b) The foregoing applies whether the person going on the leased land or water area is an invitee, licensee, trespasser, or otherwise.

(4) This act does not relieve any person of liability which would otherwise exist for deliberate, willful or malicious injury to persons or property. The provisions hereof shall not be deemed to create or increase the liability of any person.

(5) The term "outdoor recreational purposes" as used in this act shall include, but not necessarily be limited to, hunting, fishing, swimming, boating, camping, picnicking, hiking, pleasure driving, nature study, water skiing, motorcycling, and visiting historical, archaeological, scenic, or scientific sites.