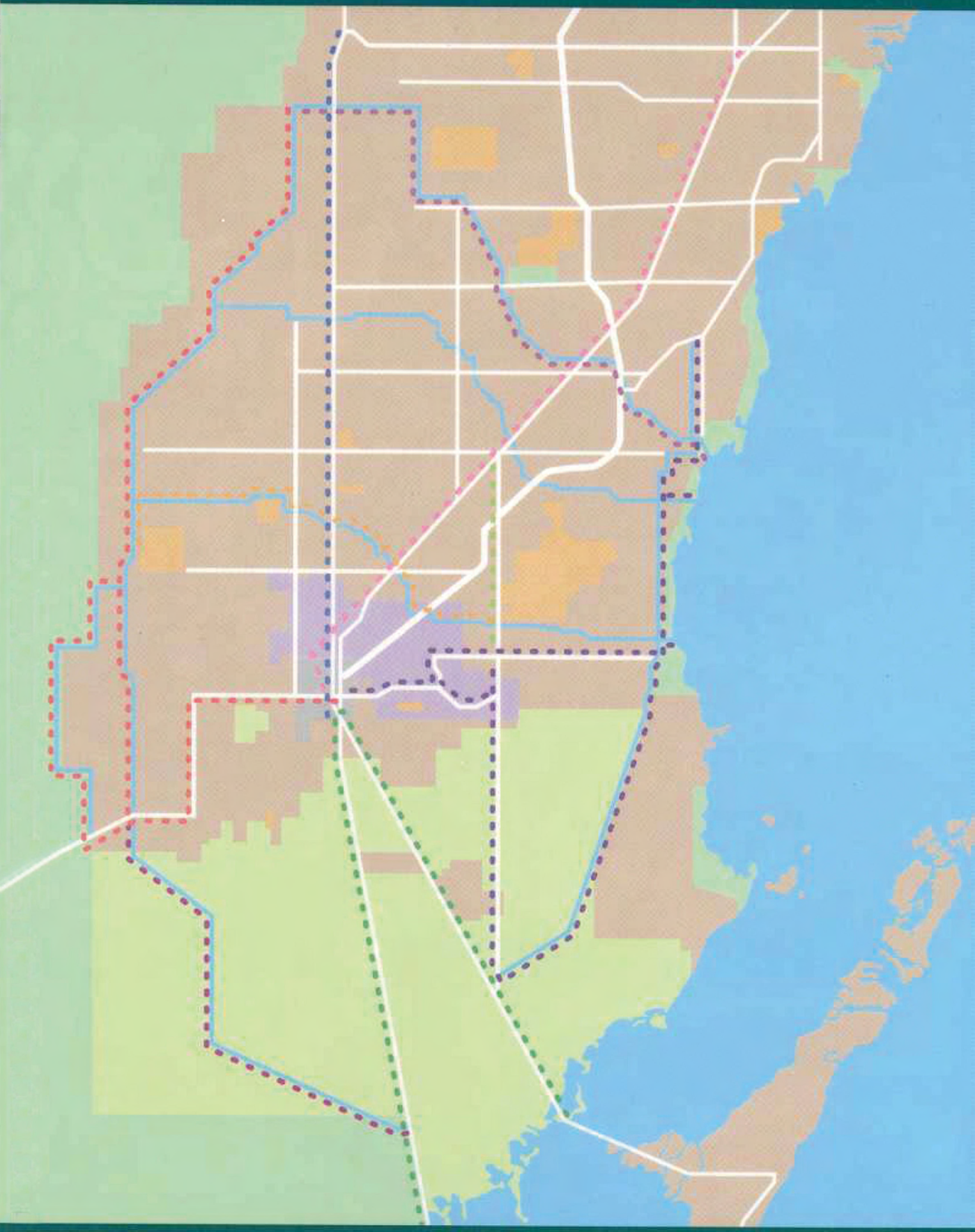
South Dade Greenway Network



Master Plan

South Dade Greenway Network

Master Plan

November, 1994

The Redland Conservancy

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Preface

The primary mission of this master plan was to identify the most appropriate corridors for a series of greenways. Therefore, the bulk of this report is devoted to site inventory and trail recommendations, with general design principles outlined.

From the beginning, the team looked to the success of the Pinellas Trail, where approximately 30% of the 1.5 million trail users are commuters. This indicated that residents used the Pinellas Trail frequently for other than purely recreational purposes. We concluded that a comprehensive network of safe and enjoyable trails can reduce automobile trips in Dade County.

Alternative transportation is one of the goals of the South Dade Greenway Network. We are pleased to note that the first trail scheduled to open is the South Dade Trail at the Metrorail Dadeland South station. Connecting to Metrorail gives trail users the option of leaving their cars at home.

Florida bicycle fatalities are three times higher than the national average. In 1993, alone, Dade County incurred 139 deaths from walking and biking. With 82% of the SDGN designated as off road, we can address a serious safety problem and eventually provide safe passage to pedestrians, cyclists and school children.

As planned, the South Dade Greenway Network will be within 2-3 miles of every resident living south of Coral Reef Drive. Its path through rural and pristine areas will visually reinforce the idea that deep South Dade is *the* "green backyard" of Dade County.

Realization of the system depends on cooperation from agencies who own rights of way, and funding (especially ISTEA funds). The combination of the two will guarantee that the entire 194 miles could be completed within five to ten years. At a minimum, at least 42% of the system will be built within the first five years, since funding and / or commitments are already in place.

Almost 50% of the proposed greenways run alongside canals, an important east / west connector in the greenway system. Historically, canals have been treated as merely functional drainage ditches. However, with imaginative and careful planning, they can be beautified with trails and become attractive waterways flowing through communities, while still maintaining their vital role in flood control.

Before Hurricane Andrew, South Dade received nearly two million visitors a year, most destined for the Everglades, Biscayne National Park and the Florida Keys. Three Trails will connect the two national parks and link to Monroe County, which will be an impressive addition to these ecotourism attractions.

A public project of this scope, and involving various governmental jurisdictions, requires a coordinating entity for management and maintenance. The creation of a Trail Authority is one of the most significant recommendations made in this report. We are heartened that the Metropolitan Planning Organization is considering our request to initiate this process.

This master plan is the first step in creating the South Dade Greenway Network. At one time, Dade County was progressive on planning for trails and greenways, but during the last decade momentum was lost. With the South Dade Greenway Network, Dade will have the largest continuous trail system in the State of Florida and one of the most comprehensive urban systems in the nation.

Lastly, we recommend that approximately $1.5 million be allocated by the Metropolitan Planning Organization to produce construction documents for all ten trails so that the system will have one team of designers. In addition to having a coherent design, this streamlined process will also save time and money by consolidating the bid process.

We are pleased to present the South Dade Greenway Network Master Plan to the community, potential trail users, elected and appointed officials, transportation planners and other interested parties for consideration and implementation. We sincerely hope that our efforts will galvanize public support for funding of trails and greenways as an integral part of Dade County's infrastructure improvements.

Respectfully,

Kitty Roedel
Project Manager
The Redland Conservancy

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Terms, Definitions & Abbreviations

ADA: American with Disabilities Act
AASHTO: American Association of State Highway and Transportation Officials
CDMP: Metro Dade Comprehensive Development Master Plan
CARL: Conservation & Recreation Lands
DEP: Florida Department of Environmental Protection
DERM: Department of Environmental Resources Management
EEL: Metro Dade Environmental Endangered Land Program
MDPW: Metro Dade Department of Public Works
FDOT: Florida Department of Transportation
FHWA: Federal Highway Administration
ISTEA: Inter-Modal Surface Transportation Enhancement Act; FHWA funds specifically made available for bicycle/pedestrian activities.
MPO: Metropolitan Planning Organization
MUTCD: Manual on Uniform Traffic Control Devices
OGT: Florida Office of Greenways and Trails, DEP
PD & E: Planning, Design & Engineering
R.O.W.: Right(s) of Way; land typically owned adjacent to transportation or utility corridors.
SFWMD: South Florida Water Management District
SDGN: South Dade Greenway Network
TIP: Transportation Improvement Program
Trail: One of ten corridors in the SDGN
trail: physical pathway (paved or unpaved) along any corridor of the SDGN

South Dade Greenway Network

Executive Summary

Executive Summary

Vision Statement

Out of the chaos of Hurricane Andrew, a community desire emerged to create a comprehensive system of multi-purpose Trails in South Dade county that would provide scenic, recreational and utilitarian corridors to be enjoyed by both residents and tourists.

- The South Dade Greenway Network (SDGN) will be an organized system of ten interconnecting Trails that totals 194 miles in length.
- The SDGN will traverse the area south of Kendall Drive to the Monroe County line; and Biscayne Bay to Everglades National Park.
- The SDGN will utilize publicly owned rights of way and will require acquisition of just a few frontage pieces along three of the Trails (approximately 13.8 acres).
- The SDGN will be built on rights of way owned by The South Florida Water Management District (98.1 miles), Florida Department of Transportation (54.3 miles), Metro Dade Public Works (41.1 miles) and City of Homestead (0.5 miles).
- Bicycle, pedestrian, equestrian, canoe and fishing activities will be included in the SDGN, with various Trails being designated as multi-purpose.
- The SDGN will be built in phases. The South Dade Trail (Phase One) will open in 1995/96. The Southern Glades Trail and Krome Trail (Interim) could open in 1995/96. The entire SDGN could be completed and open to the public as early as 2005.
- 147.4 miles, or 76%, of the SDGN will be paved.
- 158.8 miles, or 82% of the SDGN will be built off road.
- 82 linear miles of the 194 mile SDGN, or 42%, are currently programmed for improvements.

- The SDGN will provide 45.6 miles of equestrian trails and 44 miles for canoes.

- The SDGN will be within 2-3 miles of every resident south of Coral Reef Drive.

- The total estimated cost to construct the SDGN is $14,545,542.55 or $74,977 per linear mile.

- Federal Transportation Enhancement funds (90/10 match) may be utilized to build the SDGN Trails not currently programmed for improvement, reducing substantially the local cost of constructing the Greenway system.

- Trail amenities may include: signage, rest areas, emergency phones, display maps, public art, parking, landscaping, canoe lauches and observation towers.

- There will be 150 intersections in the SDGN, the majority of which are located on rural or suburban two lane roads.

- The 194 mile SDGN and its ten Trails will provide access to hundreds of community assets, including schools, parks, tourist attractions, shopping malls, historic structures, various residential communities and employment centers.

- It is recommended that Metro Dade County establish a Trail Authority with a dedicated source of funding with singular responsibility for construction, management, maintenance and promotion of the SDGN and future Trails.

- The SDGN will be linked to the more populated areas of Dade County (north of Kendall Drive) via four north/south connectors: Krome Avenue, US1/FEC, Old Cutler/SW 87 Avenue and the Kendall area via the Hammocks Town Center at SW 102 Ave.

- An ISTEA transportation enhancement application has been submitted for the Demonstration Project of the SDGN. It is 45.9 miles long and is estimated to cost $6.64 million. Partners in the project are Metro Dade Public Works and South Florida Water Management District. The request includes completing the Biscayne Trail and portions of the Everglades Trail. It has been ranked as the #1 priority project (bike/ped) for the 1997 ISTEA funding cycle.

- The SDGN has been included in the 94/95 Transportation Improvement Program approved by the Metropolitan Planning Organization Board on May 12, 1994.

- The SDGN is consistent with the Metro Dade County Comprehensive Development Master Plan and will be included in the MPO's Comprehensive Bicycle Facilities Master Plan.

- Dade County is the only county in the U.S. that has two national parks. The SDGN will link Biscayne National Park and Everglades National Park.

- When completed, the SDGN will be the longest, continuous regional greenway/trail system in the State of Florida.

- The SDGN will utilize or connect with four existing bike paths at Old Cutler, SW 87 Avenue, M Path at Metrorail and Black Creek.

- Sixteen proposed Trailheads have been identified to service the SDGN, many providing parking, restrooms, phones, beverages and information. Two Trailheads will have to be constructed. An additional 20 rest areas have been proposed along the ten Trails.

- The SDGN will require a unified signage system throughout the 194 miles due to its multi-jurisdictional nature and its potential to attract a significant number of tourists. An interpretive signage system should be implemented to showcase and inform Trail users of the unique natural features and wildlife visible from the Trail.

- The SDGN will connect to mass transit at the Metrorail Dadeland South station. Metrorail policy currently allows cyclists to board the trains.

- The Plan recommends the optimum trail to be 12 feet wide, paved, and off road. In some instances, due to R.O.W. or other restrictions, trails may be less than 12 feet wide, unpaved or even on road. Trails in the SDGN range from 4 feet to 12 feet in width.

- Trails will comply with the American with Disabilities Act requirements. The Plan recommends, wherever practicable, that trails be built to AASHTO standards.

- Many of the Trails, and especially the Everglades, Southern Glades and Biscayne Trails, will feature "watchable wildlife" opportunities.

- The cities of Homestead and Florida City will have portions of Trails running through their municipalities.

- The SDGN will be an attraction for ecotourists and could play a significant role in enhancing economic development opportunities in Florida City and Homestead.

- The Plan recognizes that the South Florida Water Management District, the U.S. Corps of Engineers, the National Audubon Society and others are developing various long-term scenarios to acquire land and/or rework various canals that have been designated as Trails. The Plan recommends that during the next decade, at such time when flow ways are implemented, the Trails and their improvements be reestablished at the perimeter of flooding or the newly reconfigured canal bank/levee.

- Existing policies of Metro Dade County, Florida Department of Transportation, Federal Highway Administration and South Florida Water Management District recommend the inclusion of bikeways along roadways that are planned for improvement and public access and recreational use of canal rights of way.

- Landscaping of the Trails will emphasize xeriscaping and native materials and placement on canal banks shall recognize the maintenance requirements of the South Florida Water Management District.

- The SDGN will be located in or impact the following Metro Dade County Commission Districts: 7, 8, 9, 10 & 11.

South Dade Greenway Network

National & State Perspective

National And State Perspective

Introduction

The United States' first national park was created at Yellowstone, Wyoming, in 1872, to preserve the site's unique geysers and other natural features. Since then, the park system has expanded to include many other areas noted for their extraordinary natural and cultural resources.

Over the past century, America has invested enormous sums of money in our federal and state parks, forests, and preserves. While we have the finest national park system in the world, most of these parks tend to be far from where people live and are limited in their ability to meet the growing diversity of America's recreation and conservation needs. Increasingly, outdoor recreation occurs close to home, in or near the cities and suburbs where 80 percent of Americans live and work. As a result, in 1987, the President's Commission on Americans Outdoors recommended the establishment of a national "network of greenways to provide people with access to open spaces close to where they live, and to link together the rural and urban open space in the American landscape."

The Commission also called for a "prairie fire of local action" to implement the greenway concept. Today, this prairie fire has ignited, and greenways are being developed in hundreds of communities across the country.

What is a greenway?

> **greenway** (*gren'-wa*) n. 1) A linear open space established along either a natural corridor, such as a riverfront, stream valley, or ridge line, or overland along a railroad right-of-way converted to recreational use, a canal, a scenic road, or other route. 2) Any natural or landscaped course for pedestrian or bicycle passage. 3) An open-space connector linking parks, nature reserves, cultural features, or historic sites with each other and with populated areas. 4) Locally, certain strip or linear parks designated as a parkway or greenbelt. [American neologism: green + way; origin obscure.]

Greenways are corridors of protected open space managed for conservation and recreation purposes. Greenways typically follow linear landscape features such as rivers, streams, and ridgelines. They are also being created along canals, abandoned railroad lines, utility corridors, country roads, and other manmade features. Greenways are, of course, not new. The concept grew out of the work of landscape

architect Frederick Law Olmsted, who coined the phrase "parkway" in 1865, and was the designer of some of the nation's first linear parks. It evolved with the development of the Appalachian Trail by Benton McKaye, in 1921, the urban parkways of the 1930's, and the post-World War II greenbelt concept. The term itself was not used until at least 1959 and did not come into widespread use until the 1970's.

In his book *Greenways for America*, author Charles Little identifies five major types of greenway. These are:

1. Urban riverside greenways, usually created as part of (or instead of) a redevelopment program along neglected, often run-down, city waterfronts.
2. Recreational greenways, featuring paths and trails of various kinds, often of relatively long distance, based on natural corridors, as well as man-made features such as abandoned rail beds, canals, or other public rights-of-way.
3. Ecologically significant natural corridors, usually along rivers and streams and sometimes ridgelines, to provide for wildlife migration and habitat protection as well as nature study.
4. Scenic and historic routes, usually along a road or highway (or sometimes a waterway), the most representative of which make an effort to provide pedestrian access along the route or at least places to alight from a car.
5. Comprehensive greenway systems or networks, usually based on natural land forms such as valleys and ridges, but sometimes simply an opportunistic assemblage of greenways and open space of various kinds to create an alternative municipal or regional green infrastructure.

Benefits of Greenways

Greenways can provide a multitude of benefits for people, wildlife, and the economy. More expansive and flexible than traditional, more confined parks, greenways can provide a kind of community trail system for the linear forms of outdoor recreation Americans are engaged in today, such as: hiking, jogging, bicycling, rollerblading, horseback riding, cross country skiing, or just plain strolling.

However, greenway benefits are not limited to recreation. They can provide lifelines for wildlife moving from one isolated natural area to another; they can help preserve biodiversity and wildlife areas by protecting environmentally sensitive land along rivers, streams, and wetlands. They can protect water quality by providing a buffer against urban run-off and non-point source pollution. Greenways can soften and direct urban growth as belts of open space around neighborhoods and towns; they can also act as outdoor classrooms or as a way to school apart from traffic.

Greenways can also stimulate the economy by providing an array of economic and quality of life benefits. Numerous studies demonstrate that linear parks can increase nearby property values, which can in turn increase local tax revenues. Spending by residents on greenway-related activities helps support recreation-oriented businesses and employment, as well as other businesses that are patronized by greenway users. Greenways often provide new business opportunities and locations for commercial activities like bed and breakfast establishments, and bike and canoe rental shops. Greenways are often major ecotourist attractions which generate expenditures on lodging, food, and recreation-oriented services. Finally, greenways can reduce public expenditures by lowering the costs associated with flooding and other natural hazards.

In summary, greenways are a multi-purpose concept that allows community groups and public agencies to link existing parks, historic sites, and natural areas with numerous environmental, recreational, and economic benefits. Another major reason that greenways are so popular is because they are cost effective. By connecting parks and other existing facilities, greenways provide more "bang for the buck" compared to regular parks. For example, a recent study by the Maryland Department of Natural Resources found that 94% of those surveyed thought greenways were a good use of state funds and 67% liked greenways better than more traditional, confined parks.

Greenways and Transportation

Greenways can provide safe, low-cost, non-motorized transportation routes for commuters going to work and children traveling to and from school. By lessening our dependence on the automobile, greenways can improve air quality, alleviate road congestion, and reduce highway construction costs.

The potential for the development of greenways as an alternative transportation network is illustrated by the results of a nationwide public opinion poll conducted by Louis Harris, Inc. in 1992. According to the survey, 72% of the respondents said that they want "safe and accessible pathways for walking, running, and bicycling included as part of their area's transportation system." Perhaps more importantly, fully 53% of all respondents said that they "would sometimes commute to work by bicycle, if there were safe, separate, designated bike paths," and fully 13% of respondents indicated that "they would walk or bike to work regularly if there were good facilities for doing this."

Table 1 - Statistics to illustrate the popular nature of greenways for both transportation and recreation.
Provided by theThe Federal Highway Administration

Trail	Users Per Year
Minuteman Trail - Boston, Massachusetts	2,100,000
Washington & Old Dominion Trail - Fairfax, Virginia	2,000,000
Pinellas Trail - Tampa, Florida	1,500,000
Burke Gilman Trail - Seattle, Washington	1,000,000
Baltimore & Annapolis Trail - Baltimore, Maryland	500,000
St. Marks Trail - Tallahassee, Florida	100,000

Greenways and Community Safety

When recreational trails and other types of greenways are proposed some people worry that they will cause crime, vandalism or other disturbances. In fact, there is little evidence to support the fear that greenway trails will produce disturbance to private landowners. In fact the evidence is to the contrary. The following studies have been performed on this issue:

- A 1980 study by the Minnesota Department of Natural Resources compared landowners attitudes on a pair of proposed trails with land owner attitudes along a pair of similar trails already established. On the proposed trails, 75% of landowners thought that if a trail was constructed it would mean more vandalism and other crimes. By contrast, virtually no landowners along the two constructed trails (0% and 6%, respectively), agreed with the statement "trail-users steal." (Minnesota Dept. of Natural Resources, 1980)

- A 1987 study of Seattle's Burke-Gilman Trail found little or no crime or vandalism experienced by adjacent property owners. The study surveyed property owners, realtors, and police officers. According to the realtors, property "near" the trail was significantly easier to market and sells for an average of 6% more than similar properties located elsewhere. Nearly two-thirds of adjacent landowners believed that the trail "increased the quality of life in the neighborhood," and not a single resident thought the trail should be closed. (Evaluation of the Burke Gilman Trail's effect on Property Values and Crime, Seattle, WA Engineering Dept., 1987)

- A former opponent of the Burke-Gilman trail (whose home is on the trail) stated that the "trail is much more positive than I expected. I was involved in citizens groups opposed to the trail. I now feel that the trail is very positive; [there are] fewer problems than before the trail was built; [there was]more litter and beer cans and vagrants [before it was built]." Not a single resident surveyed said that present conditions were worse than prior to construction of the trail.

- A 1992 study by the National Park Service of the impact of rail-trails on nearby property owners found that "a majority of landowners reported no increase in problems since the trails opened. That living near trails was better than they had expected it to be, and that living near the trails was better than living near unused railroad lines before the trails were opened." (Impact of Rail-Trails, National Park Service, 1992).

- Comments from several landowners in California and Florida are typical: "Vandalism, robbery, and safety concerns I originally had were unfounded." (Landowner on California's Lafayette/Moraga Trail). "I was very opposed to the idea at first, fearing that it would be used by motorcyclists, but I am very pleased with the trail - it provides a safe alternative to using the highway for joggers and bicyclists, and it gives me a safe and comfortable place for my walks." (Adjacent landowner on Florida's St. Mark's Trail)

- A 1988 survey of greenways in several states has found that such parks typically have not experienced serious problems regarding . . .vandalism, crime, trespass, [or] invasion of privacy . . .Prior to developing park facilities, these concerns were strongly voiced in opposition to proposed trails. After park development, however, it was found that fears did not materialize . . . concerns expressed by the neighbors opposed have not proven to be a post-development problem in any of the parks surveyed. ("A Feasibility Study for Proposed Linear Park," Oregon Department of Transportation, Parks and Recreation Division, May 1988.)

- A 1990 study by the Appalachian Trail Conference of crimes on the Appalachian Trail found that despite use by 3-4 million persons per year, that were only 0.05 per 100,000 or 1 in 2 million. This means you are more likely to be struck by lightning or victimized in your home than as a hiker on the Appalachian Trail. (Source: Appalachian Trail Conference, Harpers Ferry, West Virginia)

Where Are Greenways Located?

Greenways can be found in all states and regions of the country. Today there are an estimated 3000 greenways already in existence across the United States. These vary from large multi-state greenways like the Appalachian Trail or Blue Ridge Parkway, to extensive riverfront promenades like the Riverfront Park in Battle Creek, Michigan, to small stream side parks like the Happy Creek Greenway in Front Royal, Virginia. Numerous big cities have developed metropolitan greenways plans, many of which are well on the way to full implementation. Some of the cities with planned or existing greenway networks include: Denver, Indianapolis, Portland, Raleigh, Atlanta, Chicago, San Francisco, Orlando, and New York.

Greenways vary in size, scope, and nature. Some are ecological corridors with little or no public access; others, like the Pinellas Trail in Tampa, Florida, attract millions of visitors each year. The popularity of greenways is illustrated by the public's response to the National Geographic's June 1990 story about greenways. According to Geographic Society officials, the story "Greenways: Pathways to the Future" generated more requests for reprints than any other story in recent memory. The widespread nature of greenways is also illustrated by the following statistics:

- Rails-Trails - The Rails-to-Trails Conservancy reports that, nationwide, 572 abandoned railroad lines totaling almost 7000 linear miles have been converted into multi-purpose parks for cyclists and pedestrians. In Florida, there are currently 17 completed rail-trail projects totaling 174 miles.

- Waterfronts - The Waterfront Center maintains files on over 1000 waterfront promenades and linear parks located along rivers and harbors in the United States. Many of these waterfront parks are known for their role in attracting tourists and fostering related economic development. For example, the San Antonio Riverwalk is the leading tourist attraction in the State of Texas. The Augusta Canal Project has leveraged more than $100 million in new waterfront development from a public investment of $8 million in a riverfront walkway and park. In Florida, waterfront projects like the river walks in Fort Lauderdale and Jacksonville have leveraged millions of dollars in new investments.

- Save Our Streams - The Izaak Walton League reports that there are over 2000 Save Our Streams projects around the country involving stream side restoration, water quality monitoring, and riverside clean-up. The Florida Canoe and Kayak Association reports that there are 35 Adopt-A-Stream Programs in Florida.

- Wild and Scenic Rivers - There are currently 152 federally designated wild and scenic rivers in 34 states, totaling 10,516 miles, including Florida's Loxahatchee River.

- ISTEA - The Surface Transportation Policy Project reports that a total of $389 million has been spent in the last 3 years on 869 projects involving greenways, rail trails, and other bicycle and pedestrian facilities around the country. (See Table 2)

- National Park Service - In 1993, the Rivers, Trails, and Conservation Assistance Program of the National Park Service provided technical assistance to 130 greenway projects in 46 states. These projects ranged from the development of a regional bikeway system for Cape Cod, Massachusetts, to creating 280 miles of trails and 7 new riverfront parks in New York State.

Table 2 - Nationwide, ISTEA Enhancement Funding for Non-motorized Transportation Facilities
(All Figures in Millions)

Facility Type	Federal Share	Match Share	Total	# of Projects
Rails-Trails	$94.4	$39.0	$133.4	224
Greenway Trails*	$106.3	$38.7	$145.0	366
Other Bicycle and Pedestrian Facilities**	$77.9	$32.8	$110.7	279
Total	**$278.6**	**$110.5**	**$389.1**	**869**

*Greenway Trails includes side paths and off-road trail and bikeway facilities that are not Rail-Trails.

**Other Bicycle & Pedestrian Facilities includes on-road bicycle facilities, overpasses, underpasses, pedestrian sidewalks, plazas, etc.

- Maryland Greenways - The Maryland Greenway Atlas, prepared by the Maryland Greenway Commission, identifies 131 existing and proposed greenway projects in the State of Maryland. Existing greenways in Maryland range from the 184-mile long C&O Canal National Historical Park to the 1200-acre Gwynns Falls Greenway in the City of Baltimore.

Florida Greenways

On January 22, 1993 Governor Lawton Chiles signed an executive order establishing the Florida Greenways Commission and directing it to promote the creation of a statewide "network of green," that will benefit Florida citizens, wildlife, and the environment. Chaired by Lt. Governor Buddy McKay, the commission brings together people from all over Florida to develop a coordinated approach for protecting, enhancing, and managing a statewide "network of green." Subsequent to the establishment of the Florida Greenways Commission, the Florida Department of Environmental Protection established an Office of Greenways and Trails (OGT).

One of the Commission's primary goals is to officially recognize 150 state, regional, and local greenway projects in 1995, the 150th anniversary of Florida's statehood. Mark Benedict, Director of the Florida Greenways Program estimates that there are currently over 150 greenway projects under construction, proposed or existing in Florida. These projects range from huge cross-state projects like the Cross Florida Greenway, a 110 mile-long conservation and recreation area created from the public lands of the now defunct Cross Florida Barge Canal to small local projects such as the Hogtown Creek Greenway in Gainesville, Florida.

The following information provided by the Florida Greenways Commission illustrates the extent of greenway activity in Florida:

- There are 120 local community greenway projects proposed, under construction or already completed in Florida.
- There are currently 17 completed Rail-Trail projects totaling 174 miles. There are 36 other Rail-Trail projects in design or construction.
- There are approximately 27 greenway projects funded by ISTEA.
- There are approximately 15 greenway projects funded by the Florida Communities Trust
- There are approximately 620 miles of multi-use trail currently in existence and 610 miles proposed for use throughout Florida.

The Economic Impact of Greenways

A number of studies have been conducted that examine the impact and benefits of greenways and open space. The results of the major studies are outlined below:

- *The Impact of Rail-Trails*, by the Rivers, Trails, and Conservation Assistance Program, National Park Service, 1992. This study of users on three rails-to-trails projects found that users spent an average of $3.97 to $11.02 per day, generating an annual impact of $1.2 million or more on each trail.

The survey documented that both local users and visitors or tourists also spend as much as $250 per year on trail-related purchases such as bike equipment, clothing, shoes or boots, books, and accessories. The trails attracted spending by non-county residents ranging from $294,000 to $630,000 each year.

- *Does Farmland Protection Pay? The Cost of Community Services in Three Massachusetts Towns*, American Farmland Trust, Northeastern Office, Northampton, Mass., 1992. This study found that open space and farmland make a greater net contribution to three towns' revenues than other types of property. While farms and open space account for relatively smaller amounts of tax revenue ù and would be unable to sustain the tax base alone ù they also make far fewer demands for services. For every $1 collected in property taxes, farms and open spaces require only 33 cents in services. Commercial and industrial development cost slightly more, at 41 cents per $1 of tax revenue. Residential development was a clear loser, costing the communities an average of $1.12 for every $1 of tax generated. The fiscal impact analysis included a full accounting of revenues and expenses for the towns of Agwam, Deerfield, and Gill.

- *A Look at Visitors on Wisconsin's Elroy-Sparta Bike Trail*, University of Wisconsin-Extension, 1988. Exurban and rural trails with historic or natural characteristics that encourage "vacationö-style trips generate more revenue per use than urban and suburban trails used for light recreation and commuting. Studies of Wisconsin's Elroy-Sparta Trail and Sugar River Trail found that spending by out-of-state visitors for lodging, bike rentals, bus shuttle service, and restaurant meals was roughly twice as high as for in-state visitors. A survey of trail users in Minnesota found that users who traveled less than 25 miles to the trail spent an average of just $.61 to $2.68 per day, while those traveling 25 miles or more spent up to $53.20 per day on average.

- *The Illinois Statewide Trail User Study*, North Central Forest Experiment Station, USDA Forest Service, Chicago. This survey of 3,400 users of 19 Illinois trails found a range of spending from just 46 cents per trip on Thorn Creek Trail in south suburban Cook County to more than $200 on the River to River (Horse) Trail in the Shawnee National Forest. Average spending for non-horse-related trail use was $2.89 per trail user. Users said they used the trails often, with 60 percent visiting at least 10 times a year and more than 40 percent estimating their usage as "virtually every week." The survey also documented another measure of trail value: more than 68 percent of those surveyed said they would pay a $5 per year fee to help maintain the trail and develop new trails.

The Green Space Premium

Numerous studies have documented that green space continues to support higher values for nearby real estate. In urban, suburban, and rural areas, properties near trails, forest preserves, rivers, or protected corridors consistently show equal or higher property values than more distant properties and are often easier to sell.

- *Boulder Greenbelt, Colorado* - Estimated Premium: $4.20-$10.20 decrease per foot from greenway. The taxpayers in Boulder, Colorado, decided in 1967 to invest in a network of parks and open space, with an emphasis on the creation of a greenbelt around the city. The 17,000-acre system helped contain the city's development patterns and proved a potent multiplier of property values. A 1978 study found that property values were highest next to the greenbelt and declined with distance from it, at an average rate of $4.20 per foot, with one neighborhood showing a $10.20 per foot fall off. The largest value increases were for houses with views of or immediate access to the greenbelt.

- *Burke-Gilman Trail, Seattle, Washington* - Estimated Premium: 6.5 percent two blocks from the trail. A survey of real estate agents with experience along the 12.1 mile Burke-Gilman Trail found that properties two blocks from the trail are easier to sell than other homes and carry a price premium of about 6.2 percent. Agents were mixed about homes immediately adjacent to the trail, with 42 percent saying they are easier to sell, 30 percent saying sales are more difficult, and 27 percent seeing no effect. A survey of homeowners found that 75 percent of owners who had bought property adjacent to the trail after it opened felt the home would be easier to sell, and 48 percent expected a value premium. Only 4 percent felt their homes would sell for less. Of owners who bought before the trail opened, 33 percent expected sales to be easier, and 15 percent expected a value premium. About 48 percent thought the location would have no effect or couldn't predict the effect, and 8.5 percent felt the property would sell for less. Crime and other problems along the trail were minimal. No respondents felt the trail should be closed.

  Source: *The Effect of the Burke-Gilman Trail Upon Property Values of Adjacent and Nearby Properties and Upon the Property Crime Rate in the Vicinity of the Trail*, Seattle Engineering Department, 1986.

- *Illinois Prairie Path* - Estimated Premium: "Definitely enhances value of adjacent real estate." An informal 1985 survey of 40 experienced real estate professionals found that all agreed that the 40-mile Illinois Prairie Path made properties easier to sell and often created a price premium. Based in Glen Ellyn and Wheaton, the agents said they often advertise the proximity of the path when selling such properties.

  Source: *"Old Plank Trail - Community Impacts,"* Openlands Project, Chicago, 1985.

- *Santa Ana River Corridor, California* - Estimated Premium: $139 million to $201 million in property values. A partially completed trail on the Santa Ana River southeast of Los Angeles was estimated to have a positive effect on property values within one-eighth mile of the trail. Based on similar studies of value premiums next to parks and trails, a conservative premium of 6.5 percent was estimated for the proposed trail extension. Counting only private, taxpaying properties on 6,050 acres in Orange, Riverside, and San Bernadino Counties, total property values were estimated at $2.15 billion (low estimate) to $3.1 billion (high), yielding increases of $139 million to $201 million.

  Source: *Santa Ana River Corridor Master Plan.*

- *Pennypack Park, Philadelphia* - Estimated Premium: 33 percent at 40 feet; 9 percent at 1,000 feet. A 1,300-acre linear park along the Pennypack River in northeast Philadelphia was estimated in 1974 to increase property values by as much as 33 percent, depending on distance from the park. The study targeted 336 properties in 16 different developments and used multiple regression analysis to account for variables such as age of homes, corner locations, and type of house. Houses 40 feet from the park had values 33 percent above similar houses outside of the park's influence. Values at 1,000 feet were 9 percent higher, and at 2,500 feet had a 4.2 percent premium.

  Source: *Urban Open Space: An Investment that Pays,* The Neighborhood Open Space Coalition, New York, 1990, based on "The Effect of a Large Urban Park on Real Estate Values," T.R. Hammer, R. E. Coughlin, and E. T. Horn, Journal of American Planning Association, 1974.

- *Economic Impacts of The Northern Central Rail Trail,* by PKF Consulting for the Maryland Department of Natural Resources, 1994. This study examined the economic impacts of the Northern Central Rail Trail in Baltimore County, Maryland. It found that trail users had grown from 10,000 per year in 1984 to 450,000 per year in 1994. The study found that the value of goods purchased because of the trail was estimated in

excess of $3,380,000 in 1993 and tax revenue generated off of trail related activities was $303,750. The survey also found that 94% of survey respondents felt the trail was a "good use" of state funds and 67% liked greenways better than traditional more confined parks. Likewise, nearly two-thirds of respondents felt the trail increased nearby property values.

South Dade Greenway Network

Regional Context

South Dade Greenway Network Regional Context

The South Dade Greenway Network is an important element of a larger picture of civic improvements and projected private development. South Dade is the site of a number of recent projects that will positively impact the quality of life for area citizens. For many residents of South Florida, the aftermath of Hurricane Andrew was the first time that South Dade was understood to be an area of specific character. A unique combination of natural, agricultural and built elements located within a rural, open space setting, make this area appealing. Additionally, it is strategically nestled between two national parks and the entrance to the Florida Keys, an area of critical concern. Significant amounts of preserved lands (CARL,EEL, etc.) are found in the area as well. It is ideally situated for recreational bicycling due to its flat landscape and a semi-tropical climate. South Dade is an emerging ecotourism destination within the Greater Miami Metropolitan area, which means that its potential bicycling audience is both regional and international.

The Metro Dade Planning Department estimates that 20% of Dade County residents live south of Kendall Drive (SDGN study area). In fact, every resident south of Coral Reef Drive (SW 152nd St.) will live within 2-3 miles of a SDGN trail. Although local residents are the primary population to be served by the SDGN, it should be considered as a regional facility, especially when connections to Metrorail and the Old Cutler Bike Path are factored in.

In the three years following the hurricane, several comprehensive planning efforts have been initiated that will significantly enhance the natural and built environment in South Dade. Many of these efforts will have a direct physical relationship to and/or impact the South Dade Greenway Network. These planning activities are summarized below:

- *New South Dade Plan* - Univ. of Miami & Fl. Intl.. Univ. design faculty. Funded by We Will Rebuild, a community based volunteer planning effort, to create a vision for rebuilding South Dade. The charette process created a comprehensive view of the area destroyed by the hurricane and producing a series of regional scale and site specific design proposals. All four regional issues, transportation, environmental restoration, historic preservation and tourism included the concept of a system of Greenways.

- *The Moss Plan* - Metro Dade Office of Community Development & Bermello/Ajamil.
  A plan for post hurricane rebuilding, with public recovery funds channeled to CDC's (Community Development Corporation) and target areas. The South Dade Greenway Network will be in close proximity to many of these communities and will have direct relationship to various OCD funded community projects.

- *Florida City Plan* - Coordinated by Andres Duany and other design professionals for Florida City.
  This plan identifies Florida City, and in particular Palm Drive, as the focal point for three nationally and internationally significant ecotourist destinations (Florida Keys, Everglades & Biscayne National Parks). The plan sets the stage for redevelopment of Palm Drive which is a critical component of the SDGN. The new Florida City Hall which is under construction has been identified as a potential Trailhead for the SDGN.

- *Redland Preservation & Tourism Plan* - Metro Dade Historic Preservation Division & Univ. of Miami Center for Urban & Community Design.
  The Plan draws a comprehensive vision for the preservation of farmland and historic structures and enhancement of South Dade as an ecotourism destination. The Plan was approved by the Metro Dade Commission in June 1994 and may become a blueprint for managing development in the area. Greenways and Trails are included in the plan as a recommended component.

- *Homestead Air Force Base Reuse Plan & Feasibility Study* - Beacon Council and Post Buckley Schuh & Jernigan.
  The plan was approved/accepted by US Department of Defense for public/private reuse of 2000 acre base. It contains various residential, recreation, government and commercial activities. The SDGN connects to the base via the Tallahassee Connector. The Plan also calls for new arterials through the base with sufficient R.O.W. to build bike paths as an extension of the SDGN.

- *Jordan Commons Plan* - Habitat for Humanity with Armando Montero, architect.
  This is Habitat for Humanity's largest single neighborhood project in the nation. The plan calls for 200 homes on 40 acres to be energy efficient and bicycle/pedestrian oriented. The community will have a recreational park at C-102N canal, which could connect to the SDGN.

- *Water Study Preserves Report* - National Audubon Society.
  A plan that is currently being evaluated by staff of SFWMD. The Governing Board will make a decision and recommendations on land acquisition in November 1994. When implemented, it may impact some canal/levees.

- *Central & Southern Florida Project for Flood Control and other Projects, Canal 111 (C-111)* - U.S. Corps of Engineers.
  A study to reconfigure structural and non-structural modifications to C-111 as part of water flow restoration to Everglades National Park and Florida Bay. This plan may impact the SDGN, should the C-111 basin, north of S.R. 9336, be flooded. The SDGN recommends the use of C-111 as an alternate for the southern terminus of the Everglades Trail.

- *Metro Dade Bicycle Facilities Plan* - Metro Dade MPO & Barton-Aschman.
  The plan will identify existing and proposed bicycle corridors on street and off street in Dade County. It will be integrated in the CDMP. The plan also incorporates the SDGN.

- *Miami Dade Comprehensive Development Plan* - Metro Dade Planning Department.
  The CDMP is currently being updated as part of the Evaluation and Appraisal process required by the State of Florida. The Redland Conservancy and the MPO staff have requested that the SDGN (Kendall south) and the remainder of Dade County (Kendall north) be incorporated into the CDMP, Transportation Element, in both mapping and language.

- *L-31E Freshwater Flow Redistribution Project* - South Florida Water Management District.
  The plan outlines biological monitoring and reconstruction of L-31E to increase fresh water flows through coastal wetlands to Biscayne Bay. This would temporarily disrupt use on portions of the Biscayne Trail.

- *South Dade Watershed Project - WIN Plan Vision* - SFWMD and Univ. of Miami Center for Urban & Community Design.
  This project seeks to integrate land use and water resource planning for the restoration and protection of Biscayne Bay.

- *Coastal Everglades National Preserve* - National Park Service.
  The proposed legislation being drafted by Congressman Peter Deutsch will incorporate government owned lands situated between Everglades National Park and Biscayne National Park. It would offer a higher level of protection to the area, link the two national parks, and would incorporate portions of the SDGN's Southern Glades, Biscayne and Keys' Trails.

- *US 1 Road Widening project (Card Sound Road to Monroe County Line)* - FDOT.
  20.4 mile four-laning of US 1 to include a 10 foot wide shoulder for cyclists (Keys Trail). Project includes panther and crocodile crossings, culverts for water flow through, removing levees and restoring area to a wetland habitat.

In summary, it is clear that the South Dade Greenway Network is integral to an emerging vision for a better South Dade. From individual community projects to regionally coordinated efforts, this vision seeks to enhance the quality of life for all South Dade. The SDGN is an important contribution to creating a new sense of place. It will interconnect the tourist attractions in the area. But more importantly, it will serve as an essential linking system among the residential communities, as an alternate mode of transportation, to schools and local parks and other regional destinations.

History of Greenway Planning in Dade County

In 1969, Dade County (Planning and Parks Departments) produced the "Open Space and Recreation Master Plan." A Greenways map was included in this document for the first time.

In 1972, Dade County (Recreation, Planning and Public Works, Cities of Miami and Miami Beach) published the "Dade County Proposed Bikeways Plan." This document provided a guide for location and scheduling of bikeways in Dade County. The "Decade of Progress Bond Issue," which provided funding for bikeways, utilized this document as a basis for the various bike projects that were constructed.

In 1986, the Metropolitan Planning Organization published the "Comprehensive Bicycle Plan." This plan presented a summary of policy recommendations in four categories: engineering, education, enforcement and encouragement.

In 1993, the MPO undertook a "Bicycle Facilities Plan" which will be published in late 1994. This plan satisfies a Federal/State requirement to establish a bicycle facility plan within the traffic circulation element of the CDMP. The Plan identifies all potential corridors and establishes prioritization for development.

South Dade Greenway Network

Overview

South Dade Greenway Network Overview

The South Dade Greenway Network (SDGN) is an organized system of interconnecting linear corridors, traversing south Dade County from Kendall Drive at the north to Monroe County at the south, and from the Everglades to Biscayne Bay (see Greenway Network Map). There are ten distinct corridors (Trails) within the SDGN and each is described in detail in the Ten Trails chapter.

The SDGN utilizes existing R.O.W. owned by the South Florida Water Management District (SFWMD), by the Florida Department of Transportation (FDOT), Metropolitan Dade County and City of Homestead (see Ownership Map). Only a small portion of land (13.8 acres) must be purchased for R.O.W. to complete the system. The SDGN will provide opportunities for bicycling (both recreational and commuter), roller-skating, walking and jogging, horseback riding, canoeing, fishing and nature study.

The Master Plan calls for the development of 194 total miles; 147.4 miles of paved trails, and 46.6 miles of unpaved trails (see Map Paved, Unpaved). Except for 36 miles, where cyclists will use wide shoulders or shared lanes on roadways, the remaining 158.8 miles will be off-road, separated from automobile traffic (see Map On Road -Off Road).

When completed, the SDGN will elevate Dade County from having one of the least developed trail systems of any major urbanized area, to one of the best in the nation. It will be the only system in the U.S. that connects two national parks, Everglades National Park & Biscayne National Park. Currently, Dade County is the only county in Florida developing a comprehensive trail system and when completed, the SDGN will be Florida's largest. The majority of the SDGN abuts or comes within close proximity to numerous community assets such as schools, parks, tourist attractions, historic sites, nature preserves, local and regional shopping malls and work centers. In fact, a portion of the trail is within 2-3 miles of every resident south of Coral Reef Drive (S.W. 152nd Street). The SDGN Master Plan Map locates community assets in relationship to the SDGN.

The network will serve as main arteries to other bikeway systems which are being planned by the City of Homestead and Florida City; and Dade County's Safeways to Schools program which seeks to provide safe bicycle paths from neighborhoods to local schools. It also connects to four existing bikeways and Dadeland South Metrorail station.

The scenery along the Trails is varied. Views include industrial/commercial areas, urban and suburban residential neighborhoods, the Redland farmlands and canal banks. Some of the Trails run through almost pristine natural environments with abundant wildlife-viewing opportunities. The Trails will be further enhanced with landscaping, directional signage, location maps, trailheads, rest areas, interpretive signs, emergency phones, and other amenities. The chapter on Infrastructure and Amenities will describe the physical characteristics of each of the ten Trails and the elements added to provide for safety, security and aesthetic enjoyment.

Criteria for Corridor Selection

1. Public Ownership (See Ownership Map)

   In a rapidly developing area with high land costs, even in Dade County's "rural" areas, it would not be feasible to purchase large areas of R.O.W. Thus, the search for suitable corridors concentrated on lands already under public ownership. Only a small portion of R.O.W. must be purchased to complete this system, saving significant costs and potential delays in implementation. They are as follows:

   - Scattered sections along Palm Drive (S.W. 344th Street) between S.W. 187th Avenue & S.W. 217th Avenue.
   - S.R. 9336 from S.W. 217th Avenue to Everglades National Park
   - Tallahassee Road (S.W. 137th Avenue) from S.W. 264th Street to US Highway 1

In all, approximately 13.8 acres, composed of 25 to 35 foot wide sections must be acquired.

2. Policies Permitting Use

   All of the agencies providing R.O.W. have policies allowing and/or mandating the use of their land for bicycle/pedestrian corridors and/or recreational activities. In some instances, their R.O.W. already have bike paths or have proposed plans for development of bicycle paths or lanes (see Appendix for policies). Although Florida Power & Light has wide power line easements spreading throughout the entire county, because of their reluctance to permit public usage, these easements were not considered.

3. Programmed Improvements (See Map of Programmed Improvements)

   Almost 42% or 82 miles of the SDGN is already programmed for development by various agencies.

4. Connections to Metrorail

   The SDGN connects to the Dadeland South Station. Metrorail allows cyclists to carry their bicycles on the train, thereby providing convenient access for North Dade residents and ecotourists to any of the ten Trails.

5. Connection to Major Population Centers

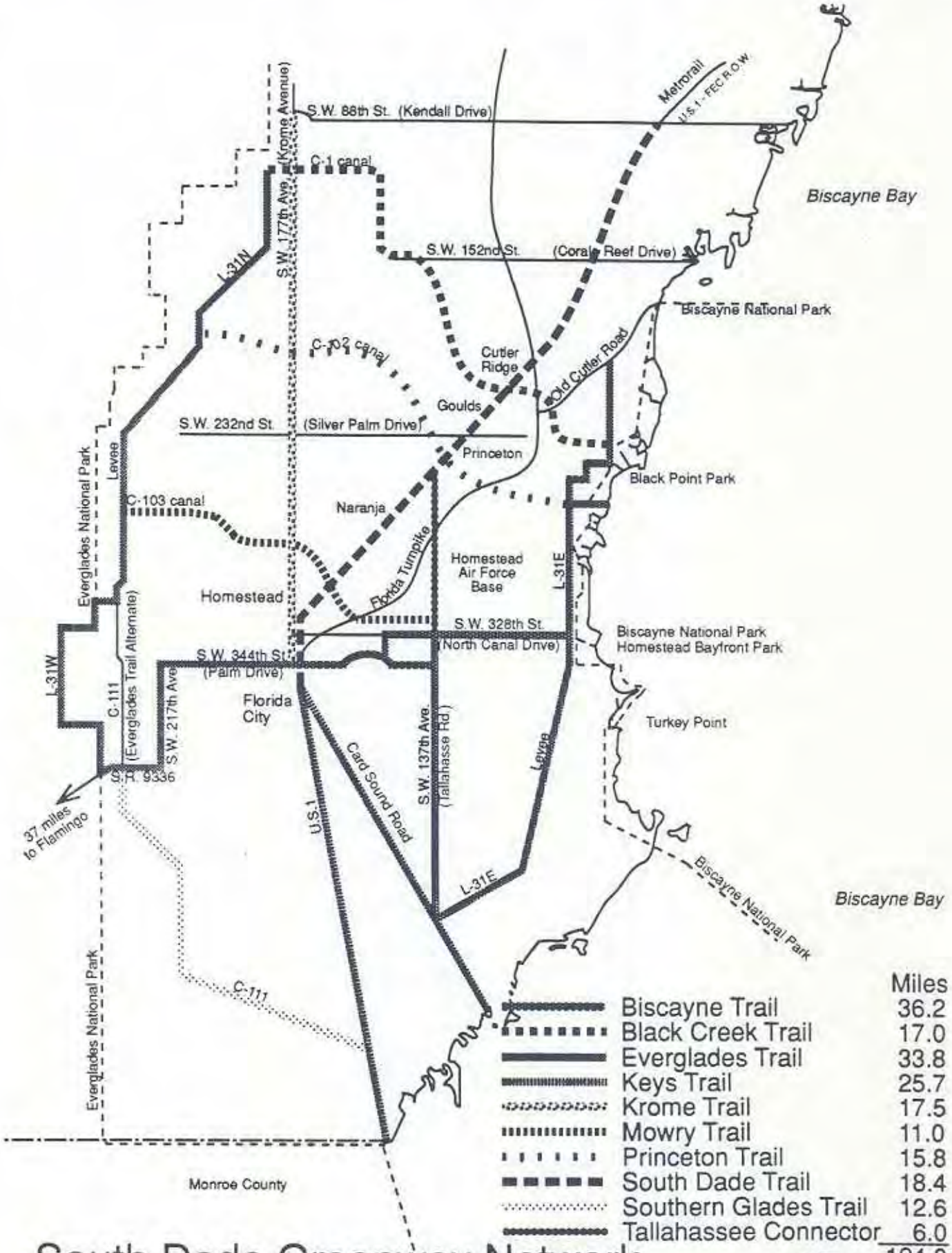
   Connections along Old Cutler Road, the U.S. 1 Exclusive Bus Lanes, Krome Avenue, and the Hammocks in west Kendall connect the SDGN to the rest of Dade County and major neighborhoods.

6. Proximity to Community Assets

   The SDGN is within 2-3 miles of numerous community assets such as schools, parks, centers of work, etc., thereby making commuting by bicycle more convenient.

7. Proximity to Natural Areas

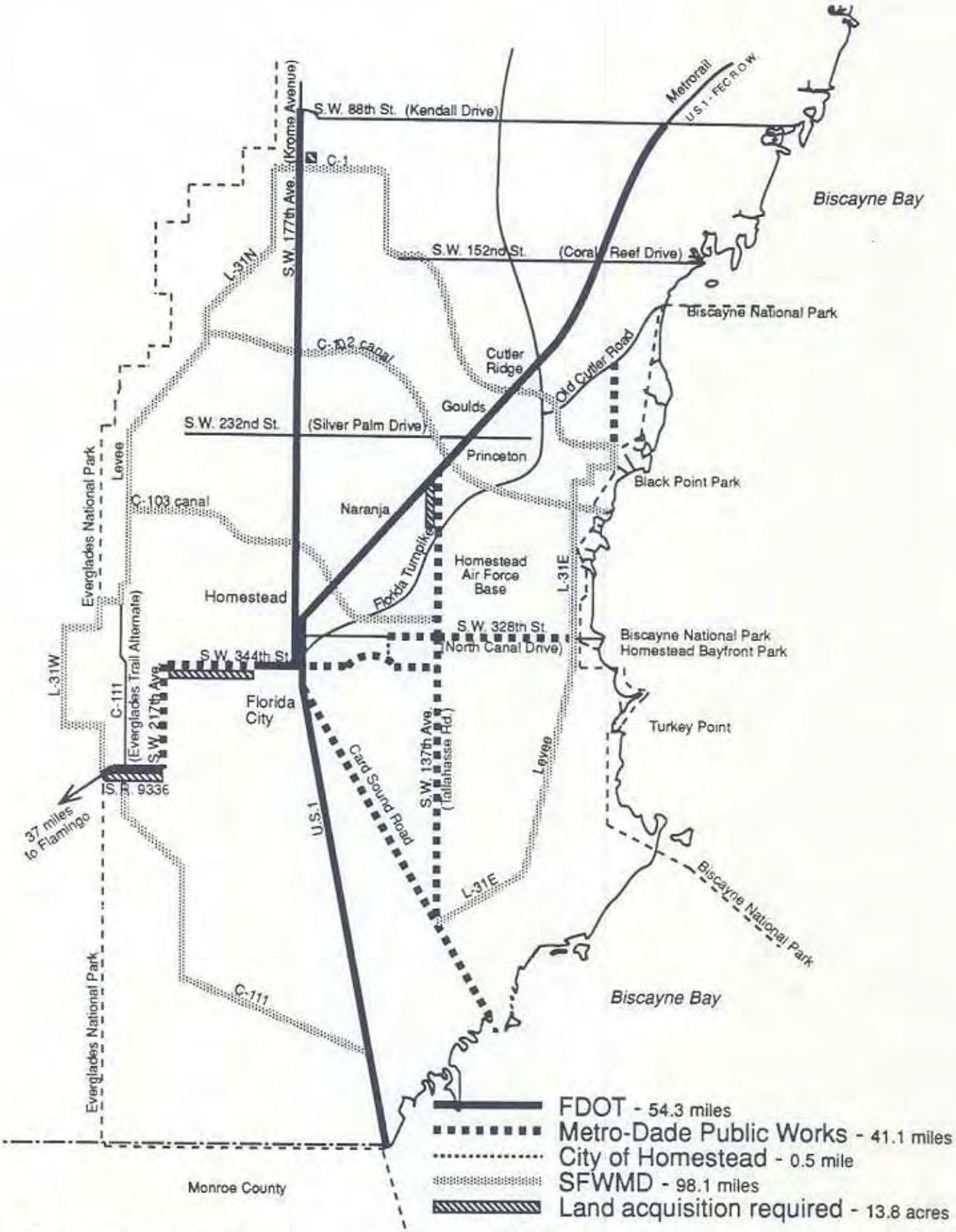
   Some Trails of the SDGN provide easy access to some of Dade County's most pristine and beautiful natural areas, offering wonderful wildlife viewing opportunities.



South Dade Greenway Network

Scale 1" = 4 miles

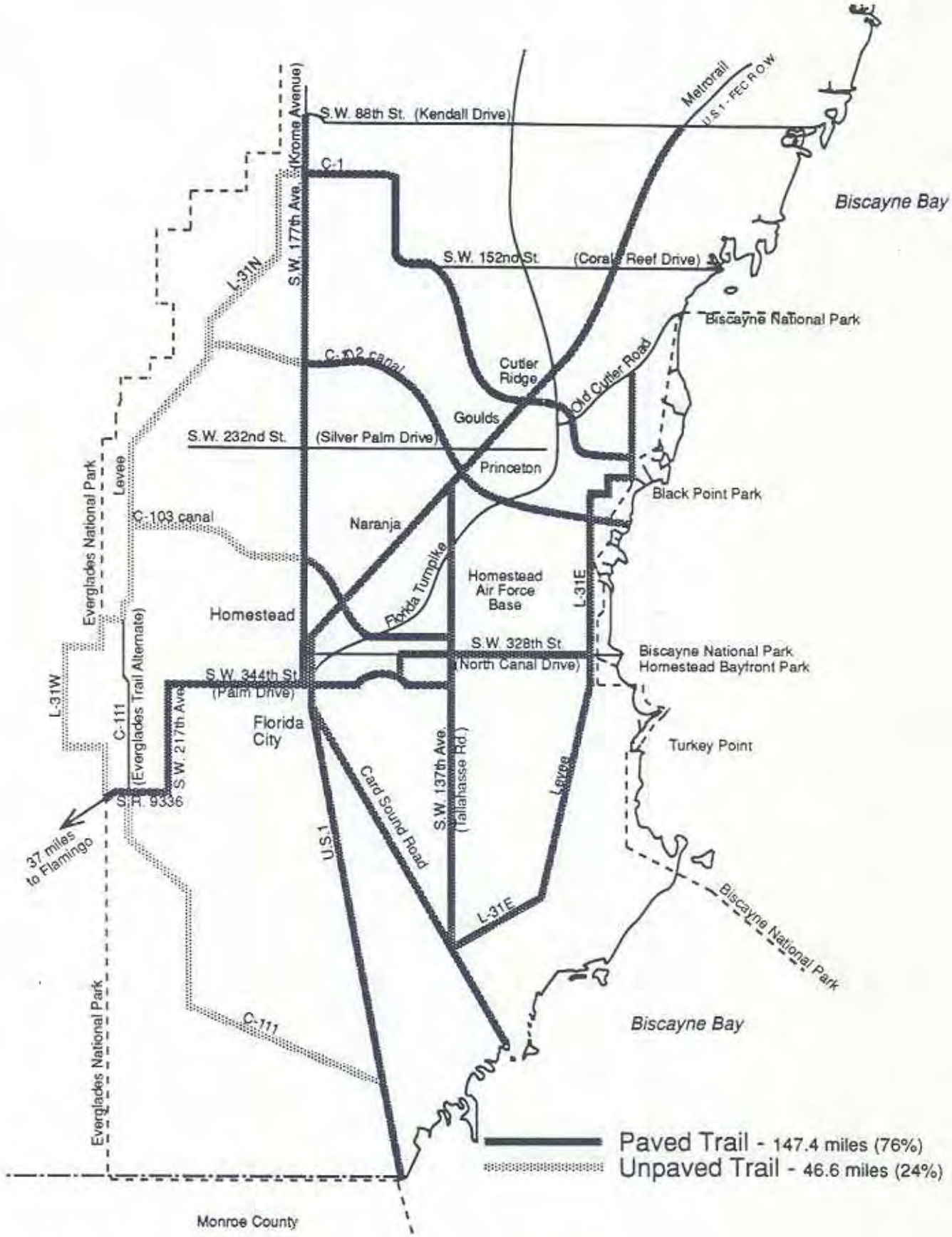
Trail System



South Dade Greenway Network

Scale 1" = 4 miles

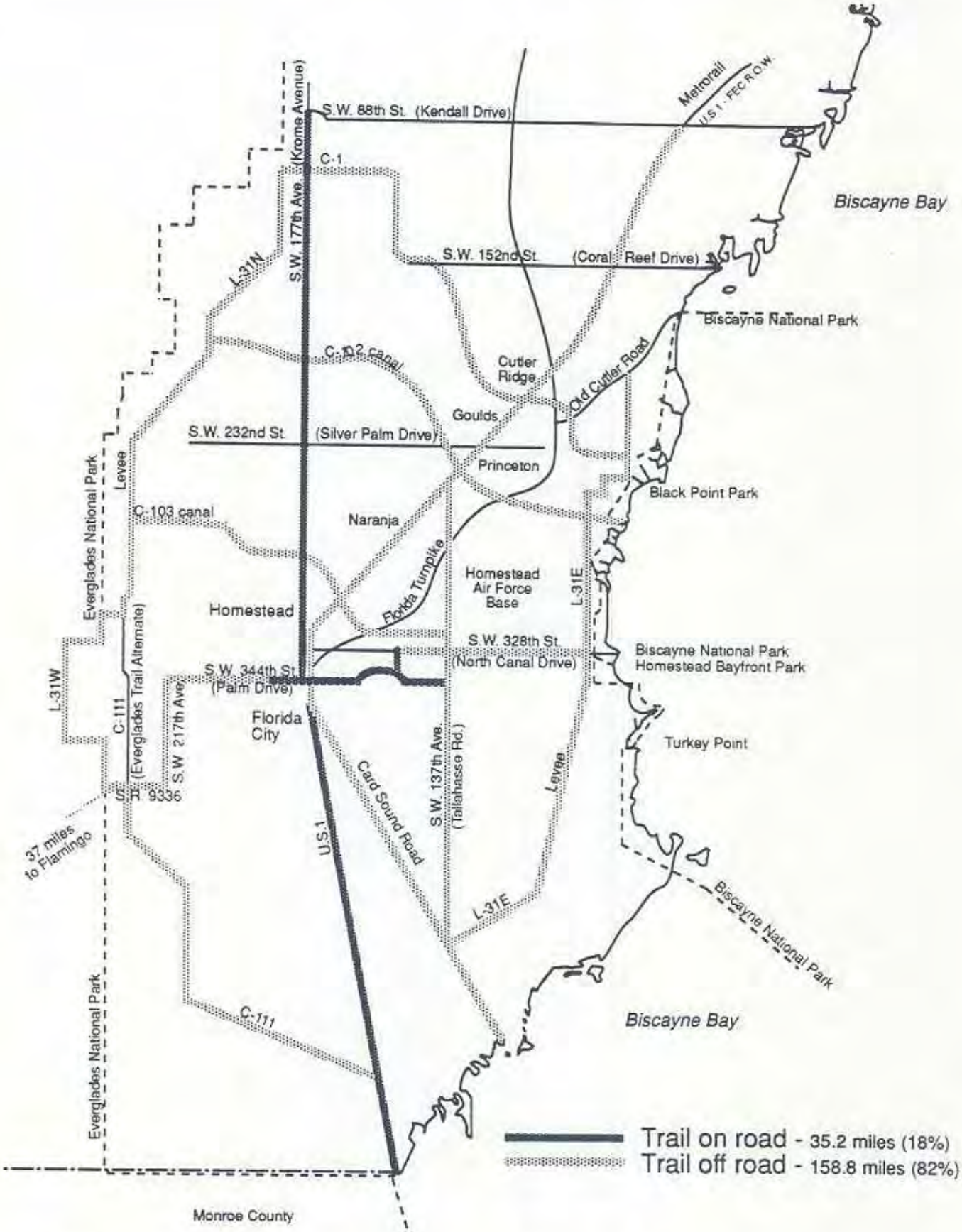
Right of Way Ownership



South Dade Greenway Network

Scale 1" = 4 miles

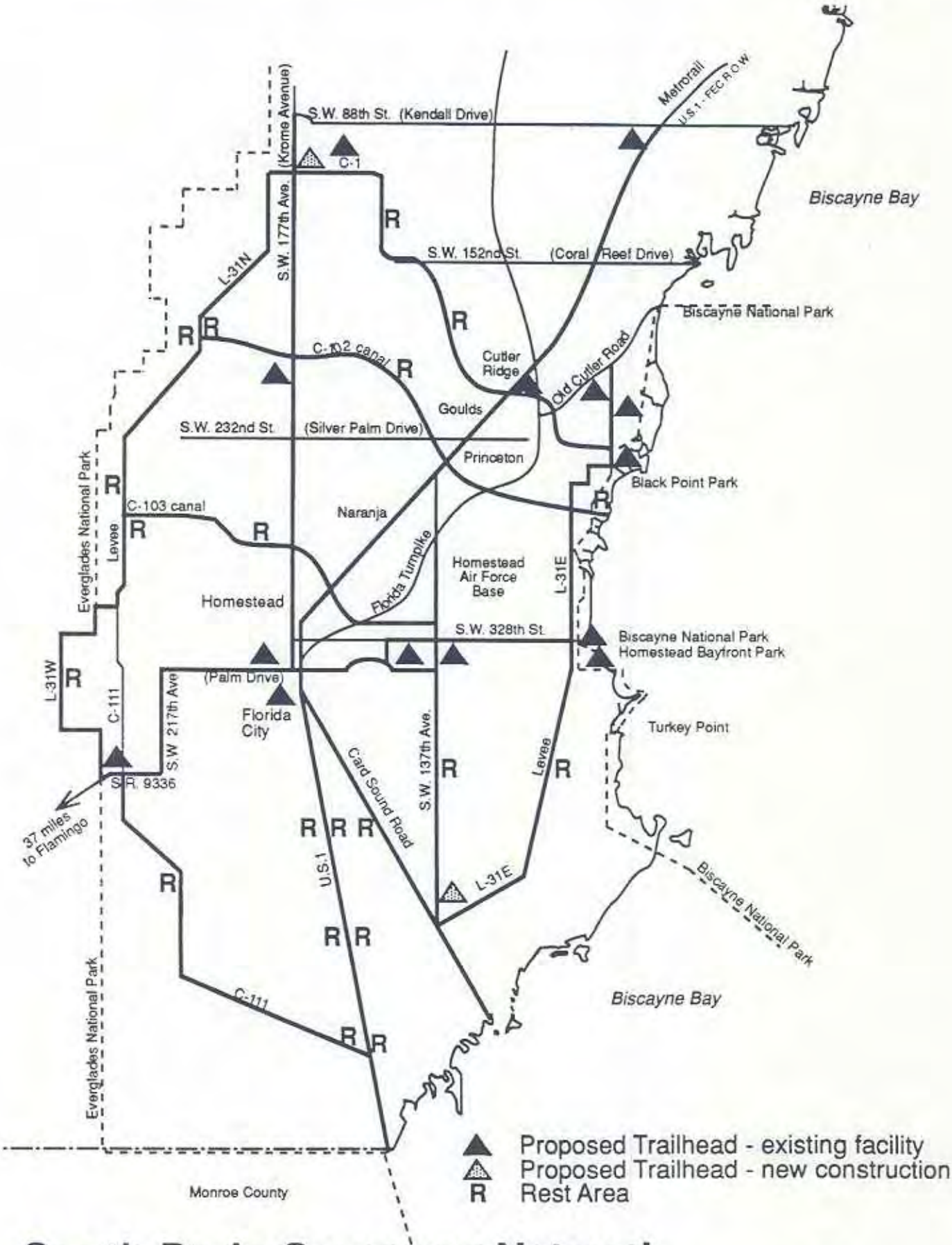
Paved / Unpaved Trails



South Dade Greenway Network

Scale 1" = 4 miles

On Road / Off Road Trails



South Dade Greenway Network

Scale 1" = 4 miles

Trailheads & Rest Areas

South Dade Greenway Network

Ten Trails

Ten Trails

The SDGN has ten distinct Trails of varying lengths. Many of the Trails intersect with each other, creating a myriad of "loops" offfering numerous combinations of trips. Together, they form a comprehensive network of Trails, the longest being 36.2 miles and the shortest, 6 miles.

This chapter contains a site inventory and analysis of the ten Trails in the SDGN and the proposed infrastructure and amenities recommended for each. Trail Segment Maps provide the following information:

- Trail R.O.W. width
- Area within the R.O.W. available for trail development
- Surrounding land uses and the potential uses based on existing zoning
- Location of trail within the R.O.W., type (paved or unpaved, multi-purpose, equestrian, etc.) and width of proposed trails
- Road and railroad intersections with the rating of the traffic intensity, and impediments to safe crossings that must be resolved (see Intersection Analysis)
- Location of proposed rest areas, trailheads and canoe ramps

Also included in this Chapter are typical Sections of each Trail, which generally describe the available R.O.W., the width and location of trails with minimum setbacks, and other data pertinent to each Trail.

The Trail Segment Maps and Typical Sections are schematic in nature to suggest a guideline for development. Detail design and construction drawings are outside the scope of this study.

For further information and details on a specific Trail, please refer to the chapter on Budgets.

Biscayne Trail

General Description - 36.2 total trail miles

The Biscayne Trail provides recreational access to Biscayne National Park and several of South Florida's coastal habitats. The northern portion of the Trail follows S.W. 87th Ave. which connects to an existing bike path at Old Cutler Road, which extends all the way to Coconut Grove and Key Biscayne. It goes south to Black Point Park and from there, the Trail utilizes the South Florida Water Management District's eastern levee (L-31E) and S.W. 137th Ave., which allows access to environmental areas. The Trail also follows North Canal Drive from Homestead Bayfront Park past The Villages of Homestead and Keys Gate communities, to U.S.1 at the Florida Keys Factory Shops.

The Trail provides views of coastal mangroves, saltwater marshes, saw grass marshes, and sabal heads. Within these ecosystems one may see numerous native birds, along with alligators, and an occasional crocodile. A portion passes farms and a new suburban planned community (the Villages of Homestead). This trail is the most natural of the entire South Dade Greenway Network, and is very similar to the Shark Valley Trail "loop" in Everglades National Park located off of U.S. 41. Biscayne Trail is a part of the SDGN's Demonstration Project.

The expected user groups are:

- Cyclists
- Pedestrians and joggers
- Rollerbladers
- Ecotourists
- Naturalists and educational groups
- Canoeing
- Fishermen

Ownership

Dade County: S.W. 87th Ave., S.W. 137th Ave., N.Canal Dr., & Palm Drive
City of Homestead: S.W. 152nd Ave.
SFWMD: L-31E

Existing Conditions of Rights of Way and Surroundings

S.W. 87th Ave From Old Cutler Road to Black Point Park.
(see map sections: 1 & 2)

- 2.3 miles of existing bike paths to be resurfaced.
- Usable easement ranging from 37'-70' .
- Three road crossings.
- Intersects with Black Creek Trail.

East Levee (L-31E) from Black Creek Canal (C-1) at Black Point Park, past Biscayne National Park to Card Sound Road.
(see map sections: 4 - 7)

- 17.6 miles of compacted Oolitic Limestone.
- SFWMD Control Structures - Five.
- Three road crossings.
- Intersects with Princeton and Keys Trails.
- North of Homestead Bayfront Park, the trail primarily passes though coastal mangroves.
- Southern Portion of trail traverses sawgrass marshes.

S.W. 137th Ave from Card Sound Road to Palm Drive
(see map sections: 7 & 8)

- 7.4 miles of old roadbed.
- Dedicated county road currently closed to vehicular traffic.
- Intersects with Tallahassee Connector.
- West side of trail consists of exotic and native vegetation, with a drainage canal at the edge of the easement.
- East side of trail is sawgrass marsh.

S.W. 344th Ave.(Palm Drive) from S.W. 167th Ave. to U.S.1
(see map section: 12)

- 1 mile of mostly undeveloped land, with about 660' developed for Florida Keys Factory Shops.
- Two road crossings.
- Passes by housing developments, some agriculture, and the Florida Keys Factory Shops.

North Canal Drive From S.W. 152nd Ave. to L-31E levee
(see map sections: 9 - 11)

- 5.4 miles of old asphalt roadbed.
- Four road crossings.
- Intersects with Tallahassee Connector.
- This section of trail utilizes an abandoned county road on north side of the canal; with the main road on the south side.
- Requires a bridge across L-31E levee.

S.W. 152nd Ave. From N. Canal Drive to Palm Drive &
Palm Drive From S.W. 137th Ave. to S.W. 167th Ave.
(see map sections: 11 & 12)

- 2.5 miles of existing four lane divided road, with sidewalks both sides.
- One road crossing.
- This is a developed area of the Villages of Homestead which passes by the new Homestead Sports Complex and Homestead Motorsports Complex.

Trail Development

Trail Construction (see typical sections)

- S.W. 87th Ave. - 12' wide, off road, multi-purpose paved trail, located between the canal and west side of the road. And 4' bike lanes on both sides of the road.
- East Levee (L-31E) - 12' wide, multi-purpose paved trail on elevated levee, raised 6' above surrounding grade.
- S.W. 137th Ave. - Off road, 12' paved, multi-purpose trail.
- S.W. 344th St. (Palm Drive, from S.W. 167th Ave to U.S. 1) - Off road, 12' paved, multi-purpose trail.
- North Canal Drive - Off road, 12' paved, multi-purpose trail.
- S.W. 152nd Ave. and Palm Drive from S.W. 137th Ave. to S.W. 167th Ave. - Bike sharing travel lanes and sidewalks.

Amenities

- Ten proposed Trailheads - Old Cutler Town Center, Centennial Middle School, Black Point Park, Biscayne National Park, Homestead Bayfront Park, Homestead Sports Complex, Homestead Motorsports Complex, Florida City - City Hall, Tropical Everglades Visitor Assoc.,and Card Sound Road.
- Rest Areas - Three
- Location Maps - Seven
- Emergency Phones - Twenty-nine
- Interpretive Signage - Four
- Landscaping
- Observation tower located on L-31E, south of Turkey Point.
- Canoe ramps at L-31E and North Canal Dr. and at the Card Sound Road Trailhead.

Community Assets (within 2 miles)

Points of Interest

- Turkey Point Power Plant - Palm Dr. @ Biscayne Bay
- Homestead Air Force Base - S.W. 312th St. & S.W. 137th Ave.
- Pioneer BMX - S.W. 172nd Ave. & S.E. 3rd St.
- Homestead Sports Complex - Palm Drive & S.W. 152nd Ave.
- Homestead Motorsports Complex - Palm Drive & S.W. 137th Ave.
- Florida Keys Factory Shops - U.S. 1 & Palm Drive
- Tropical Everglades Visitor Association - U.S. 1 just south of Palm Drive
- State Farmers Market - S.W. 3rd St. & Krome Ave. Fl. City
- Pioneer Museum - 826 Krome Ave.

Parks

- Black Point Park - S.W. 87th Ave. & S.W. 248th St.
- Biscayne National Park - S.W. 328th St. @ Biscayne Bay
- Homestead Bayfront Park - S.W. 328th St. @ Biscayne Bay

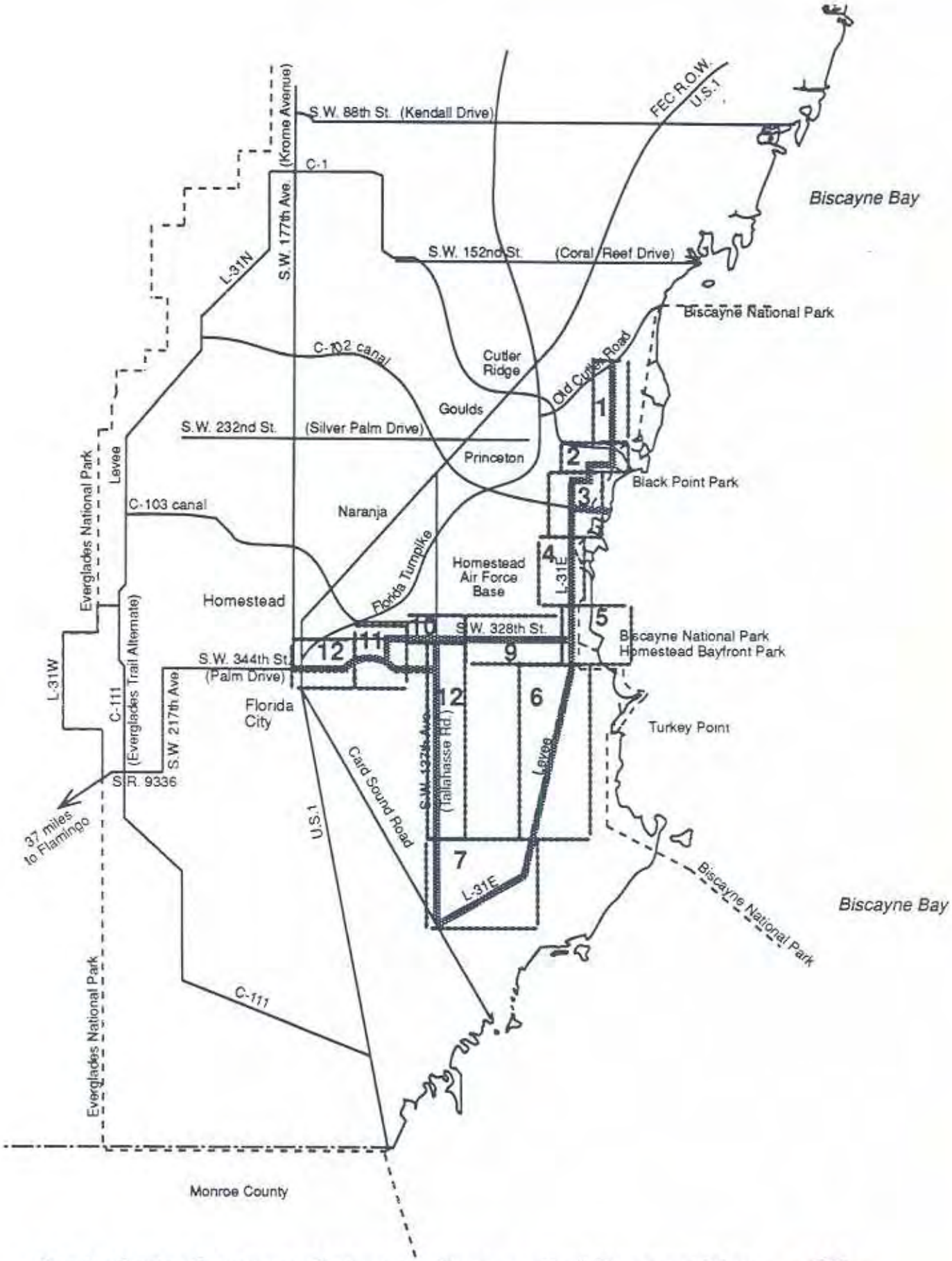
Schools

- Avocado Elementary - 16969 S.W. 294th St.
- Bel Aire Elementary - 10205 S.W. 194th St.
- Centennial Middle School - 8601 S.W. 212th St.
- Cutler Ridge Elementary - 20210 Coral Sea Rd.
- Gulfstream Elementary - 20900 S.W. 97th Ave.
- Lewis Elementary - 505 S.W. 8th St.
- West Homestead Elementary - 1550 S.W. 6th St.
- Whispering Pines Elementary - 18929 S.W. 89th Rd.
- Homestead High - 2350 S.E. 12th Ave.

Issues

- 1 mile section of trail on L-31E just north of Homestead Bayfront Park, may have a mixed use of vehicular traffic and trail users. Proper design must be provided for safety.
- S.W. 152nd Ave. and a section of Palm Drive need explicit signage with regard to bikes sharing travel lane.
- Trailhead located at Card Sound Road will require fill. Adequate time should be provided for lengthy permitting process.
- Portion of S.W. 137th Ave., just south of Palm Drive, lies within a City of Homestead mitigation area. Permits must be sought to pave this section.

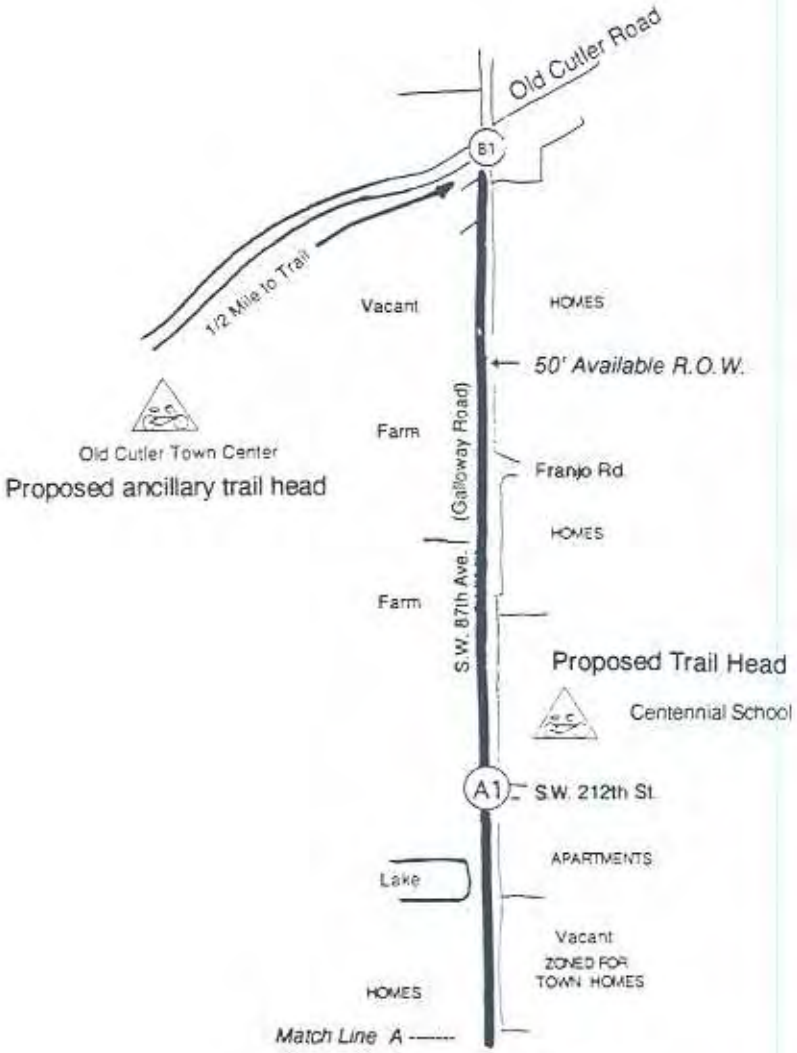
- Coordinate with Florida City, the City of Homestead and Metro-Dade Public Works to provide 12' wide, off road trail on Palm drive between U.S. 1 and S.W. 167th Ave.
- Coordinate with City of Homestead to provide a Trailhead at either the Homestead Sports Complex or the Homestead Motorsports Complex.
- An assumption is made that Metro-Dade Public Works/City of Homestead will extend road improvements along Palm Drive, from S.W. 152nd Ave. to S.W. 137th Ave. Although, it is recommended that a separate 12' wide, off road, multi-purpose trail be added.
- An assumption is made that any intersections built during scheduled road improvements will adhere to the established standards and install SDGN signage.



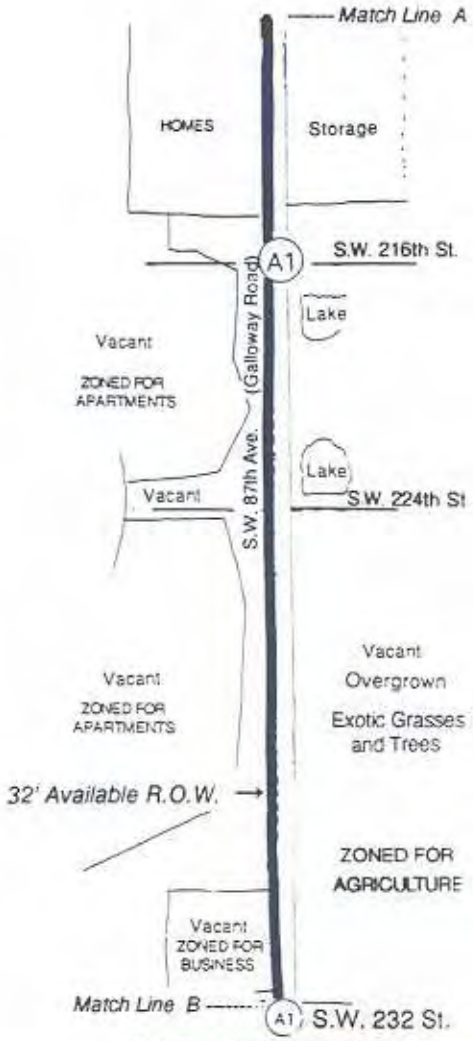
South Dade Greenway Network - Biscayne Trail Segment Map

Scale 1" = 4 miles

Map Section Key



12' multi-purpose trail
on west side of road



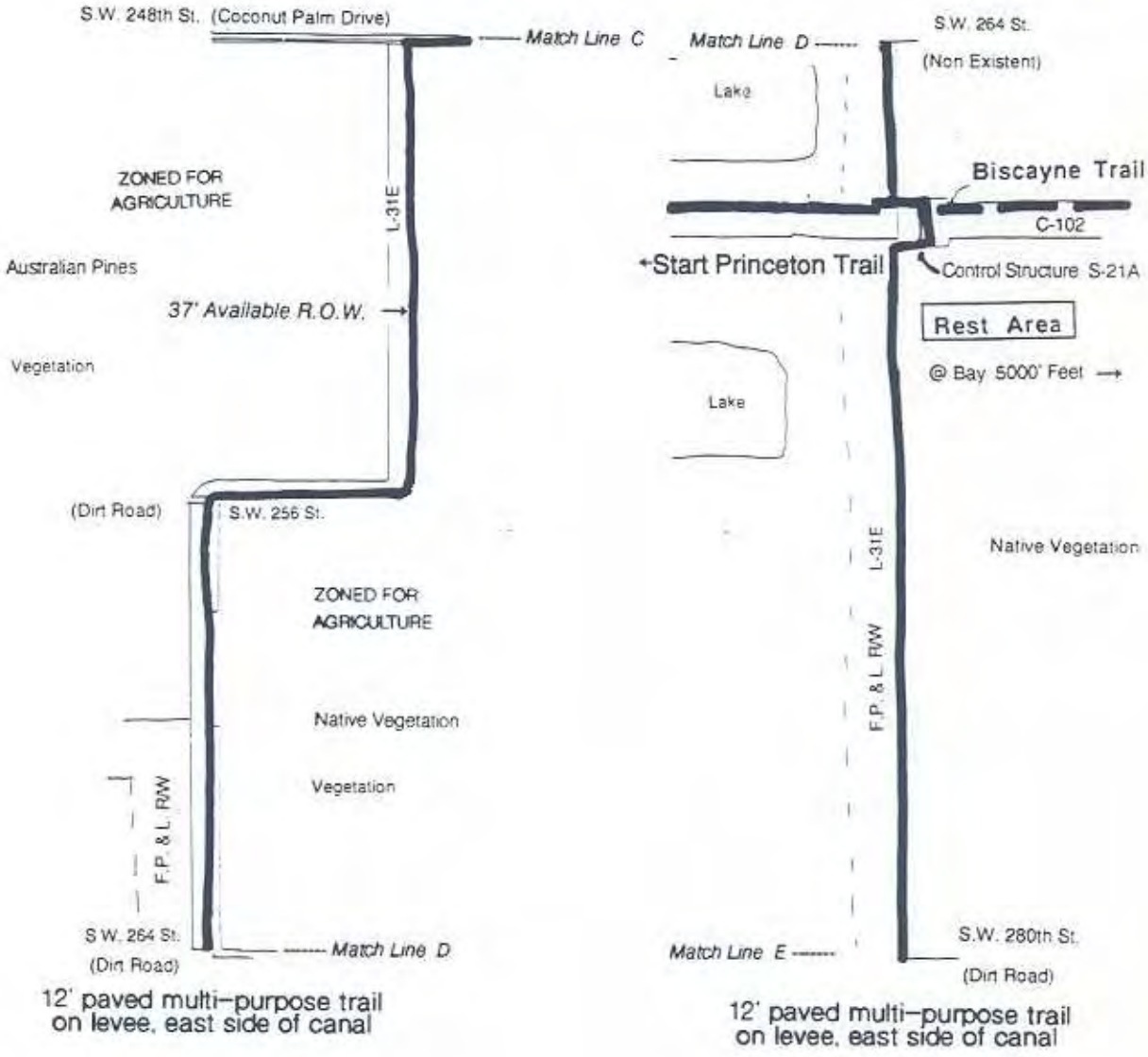
12' multi-purpose trail
on west side of road

South Dade Greenway Network - Biscayne Trail (Section 1)

Scale 1" = 1000'

South Dade Greenway Network - Biscayne Trail (Section 2)

Scale 1" = 1000'

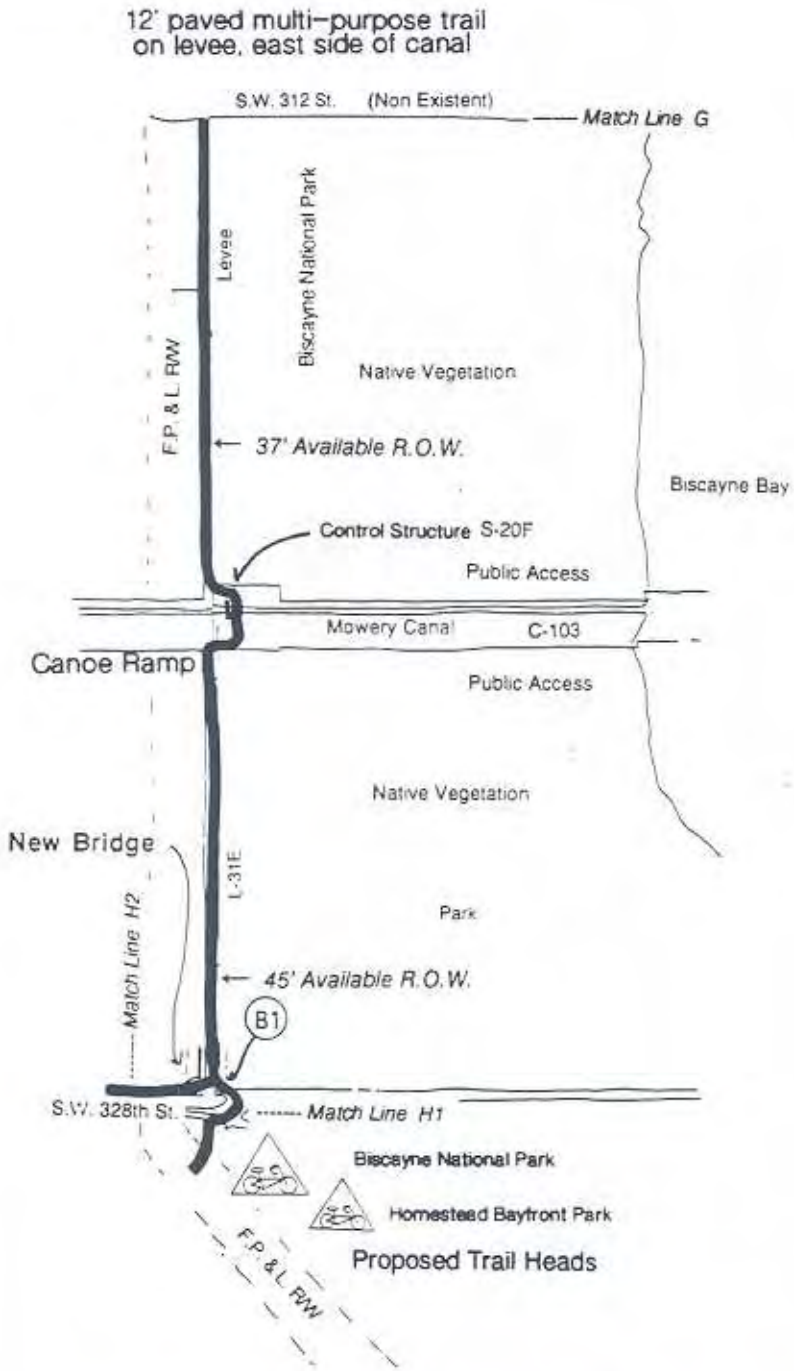


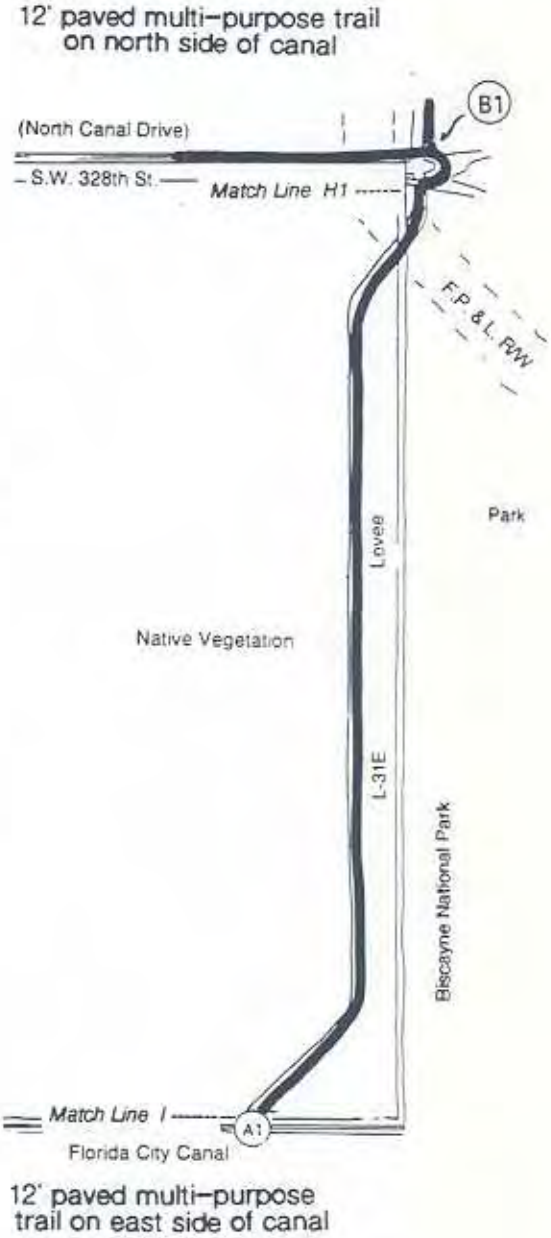
South Dade Greenway Network - Biscayne Trail (Section 3)

Scale 1" = 1000'

South Dade Greenway Network - Biscayne Trail (Section 4)

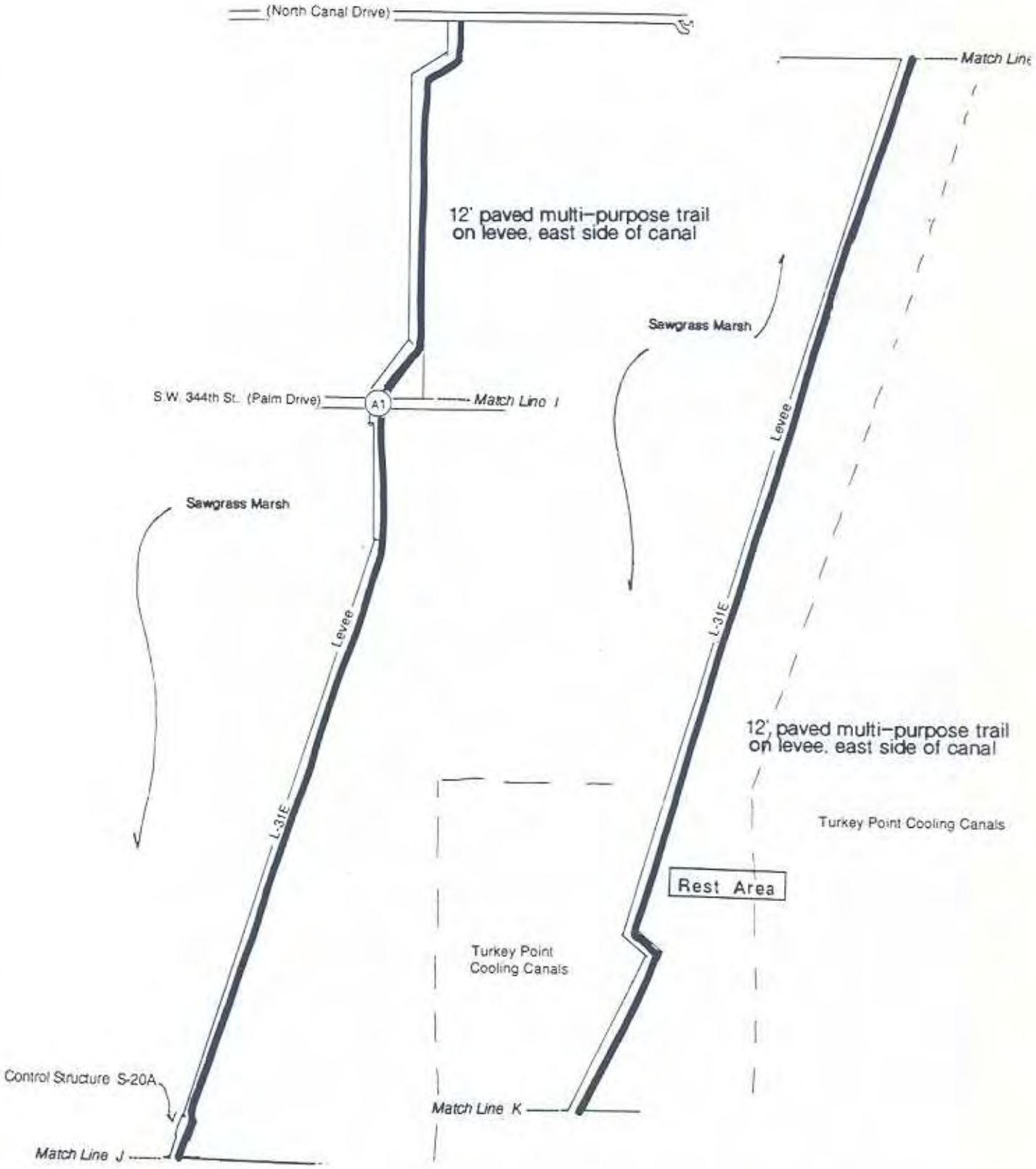
Scale 1" = 1000'





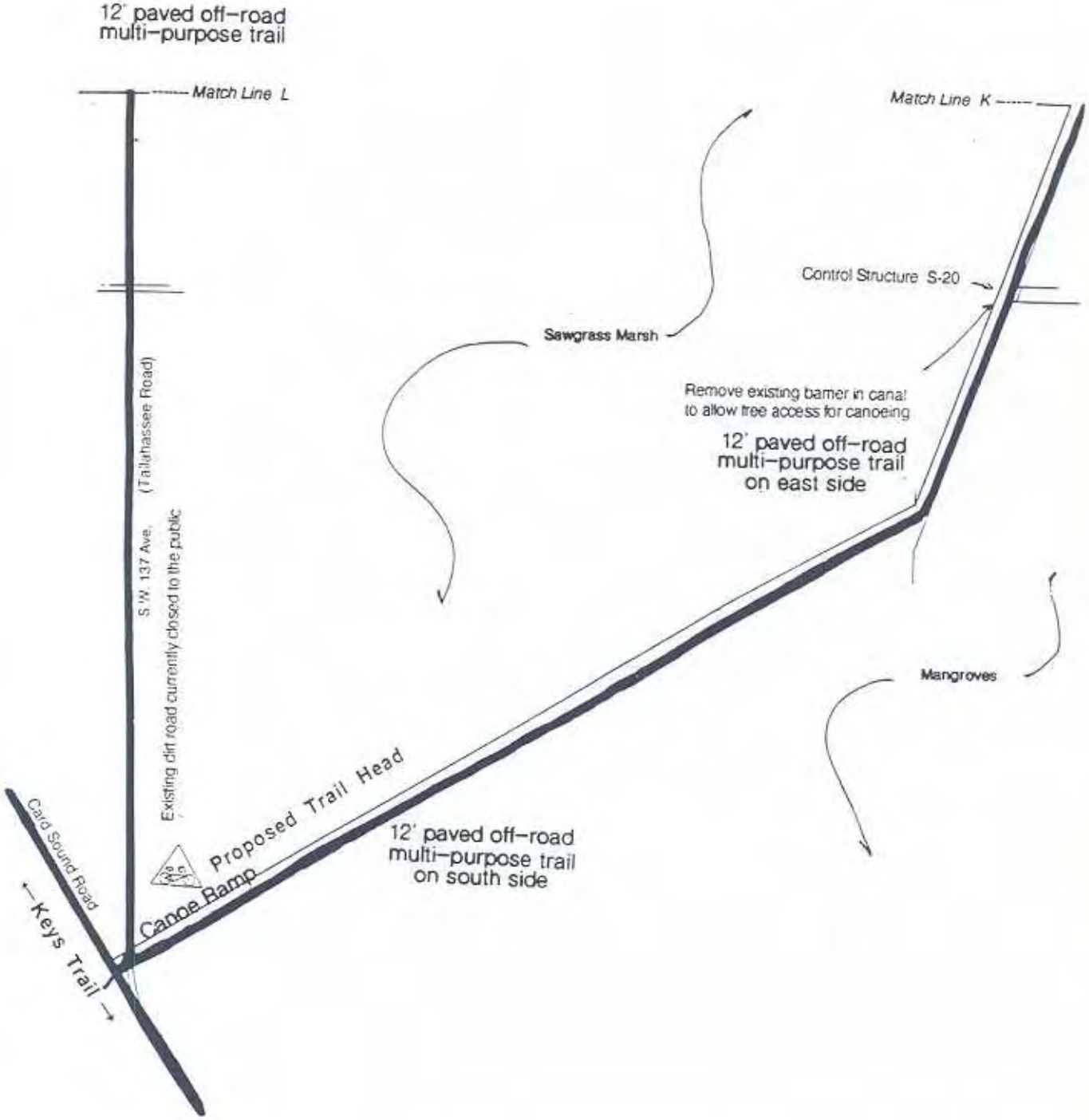
South Dade Greenway Network - Biscayne Trail (Section 5)

Scale 1" = 1000'



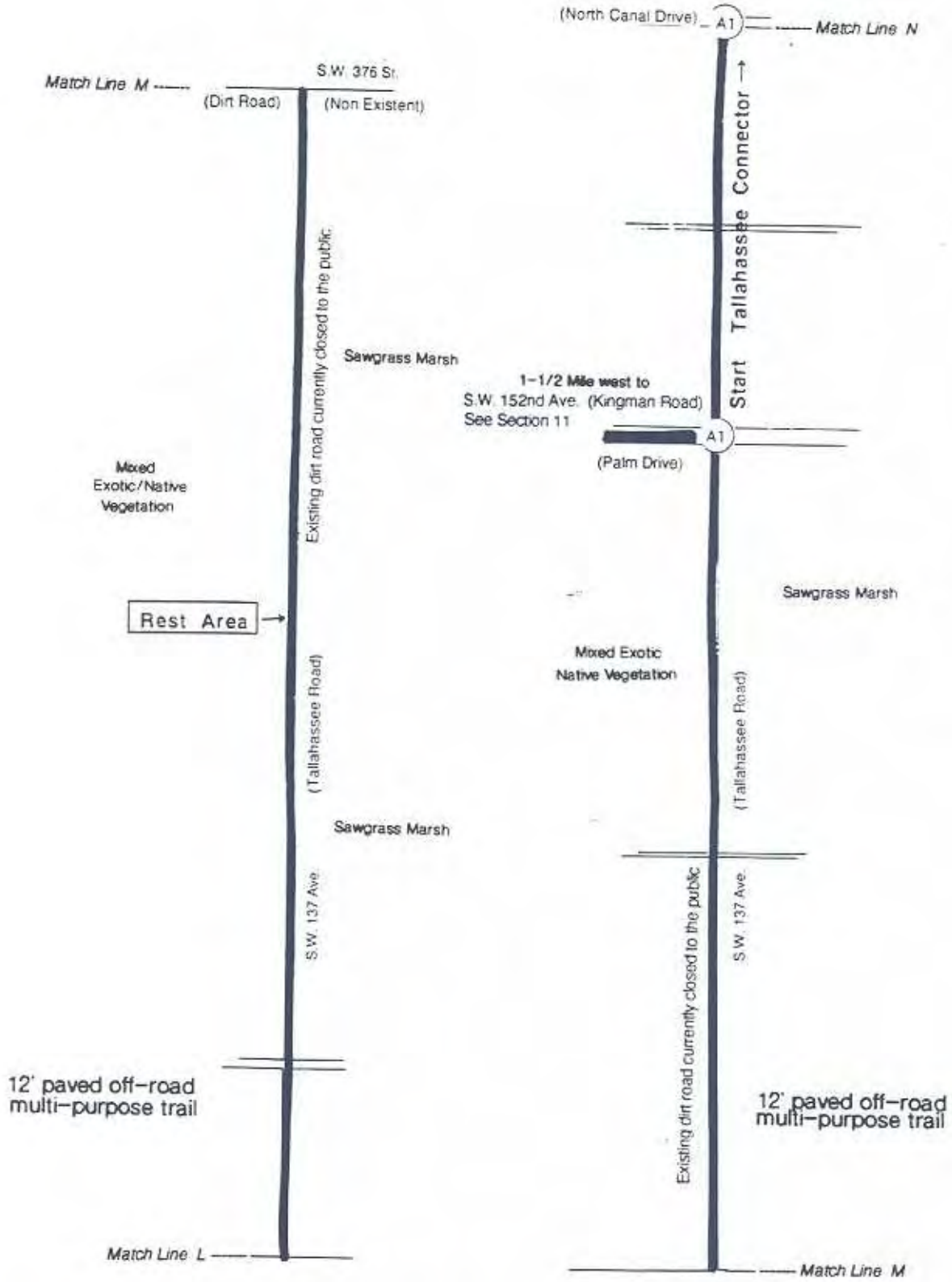
South Dade Greenway Network - Biscayne Trail (Section 6)

Scale 1" = 2000'



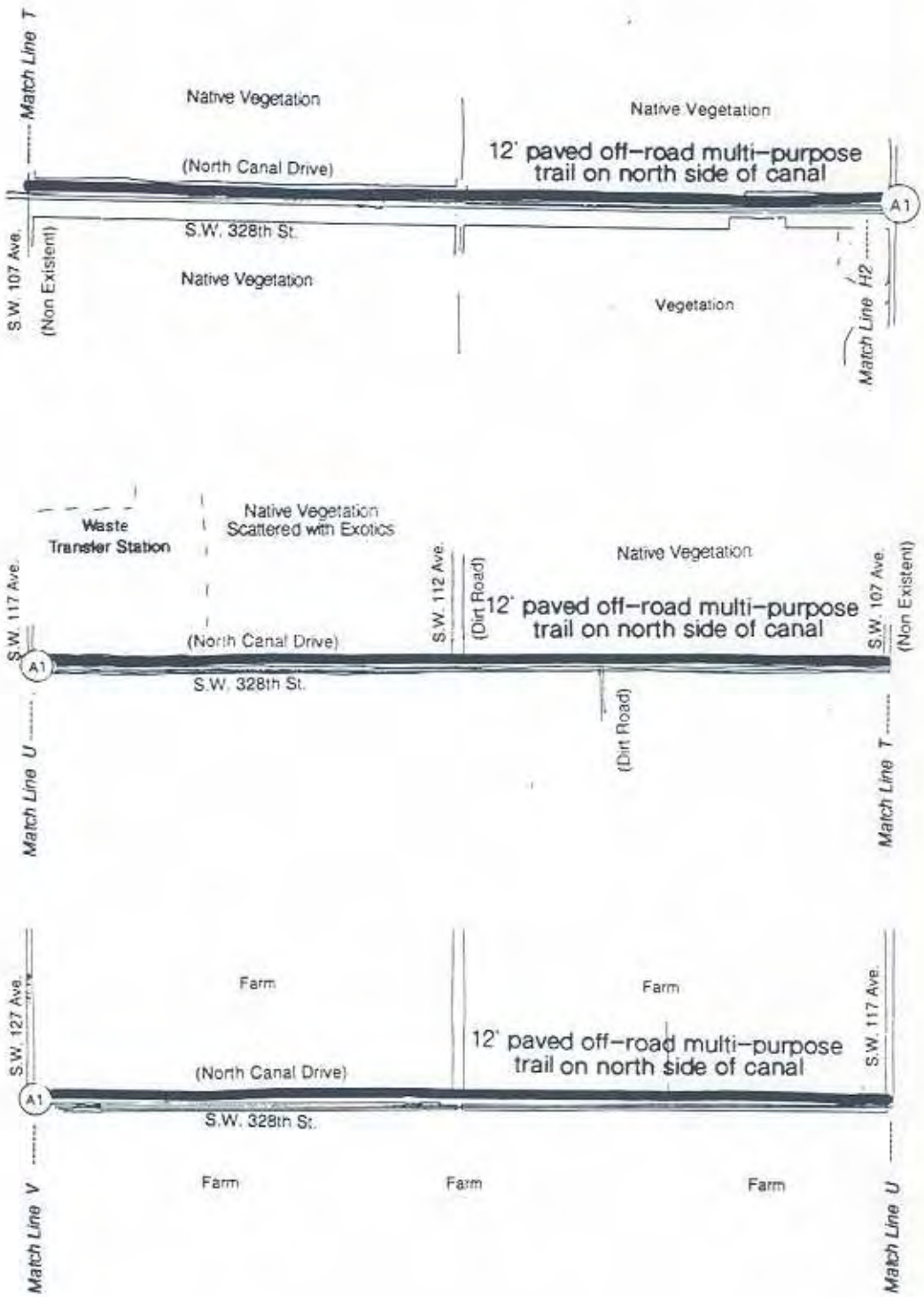
South Dade Greenway Network - Biscayne Trail (Section 7)

Scale 1" = 2000'



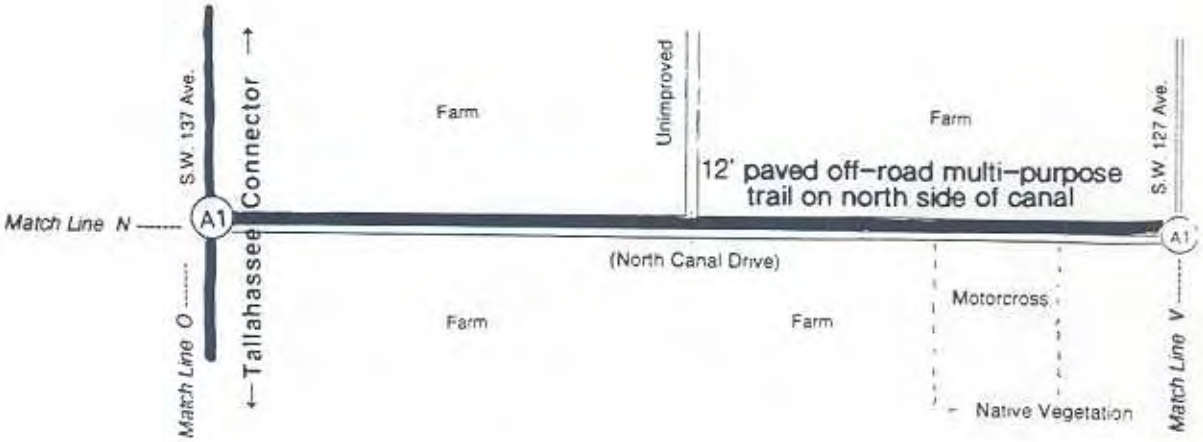
South Dade Greenway Network - Biscayne Trail (Section 8)

Scale 1" = 2000'



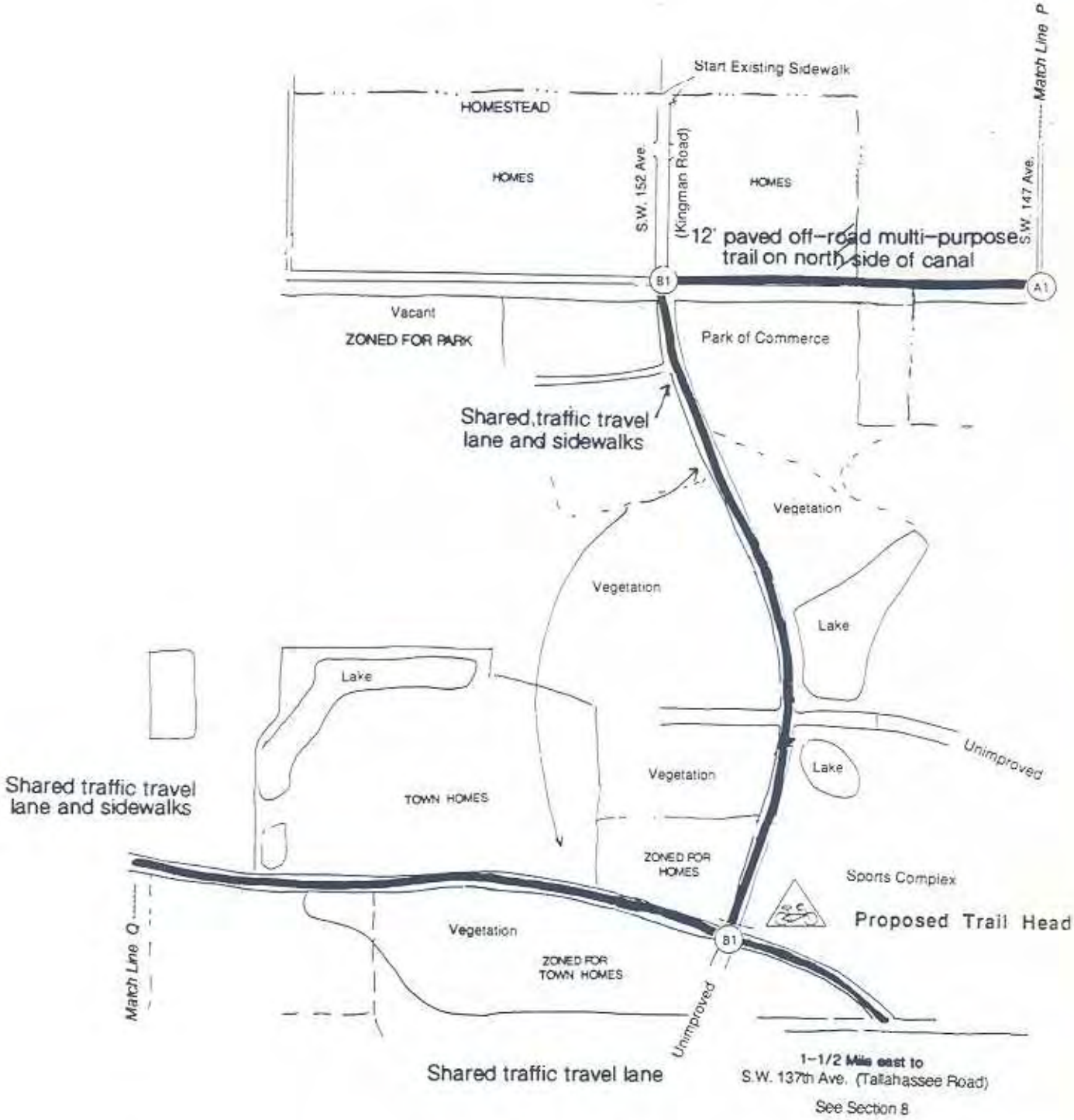
South Dade Greenway Network - Biscayne Trail (Section 9)

Scale 1" = 1000'



South Dade Greenway Network - Biscayne Trail (Section 10)

Scale 1" = 1000'



South Dade Greenway Network - Biscayne Trail (Section 11)

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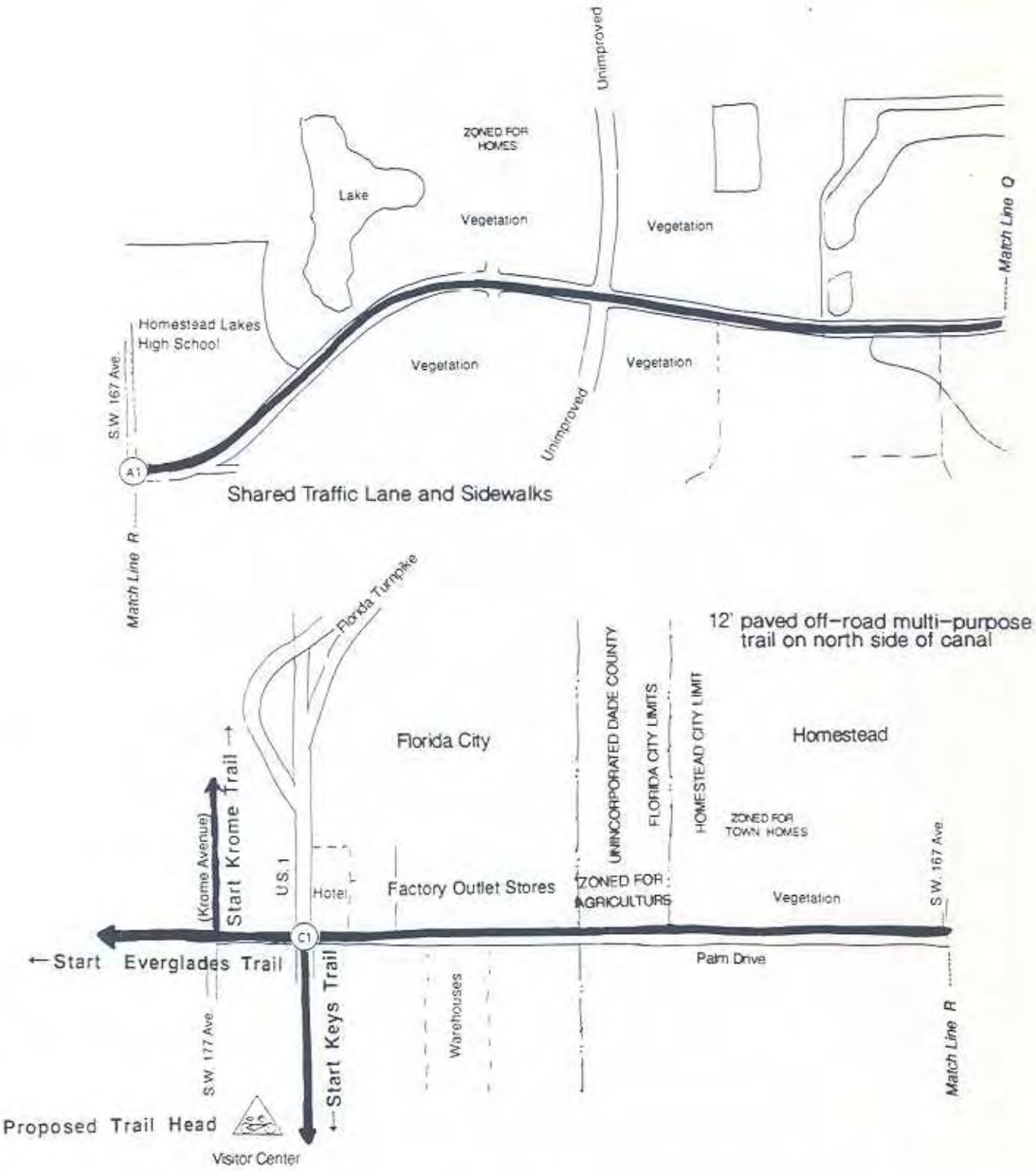
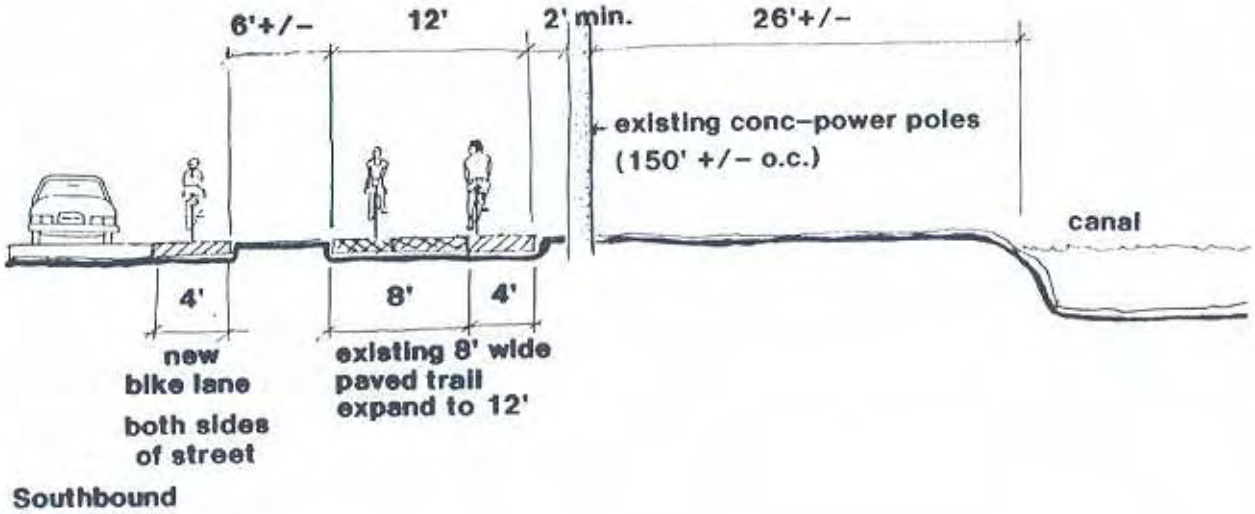


South Dade Greenway Network - Biscayne Trail (Section 12)

Scale 1" = 1000'

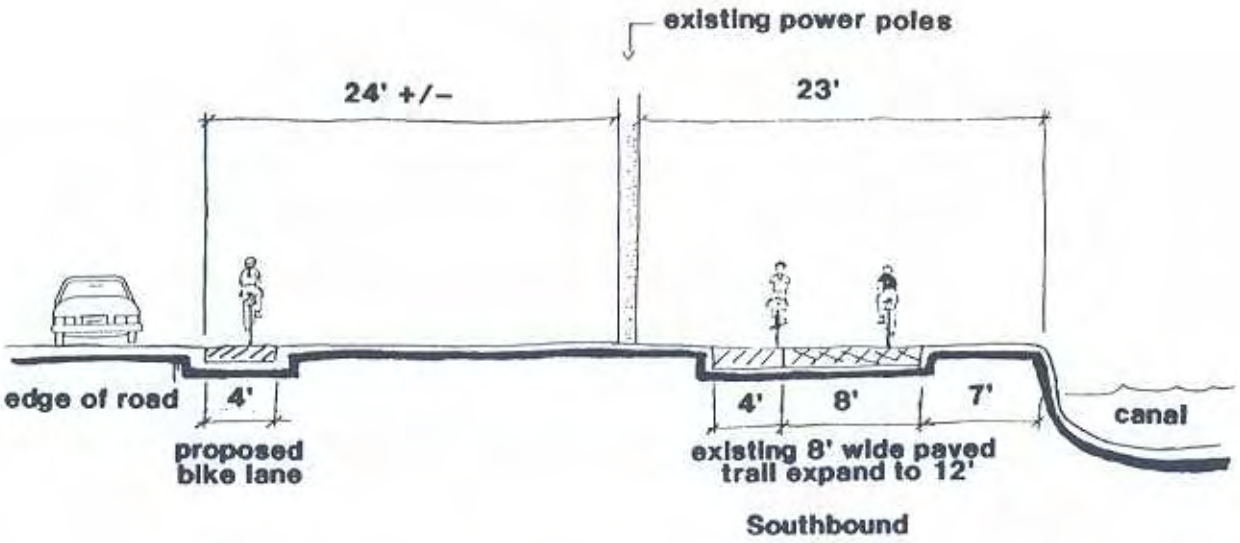


BISCAYNE TRAIL

S.W. 87 Ave.

(from Old Cutler Rd. to S.W. 212 St.)

TYPICAL SECTION

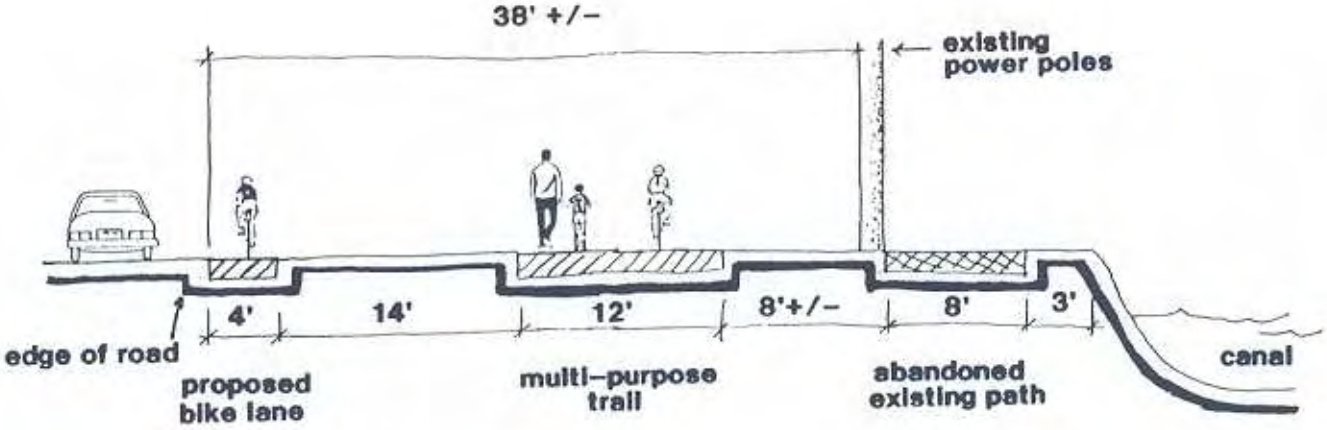


BISCAYNE TRAIL

S.W. 87 Ave.

from 212 St. to 216 St.

TYPICAL SECTION

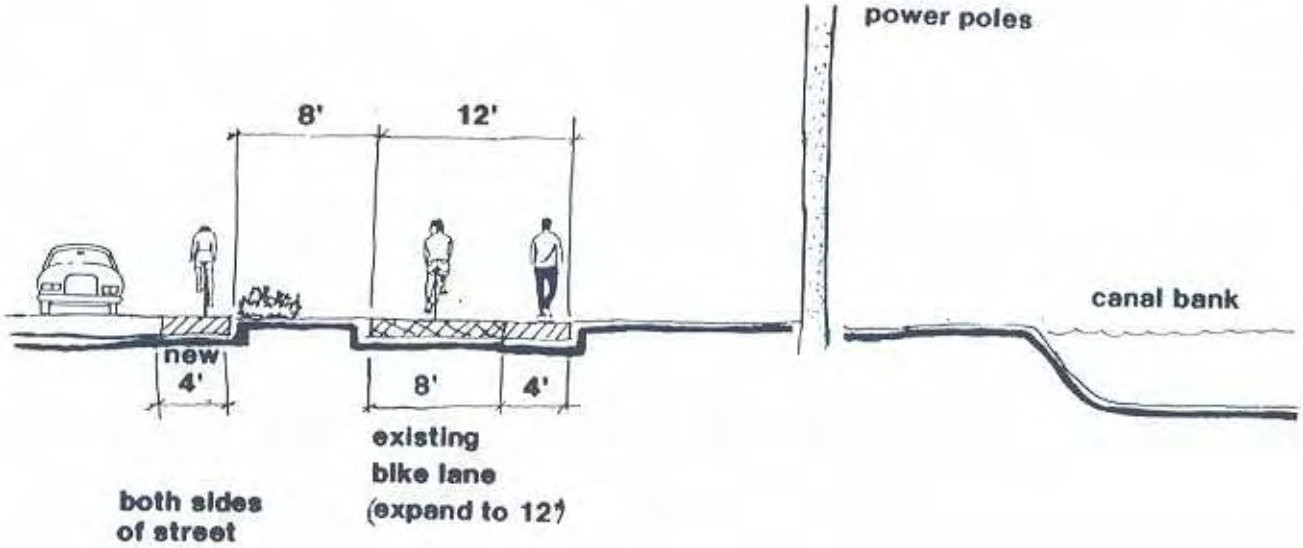


BISCAYNE TRAIL

S.W. 87 Ave.

(from 216 St. to 232 St.)

TYPICAL SECTION



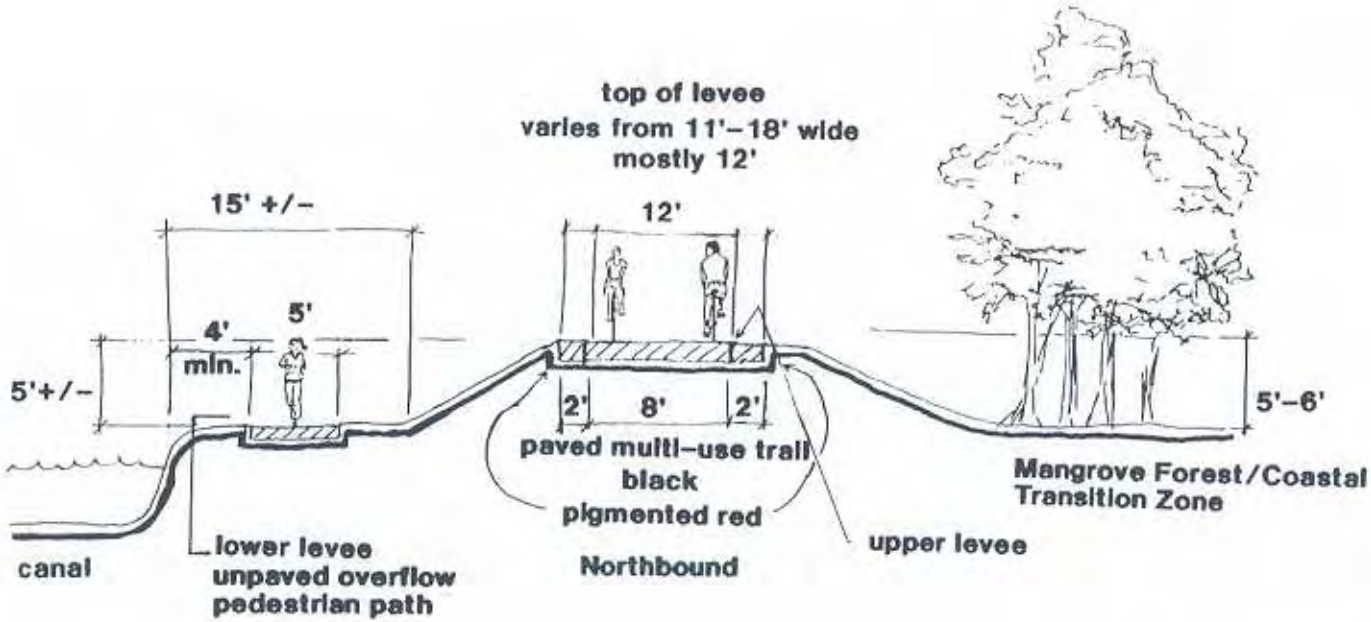
Southbound

BISCAYNE TRAIL

S.W. 87 Ave.

(from S.W. 232 St. to Black Point Park)

TYPICAL SECTION

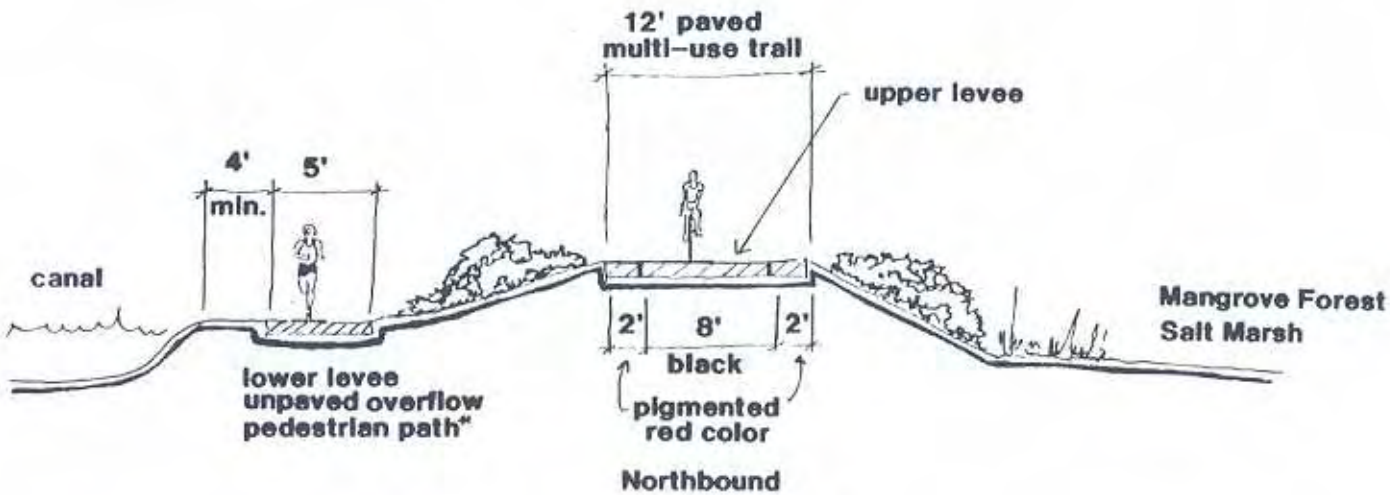


BISCAYNE TRAIL

L–31E Levee between Black Point

& Homestead Bayfront Park

TYPICAL SECTION



Note

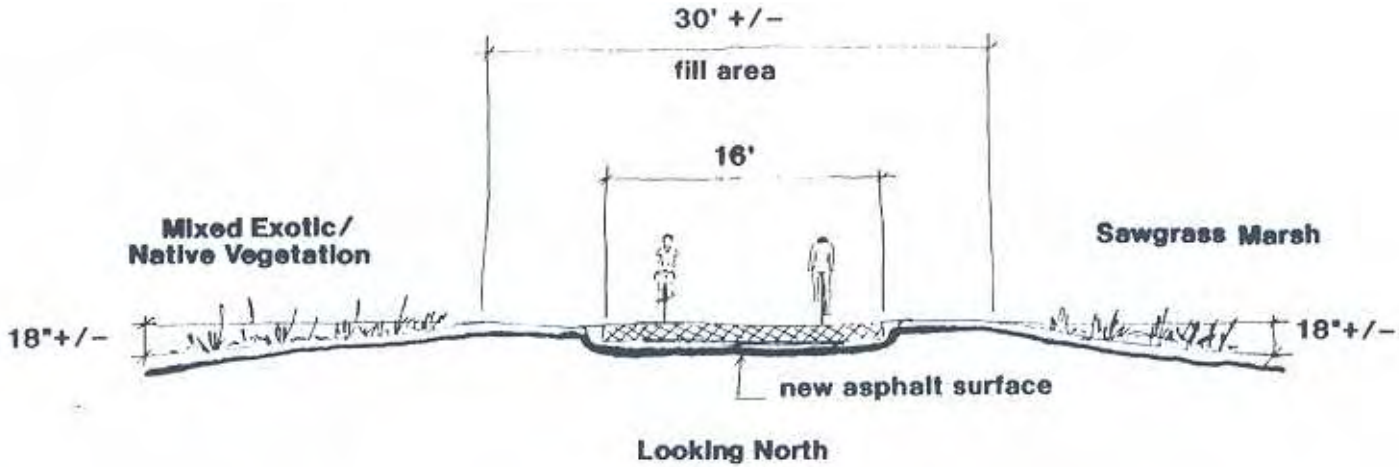
*where not intermitently flooded

BISCAYNE TRAIL

L-31E south of North Canal Dr.

to Card Sound Rd.

TYPICAL SECTION

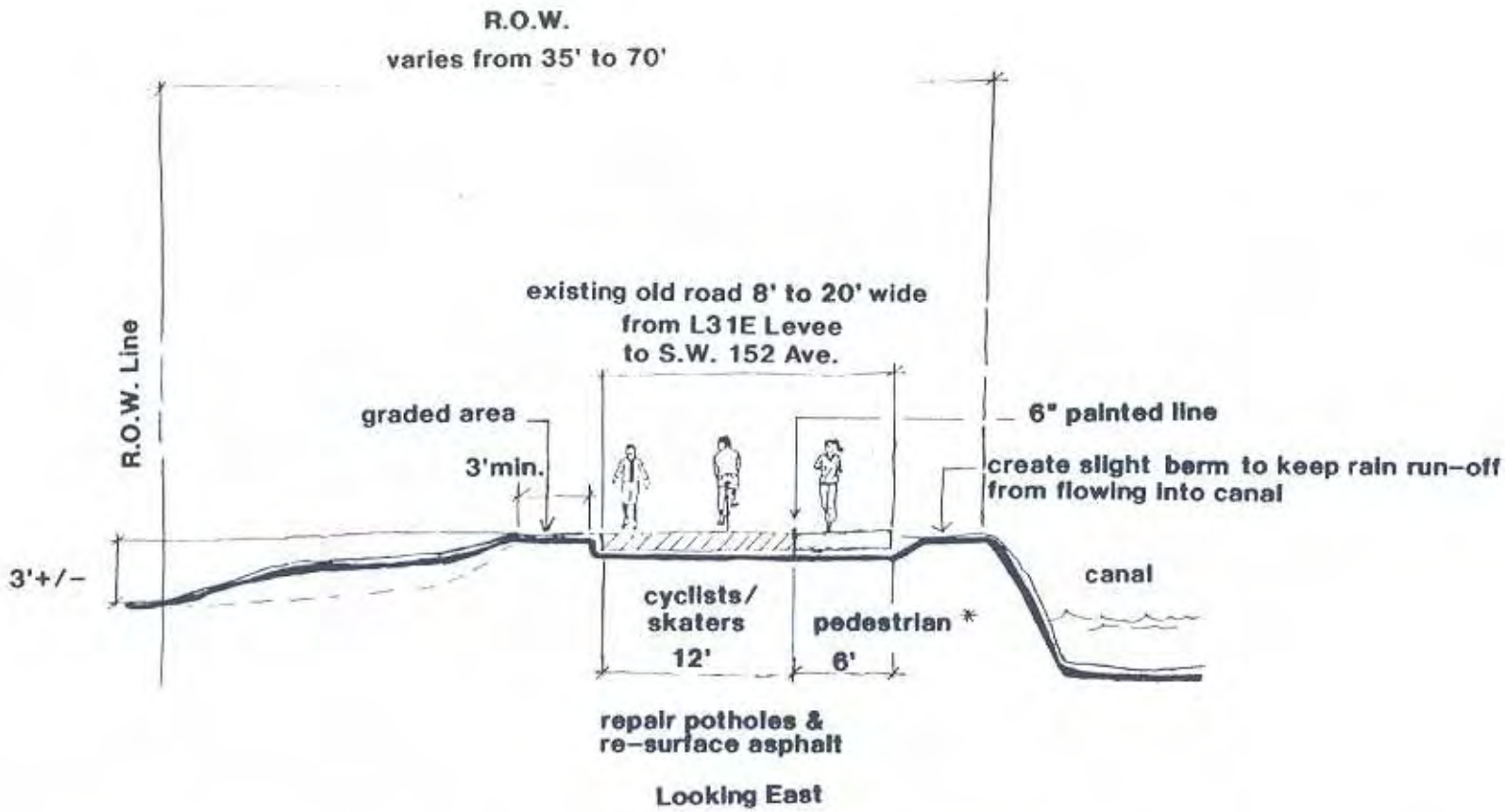


BISCAYNE TRAIL

S.W. 137 Ave. (Tallahassee Rd.)

south of North Canal Dr.

TYPICAL SECTION



add 4 ft. of new paving where existing road is only 8 ft. wide

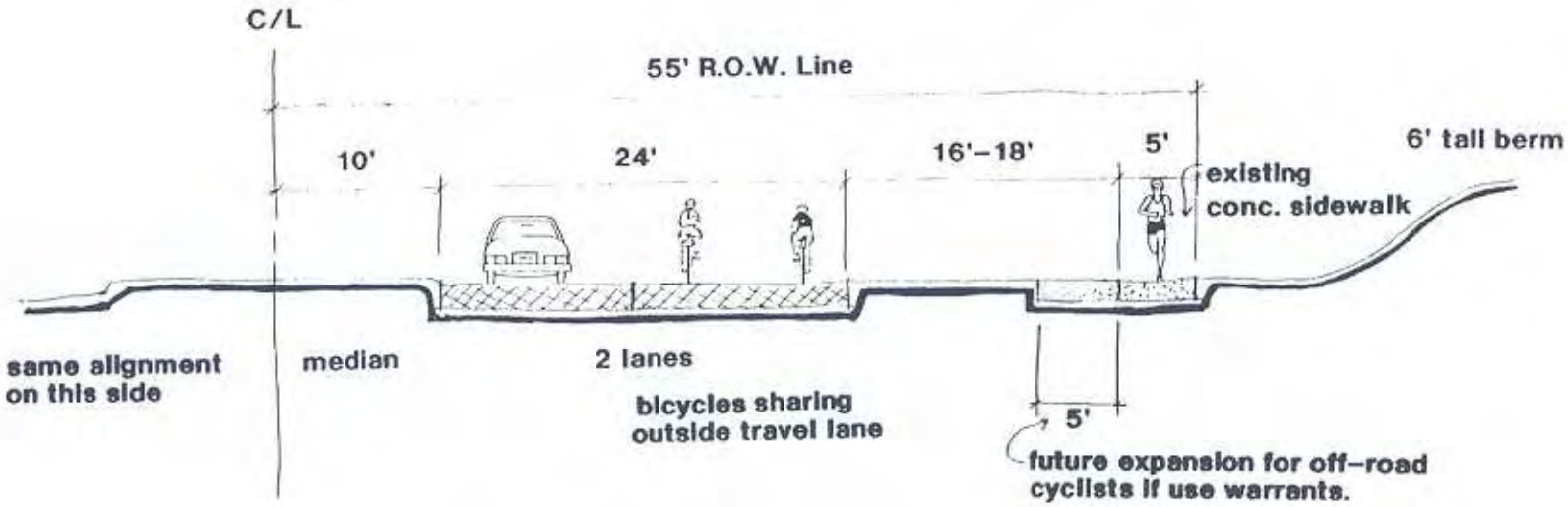
* Where existing road is already at least 18' ft. wide

BISCAYNE TRAIL

North Canal Drive (from Homestead

Bayfront Park to S.W. 152 Ave.)

TYPICAL SECTION

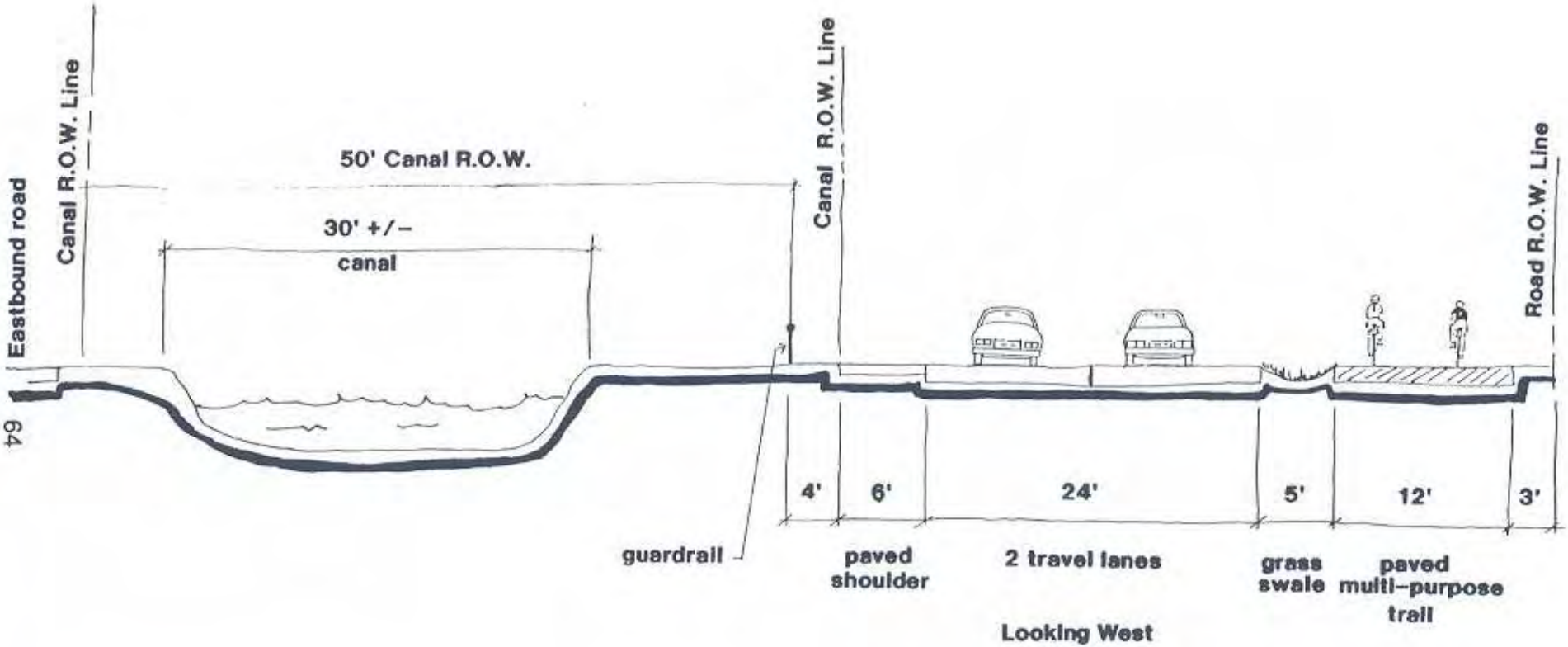


BISCAYNE TRAIL

S.W. 152 Ave. (Kingman Rd.) & S.W. 344 St.

(Palm Dr.) thru Villages of Homestead

TYPICAL SECTION



Notes

This section may change, based on road alignment engineering to be done by Florida City & the City of Homestead

BISCAYNE TRAIL

Palm Drive

between S.W. 167 Ave. & U.S. Hwy. 1

TYPICAL SECTION

Black Creek Trail

General Description - 17 total trail miles.

This is a canal Trail traversing from the northwest to the southeast. Historically the canals were dug along fresh water sloughs, which were part of the natural watershed of South Florida from the Everglades to Biscayne Bay, with the intention of draining the Everglades for more suitable farm land and buildable acreage. Although the canal banks are Oolitic limestone the areas adjacent are rich marl soils.

The portion of the Trail west of the Krome Trail is to remain unpaved for hikers, mountain bikes and equestrians, unless future use dictates otherwise. Trail users will pass farms.

Heading east from the Krome Trail, the Black Creek Trail cuts though the eastern reaches of farmland, where primarily row crops are grown, then past the Hammocks community, which has it's own bike paths. The Trail at this point is the closest connection of the SDGN to the West Kendall residential area.

As the canal heads south, it is located at the western edge of the Kendall-Tamiami Executive Airport, where the trail user will find a rest area, providing for airplane watching. The remainder of the Trail travels through residential developments, the Cutler Ridge area, past the South Dade Government Center & Regional Library, a small undeveloped area, then into Black Point Park.

The expected user groups are:

- Cyclists - road bikes and off road bikes
- Pedestrians and joggers
- Commuting school children
- Rollerbladers
- Equestrians
- Canoeing
- Fishermen

Ownership

South Florida Water Management District

Existing Conditions of Rights of Way and Surroundings

Black Creek canal (C-1W) from L-31N levee to Krome Ave.
(see map section: 1)

- 1 mile of compacted Oolitic Limestone.
- Usable easement ranging from 32' to 43'.
- Intersects with Everglades Trail and Krome Trail.
- Agriculture

Black Creek canal (C-1W & C-1) from Krome Ave. to S.W. 184th St.
(see map sections: 1 - 4)

- 8.2 miles of compacted Oolitic Limestone.
- Usable easement ranging from 42' to 48'.
- Nine road crossings.
- Three Railroad crossings.
- Needs pedestrian signage at S.W. 177th Ave. and at S.W. 152nd St.
- Primarily row crops, then a small local airport and residential communities.

Black Creek canal (C-1) from S.W. 184th St. to U.S. 1
(see map sections: 4 & 5)

- 3.1 miles existing 8' bike path in disrepair.
- Usable easement ranging from 38' to 42'.
- Four road crossings.
- SFWMD Control Structure S -148.
- Intersects with South Dade Trail.
- Primarily residential communities with some plant nurseries and ranches on the northern portion.

Black Creek canal (C-1) from S.W. 211th St. & S.W. 112th Ave. to canal
(see map section: 5)

- .4 mile of sidewalk
- One road crossing.
- Commercial area of U.S. 1 and Cutler Ridge.

Black Creek canal (C-1) from canal to S.W. 216th St.
(see map sections: 5 & 6)

- .6 miles of existing 10' multi-purpose trail.
- Usable easement ranging from 42' to 48', excluding the Florida Turnpike Extension overpass.
- One road crossing.
- Primarily warehouses.

Black Creek canal (C-1) from S.W. 216th St. to L-31E levee
(see map sections: 6 & 7)

- 3.7 miles of compacted Oolitic Limestone.
- Usable easement ranging from 30' to 96'.
- Two road crossings.
- One apartment complex, agriculture, and before reaching Black Point Park, the canal bisects the Miami-Dade Water Sewer Authority and the Dade County Solid Waste Plant and Landfill (Mount Trashmore).

Trail Development

Trail Construction (see typical sections)

- Black Creek (west of S.W. 177th Ave.) 12' wide, unpaved trail with separate unpaved trail for equestrians.
- Black Creek (east of S.W. 177th Ave.) 12' wide, paved multi-purpose trail where currently undeveloped. Resurfacing and expansion of existing trail where needed.

Amenities

- Four proposed Trailheads - Krome Ave., the Hammocks Town Center, the Cutler Ridge Mall and Black Point Park
- Rest Areas - Two
- Location Maps - Three
- Emergency Phones - Fourteen
- Landscaping

Community Assets (within 2 miles)

Points of Interest

- Weeks Air Museum - 14710 S.W. 128th St.
- Kendall Tamiami Executive Airport - 13595 S.W. 137th Ave.
- Boys Town of Florida - S.W. 120th St. & S.W. 137th Ave.
- Metrozoo - 12400 S.W. 152nd St.
- Goldcoast Railroad Museum - 12450 S.W. 152nd St.
- Larry & Penny Thompson Park - 12450 S.W. 184th St.
- Burr's Strawberry Farm - S.W. 216th St. & S.W. 137th Ave.
- Pine Ridge BMX - S.W. 216th St. & S.W. 139th Ave.
- Cauley Square - U.S. 1 & S.W. 224th St.
- South Dade Government Center - 10710 S.W. 211th St.
- South Dade Regional Library - 10705 S.W. 211th St.
- Black Point Marina - 24775 S.W. 87th Ave.

Parks

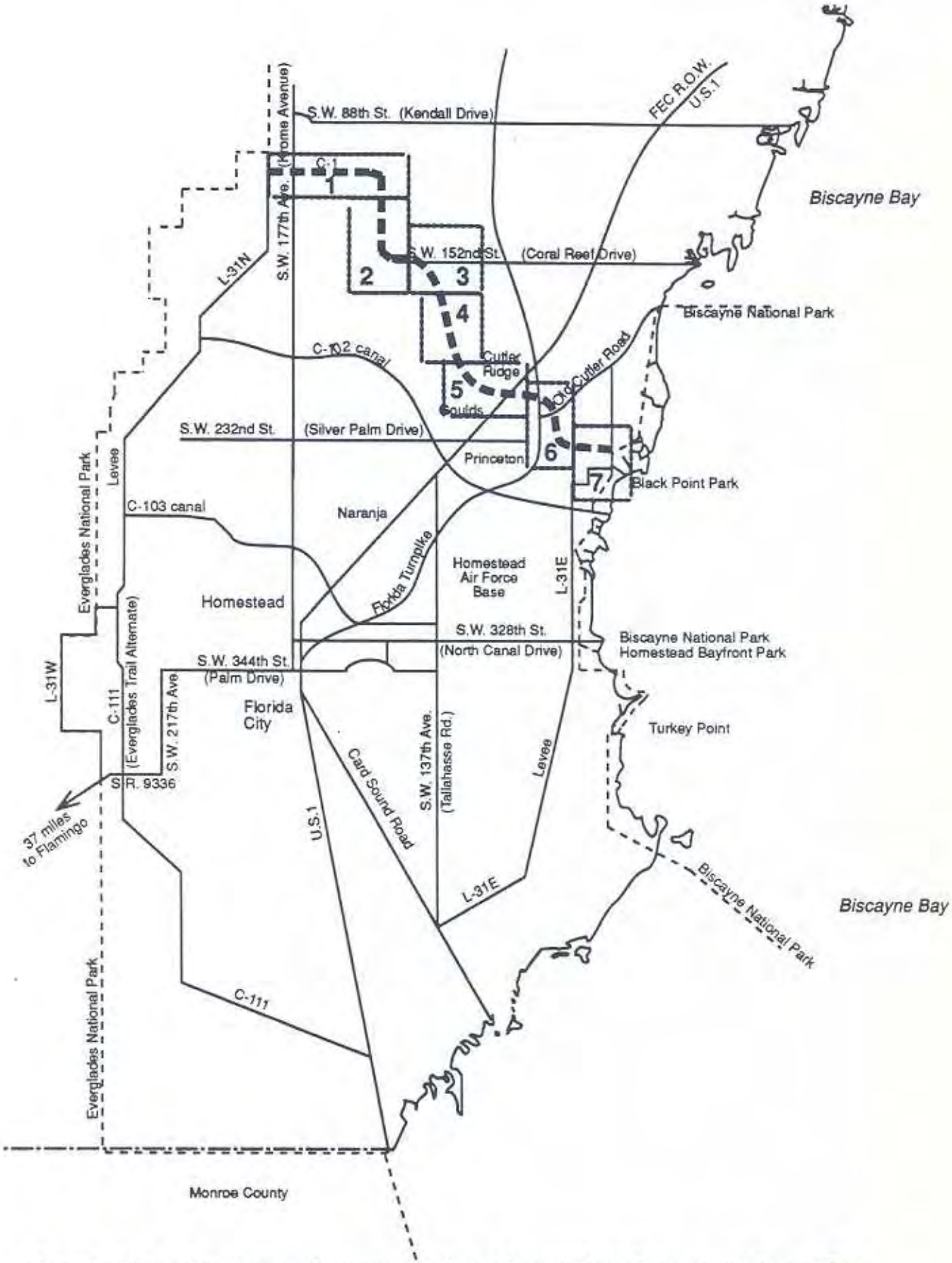
- Kings Grant Park - S.W. 160th St. & S.W. 152nd Ave.
- Goulds Park - 21805 S.W. 114th Ave.
- Goulds Wayside Park - S.W. 226th St. & U.S. 1
- Bailes Park - Bailes Rd. & S.W. 119th Ave.
- Southridge Park - 19355 S.W. 114th Ave.
- Cutler Ridge - 10100 S.W. 200th St.
- Lincoln City - S.W. 220th St. & S.W. 102nd Ave.
- Black Point Park - 24775 S.W. 87th Ave.

Schools

- Bel Aire Elementary - 10205 S.W. 194th St.
- Caribbean Elementary - 11990 S.W. 200th St.
- Cutler Ridge Elementary - 20210 Coral Sea Rd.
- Gulfstream Elementary - 20900 S.W. 97th Ave.
- Oliver Hoover Elementary - 9050 Hammocks Blvd.
- Gilbert L. Porter Elementary - 15851 S.W. 112th St.
- Richmond Heights Relief Elementary - Country Walk @ S.W. 144th Ave.
- South Miami Heights Relief Elementary - 12231 S.W 190th Terr.
- Centennial Middle - 8601 S.W. 212th St.
- Cutler Ridge Middle - 19400 S.W. 97th Ave.
- Mays Middle - 11700 S.W. 216th St.
- Miami Southridge High - 19355 S.W. 114th Ave.
- Robert Morgan Technical - 18180 S.W. 122nd Ave.

Issues

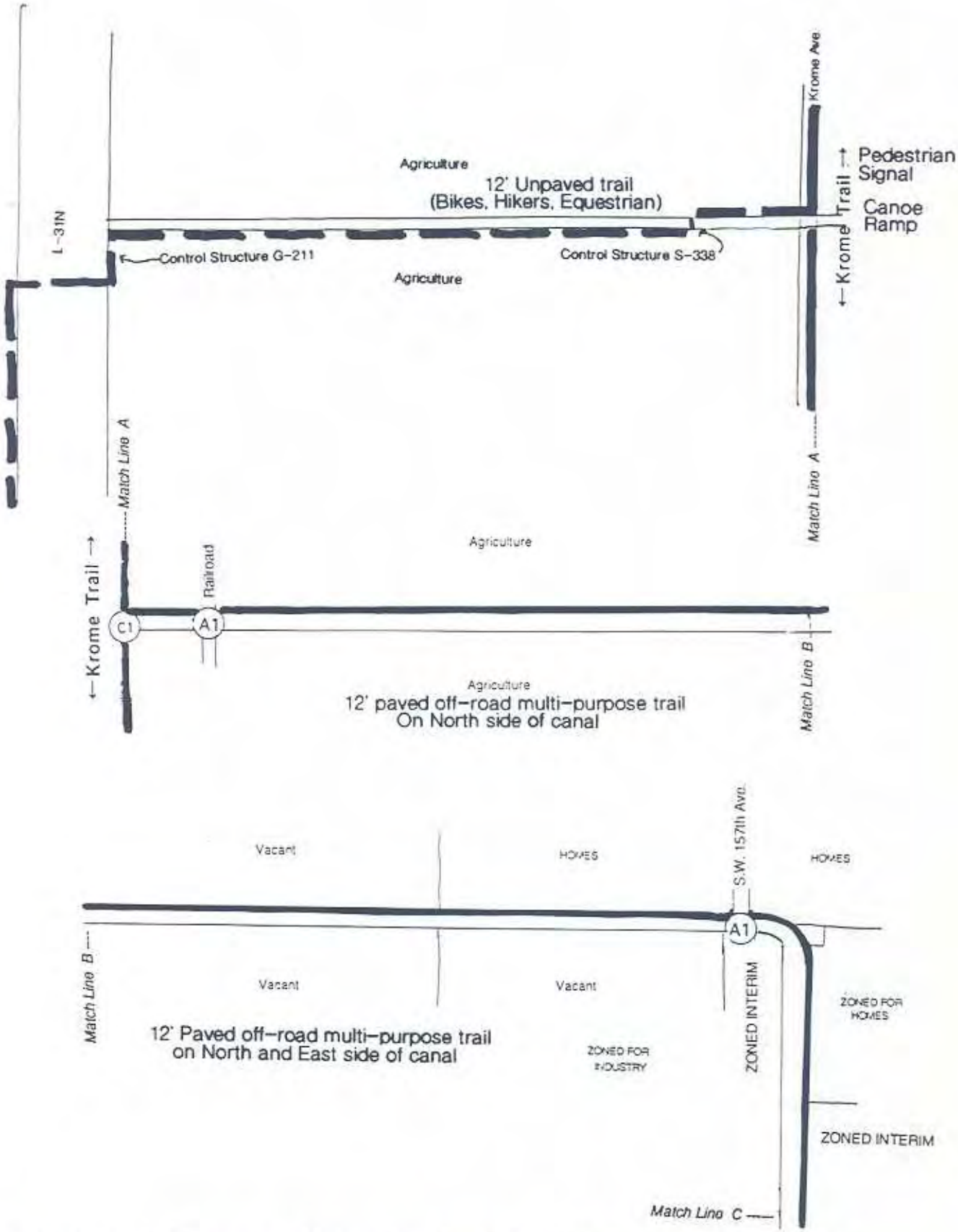
- Safe crossing of U.S. 1. needs to be investigated.
- SFWMD owns canal R.O.W. and performs regular maintenance. Modify all canal gates at road intersections to provide easy access for authorized vehicles and Trail users, while discouraging automobile entry.
- Farming is along Trail. Signage should be provided to inform trail users of farming practices, such as spraying of chemicals, which can, during the actual operation be of concern. Existing regulations require farmers to post warnings.
- Boat Ramps used by the SFWMD exist along the R.O.W., but no parking for cars is available, which reduces access for canoes.
- Two pedestrian signals are necessary, one at Black Creek Trail on Krome Ave., and on S.W. 152nd St. due to high volume of vehicular traffic and short sight distances.



South Dade Greenway Network - Black Creek Trail Segment Map

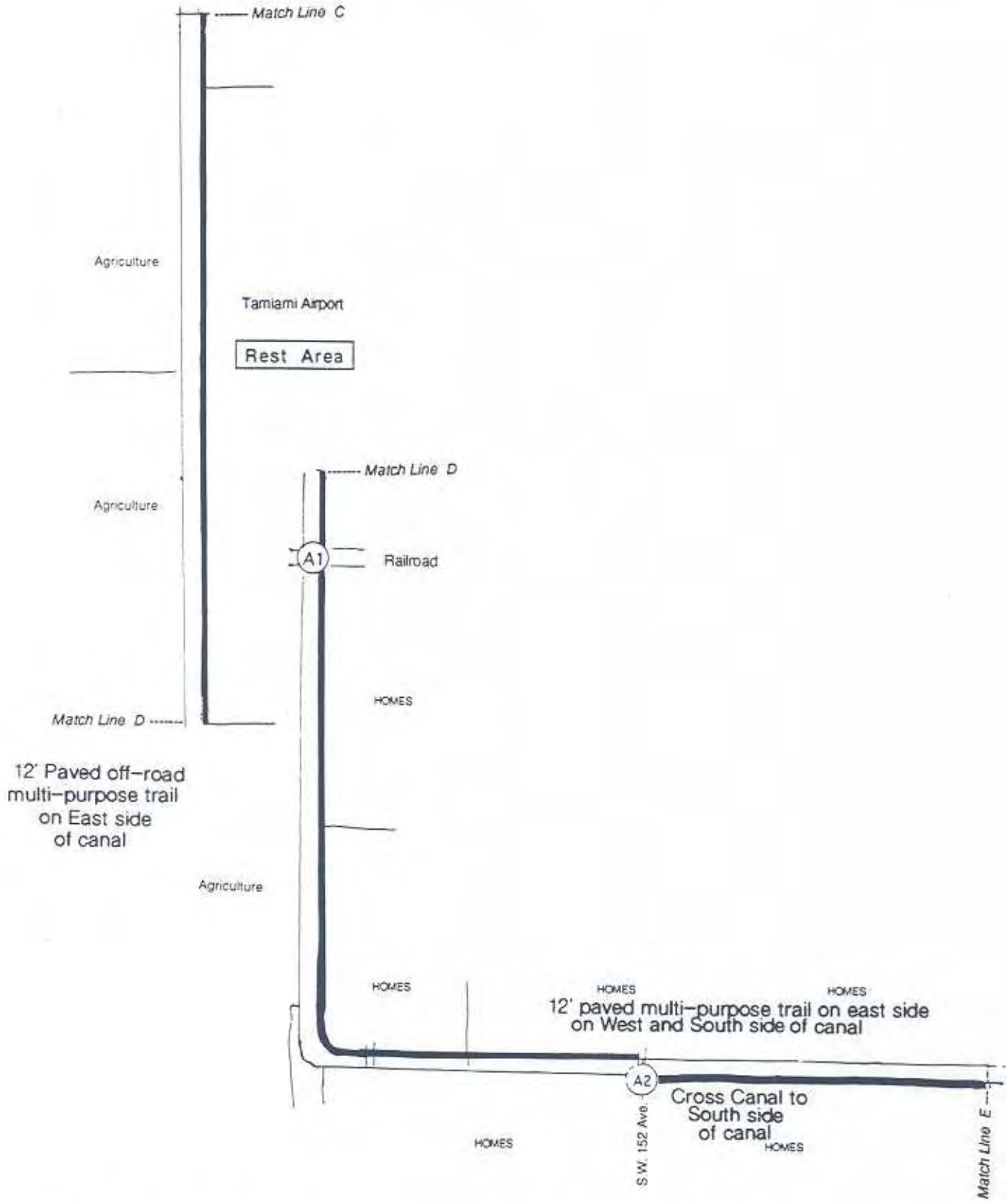
Scale 1" = 4 miles

Map Section Key



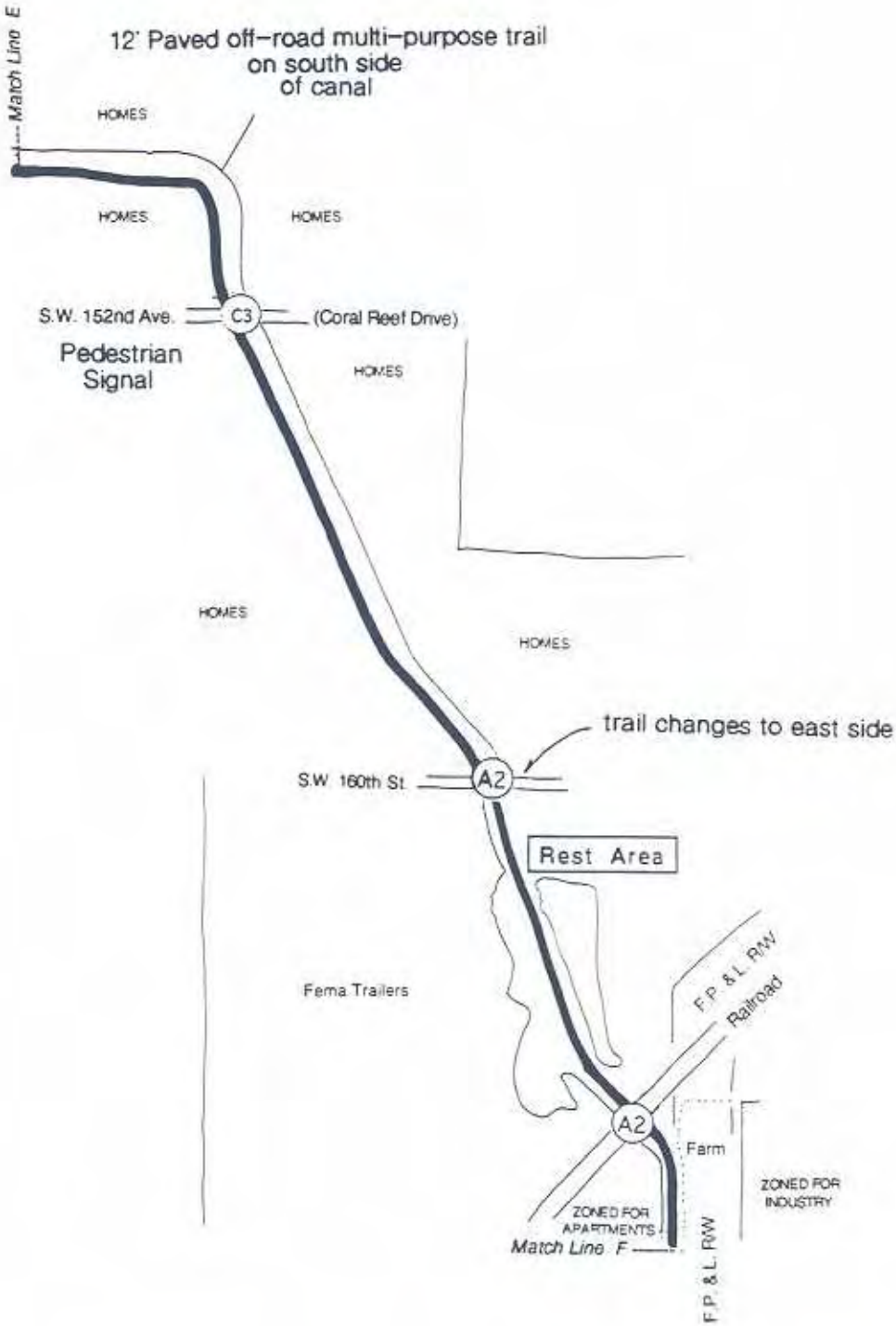
South Dade Greenway Network - Black Creek Trail (Section 1)

Scale 1" = 1000'



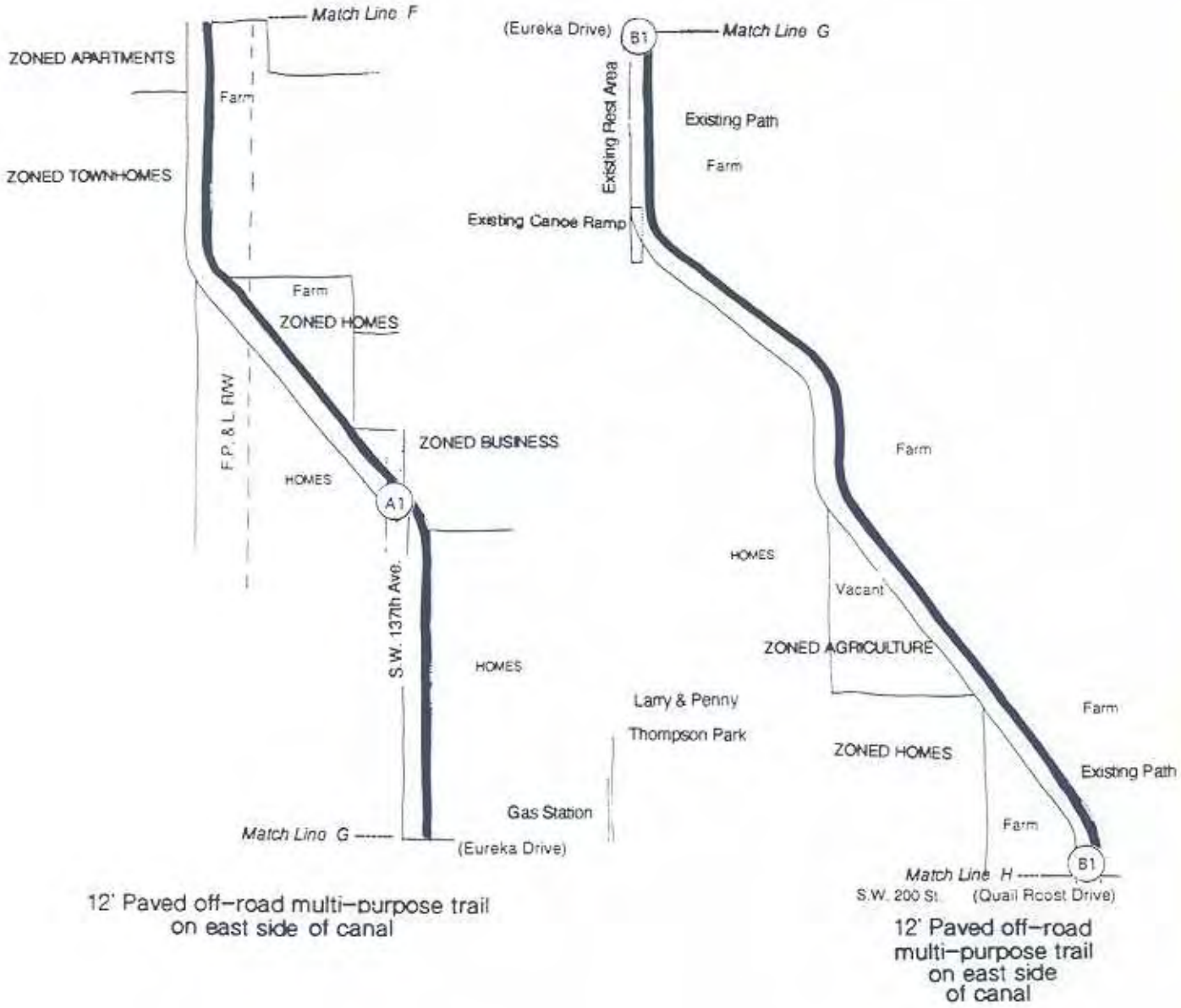
South Dade Greenway Network - Black Creek Trail (Section 2)

Scale 1" = 1000'



South Dade Greenway Network - Black Creek Trail (Section 3)

Scale 1" = 1000'

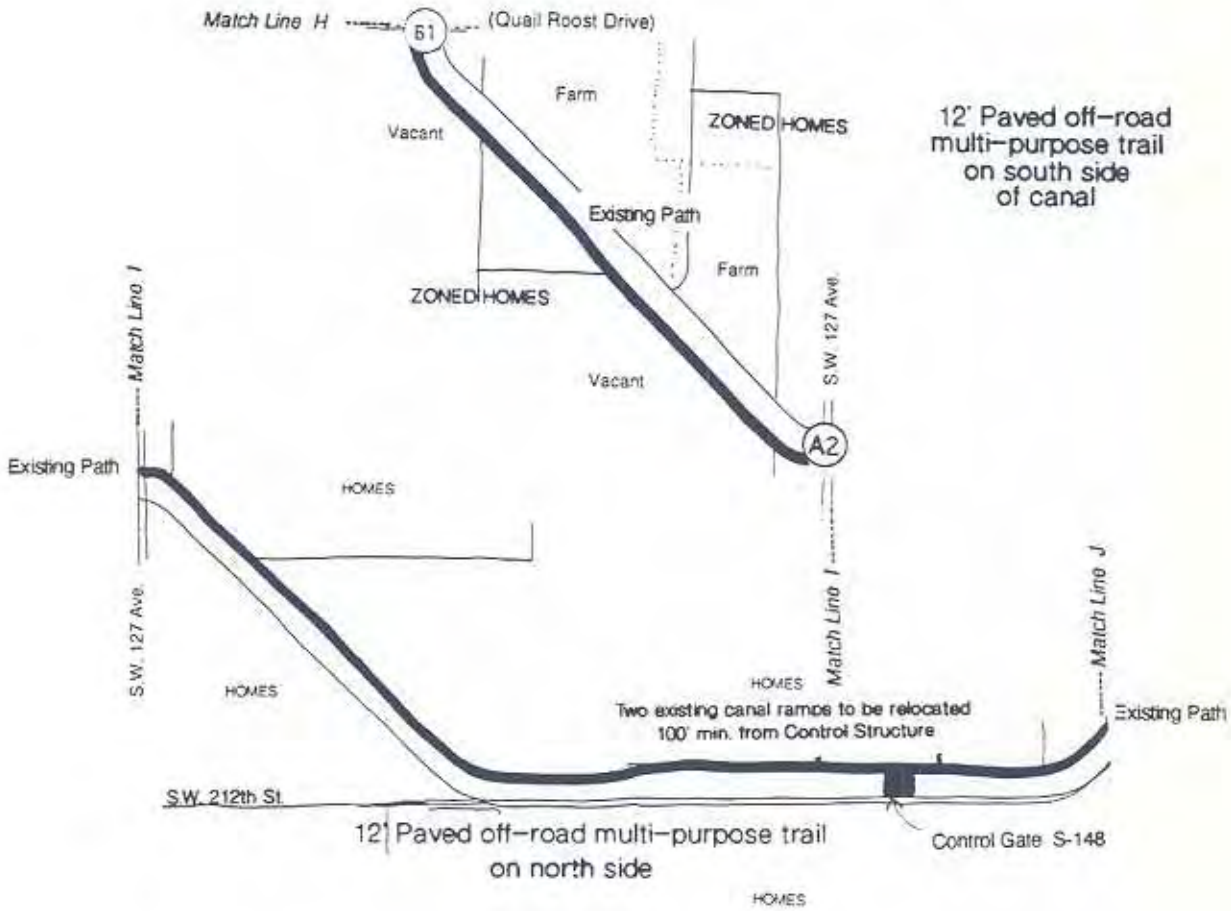


12' Paved off-road multi-purpose trail on east side of canal

12' Paved off-road multi-purpose trail on east side of canal

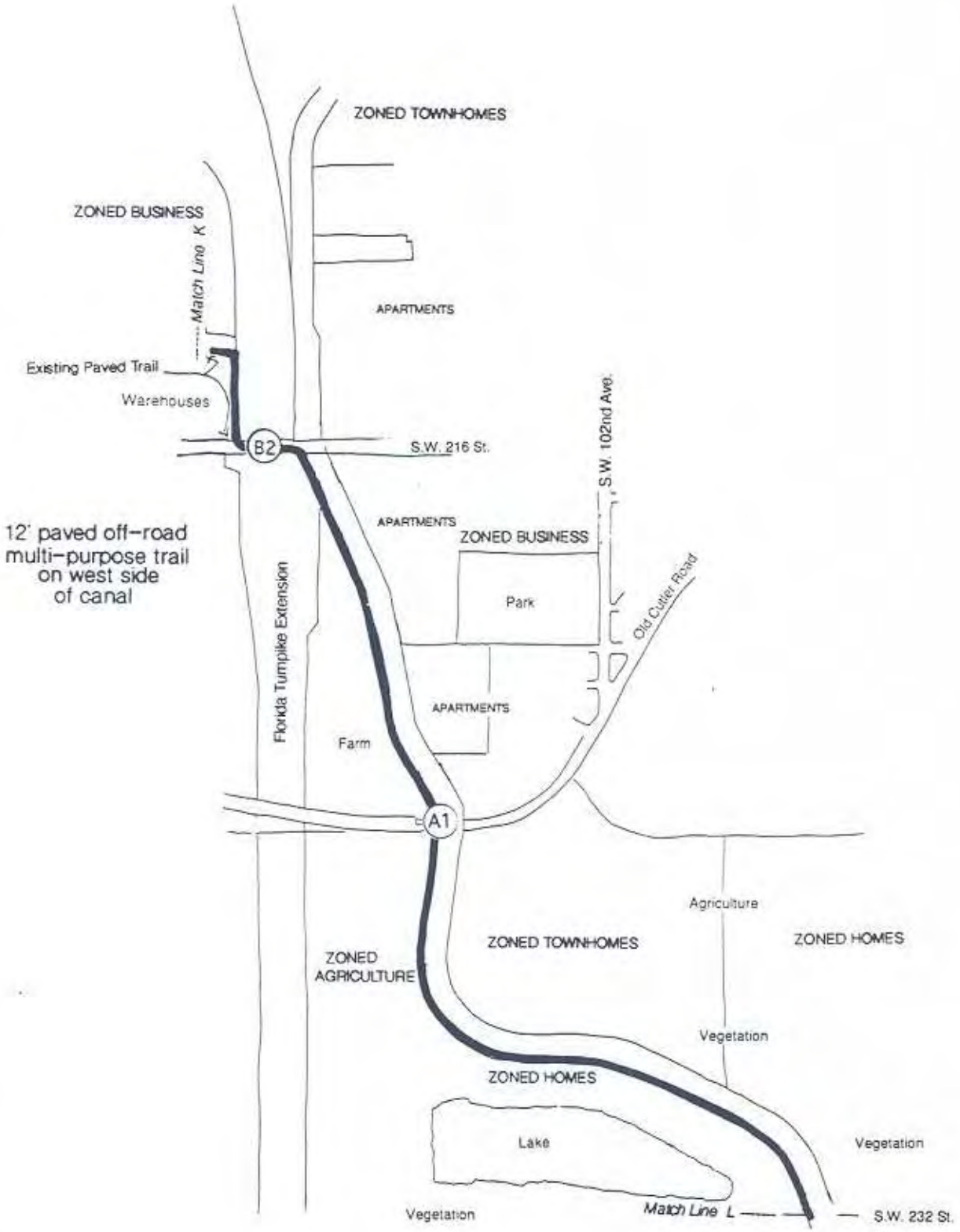
South Dade Greenway Network - Black Creek Trail (Section 4)

Scale 1" = 1000'



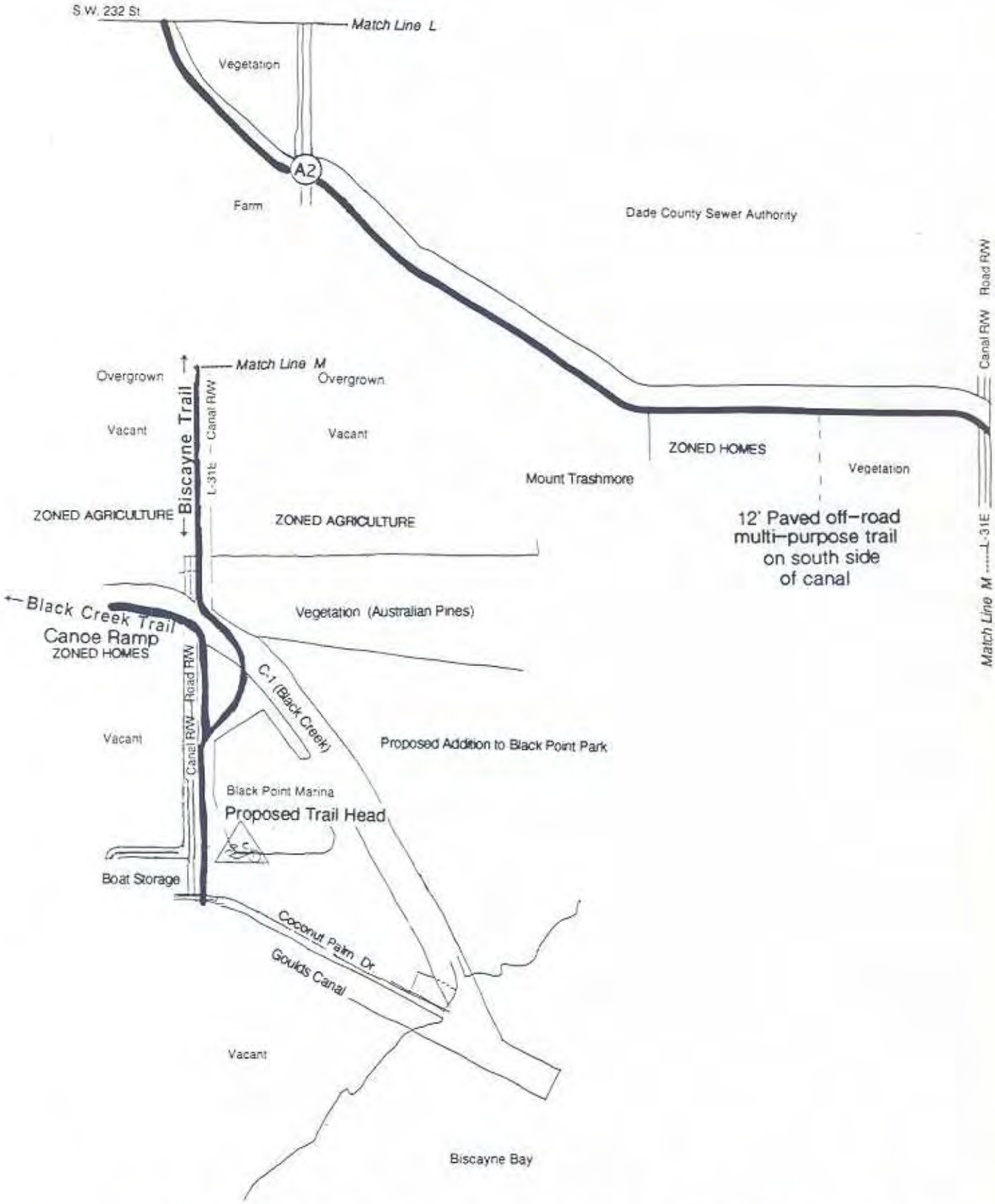
South Dade Greenway Network - Black Creek Trail (Section 5)

Scale 1" = 1000'



South Dade Greenway Network - Black Creek Trail (Section 6)

Scale 1" = 1000'



South Dade Greenway Network - Black Creek Trail (Section 7)

Scale 1" = 1000'

Princeton Trail

General Description - 15.8 total trail miles.

This is a canal Trail traversing along side of C-102 from the northwest to the southeast. Historically the canals were dug along fresh water sloughs, which were part of the natural watershed of South Florida from the Everglades to Biscayne Bay, with the intention of draining the Everglades for more suitable farm land and buildable acreage. Although the canal banks are Oolitic limestone the areas adjacent are rich marl soils.

The portion of the Trail west of the Krome Trail is to remain unpaved for hikers, mountain bikes and equestrians, unless future use dictates otherwise. Trail users will pass occasional homes and assorted agriculture, consisting of: row crops, fruit groves, and plant nurseries.

As the Trail extends eastward the Trail passes though the northern portion of the Redland area of south Dade, which also consists of assorted agriculture, residential areas and historic pioneer homes. The Trail utilizes a small portion of the South Dade Trail to allow trail users to safely cross U.S. 1. at Coconut Palm Drive (S.W. 248th St.). C-102 extends from L-31E all the way to Biscayne Bay as part of the Biscayne Trail.

The expected user groups are:

- Cyclists - road bikes and off road bikes
- Pedestrians and joggers
- Commuting school children
- Rollerbladers
- Equestrians
- Fishermen

Ownership

South Florida Water Management District

Existing Conditions of Rights of Way and Surroundings

C-102 canal from L-31N levee to Krome Ave.
(see map sections: 1 & 2)

- 3.5 miles of compacted Oolitic Limestone.
- Usable easement ranging from 41' to 48'.
- Four road crossings
- Intersects with Everglades Trail and Krome Trail
- Primarily agriculture and a mobile home community.

C-102 canal from Krome Ave. to L-31E levee
(see map sections: 2 - 7)

- 12.3 miles of compacted Oolitic Limestone.
- Usable easement ranging from 30' to 72'.
- Ten road crossings.
- One railroad crossing.
- One SFWMD control structure crossing.
- Intersects with South Dade Trail and Biscayne Trail.
- Agriculture, occasional homes, through a small industrial area, then new residential communities, plant nurseries, and finally coastal mangroves.

Trail Development

Trail Construction (see typical sections)

- C-102 (west of S.W. 177th Ave.) 12' wide, unpaved trail with separate unpaved trail for equestrians.
- C-102 (East of S.W. 177th Ave.) 12' wide, paved multi-purpose trail.

Amenities

- One proposed Trailhead - Coffee's Country Store
- Rest Areas - Two
- Location Maps - Four
- Emergency Phones - Twelve
- Interpretive Signage - One
- Landscaping

Community Assets (within 2 miles)

Points of Interest

- Redland KOA Campground - S.W. 162nd Ave. & S.W. 208th St.
- Anderson's Corner - S.W. 232nd St. & S.W. 157th Ave.
- Monkey Jungle - 14805 S.W. 216th St.
- Pine Ridge BMX - S.W. 216th St & S.W. 130th Ave.
- Burr's Strawberry Farm - S.W. 216th St & S.W. 129th Ave.
- Cauley Square - U.S. 1 & S.W. 224th St.

Parks

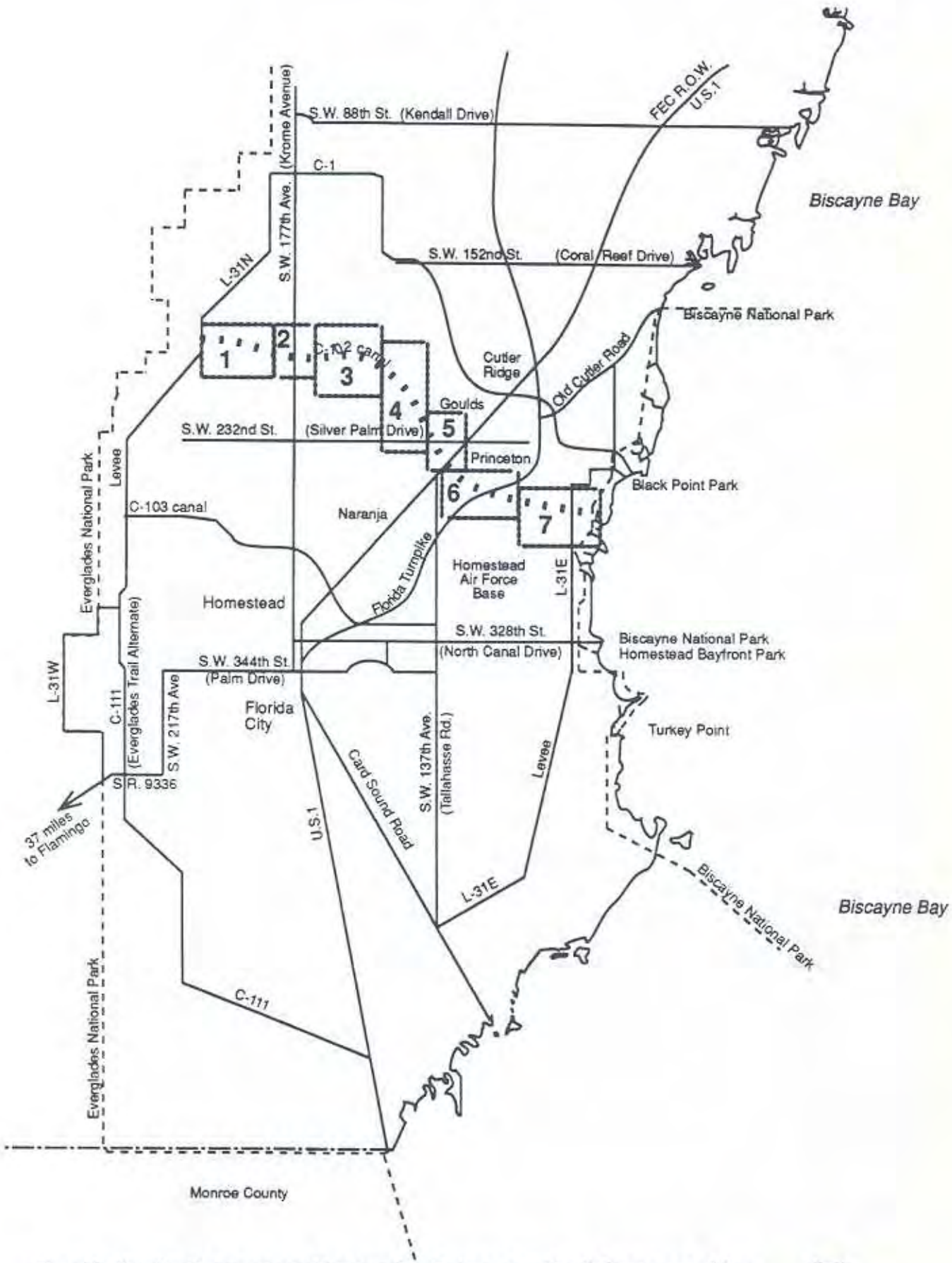
- Meadow Wood Manor Park - S.W. 261st Terr. & S.W. 125th Ave.
- Biscayne National Park - C-102 & the bay.

Schools

- Airbase Elementary - 12829 S.W. 272st.
- Chapman Elementary - 27190 S.W. 140th Ave.

Issues

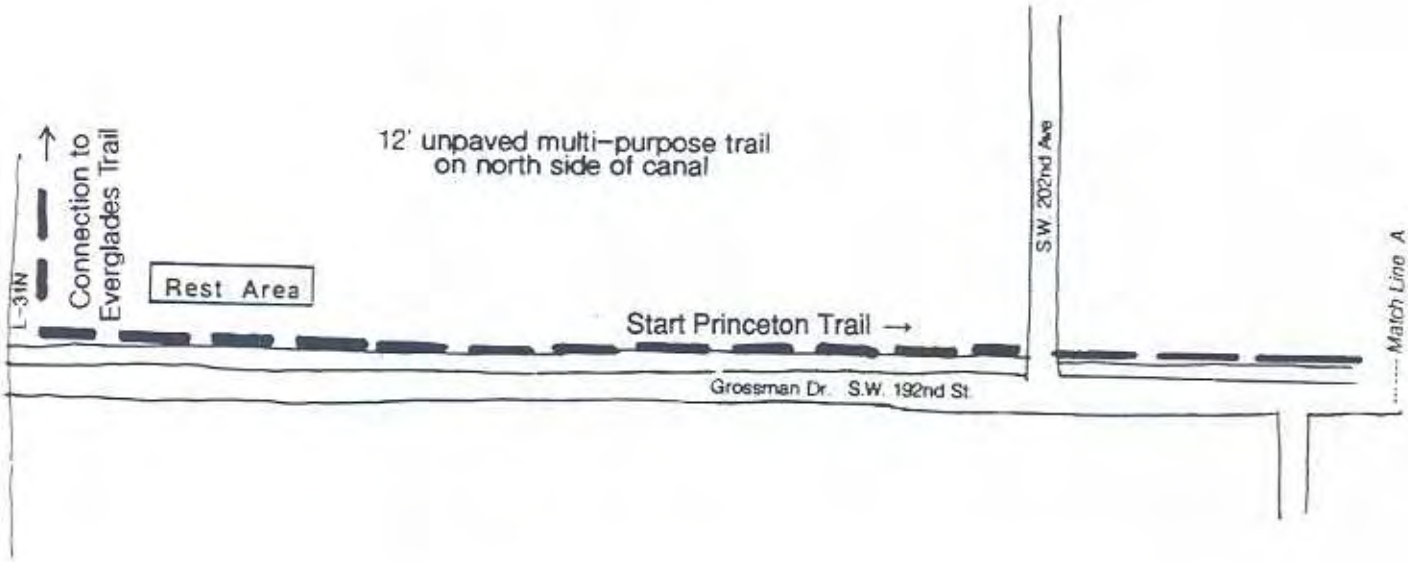
- Safe crossing of U.S. 1 needs to be investigated.
- SFWMD owns canal R.O.W. and performs regular maintenance. Modify all canal gates at road intersections to provide easy access for authorized vehicles and Trail users, while discouraging automobile entry.
- Farming is along Trail. Signage should be provided to inform trail users of farming practices, such as spraying of chemicals, which can, during the actual operation be of concern. Existing regulations require farmers to post warnings.
- Boat Ramps used by the SFWMD exist along the R.O.W., but no parking for cars is available, which reduces the access for canoes.

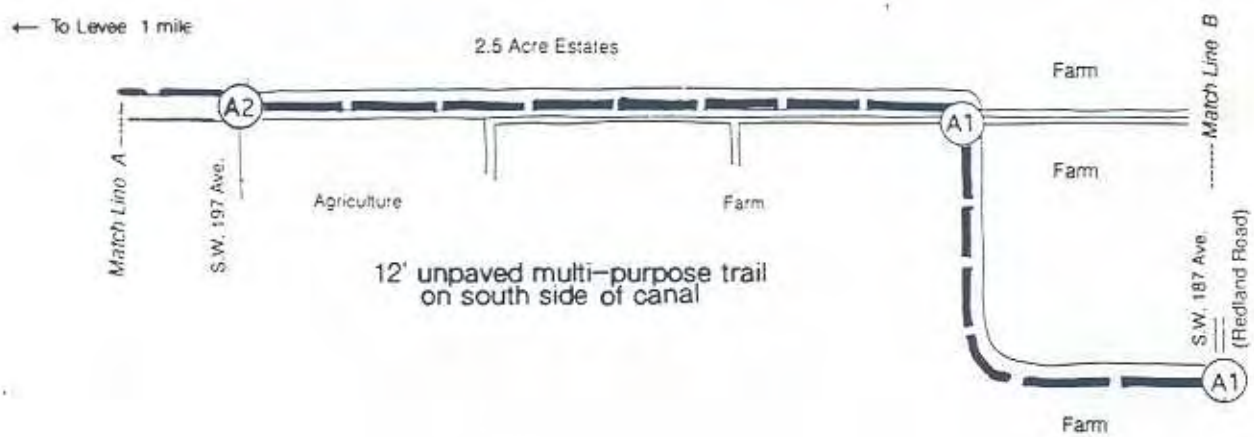


South Dade Greenway Network - Princeton Trail Segment Map

Scale 1" = 4 miles

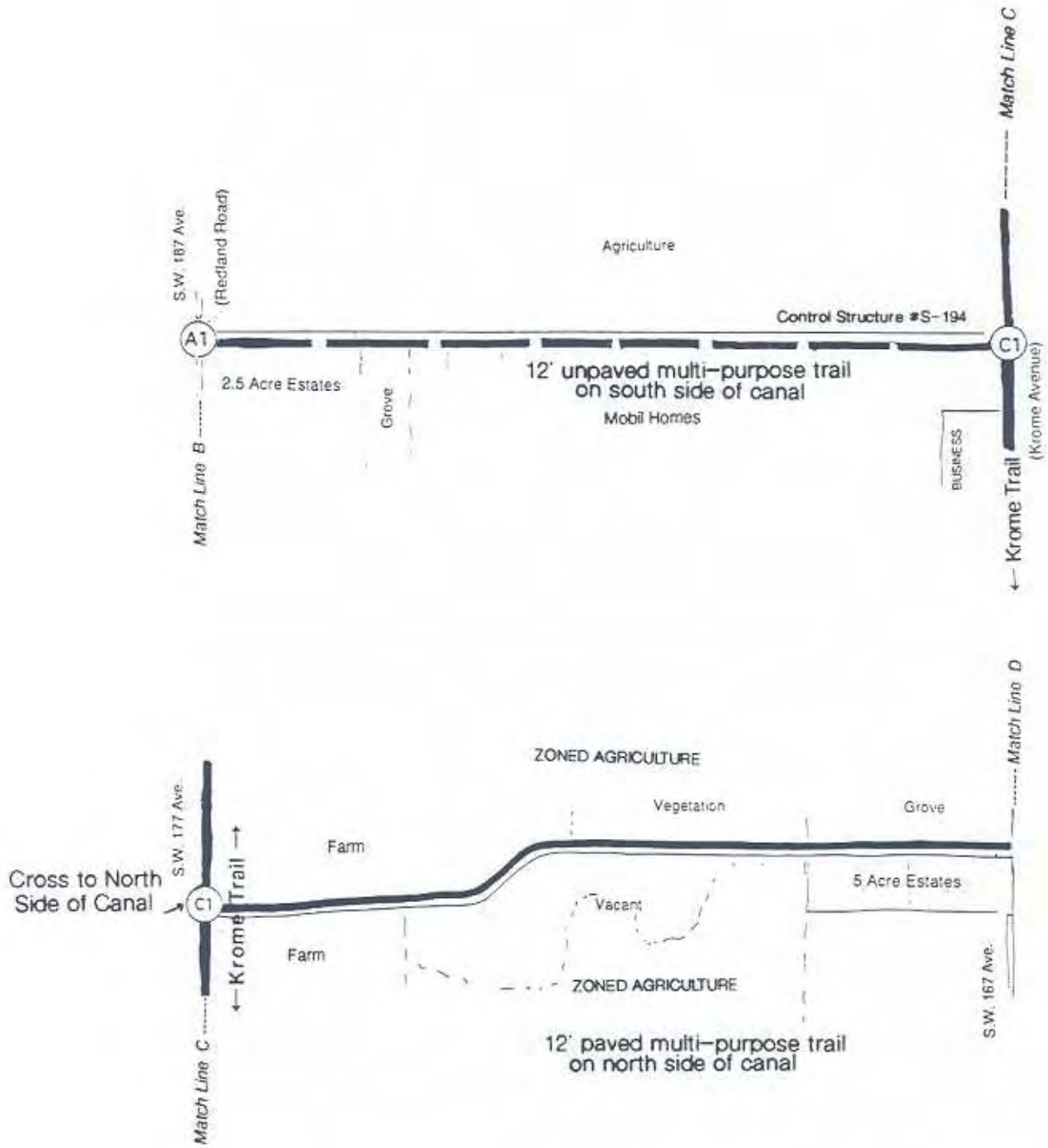
Map Section Key





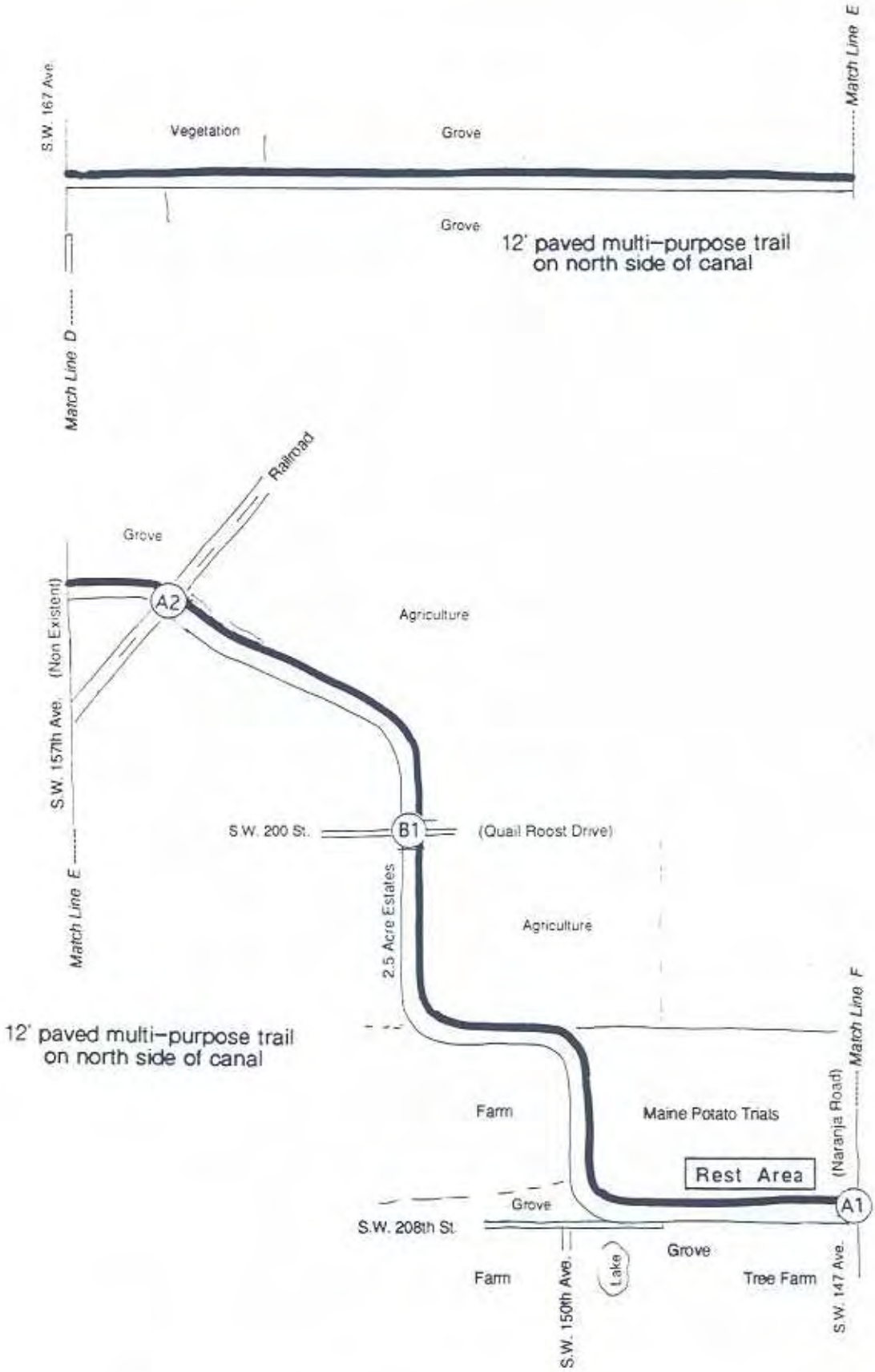
South Dade Greenway Network - Princeton Trail (Section 1)

Scale 1" = 1000'



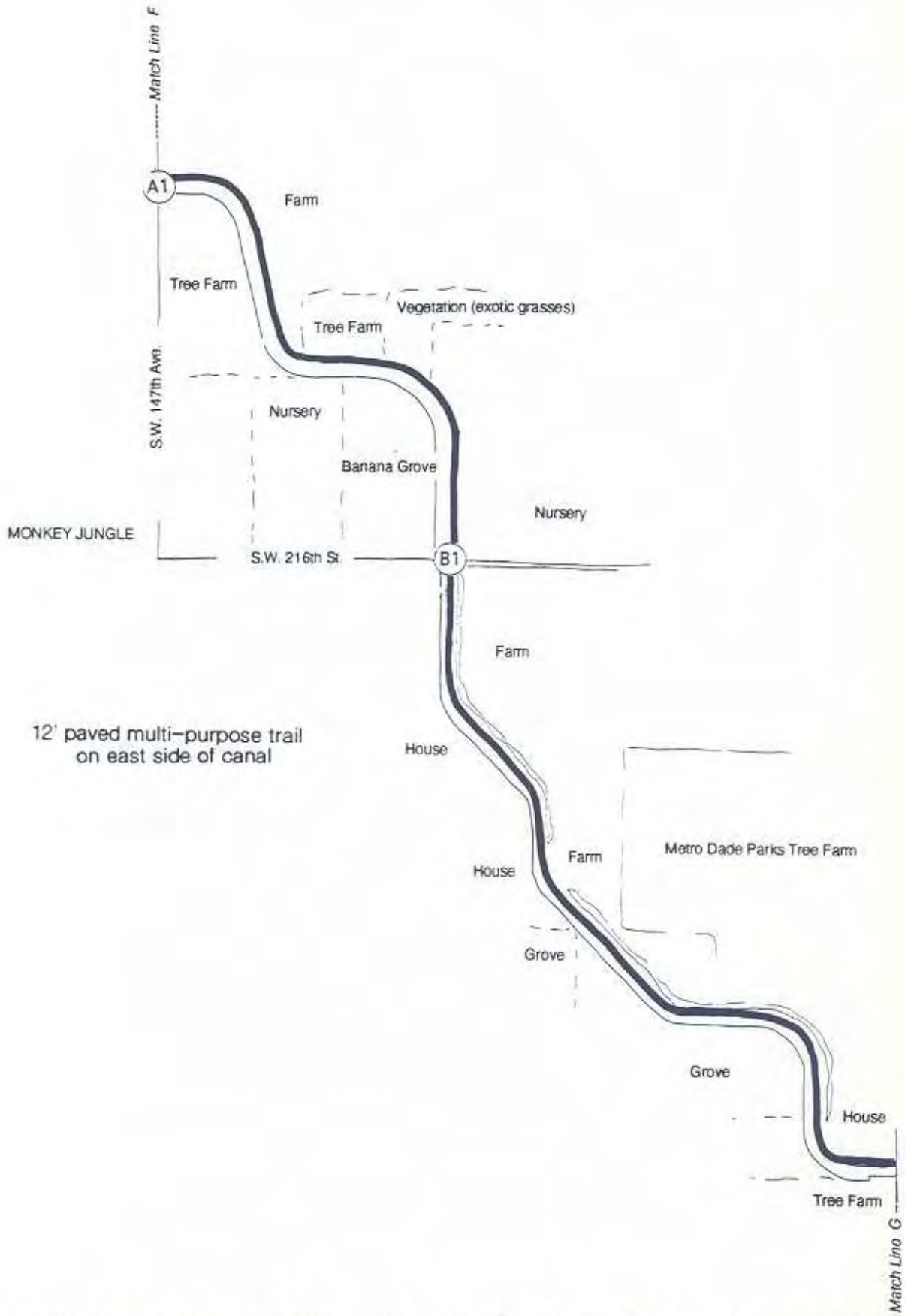
South Dade Greenway Network - Princeton Trail (Section 2)

Scale 1" = 1000'



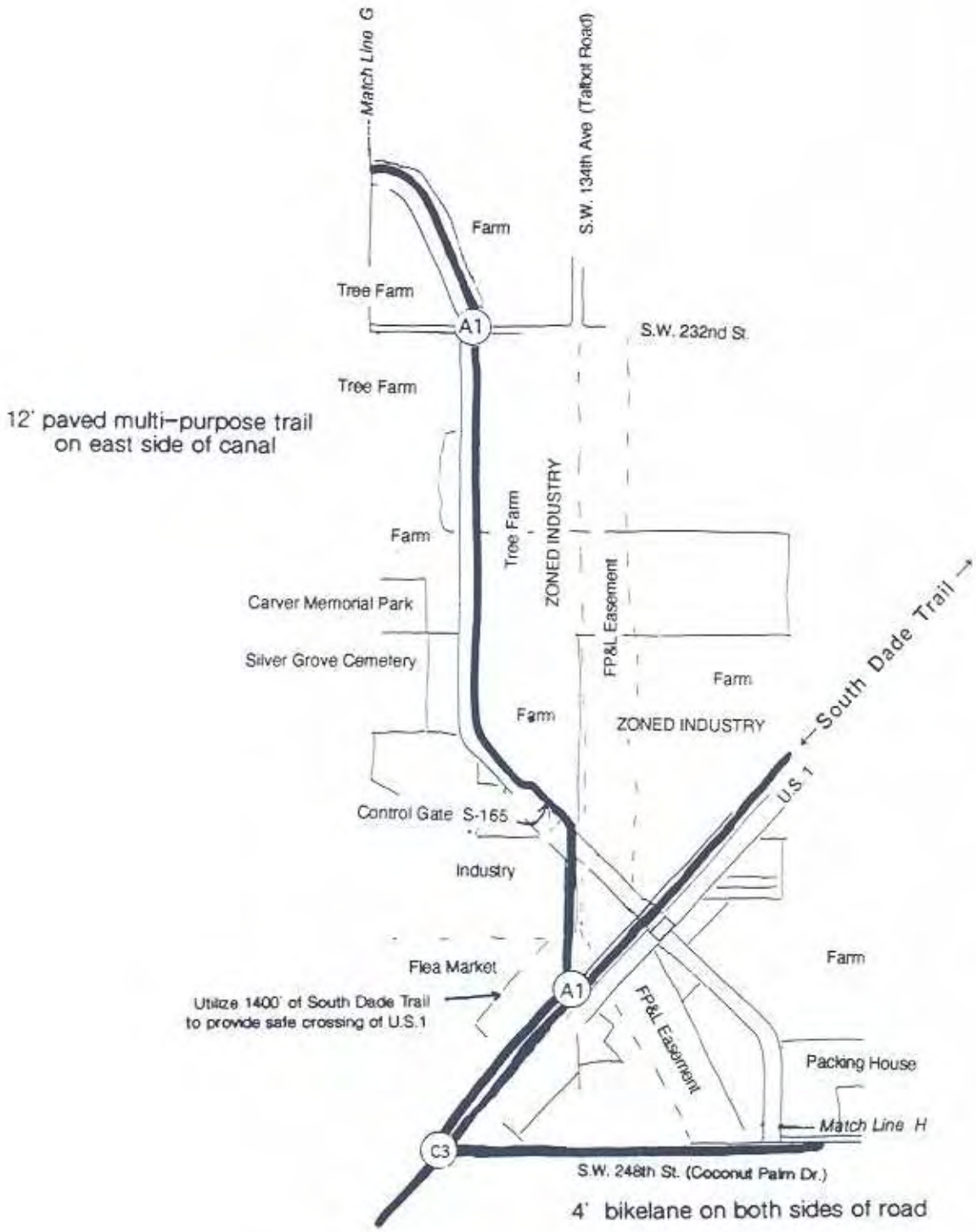
South Dade Greenway Network - Princeton Trail (Section 3)

Scale 1" = 1000'



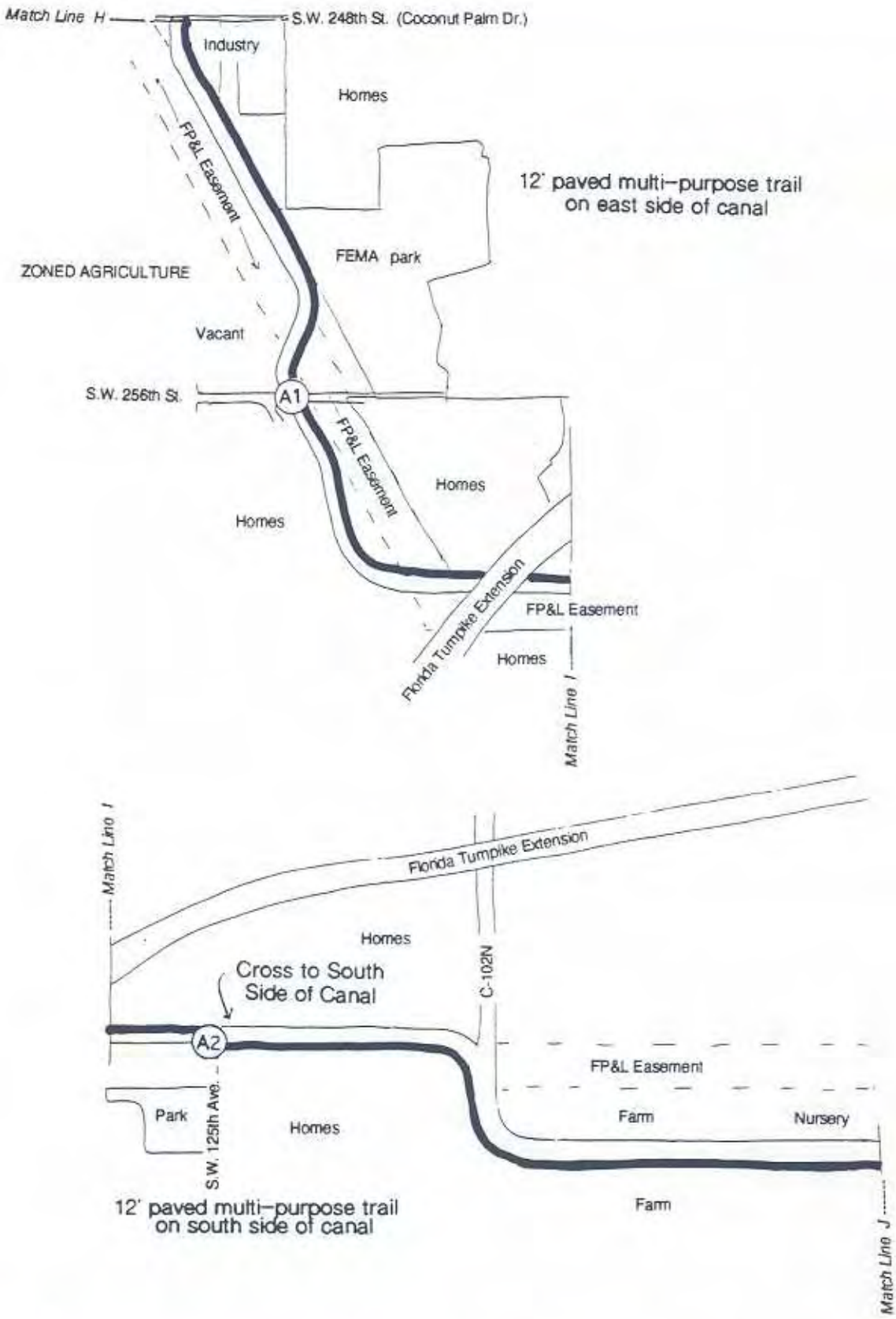
South Dade Greenway Network - Princéton Trail (Section 4)

Scale 1" = 1000'



South Dade Greenway Network - Princeton Trail (Section 5)

Scale 1" = 1000'



South Dade Greenway Network - Princeton Trail (Section 6)

Scale 1" = 1000'

South Dade Greenway Network - Princeton Trail (Section 7)

Scale 1" = 1000'

Mowry Trail

General Description - 11 total trail miles.

This is a canal Trail traversing along C-103 from the northwest to the southeast. Historically the canals were dug along fresh water sloughs, which were part of the natural watershed of South Florida from the Everglades to Biscayne Bay; with the intention of draining the Everglades for more suitable farm land and buildable acreage. Although the canal banks are Oolitic limestone the areas adjacent are rich marl soils.

The portion of the Trail west of the Krome Trail is to remain unpaved for hikers, mountain bikes and equestrians, unless future use dictates otherwise. Trail users will pass occasional homes and assorted agriculture, consisting of row crops, fruit groves, and plant nurseries.

As the Trail extends eastward, it passes though the southern portion of the Redland area of south Dade, which is primarily agricultural, residential homesites and historic pioneer homes. The Trail utilizes a small portion of the South Dade Trail to allow trail users to safely cross U.S. 1 at Avocado Drive (S.W. 296th St.) Mowry Trail ends at the Tallahassee Connector.

The expected user groups are:

- Cyclists - road bikes and off road bikes
- Pedestrians and joggers
- Commuting school children
- Rollerbladers
- Equestrians
- Fishermen

Ownership

South Florida Water Management District

Existing Conditions of Rights of Way and Surroundings

C-103 canal from L-31N levee to Krome Ave.
(see map sections: 1 & 2)

- 5.4 miles of compacted Oolitic Limestone.
- Usable easement ranging from 34' to 38'.
- Seven road crossings.
- One railroad crossing.
- One SFWMD control structure.
- Intersects with Everglades Trail and Krome Trail
- Primarily agriculture with occasional homes.

C-103 canal from Krome Ave. to Tallahassee Connector
(see map sections: 3 - 5)

- 5.6 miles of compacted Oolitic Limestone.
- Usable easement ranging from 30' to 125'.
- Nine road crossings.
- Intersects with South Dade Trail and Tallahassee Connector.
- Primarily agriculture with occasional homes west of South Dade Trail. Residential and commercial density on either side of U.S. 1, followed by more agriculture.

Trail Development

Trail Construction (see typical sections)

- C-103 (west of S.W. 177th Ave.) 12' wide, unpaved trail with separate unpaved trail for equestrians.
- C-103 (East of S.W. 177th Ave.) 12' wide, paved multi-purpose trail.

Amenities

- Two proposed Trailheads - Homestead Sports Center and Homestead Motorsports Complex
- Rest Areas - Two
- Location Maps - Four
- Emergency Phones - Six
- Interpretive Signage -Two
- Landscaping

Community Assets (within 2 miles)

Points of Interest

- Univ. of Florida Tropical Research and Education Center - 18905 S.W. 280th St.
- Dade County Agricultural Center - 18710 S.W. 288th St.
- Homestead Air Force Base - S.W. 137th Ave. entrance
- Homestead Sports Complex - Palm Drive & S.W. 152nd Ave.
- Homestead Motorsports Complex - Palm Drive & S.W. 137th Ave.

Parks

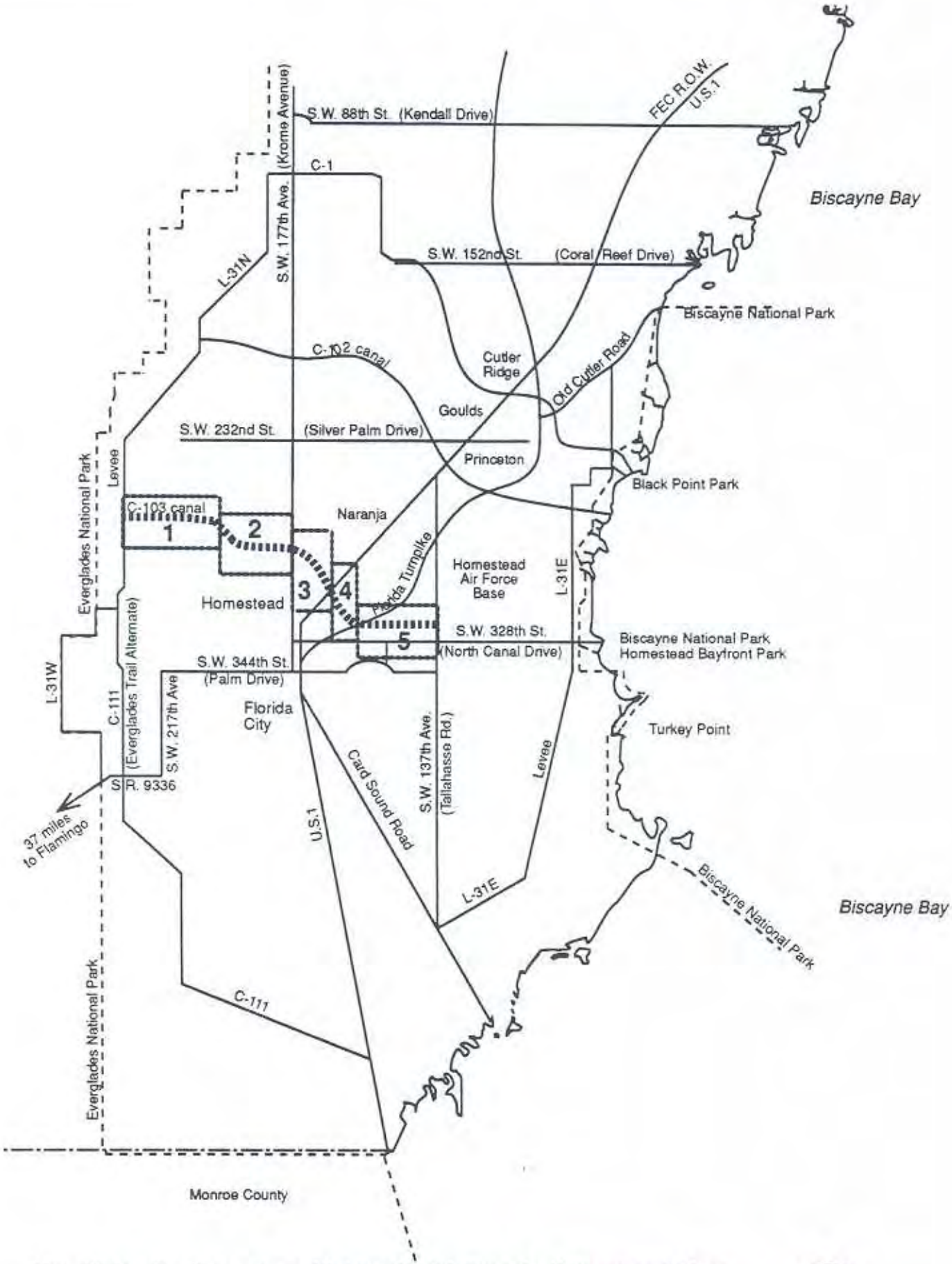
- South Dade Recreation Center - 28151 S.W. 164th Ave.
- Modello Wayside Park - S.W. 288th St. & west side of U.S. 1
- Seminole Wayside Park - S.W. 298th St. & east side of U.S. 1
- Tom J. Harris Field / YMCA - U.S. 1 & Campbell Drive

Schools

- Airbase Elementary - 12829 S.W. 272st.
- Avocado Elementary - 16969 S.W. 294th St.
- Avocado / Leisure Relief - S.W. 290th St. @ S.W. 197th Ave.
- Campbell Drive Elementary - 30700 S.W. 157th Ave.
- Leisure City Elementary - 14950 S.W. 288th St.
- Peskoe Elementary - S.W. 290th St. @ S.W. 144th Ave.
- Campbell Drive Middle - 31110 S.W. 157th Ave.
- South Dade High - 28401 S.W. 167th Ave.
- South Dade Adult Education Center - 109 N.E. 8 St.
- South Dade Skill Center - 28300 S.W. 152nd Ave.

Issues

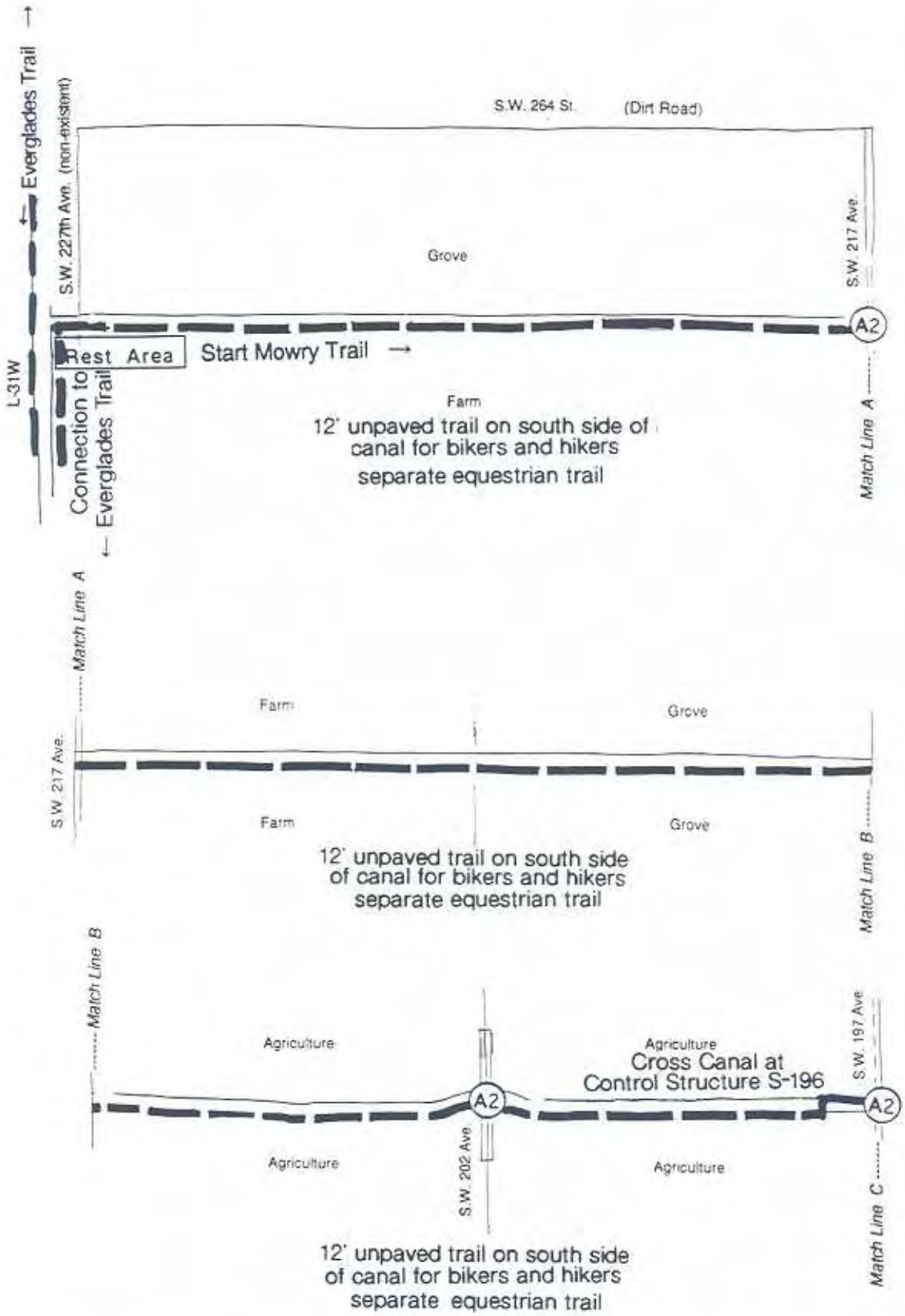
- Safe crossing of U.S. 1 needs to be investigated.
- SFWMD owns canal R.O.W. and performs regular maintenance. Modify all canal gates at road intersections to provide easy access for authorized vehicles and Trail users, while discouraging automobile entry.
- Farming is along Trail. Signage should be provided to inform trail users of farming practices, such as spraying of chemicals, which can, during the actual operation be of concern. Existing regulations require farmers to post warnings.
- Boat Ramps used by the SFWMD exist along the R.O.W., but no parking for cars is available, which reduces the access for canoes.



South Dade Greenway Network - Mowry Trail Segment Map

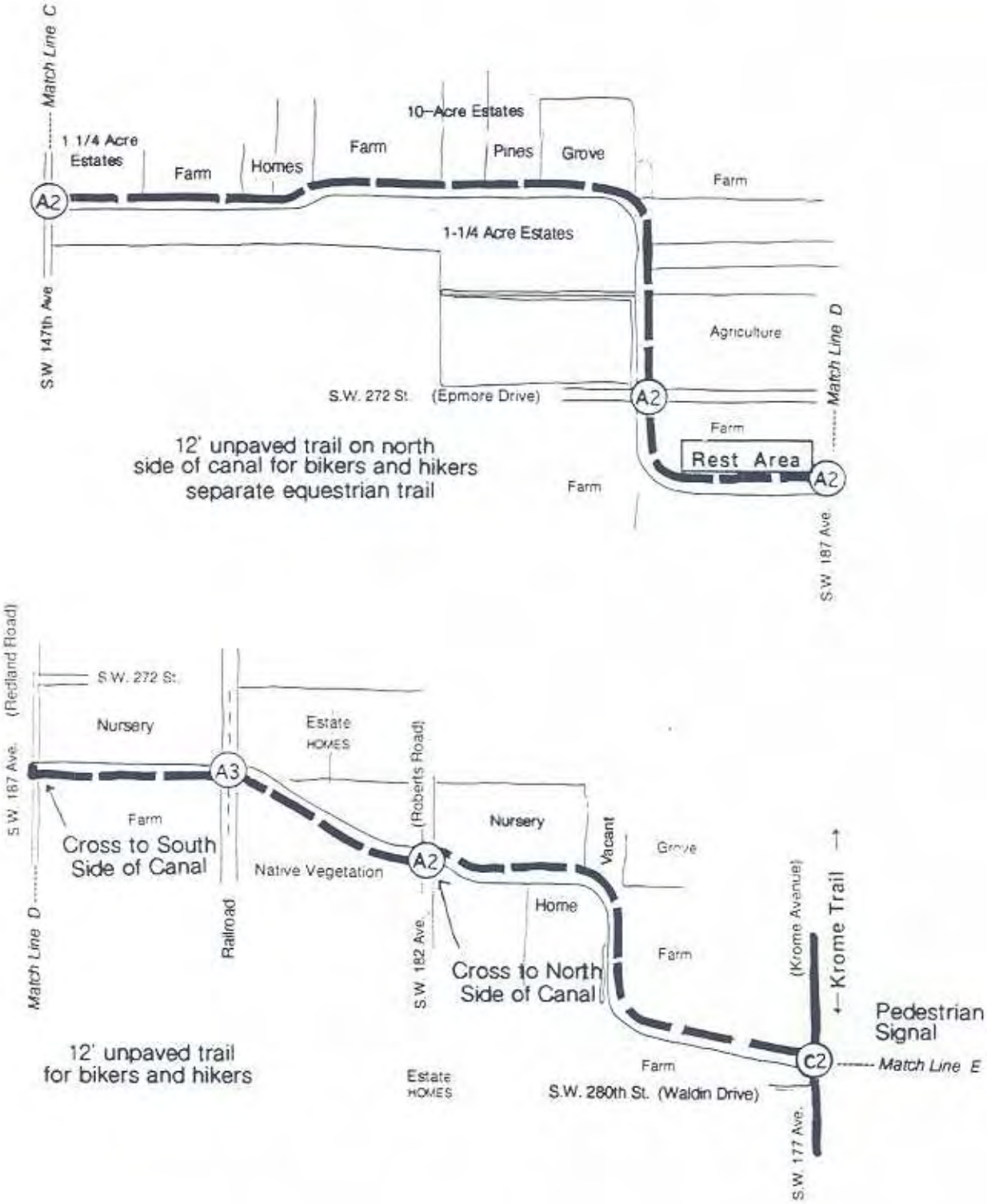
Scale 1" = 4 miles

Map Section Key



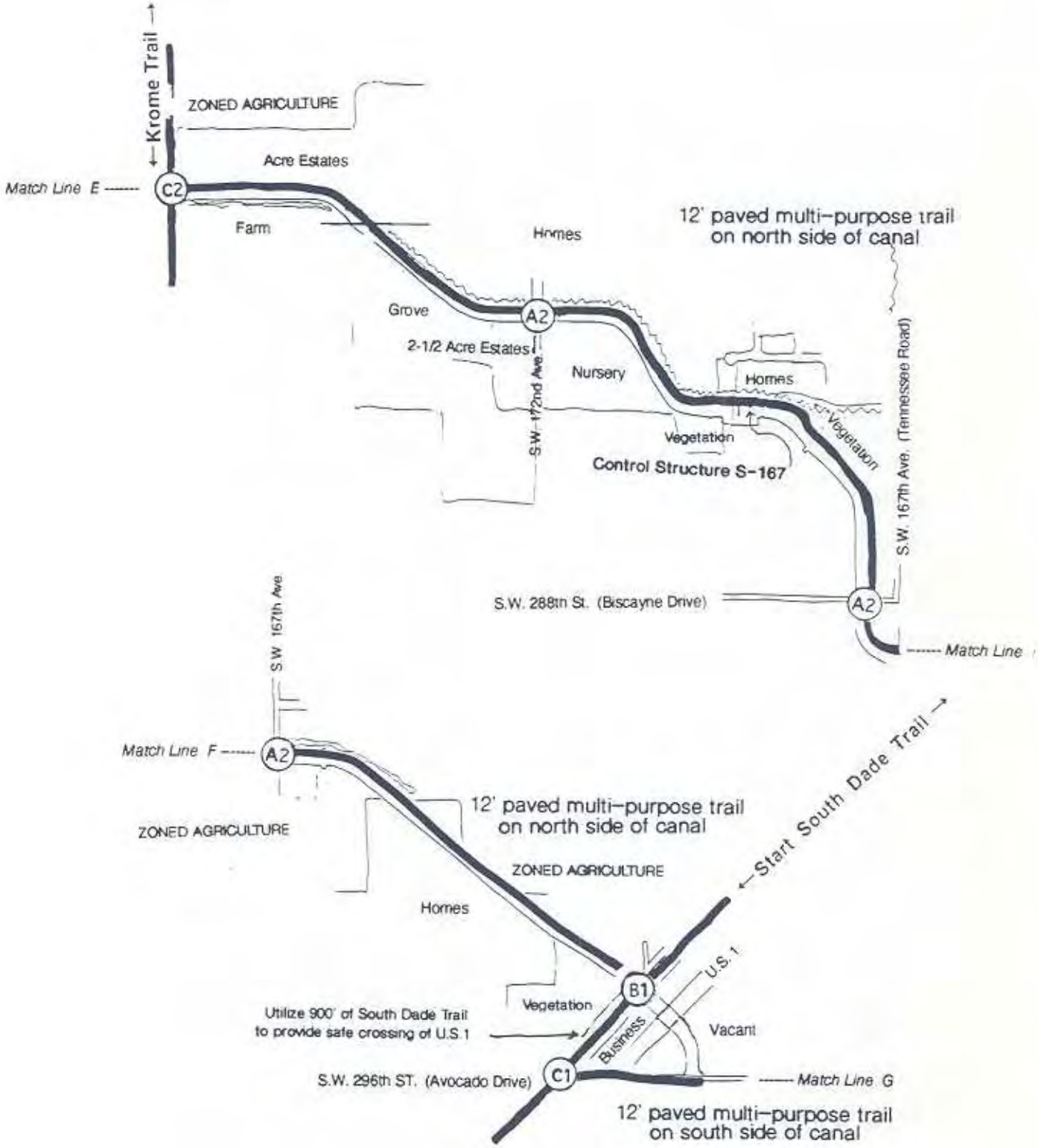
South Dade Greenway Network - Mowry Trail (Section 1)

Scale 1" = 1000'



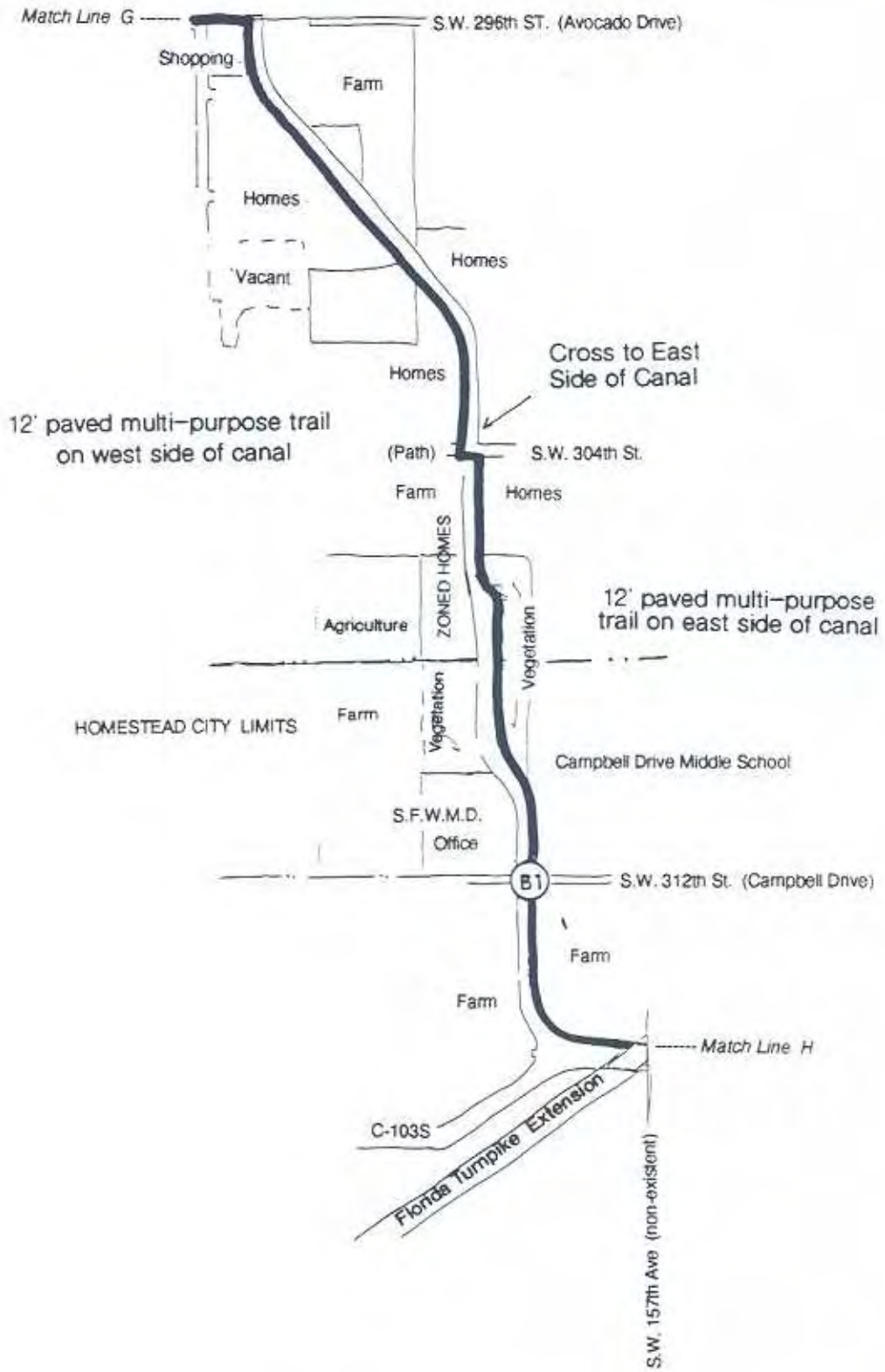
South Dade Greenway Network - Mowry Trail (Section 2)

Scale 1" = 1000'



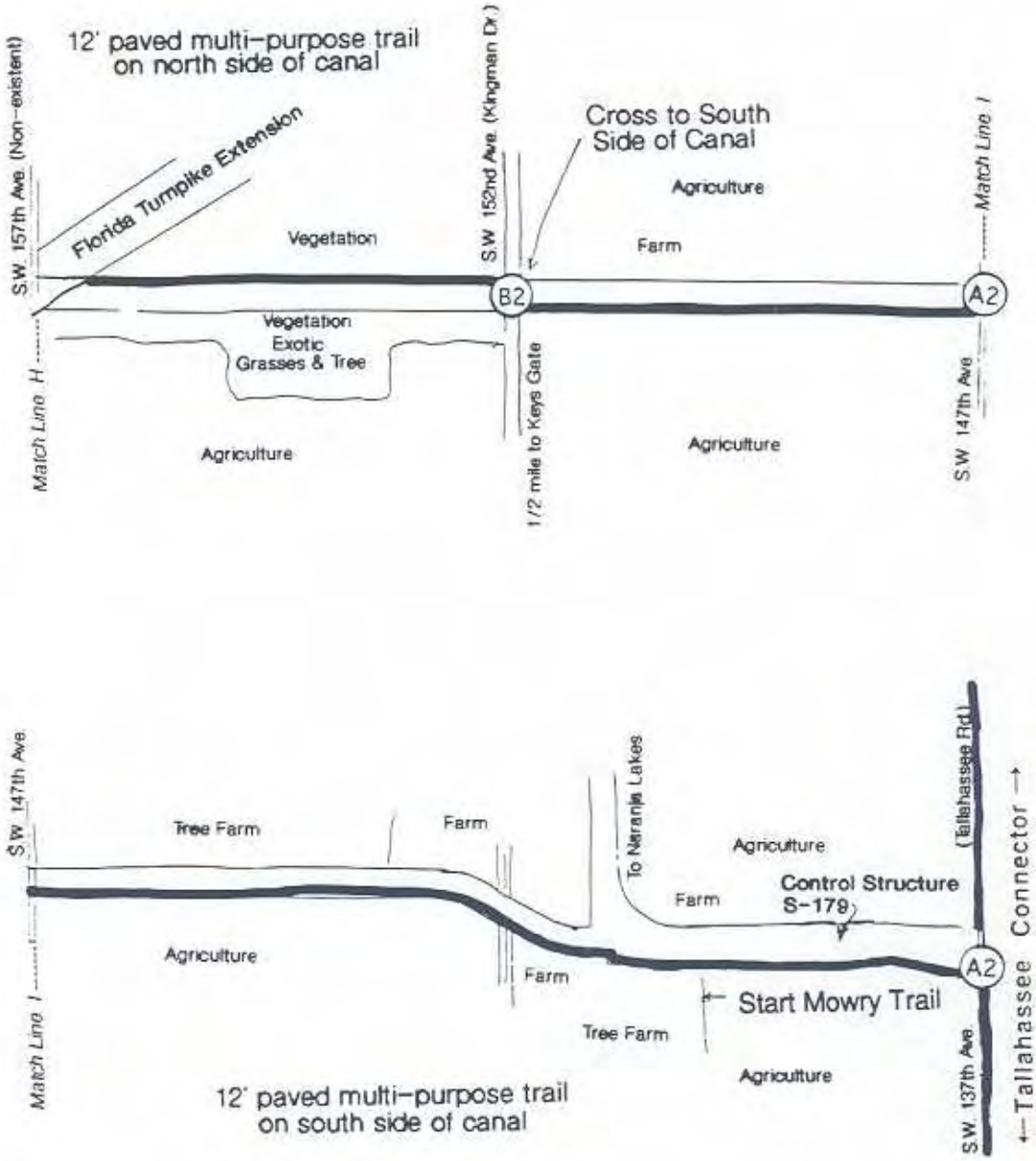
South Dade Greenway Network - Mowry Trail (Section 3)

Scale 1" = 1000'



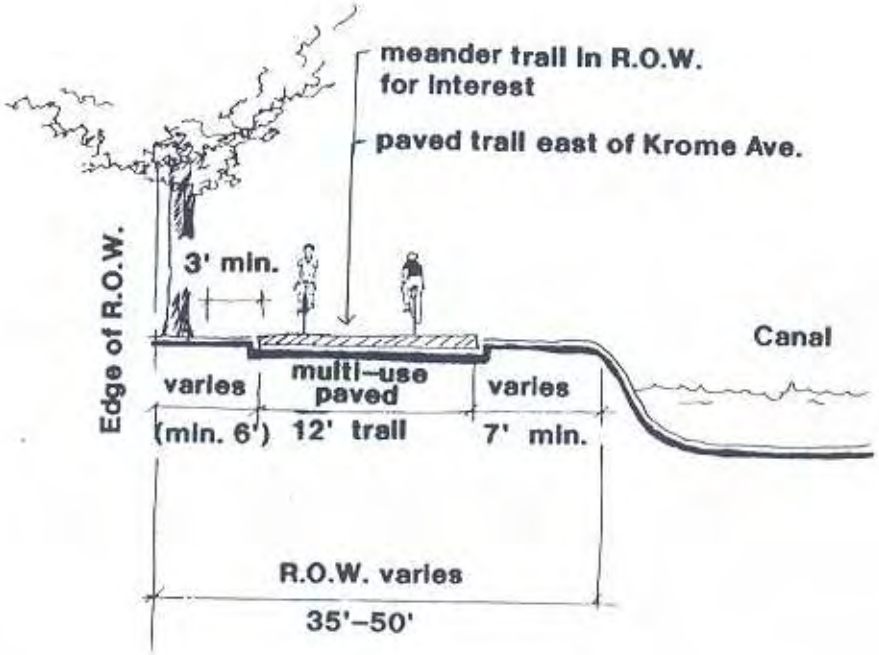
South Dade Greenway Network - Mowry Trail (Section 4)

Scale 1" = 1000'



South Dade Greenway Network - Mowry Trail (Section 5)

Scale 1" = 1000'



Notes

Provide safety rail or shrub mass where trail is closer than 7' ft. from canal bank.

unpaved, graded trail west of Krome Ave.

CANAL TRAIL

Black Creek, C-102, C-103

east of Krome Ave.

TYPICAL SECTION

Everglades Trail

General Description - 21.5 total trail miles

The Everglades Trail provides access to Everglades National Park from the north, near Kendall; and from the east, at a juncture of four other trails. The unpaved portion of the trail follows South Florida Water Management District's western levee, L-31N / L-31W, from Black Creek (C-1W) south to the entrance of the park; with the balance of the trail being paved. The paved portion of this trail is off road, following S.R. 9336, S.W. 217th Ave., and Palm Drive (S.W. 344th St.) within rural and farming areas; and on road within the city limits of one of Dade County's pioneer settlements, Florida City.

Overall, the trail provides views of assorted tropical fruit crops, landscape and foliage nurseries, winter row crops, groves, rural estates, Homestead General Airport and representation of two different geological rock formations. At the edge of the Everglades, there are vistas of saw grass, distant cypress and sabal heads. At the approach of the park's main entrance are the remains of the western edge of Pine Flatlands. Florida City, due to Hurricane Andrew, is undergoing historic restoration and revitalization.

The expected user groups are:

- Cyclist - road bikes and off road bikes
- Pedestrian and joggers
- Ecotourists
- Rollerblading
- Equestrian
- Fishing

Ownership

South Florida Water Management District - L-31N & L-31W
Florida Department of Transportation - S.R. 9336
Metro-Dade Public Works - S.W. 217th Ave., Palm Drive
(west of Tower Road / S.W. 192nd Ave.)

Existing Conditions of Rights of Way and Surroundings

West Levee (L-31N and L-31W) from Black Creek Canal (C-1) south to S.R. 9336 at Everglades National Park.
(see map sections: 1 - 4)

- 23.7 miles of compacted Oolitic limestone.
- Usable easement ranging from 54' to 210'.
- Two road crossings.
- Six SFWMD control structures.
- Intersects with Black Creek Trail, Princeton Trail and Mowry Trail.
- Northern three quarters agriculture and open land
- Southern quarter agriculture on east side, Everglades National Park on west side.

S.R. 9336 east to S.W. 217th Ave.
(see map section: 4)

- 2.2 miles of two lane road
- Limited dedicated 'right of way'. Purchase of additional R.O.W. necessary.
- One road crossing.
- One canal crossing on existing bridge.
- Intersects with Southern Glades Trail.
- Primarily Agriculture.

S.W. 217th Ave. north to Palm Drive.
(see map sections: 4 & 5)

- 3 miles of two lane paved road.
- 70' of 'right of way' width.
- Two road crossings.
- Primarily Agriculture, with scattered homes.

Palm Drive (S.W. 344th St.) east to U.S. 1
(see map sections: 5 & 6)

- 4.5 miles varying widths of 'right of way' with sidewalks within downtown Florida City.
- Five road crossings (excluding city limits of Florida City)
- Intersects with South Dade Trail, Krome Trail and Biscayne Trail.
- 3 miles of rural estates and agriculture.
- 1.5 miles through downtown Florida City.

Trail Development

Trail Construction (see typical sections)

- West Levee (L-31N and L-31W) - To remain unpaved for equestrian and mountain bike use. Delineated by signage to separate uses.
- S.R. 9336, S.W. 217th Ave. and Palm Drive (S.W. 217th Ave. to S.W. 187th Ave.) - Off road, 12' wide, paved multi-purpose trail.
- Palm Drive (east of S.W. 187th Ave.) - Primarily on bike sharing roadways and sidewalks.

Amenities

- Four proposed Trailheads - At Tropical Everglades Visitor Center , Florida City Hall, Glenn Garrett Park, and Krome.
- Rest Areas - Three
- Location Maps - Five
- Emergency Phones - Ten
- Interpretive Signage - Three
- Landscaping
- Observation tower located on L-31W overlooking Everglades National Park.

Community Assets (within 2 miles)

Points of Interest

- Homestead General Airport - east of L-31N at S.W. 280th St.
- Robert is Here - fruit stand, corner of Palm Drive and S.W. 192nd Ave.
- Downtown Florida City - Palm Drive, between S.W. 187th Ave. and Krome Ave.
- Everglades Alligator Farm - S.W. 192 Ave. south of S.R. 9336

Parks

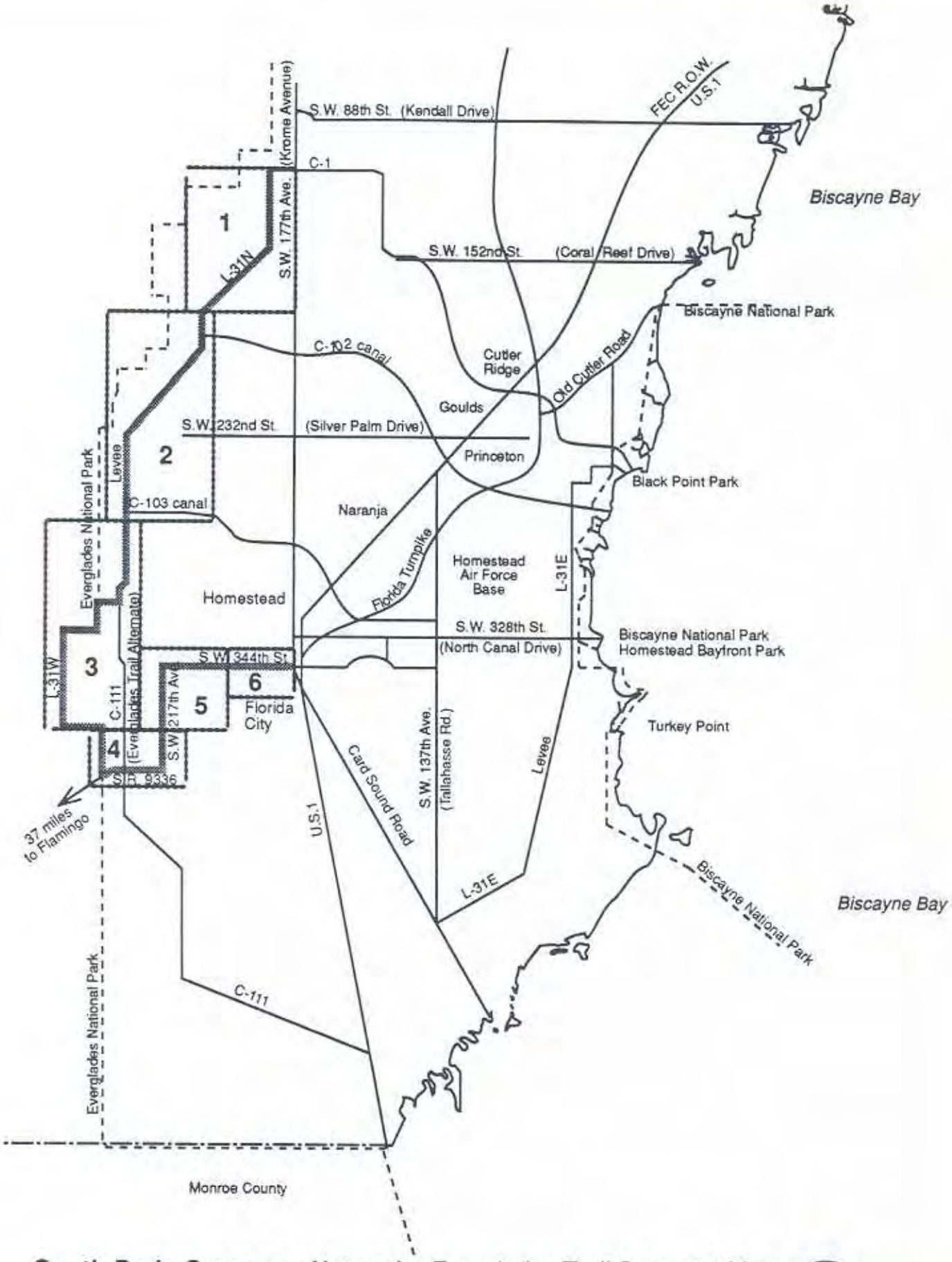
- Everglades National Park - western terminus of S.R. 9336
- Glenn Garrett Park - entrance to Everglades National Park
- Benito Juarez Park - 19400 S.W. 388th St.
- Fasulo Park - 525 S.W. 10th Ave. Florida City

Schools

- Florida City Elementary School - 364 N.W. 6th Ave.

Issues

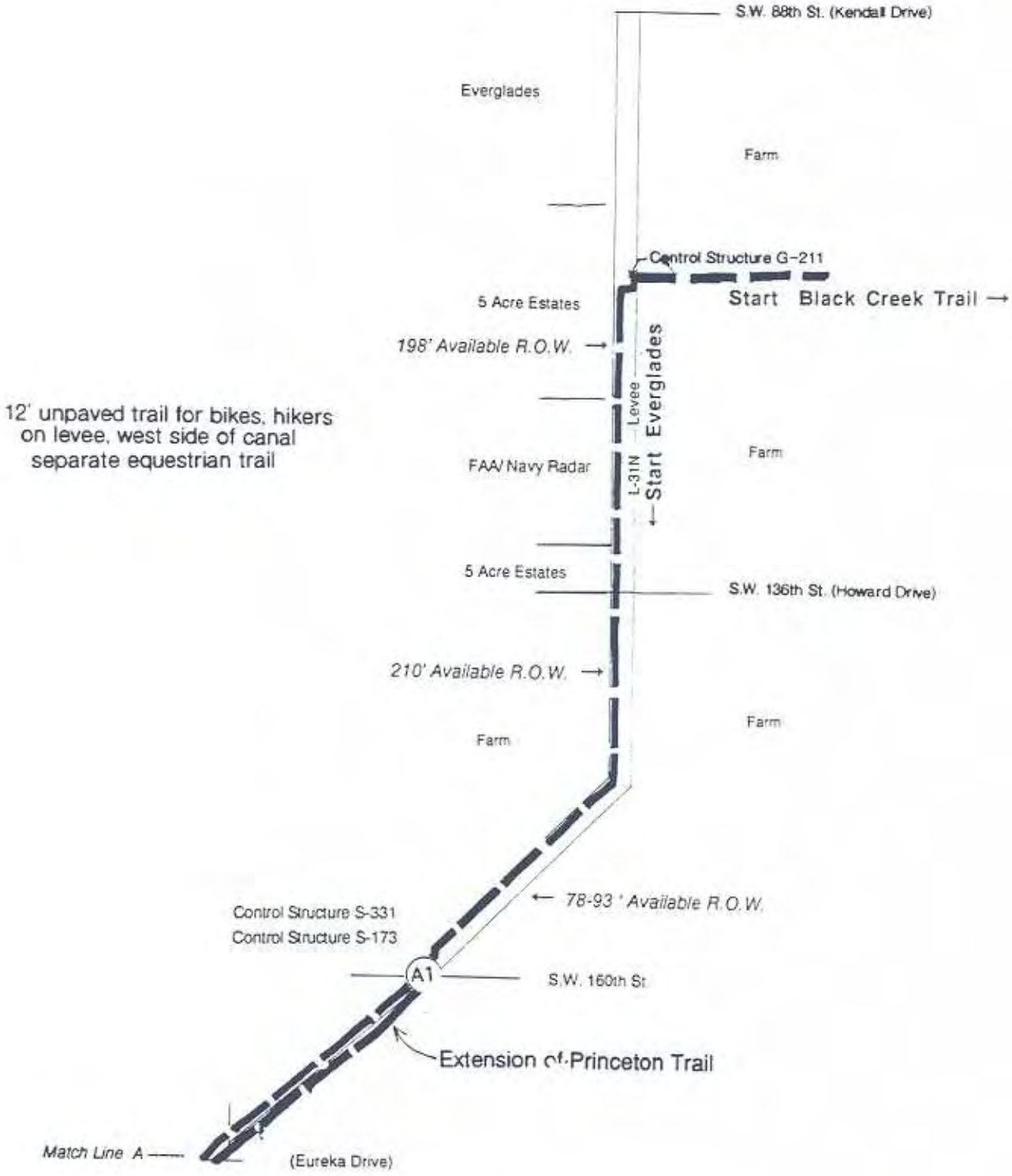
- Coordinate with Florida City and the Florida Department of Transportation to provide for bike lanes or paths in the redevelopment of Palm Drive through downtown.
- Acquisition of land for trail R.O.W. required on parts of Palm Drive and S.R. 9336.
- A portion of L-31W may be flooded as part of an Everglades reclamation project, the trail will be diverted to C-111.
- Provisions for water and bathrooms need to be provided at the Glenn Garrett Trailhead.
- An asumption is made that any intersections built during scheduled road improvements, will adhere to the established standards and install SDGN signage.



South Dade Greenway Network - Everglades Trail Segment Map

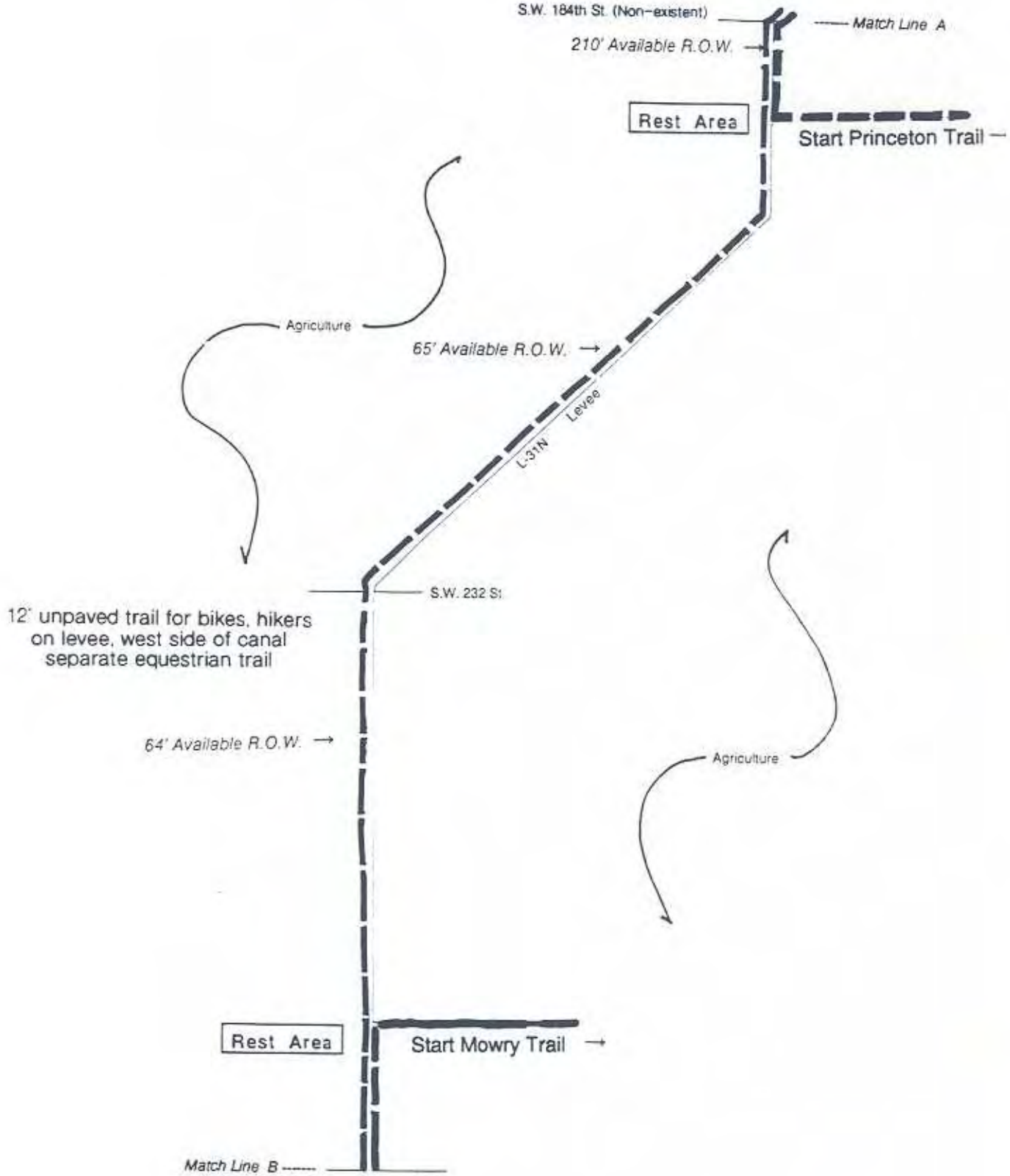
Scale 1" = 4 miles

Map Section Key



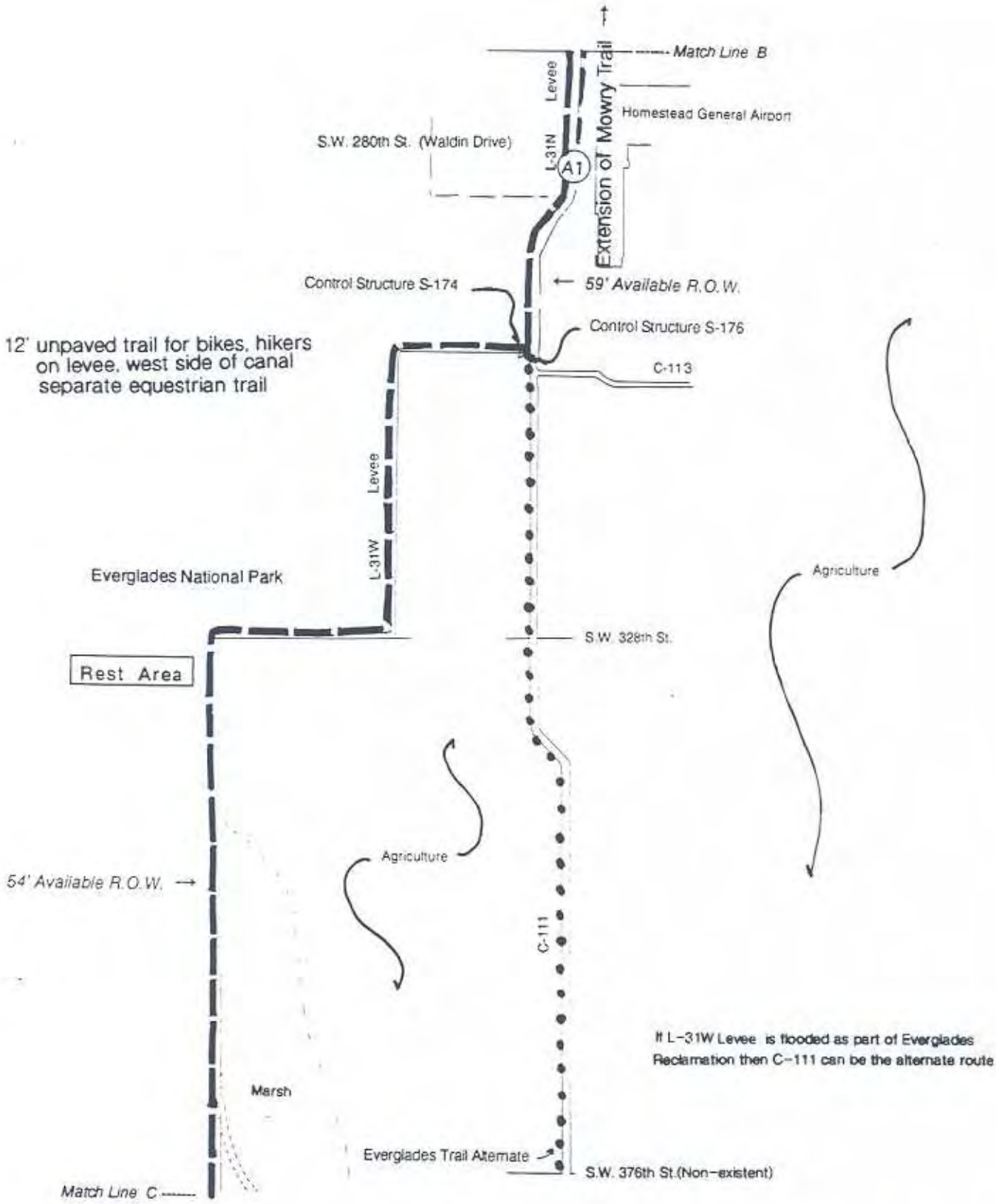
South Dade Greenway Network - Everglades Trail (Section 1)

Scale 1" = 4000'



South Dade Greenway Network - Everglades Trail (Section 2)

Scale 1" = 4000'

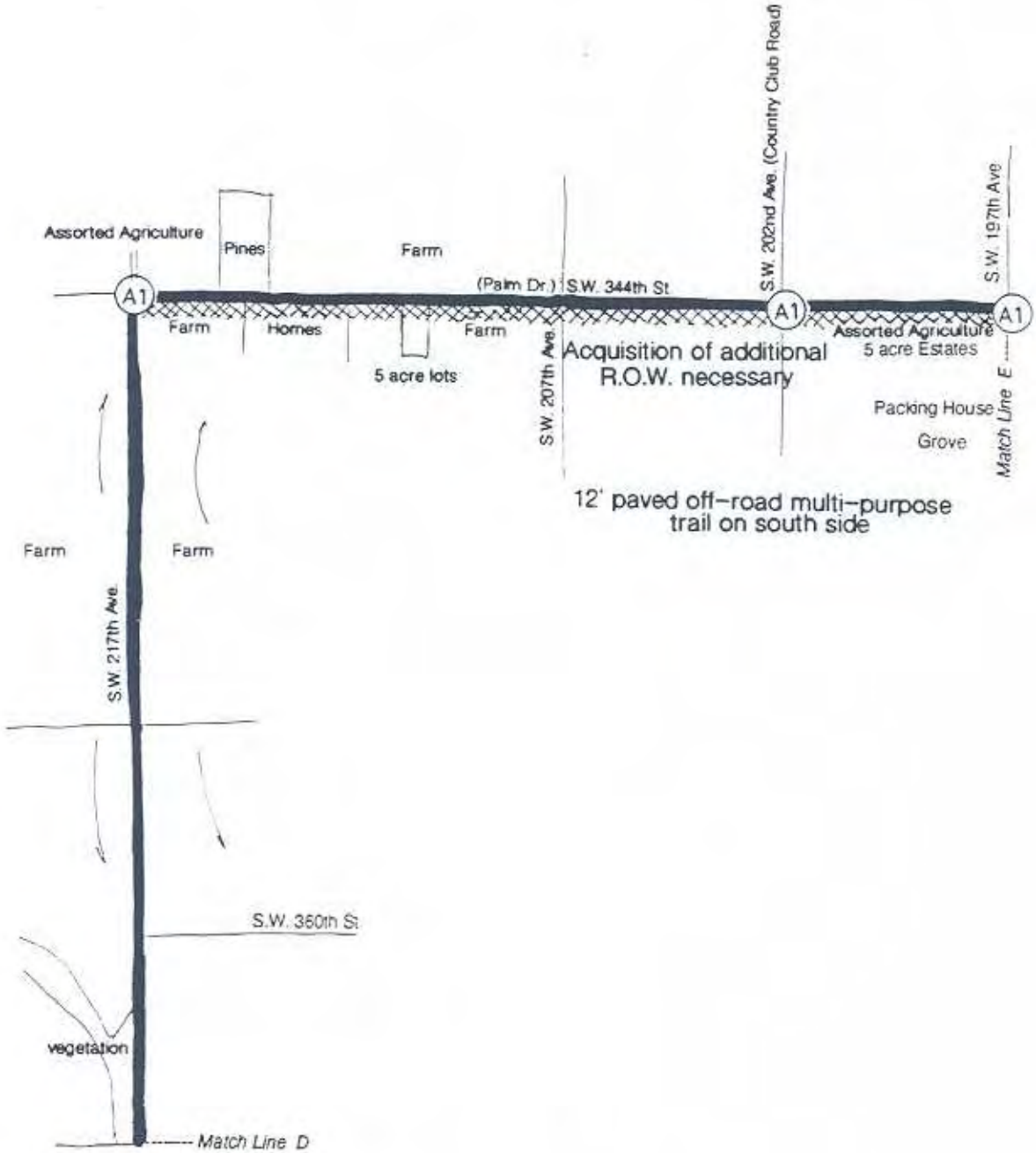


South Dade Greenway Network - Everglades Trail (Section 3)

Scale 1" = 4000'

South Dade Greenway Network - Everglades Trail (Section 4)

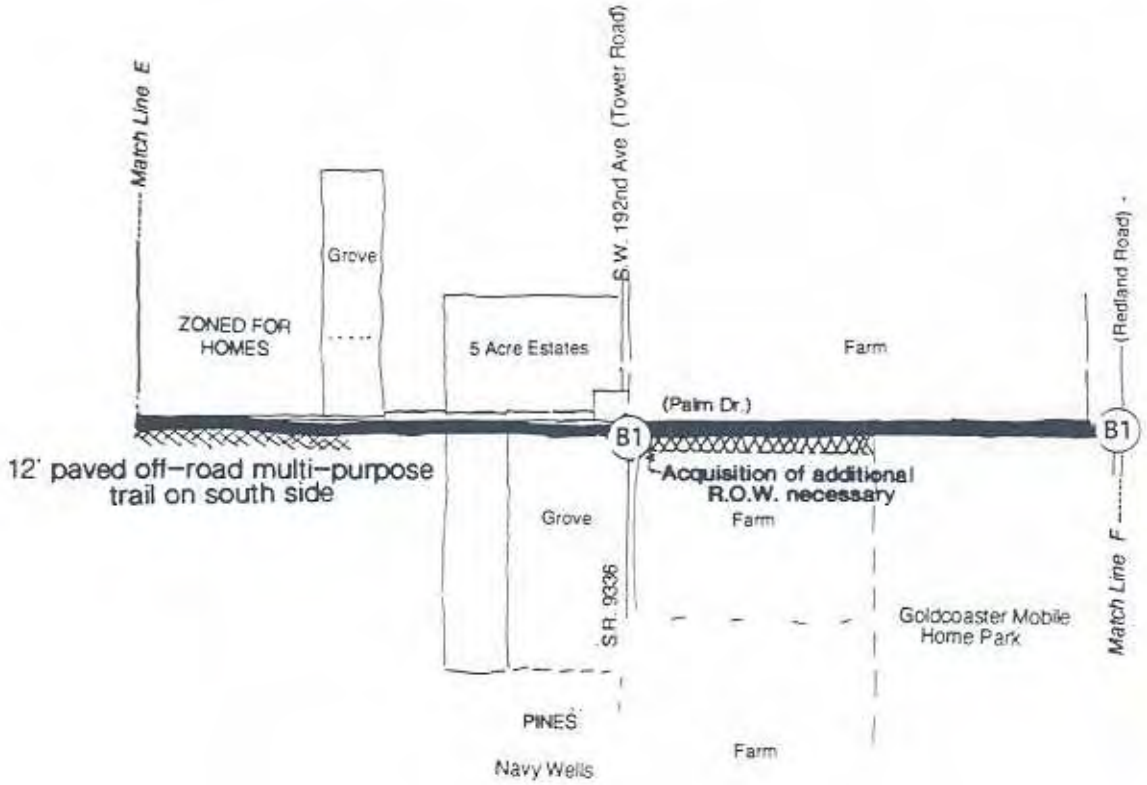
Scale 1" = 2000'



12' paved off-road multi-purpose
trail on west side

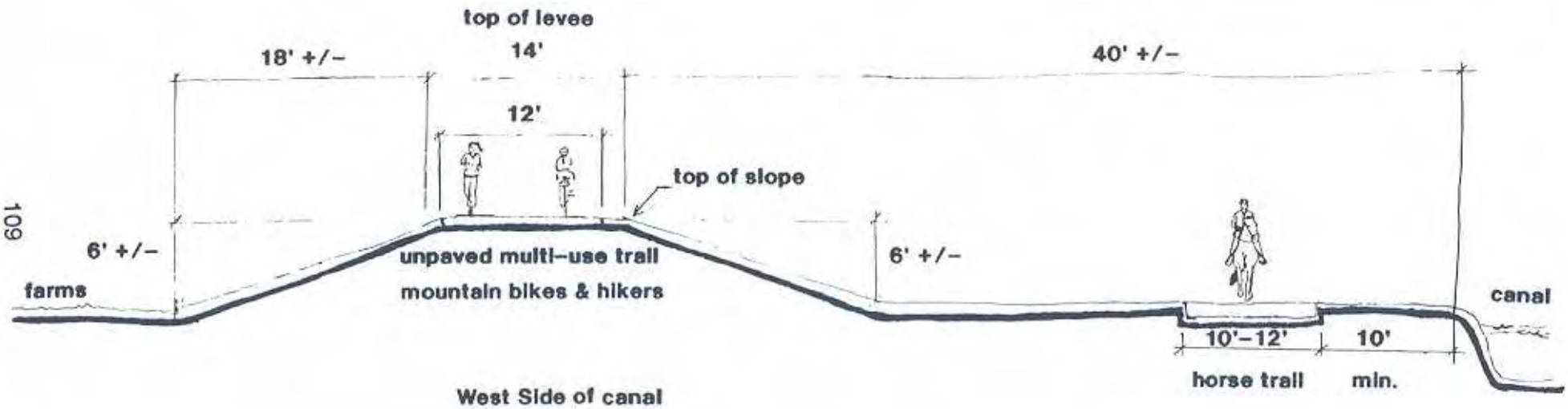
South Dade Greenway Network - Everglades Trail (Section 5)

Scale 1" = 2000'



South Dade Greenway Network - Everglades Trail (Section 6)

Scale 1" = 1000'

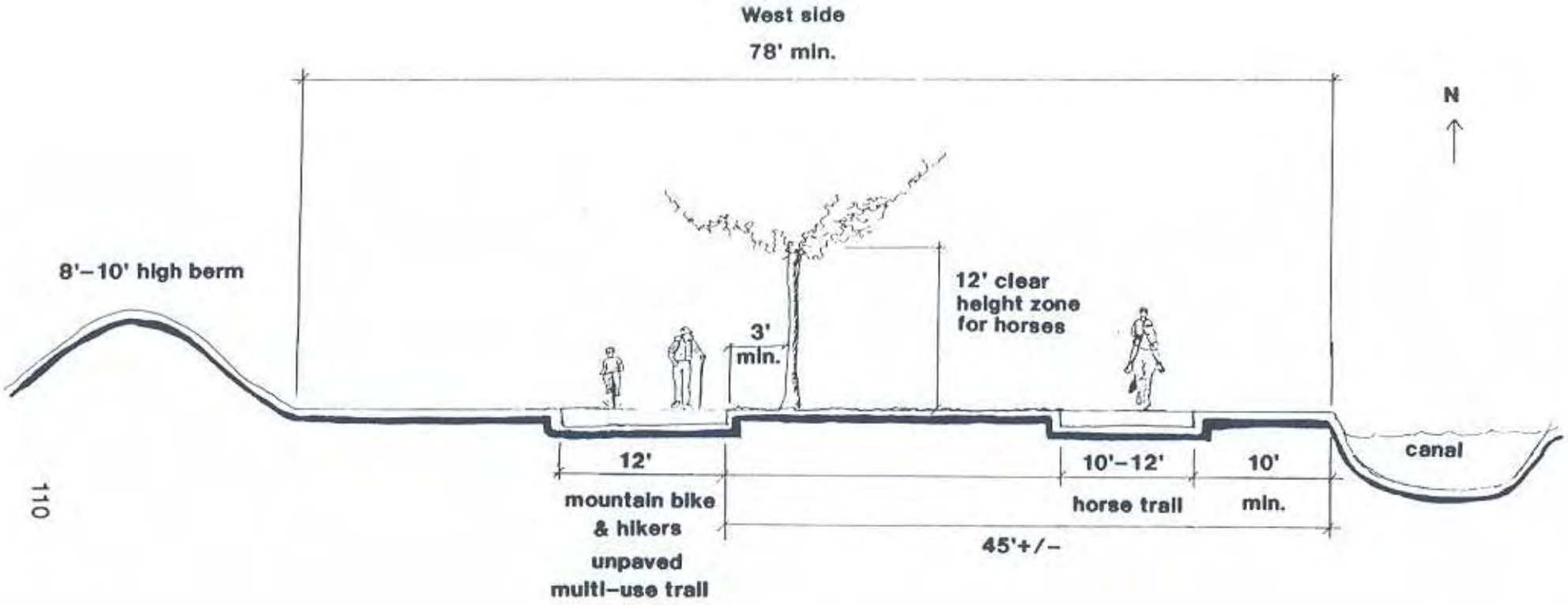


EVERGLADES TRAIL

L-31N Levee

From S.W. 160 St. to Black Creek Trail

TYPICAL SECTION

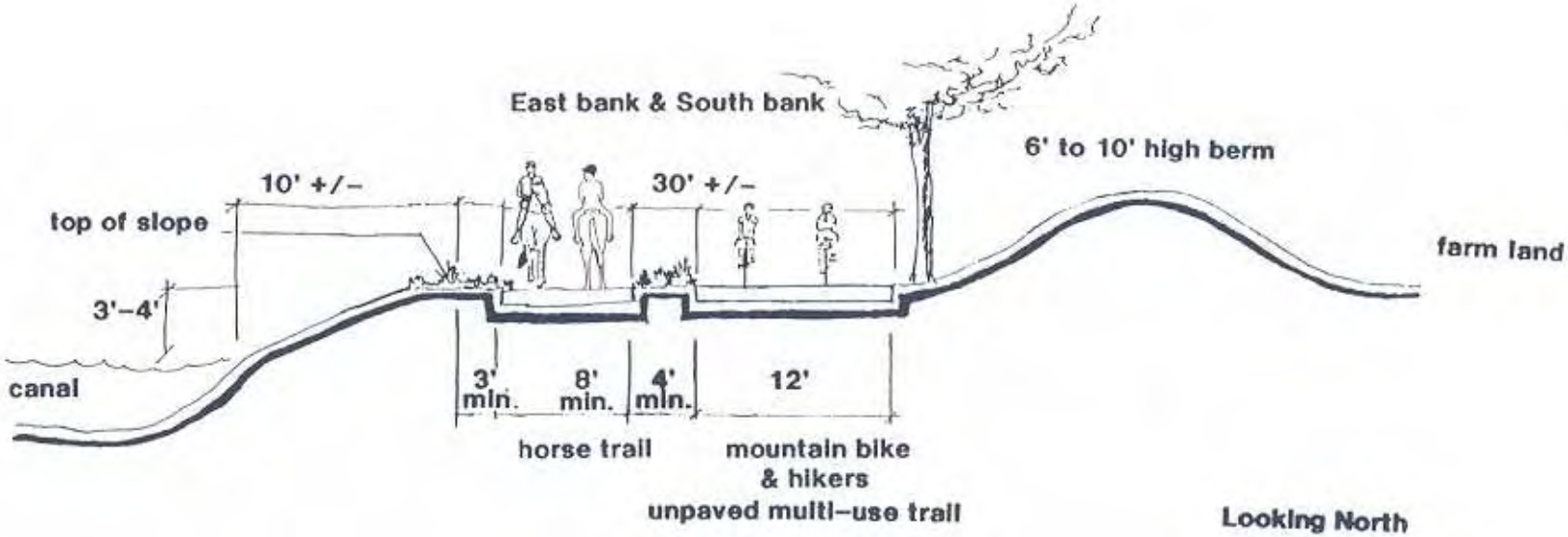


EVERGLADES TRAIL

L–31N Levee

from 288 St. to 160 St.

TYPICAL SECTION

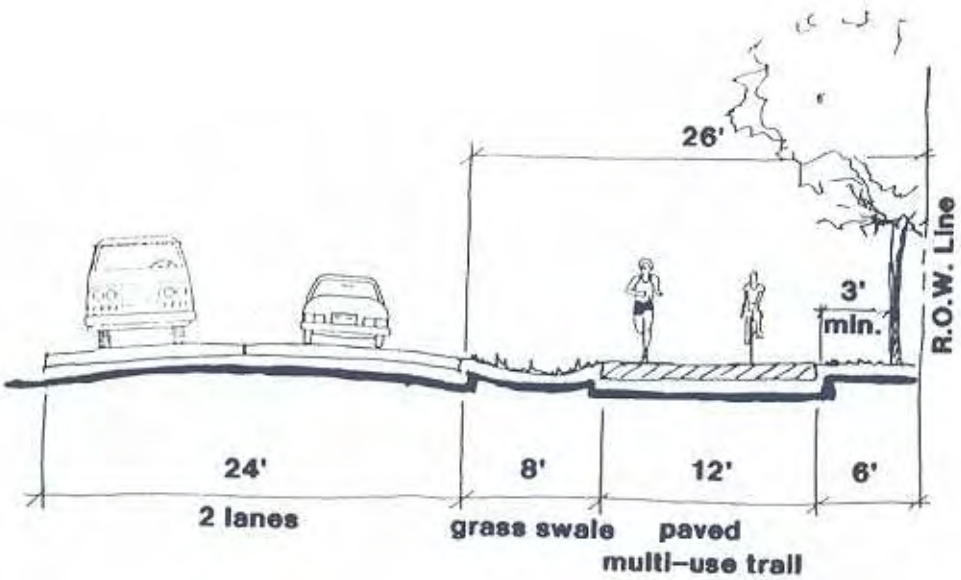


EVERGLADES TRAIL

L-31W Levee S.R.9336 to

Intersection of C-111 Canal

TYPICAL SECTION



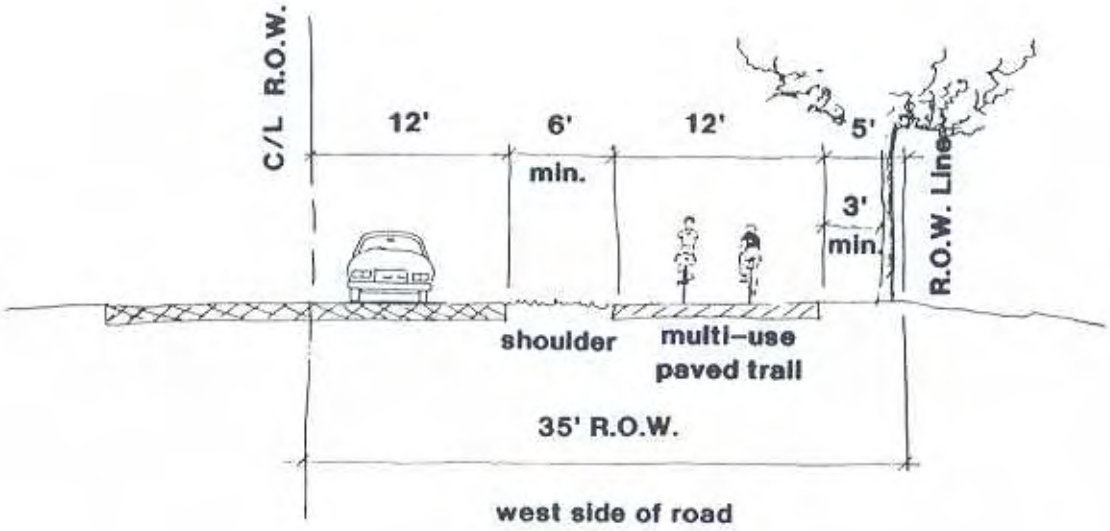
Looking West

Note
This area requires additional R.O.W. acquisition to complete the trail

EVERGLADES TRAIL

S.R. 9336 from 217 Ave. to Everglades National Park (L-31W)

TYPICAL SECTION

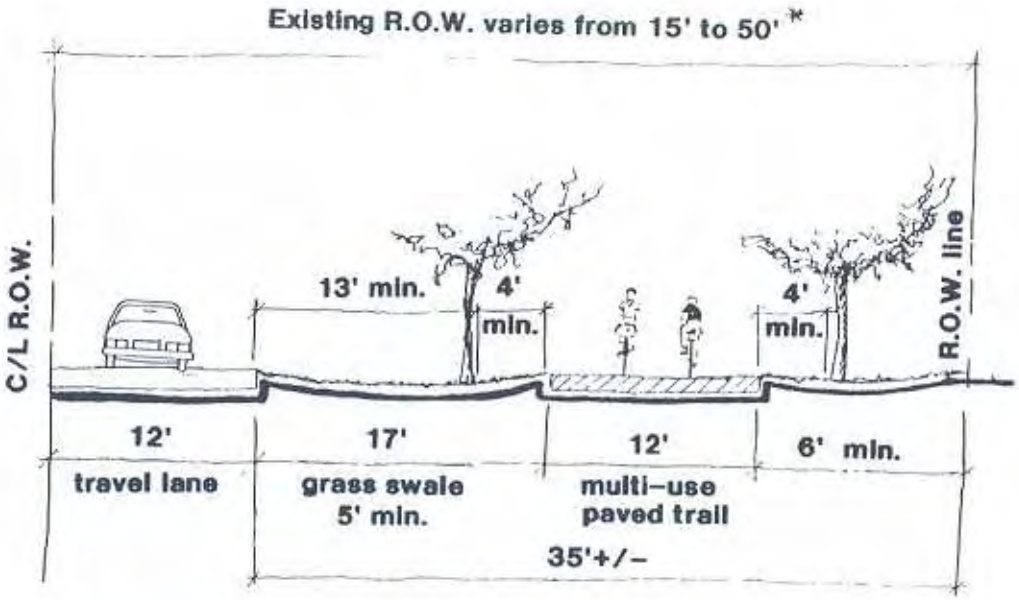


EVERGLADES TRAIL

S.W. 217 Ave.

(from Palm Dr. to S.R. 9336)

TYPICAL SECTION



Heading West

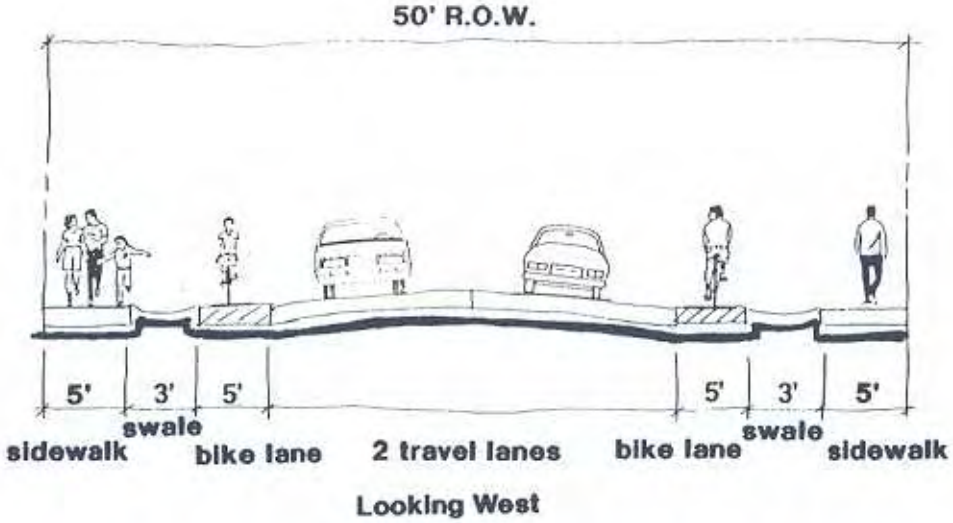
* r.o.w. purchase will be necessary where less than 35' ft. of R.O.W. beyond the edge of the travel lane does not exist.

EVERGLADES TRAIL

Palm Dr. (S.W. 344 St.)

west of S.W. 187 Ave. to S.W. 217 Ave.

TYPICAL SECTION

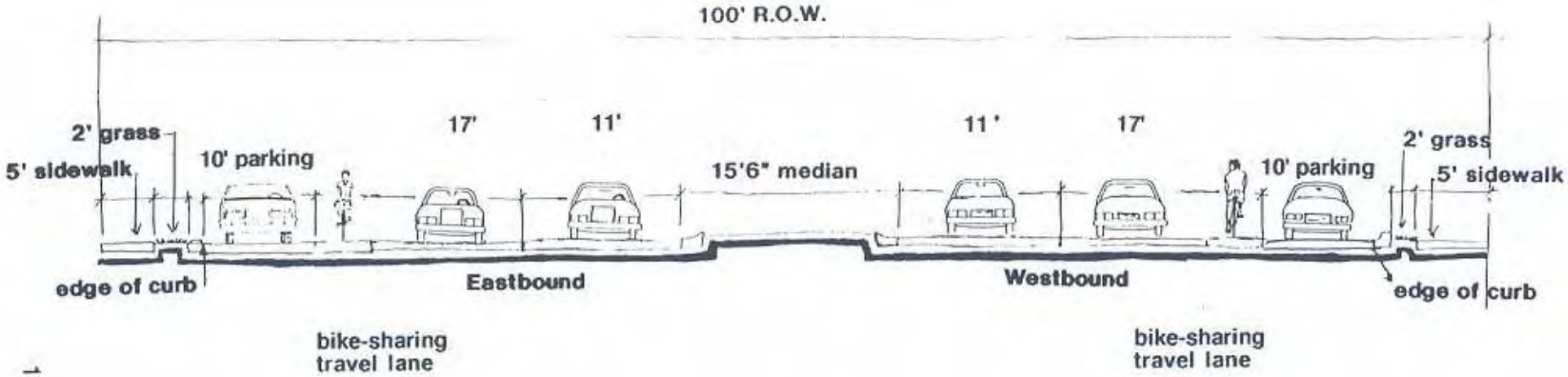


EVERGLADES TRAIL

Palm Drive (S.W. 344 St.)

from N.W. 6 Ave. in Fla. City to S.W. 187 Ave.

TYPICAL SECTION



Notes

other options will be studied by
Florida City in the development
of their plans for the downtown area

Partial Plan View

EVERGLADES TRAIL

S.R. 9336 In Downtown Florida City

(from U.S. 1 to N.W. 6 Ave.)

TYPICAL SECTION

Keys Trail

General Description - 25.7 total trail miles.

This Trail, both U.S. 1 and Card Sound Road, is the only one in the SDGN which connects the user to another county. Currently some cyclists venture along these presently narrow roadways. Once the U.S. 1 roadway improvements are completed this will become a much safer adventure.

The Keys Trail passes through environmentally endangered lands, currently under acquisition by Metro-Dade County and the South Florida Water Management District. This Trail is assured to remain a natural habitat, featuring sawgrass marsh with tree islands, salt marsh, mangroves, and good wildlife viewing opportunities.

The expected user groups are:

- Cyclists

Ownership

Florida Department of Transportation: U.S. 1
Metro-Dade County Public Works: Card Sound Road.

Existing Conditions of Rights of Way and Surroundings

U.S. 1 from Card Sound Road to Monroe County line.
(see map sections: 1 & 2)

- 14.2 miles of two lane road with 4' shoulders and diagonal patterned road reflectors.
- Intersects with the Biscayne Trail, South Dade Trail and the Southern Glades Trail.
- Primarily natural habitat with scattered exotics.

Card Sound Road from U.S. 1 to the Card Sound Bridge.
(see map sections: 1 & 3)

- 11.5 miles of two lane road with no shoulders.
- Minimum easement.
- Intersects with Biscayne Trail.
- Primarily natural habitat with scattered exotic trees and shrubs.

Trail Development

Trail Construction (see typical sections)

- U.S.1 - Scheduled (1996) road improvement, by Florida Department of Transportation (FDOT) to be widened, with 10' wide shoulders suitable for cyclists.
- Card Sound Road - 8' wide, paved, off road bike path.

Amenities

- Three proposed Trailheads - Tropical Everglades Visitor Assoc., Florida City Hall and Card Sound Road.
- Rest Areas - Five
- Location Maps - Four
- Emergency Phones - Six
- Interpretive Signage - One

Community Assets (within 2 miles)

Points of Interest

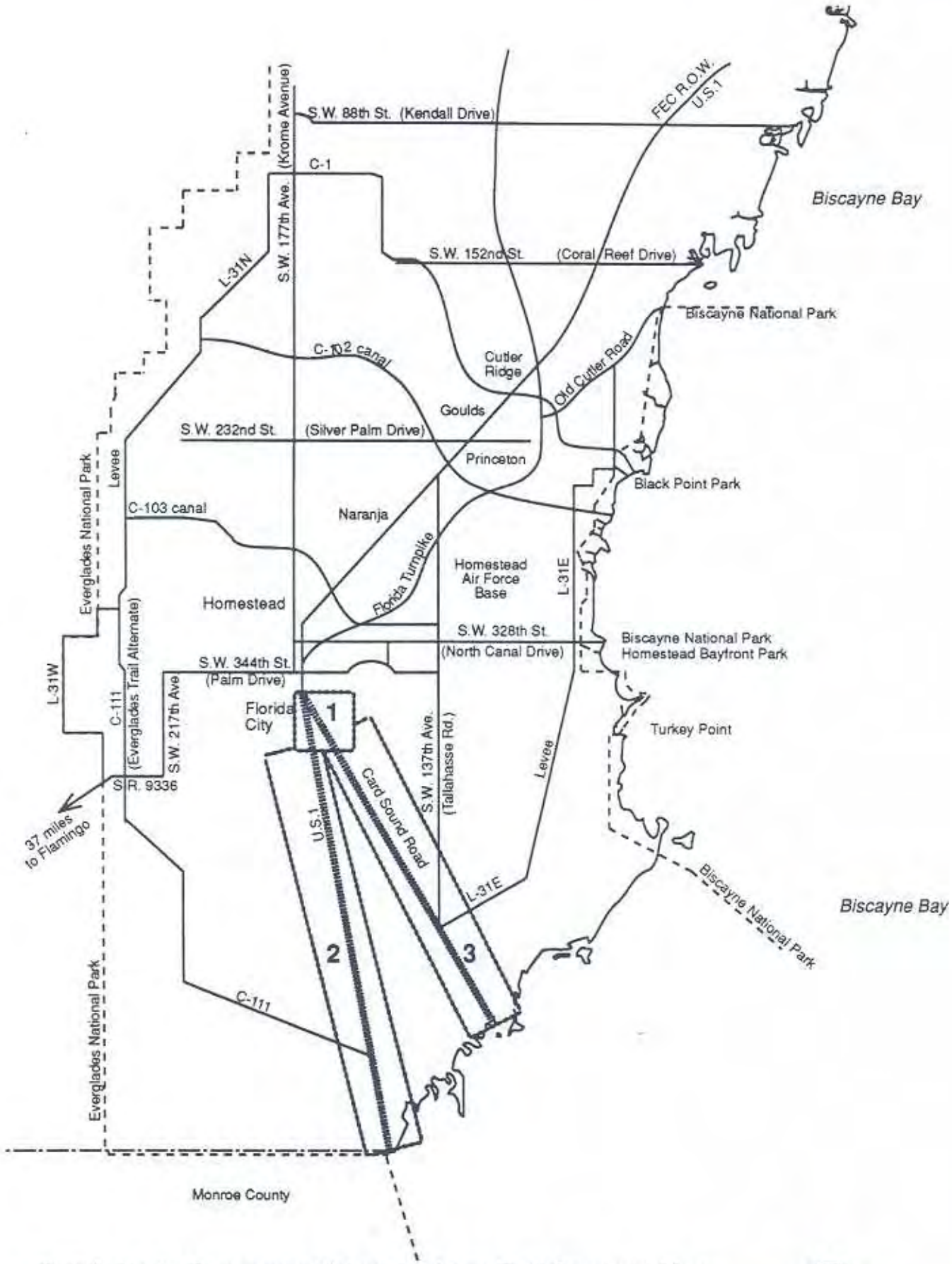
- Pioneer Museum - 826 N. Krome Ave. Fl. City
- State Farmers Market - 300 N. Krome Ave. Fl. City
- Robert is Here (Fruit Stand) Corner of 192nd Ave. & 344th St.
- U.S. Navy Wells - 35400 S.W. 192nd Ave.
- Tropical Everglades Visitor Assoc. - U.S. 1 just south of Palm Drive
- Villages of Homestead Golf Course -1851 S. Canal Drive
- Southern Glades Wildlife and Environmental Area (SGWEA).
- Alabama Jack's - Card Sound Road & the bridge.

Parks & Schools

- None

Issues

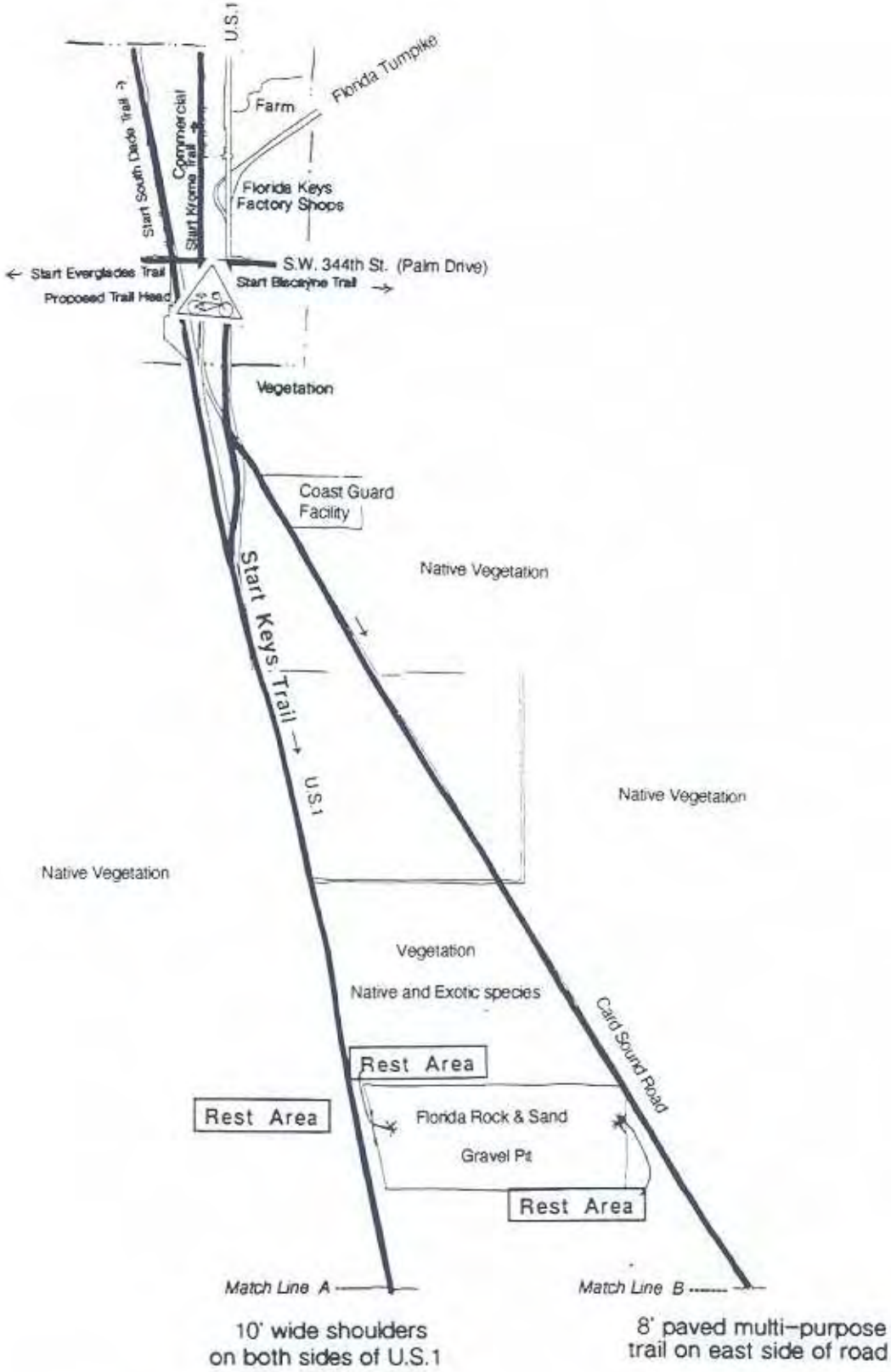
- Minimal fill is required for the portion of Card Sound Road north of the Trailhead. Fill will be required at the southernmost portion of Card Sound Road. This will require necessary permits and possible mitigation.
- Rest areas along U.S. 1 may also require mitigation.
- An assumption is made that FDOT will continue the U.S. 1 Exclusive Bus Lane Corridor (phase 2) / South Dade Trail, along the FEC R.O.W., connecting to Keys Trail.



South Dade Greenway Network - Keys Trail Segment Map

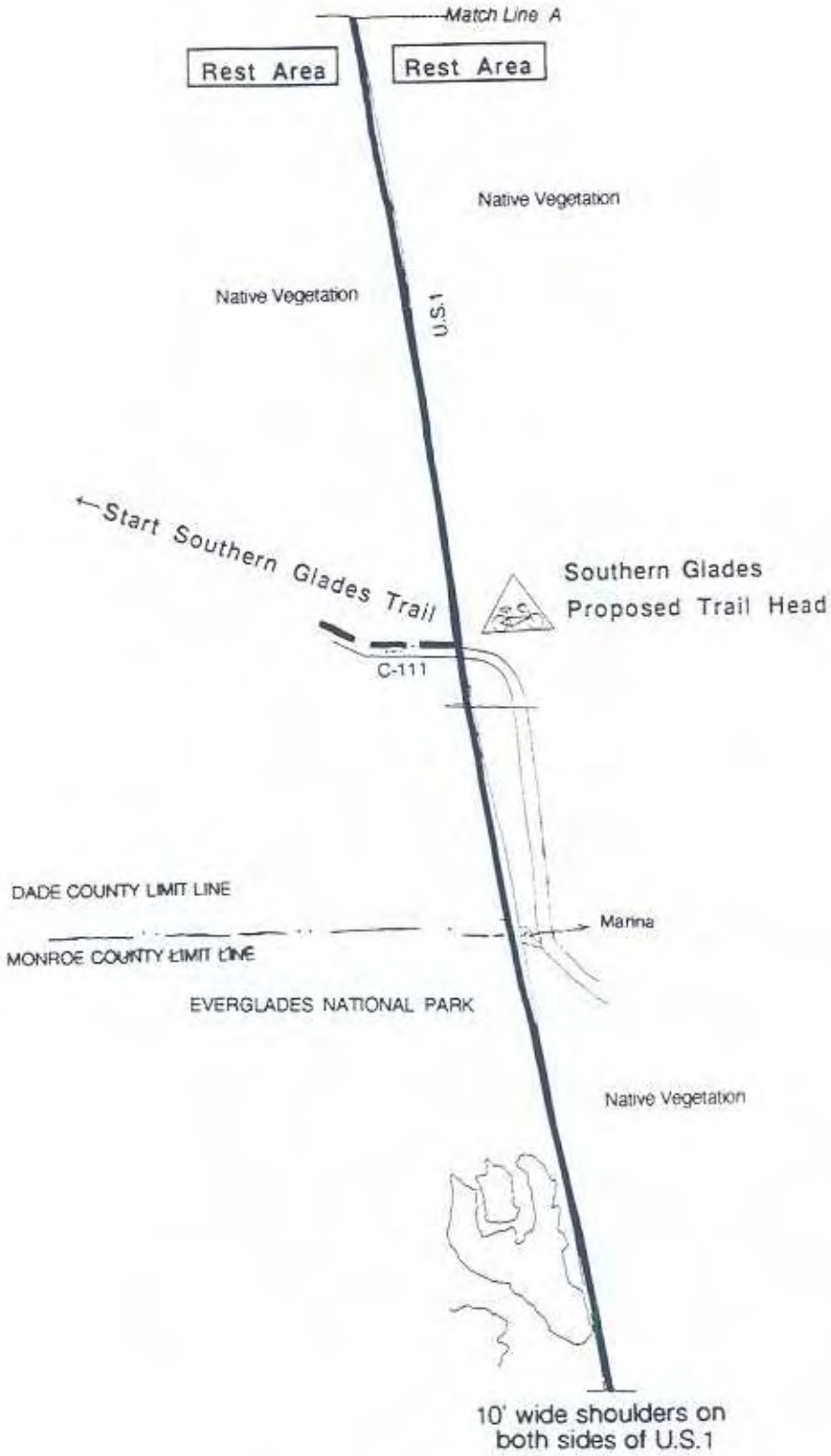
Scale 1" = 4 miles

Map Section Key



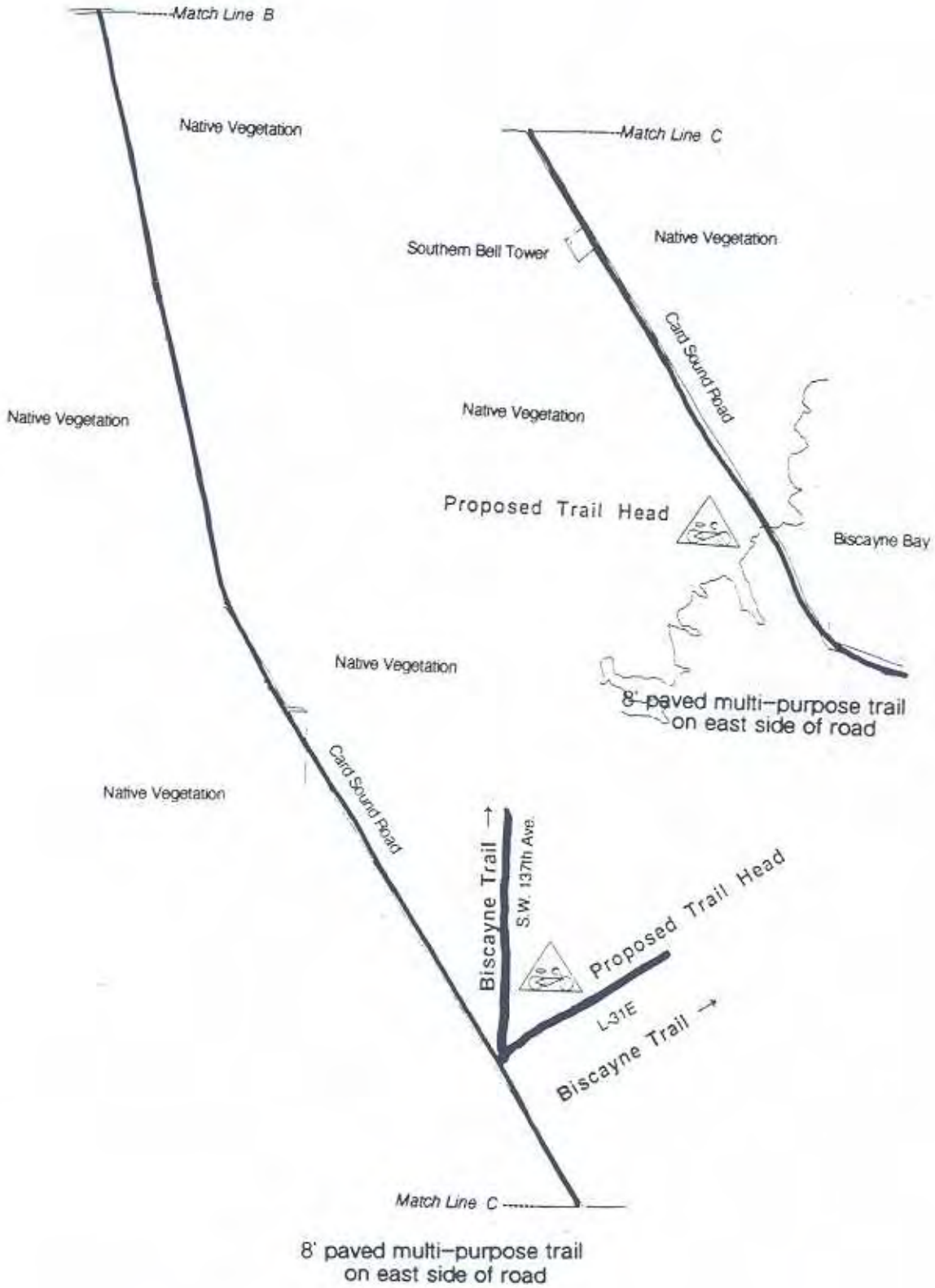
South Dade Greenway Network - Keys Trail (Section 1)

Scale 1" = 2000'



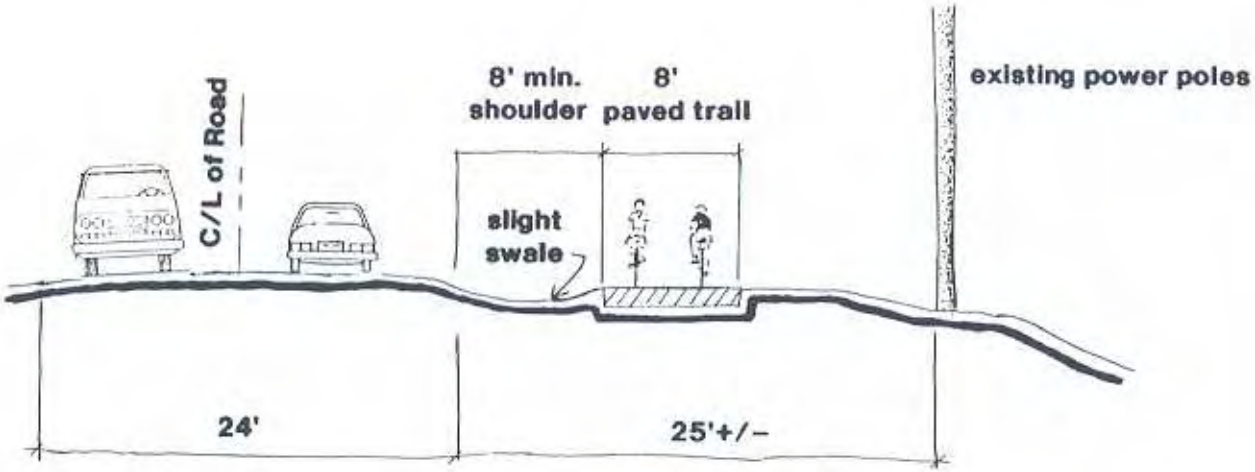
South Dade Greenway Network - Keys Trail (Section 2)

Scale 1" = 4000'



South Dade Greenway Network - Keys Trail (Section 3)

Scale 1" = 4000'



East side of Road

Notes

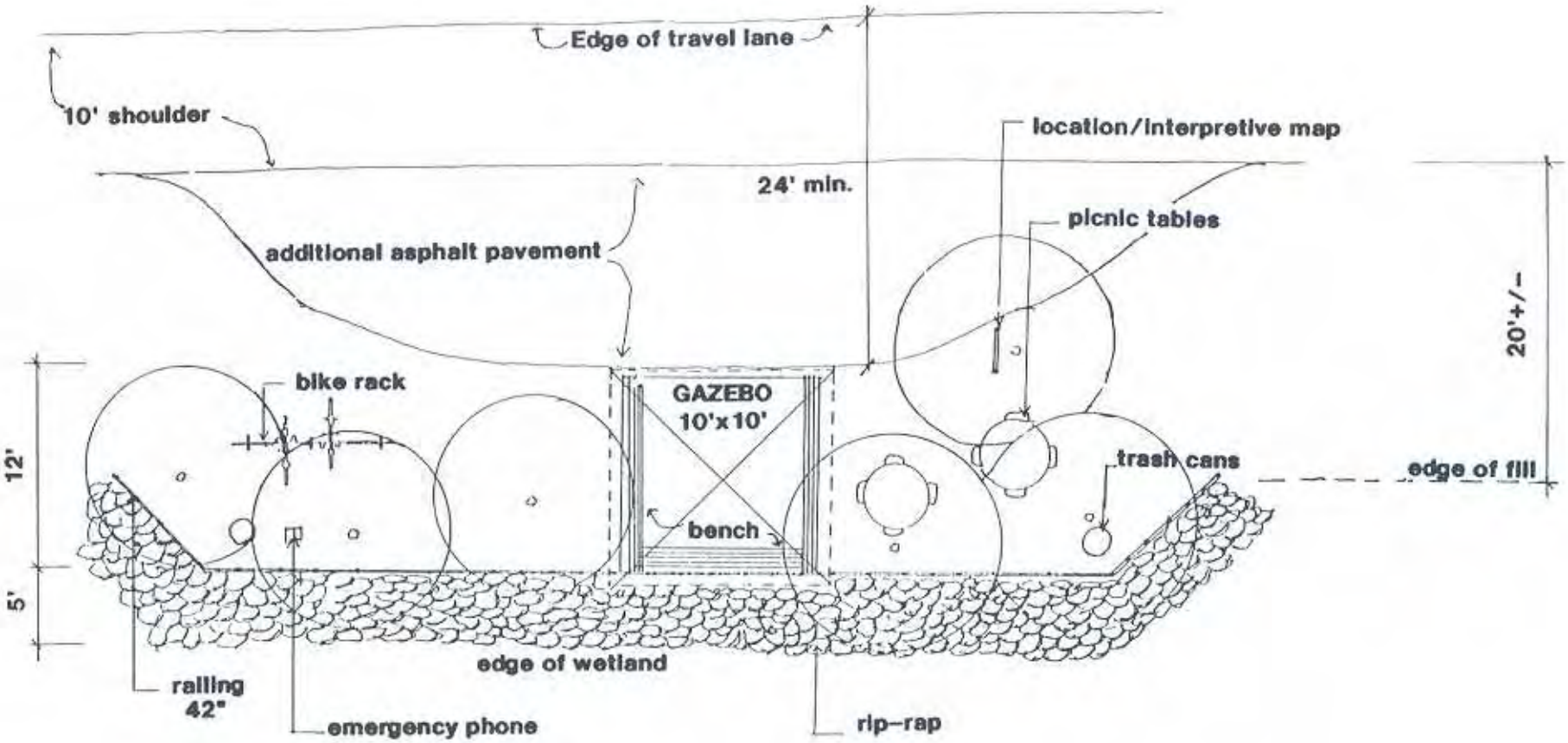
additional fill will be required to widen the shoulder on the southern 1/3 of the R.O.W. to construct the trail

KEYS TRAIL

Card Sound Rd.

from U.S. 1 to Card Sound Bridge

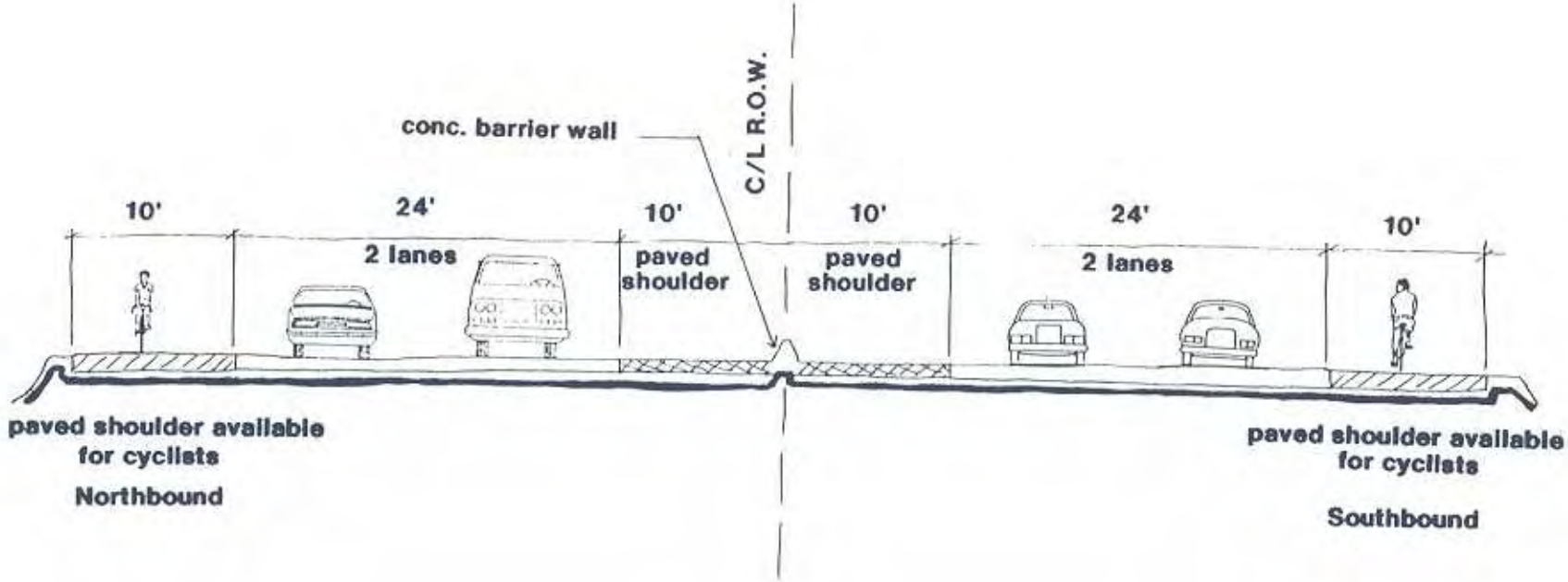
TYPICAL SECTION



KEYS TRAIL
TYPICAL REST AREA

U.S.1

PLAN VIEW



KEYS TRAIL (U.S. HWY. 1)

from Card Sound Rd. to Monroe County

TYPICAL SECTION

Krome Trail (interim)

General Description - 17.5 total trail miles.

Krome Trail is a main north / south artery, which travels though the Redland agricultural area to Broward County, from the commercial area of Homestead at the south end. It also bisects three of the canal Trails in the South Dade Greenway Network, providing numerous loops within the system, both for the paved or unpaved trail user.

In 1994, FDOT began shoulder and swale construction on Krome Ave., providing 4' wide shoulders from Kendall Drive to Avocado Drive, which can be utilized by more adventurous cyclists. Future R.O.W. corridor improvements will not be undertaken by FDOT until the year 2000, so this Trail is recommended as interim.

The expected user groups are:

- Cyclists

Ownership

Florida Department of Transportation

Existing Conditions of Rights of Way and Surroundings

Krome Ave. (S.W. 177th Ave.) from Kendall Drive to Florida City
(see map sections: 1 - 5)

- 17.5 miles of existing two lane road with 4' wide shoulders on both sides.
- Seventeen road crossings.
- One railroad crossing.
- Intersects with Black Creek Trail, Princeton Trail, Mowry Trail and Everglades Trail.
- Assorted agriculture (including seasonal U-Pick-Em farms), street vendors (weekends), some homes, and commercial corners at some intersections north of the City of Homestead, and changing to urban residential/retail in downtown Homestead.

Trail Development

Trail Construction (see typical sections)

- Krome Ave. - 4' wide shoulders constructed during road improvements by the Florida Department of Transportation.

Amenities

- Four proposed Trailheads - Krome Ave., Coffee's Country Store, Florida City - City Hall and the Tropical Everglades Visitor Assoc.
- Rest Areas - One
- Location Maps - Four
- Emergency Phones - One
- Interpretive Signage - Four

Community Assets (within 2 miles)

Points of Interest

- Seasonal U-Pick-Em Farms - scattered either side of Krome Ave.
- Redland KOA - S.W. 162nd Ave. & S.W. 208th St.
- Redland Country Club and Golf Course - 24451 S.W. 177th Ave.
- Redland Fruit & Spice Park - 24801 S.W. 187th Ave.
- Anderson's Corner - S.W. 232nd St. & S.W. 157th Ave.
- Knaus Berry Farm - 15980 S.W. 248th St.
- Univ. of Florida Tropical Research and Education Center - 18905 S.W. 280th St.
- Dade County Agricultural Center - 18710 S.W. 288th St.
- Pioneer BMX - S.W. 172nd Ave. & S.E. 3rd St.
- Pioneer Museum - 826 Krome Ave.
- State Farmers Market - S.W. 3rd St. & Krome Ave.
- Tropical Everglades Visitor Assoc. - U.S. 1 just south of Palm Dr.
- Villages of Homestead Golf Course - 1851 N. Canal Dr.
- Robert is Here (Fruit Stand) - 19200 S.W. 344th St.
- U.S. Navy Wells - S.W. 192nd Ave. & S.W. 354th St.

Parks

- Owaissa Bauer Camp - 17001 S.W. 264th St.
- Castellow Hammock - 22200 S.W. 162nd Ave.
- South Dade Recreation Center - 28151 S.W. 164th Ave.
- Modello Wayside Park - S.W. 288th St. & west side of U.S. 1
- Seminole Wayside Park - S.W. 298th St. & east side of U.S. 1

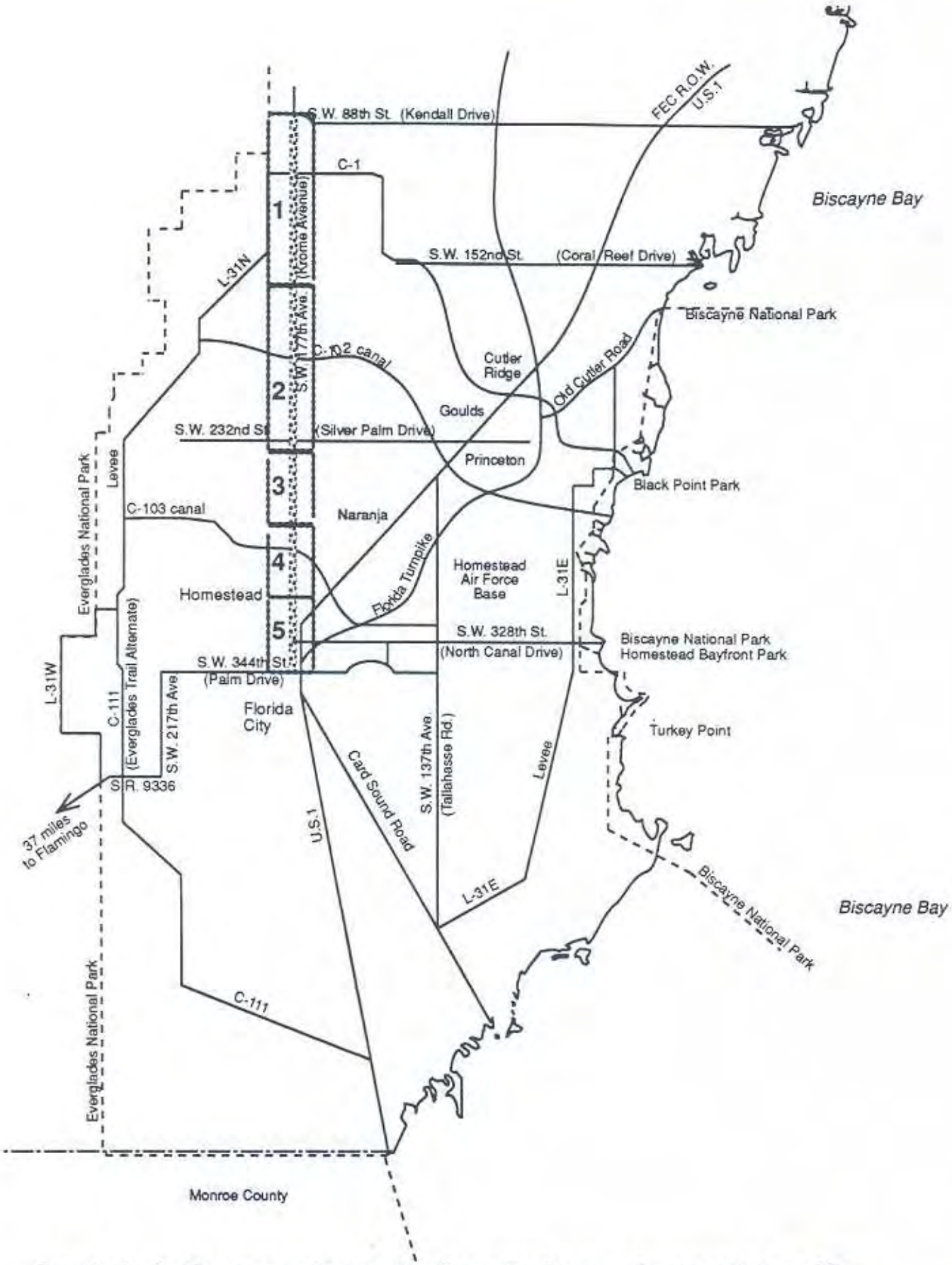
- Tom J. Harris Field / YMCA - S.W. 312th St. & U.S. 1
- Arthur Vining Davis Park - 826 Krome Ave.
- Fasulo Park - Florida City

Schools

- Avocado Elementary - 16969 S.W. 294th St.
- Avocado / Leisure Relief - S.W. 290th St. @ S.W. 197th Ave.
- Campbell Drive Elementary - 30700 S.W. 157th Ave.
- A.L. Lewis Elementary - 505 S.W. 8th St.
- Campbell Drive Middle - 31110 S.W. 157th Ave.
- Redland Middle - 16001 S.W. 248th St.
- South Dade High - 28401 S.W. 167th Ave.
- South Dade Adult Education Center - 109 N.E. 8 St.

Issues

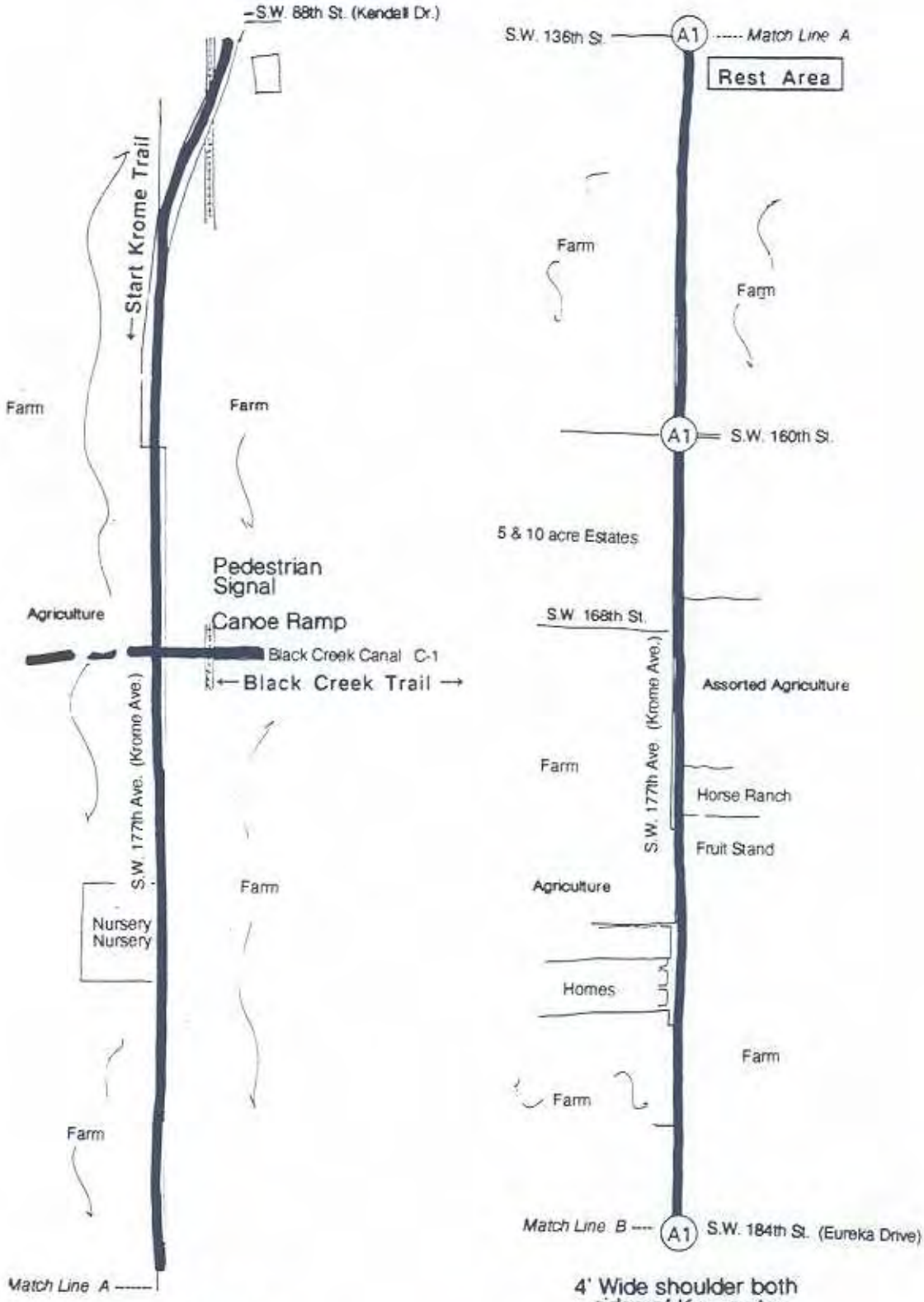
- Farming is along the Trail. Signage should be provided to inform trail users of farming practices, such as spraying of chemicals, which can during the actual operation be of concern. Existing regulations require farmers to post warnings.
- Krome Ave. has very limited R.O.W., and is a heavily traveled truck route. This Trail is considered, with the addition of safety improvements, as interim use only.
- When FDOT studies controlled access options for the road, additional R.O.W. should be provided for off-road, multi-purpose trails and separate equestrian trails in both directions.



South Dade Greenway Network - KromeTrail (interim) Segment Map

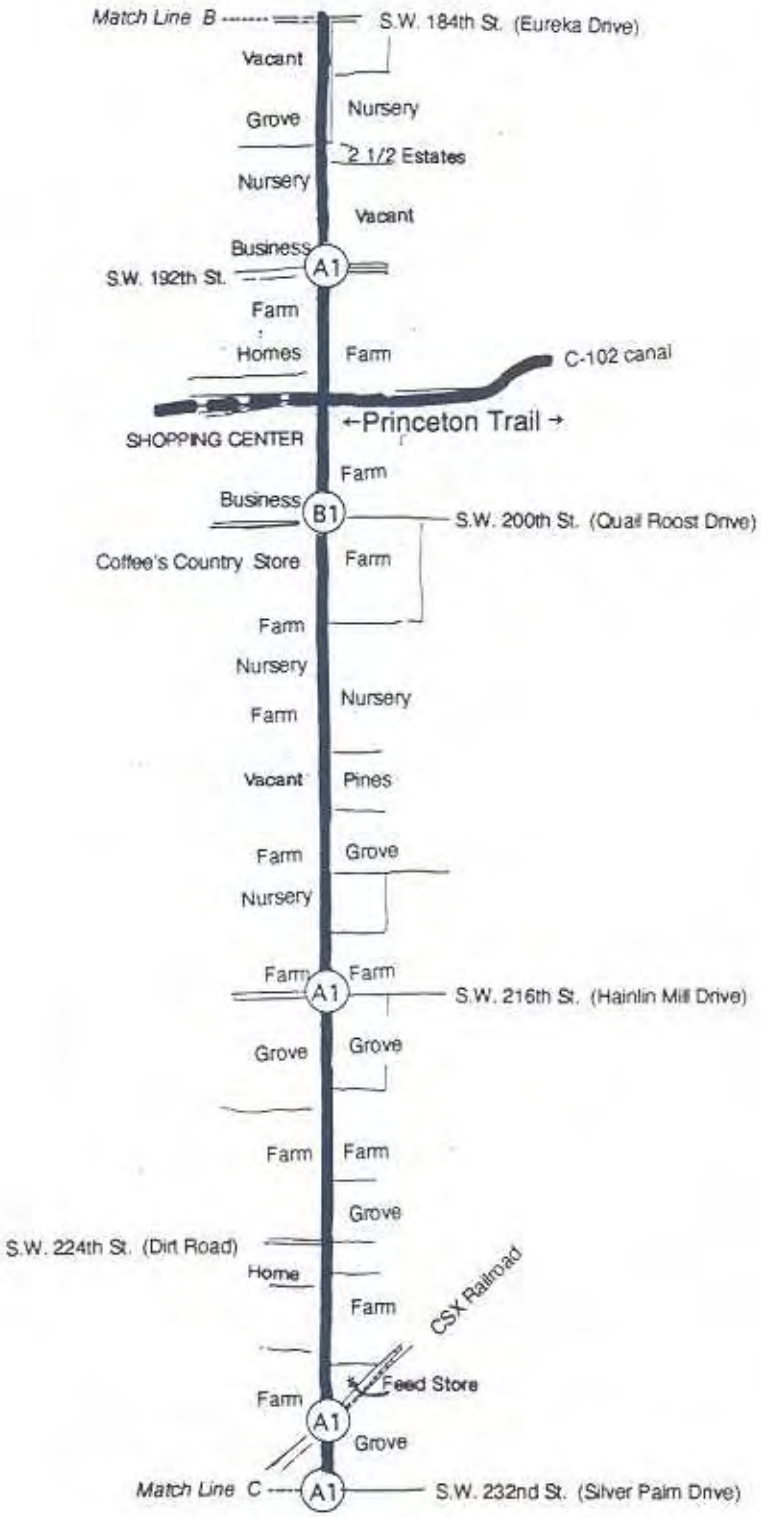
Scale 1" = 4 miles

Map Section Key



South Dade Greenway Network - Krome Trail - interim (Section 1)

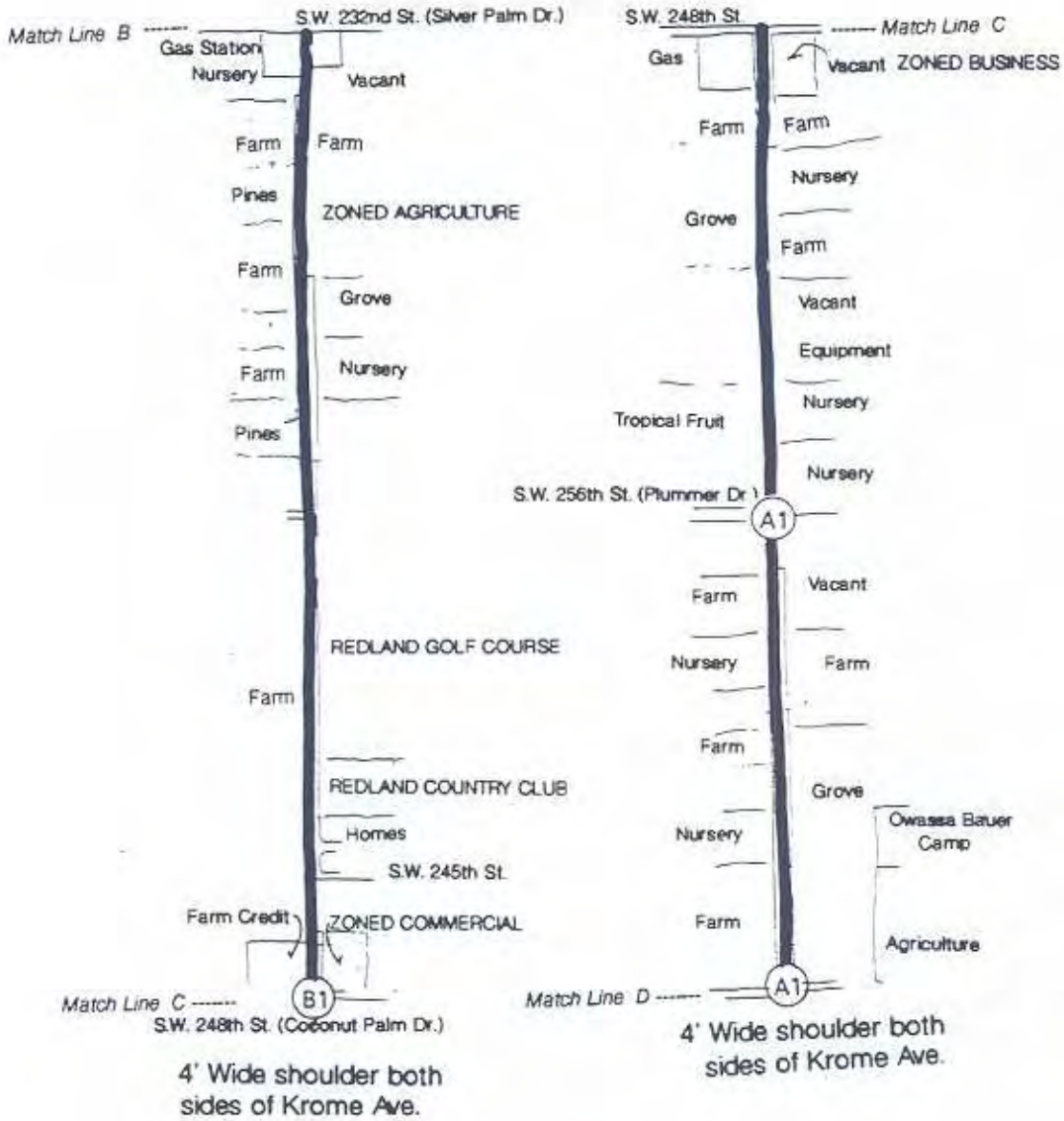
Scale 1" = 2000'



4' Wide shoulder both sides of Krome Ave.

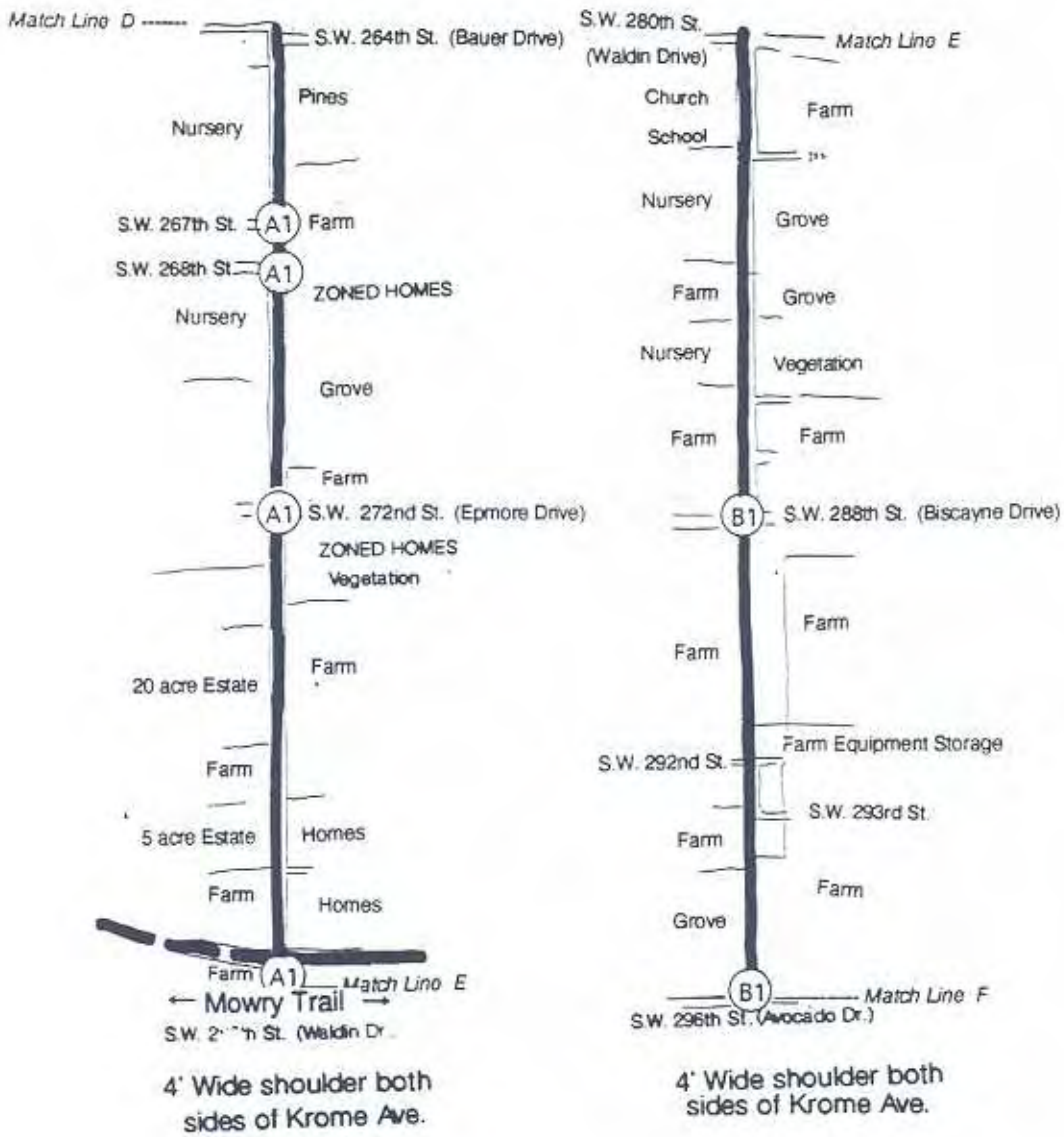
South Dade Greenway Network - Krome Trail - interim (Section 2)

Scale 1" = 2000'



South Dade Greenway Network - Krome Trail - interim (Section 3)

Scale 1" = 1000'

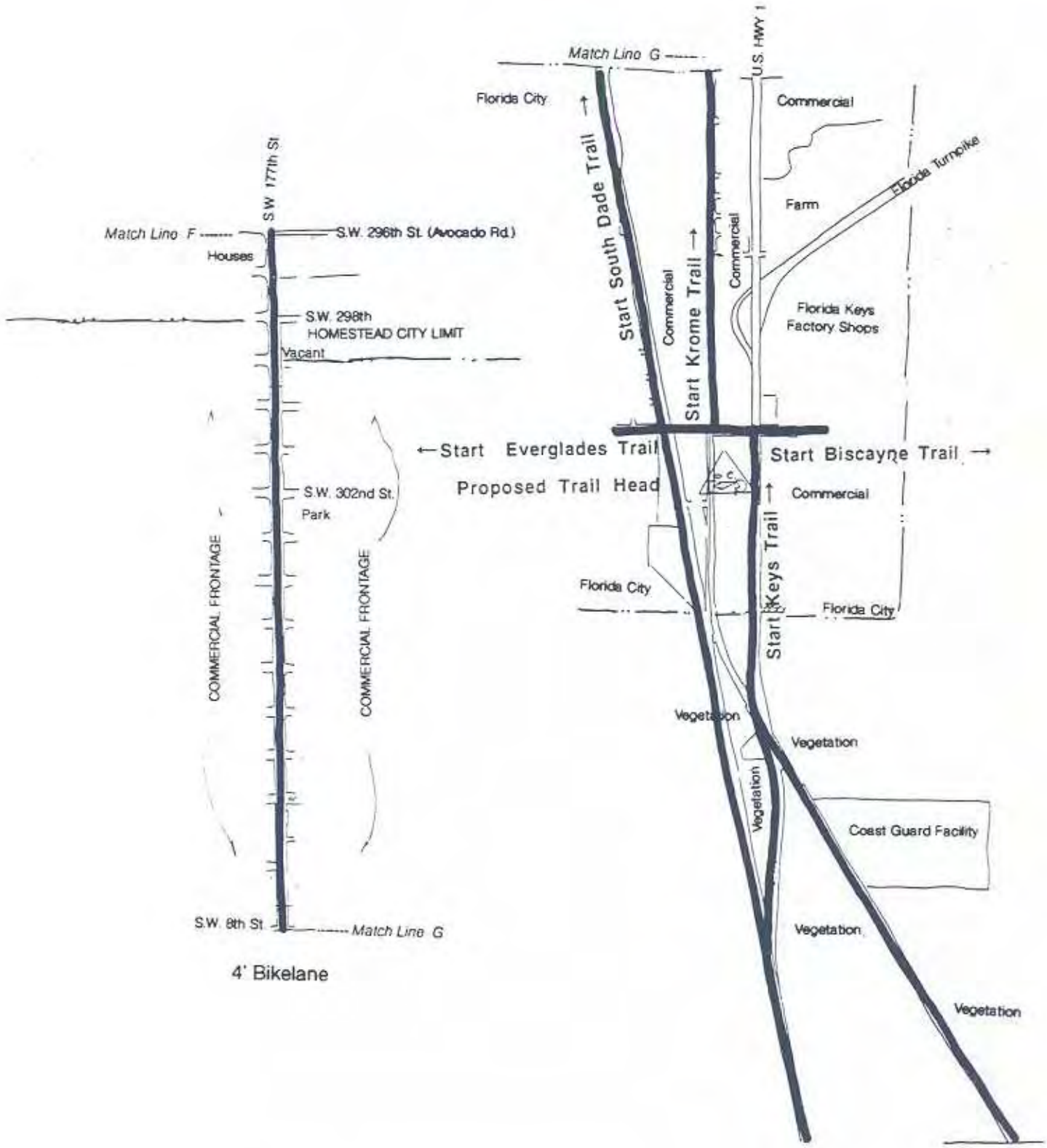


4' Wide shoulder both sides of Krome Ave.

4' Wide shoulder both sides of Krome Ave.

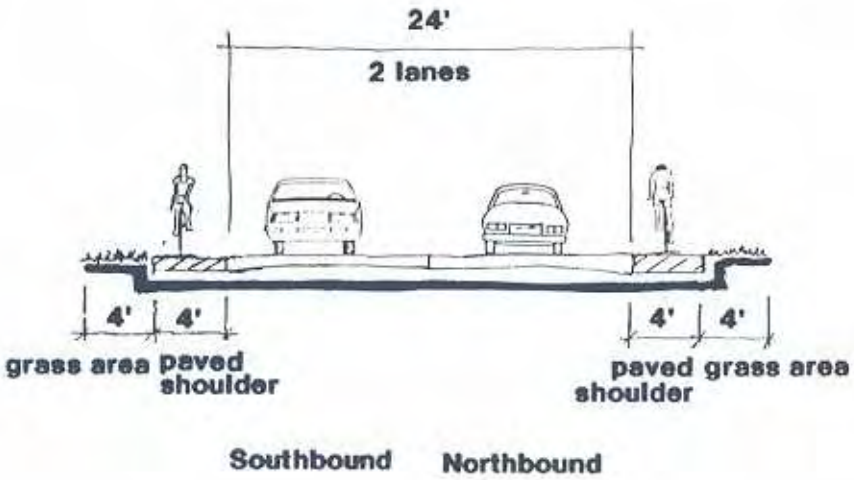
South Dade Greenway Network - Krome Trail - interim (Section 4)

Scale 1" = 1000'



South Dade Greenway Network - Krome Trail - interim (Section 5)

Scale 1" = 1000'



Note

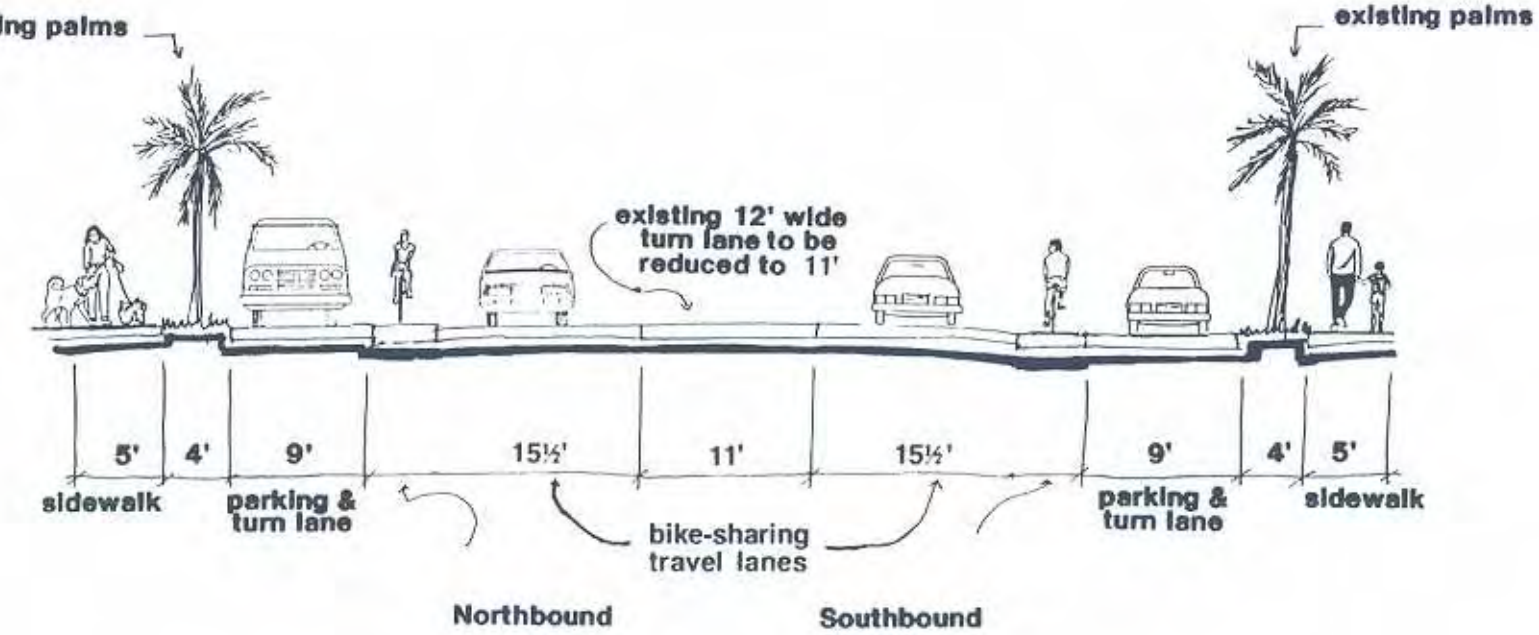
future roadway studies may provide for additional R.O.W. with off-road multi-purpose trails and equestrian trails

KROME TRAIL (INTERIM TRAIL)

from Kendall Dr. to N.E. 25 St.

in Homestead

TYPICAL SECTION

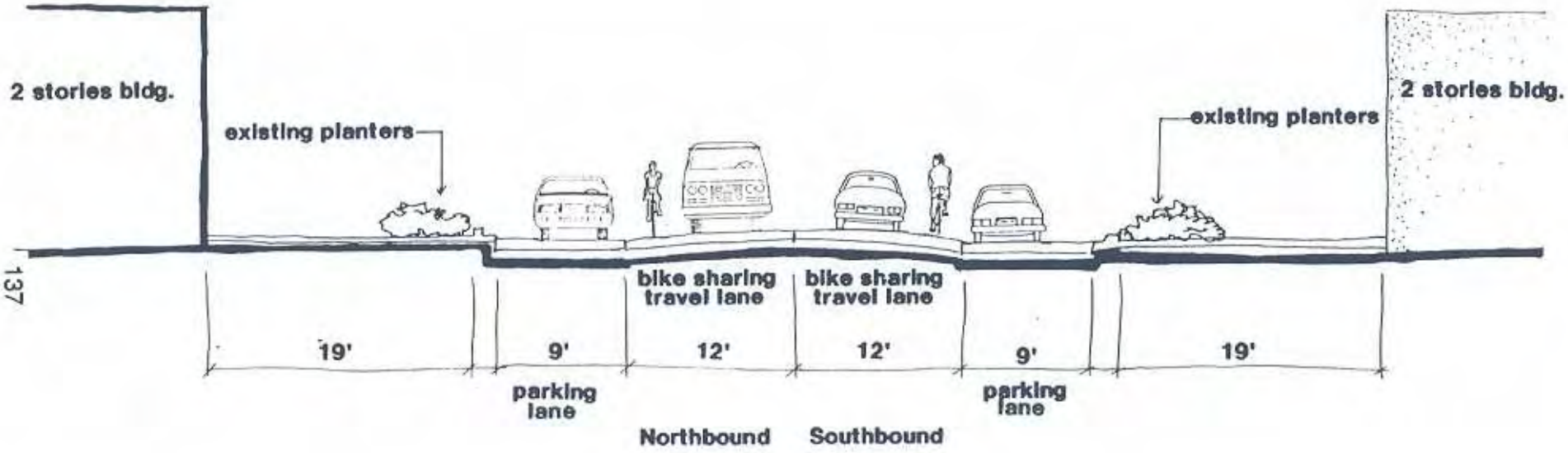


KROME TRAIL

Krome Ave. (In Homestead)

from N.E. 21 St. to N.E. 4 St.

TYPICAL SECTION

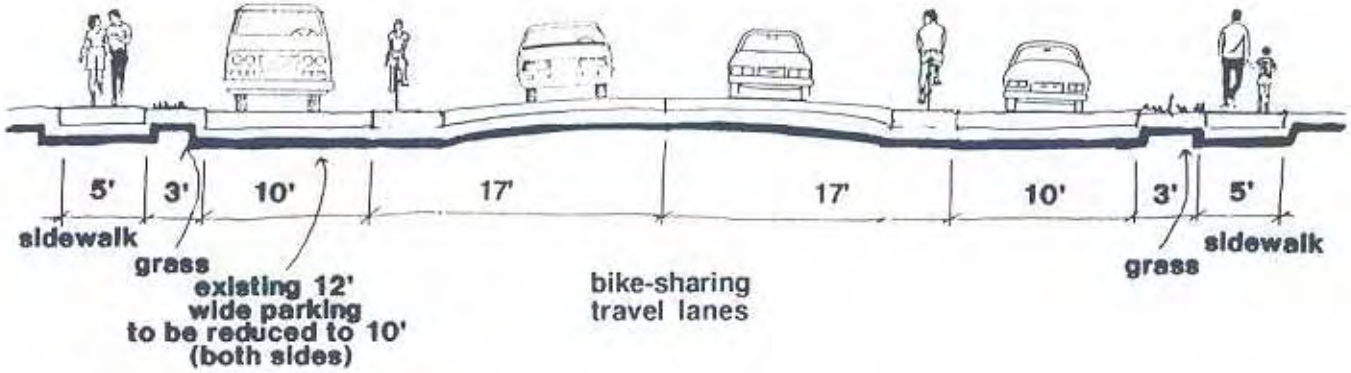


KROME TRAIL

Krome Ave. (In Homestead–Historic District)

from N.E. 4 St. to S.E. 1 St.

TYPICAL SECTION

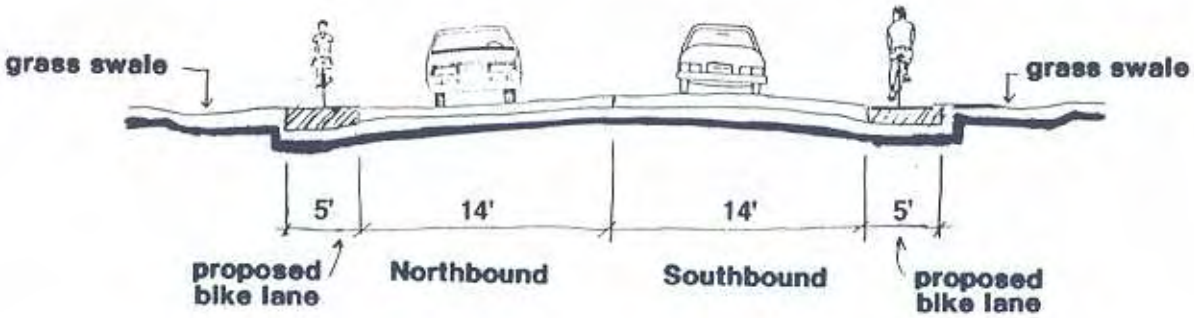


KROME TRAIL

Krome Ave. (In Homestead)

Flagler Ave. to Lucy St. (S.E. 8 St.)

TYPICAL SECTION



KROME TRAIL

Krome Ave. In Florida City Lucy St.

(S.W. 328 St.) to Palm Drive (S.W. 344 St.)

TYPICAL SECTION

South Dade Trail

General Description - 25.7 total trail miles.

This is the system's most urbanized Trail. It runs along the U.S.1 Exclusive Bus Lane Corridor, which is located on the former Florida East Coast Railroad (FEC) R.O.W. The FEC was constructed by Henry Flagler during South Florida's pioneer age, and connects historic settlements, remnants of which still exist.

The bus lane corridor, along with the bike lane, from the Dadeland Metrorail South station to Cutler Ridge is scheduled by the Florida Department of Transportation (FDOT) for completion in 1996, this will be the first Trail to open to the public. FDOT then expects to continue the corridor; south to Florida City, by 1997, completing the South Dade Trail.

This Trail allows users access to many commercial and work centers. It is also a direct link to Metrorail. It will be the spine of the SDGN network because it intersects with all Trails except for the Southern Glades and Krome Trails.

The expected user group is:

- Commuters
- Ecotourists

Ownership

Florida Department of Transportation

Existing Conditions of Rights of Way and Surroundings

FEC R.O.W. from Kendall Drive to Palm Drive.
(see map sections: 1 - 9)

- 18.4 miles of abandon railroad R.O.W.
- Forty-five road crossings (Twenty-two within phase one)
- Intersects with the Black Creek Trail, Princeton Trail, Mowry Trail, Tallahassee Connector, Everglades Trail, Biscayne Trail and the Keys Trail.
- Commercial, industrial and residential development.

Trail Development

Trail Construction (see typical sections)

- A 10' wide asphalt bike path.
- Located on the west side of the FEC R.O.W.

Amenities

- Four proposed Trailheads - Dadeland Metrorail Station, Cutler Ridge Mall, Florida City - City Hall and Tropical Everglades Visitor Assoc.
- Rest Areas - Provided at bus stops
- Location Maps - One
- Interpretive Signage - Five

Community Assets (within 2 miles)

Points of Interest

- Matheson Hammock - 9610 Old Cutler Road
- Parrot Jungle - 11000 S.W. 57th Ave.
- Rockdale Pine Preserve - U.S. 1 & S.W. 144th St.
- Briar Bay Golf Course - 9373 S.W. 134th St.
- Subtropical Horticulture Research Station - S.W. 67th Ave. & S.W. 144th St.
- Charles Deering Estate - 16701 S.W. 72nd Ave.
- Palmetto Golf Course - 9300 S. W. 152nd St.
- Girl Scout Camp - 11347 S.W. 160th St.
- Old Cutler Hammock - 17555 S.W. 79th Ave.
- Burr's Strawberry Farm - S.W. 216th St. & S.W. 137th Ave.
- Pine Ridge BMX - S.W. 216th St. & S.W. 139th Ave.
- Cauley Square - U.S. 1 & S.W. 224th St.
- South Dade Government Center - 10710 S.W. 211th St.
- South Dade Regional Library - 10705 S.W. 211th St.
- Coral Castle - 28655 S. Federal Hwy.
- Homestead Air Force Base, north entrance on 268th st.
- Pioneer BMX - S.W. 172nd Ave. & S.E. 3rd St.
- Pioneer Museum - 826 Krome Ave.
- State Farmers Market - 300 N. Krome Ave. Fl. City
- U.S. Navy Wells - S.W. 192nd Ave. & S.W. 354th St.

Parks

- Fuch's Park - S.W. 80th St. & U.S. 1
- Red Road Park - S.W. 57th Ave. & S.W. 87th St.
- K-Land Park - S.W. 88th St. & S.W. 95th Ave.
- Coral Pine Park - 6995 S.W. 104th St.
- Continental Park - 10000 S.W. 82nd Ave.
- Ron Ehmann Park - S.W. 97th Ave. & S.W. 112th St.
- Kendall Veteran Wayside - S.W. 112th St. & U.S. 1
- Suniland Park - 12855 S. Dixie Hwy.
- Coral Reef Park - 7895 S.W. 152nd St.
- Colonial Drive Park - 10750 S.W. 156th Terr.
- Southridge Park - 19355 S.W. 114th Ave.
- Cutler Ridge Park - 10100 S.W. 200th St.
- Larry & Penny Thompson Park - 12451 S.W. 184th St.
- Lincoln City - S.W. 220th St. & S.W. 102nd Ave.
- Goulds Park - 21805 S.W. 114th Ave.
- South Dade Recreation Center - 16350 S.W. 280th St.
- Modello Wayside Park - S.W. 288th St. & west side of U.S. 1
- Seminole Wayside Park - S.W. 300th St. & east side of U.S. 1
- Tom J. Harris Field / YMCA - U.S. 1 & S.W. 312th St.
- Arthur Vining Davis Park - 826 Krome Ave.
- Fasulo Park - S.W. 350th St. & S.W. 187th Ave.

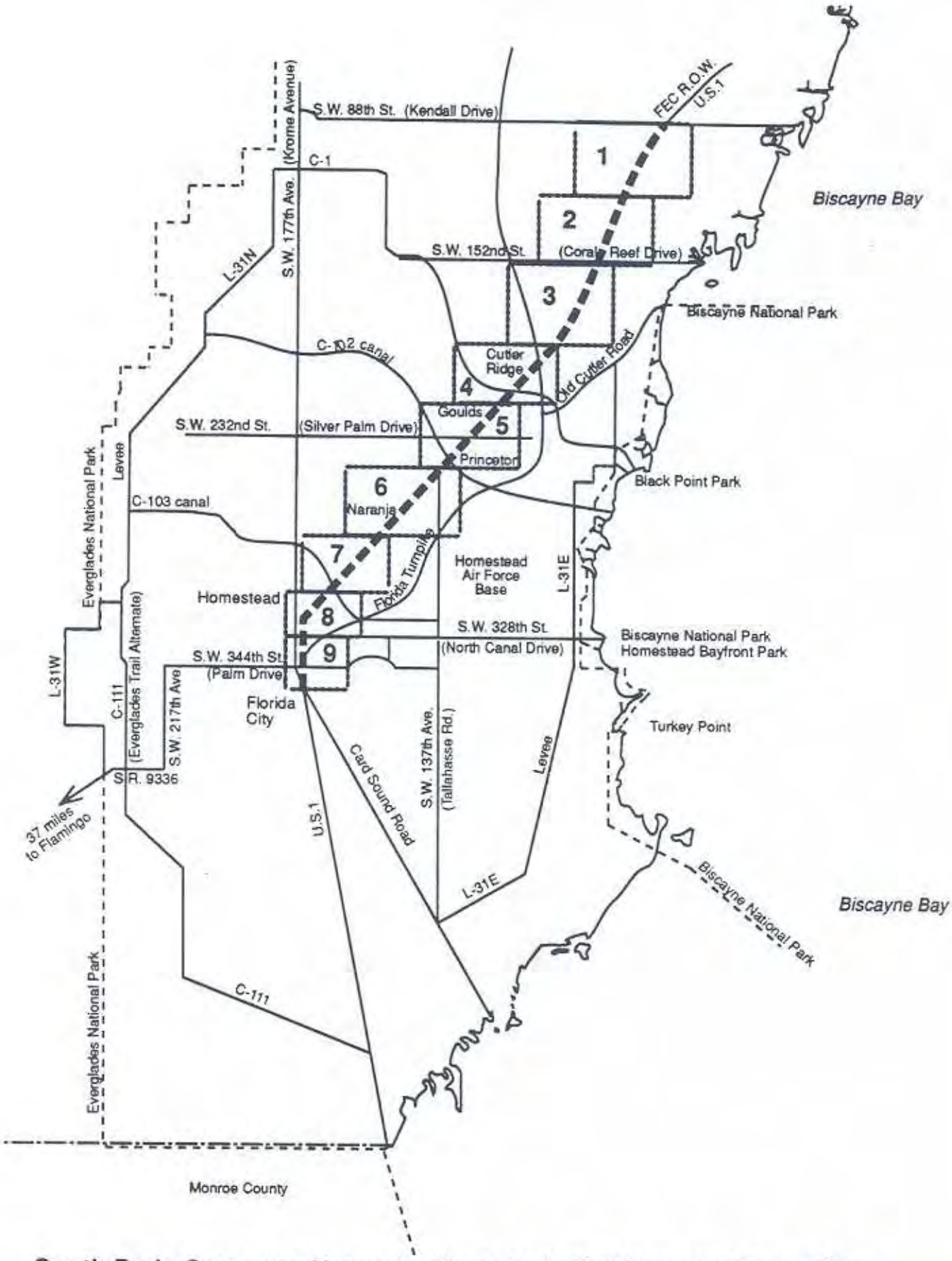
Schools

- Air Base Elementary - 12829 S.W. 272nd St.
- Avocado Elementary - 16969 S.W. 294th St.
- Bel Aire Elementary - 10205 S.W. 194th St.
- Campbell Drive Elementary - 30700 S.W. 157th Ave.
- Caribbean Elementary - 11990 S.W. 200th St.
- W. Chapman Elementary - 27190 S.W. 140 Ave.
- Colonial Drive Elementary - 10755 S.W. 160th St.
- Coral Reef Elementary - 7955 S.W. 152nd St.
- Cutler Ridge Elementary - 20210 Coral Sea Rd.
- Gulfstream Elementary - 20900 S.W. 97th Ave.
- Howard Drive Elementary - 7750 S.W. 136th St.
- Kenwood Elementary - 9300 S.W. 79th Ave.
- Leewood Elementary - 10343 S.W. 124th St.
- Leisure City Elementary - 14950 S.W. 288th St.
- Lewis Elementary - 505 S.W. 8th St.
- Ludlum Elementary - 6639 S.W. 74th St.
- Miami Heights Elementary - 17661 S.W. 117th Ave.
- Moton Elementary - 18050 Homestead Ave.

- Naranja Elementary - 13990 S.W. 264th St.
- Palmetto Elementary - 12401 S.W. 74th Ave.
- Perrine Elementary - 8851 S.W. 168th St.
- Peskoe Elementary - S.W. 290th St. & S.W. 144th Ave.
- Pinecrest Elementary - 10250 S.W. 57th Ave.
- Pine Lake Elementary - 16700 S.W. 109th Ave.
- Pine Villa Elementary - 21799 S.W. 117th Ct.
- Pine Villa Relief - S.W. 268th St. & S.W. 132nd Ave.
- Redland Elementary - 24701 S.W. 162nd Ave.
- Redondo Elementary - 18480 S.W. 304th St.
- Richmond Elementary - 16929 S.W. 104th Ave.
- South Miami Heights Elementary - 12231 S.W 190th Terr.
- Vineland Elementary - 8455 S.W 119th St.
- West Homestead Elementary - 1550 S.W. 6th St.
- Whispering Pines Elementary - 18929 S.W. 89th Rd.
- Campbell Drive Middle - 31110 S.W. 157th Ave.
- Cutler Ridge Middle - 19400 S.W. 97th Ave.
- Mays Middle - 11700 S.W. 216th St.
- Palmetto Middle - 7351 S.W. 128th St.
- Redland Middle - 16001 S.W. 248th St.
- Richmond Heights Middle - 15015 S.W. 103rd Ave.
- Southwood Middle - 16301 S.W. 80th Ave.
- Homestead High - 2350 S.E. 12th Ave.
- Miami Killian High - 10655 S.W. 97th Ave.
- Miami Killian relief - S.W. 152nd St. between S.W. 99th Ave. & S.W. 102nd Ave.
- Miami Palmetto High - 7460 S.W. 118th St.
- Miami Southridge High - 19355 S.W. 114th Ave.
- South Dade High - 28401 S.W. 167th Ave.
- Robert Morgan Technical - 18180 S.W. 122nd Ave.
- South Dade Adult Education Center - 109 N.E. 8th St.
- South Dade Skills Center - 28300 S.W. 152nd Ave.

Issues

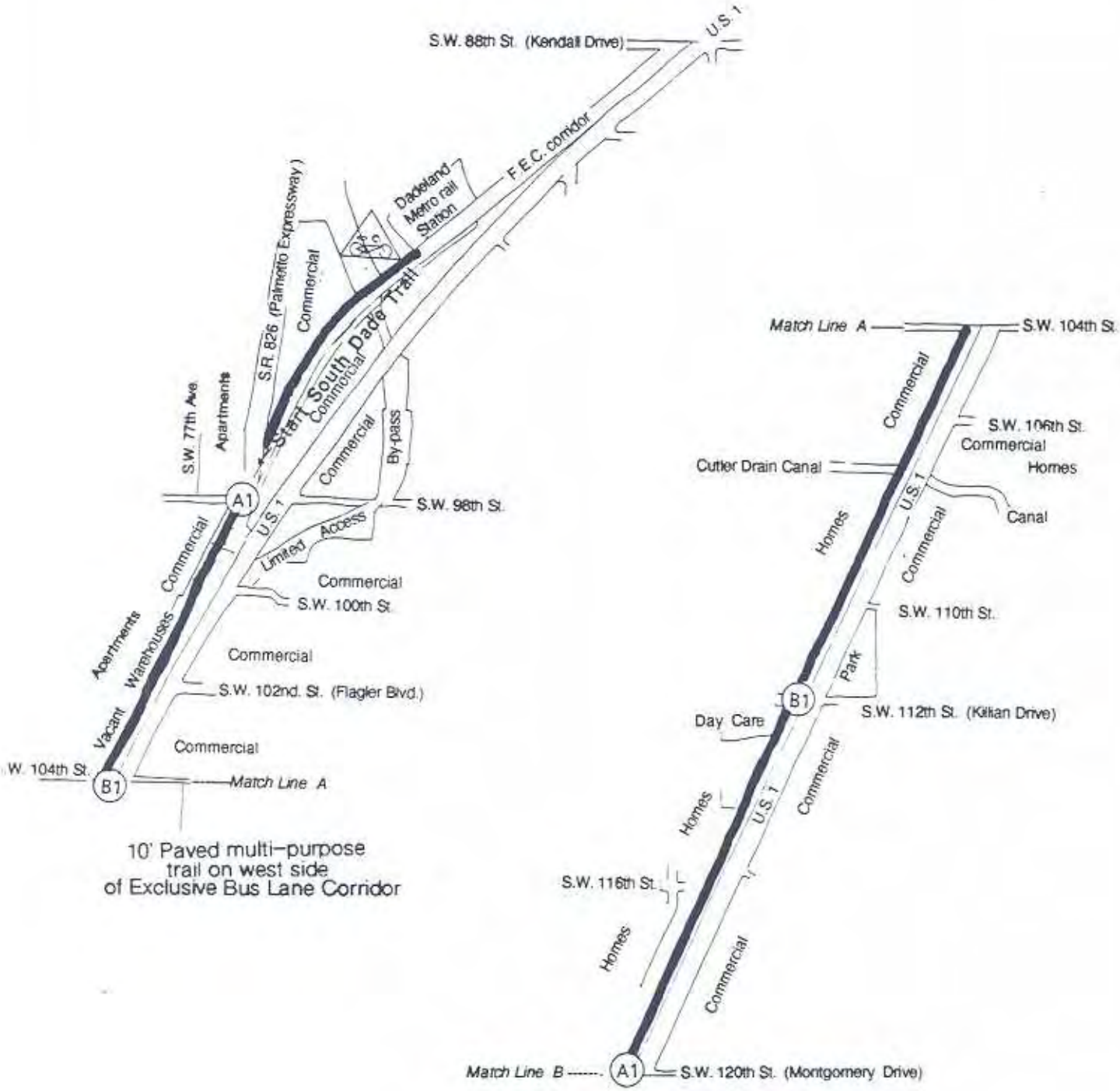
- Potential conflict between cyclists and pedestrians at bus bench locations. It needs evaluation and correction of proposed design.
- Provide special passes and bike lockers to promote use of Metrorail as a commuter link to the SDGN.
- An assumption is made that any intersections built during scheduled road improvements, will adhere to the established standards and install SDGN signage.
- An assumption is made that FDOT will continue the U.S. 1 Exclusive Bus Lane Corridor (phase 2) / South Dade Trail, along the FEC R.O.W., connecting to Keys Trail.



South Dade Greenway Network - South Dade Trail Segment Map

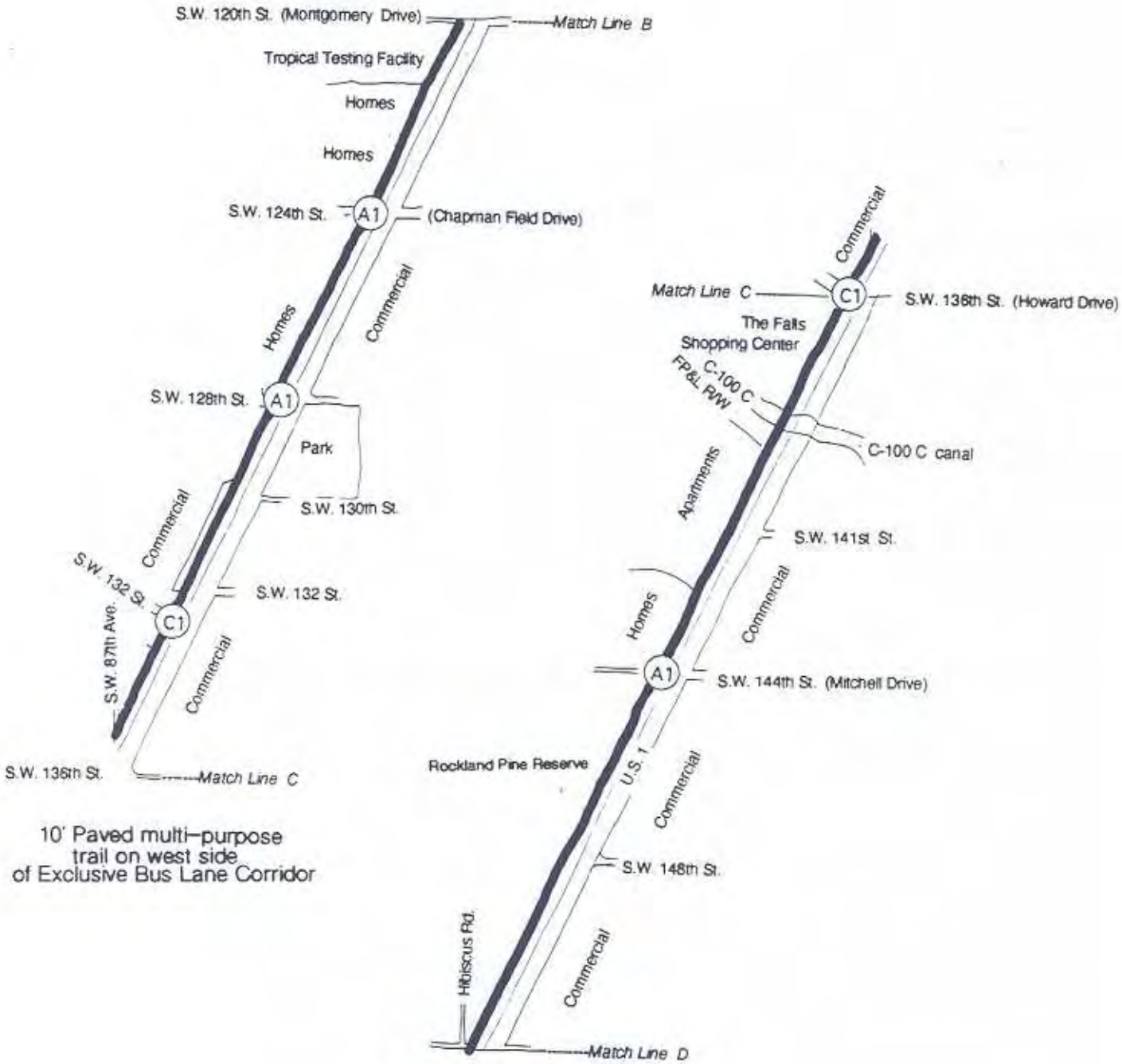
Scale 1" = 4 miles

Map Section Key



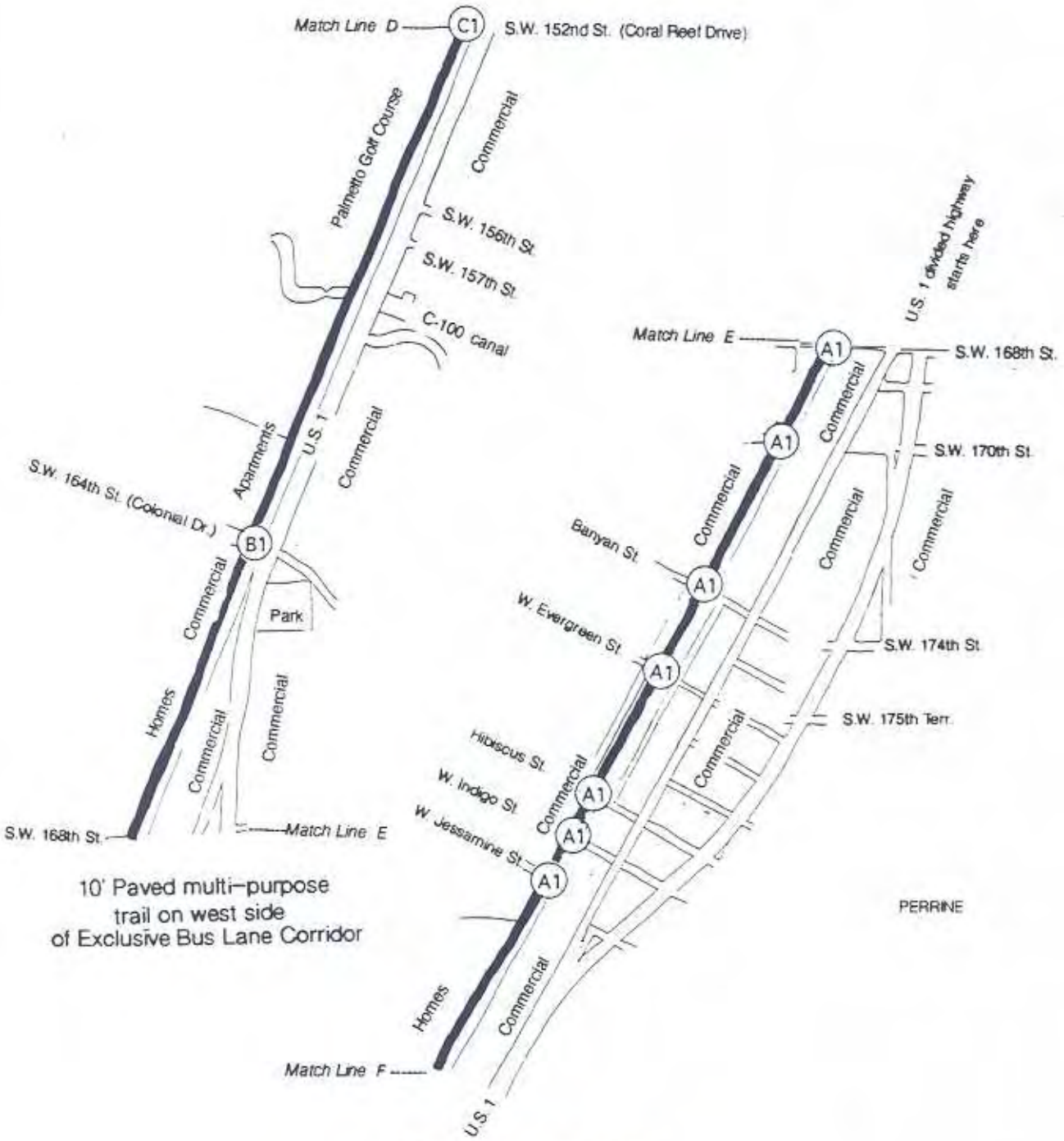
South Dade Greenway Network - South Dade Trail (Section 1)

Scale 1" = 1000'



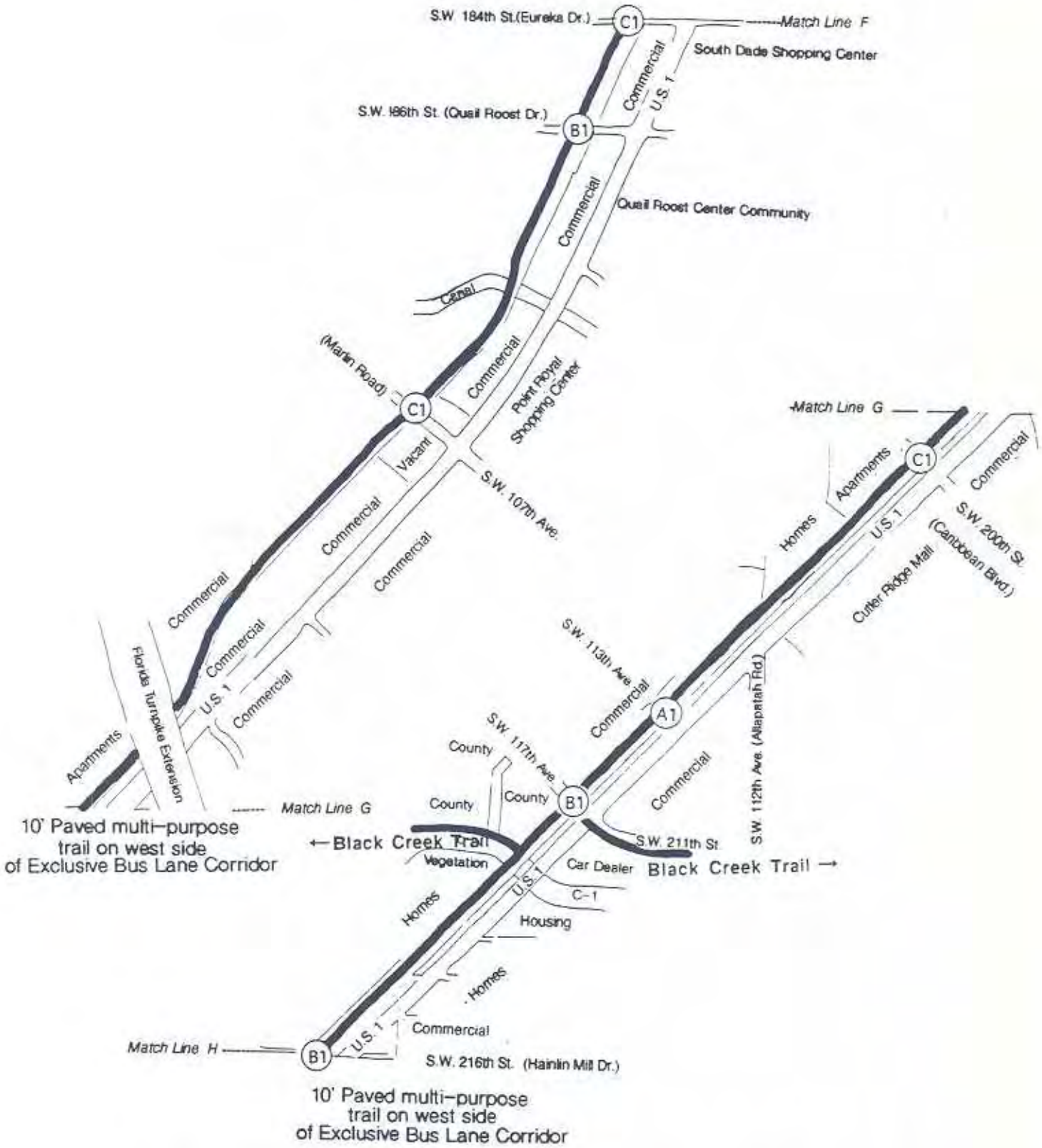
South Dade Greenway Network - South Dade Trail (Section 2)

Scale 1" = 1000'



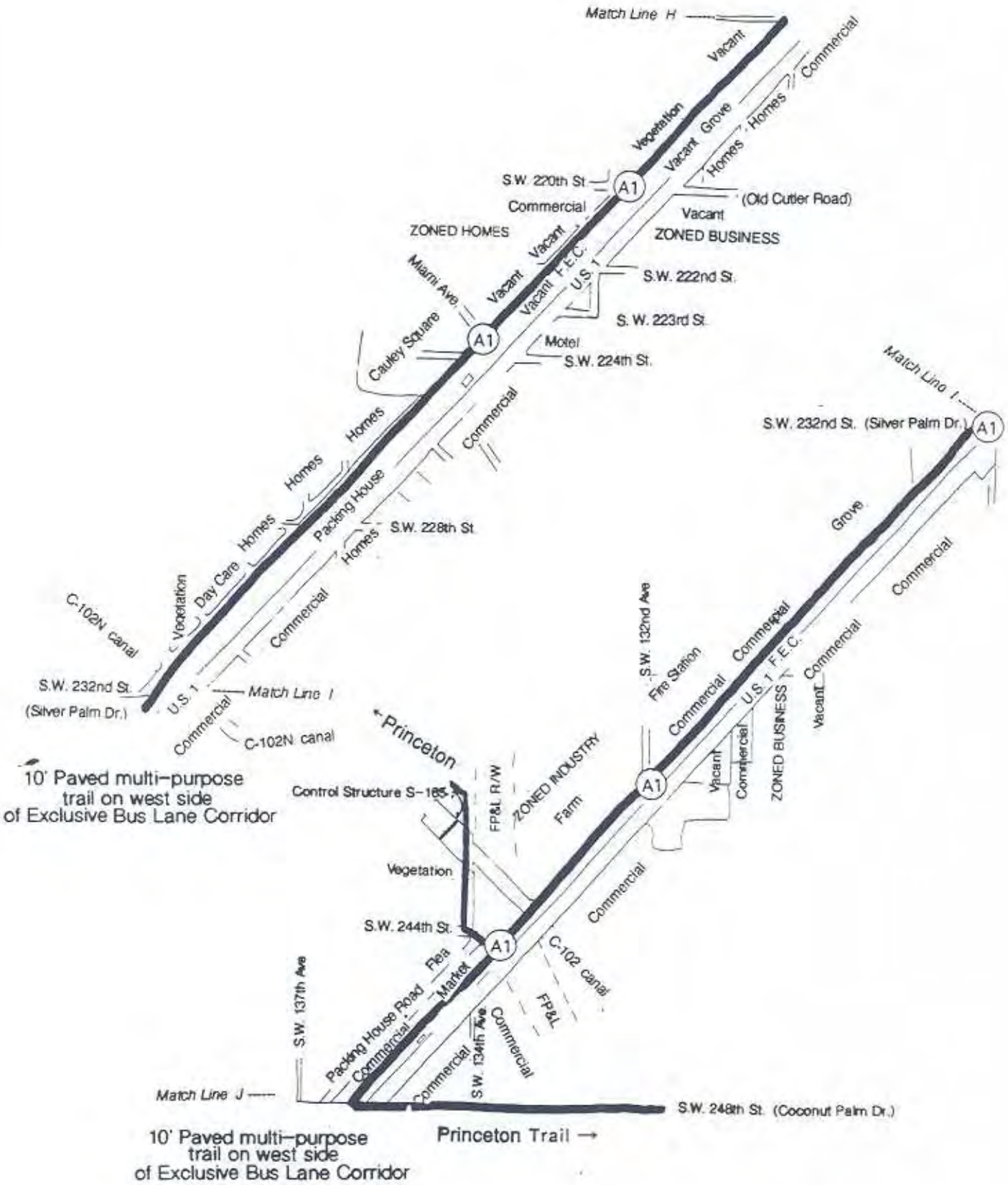
South Dade Greenway Network - South Dade Trail (Section 3)

Scale 1" = 1000'



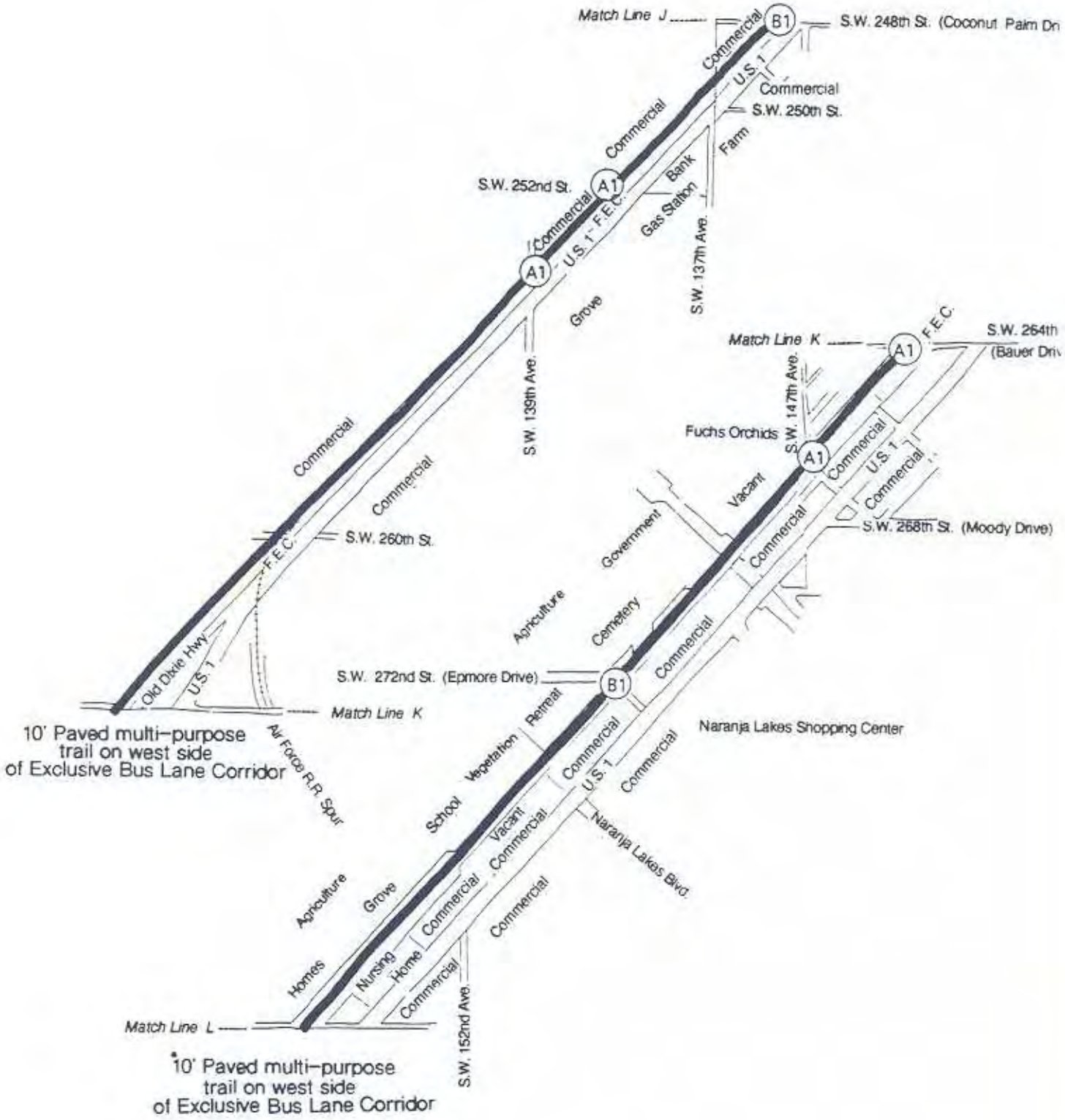
South Dade Greenway Network - South Dade Trail (Section 4)

Scale 1" = 1000'



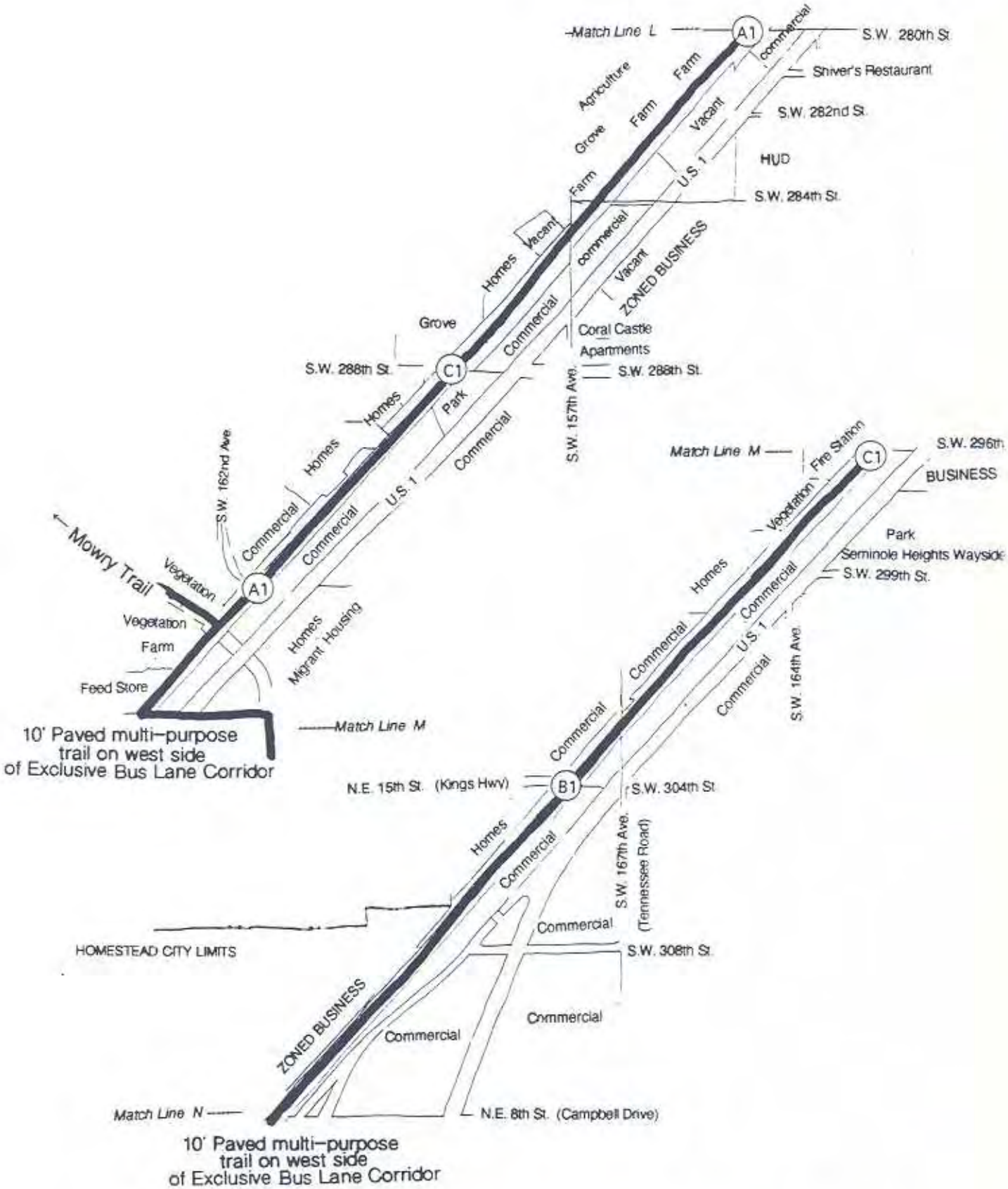
South Dade Greenway Network - South Dade Trail (Section 5)

Scale 1" = 1000'



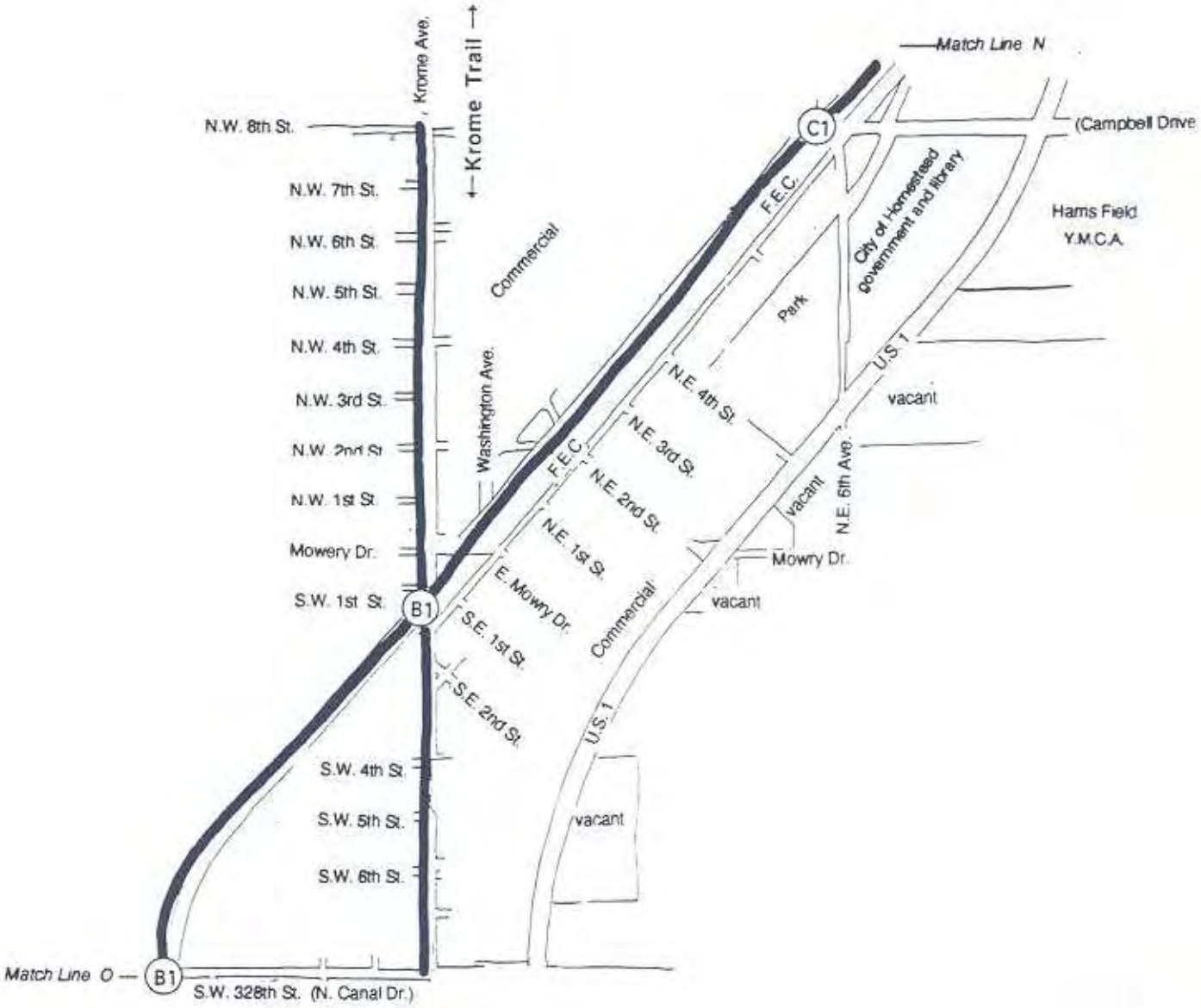
South Dade Greenway Network - South Dade Trail (Section 6)

Scale 1" = 1000'



South Dade Greenway Network - South Dade Trail (Section 7)

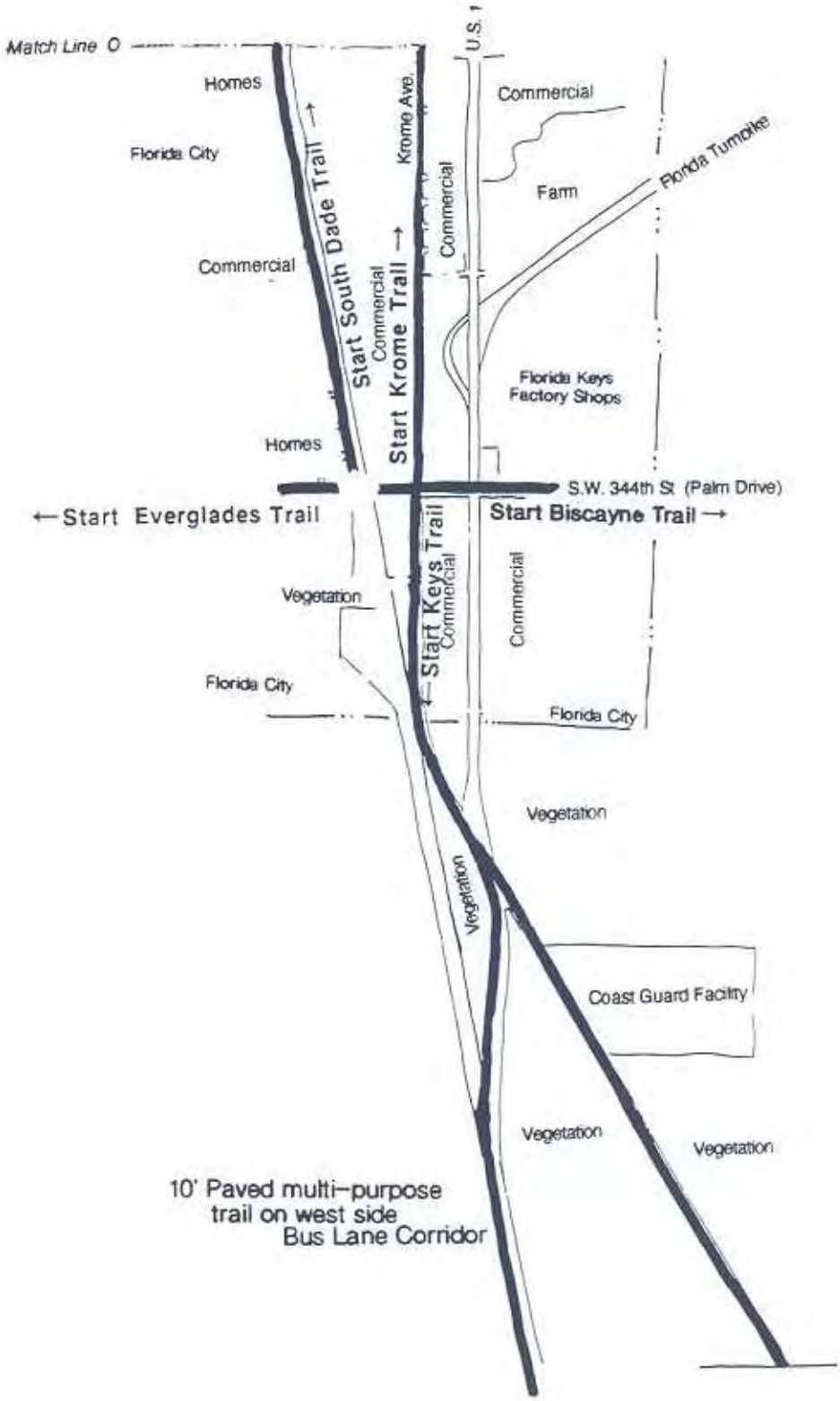
Scale 1" = 1000'



10' Paved multi-purpose
trail on west side
of Exclusive Bus Lane Corridor

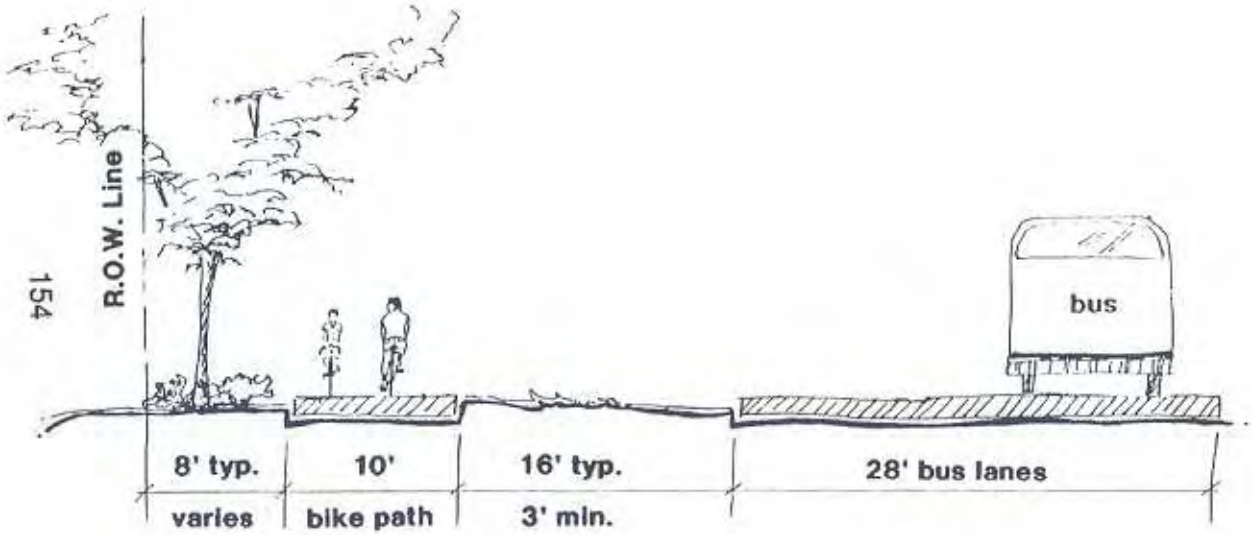
South Dade Greenway Network - South Dade Trail (Section 8)

Scale 1" = 1000'



South Dade Greenway Network - South Dade Trail (Section 9)

Scale 1" = 1000'



Northbound

Note
varies at intersections
for bus drop-off shelter

SOUTH DADE TRAIL

(FEC R/W) Express Bus Way from Dadeland South (Metro-Rail Station) to Cutler Ridge

TYPICAL SECTION

Southern Glades Trail

General Description - 12.6 total trail miles.

The Southern Glades Trail utilizes an existing Canal R.O.W., within a 25,886 acre nature preserve currently managed by the Florida Game and Fresh Water Fish Commission. Current recreational use of this area includes fishing and hunting. This Trail, with signage on U.S. 1, will attract visitors to and from the Keys.

Most of this area, other than the canal banks, is comprised of wetlands which are considered part of the Everglades ecosystem. The plant communities visible from the Trail include: sawgrass marsh, cypress strands, hydric hammocks with mixed hardwoods and many rare, threatened, or endangered plant species. The Southern Glades Wildlife and Environmental Area is also "home" for seven endangered animals: the Cape Sable Seaside Sparrow, American Crocodile, Bald Eagle, Peregrine Falcon, Wood Stork, Snail Kite and the Florida Panther. There are numerous threatened and species of special concern as well. More commonly spotted are many waterfowl and birds, small amphibians and mammals; such as rabbits, otters, raccoons, deer, and bobcats.

The expected user groups are:

- Ecotourists
- Hikers
- Cyclists - off road
- Canoeing
- Fishermen

Ownership

South Florida Water Management District

Existing Conditions of Rights of Way and Surroundings

C-111 from U.S.1 to S.R. 9336
(see map section 1)

- 12.6 miles of compacted Oolitic Limestone.
- Two SFWMD control structures.
- Intersects with the Keys Trail and the Everglades Trail.
- Primarily natural habitat with a small portion of row crop farming in the north.

Trail Development

Trail Construction (see typical sections)

- C-111 - 12' wide, unpaved multi-purpose trail.

Amenities

- One proposed Trailhead - Glenn Garrett Park
- Rest Areas - Three
- Location Maps - Two
- Emergency Phones - Four
- Interpretive Signage - One
- Landscaping

Community Assets (within 2 miles)

Points of Interest

- Southern Glades Wildlife and Environmental Area (SGWEA).

Parks

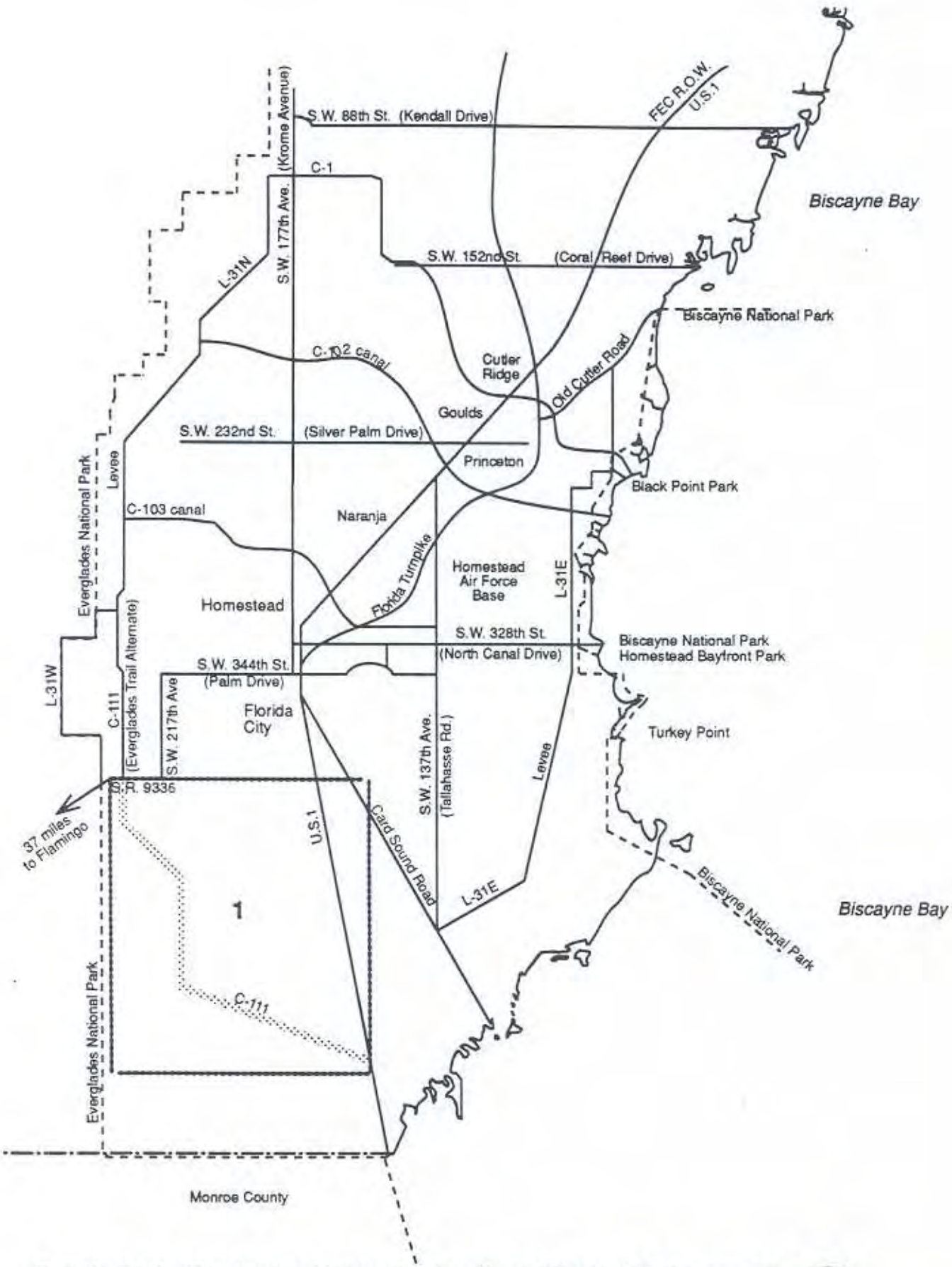
- Everglades National Park

Schools

- None

Issues

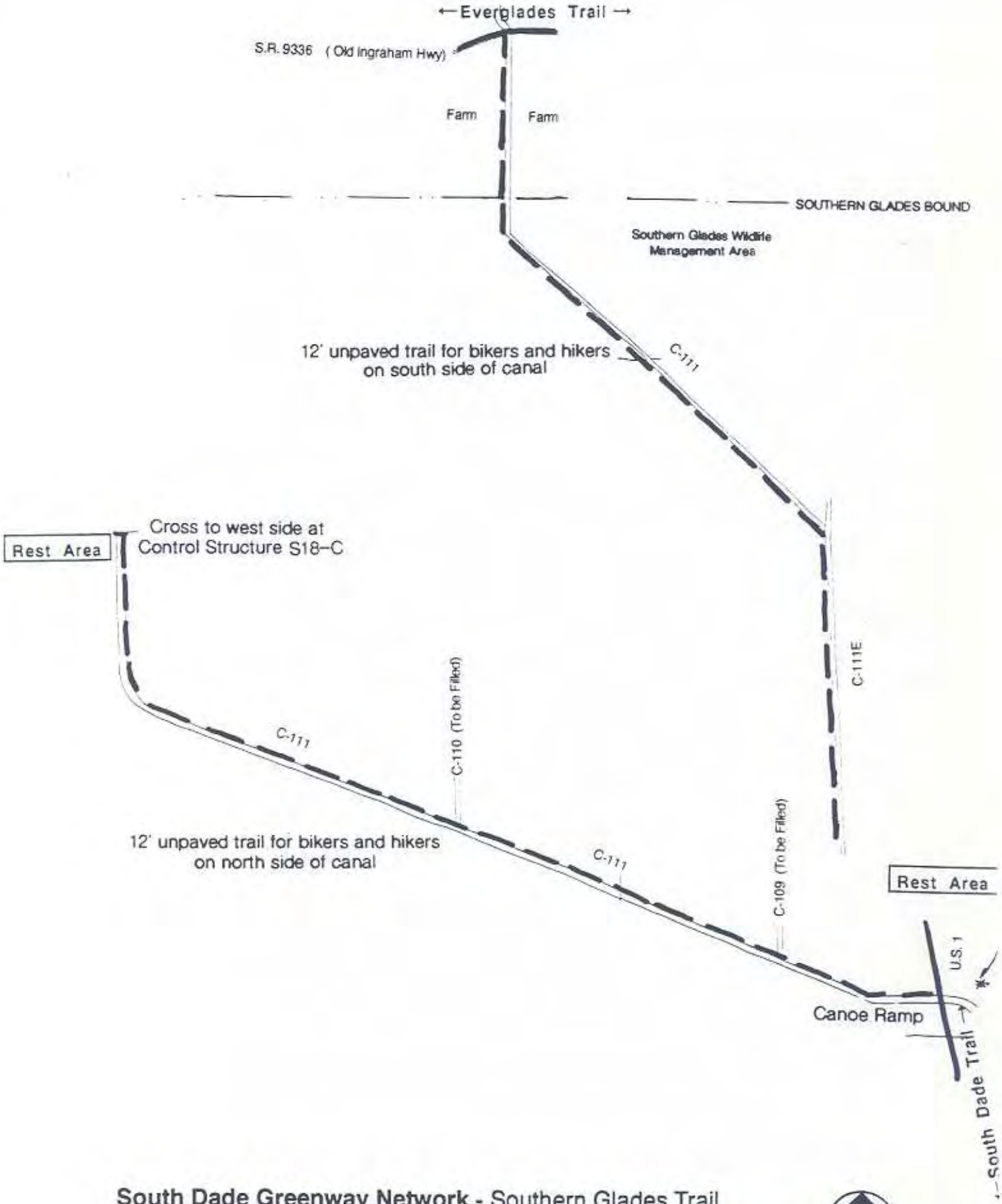
- Hunting is currently allowed September through December; and frogging between December and March. Conflict between trail users and hunters, needs to be addressed during these seasons.
- Can be opened as early as 1995 with the cooperation of SFWMD.
- Recommend keeping section of the spoil bank along R.O.W. edge and grading them to allow for overlooks.



South Dade Greenway Network - Southern Glades Trail Segment Map

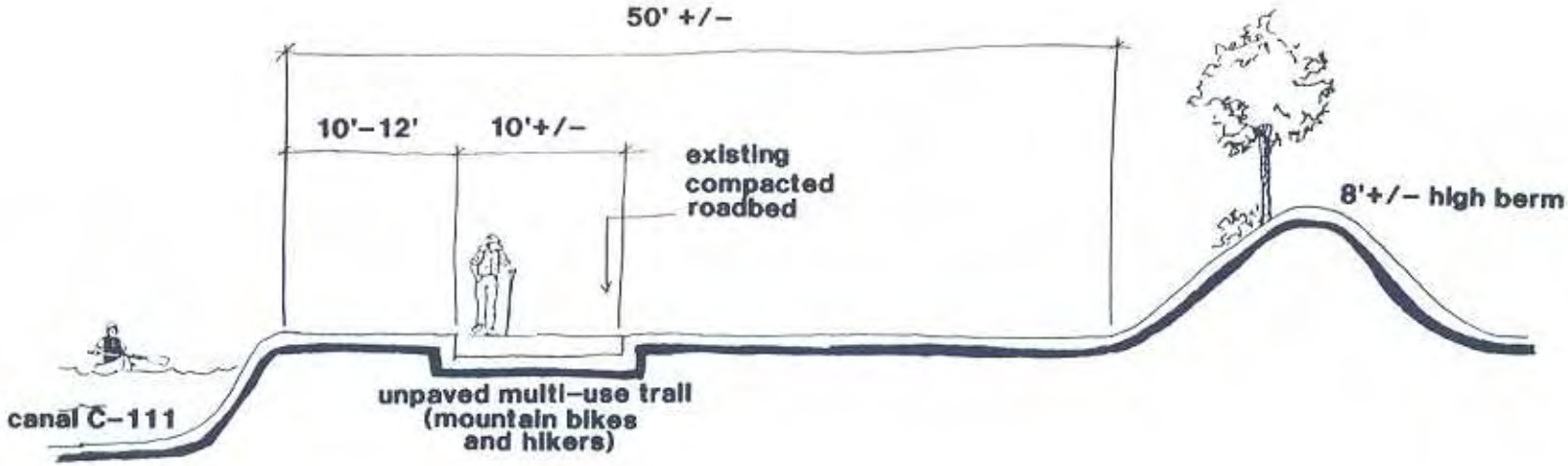
Scale 1" = 4 miles

Map Section Key



South Dade Greenway Network - Southern Glades Trail

Scale 1" = 4000'

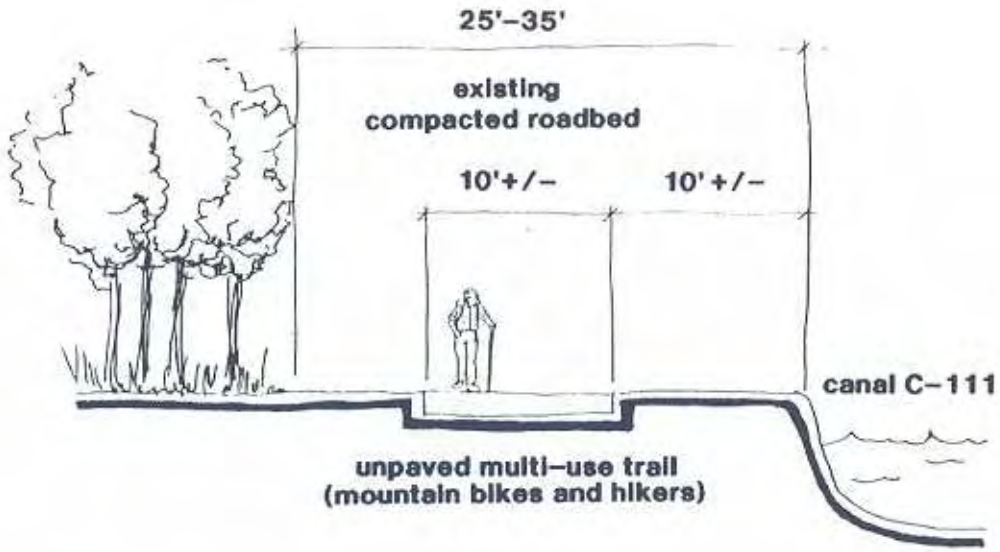


Westbound

SOUTHERN GLADES TRAIL

from U.S. 1 to Structure S-18C

TYPICAL SECTION



Northbound

SOUTHERN GLADES TRAIL

from Structure S–18 C

to S.R. 9336

TYPICAL SECTION

Tallahassee Connector

General Description - 6.0 total trail miles.

As the name denotes, this Trail links the South Dade Trail with the Mowry Trail and the Biscayne Trail; and leads the user to the new Homestead Sports Complex , Homestead Motorsports Complex, and to a major South Dade work center, Homestead Air Force Base. The South portion of this Trail is planned as part of a roadway improvement project.

The expected user group is:

- Cyclists
- Commuters
- Pedestrians and joggers
- Rollerbladers

Ownership

Metro-Dade Public Works: S.W. 137th Ave. from U.S. 1 to Palm Drive

Existing Conditions of Rights of Way and Surroundings

S.W. 137th Ave. from U.S. 1 to Palm Drive.
(see map sections: 1 & 2)

- 6.0 miles of county roadway.
- Fifteen road crossings (eight within phase 1)
- One railroad crossing
- Intersects with the South Dade Trail, Mowry Trail and the Biscayne Trail.
- Farm land and residential neighborhoods.

Trail Development

Trail Construction (see typical sections)

- An 8' wide, off-road, multi-purpose trail on most of the corridor, east side of R.O.W., and sidewalk on west side, includes 4' bike lanes.

Amenities

- Two proposed Trailheads - Homestead Sports Complex and Homestead Sports Complex
- Landscaping

Community Assets (within 2 miles)

Points of Interest

- Cauley Square - U.S. 1 & S.W. 224th St.
- Coral Castle - 28655 S. Federal Hwy.
- Homestead Air Force Base, north entrance on 268th st.
- Homestead Sports Complex - Palm Drive & S.W. 152nd Ave.
- Homestead Motorsports Complex - Palm Drive & S.W. 137th Ave.

Parks

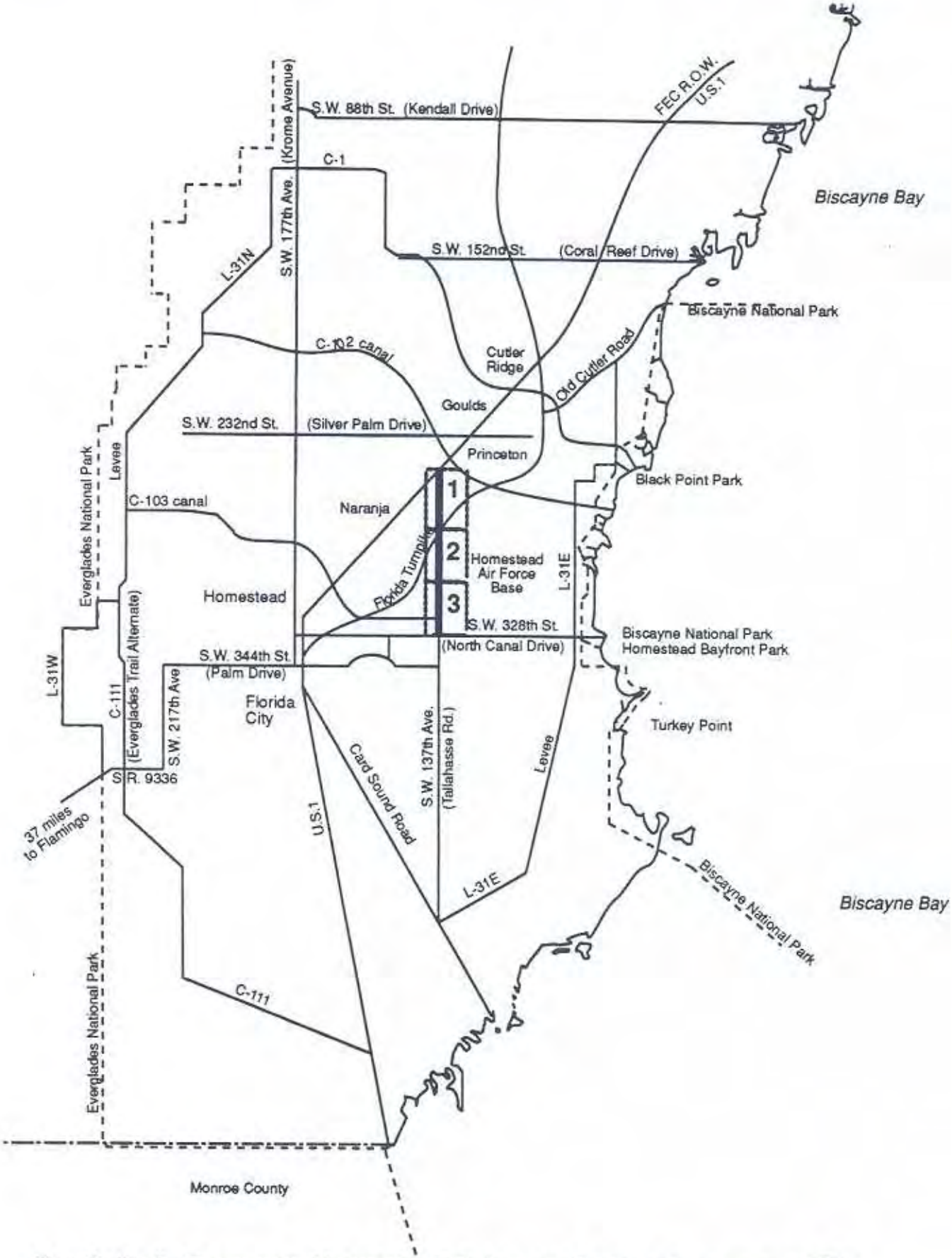
- Naranja Park - S.W. 264th St. & S.W. 142nd Ave.
- Moody Park - S.W. 129th Ct. & S.W. 268th St.
- Leisure Lakes Park - S.W. 293rd St. & S.W. 150th Ave.

Schools

- Air Base Elementary - 12829 S.W. 272nd St.
- Campbell Drive Elementary - 30700 S.W. 157th Ave.
- Leisure City Elementary - 14950 S.W. 288th St.
- Naranja Elementary - 13990 S.W. 264th St.
- Campbell Drive Middle - 31110 S.W. 157th Ave.
- Homestead High - 2350 S.E. 12th Ave.

Issues

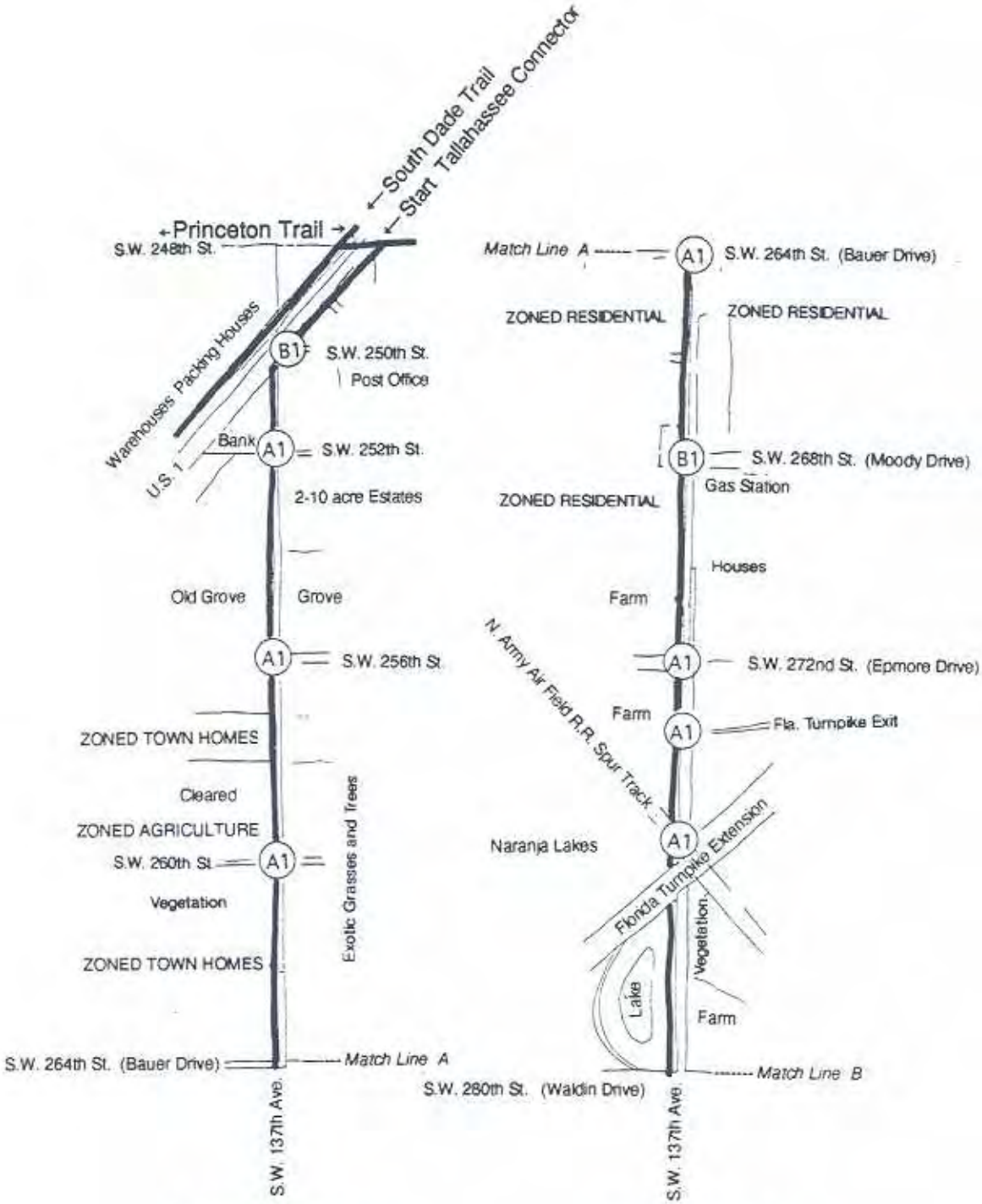
- 3.5 miles from Palm Drive to the Florida Turnpike planned to be developed by the City of Homestead.
- 2.5 miles of R.O.W., approximately 40' wide, must be purchased between U.S. 1 and the Florida Turnpike to complete the Trail.
- An assumption is made that any intersections built during scheduled road improvements, will adhere to the established standards and install SDGN signage.



South Dade Greenway Network - Tallahassee Connector Segment Map

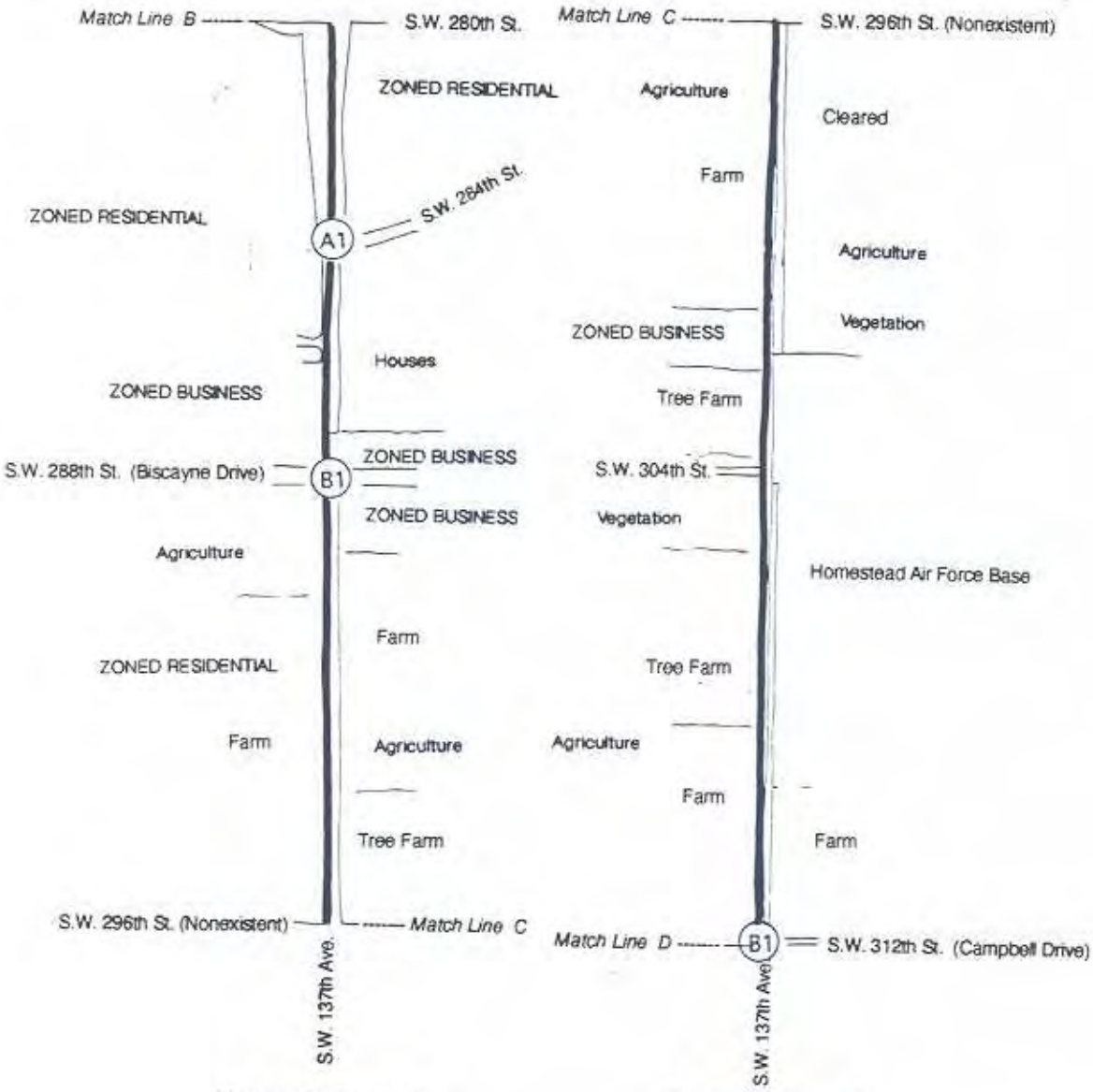
Scale 1" = 4 miles

Map Section Key



South Dade Greenway Network - Tallahassee Connector (Section 1)

Scale 1" = 1000'

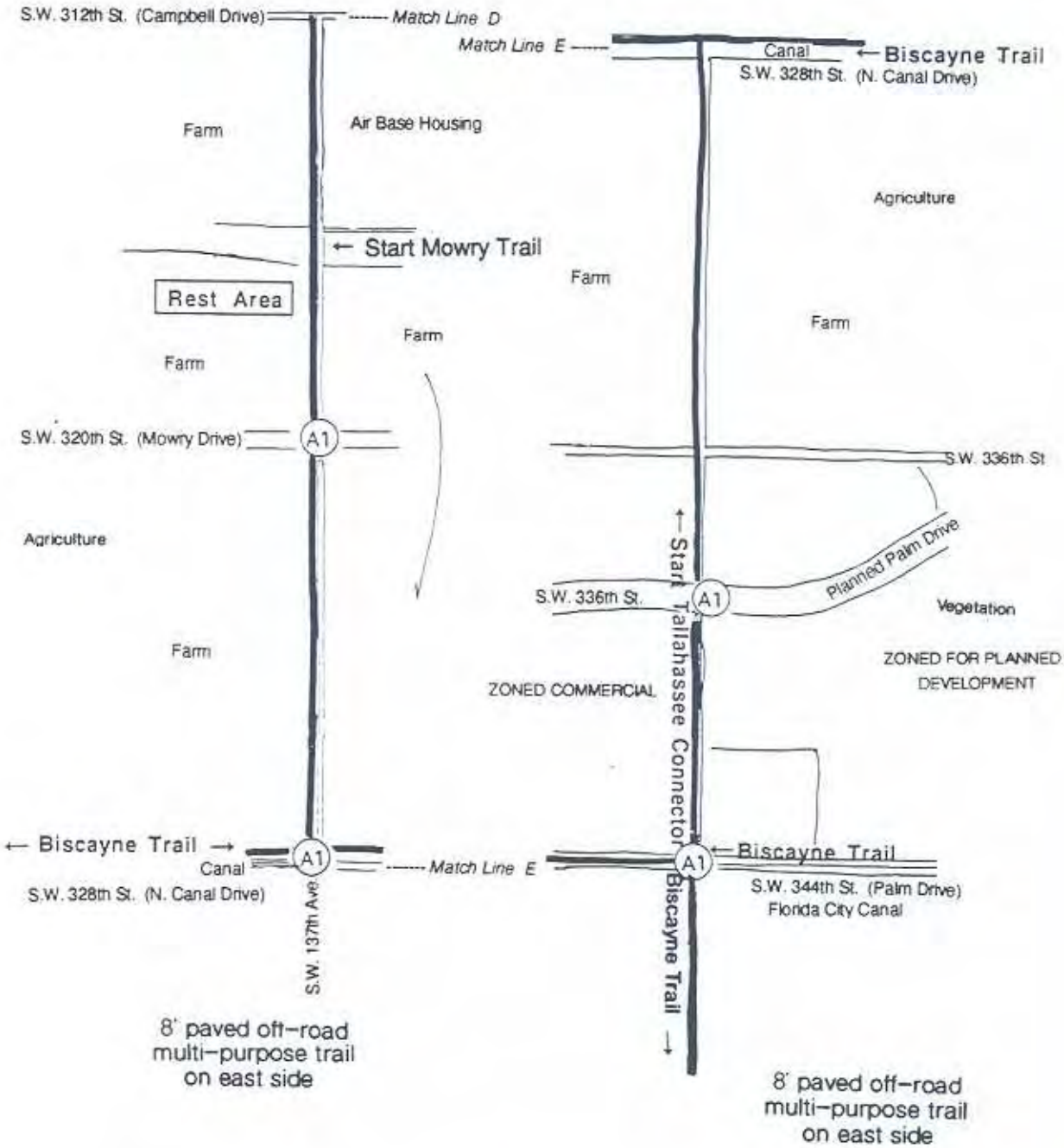


8' paved off-road multi-purpose trail on east side

8' paved off-road multi-purpose trail on east side

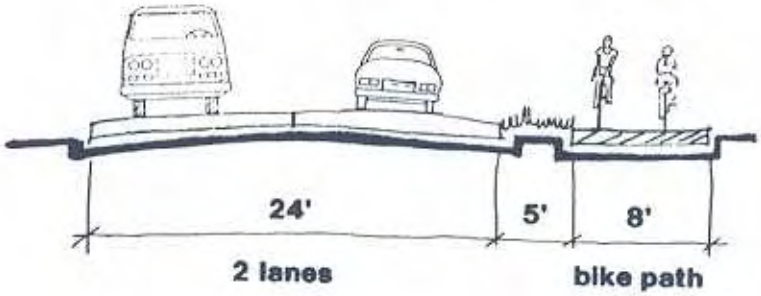
South Dade Greenway Network - Tallahassee Connector (Section 2)

Scale 1" = 1000'



South Dade Greenway Network - Tallahassee Connector (Section 3)

Scale 1" = 1000'

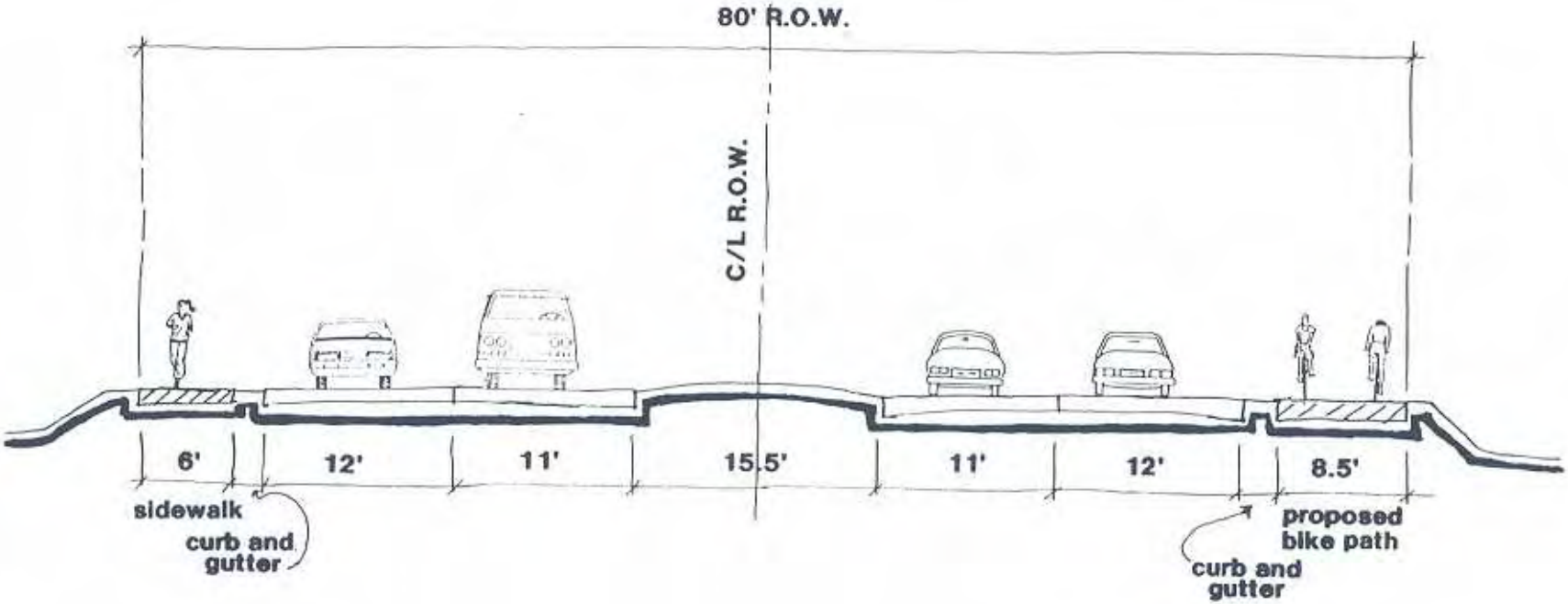


Looking East

TALLAHASSEE CONNECTOR

From U.S. Hwy. 1 to Turnpike

TYPICAL SECTION

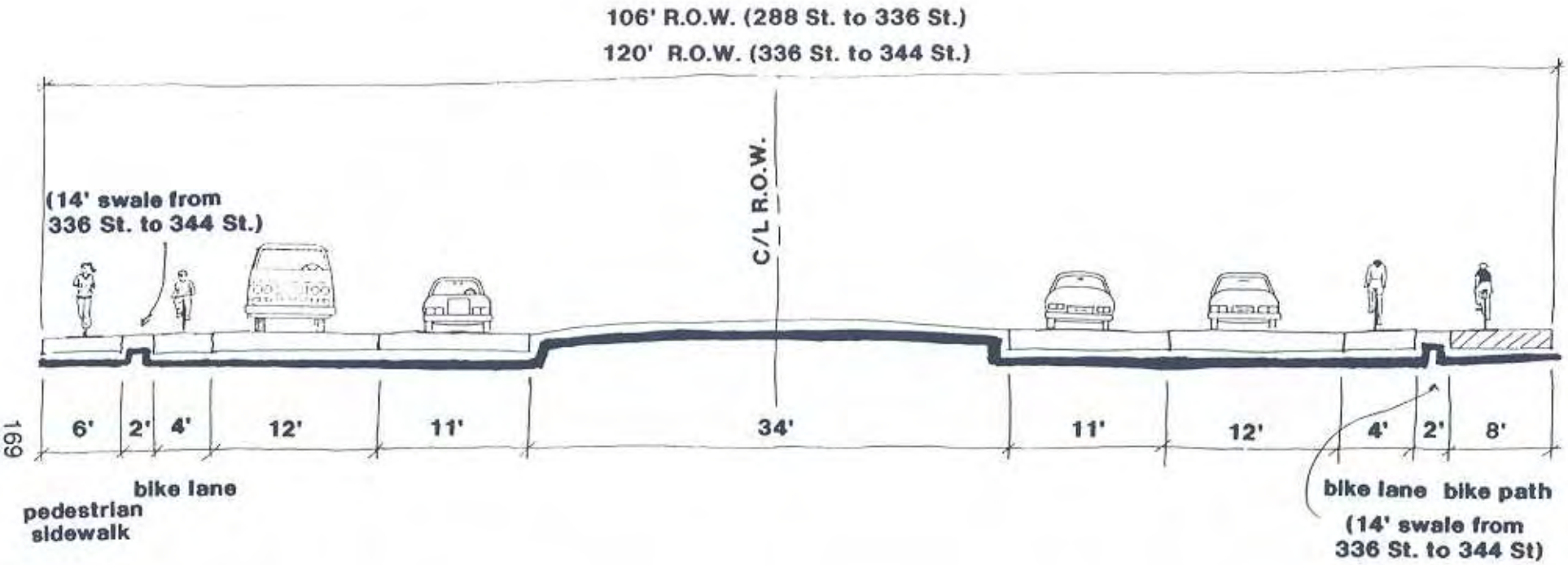


TALLAHASSEE CONNECTOR

S.W. 137 Ave.

between Fla. Turnpike & S.W. 288 St.

TYPICAL SECTION



TALLAHASSEE CONNECTOR

S.W. 137 Ave.

from S.W. 288 St. to 344 St.

TYPICAL SECTION

South Dade Greenway Network

Demonstration Project

Demonstration Project

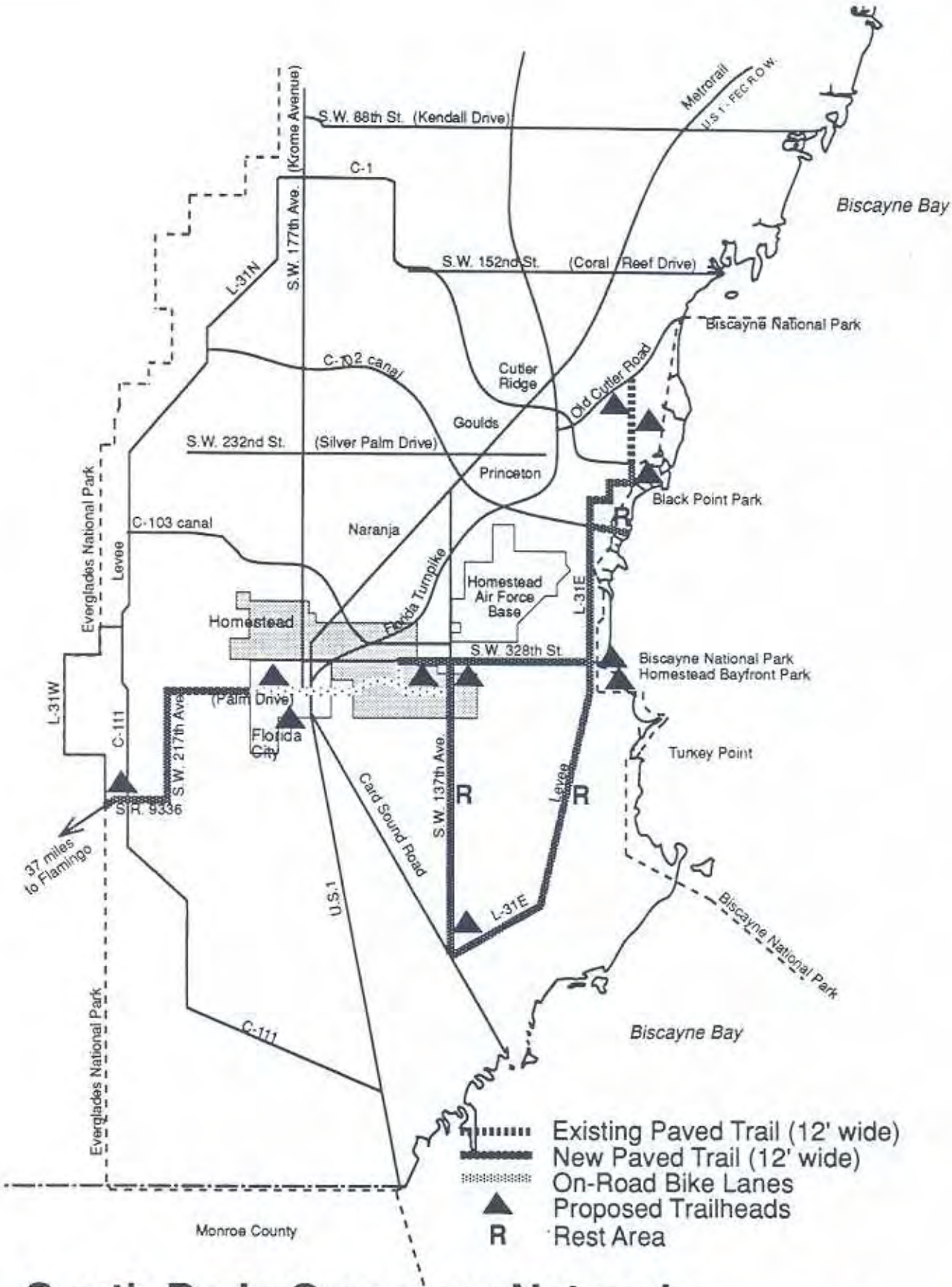
A corridor was selected as a prototype to demonstrate to the community the recreational and ecotourism value of a well-planned and scenic greenway (see Demonstration Project Map).

The Biscayne Trail and a portion of the Everglades Trail were selected for the following reasons:

- Connects two national parks - Biscayne National Park and Everglades National Park.
- Runs through two major Dade County regional parks - Black Point Park and Homestead Bayfront Park.
- Is the most scenic of all the proposed Trails, since the majority of it traverses a beautiful nature preserve with fantastic wildlife viewing opportunities.
- 8 mile portion of North Canal Drive and S.W. 87th Avenue already has a paved, off-road trail.
- Runs through the heart of Florida City and the City of Homestead, including the new Homestead Motorsports Complex and the City's Sports Complex.
- Connects on it's north end, to the existing, and much utilized, Old Cutler Bike Path, which runs north to Coconut Grove and terminates in Key Biscayne.
- The majority of the project could accommodate off-road, 12 foot wide, paved trails
- Provides cyclists with a "loop" trip similar to the highly popular Shark Valley Loop (Everglades National Park - U.S. Highway 41)

The Demonstration Project, when completed, will span 45.9 miles and represent nearly 24% of the entire SDGN.

The total cost for construction of the Project is estimated to be $6,640,949.10 (see Demonstration Project Budget). An ISTEA Grant (Intermodal Surface Transportation Efficiency Act of 1991) for $3,000,000 was submitted to the Metropolitan Planning Organization (MPO), and was the #1 ranked bike/ped project. The ISTEA funds will be available in 1997. Additional sources of funding are now being sought to complete the entire Demonstration Project. SFWMD and MDPW have committed $150,000 and $200,000, respectively, toward the project, which is the required matching portion of the ISTEA grant.



South Dade Greenway Network

Scale 1" = 4 miles

Demostration Project

Demonstration Project Budget

Demonstration project consists of the Biscayne Trail and the paved portions of the Everglades Trail.

Total Costs For:	
Paving	$ 2,698,000.00
Asphalt Resurfacing	211,465.00
Intersections	52,500.00
Rest Areas	72,000.00
Location Maps	12,000.00
Interpretive Signs	7,500.00
Emergency Phones	117,800.00
Observation Towers	22,000.00
Bridge	60,000.00
Trailhead	125,000.00
Landscaping	1,136,200.00
Total Materials and Installation	4,514,465.00
Planning, Design, Engineering & Permit Fees - 15%.	677,169.75
General Contractors Fees - 15% of Construction.	677,169.75
Land Acquisition	168,422.00
Subtotal	6,037,226.50
10 % Contingency	603,722.65
TOTAL Demonstration Project	$ 6,640,949.10

For more detailed information, see individual Trail budgets.

South Dade Greenway Network

Infrastructure & Amenities

Infrastructure & Amenities

This chapter describes the infrastructure and amenities of the ten Trails within the SDGN required to provide for the safety, security, comfort and aesthetic enjoyment of the user. Further details are contained in the chapters on Ten Trails and Budgets.

The following elements are integral parts of the Trail system:

1. The "trails" (paved & unpaved) **
2. Intersections
3. Signage
4. Trailheads
5. Rest Areas/Observation Points
6. Landscaping
7. Telephones
8. Canoe Facilities
9. Equestrian Facilities
10. Fishing
11. Public Art

** Trail with a capital "T" refers to one of the ten distinct corridors of the SDGN. When starting with a small "t," trail means the physical pathway (paved or unpaved) along the corridor.

The design of the first three elements (trails, intersections and signage) are guided by certain nationally accepted standards (AASHTO and MUTCD), and in fact, are required to qualify for most government funding. The remaining elements are not mandated by any codes or national standards, but are essential to the development of a safe, successful system.

The "trails"

While mountain bicycles (wide-tired) can easily travel on the compacted sub-base of many of the existing canal R.O.W.'s, cyclists (especially those owning narrow-tired racing bikes) prefer smooth, level pavements. In-line skating (rollerblading), a fast-growing sport, requires smooth pavements as well. Most joggers also prefer pavement, since they are less likely to turn an ankle on a stable, level surface. All paved trails will meet the requirements of the Americans with Disabilities Act (ADA) to allow for wheelchairs. In addition, well-drained, paved surfaces can be used during and immediately after heavy rainfall, which can render unpaved paths unusable.

Approximately 76% of the trails will be paved with asphalt. Equestrians, on the other hand, need unpaved, well-drained dirt trails. Since the western part of the County is farthest from the highest concentrations of population and since most of the horse stables are located in this area, all portions of the Trails west of Krome Avenue are left unpaved, with the exception of S.R. 9336 to Everglades National Park. In the next decade, future demand may dictate paving, budgets permitting. Horse trails, separate from cyclist/hiker trails, will always remain unpaved.

The American Association of State Highway and Transportation Officials (AASHTO) in their Guide for the Development of Bicycle Facilities, August 1991, published standards for bicycle path construction, dealing with design speeds, widths of pavement, methods of intersection design with auto and pedestrian, etc. All of the off-road paved trails will adhere to AASHTO standards.

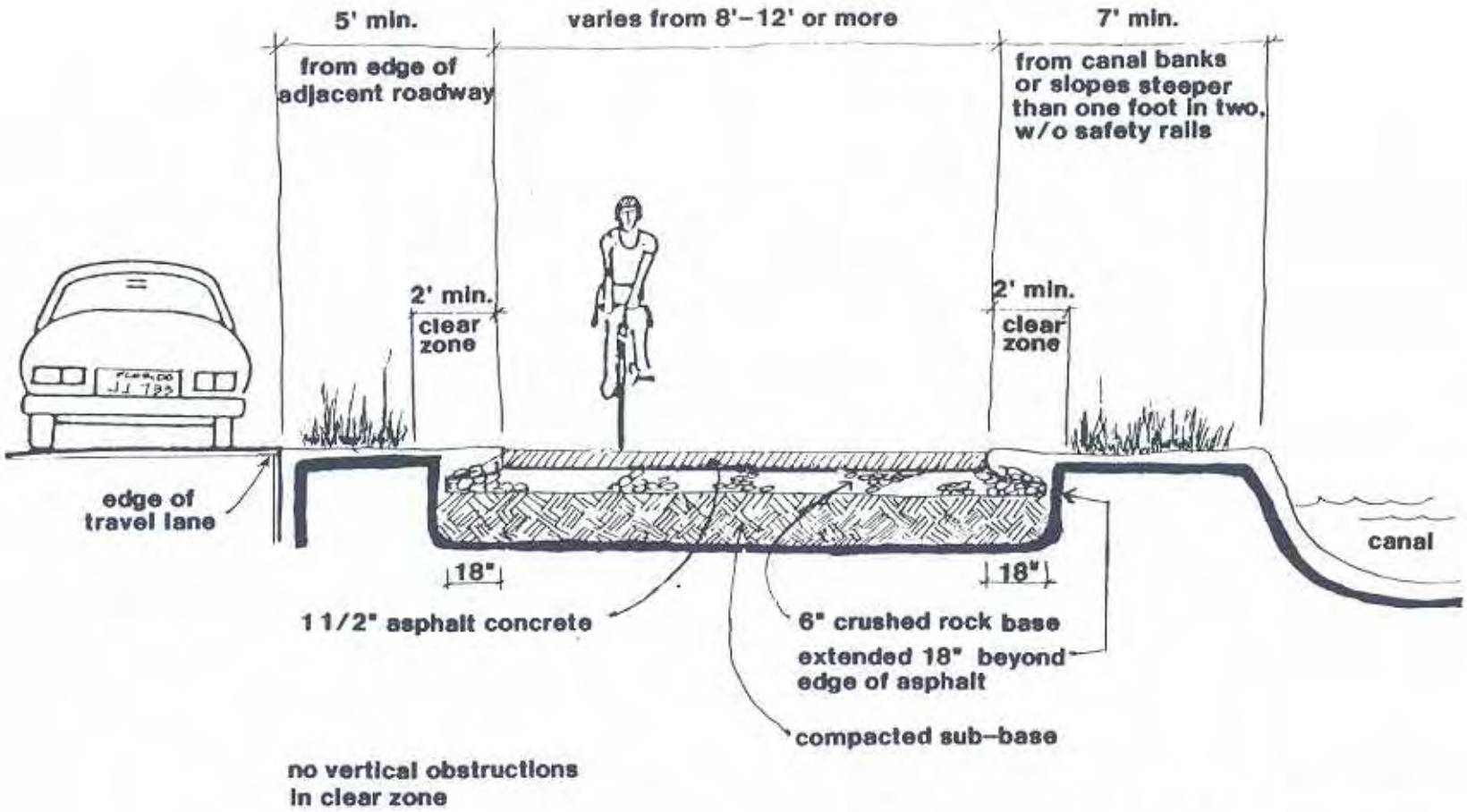
Most of the trails will be multi-purpose pathways for cyclists, rollerbladers and pedestrians, with horse trails being separated from the main trail.

An 8 foot, two-way trail, is the minimum acceptable width based on AASHTO standards, with a 10-12 foot minimum preferred for joint-use trails.

In other heavily populated urbanized areas, trails have been built as much as 20 feet wide, and in many instances, separate paths for cyclists and pedestrians are provided. Because the SDGN has an extensive network of rural and suburban trails in which to disperse users, the plan calls primarily for 12 foot wide trails. In areas where space is limited, or in areas where lower levels of use are anticipated, they are reduced to 8 feet wide.

In some areas, if usage exceeds projections, the trails can be further widened, or a separate pedestrian trail can be installed.

The asphalt trails should be built to withstand not only bicycle and pedestrian loads, but also maintenance vehicles as well. In fact, on the canal R.O.W.'s, very heavy canal dredging equipment occasionally travels the area. We recommend a minimum of 1-1/2 inch asphalt on a 6 inch compacted crushed rock base (see the Construction & Safety Details for Paved Trail - typical section). Recycled rubber tires, ground into small pellets and mixed into the asphalt mix, is now mandated on selected FDOT roadways, and should be used in all trail pavements, for increased longevity and reduced maintenance costs.



CONSTRUCTION & SAFETY DETAILS FOR PAVED TRAIL

based on AASHTO standards

TYPICAL SECTION

Intersections

There are 150 intersections of roads or railroad crossings along the Trails (not including downtown Homestead and Florida City). All must be improved to provide safe crossing for trail users. Improvements needed vary at each intersection and will include one or more of the following:

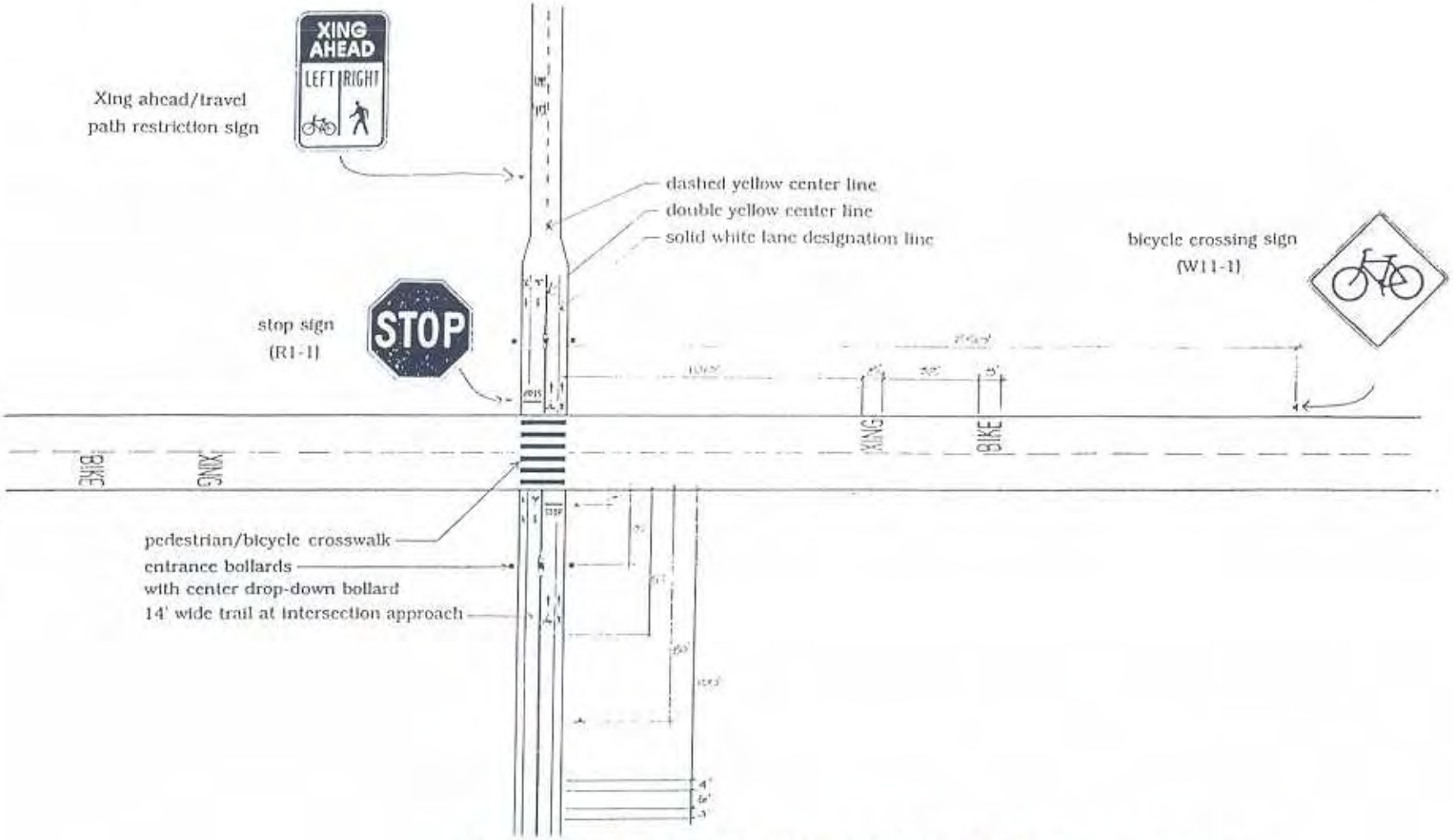
- Signage and markings to warn Trail users and motorists of approaching intersections and define safe methods of crossing. AASHTO and MUTCD standards shall be applied at all crossings. (see Typical Trail/Street Intersection Signage & Markings).
- Improved sight distances
- Regrading to meet ADA handicap ramp requirements (see Canal / Bridge Crossing - typical ramped section).
- Realignment of guardrails along bridges which, in some instances, span the entire length of the canal R.O.W. and impede accessibility.
- Redesign and modification of SFWMD traffic control gates to allow easier access by cyclists, pedestrians, and equestrians, but to still limit unauthorized vehicular access. (see Typical Canal / Road Bridge Crossing - cross-section thru ramped section & plan view)
- Pedestrian crossing lights at heavily traveled roadways. Four Trail crossings at U.S. 1 utilize existing traffic signals. Pedestrian signals are recommended at only three road crossings:

    1. Black Creek Trail and S.W. 177th Ave.
    2. Black Creek Trail and SW 152nd St.
    3. Mowry Trail and S.W. 177th Ave.

    As traffic increases, additional signals may become necessary.

Because of their expense, pedestrian overpasses are not recommended at this time, on any of the Trails. Consideration should be given to building them on Trails crossing U.S.1, especially the Black Creek Trail, if usage warrants in the future.

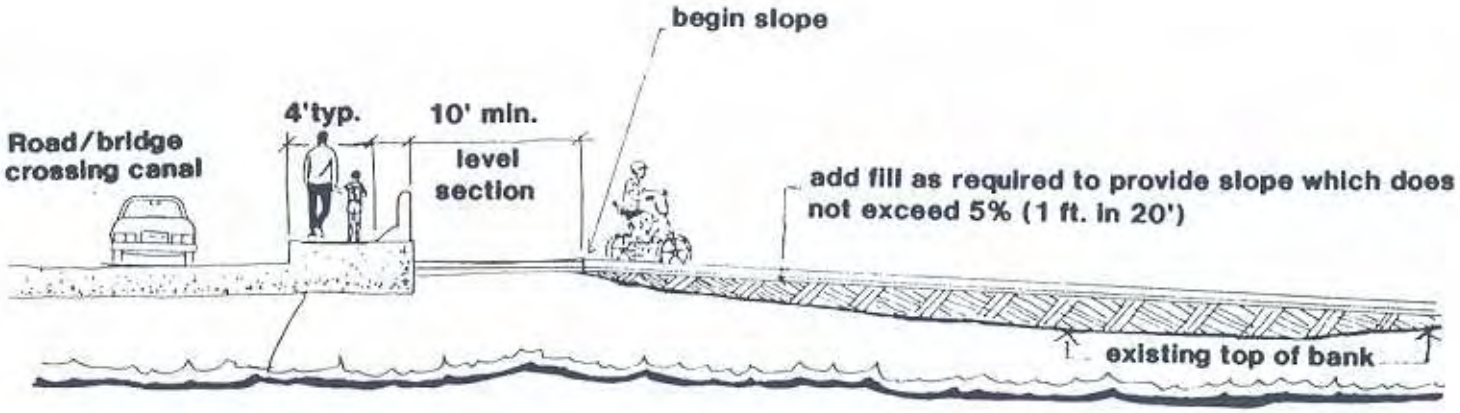
Every intersection was informally evaluated and rated. This analysis was made to generally identify the volume of traffic and the range of modifications required to improve them. Specific intersection improvements must be designed as part of the SDGN Trail engineering plans to meet all safety requirements. (see Intersection Analysis)



TYPICAL TRAIL/STREET INTERSECTION SIGNAGE AND MARKINGS

TYPICAL SECTION

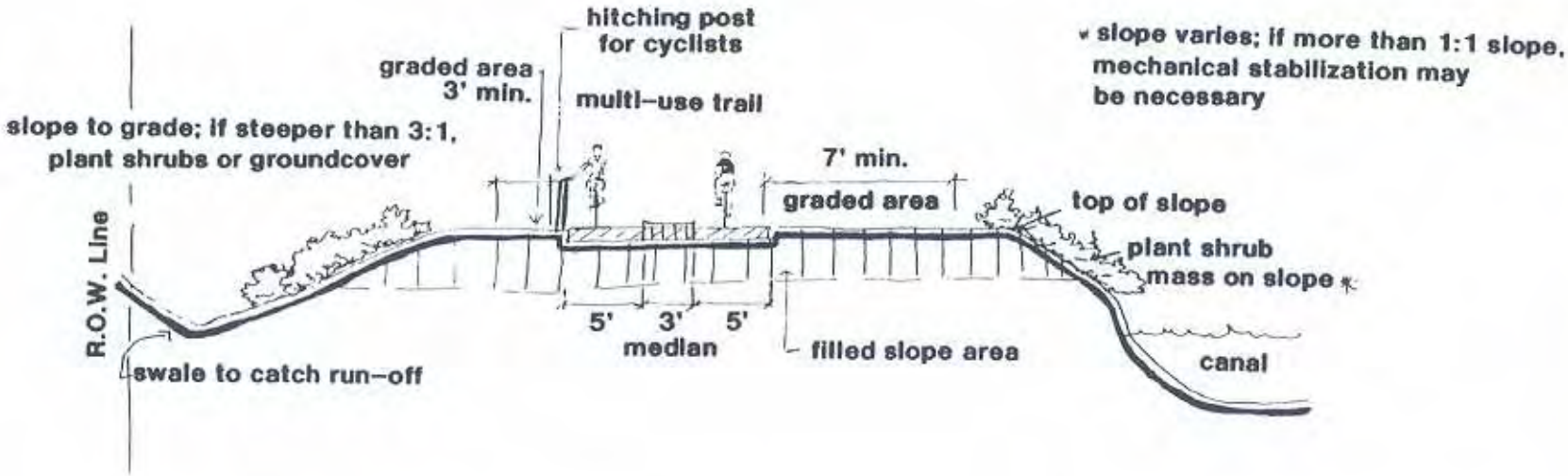
Prepared by: Glatting Jackson Kercher Anglin Lopez Rinehart Inc.
Community Planners



CANAL TRAIL INTERSECTION WITH ROAD BRIDGE

to conform to ADA/AASHTO Standards

TYPICAL RAMPED SECTION



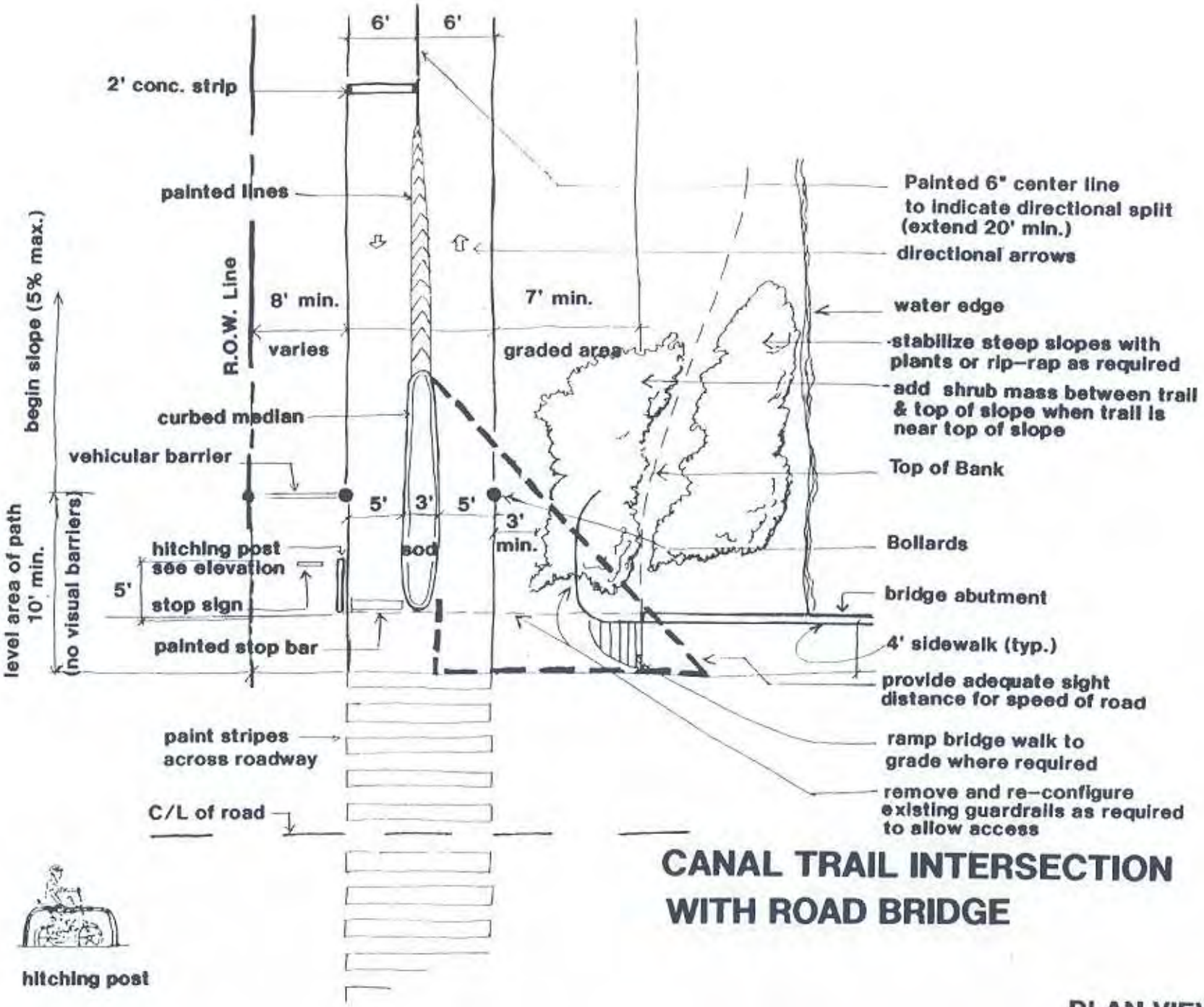
Notes

If minimum graded area shown on canal side cannot be provided, a safety rail or shrubs shall be installed, set a minimum of 3 ft. from edge of bike lane

CANAL TRAIL INTERSECTION WITH ROAD BRIDGE

CROSS SECTION

THRU RAMPED SECTION



CANAL TRAIL INTERSECTION WITH ROAD BRIDGE

PLAN VIEW

Intersection Analysis

Classification:

Traffic Flow
Low = A
Medium = B
Heavy = C

Impediments
None = 1
1-2 = 2
3 or more = 3

^ Indicates that a pedestrian signal is recommended at this intersection

** Indicates that the intersection is shared by two Trails.

Biscayne Trail

Trail Segment & Intersection	Traffic	#of Lanes	Impediments	Classification
S.W. 87 Ave. & S.W. 212 St.	Low	2	None	A1
S.W. 87 Ave. & S.W. 216 St.	Low	2	None	A1
S.W. 87 Ave. & S.W. 232 St.	Low	2	None	A1
S.W. 87 Ave. & S.W. 248 St.	Low	2	None	A1
L-31 E levee & S.W. 328 St.	Medium	2	None	B1
L-31 E levee & S.W. 344 St.	Low	2	None	A1
S.W. 137 Ave. & S.W. 344 St. **	Low	2	None	A1
N. Canal Dr. & S.W. 117 Ave.	Low	2	None	A1
N. Canal Dr. & S.W. 127 Ave.	Low	2	None	A1
N. Canal Dr. & S.W. 137 Ave. **	Low	2	None	A1
N. Canal Dr. & S.W. 147 Ave.	Low	2	None	A1
N. Canal Dr. & S.W. 152 Ave.	Medium	4	None	B1
S.W. 152 Ave. & S.W. 344 St.	Medium	2	None	B1
S.W. 344th St. & S.W. 167th Ave.	Medium	2	None	B1
S.W. 344th St. & U.S. 1 **	Heavy	6	None	C1

Black Creek Trail

Trail Segment & Intersection	Traffic	#of Lanes	Impediments	Classification
C-1 canal & S.W. 177th Ave. ^	High	2	None	C1
C-1 canal & Railroad	Low	-	None	A1
C-1 canal & Railroad	Low	-	None	A1
C-1 canal & S.W. 157th Ave.	Low	2	None	A1
C-1 canal & S.W. 152nd Ave.	Low	2	Slope & Sidewalk	A2
C-1 canal & S.W. 152nd St. ^	Heavy	4	Slope, Hole & Guardrail	C3
C-1 canal & S.W. 160th St.	Low	2	Sidewalk	A2
C-1 canal & Railroad	Low	-	Slope & Tracks	A2
C-1 canal & S.W. 137th Ave.	Low	2	None	A1
C-1 canal & S.W. 184th Ave.	Medium	2	None	B1
C-1 canal & S.W. 200th St.	Medium	2	None	B1
C-1 canal & S.W. 127th Ave.	Low	2	Sight Distance	A2
C-1 canal & U.S. 1	Heavy	6	None	C1
C-1 canal & S.W. 112th Ave.	Medium	4	None	B1
C-1 canal & S.W. 216th St.	Medium	4	Complicated Intersection	B2
C-1 canal & Old Cutler Road	Low	2	None	A1
C-1 canal & S.W. 97th Ave.	Low	2	Slope, & Sight Distance	A2

Intersection Analysis

Princeton Trail

Trail Segment & Intersection	Traffic	#of Lanes	Impediments	Classification
C-102 canal & S.W. 197 Ave.	Low	2	Guardrail	A2
C-102 canal & S.W. 192 St.	Low	2	None	A1
C-102 canal & S.W. 187 Ave.	Low	2	None	A1
C-102 canal & S.W. 177 Ave.	Heavy	2	None	C1
C-102 canal & Railroad	Low	-	Slope & Tracks	A2
C-102 canal & S.W. 200 St.	Medium	2	None	B1
C-102 canal & S.W. 147 Ave.	Low	2	None	A1
C-102 canal & S.W. 216 St.	Medium	2	None	B1
C-102 canal & S.W. 232 St.	Low	2	None	A1
C-102 canal & S.W. 244 St.	Low	2	None	A1
S.W. 248 St. & U.S. 1	Heavy	6	None	C1
C-102 canal & S.W. 256 St.	Low	2	None	A1
C-102 canal & S.W. 125 Ave.	Low	2	Guardrail & Curb	A2
C-102 canal & S.W. 112 Ave.	Medium	4	Guardrail & Hole	B2
C-102 canal & S.W. 107 Ave.	Low	2	None	A1

Mowry Trail

Trail Segment & Intersection	Traffic	#of Lanes	Impediments	Classification
C-103 canal & S.W. 217 Ave.	Low	2	Slope, Curb & Drain	A2
C-103 canal & S.W. 202 Ave.	Low	2	Guardrail	A2
C-103 canal & S.W. 197 Ave.	Low	2	Guardrail	A2
C-103 canal & S.W. 272 St.	Low	2	Curb & Drain	A2
C-103 canal & S.W. 187 Ave.	Low	2	Guardrail, Curb & Drain	A2
C-103 canal & Railroad	Low	-	Slope, Tracks & Hole	A3
C-103 canal & S.W. 182 Ave.	Low	2	Slope, Curb & Drain	A2
C-103 canal & S.W. 177 Ave. ^	Heavy	2	Guardrail	C2
C-103 canal & S.W. 172 Ave.	Low	2	Slope, Curb & Drain	A2
C-103 canal & S.W. 288 St.	Low	2	Curb & Drain	A2
C-103 canal & S.W. 167 Ave.	Low	2	Drain	A2
C-103 canal & Old Dixie Hwy	Medium	2	None	B1
S.W. 296 St. & U.S. 1	Heavy	6	None	C1
C-103 canal & S.W. 312 St.	Medium	2	None	B1
C-103 canal & S.W. 152 Ave.	Medium	4	Slope & Guardrail	B2
C-103 canal & S.W. 147 Ave.	Low	2	Curb & Drain	A2
C-103 canal & S.W. 137 Ave.	Low	2	Slope	A2

Intersection Analysis

Everglades Trail - *Does not include downtown Florida City*

Trail Segment & Intersection	Traffic	#of Lanes	Impediments	Classification
L-31N levee & S.W. 160 St.	Low	2	None	A1
L-31N levee & S.W. 280 St.	Low	2	None	A1
L-31W levee & S.R. 9336	Medium	2	None	B1
S.R. 9336 & S.W. 217 Ave.	Low	2	None	A1
S.W. 217 Ave. & S.W. 344 St.	Low	2	None	A1
S.W. 344 St. & S.W. 202 Ave.	Low	2	None	A1
S.W. 344 St. & S.W. 197 Ave.	Low	2	None	A1
S.W. 344 St. & S.W. 192 Ave.	Medium	2	None	B1
S.W. 344 St. & S.W. 187 Ave.	Medium	2	None	B1
S.W. 344th St. & U.S. 1 **	Heavy	6	None	C1

Keys Trail

Trail Segment & Intersection	Traffic	#of Lanes	Impediments	Classification
U.S. 1 & None	-	-	-	-
Card Sound Road & None	-	-	-	-

Krome Trail - *Does not include downtown Homestead & Florida City*

Trail Segment & Intersection	Traffic	#of Lanes	Impediments	Classification
S.W. 177 Ave. & S.W. 136 St.	Low	2	None	A1
S.W. 177 Ave. & S.W. 160 St.	Low	2	None	A1
S.W. 177 Ave. & S.W. 168 St.	Low	2	None	A1
S.W. 177 Ave. & S.W. 184 St.	Low	2	None	A1
S.W. 177 Ave. & S.W. 192 St.	Low	2	None	A1
S.W. 177 Ave. & S.W. 200 St.	Medium	2	None	B1
S.W. 177 Ave. & S.W. 216 St.	Low	2	None	A1
S.W. 177 Ave. & Railroad	Low	-	None	A1
S.W. 177 Ave. & S.W. 232 St.	Low	2	None	A1
S.W. 177 Ave. & S.W. 248 St.	Medium	2	None	B1
S.W. 177 Ave. & S.W. 256 St.	Low	2	None	A1
S.W. 177 Ave. & S.W. 264 St.	Low	2	None	A1
S.W. 177 Ave. & S.W. 267 St.	Low	2	None	A1
S.W. 177 Ave. & S.W. 268 St.	Low	2	None	A1
S.W. 177 Ave. & S.W. 272 St.	Low	2	None	A1
S.W. 177 Ave. & S.W. 280 St.	Low	2	None	A1
S.W. 177 Ave. & S.W. 288 St.	Medium	2	None	B1
S.W. 177 Ave. & S.W. 296 St.	Medium	2	None	B1

Intersection Analysis

South Dade Trail

Phase 1

Trail Segment & Intersection	Traffic	#of Lanes	Impediments	Classification
F.E.C. R.O.W & S.W. 98 St.	Low	2	None	A1
F.E.C. R.O.W & S.W. 104 St.	Medium	3	None	B1
F.E.C. R.O.W & S.W. 112 St.	Medium	3	None	B1
F.E.C. R.O.W & S.W. 120 St.	Low	2	None	A1
F.E.C. R.O.W & S.W. 124 St.	Low	2	None	A1
F.E.C. R.O.W & S.W. 128 St.	Low	2	None	A1
F.E.C. R.O.W & S.W. 132 St.	Heavy	3	None	C1
F.E.C. R.O.W & S.W. 136 St.	Heavy	6	None	C1
F.E.C. R.O.W & S.W. 144 St.	Low	2	None	A1
F.E.C. R.O.W & S.W. 152 St.	Heavy	6	None	C1
F.E.C. R.O.W & S.W. 164 St.	Medium	4	None	B1
F.E.C. R.O.W & S.W. 168 St.	Low	2	None	A1
F.E.C. R.O.W & S.W. 170 St.	Low	2	None	A1
F.E.C. R.O.W & Banya St.	Low	2	None	A1
F.E.C. R.O.W & W. Evergreen St.	Low	2	None	A1
F.E.C. R.O.W & Hibiscus St.	Low	2	None	A1
F.E.C. R.O.W & W. Indigo St.	Low	2	None	A1
F.E.C. R.O.W & W. Jessamine St.	Low	2	None	A1
F.E.C. R.O.W & S.W. 184 St.	Heavy	5	None	C1
F.E.C. R.O.W & S.W. 186 St.	Medium	3	None	B1
F.E.C. R.O.W & S.W. 107 Ave.	Heavy	4	None	C1
F.E.C. R.O.W & S.W. 200 St.	Heavy	4	None	C1

Phase 2

Trail Segment & Intersection	Traffic	#of Lanes	Impediments	Classification
F.E.C. R.O.W & S.W. 113 Ave.	Low	2	None	A1
F.E.C. R.O.W & S.W. 117 Ave.	Medium	4	None	B1
F.E.C. R.O.W & S.W. 216 St.	Medium	2	None	B1
F.E.C. R.O.W & S.W. 220 St.	Low	2	None	A1
F.E.C. R.O.W & S.W. 224 St.	Low	2	None	A1
F.E.C. R.O.W & S.W. 232 St.	Low	2	None	A1
F.E.C. R.O.W & S.W. 132 Ave.	Low	2	None	A1
F.E.C. R.O.W & S.W. 244 St.	Low	2	None	A1
F.E.C. R.O.W & S.W. 248 St.	Medium	2	None	B1
F.E.C. R.O.W & S.W. 252 St.	Low	2	None	A1
F.E.C. R.O.W & S.W. 139Ave.	Low	2	None	A1
F.E.C. R.O.W & S.W. 264 St.	Low	2	None	A1
F.E.C. R.O.W & S.W. 147 Ave.	Low	2	None	A1
F.E.C. R.O.W & S.W. 272 St.	Medium	2	None	B1
F.E.C. R.O.W & S.W. 280 St.	Low	2	None	A1
F.E.C. R.O.W & S.W. 288 St.	Heavy	5	None	C1
F.E.C. R.O.W & S.W. 162 Ave.	Low	2	None	A1
F.E.C. R.O.W & S.W. 296 St.	Heavy	5	None	C1
F.E.C. R.O.W & S.W. 304 St.	Medium	3	None	B1
F.E.C. R.O.W & S.W. 312 St.	Heavy	6	None	C1
F.E.C. R.O.W & S.W.177Ave.	Medium	2	None	B1
F.E.C. R.O.W & S.W. 328 St.	Medium	2	None	B1
F.E.C. R.O.W & S.W. 344 St.	Medium	4	None	B1

Intersection Analysis

Southern Glades Trail

Trail Segment & Intersection	Traffic	#of Lanes	Impediments	Classification
C-111 canal & None	-	-	-	-

Tallahasse Connector

Trail Segment & Intersection	Traffic	#of Lanes	Impediments	Classification
S.W. 137 Ave & S.W. 250 St.	Medium	2	None	B1
S.W. 137 Ave & S.W. 252 St.	Low	2	None	A1
S.W. 137 Ave & S.W. 256 St.	Low	2	None	A1
S.W. 137 Ave & S.W. 260 St.	Low	2	None	A1
S.W. 137 Ave & S.W. 264 St.	Low	2	None	A1
S.W. 137 Ave & S.W. 268 St.	Medium	4	None	B1
S.W. 137 Ave & S.W. 272 St.	Low	2	None	A1
S.W. 137 Ave & Trnpk Exit	Low	2	None	A1
S.W. 137 Ave & Railroad	Low	-	None	A1
S.W. 137 Ave & Trnpk Exit	Low	2	None	A1
S.W. 137 Ave & S.W. 288 St.	Medium	4	None	B1
S.W. 137 Ave & S.W. 312 St.	Medium	4	None	B1
S.W. 137 Ave & S.W. 320 St.	Low	2	None	A1
S.W. 137 Ave & S.W. 328 St. **	Low	2	None	A1
S.W. 137 Ave & S.W. 336 St.	Low	2	None	A1
S.W. 137 Ave & S.W. 344 St. **	Low	2	None	A1

Signage

A key element contributing to the enjoyment and safe use of Trails is proper signage. There are three basic types of signs proposed for the SDGN.

- Informational, Safety & Directional Signage
- Location Maps
- Interpretive Signs

Informational, Safety & Directional Signs

- Informational and Safety signage functions in the same way as that located on roadways. They identify approaching intersections of trails and roadways or railroad crossings; establish speed limits (yes, even bicycle speeds are regulated). Signs, along with markings on the trail surface, clarify the proper alignment of cyclists and pedestrians on the multi-purpose trails. Signs also list the types of activities permitted and not permitted, as well as trail etiquette. The "Manual on Uniform Traffic Control Devices (MUTCD)" provides traffic control standards for safety markings and signage at intersections. AASHTO also has standards. The signage on the SDGN will meet both guidelines (see Typical Trail / Street Intersection - Signage and Markings - typical section). Mile Markers should be installed at appropriate locations.

- Directional signs will be placed at the intersection of trails and roadways, at the intersection of two Trails, and to indicate to Trail users nearby community assets. Directional signs will identify each Trail by name.

Location Maps

- These maps will act much like other transit system maps, identifying the entire SDGN and it's ten Trails, key streets, community assets, lengths of Trail segments between key points, which trails are paved and unpaved and "you are here" reference points. These will help users find their way, plan the length and direction of their trip, and be informed about points of interest along the way. These signs will be placed at Trail intersections, at Trailheads and rest areas.

Interpretive Signs

- Each Trail segment has unique physical and cultural characteristics. Some pass through natural habitats or agricultural areas that are unique to Dade County. To better appreciate these special areas, interpretive signs will describe what the visitor is viewing in an informative manner.

Trailheads (see Trailhead Matrix)

There are 16 Trailheads specifically proposed along the SDGN. These are sites to which users can drive to, to begin their Trail trip and where basic services such as rest rooms, shelters, water fountains, telephones and opportunities to purchase refreshments are provided. Nearby public parks and facilities, retail centers and tourist attractions can also provide these services, Although not designated as a Trailhead.

Due to the suburban/rural locations of the majority of the Trails, a large percentage of Trail users are expected to drive their cars, to begin their trip on the SDGN. Hopefully many will come by Metrorail. A significant number of users will travel in groups. It is not unusual for groups of 20 or more cyclists (members of a club, etc.) to gather and ride together. Thus, sufficient parking at the Trailheads is critical to allow maximum utilization of the SDGN.

With nearly 200 miles of trails which are accessible from over 150 road intersections and 11 public parks abutting the Trails, it would be difficult to determine with any certainty, where users would choose to enter or exit the system, or how many would congregate at a particular location to begin their trip. As the system develops and user patterns emerge, a better determination of parking and Trailhead needs can be made.

Overall, with only two exceptions, sufficient Trailheads are available near the Trails. Along most of the Trails abutting roadways, there are many retail centers and individual establishments that can also serve as Trailheads. Nearby commercial centers that wish to offer services to Trail users can be included in the list. In other communities, businesses have built extended trails from the public Trails to their stores or centers; and in some instances, have relocated to be closer to the Trail. We can expect the same in Dade County.

Of the 16 Trailheads designated, 10 are at publicly owned areas and 6 are at privately-owned facilities (i.e. shopping centers). All are located directly adjacent to or nearby a Trail.

The construction of only two Trailheads is recommended. One, the Card Sound Trailhead, is proposed on the Biscayne Trail at the intersection of Card South Road. It is the midpoint of an 18.5 mile loop (L-31E levee to Card Sound Road and back along SW 137th Avenue to Palm Avenue) through an isolated wilderness area, with no facilities for miles around. This should be completed when the Biscayne Trail is opened for use. The second, the Krome Trailhead, at the intersection of the Krome and Black Creek Trails is proposed for the same reason. There are no nearby facilities which can serve as Trailheads. This one, however, could be built when sufficient R.O.W. is available, and usage of the trail indicates it's need.

The Card Sound site is only partially filled above the surrounding low-lying area, and will require additional filling of wetlands. Environmental permitting and mitigation will be required. Because there are no nearby water and sewer lines at both sites, chemical or composting toilets will have to be utilized, and drinking water will have to be trucked-in. Electric service, is available at both locations, although a transformer will be required. Coordination with the City of Homestead and Florida City will be required to open the Homestead Sports Complex, Homestead Motorsports Complex and the Florida City's City Hall as Trailheads. At Glenn Garrett Park, the SFWMD would have to add a rest room pavilion and telephone to serve fully as a Trailhead.

South Dade Greenway Network Trailhead Matrix

Proposed Trailheads	Trails Served									
	Biscayne Trail	Black Creek Trail	Princeton Trail	Mowry Trail	Everglades Trail	Keys Trail	Krome Trail	South Dade Trail	Southern Glades Trail	Tallahassee Connector
Black Point Park 24775 S.W. 87th Ave	X	X								
Biscayne National Park 9700 S.W. 328th St.	X									
Card Sound (new construction) Juncture of L-31E & S.W. 137th Ave.	X					X				
Centennial Middle School 8601 S.W. 212th St.	X									
Coffey's Country Store 20090 S.W 177th Ave.			X				X			
Cutler Ridge Mall 20505 S. Dixie Highway (U.S. 1)		X						X		
Dadeland Metrorail Station Dadeland Blvd. and U.S. 1								X		
Florida City - City Hall 404 W. Palm Dr.	X				X	X	X	X		
Glenn Garrett Park western terminus of S.R.1					X				X	
Hammocks Shopping Center 10201 Hammocks Blvd.		X								
Homestead Bayfront Park 9698 S.W. 328th St.	X									
Homestead Sports Complex Palm Dr. and S.W. 152nd Ave.	X			X						X
Homestead Motorsports Complex Palm Dr. and S.W. 137th Ave.	X			X						X
Krome (new Construction) Intersection of Krome Trail & Black Creek Trail		X					X			
Old Cutler Town Center 20443 Old Cutler Rd.	X									
Tropical Everglades Visitor Association 160 U.S. Highway 1	X				X	X	X	X		

Rest Areas and Observation Points (see Trail Segment Maps)

Rest areas should be provided at approximately 3 to 5 mile intervals, a comfortable distance for cyclists to cover in 15 to 25 minutes. The plan proposes 20 rest areas. Since most of the roadway Trails run through urbanized areas, with nearby shopping centers or parks, the user can stop there. The South Dade Trail has bus benches at each major intersection, which can serve the cyclist. Rest areas are however, proposed on the Key's Trail, which is far from any services. They should also be located adjacent to unique natural or man-made features along the Trail.

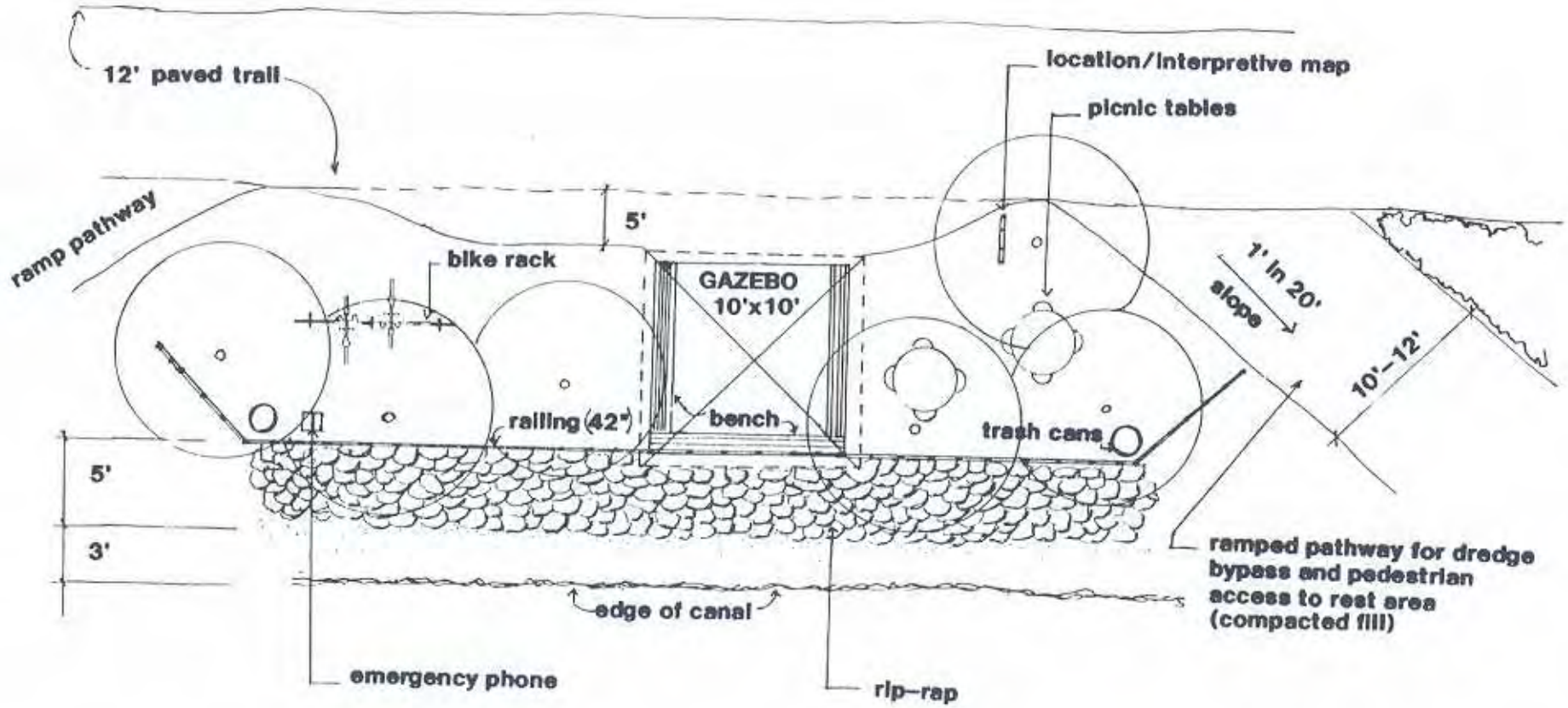
Recommended features at rest areas would include a minimal shelter, bike racks, hitching post for equestrian trails, benches, picnic tables, trash receptacles and emergency phones.

Elevated observation platforms could be built at prime natural areas. Any elevated area offering long vistas, are greatly appreciated by Floridians and visitors. These are ideal locations for educational/interpretive programs by trained guides. Shelters, benches and picnic tables should be constructed of concrete or other non-combustible, or recycled materials to resist vandalism and weathering.

The Typical Rest Area (plan view) depicts a rest area that is the minimal functional size. This design was developed for the most restrictive R.O.W., which is located along the L-31E levee. Here, the elevated berm on which the trail is placed is very narrow. On the east side of the berm is wetland, either mangrove or marsh habitat. Therefore, the rest area must be located on the west side of the berm, placing fill on the existing lower bank. The Design of these rest areas must provide access for dredges operated by SFWMD to maintain the canals.

On the Keys Trail (U.S. 1 and Card Sound Road), permission to fill into the wetlands would be required to create rest areas.

On the other canal R.O.W.'s, there is ample space for larger rest areas.



BISCAYNE TRAIL
TYPICAL REST AREA

Along L-31E Levee on west side of trail

PLAN VIEW

Landscaping

Some Trails pass through beautiful natural environments with "natural" landscaping. Others run adjacent to residential areas with landscaped yards, and next to groves, which offer a landscaped view. But most of the Trail R.O.W.'s have no vegetation except grasses, or in many instances, bare compacted soil; which provide no areas of shade or landscape interest within the R.O.W.

Thus, landscaping should be considered a necessary amenity to make the Trails more comfortable and interesting, and hence, more usable and attractive. The goal should be to create long stretches of tree-shaded Trails, and to eliminate large areas of grass by introducing native grasses and wildflowers, thus reducing maintenance costs while adding beauty. Because of the many miles of Trails to be landscaped, the amount and intensity of planting must be carefully planned to maximize impact within reasonable budget constraints. Not only initial costs, but long-term maintenance costs must also be considered. The proposed budgets for landscaping the Trails are the absolute minimum, and would need further supplementation to satisfy the desired goal.

The main emphasis in landscaping initially should be to provide:

- Areas of shade where users can stop to rest. In our hot summers, lack of shade would discourage use of the Trails. Conversely, well shaded Trails will encourage use.
- Screening of unsightly views or privacy screening. In places, the Trails pass unattractive industrial or commercial sites that should be screened from view. In other areas, adjacent residents, farmers, etc., it may be desirable privacy screening along the Trail.
- Creating safety barriers and erosion control on steep banks. Where the trail must come very close to steep slopes, canal banks, or other areas of potential danger, shrub masses can help to keep the user away. On steep, eroding banks and slopes, native grasses and shrubs can stabilize the soil and break falls.
- Utilize landscaping to help separate cyclists and pedestrians from horse trails.

In most of the Trail R.O.W.'s, there are severe constraints to providing these "shaded lanes." On Trails running along road R.O.W.'s, safety factors limit where trees can be planted. Depending on the design speed of the roadway, the setback from the road edge for tree planting varies from a minimum of 4 feet, from the edge of concrete curbs, to 8-24 feet where there are no curbs. In some instances, the R.O.W. width is not sufficient to provide for both trees and the trail. Landscaping must be coordinated with and approved by the Florida Department of Transportation, District VI (FDOT) on state roads, and Metropolitan Dade County Public Works Department on local roads.

Along canal banks, the South Florida Water Management District (SFWMD), has established guidelines for landscaping. Trees which can fall into the canals during high winds (hurricanes) and impede the water flow, are discouraged. Also, travel lanes must be provided for maintenance vehicles and especially for large dredges which must move along the edge of canal banks to clean debris out of the water. (see Typical Canal Bank Landscaping - Plan View and Re-vegetation Alternatives on Canal R.O.W.'s - Typical Section)

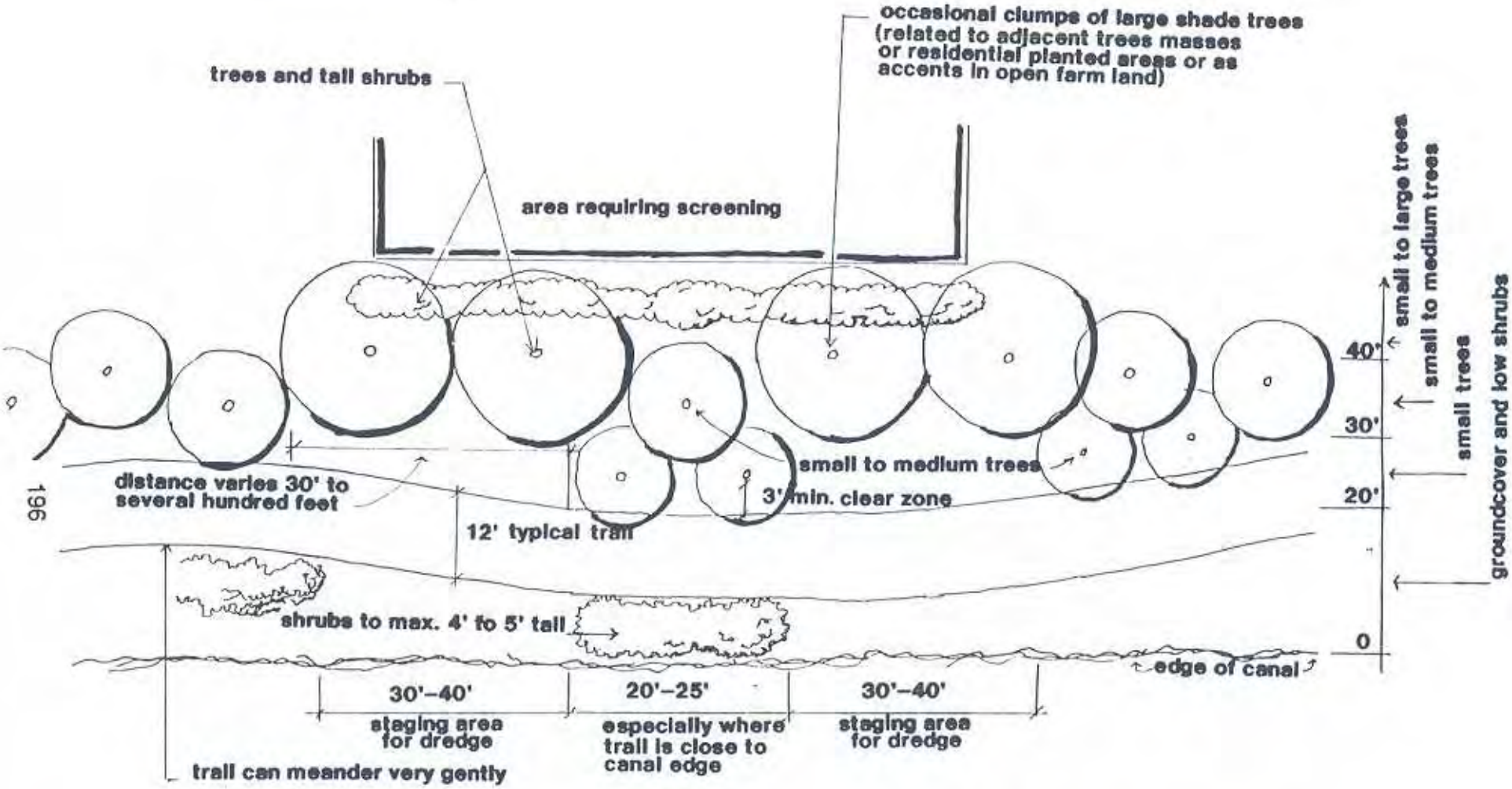
The selection of plant species should relate to the types of vegetation found adjacent to the Trail R.O.W.'s. For instance, for sections of Trails located in suburban areas, a mixture of exotic and native species can be used, with an emphasis on flowering trees. Design of the planting should relate to the adjacent community and "fit in." For instance, a wild, natural look might not be acceptable to adjacent homeowners whose lawns are manicured. In natural preserves (i.e. along the L-31-E levee) planting should be limited to those species native to the surrounding habitat. Plant massing should appear "natural" to blend in.

In every case, the landscaping must adhere to xeric principles, since no irrigation systems will be installed.

Where possible, wild flowers, small herbaceous shrubs, and native grasses should be planted, or encouraged to seed in, thus reducing the need for frequent mowing and to enhance the visual interest. In most instances, soil amendments to the existing rocky soil will be needed to encourage such growth. Less frequent mowing, with blades set higher, can allow the wildflowers, etc., to grow, while discouraging the intrusion of Brazil Pepper and other taller obnoxious exotics.

Trees with surface or invasive roots, brittle wood, messy fruit, thorns or poisonous parts, must be avoided. Selective eradication of invasive exotic species (Brazil Pepper and Australian Pine) should be part of the on-going landscape maintenance.

Tree planting programs are a popular citizen volunteer activity that can be fostered to enhance the initial landscaping on the Trails.



TYPICAL CANAL BANK LANDSCAPING

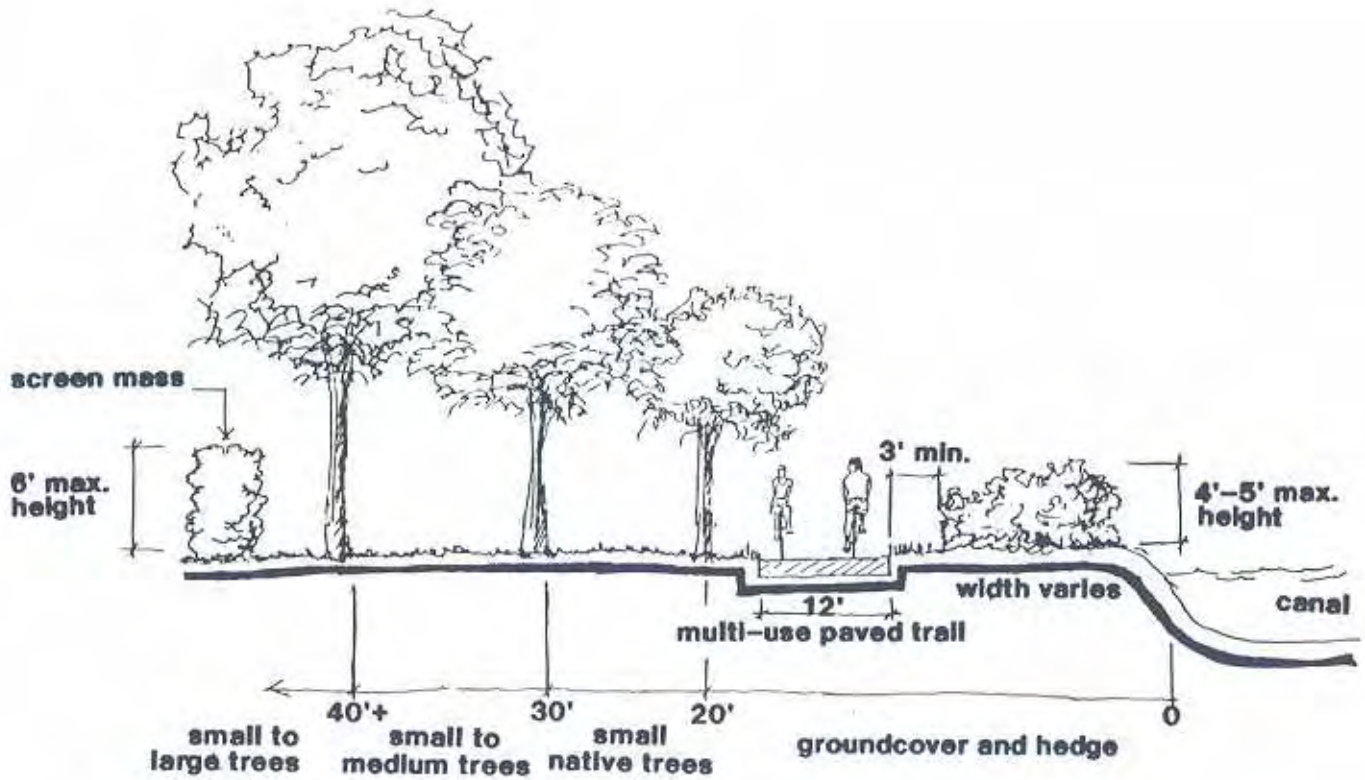
Notes

Small Trees up to 12'–15' tall, small caliper trunks

Medium Trees up to 25' tall

Large Trees 25' or more

PLAN VIEW



REVEGETATION ALTERNATIVES ON CANAL R.O.W.'s

TYPICAL SECTION

Telephones

To enhance the feeling of security and add to the safety of users, emergency telephones should be installed, with priority on those Trails that traverse isolated stretches of R.O.W. where no nearby pay phones are available. In these isolated areas, the plans call for spacing emergency phones no more than 3 miles apart, generally coinciding with rest areas. This is about a 15 minute bike or horse ride between phones. We have assumed that pedestrian use of these isolated trails would be minimal. In areas frequented by pedestrians or rollerbladers, telephones must be available within 15 minutes travel time (or one mile) along the trail.

The Trails where emergency phones are budgeted are the Biscayne Trail (at L-31E Levee, S.W. 137th Avenue, North Canal Drive); Everglades Trail (L-31W Levee, S.R. 9336, S.W. 217th Avenue); Keys Trail (U.S.1 and Card Sound Road); the western portions of the Black Creek Trail; Princeton and Mowry Trails; and a stretch of the Krome Trail between Kendall Drive and Eureka Drive.

Emergency phones are not budgeted along Trails that run along roadways fronting retail areas (South Dade Trail, portions of the Biscayne Trail, Everglades Trail, Krome Trail and the Tallahassee Connector). Pay telephones are needed at Trailheads for the convenience of users.

Canoe Facilities (See Equestrian/Canoe Trail Map)

Approximately 44 miles of canoe trails are proposed along Trails fronting canals. Lack of convenient access to these canals has limited usage to date. Access must include gently sloping ramps, and equally as important, parking adjacent to the ramps, so that users can portage their canoes to the launch site. Lack of sufficient space for parking on the canal R.O.W.'s is one of the most limiting factors. Another is the lack of intrinsic visual interest along the canal banks. Some canals, with fairly high, barren banks running through open farm land, with limited opportunities for pulling off onto land to rest, are not prime locations for canoeing.

Another limiting factor to the use of the canals is the location of control structures near what might otherwise be good launching areas. For safety, canoes are not permitted within 200 feet of control structures, since sudden rushes of water when they automatically open, can pull a canoe into the structure. An existing ramp on the Black Creek canal at the S-140 Control Structure should be relocated further from the structure. The location of ramps must be carefully assessed to allow for long-enough stretches of canoeing between structures to encourage use. The Equestrian / Canoe Trail Map shows the location of the prime canoe trails and proposed ramps. At these locations, parking must be provided.

The canal along the Biscayne Trail (L-31E), especially south of Homestead Bayfront Park, runs through a beautiful natural environment, with low banks which afford many opportunities to pull off on the east-side levee. Along it's entire 8.5 mile length, only two control structures block travel and require portage around them. Canoe ramps can be provided at the north end just south of the entrance to Homestead Bayfront Park, and at the south end of the canal at the proposed Trailhead at Card Sound Road. Parking for cars would be provided at the park and at the Trailhead.

The Southern Glades Trail is the other canal R.O.W. now offering an interesting visual experience on both sides of the bank, and parking is available at the rest areas located at the intersection of U.S. Highway 1 and at Glenn Garrett Park on the north end.

The Black Creek Trail can also provide a good canoeing experience, conveniently close to existing neighborhoods. The canoe trail could extend from the Krome Trailhead all the way east to Black Point Park.

Boat ramps used by SFWMD crews now exist on several canal banks. Because there is no adjacent parking for vehicles, these are not very useful at this time.

To provide more, high-quality canoeing experiences along canal R.O.W. Trails, certain improvements would be required:

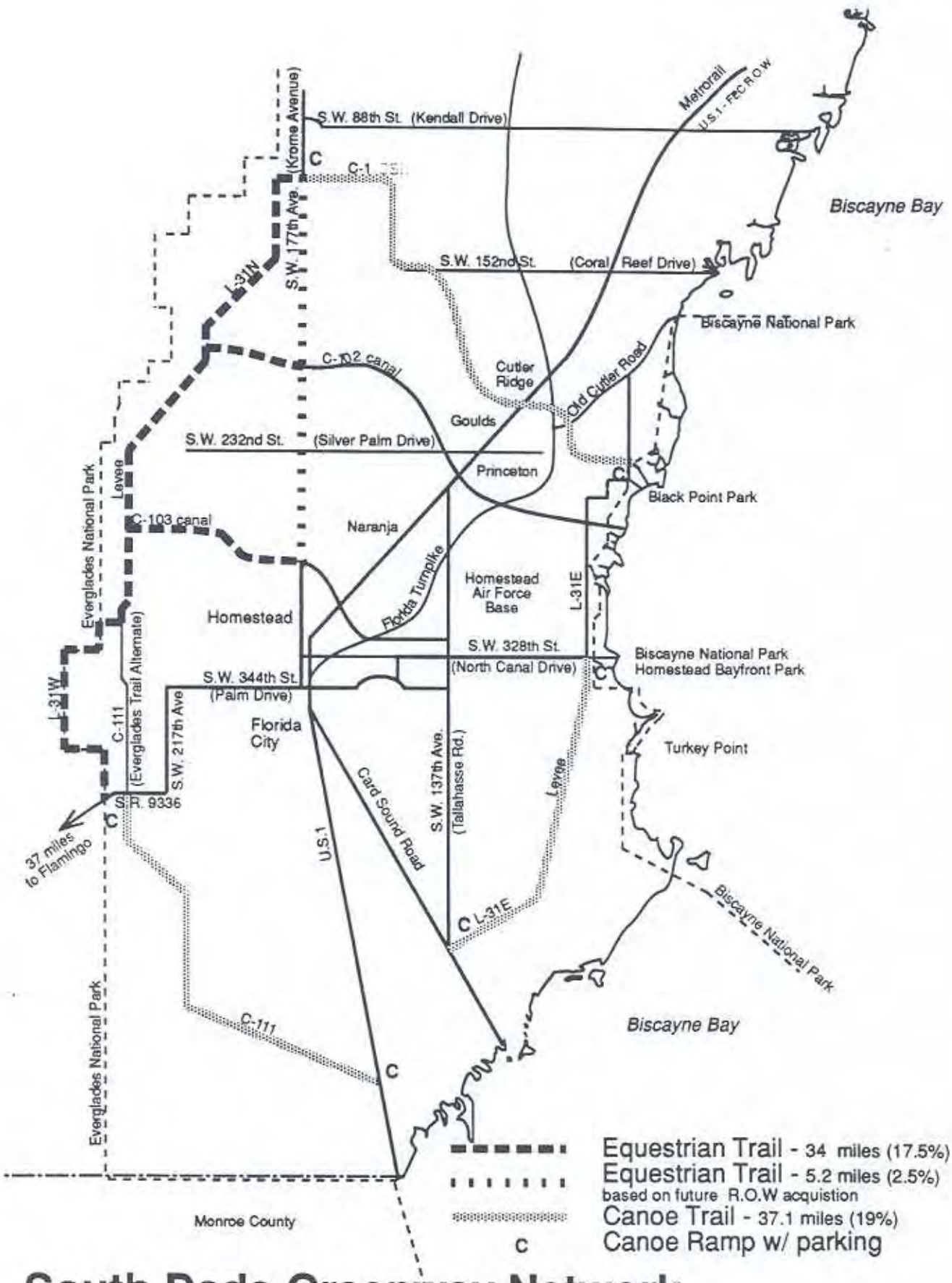
- Acquire adjacent R.O.W. to provide parking at launch sites.
- Regrade canal banks to create littoral zones which would create wildlife habitat for enhanced interest, as well as areas to pull off for a rest.

Private canoe rental businesses could locate at launch sites to give people who don't own canoes, an opportunity to enjoy the waterways.

Equestrian Facilities

The plan proposes 45.6 miles of equestrian trails. These are unpaved trails, limited to the western portions of the County, along Krome Avenue and west of Krome Ave. along the canal R.O.W.'s. They will be marked with intermittent signage (and plant masses when possible) to separate them from the unpaved bicycle and hiking trails which share the R.O.W.'s. They are generally 10-12 foot wide, and located closer to the canal bank than the bicycle trails.

Horsemen can share rest areas with cyclists. Hitching posts would be provided. At intervals along the trail, gentle slopes should be cut into the canal bank so that horses can be given an opportunity for a drink.



South Dade Greenway Network

Scale 1" = 4 miles

Equestrian / Canoe Trails

Fishing

Fishing is already a popular past-time on canal banks. With enhanced access, even more opportunities will exist. Very little, if any, improvements are required. At one especially popular spot, the intersection of the C-103 canal and the L-31E Levee, fishermen drive their cars along the levee to the canal bank. Because of the long distance from any nearby parking area, the vehicular use of this short section of canal bank (from North Canal Drive to C-103) must be looked at carefully. Careful design of the bike/pedestrian trail along this stretch could allow for safe multiple use.

Public Art

Greenway art can reinforce cultural, historic or native qualities of the community. Portions of the Trail R.O.W.'s can be assigned to local artists to create areas of unique visual interest, with either temporary or permanent installations. The "Art in Public Places" program, local artist groups, and school art programs, can be sources of talent and even funds.

South Dade Greenway Network

Budget

Trail Construction Budgets

Trail Budgets are line item estimates to construct each Trail. The costs include engineering and permitting, costs of materials and labor, and general contractor overhead and profit.

The total estimated construction budget for the SDGN is $14,545,542.55 allocated as follows:

Table 3 - Construction Budgets for the SDGN

Biscayne Trail	$5,281,940.95
Black Creek Trail	$2,319,317.00
Everglades Trail	$1,966,911.10
Keys Trail	$1,279,921.50
Krome Trail	$307,494.00
Mowry Trail	$1,245,244.00
Princeton Trail	$1,972,113.00
South Dade Trail	$12,870.00
Southern Glades Trail	$159,731.00
Tallahassee Connector	$422,812.50
Total	**$14,545,542.55**

General Budget Assumptions

The estimates anticipate the increased labor costs (as much as 20% higher) inherent in projects funded with Federal grants (i.e. ISTEA) which require Davis-Bacon Act pay schedules and other requirements.

Landscaping

The budgets for landscaping vary depending on several factors:

- Trails on narrow road R.O.W.'s have no space for trees due to setback restrictions.

- Trails through natural areas may not require as much planting as others.
- Portions of Trails passing through residential neighborhoods may require a higher level of planting to blend in.
- Planting to create safety barriers is more extensive on some Trails.

The budgets for landscaping allocated to each Trail are averages of these factors.

Intersections

An overall average cost per type of intersection was developed and used as a budget figure. Some will cost more, some less, to do the necessary improvements. Intersections where trails are within road R.O.W.'s generally only require signage and markings based on MUTCD and AASHTO standards. Intersections at road bridges and trails at canal R.O.W.'s, may require grading and ramping, re-aligning of guard rails, re-vamping of vehicle barriers, etc., in addition to the standard signage and markings. Intersection improvements on the South Dade Trail may be done by FDOT as they develop that R.O.W., and thus, are not included in the budget. Costs for pedestrian crossing signalization is separtate from the intersection items.

Trailheads

The budget for a "typical" trailhead includes; parking for 25 cars, a restroom/pavilion, picnic area, telephone, bike racks, traffic control devices (bollards, fences, etc.) and landscaping. The number of parking spaces and area set aside for picnicing would vary based on need and available space.

Rest Areas

The budget is for a minimal area containing a small shelter, picnic table, bicycle rack, trash receptacles, emergency phone and landscaping. Where space allows, and usage dictates, the rest areas can be enlarged.

Location Maps, Interpretive Signs & Emergency Telephones

The budgets for these were based on averages of costs for other trail systems.

South Dade Greenway Network - CONSTRUCTION COST ESTIMATE

TRAIL	BISCAYNE From Old Cutler Rd To U.S. 1 (36.2 miles)	BLACK CREEK From L-31W To Black Point Park (17 miles)	PRINCETON From L-31N levee To Biscayne Bay (15.8 miles)	MOWRY From L-31N levee To S.W. 137th Ave (11 miles)	EVERGLADES From L-31N @ Black Creek to U.S.1 (33.8 miles)
Asphalt Paving					
New	$2,101,000.00	$918,100.00	$861,000.00	$392,000.00	$597,000.00
Resurfacing	$211,465.00	$85,100.00	-	-	-
Intersections	$32,500.00	$204,000.00	$180,000.00	$204,000.00	$22,500.00
Rest Areas	$72,000.00	$48,000.00	$48,000.00	$48,000.00	$72,000.00
Location Maps	$10,500.00	$4,500.00	$6,000.00	$6,000.00	$7,500.00
Interpretive Signs	$6,000.00	-	$1,500.00	$3,000.00	$4,500.00
Emergency Phones	$110,200.00	$53,200.00	$45,600.00	$22,800.00	$38,000.00
Landscaping	$943,000.00	$249,000.00	$237,000.00	$165,000.00	$482,400.00
Bridge	$60,000.00	-	-	-	-
Pedestrian Signal	-	$60,000.00	-	$30,000.00	-
Observation Tower	$22,000.00	-	-	-	$22,000.00
Land Acquisition	-	-	-	-	$168,431.00
Trail Head	$125,000.00	-	-	-	-
Total Materials and Installation	$3,693,665.00	$1,621,900.00	$1,379,100.00	$870,800.00	$1,245,900.00
Planning, Design, and Engineering - 15%	$554,049.75	$243,285.00	$206,865.00	$130,620.00	$186,885.00
General Contractors Fees - 15%	$554,049.75	$243,285.00	$206,865.00	$130,620.00	$186,885.00
Subtotal + Land Acquisition	$4,801,764.50	$2,108,470.00	$1,792,830.00	$1,132,040.00	$1,788,101.00
Contingency - 10%	$480,176.45	$210,847.00	$179,283.00	$113,204.00	$178,810.10
TOTAL TRAIL	$5,281,940.95	$2,319,317.00	$1,972,113.00	$1,245,244.00	$1,966,911.10

South Dade Greenway Network - CONSTRUCTION COST ESTIMATE

TRAIL	KEYS U.S.1 from Fl. City to Key Largo & Card Sound Rd. (25.7 miles)	KROME(Interim) From Kendall Dr. To Florida City (17.5 miles)	SOUTH DADE From Kendall Drive To Palm Drive (18.4 miles)	S. GLADES C-111 From U.S.1 To S.R.9336 (12.6 miles)	TALLAHASSE CONNECTOR From U.S.1 To Palm Dr (24.4 miles)
Asphalt Paving					
New	$744,750.00	-	-	-	$116,250.00
Resurfacing	-	-	-	-	-
Intersections	-	$45,000.00	-	-	$17,500.00
Rest Areas	$120,000.00	-	-	$72,000.00	-
Location Maps	$6,000.00	$6,000.00	$1,500.00	$3,000.00	-
Interpretive Signs	$1,500.00	$6,000.00	$7,500.00	$1,500.00	-
Emergency Phones	$22,800.00	$3,800.00	-	$15,200.00	-
Landscaping	-	-	-	$20,000.00	$65,000.00
Bridge	-	-	-	-	-
Pedestrian Signal	-	-	-	-	-
Observation Tower	-	-	-	-	-
Land Acquisition	-	$25,000.00	-	-	$126,000.00
Trail Head	-	$135,000.00	-	-	-
Total Materials and Installation	$895,050.00	$195,800.00	$9,000.00	$111,700.00	$198,750.00
Planning, Design, and Engineering - 15%	$134,257.50	$29,370.00	$1,350.00	$16,755.00	$29,812.50
General Contractors Fees - 15%	$134,257.50	$29,370.00	$1,350.00	$16,755.00	$29,812.50
Subtotal + Land Acquisition	$1,163,565.00	$279,540.00	$11,700.00	$145,210.00	$384,375.00
Contingency - 10%	$116,356.50	$27,954.00	$1,170.00	$14,521.00	$38,437.50
TOTAL TRAIL	$1,279,921.50	$307,494.00	$12,870.00	$159,731.00	$422,812.50

Ten Trail Total $14,545,542.55

Biscayne Trail - CONSTRUCTION COST ESTIMATE

SEGMENT			S.W. 87th Ave. From Old Cutler Road To Black Point Park 2.3 miles		L-31E Levee From Black Point Park To Card Sound Road 17.6 miles		S.W. 137th Ave. From Card Sound Road To S.W. 344th St.(Palm Drive) 7.4 miles		S.W. 344th Ave. From S.W. 167th Ave. To U.S. I 1.0 miles	
ITEM	COST	UNIT	QUANTITY	COST	QTY.	COST	QUANTITY	COST	QUANTITY	COST
Asphalt Paving	$1.10-$1.20	sq.ft.							(11)	
4' wide	$23,000.00	mile	(2) 2.3	$52,900.00		-		-		-
12' wide on levee(1)	$76,000.00	mile		-	17.6	$1,337,600.00		-		-
12' wide on road	$70,000.00	mile	0.25	$17,500.00		-	7.4	$518,000.00		-
Asphalt Resurfacing	$0.55	sq.ft.								
8' wide	$23,000.00	mile	2.3	$52,900.00		-		-		-
16' wide	$34,850.00	mile		-		-		-		-
Intersections	$2,500.00	each	3	$7,500.00	3	$7,500.00		-	2	$5,000.00
Rest Areas (4)	$24,000.00	each		-	2	$48,000.00	1	$24,000.00		-
Location Maps (5)	$1,500.00	each	1	$1,500.00	4	$6,000.00		-	1	$1,500.00
Interpretive Signs (6)	$1,500.00	each		-	4	$6,000.00		-		-
Emergency Phones(7)	$3,800.00	each		-	17	$64,600.00	7	$26,600.00		-
Observation Tower	$22,000.00	each		-	1	$22,000.00		-		-
Bridge (8)	$60,000.00	each		-		-		-		-
Trailhead	$125,000.00	each		-	(15) 1	$125,000.00		-	(12)	-
Landscaping (9)	$26,000.00	mile	2.3	$59,800.00		-		-		-
(10)	$10,000.00	mile		-		-	7.4	$74,000.00		-
(14)	$38,000.00	mile		-	17.6	$668,800.00		-		-
TOTAL SEGMENT				$192,100.00		$2,285,500.00		$642,600.00		$6,500.00

Biscayne Trail - CONSTRUCTION COST ESTIMATE

North Canal Drive From S.W. 152nd Ave. To L-31E levee 5.4 miles		S.W. 152nd Ave. from N.Canal Dr. to Palm Dr. & Palm Drive from 137th Ave to 167th Ave 2.5 miles (3)	
QUANTITY	COST	QUANTITY	COST
	-		-
	-		-
2.5	$175,000.00		-
2.5	$57,500.00		-
2.9	$101,065.00		-
4	$10,000.00	1	$2,500.00
	-		-
	-	1	$1,500.00
	-		-
5	$19,000.00		-
	-		-
1	$60,000.00		-
	-	(13)	-
5.4	$140,400.00		-
	-		-
	-		-
	$562,965.00		$4,000.00

36.2 Total Miles

NOTES:

(1) More costly than usual because of narrow area to maneuver during installation. May also require silt barrier during construction on east side @ 1-50 linear feet (17.5 miles X $7,920 per mile = $138,600)
(2) Bike lanes not included in cost. Will be done by Dade County in their scheduled road improvement project.
(3) Utilize existing sidewalks & roadway on nicely landscaped R.O.W. Minor costs for signage & road markings required.
(4) Located on C-102 canal @ the bay, between Turkey Point & Card Sound Rd.and midpoint on Tallahassee Rd.
(5) Old Cutler Rd.; Black Point Park; C-102 Canal; Homestead Bayfront Park; Card Sound Rd.; Homestead Sports Complex; and the Visitor Center on U.S. 1
(6) Located at Black Point Park, C-102 at the Bay, Homestead Bayfront Park / Biscayne National Park, Card Sound Road.
(7) At all rest areas and or a minimum of 1 mile apart.
(8) At the intersection of N. Canal and L-31E levee.
(9) Assume 100 trees per mile and grass & wildflowers along trail.
(10) Assume wildflower and native grass seeding & occasional tree clumps.
(11) Construction will be done by Florida City / Homestead.
(12) Assume landscaping will be provided during road construction.
(13) Already landscaped.
(14) Continuous row of clumping grasses at top edge of trail slopes as safety barrier, & occasional tree clumps.
(15) Located @ Juncture of S.W. 137th Ave. , L-31E, and Card Sound Road.

$3,693,665.00	Total Materials and Installation
$554,049.75	Planning, Design, Eng., & Permit Fees - 15% of constr.
$554,049.75	General Contractor Fees - 15% of construction costs.
$4,801,764.50	Subtotal
$480,176.45	10% Contingency
$5,281,940.95	**TOTAL BISCAYNE TRAIL**

Black Creek Trail - CONSTRUCTION COST ESTIMATE

SEGMENT			Black Creek Canal (C-1) From L-31N levee To Krome Ave. 1.0 miles		Black Creek Canal (C-1) From Krome Ave. To S.W. 184th St. 8.2 miles		Black Creek Canal (C-1) From S.W. 184th St. To U.S. 1 & South Dade Tr. 3.1 miles		Black Creek Canal (C-1) S.W. 211th St. & S.W. 112th Ave. to canal 0.4 miles	
ITEM	COST	UNIT	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST
Asphalt Paving	$1.10	sq.ft.								
4' wide (1)	$23,000.00	mile		-		-	3.1	$71,300.00		-
12' wide (2)	$70,000.00	mile		-	8.2	$574,000.00		-		-
Asphalt resurfacing	$0.55	sq.ft.								
8' wide (3)	$23,000.00	mile		-		-	3.1	$71,300.00		-
Intersections (4)	$12,000.00	each		-	9	$108,000.00	4	$48,000.00	1	$12,000.00
Rest Areas (5)	$24,000.00	each		-	2	$48,000.00		-		-
Location Maps (6)	$1,500.00	each		-	2	$3,000.00		-	1	$1,500.00
Emergency Ph. (7)	$3,800.00	each		-	8	$30,400.00	2	$7,600.00		-
Landscaping (8)	$15,000.00	mile	1	$15,000.00	8.2	$123,000.00	3.1	$46,500.00		-
Pedestrian Signal (9)	$30,000.00	each		-	2	$60,000.00		-		-
TOTAL SEGMENT				$15,000.00		$946,400.00		$244,700.00		$13,500.00

Black Creek Trail - CONSTRUCTION COST ESTIMATE

Black Creek Canal (C-1) From canal To S.W. 216th St. 0.6 miles		Black Creek Canal (C-1) From S.W. 216th St. To L-31E levee 3.7 miles	
QUANTITY	COST	QUANTITY	COST
0.6	$13,800.00		-
	-	3.7	$259,000.00
0.6	$13,800.00		-
1	$12,000.00	2	$24,000.00
	-		-
	-		-
1	$3,800.00	3	$11,400.00
0.6	$9,000.00	3.7	$55,500.00
	-		-
	$52,400.00		$349,900.00

17 Total Miles

NOTES:

(1) Additional 4 feet added to existing 8 foot wide trail.
(2) New 12 foot wide trail.
(3) Resurface existing 8 foot trail.
(4) At canal / road bridge crossings; includes safety and directional signage, modification of guardrails, easing slopes from canal to bridge, bollards, curbing, access control structures. Each crossing's modification requirements vary. This estimate is for those requiring the most modifications.
(5) Located across from Tamiami Airport, and at S.W. 160th St.
(6) Located at the intersection of South Dade Trail, The Hammocks Town Center Trail Head, and at S.W. 152nd St.
(7) At all rest areas, S.W. 216th St., Krome Ave. and or a minimum of 1 mile apart west of the Krome Trail.
(8) Assumes clumps of trees (6-8) 1000' +/- o.c., screening shrubs where needed, and wildflower and native grass seeding.
(9) Pedestrian signal recommended at S.W. 177th Ave. and S.W. 152nd St. due to high traffic volume and speed.

$1,621,900.00	Total Materials and Installation
$243,285.00	Planning, Design, Eng., & Permit Fees - 15% of const.
$243,285.00	General Contractor Fees - 15% of construction costs.
$2,108,470.00	Subtotal
$210,847.00	10% Contingency
$2,319,317.00	**TOTAL BLACK CREEK TRAIL**

Princeton Trail - CONSTRUCTION COST ESTIMATE

SEGMENT			C-102 From L-31N To Krome Ave. 3.5 miles		C-102 From Krome Ave. To L-31E 12.3 miles	
ITEM	COST	UNIT	QUANTITY	COST	QUANTITY	COST
Asphalt Paving 12' wide	$1.10 $70,000.00	sq.ft. mile		-	12.3	$861,000.00
Intersections (1)	$12,000.00	each	4	$48,000.00	11	$132,000.00
Rest Areas	$24,000.00	each	(2) 1	$24,000.00	(3) 1	$24,000.00
Location Maps (4)	$1,500.00	each	2	$3,000.00	2	$3,000.00
Interpretive Signs (5)	$1,500.00	each		-	1	$1,500.00
Emergency Phones(6)	$3,800.00	each	2	$7,600.00	10	$38,000.00
Landscaping (7)	$15,000.00	mile	3.5	$52,500.00	12.3	$184,500.00
TOTAL SEGMENT				$135,100.00		$1,244,000.00

15.8 miles

NOTES:

(1) At canal / road bridge crossings; includes safety and directional signage, modification of guardrails, easing slopes from canal to bridge, bollards, curbing, access control structures. Each crossing's modification requirements vary. This estimate is for those requiring the most modifications.
(2) Located at L-31N levee (east side) and Krome Ave. (S.W. 177th Ave.)
(3) At the Maine Potato Trials site.
(4) Located at S.W. 147th Ave.
(5) At all rest areas and at South Dade Trail.
(6) At all rest areas ,S.W. 125th Ave. and or a minimum of 1 mile apart east of Krome Trail.
(7) Assume Clumps of trees (6-8) at 1000' +/- intervals, screening hedges where required, and wildflowers & native grass seeding.

$1,379,100.00	Total Materials and Installation
$206,865.00	Planning, Design, Eng.,& Permit Fees - 15% of constr.
$206,865.00	General Contractor Fees - 15% of construction costs.
$1,792,830.00	Subtotal
$179,283.00	10% Contingency
$1,972,113.00	**TOTAL PRINCETON TRAIL**

Mowry Trail - CONSTRUCTION COST ESTIMATE

SEGMENT			C-103 From L-31N To Krome Ave. 5.4 miles		C-103 From Krome Ave. To Tallahassee Connector 5.6 miles	
ITEM	COST	UNIT	QUANTITY	COST	QUANTITY	COST
Asphalt Paving 12' wide	$1.10 $70,000.00	sq.ft. mile		-	5.6	$392,000.00
Intersections (1)	$12,000.00	each	8	$96,000.00	9	$108,000.00
Pedestrian Signal (2)	$30,000.00	each	1	$30,000.00		-
Rest Areas (3)	$24,000.00	each	2	$48,000.00		-
Location Maps (4)	$1,500.00	each	2	$3,000.00	2	$3,000.00
Interpretive Signs (5)	$1,500.00	each		-	2	$3,000.00
Emergency Phones(6)	$3,800.00	each	2	$7,600.00	4	$15,200.00
Landscaping (7)	$15,000.00	mile	5.4	$81,000.00	5.6	$84,000.00
TOTAL SEGMENT				$265,600.00		$605,200.00

11.0 miles

NOTES:

(1) At canal / road bridge crossings; includes safety and directional signage, modification of guardrails, easing slopes from canal to bridge, bollards, curbing, access control structures. Each crossing's modification requirements vary. This estimate is for those requiring the most modifications.
(2) Located at Krome Ave.
(3) Located near S.W. 187th Ave. (Redland Road)
(4) Located at L-31N levee; S.W. 177th Ave.; South Dade Trail; and S.W. 137th Ave.
(5) In the farming area and at the SFWMD office.
(6) At L-31N levee and at S.W. 187th Ave. and or a minimum of 1 mile apart east of Krome Trail.
(7) Assume Clumps of trees (6-8) at 1000' +/- intervals, screening hedges where required, and wildflowers & native grass seeding.

$870,800.00	Total Materials and Installation
$130,620.00	Planning, Design, Eng., & Permit Fees - 15% of constr.
$130,620.00	General Contractor Fees - 15% of construction costs.
$1,132,040.00	Subtotal
$113,204.00	10% Contingency
$1,245,244.00	**TOTAL MOWRY TRAIL**

Everglades Trail - CONSTRUCTION COST ESTIMATE

SEGMENT			S.W. 344th St.(Palm Dr. From U.S. 1 To N.W. 6th Ave. 1.0 miles (1)		S.W. 344th St.(Palm Dr. From N.W. 6th Ave. To S.W. 187th Ave. 0.5 miles		S.W. 344th St.(Palm Dr. From S.W. 187th Ave. To S.W. 217th Ave. 3.0 miles		S.W. 217th Ave From Palm Drive To S.R. 9336 3.0 miles	
ITEM	COST	UNIT	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST
Asphalt Paving	$1.10	sq.ft.								
4' wide (2)	$23,000.00	mile			1	$23,000.00		-		-
12' wide (3)	$70,000.00	mile				-	3	$210,000.00	3	$210,000.00
Intersections	$2,500.00	each			(4)	$2,500.00	4	$10,000.00	2	$5,000.00
Rest Areas (5)	$24,000.00	each				-		-		-
Location Maps (6)	$1,500.00	each				-		-		-
Interpretive Signs (7)	$1,500.00	each				-		-		-
Emergency Phones(8)	$3,800.00	each				-	1	$3,800.00	1	$3,800.00
Observation Tower	$22,000.00	each				-		-		-
Landscaping										
(9)	$26,000.00	mile			0.5	$13,000.00		-	3	$78,000.00
(10)	$15,000.00	mile				-	3	$45,000.00		-
(11)	$12,000.00	mile				-		-		-
Land Acquisition (12)	$19,585.00	acre					1.1	$21,543.50		
TOTAL SEGMENT						$38,500.00		$290,343.50		$296,800.00

Everglades Trail - CONSTRUCTION COST ESTIMATE

S.R. 9336 From S.W. 217th Ave. To Everglades Ntl. Park 2.2 miles		L-31W levee From S.R. 9336 To Black Creek Canal 24.1 miles	
QUANTITY	COST	QUANTITY	COST
2.2	- $154,000.00		- -
1	$2,500.00	(4)	$2,500.00
	-	3	$72,000.00
1	$1,500.00	4	$6,000.00
1	$1,500.00	2	$3,000.00
	-	8	$30,400.00
	-	1	$22,000.00
2.2	$57,200.00 - -	24.1	- - $289,200.00
7.5	$146,887.50		
	$363,587.50		$425,100.00

33.8 Total Miles

NOTES:

(1) Minor improvements such as directional signage, road markings, striping, and landscaping would be done by FDOT in the redevelopment plans for the road R.O.W.'s
(2) Add 4 foot wide bike lanes to existing 2 lane roadway.
(3) Off-road 12 foot wide multi-use trail.
(4) Several minor street crossings requiring minimal road markings and signage; lump sum cost listed.
(5) Located on L-31 N/W @ C-102 Canal, C-103 Canal, and 6 miles south of C-103 Canal.
(6) At all rest areas and at Glenn Garrett Park.
(7) Located on L-31 N/W at Black Creek Canal, C-102 Canal, and at Glenn Garrett Park.
(8) At all rest areas and on S.W. 217th Ave. at Palm Drive and S.R. 9336 At all rest areas and or a minimum of 1 mile apart.
(9) Assume 100 trees per mile and 3' wide strips of sod along trail edge.
(10) Existing landscaping along R.O.W. Budget allows for sod along trail edge, and some trees.
(11) Assumes clumps of trees (6-8) 1000' +/- o.c. and wildflower and native grass seeding.
(12) 7.5 acres on S.R. 9336 (average 28' wide for 2.2 miles) and 1.1 acres on Palm Drive between S.W. 187th Ave. and S.W. 217th Ave.

$1,245,900.00	Total Materials and Installation
$186,885.00	Planning, Design, Eng., & Permit Fees - 15% of constr.
$186,885.00	General Contractor Fees - 15% of construction costs.
$168,431.00	Land Acquisition
$1,788,101.00	Subtotal
$178,810.10	10% Contingency
$1,966,911.10	**TOTAL EVERGLADES TRAIL**

Keys Trail - CONSTRUCTION COST ESTIMATE

SEGMENT			U.S. 1 (1) From Card Sound Road To Monroe County Line 14.2 miles		Card Sound Road From U.S.1 To Card Sound Bridge 11.5 miles (2)		
ITEM	COST	UNIT	QTY	COST	QTY	COST	
Asphalt Paving	$1.10	sq.ft.					
8' wide	$46,500.00	mile		-	11.5	$534,750.00	
Fill for shoulders (3)	$15.00	cu.yd.		-	14,000	$210,000.00	
Rest Areas	$24,000.00	each	(4) 4	$96,000.00	(5) 1	$24,000.00	
Location Maps (6)	$1,500.00	each	2	$3,000.00	2	$3,000.00	
Interpretive Signs (7)	$1,500.00	each		-	1	$1,500.00	
Emergency Phones(8)	$3,800.00	each	4	$15,200.00	2	$7,600.00	
TOTAL SEGMENT				$114,200.00	TOTAL	$780,850.00	$895,050.00 Grand Total Materials and Installation
				$17,130.00	0.15	$117,127.50	$134,257.50 Planning, Design., Eng.,& Permits - 15%
				$17,130.00	0.15	$117,127.50	$134,257.50 General Contractor Fees - 15%
				$148,460.00	Subtotal	$1,015,105.00	$1,163,565.00 Subtotal
				$14,846.00	0.10	$101,510.50	$116,356.50 10% Contingency
				$163,306.00	TOTAL	$1,116,615.50	$1,279,921.50 GRAND TOTAL KEYS TRAIL

25.7 miles

NOTES:

(1) Wide shoulders (10 Ft.) on east and west sides of road to be built by FDOT when widening U.S.1 to four lane divided road.
(2) Add 8 feet wide off-road paved trail along the east side of the R.O.W.
(3) The south one third of the R.O.W. requires approximately 12 feet wide of fill, averaging 18 inches deep on the shoulder as a base for the paving. If a silt barrier is required during construction, the cost at $1.50 per linear foot for 11.5 miles would be $90,000.
(4) Located near Ft. Rock & Sand and four miles north of Southern Glades Trail. (One on each side of road)
(5) Located midway between U.S.1 & L-31E levee.
(6) At the north and south ends of U.S. 1 and Card Sound Road.
(7) At Alabama Jack's.

Krome Trail (Interim) - CONSTRUCTION COST ESTIMATE

SEGMENT			Krome Ave. (S.W. 177th Ave.) From Kendall Dr. To Fl. City 17.5 miles			
ITEM	COST	UNIT	QUANTITY	COST		
Asphalt Paving 12' wide	$1.10 $70,000.00	sq.ft. mile		-		
Intersections (1)	$2,500.00	each	18	$45,000.00		
Location Maps (2)	$1,500.00	each	4	$6,000.00		
Interpretive Signs (3)	$1,500.00	each	4	$6,000.00		
Emergency Phones(4)	$3,800.00	each	1	$3,800.00		
Landscaping (5)	$15,000.00	mile		-		
Land Acquisition	$25,000.00	acre	1	$25,000.00		
Trail Head (6)	$160,000.00	each	1	$135,000.00		
TOTAL SEGMENT				$195,800.00		

17.5 miles

NOTES:
(1) Not including downtown Homestead and Florida City intersections.
(2) Located at Black Creek Trail; C-102 Trail; C-103 Trail; and the Visitor Center on U.S. 1 in Florida City.
(3) Coffee's County Store; Silver Palm Drive; Homestead city limits; and Florida City city limits.
(4) At S.W. 136th St.
(5) No Landscaping is proposed since future proposed road widening would remove it.
(6) Proposed at the intersection of Black Creek Trail and the Krome Trail.

$195,800.00	Total Materials and Installation
$29,370.00	Planning, Design, Eng., & Permit Fees - 15% of constr
$29,370.00	General Contractor Fees - 15% of construction costs.
$279,540.00	Subtotal + Land Acquisition
$27,954.00	10% Contingency
$307,494.00	**TOTAL KROME TRAIL**

South Dade Trail - CONSTRUCTION COST ESTIMATE

SEGMENT			South Dade Trail From Kendall Drive To Palm Drive 18.4 miles			
ITEM	COST	UNIT	QUANTITY	COST		
Asphalt Paving 12' wide	$1.10 $70,000.00	sq.ft. mile		-		
Intersections	$2,500.00	each	(1)	-		
Location Maps	$1,500.00	each	1	$1,500.00		
Interpretive Signs	$1,500.00	each	5	$7,500.00		
Landscaping (2)	$26,000.00	mile		-		
TOTAL SEGMENT						$9,000.00

18.4 miles

NOTES:

(1) & (2) All trail development, including landscaping and intersections will be done by the Florida Department of transportation, within the development of the Exclusive U.S. 1 Bus Lanes Corridor.

No provisions are made for rest areas since frequently placed bus shelters will be at intersections.

No emergency phones will be provided since there are pay phones available all along the corridor at adjacent commercial centers.

$9,000.00	Total Materials and Installation
$1,350.00	Planning, Design, Eng.,& Permit Fees - 15% of cons
$1,350.00	General Contractor Fees - 15% of construction costs
$11,700.00	Subtotal
$1,170.00	10% Contingency
$12,870.00	**TOTAL SOUTH DADE TRAIL**

Southern Glades Trail - CONSTRUCTION COST ESTIMATE

SEGMENT			C-111 Canal From U.S.1 To S.R. 9336 12.6 miles			
ITEM	COST	UNIT	QUANTITY	COST		
Asphalt Paving 12' wide	$1.10 $70,000.00	sq.ft. mile	(1)	-		
Rest Areas (2)	$24,000.00	each	3	$72,000.00		
Location Maps (3)	$1,500.00	each	2	$3,000.00		
Interpretive Signs (4)	$1,500.00	each	1	$1,500.00		
Emergency Phones(5)	$3,800.00	each	4	$15,200.00		
Landscaping	$15,000.00	mile		-		
Spoil Bank (6) improvements	$5,000.00	mile	4	$20,000.00		
TOTAL SEGMENT				$111,700.00		

12.6 miles

NOTES:

(1) This trail to remain unpaved.
(2) Located at U.S. 1; 1/2 mile west of U.S. 1; and near control structure S-18C.
(3) At U.S. 1 and S.R. 9336
(4) At U.S. 1
(5) At all rest areas and or a minimum of 1 mile apart.
(6) Improve spoil banks in between rest areas; regrade portions of existing spoil bank to facilitate walking to top as an observation area; add shade trees.

$111,700.00	Total Materials and Installation
$16,755.00	Planning, Design, Eng.,& Permit Fees - 15% of constr.
$16,755.00	General Contractor Fees - 15% of construction costs.
$145,210.00	Subtotal
$14,521.00	10% Contingency
$159,731.00	**TOTAL SOUTHERN GLADES TRAIL**

Tallahassee Connector - CONSTRUCTION COST ESTIMATE

SEGMENT			S.W. 137th Ave. From U.S. 1 To Palm Drive 6 miles (1)			
ITEM	COST	UNIT	QUANTITY	COST		
Asphalt Paving 8' wide	$1.10 $46,500.00	sq.ft. mile	2.5	$116,250.00		
Intersections	$2,500.00	each	7	$17,500.00		
Location Maps	$1,500.00	each		-		
Interpretive Signs	$1,500.00	each		-		
Landscaping (2)	$26,000.00	mile	2.5	$65,000.00		
Land Acquisition (3)	$30,000.00	acre	4.2	$126,000.00		
TOTAL SEGMENT						$198,750.00

6 miles

NOTES:

(1) From U.S. 1 south to the Florida Turnpike Extension. The portion south of that will be constructed by the City of Homestead.

(2) Assume 100 trees per mile and 3' wide strips of sod along trail edge.

(3) From S.W. 264th St. north to U.S. 1 will require an average purchase of a 35' wide corridor to properly develop a 12' wide off-road multi-purpose trail.

$198,750.00	Total Materials and Installation
$29,812.50	Planning, Design, Eng.,& Permit Fees - 15% of cons
$29,812.50	General Contractor Fees - 15% of construction costs
$126,000.00	Land Acquisition
$384,375.00	Subtotal
$38,437.50	10% Contingency
$422,812.50	**TOTAL TALLAHASSEE CONNECTOR**

South Dade Greenway Network

Implementation Strategy & Action Plan

Implementation Strategy & Action Plan

The SDGN at 194 miles, costing approximately $15 million, utilizing R.O.W. of four entities, and involving three governments (Metro Dade County, Homestead, Florida City), will, by necessity, be built in phases. Incredibly, however, approximately 42% or 82 miles of the SDGN is currently planned for improvement. Without question, almost half of the system will be built by others during the next decade.

We have attempted to predict in what sequence trails would come on line according to plans and data available to us during the preparation of this report. It is important to note that transportation projects may move up or down in priority status in any given five year period. Also, trails or portions of trails may be built sooner than anticipated if funds are forthcoming from any number of sources.

Phase One

The U.S. 1 Exclusive Bus Lane Project (South Dade Trail), now being constructed by FDOT, will be the kick off to Phase One. The South Dade Trail initial segment which is 9 miles in length, is anticipated to officially open between November, 1995 and March, 1996. It will provide for a ten foot, off road, designated bike lane.

FDOT has recently completed safety improvements to Krome Avenue (Kendall Drive to S.W. 296th Street) and the Krome Trail would provide 4 foot wide shoulders. These shoulders would not be designated and do not meet AASHTO standards for bike lanes. However, future corridor improvements that could incorporate off road trails would not begin any earlier than 2000, and because Krome is an important north/south route that forms linkages and convenient loops between other trails in the SDGN, we are recommending that the Krome Trail be opened as an "interim" trail. FDOT would need to add the trail improvements into their 1995/96 Work Program and all safety measures would have to be taken into consideration, such as intersection striping and "Bike Sharing Roadway" signs installed. The proposed Trailhead for Krome would be accomplished at a later date since it requires additional R.O.W., when the final disposition of Krome Avenue has been resolved.

The Southern Glades Trail would also be inaugurated in 1995/96, if the SFWMD cooperates on providing minimal improvements. The Florida Game and Fresh Water Fish Commission has offered to assist with the signage. In addition, rest areas, landscaping and emergency phones are needed to make the Trail fully functional and convenient to users.

The South Dade Trail should attract commuters from opening day while the Southern Glades Trail could capture 10% of tourists traveling to the Keys. The three Trails of Phase One would total 39.1 miles (20%) that could feasibly open within the first year.

Future Phases (with funding commitments):

Demonstration Project - PD&E and R.O.W. acquisition begins in 1997. Construction begins 1998. This project has a one year construction schedule.

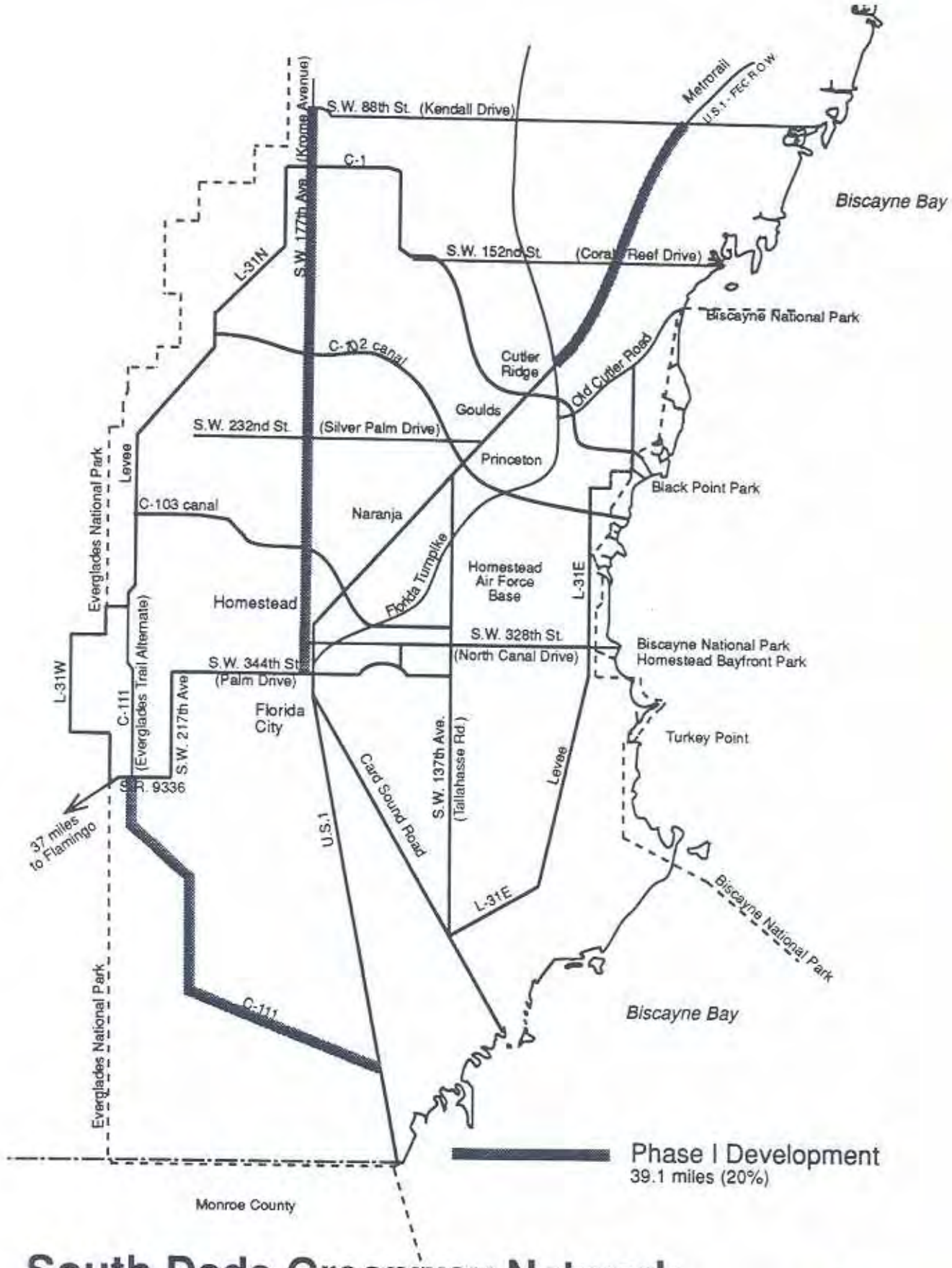
Tallahassee Road - PD & E is ongoing; scheduled for construction, 1998/99 (may be expedited to 95/96). Two year construction schedule.

Exclusive Bus Lane, Phase 2 (Cutler Ridge to Florida City) - PD & E begins in 1996. Construction could begin in 1997 and take one year to complete.

U.S. 1 Four Laning, Card Sound Road to Monroe County - PD & E complete; Phase 1 Mitigation under construction; roadway construction drawings to be complete in April, 1995; roadway construction will begin April, 1995 and expected to be completed in 2000.

Phases (without funding commitments):

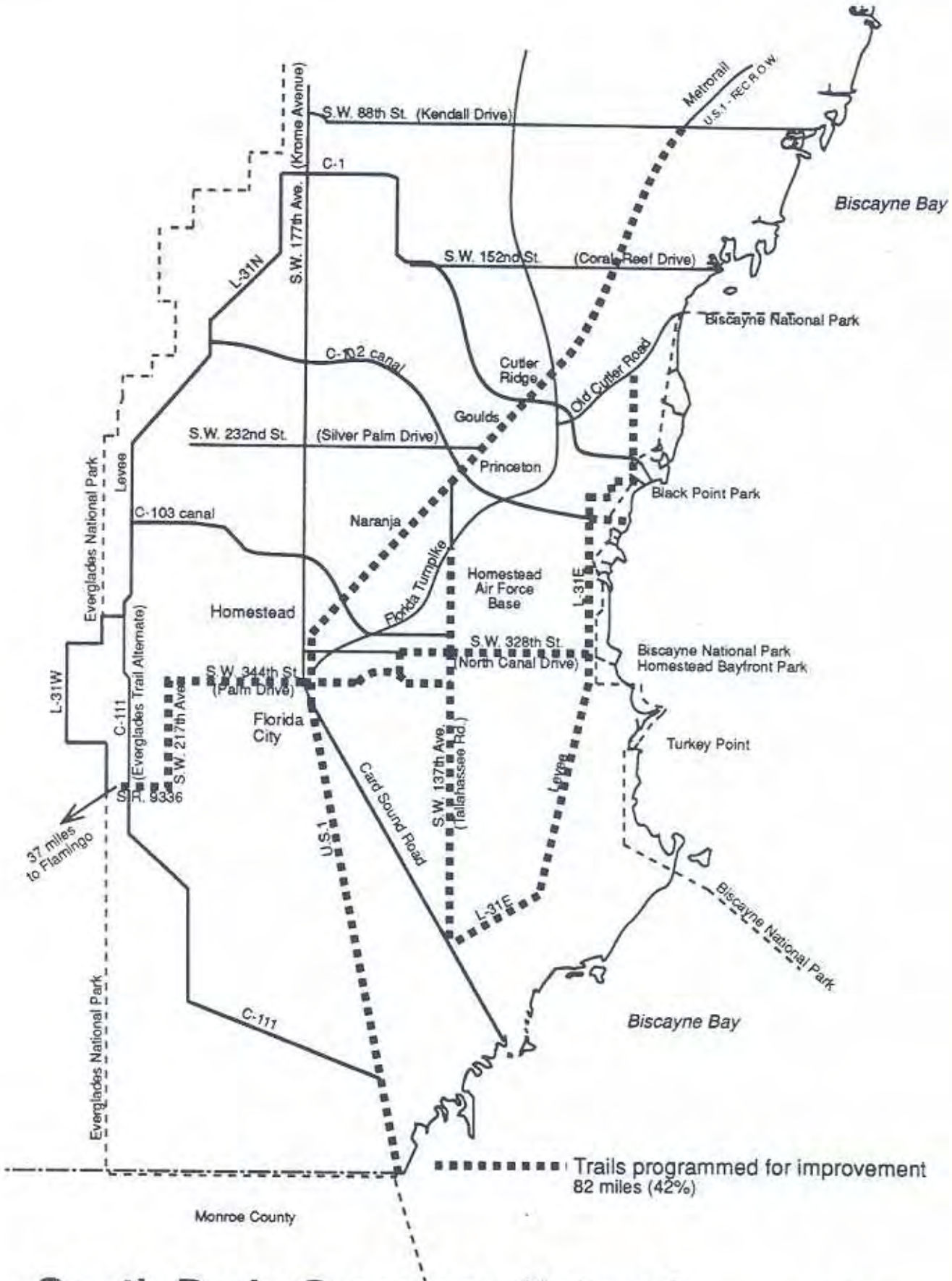
- L-31 (unpaved portion of the Everglades Trail)
- C-102, C-103, and Black Creek canals.
- Krome Avenue
- Card Sound Road
- Tallahassee Road (2.5 miles, from Turnpike to U.S. 1)



South Dade Greenway Network

Scale 1" = 4 miles

Proposed Phase I - 1995/96



South Dade Greenway Network

Scale 1" = 4 miles

Programmed Improvements

Action Plan

- Adoption of the SDGN Master Plan by MPO Governing Board
- Adoption of the SDGN Master Plan by Metro Dade County Commission
- Adoption of the SDGN Master Plan by SFWMD Governing Board
- Incorporation of SDGN Master Plan in the TIP, 1995/96, $1.5 million for PD&E
- Approval & funding of Southern Glades Trail by SFWMD for 1995/96
- Approval & funding of Krome Trail (interim) by FDOT in Work Program for 1995/96
- Incorporation of South Dade Trail in U.S. 1 Exclusive Bus Lane Project by FDOT
- Coordinate with FDOT, MDPW, Florida City and Homestead on redevelopment of S.R. 9336 and Palm Drive
- Incorporation of Keys Trail in U.S.1 Four Laning project by FDOT
- Secure additional funding for Demonstration Project
- Submit ISTEA grant for the year 2000; secure project sponsors and funding match
- Seek official designation of SDGN as part of Florida Sesquicentennial celebration
- Encourage establishment of Metro Dade Trail Authority with dedicated source of funding
- Coordinate with Nation Park Service on Signage Program
- Incorporation of SDGN in CDMP

South Dade Greenway Network

Operational Issues

Operational Issues

Currently Dade County has approximately 100 miles of existing bike paths. They are scattered throughout the county, and provide little or no continuity. Many are substandard (not meeting AASHTO standards), most are in disrepair and poorly maintained. It is conceivable that during the next decade, Dade County could well develop up to 500 miles of trails/greenways with ISTEA projects and road improvements.

The MPO has the overall responsibility for planning bicycle facilities, but has no control over maintenance. There has never been an entity established to manage bike facilities. The following agencies now participate in maintenance of bicycle paths that are within their jurisdiction: FDOT, MDPW, Metro Dade Parks & Recreation, Cities of Coral Gables, North Miami, Miami, Miami Beach, SFWMD on canal banks and others.

One of the recommendations of the South Dade Greenway Master Plan is for Metro Dade to establish a Trail Authority that would have singular responsibility for all trail construction, maintenance, management and promotion as well as a dedicated source of funds for Trail Authority operations. The Trail Authority would also be responsible for securing construction funds for trail development and conduct all planning activities. This consolidation of bicycle/pedestrian related functions in one entity, coupled with appropriate authority and funding, will place Dade County in a national leadership position in the Greenways movement.

In developing the SDGN Master Plan and consulting with various agencies, it became apparent to the Team that the issue of maintenance had to be addressed prior to the system coming on line. Not only were the SFWMD, FDOT and MDPW concerned about who would be responsible for maintaining bicycle facilities on their R.O.W., but ISTEA funding now requires a maintenance agreement. The consequences of liability due to long term neglect of trails is also an on-going concern.

With the advent of the SDGN at 194 miles, carrying an investment of public funds at $15 million, a critical mass will be achieved that will demand a coordinated, comprehensive approach to these facilities.

In addition to its primary mission of funding, planning and building greenways/trails, the Trail Authority should be responsible for undertaking the following tasks:

- Develop and implement annualized, scheduled maintenance program for routine repairs and replacement.
- Develop an inter-local agreement for security patrols and emergency response and internal Trail ranger program.
- Conduct semi-annual Trail user safety analysis.
- Prepare risk management reports.
- Develop Trail user rules & regulations.
- Determine hours of operation.
- Provide public information on the Trails, including brochures, public speaking, etc.
- Create Trail volunteer network.
- Solicit corporate, foundation and individual donations.
- Secure public funds for Trail development.
- Coordinate with landowners adjacent to Trail.
- Develop any potential revenue operations on Trail.
- Produce annual reports to MPO and other governmental agencies whose R.O.W. is utilized by the Trails.
- Establish a good working relationship with agencies whose R.O.W. is utilized by the Trails.
- Market & promote the Trail to residents and tourists.
- Initiate and/or coordinate special events on Trails(s).
- Create not-for-profit "Friends of Dade Trails".
- Monitor land use decisions that could negatively impact the Trails.
- Establish & respond to a Trail Hot Line phone number.
- Establish an "Adopt a Trail" program.
- Analyze Trail accidents to improve safety.

Prior to constructing and opening to the public any segment of a Trail or greenway, a Maintenance and Security Plan must be in place. A successful maintenance plan will ensure Trail safety and high usage and prolong the life of the Trail. A security plan will provide Trails users and land owners in close proximity to the Trail with a sense of security.

Maintenance Plan:

On Going

- Sweeping of trails
- Mowing
- Tree and vegetation trimming
- Trash collection
- Graffiti removal
- Minor repairs to trails and amenities
- Quick repair to acts of vandalism
- Repair and/or replace damaged signs
- Seasonal wildflower seeding

Long Term

- Repave deteriorated trails
- Accomplish major repairs to Trail amenities
- Install new landscaping
- Install new Trail amenities

Security Plan:

- Establish a Mutual Aid Agreement between FHP, Metro Dade County Sheriffs Department and the Cities of Homestead and Florida City police departments.
- Establish a Trail Security Task Force that meets quarterly.
- Develop a specific patrol and law enforcement strategy for the Trail system.
- Develop an Emergency Response Plan.
- Establish Trail Ranger patrol with cellular phones.
- Install and maintain emergency phones in remote locations.
- Encourage Trail users to bring personal cellular phones on Trail trips.
- Establish surveillance at Trailheads and rest areas.
- Enforce the arrest of Trail users after hours as trespassers.
- Provide detailed Trail maps to Fire Rescue and ambulance services.
- Ticket Trail users who cause accidents.

To date, research from various existing trail/greenways indicates that there is no statistical increase in crime due to Trails. Therefore, a Security Plan should emphasize prevention. (Please refer to a letter from Sgt. Tim Melnick, Chairperson, Pinellas Trail Security Task Force in the appendix for a report on crime with regard to the heavily utilized Pinellas Trail.)

South Dade Greenway Network

Future Linkages

Future Linkages

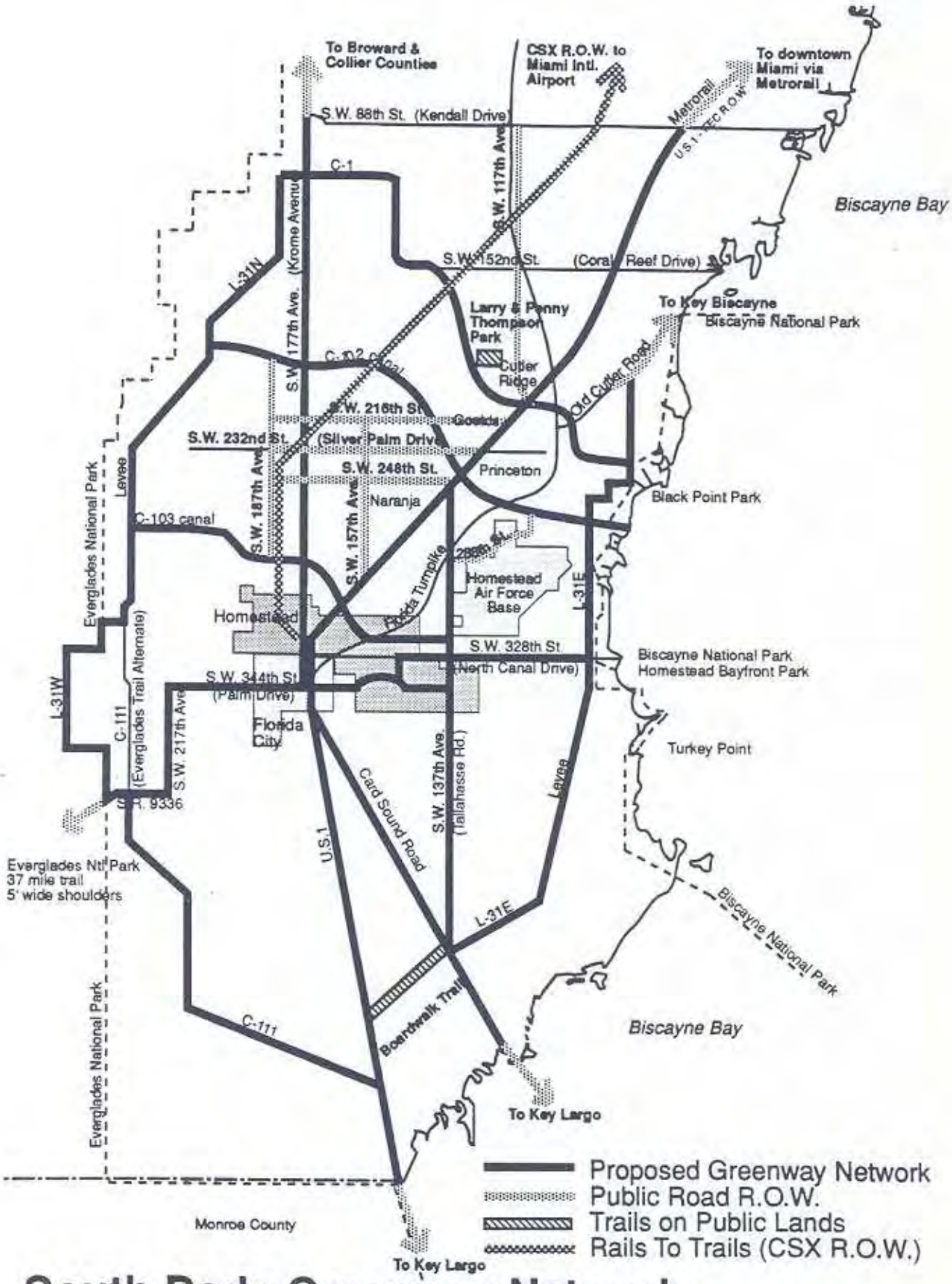
The primary structural characteristic of Greenways is flexibility of routing and connectivity. Unlike fixed parks, greenways can meander to a multitude of destinations, as long as there is a narrow corridor of land available. A comprehensive system of Greenways or Trails provides residents with easier access to community assets, jobs and schools, without the use of an automobile.

The SDGN, at 194 miles, was developed as a comprehensive system. It will serve as major arterials for biking and pedestrian activities and alternative transportation corridors. The SDGN can be accessed by Dade County residents who utilize Metrorail or live near Metrorail stations since there is a direct connection at the Dadeland South Station. It is anticipated that concurrent with completion of the SDGN, local area Trail plans and networks will come on line to hook up to the SDGN, such as in Homestead and Florida City.

In developing the SDGN Master Plan, obvious future connections began to emerge. Some of these linkages are already on the planning boards, but the need for many will become clear with increased usage of the SDGN:

- Florida City Bike Plan (under consideration)
- City of Homestead Bike Plan (requested funding from MPO)
- Larry & Penny Thompson Park to Black Creek Trail (existing trail but needs improvements)
- CSX R/R, Homestead to Miami International Airport, Intermodal Terminal (FDOT considering R.O.W. purchase)
- Everglades National Park, 37 mile trail, wide shoulder and existing internal trail network, park entrance to Flamingo. (funding requested, Phase I study completed, environmental considerations will determine trail width)
- S.W. 117th Avenue from U.S. 1 to Kendall Drive (portions included in TIP for four laning)
- Homestead Air Force Base, Biscayne Drive (S.W. 288th St.) to Allapattah Road (S.W. 112th Ave) (proposed)
- Redlands: S.W. 216th St. (Hainlin Mill Dr.), S.W. 232nd St. (Silver Palm Dr.), S.W. 248th St. (Coconut Palm Dr.) and S.W. 187th Ave. (Redland Road) and S.W. 157th Ave. (Newton Road) (no plans at this time)
- Connection between US 1 and Card Sound Road (no plans at this time)

Long range planning, which is outside the scope and geographical limits of this study, would attempt to connect Dade County Trails and Greenways to Broward, Monroe and Collier counties; and to the Florida National Scenic Trail. The SDGN already connects to Monroe County via the Keys Trail. The CSX R/R, if converted to a Trail and connected with the proposed Intermodal Terminal, would allow the four million residents of Broward and Palm Beach Counties direct access to the SDGN. Two other connectors to Broward County could be explored: Krome & L 30,31&33 canals (SDGN has Krome Trail to Kendall Drive only) and the FEC R/R. The Collier County, Florida National Scenic Trail and Big Cypress National Preserve connection could be accommodated if U.S. 41 is rebuilt to enhance water flows.



South Dade Greenway Network

Scale 1" = 4 miles

Future Linkages

South Dade Greenway Network

Planning Process

Planning Process

To initiate the planning process for the SDGN Master Plan, the Team researched existing plans and policies that would potentially affect any proposed greenways. Courtesy visits were also paid to the City of Homestead and Florida City to alert them to our efforts.

A half day workshop was held with the three agencies (FDOT, MDPW & SFWMD), that own significant amounts of R.O.W. that the Team felt could be utilized for greenways. The purpose of the meeting was to establish preliminary routes and determine any R.O.W. restrictions or limitations.

A conceptual plan was drafted by the Team which became the guiding document for all future review and discussions. Team members scheduled numerous meetings with and solicited comments from various governmental agencies:

- Metro Dade County: MPO, Public Works, DERM, EEL, and Planning
- State: SFWMD, FDOT, Game & Fresh Water Fish Commission
- Federal: Biscayne National Park & Everglades National Park

The Conceptual Plan was presented for review and/or endorsement to the following public & private organizations: (* Resolutions of Endorsement)

- Citizens Transportation Advisory Committee *
- Metro Dade Bicycle Pedestrian Advisory Committee *
- Perrine/ Cutler Ridge Rotary Club
- Florida City Commission *
- Homestead City Council *
- Metro Dade Environmentally Endangered Lands Program * (Land Acquisition & Selection Committee)

The Project Manager presented the SDGN plans to several homeowner groups for input on community issues:

- Redland Citizens Association
- Villages of Homestead *
- Kendall Homeowners Federation *

The Greenway Plan was presented to the general public in the following forums:

- Tropical Agricultural Fiesta (500 signatures on petitions)
- Public meeting and Trail preview tour at Biscayne National Park

During preparation of the Plan, the Team was visited by several experts in the field of Greenways and Trails who reviewed the plans and offered critical comments:

- Joe Cooley, Landscape Architect, National Park Service, Rivers & Trails Conservation Assistance Program, Atlanta
- Fred Ayer, Director, Florida Office of Greenways & Trails, Tallahassee
- Dan Burden, FDOT,Statewide Bike/Ped Coordinator, Tallahassee

The Project Manager and Redland Conservancy Board Members briefed elected and appointed officials during the course of preparing the SDGN Master Plan:

Federal

- Congresswoman Carrie Meek (staff)

Metro Dade & MPO

- Chairperson Arthur Teele
- Commissioner Dennis Moss
- Commissioner Larry Hawkins
- MPO Governing Board (inclusion in TIP)

State

- Senator Daryl Jones
- Senator Mario Diaz Balart
- Representative John Cosgrove

SFWMD

- Annie Betancourt
- Allan Milledge
- Nathaniel Reed
- Sam Poole

South Dade Greenway Network

Appendixes

Appendix A - Resolutions

Citizens Transportation Advisory Committee
Bicycle/Pedestrian Advisory Committee
City of Homestead
City of Florida City
Bicycle Pedestrian Advisory Committee
Kendall Federation of Homeowner Associations
Villages of Homestead

RESOLUTION #9-94

A RESOLUTION ENDORSING THE SOUTH DADE GREENWAYS PLAN, SUBMITTED BY THE REDLANDS CONSERVANCY

WHEREAS, the Metropolitan Planning Organization has established the Bicycle/Pedestrian Advisory Committee (BPAC) to advise it on Bicycle/Pedestrian matters, and

WHEREAS, the Redlands Conservancy has developed a South Dade Greenways Plan, and

WHEREAS, the Greenways network will serve a wide-range of communities, opening them up for bicycle/pedestrian usage, improving connections and access, including connecting two major park systems, and

WHEREAS, this type of project will improve eco-tourism and the quality of life within the effected communities and Dade County as a whole,

NOW THEREFORE, BE IT RESOLVED BY THE BICYCLE/PEDESTRIAN ADVISORY COMMITTEE OF THE METROPOLITAN PLANNING ORGANIZATION FOR THE MIAMI URBANIZED AREA:

SECTION 1. An endorsement is provided to the South Dade Greenways Plan, submitted by the Redlands Conservancy.

The foregoing resolution was offered by Ted Silver, who moved its adoption The motion was seconded by Barry Burak, and being put to a vote, the vote was as follows:

Ernie Anderson - aye
Mark Baum - absent
Barry Burak - aye
Brian Hannigan - absent
David Kaufman - aye
Mary Magazine - absent
Co-Chair Gabriele Marewski - aye
Mary Jane Mark - absent
Neill Miller - absent
Barbara Rupert - aye
Larry Shahboz - aye
Ted Silver - aye
Leo Succar - aye
Co-Chair Jay Weisberg - aye

The Co-Chair(s) thereupon declared the resolution duly passed and adopted this 28th day of July, 1994.

BICYCLE/PEDESTRIAN ADVISORY COMMITTEE
(BPAC)

BY _____
Jeffrey Hunter
BPAC Secretariat

BPAC2 b&c-4

CTAC # 23-94

A RESOLUTION RECOMMENDING APPROVAL OF THE SOUTH DADE GREENWAY NETWORK PLAN FOR ADDITION IN THE FUNDED SECTION OF THE TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

WHEREAS, the Metropolitan Planning Organization (MPO) has established the Citizens Transportation Advisory Committee (CTAC) to advise it on transportation related matters, and

WHEREAS, the Surface Transportation Subcommittee has heard a presentation on this proposal, and

WHEREAS, the Subcommittee recognizes that this is a worthwhile community project, providing a recreational opportunity and tourist attraction for the South Dade area.

WHEREAS, the Subcommittee recognizes that a project applying for TIP funding must compete with all other projects applying for TIP funding.

NOW, THEREFORE, BE IT RESOLVED BY THE CITIZENS TRANSPORTATION ADVISORY COMMITTEE OF THE METROPOLITAN PLANNING ORGANIZATION FOR THE MIAMI URBANIZED AREA:

SECTION 1. That the South Dade Greenway Network Plan is hereby recommended for approval in the funded section of the TIP.

The foregoing resolution was offered by Mac Glasgow, who moved its adoption. The motion was seconded by Leif Gunderson, and upon being put to vote the vote was as follows:

Rick Alayon	- aye	Don Hinson	- aye
Michael Barea	- aye	Keith Jennings	- absent
Victor Chapeton	- aye	Miles Moss	- excused
Dorothy Cissel	- absent	Maria Porrata	- absent
Angel Cortinas	- excused	Patrick Rebull	- aye
Xiomara Diaz	- aye	Stuart Schulman	- aye
Brunhilda Garcia	- aye	Leonard Sperraza	- aye
Jeff Gillman	- absent	Fred St. Amand	- absent
Mac Glasgow	- aye	Kathy Terry	- excused
Richard Gray	- excused	Calvin Zemsky	- excused
Leif Gunderson	- aye	Chairman Norman Wartman	- aye
David Haber	- aye		

The Chairman thereupon declared the resolution duly passed and adopted this 29th day of June, 1994.

CITIZENS TRANSPORTATION ADVISORY COMMITTEE (CTAC)

By _____
Susan Schreiber
CTAC Secretariat

CITIZEN TRANSPORTATION ADVISORY COMMITTEE DADE COUNTY FLORIDA CTAC

B:\CTAC\F285.4 SAS

PASSED AND ADOPTED this 18th day of July, 1994.

J.W. DEMILLY, III
Mayor

ATTEST:

VELVA BURCH
City Clerk

APPROVED AS TO FORM & CORRECTNESS:

MICHAEL E. WATKINS
City Attorney

Offered by MRS. PERRY.
seconded by MR. WARREN.

Motion to adopt by MRS. PERRY.

FINAL VOTE AT ADOPTION

Mayor J.W. DeMilly, III	YES
Vice Mayor Roscoe Warren	YES
Councilman Ruth Campbell	YES
Councilman Jeff Kirk	ABSENT
Councilman Eliza Perry	YES
Councilman Steve Shiver	YES
Councilman Nick Sincore	YES

R94-07-61

RESOLUTION NO. R-94-07-61

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HOMESTEAD, DADE COUNTY, FLORIDA, SUPPORTING THE CONCEPT AND CONSTRUCTION OF THE SOUTH DADE GREENWAY NETWORK PLAN TO PROVIDE BICYCLE PATHS THROUGH SOUTH DADE COUNTY AS PRESENTED BY THE REDLAND CONSERVANCY TO THE CITY COUNCIL AT ITS REGULARLY SCHEDULED MEETING ON JULY 18, 1994. A COPY OF THE PLAN IS ATTACHED HERETO AND MADE A PART HEREOF AS THOUGH FULLY INCORPORATED HEREIN. REQUESTING ALL OTHER GOVERNMENTAL AGENCIES TO SUPPORT AND TO HELP FUND THE CONSTRUCTION OF A SOUTH DADE GREENWAY NETWORK PLAN.

WHEREAS, the City Council, at its regularly scheduled meeting July 18, 1994, heard a plan from the Redland Conservancy to establish the South Dade Greenway Network plan as per the attached Exhibit A, and

WHEREAS, the City Council of the City of Homestead feels it is in the best interest of the citizens of Homestead and surrounding south Dade County to have said Greenway Network Plan in place and operable;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF HOMESTEAD, DADE COUNTY, FLORIDA:

SECTION 1. That the City Council of the City of Homestead hereby endorses the South Dade Greenway Network plan presented to it at its meeting on July 18, 1994 as evidenced by the attached Exhibit A hereto and heartily recommends that all other governmental agencies involved in the planning and construction of said plan give their full participation and support to the construction and completion of said plan.

RESOLUTION NO. 94-50

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF FLORIDA CITY SUPPORTING THE CONCEPT OF THE SOUTH DADE GREENWAY NETWORK PLAN TO PROVIDE BICYCLE PATHS THROUGH SOUTH DADE COUNTY AND REQUESTING ALL GOVERNMENTAL AGENCIES TO SUPPORT AND HELP FINANCE THE SOUTH DADE GREENWAY NETWORK PLAN.

WHEREAS, the City Commission at its meeting of August 9, 1994 was presented with the South Dade Greenway Network Plan by its representatives and

WHEREAS, the City Commission of the City of Florida City approves of the concept of said plan,

NOW THEREFORE, BE IT RESOLVED BY THE MAYOR AND THE CITY COMMISSION OF THE CITY OF FLORIDA CITY, FLORIDA THAT:

1. The City of Florida City hereby approves the South Dade Greenway Network Plan, subject to restrictions, alterations, changes, and other requirements of the Staff of the City of Florida City for that portion of the South Dade Greenway Network Plan which runs through the City of Florida City.

2. The City of Florida City urges all governmental agencies to give their full support to the South Dade Greenway Network Plan.

PASSED and **ADOPTED** by the Mayor and City Commission of the City of Florida City, Florida this 23rd day of August, 1994.

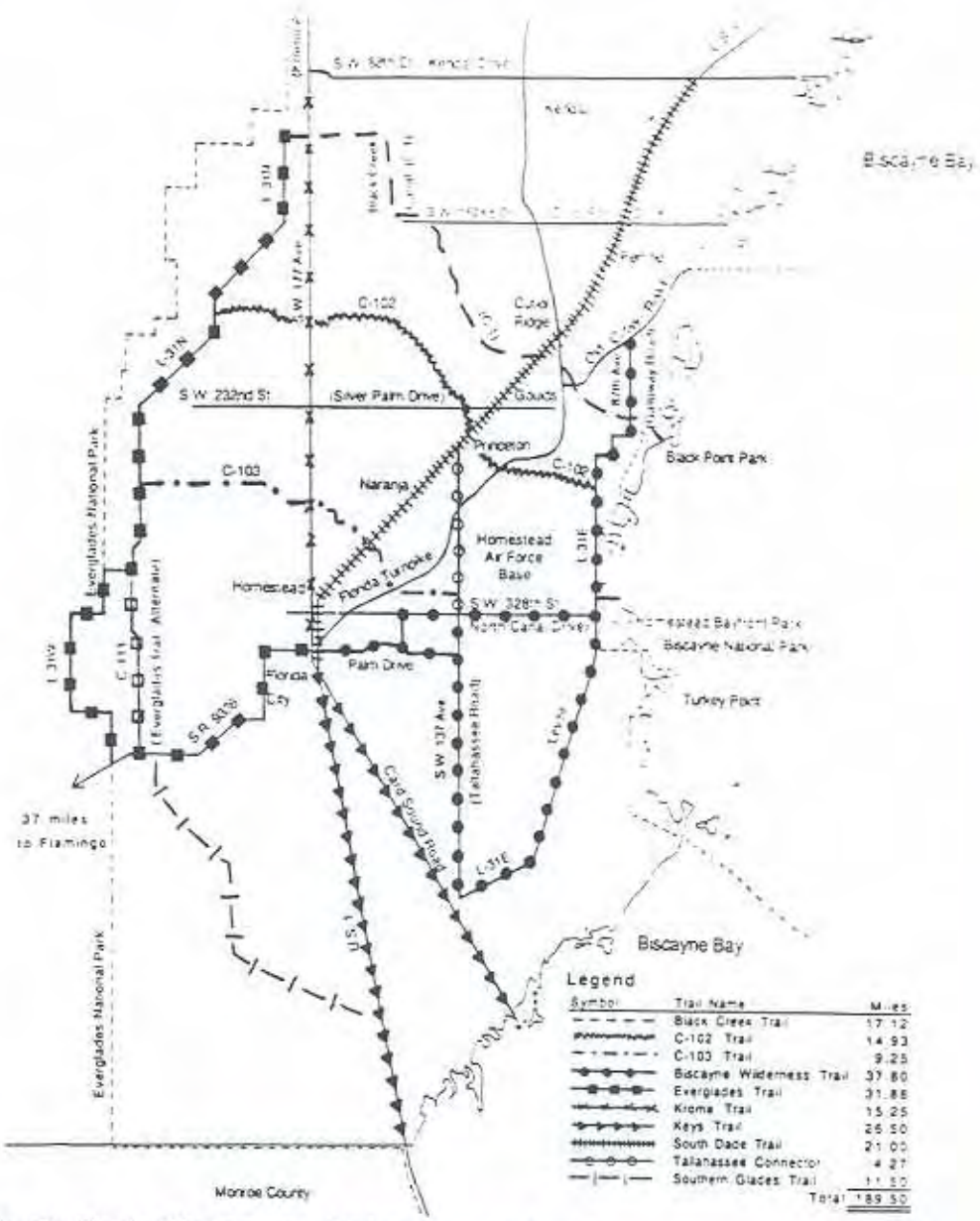
Otis T. Wallace, Mayor

Attest:

Meighan J. Pier, City Clerk

STATE OF FLORIDA
COUNTY OF DADE:

I, Meighan J. Pier, City Clerk
Of the City of Florida City, Florida do hereby certify that the above and foregoing is a true and correct copy of the original thereof on file in this office.
WITNESS my hand and the seal of said City
this 9th day of Sept A.D. 1994.



South Dade Greenway Network - Trail System

Scale 1" = 4 Miles

R94-CD-61

The proposed greenway network is a collection of trails totaling 189.5 miles, comprised of canal and road rights of way, to provide safe, attractive opportunities for recreational and commuter cycling, walking and jogging, horseback riding, canoeing, and fishing to Dade County's residents and to tourists. The network offers paved and unpaved trails, on and off road.

The concept of creating and preserving "Greenways" is rapidly taking the nation by storm, and by no means is Dade County the first to promote such an idea, although this project will be one of the largest systems when completed.

The South Dade Greenway Network will connect two national parks, urban, suburban, and rural communities. With the development of a northern Dade County network it will facilitate a connection amongst three counties in South Florida, Monroe, Dade and Broward.

Prepared for The Redland Conservancy
by Rosenberg Design Group

Kendall Federation of Homeowner Associations

Serving the Greater Kendall Community Since 1976

P.O. Box 160947

Miami, Florida 33176

October 14, 1994

To Whom It May Concern:

The Executive Board of the Kendall Federation Board of Directors discussed, resolved and passed the following resolution;

The Kendall Federation fully endorses and supports the proposed South Dade Greenway Network and feels this will be a substantial enhancement to the community.

The Kendall Federation congratulates the Redlands Conservancy for coordinating and designing this worthwhile project.

Sincerely,

Dorothy J. Cissel, President KFHA
Executive Board of Directors KFHA

RESOLUTION #11-94

A RESOLUTION RESCINDING RESOLUTION #10-94 AND REQUESTING THE MPO GOVERNING BOARD TO REPROGRAM FUNDS ($100,000), ORIGINALLY EARMARKED FOR THE CSX RAILS-TO-TRAILS FEASIBILITY STUDY, TO RETAIN CONSULTANTS TO PREPARE A DETAILED REPORT ON ESTABLISHING A DADE TRAIL AUTHORITY RESPONSIBLE FOR THE MANAGEMENT AND MAINTENANCE OF ALL TRAILS AND GREENWAYS; IDENTIFYING A DEDICATED SOURCE OF FUNDS FOR THE TRAIL AUTHORITY'S OPERATION; FURTHER INSTRUCTING THE BICYCLE/PEDESTRIAN COORDINATOR TO ACT AS PROJECT MANAGER; AND INCLUDING THE INPUT OF THE BICYCLE/PEDESTRIAN ADVISORY COMMITTEE AS PART OF THE SCOPE-OF-SERVICES DEVELOPMENT AND CONSULTANT SELECTION PROCESSES

WHEREAS, the Metropolitan Planning Organization has established the Bicycle/Pedestrian Advisory Committee (BPAC) to advise it on Bicycle/Pedestrian matters; and

WHEREAS, the Miami Urbanized Area has many miles of both on-road and off-road bikeways which are commonly used by many citizens on a continuing basis; and

WHEREAS, the uncertainty of maintenance along these bikeways has been a concern for years, and recently, the Parks & Recreation Dept. has been overburdened by tasks involved with Hurricane Andrew clean-up; and

WHEREAS, funds for a CSX rails-to-trails study were placed on hold following a request by the Bicycle/Pedestrian Advisory Committee, pending further negotiations between the FDOT and the CSX; and

WHEREAS, these negotiations and a decision as to the inclusion of existing tracks within of the rail line right-of-way, have been estimated to stall the rails-to-trails study up to five years or beyond;

NOW THEREFORE, BE IT RESOLVED BY THE BICYCLE/PEDESTRIAN ADVISORY COMMITTEE OF THE METROPOLITAN PLANNING ORGANIZATION FOR THE MIAMI URBANIZED AREA:

SECTION 1. that a request is made to the MPO Governing Board to reprogram funds ($100,000), originally earmarked for the CSX Rails-To-Trails Feasibility Study, to retain consultants to prepare a detailed report on establishing a Dade Trail Authority responsible for the management and maintenance of all trails and greenways; and

SECTION 2. identifying a dedicated source of funds for the Trail Authority's operation; and

SECTION 3. further instructing the Bicycle/Pedestrian Coordinator to act as Project Manager; and

SECTION 4. including the input of the Bicycle/Pedestrian Advisory Committee as part of the scope-of-services development and consultant selection processes.

The foregoing resolution was offered by Mary Magazine, who moved its adoption. The motion was seconded by Larry Shahboz, and being put to a vote, the vote was as follows:

Ernie Anderson - absent	Mary Jane Mark - absent
Mark Baum - aye	Neill Miller - absent
Barry Burak - aye	Barbara Rupert - absent
Brian Hannigan - absent	Larry Shahboz - aye
David Kaufman - aye	Ted Silver - aye
Mary Magazine - aye	Leo Succar - absent
Co-Chair Gabriele Marewski - aye	Co-Chair Jay Weisberg - aye

The Co-Chair(s) thereupon declared the resolution duly passed and adopted this 22nd day of September, 1994.

BICYCLE/PEDESTRIAN ADVISORY COMMITTEE
(BPAC)

BY _____
Jeffrey Hunter
BPAC Secretariat

BPAC3:g10:2

Appendix B - Letters

Everglades National Park
Biscayne National Park
National Park Service, Rivers, Trails & Conservation Assistance
Senator Diaz-Balart
Department of Environmental Protection, Office of Greenways and Trails (2)
Florida Game and Fresh Water Fish Commission
Florida Greenways Commission
Metropolitan Planning Organization (4)
Metro Dade DERM
Metro Dade Art in Public Places Program
Florida Department of Transportation (2)
Dunedin Police Department

September 30, 1994

Ms. Kitty Roedel
The Redland Conservancy
P.O. Box 924648
Princeton, FL 33092

Dear Ms. Roedel,

On behalf of the Villages of Homestead Overall Homeowners Association Board, I would like to indicate our wholehearted support of the South Dade Greenway Network. We believe that the Greenways will have a positive effect on Homestead and on the Villages of Homestead.

Sincerely Yours,

Barbara Huber, President

ska:BH

1851 South Canal Drive ☼ Homestead, FL ☼ 33035

United States Department of the Interior

NATIONAL PARK SERVICE
Biscayne National Park
Post Office Box 1369
Homestead, Florida 33090-1369

TAKE PRIDE IN AMERICA

IN REPLY REFER TO

A40

SEP 20 1994

Ms. Kitty Roedel
Executive Director
The Redland Conservancy
P.O. Box 92468
Princeton, Florida 33092

Dear Ms. Roedel:

Please accept our sincere congratulations for the great work done by you and your organization to initiate a greenways program. The economic, natural, aesthetic and recreational values of the area can be greatly enhanced by a program such as yours.

It is our understanding that the Rivers, Trails & Conservation Assistance group at our Regional Office will assist you in the preparation of a pamphlet, and educational/information piece and in the establishment of a public involvement process.

If we can further assist you in your worthy effort, please let us know.

Sincerely,

Richard W. Frost
Superintendent

If you would like, we could also assist in establishing or formating a public involvment process. We have found that projects with a wide base of grassroot level support along with governmental support have a longer and more active life.

In the meantime, we will be happy to forward you any information we have regarding ecotourism and the cost benefits of greenways I will also investigate and try to determine the status of any Army Corps of Engineers programs that are addressing utilization of levees as greenways.

You are to be commended on the amount you have accomplished in such a short period of time. I certainly hope we will be able to assist you in your effort. Please feel free to give me or Joe Cooley a call and we can further discuss how we can help.

Sincerely,

Wallace C. Brittain

Wallace C. Brittain
Chief, Conservation Assistance Branch

cc:
L. Belli, Everglades National Park
D. Frost, Biscayne National Park

United States Department of the Interior

NATIONAL PARK SERVICE
Everglades National Park
and
Dry Tortugas National Park
40001 State Road 9336
Homestead, Florida 33034-6733

IN REPLY REFER TO
L30

Ms. Kitty Roedel
Executive Director
The Redland Conservancy
PO Box 924684
Princeton, Fl 33902

Dear Ms. Roedel:

We are providing this letter in support of The Redland Conservancy's efforts to obtain funding for Phase I of the South Dade Greenway Network. This proposed Phase I demonstration project will link the Cutler Ridge trail with Biscayne National Park, Homestead Bayfront Park, and Everglades National Park through the Biscayne Wilderness and Everglades Trails. These trails will provide South Dade residents and visitors with a wonderful recreational opportunity and a unique way to see the wetland types characteristic of the Everglades ecosystem.

Everglades National Park looks forward to continuing to work with The Redland Conservancy and the National Park Service's Rivers, Trails, and Conservation Assistance Program on this exciting project.

Sincerely,

Richard G. Ring
Superintendent

RIVERS, TRAILS & CONSERVATION ASSISTANCE
NATIONAL PARK SERVICE
SOUTHEAST REGIONAL OFFICE
Richard B. Russell Bldg.
75 Spring Street, S.W. - Suite 1020
Atlanta, Georgia 30303

Phone: (404) 331-5838 FAX: (404) 730-3233 1-800-524-6878

August 29, 1994

Ms. Kitty Roedel
Executive Director
The Redland Conservancy
P.O. Box 924648
Princeton, FL 33092

Dear Ms. Roedel:

I am sorry I was unable to come to Miami to discuss the South Dade Greenways Program with you but Joe Cooley indicated that he had a very good meeting with you and your consultant. He has brought me up to date on the project and your efforts.

We have reviewed the proposed assistance list you provided Mr. Cooley and I believe we can be of assistance to you in some of the efforts. We can not provide site specific ecological or historical interpretation assistance, but we certainly can assist in the develop of a comprehensive signage program. One possible product might be a design pamphlet illustrating a central theme or "look" for all the greenway signs. Design criteria could be established to meet the different requirements of state, local, and Federal agencies yet provide a unifiying element for the various greenway segments. It is my understanding that the first phase of the project, a section along U.S. Highway 1, is slated for construction startup in approximately 265 days with construction documents going out for bid in approximately 165 days. I see no problem of having design criteria established prior to that date.

The October deadline for a full color map/informational piece is really to soon to allow us to produce camera ready artwork. We can assist you with the graphic design and provide camera ready artwork for a full color printing but the process would take approximately eight weeks. We would probably be using a graphic design consultant and time is necessary to provide preliminary layout concepts, sketches, budgets, review of concepts, clarifications of text, modifications, review of mockup by all concerned, finalization of artwork, and color separations. You would need to provide the text, finished maps, layout input, and any photos that would be applicable. If the October deadline is firm we could possibly assist you in the same manner but on an educational/information piece that could be used to promote the South Dade greenway system. In conjunction with such a document we would be happy to help you develop an overall marketing approach by sharing techniques and methods that have been successful in other communities.

Department of
Environmental Protection

Lawton Chiles
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Virginia B. Wetherell
Secretary

September 15, 1994

Kitty Roedel, Executive Director
The Redland Conservancy
P.O. Box 924648
Princeton, FL 33092

Dear Ms. ~~Roedel~~ Kitty:

I want to thank you for the warm hospitality extended to me during my visit to Miami. Your hard work handling the tour of the Redlands area was a tremendous success and the Office of Greenways and Trails is excited about becoming involved with the South Dade Greenway Network. Our office feels strongly about cooperative efforts and we have no doubt that a partnership with Dade County will be very rewarding for everyone involved.

Enclosed, you will find a sample of a partnership agreement our office uses in similar situations and also there is an application to join the Florida Recreational Trails Council. You may return them to our office when you have completed them. The information you requested regarding the connection to the Florida Trail or the National Scenic Trail is being researched and we will have an answer for you shortly. We are extremely excited about including the South Dade Greenway Network in the statewide comprehensive plan for greenways and trails.

We would like to plan another field trip for additional staff from our office some time in October. If possible we would like to have someone from your organization visit our Tallahassee office to better understand the services we can provide. In the mean time, if there is anything we can do, please do not hesitate to call our office at (904)488-3701.

Yours in Better Government,

Fred Ayer, Director
Office of Greenways and Trails
325 John Knox Road
Woodcrest Office Park, Bldg 500
Tallahassee, FL 32303

FDA/sw

cc: Senator Mario Diaz-Balart
Representative Alex Villalobos
Gabriele Marewski,Tropical Tours
Thomas Singleton,Governmental representative, SFWMD
Jeff Hunter, Bicycling/Pedestrian Coordinator, Metro-Dade
Maria Fernandez-Porrata, Project Development Manager, DOT
Bill Rosenberg, President, Rosenberg Design Group

Printed on recycled paper

THE FLORIDA SENATE

Tallahassee, Florida 32399-1100

SENATOR MARIO DIAZ-BALART
37th District

COMMITTEES:
Appropriations, Sub. D, *Chairman*
Community Affairs
Corrections, Probation and Parole
Natural Resources and Conservation
Transportation
JOINT COMMITTEE:
Legislative Auditing

September 30, 1994

The Honorable Ben Watts
Burns Building
605 Suwannee Street
Tallahasssee, Florida 32399-0450

Ben

Dear Secretary Watts:

Thank you for the time you took yesterday to meet with my aide and the representatives from the Redland Conservancy. I understand that you were very helpful in explaining the restrictions faced by the Department of Transportation in trying to assist with specific local projects; even worthwhile projects such as this one.

I am encouraged by your observation that perhaps this issue can be presented to the MPO for their reconsideration. I hope we can continue to count on your valuable counsel in the event that the Redland Conservancy, in consultation with Secretary Stan Cann, is successful in promoting the South Dade Greenway Network to the MPO.

Once again, I appreciate your personal attention to this matter.

Sincerely yours,

Mario Diaz-Balart

MDB/rfc

cc: Secretary Stan Cann
Mr. Jose Mesa
Ms. Kitty Roedel

REPLY TO:
☐ 8890 Coral Way, Suite 215, Miami, Florida 33165 (305) 227-7690
☐ 334 Senate Office Building, Tallahassee, Florida 32399-1100 (904) 487-5130

PAT THOMAS
President

ANDER CRENSHAW
President Pro Tempore

JOE BROWN
Secretary

WAYNE W. TODD, JR.
Sergeant at Arms

FLORIDA GAME AND FRESH WATER FISH COMMISSION

JOE MARLIN HILLIARD
Clewiston

J. BEN ROWE
Gainesville

JULIE K. MORRIS
Sarasota

QUINTON L. HEDGEPETH, DDS
Miami

MRS. GILBERT W. HUMPHREY
Miccosukee

ALLAN L. EGBERT, Ph.D., Executive Director
WILLIAM C. SUMNER, Assistant Executive Director

EVERGLADES REGION
551 North Military Trail
West Palm Beach, FL 33415
(407) 640-6100

September 27, 1994

Ms. Kitty Roedel, Executive Director
The Redland Conservancy
P.O. Box 924648
Princeton, FL 33092

Dear Ms. Roedel,

Thank you for meeting with us to discuss your plans for a trail system in southern Dade County. I understand your field trip with biologist Luis Gonzalez to the Southern Glades Wildlife and Environmental Area (SGWEA) was informative. As discussed at the meeting, the Florida Game and Fresh Water Fish Commission manages the freshwater fish, wildlife, and public recreation on the SGWEA under contract with the South Florida Water Management District, which owns the property.

After discussing your plans with biologists Steve Coughlin and Luis Gonzalez, I believe we will be able to assist you in the development of trail signage along the proposed trail on the C-111 in the interior of SGWEA. Please keep us advised as your trail plans develop and we will coordinate the sign placement with you.

I would suggest you contact Mr. Fred Schiller, the recreational planner for the SFWMD, to advise him of your plans for trail development in this area. Please let me know if I can be of further assistance.

Sincerely,

Laura B Richards

Laura B. Richards
Regional Wildlife Biologist

WLD 8-5-2 (S. Glades)
cc: Steve Coughlin
Luis Gonzalez

Department of
Environmental Protection

Lawton Chiles
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Virginia B. Wetherell
Secretary

October 14, 1994

Kitty Roedel, Executive Director
The Redland Conservancy
P.O. Box 924648
Princeton, Fl 33092

Dear Ms. Roedel:

As you know, the Department of Environmental Protection through the Office of Greenways and Trails (OGT) is in the process of developing a statewide master plan which will eventually provide a network of continuous greenway corridors throughout the state of Florida. My recent tour with you on the 210 mile South Dade Greenway and our subsequent review of the master plan you submitted is very exciting.

OGT feels very strongly that the multiple use "greenway" partnership between DEP and South Dade County is a necessary component to the statewide network. We agree with you that this multiple-use recreational approach with various governmental and private partners is the key to managing Florida's ecosystem and recreational needs. We want to reiterate our intention of including the South Dade system in our master plan.

If we can ever be of assistance to you, please do not hesitate to call our office at (904) 488-3701.

Yours in Better Government,

Fred Ayer, Director
Office of Greenways and Trails
325 John Knox Road
Woodcrest Office Park, Bldg. 500
Tallahassee, Florida 32303

FDA/sw

cc: Senator Rick Dantzler
Senator Mario Diaz-Ballart
Representative John Cosgrove
Secretary Virginia Wetherell
Wayne Voigt

METRO-DADE

METROPOLITAN PLANNING ORGANIZATION (MPO) SECRETARIAT

OFFICE OF COUNTY MANAGER
SUITE 910
111 NW FIRST STREET
MIAMI FLORIDA 33128-1904
(305) 375-4507

October 14, 1994

Ms. Kitty Roedel, Executive Director
The Redlands Conservancy
828 NW 9 Ave.
Miami, FL 33136

Dear Ms. Roedel:

In response to your request concerning the status of bicycle/pedestrian projects of interest to your organization, we can inform you of the following:

1. South Dade Greenway Network Demonstration Project (Phase One)

At its May 12 meeting, the MPO Governing Board voted to include this project in the Dade County TIP subject to the approval of federal funds. The project will be included in the non-motorized section of the 1995 TIP as a locally funded item of $200,000 in County highway funds with the notation that this funding is contingent upon the approval of Federal transportation funds.

2. South Dade Greenways Network

At the May 12 meeting, the MPO Board also agreed to include this project in the 1995 TIP as an unfunded item. The project will be included in the unfunded needs (non-motorized) section of the 1995 TIP with a projected cost of $7.5 million, as per the recommendation of MPO Chair Arthur E. Teele, Jr.

I trust that the above information addresses the questions you raised. If you have further questions please call Irma San Roman of the MPO staff at at 375-4507.

Sincerely,

Jose-Luis Mesa, Director
MPO Secretariat

bp2:j14c-4

The Florida Greenways Program
926 East Park Avenue
Post Office Box 5948
Tallahassee, Florida 32314-5948
(904) 222-6277
Fax (904) 222-1117

Mark A. Benedict, Ph. D.
Program Director

October 13, 1994

Kitty Roedel
The Redlands Conservancy
828 NW 9th Avenue
Miami, Florida 33136

Dear Kitty,

Thank you for sending me an advance draft of your *South Dade Greenway Network Master Plan*. It is very impressive.

As I told you, the Florida Greenways Commission is in the process of finalizing the report to the Governor to be delivered on December 15. The report's "Florida Greenway Map Series" will depict existing greenways and trails and proposed greenways and trails that have been approved by a governmental entity. Since the South Dade Greenway Network is a part of the approved TIP for Dade County, the network's greenways and trails will be included in the commission's map series. In addition, the South Dade planning effort will be included in the report's community greenway project s summary table.

As you requested, the draft 150 greenways celebration fact sheet is attached to this memo. It briefly describes the commission's proposed 150 greenways recognition program.

Sincerely,

Mark A. Benedict

Mark A. Benedict
Executive Director
Florida Greenways Commission

Metro-Dade
BICYCLE/PEDESTRIAN PROGRAM
METRO-DADE CENTER, 111 N.W. FIRST STREET, SUITE 910, MIAMI, FLORIDA 33128

October 14, 1994

Kitty Roedel
Redlands Conservancy
828 NW 9 Ave.
Miami, FL 33136

Dear Ms. Roedel:

First, I'd like to congratulate you on the work you and the Redlands Conservancy have performed in completing the South Dade Greenways Network. Your team has done an outstanding job on the plan.

Once these projects are constructed Dade County citizens and visitors will benefit greatly by the wide variety of trails and amenities provided in the plan. Without individuals like you to drive this idea process into working plans, projects such as these may never materialize. I'll be looking forward to seeing the opening of Phase I in a relatively short time.

The Greenways Network of paved trails will be incorporated into our Dade County Bicycle Facility Plan. This network will enhance the existing off-road system and promote bicycling within our community.

See you on the trails,

Jeff Hunter, Coordinator
Dade County Bicycle/Pedestrian Program

b/p2:114b-4

Printed on Recycled Paper

Metro-Dade
BICYCLE/PEDESTRIAN PROGRAM
METRO-DADE CENTER, 111 N.W. FIRST STREET, SUITE 910, MIAMI, FLORIDA 33128

September 26, 1994

Kitty Roedel
Redlands Conservancy
828 NW 9 Ave.
Miami, FL 33136

Dear Ms. Roedel:

As you are aware, the Metropolitan Planning Organization (MPO) received 31 project proposals for ISTEA transportation enhancement projects this year. Of those, 16 applications were bicycle and pedestrian related. These projects were then evaluated by an interagency working group and by the Bicycle/Pedestrian Advisory and Citizens Transportation Advisory Committees.

Those projects which have received high priority from the MPO will be eligible for programming by the Florida Dept. of Transportation (FDOT) for inclusion in the state work program in fiscal years 1997-98, 1998-99, and 1999-2000, provided that the projects are feasible and can be accommodated within the funding limitations of the enhancement program. Approximately $3.5 million/year is available under the program.

I am pleased to inform you that after these formal reviews, Phase I of the South Dade Greenways Plan was rated #1 from the bicycle/pedestrian related projects submitted during the process. The MPO Governing Board has handed over these projects to the FDOT to eventually be funded through these ISTEA grants.

Should you need further information, please contact me at 375-4507.

Sincerely,

Jeff Hunter, Coordinator
Dade County Bicycle/Pedestrian Coordinator

METROPOLITAN DADE COUNTY, FLORIDA

METRODADE

DERM

ENVIRONMENTAL RESOURCES MANAGEMENT
33 S.W. 2nd AVENUE
MIAMI, FLORIDA 33130-1540
(305) 372-6666

August 26, 1994

Kitty Roedel, Executive Director
The Redland Conservancy
828 N.W. 9th Avenue
Miami, Florida 33136

Re: Proposed South Dade Greenway Network

Dear Ms. Roedel:

We have reviewed the preliminary plan for the South Dade Greenway Network. We support your efforts and believe you have developed an innovative project which will enhance the public's access to the natural areas of southern Dade County.

Please be advised that there may be portions of the Greenway Network that affect wetlands. Therefore, any component of the Greenway project which involves the placement of fill in wetlands or the removal of vegetation in wetland areas will require a permit from our Department. Permits may also be required from the State of Florida as well as the U.S. Army Corps of Engineers for such work. Also note that any filling that is permitted will require on-site or off-site mitigation.

Good luck with the project and should you require any additional information, please feel free to call on us.

Sincerely,

David Ettman
Assistant Director

DE:jj

107.07-17A METRO-DADE/GSA-MAT MGT

MEMORANDUM

TO: Joaquin G. Avino, P.E., P.L.S.
County Manager
Attn: Jose Luis Mesa
MPO Secretariat

DATE: June 1, 1994

SUBJECT: Redland Conservancy

FROM: Arthur E. Teele, Jr.
Chairperson
MPO Governing Board

Attached please find a letter from Ms. Kitty Roedel, Executive Director of The Redland Conservancy. In her letter Ms. Roedel requests that the MPO investigate a dedicated source of funds for trail management and maintenance. These functions could be directed through the Pedestrian/Bicycle Advisory Committee, appointed by the MPO Governing Board.

The attached is forwarded for your review and appropriate action.

Regards.

[redacted]

Attachments

AET/bwhj

cc. Mr. Jose Luis Mesa, MPO Secretariat

MPO SECRETARIAT
REC'D. JUN 03 1994

FLORIDA DEPARTMENT OF TRANSPORTATION
LAWTON CHILES
GOVERNOR
BEN G. WATTS
SECRETARY

Environmental Management Office
1000 N.W. 111th Avenue, Room 6103
Miami, Florida 33172

October 18, 1994

Ms. Kitty Roedel, Executive Director
The Redland Conservancy
P.O. Box 924648
Princeton, Florida 33092

RE: Work Program Item Number: 6123249 State Project Number: 87099-1517
Federal Aid Project Number: XA-XU-6015(1) County: Dade
Description: Alternatives TS-1 & TS-2 relation to the South Dade Greenway Network Plan/ The Redland Conservancy

Dear Ms. Roedel:

The Final Engineering Report for the above referenced project, which was completed this past September along with various other environmental documents will be submitted to the Federal Highway Administration , for their approval. The proposed typical sections will provide a safe and adequate space for both pedestrian and bicycle traffic.

TS-1 Limits: S.W. 137th Avenue (Tallahassee Road) from the Turnpike to north of S. W. 288th Street.
This typical, will provide a 6 foot sidewalk on the west side and 8.5 foot sidewalk on the east side, which can be shared by pedestrian and/or cyclists respectively.

TS-2 Limits: S.W. 137th Avenue (Tallahassee Road) from south of S.W. 288th Street to S.W. 336th Street.
This typical will provide a 6 foot sidewalk on the west side and 8 foot sidewalk on the east side in addition to 4 foot bikepaths adjacent to southbound and northbound travel lanes.

I hope this letter provides you with confirmation on what pedestrian and bicyclist features are being planned as part of the improvements to S.W. 137th Avenue/Tallahassee Road.

Sincerely,

Gary L. Donn, P.E.
District Environmental Management Engineer

DEPARTMENT OF TRANSPORTATION

BEN G. WATTS
SECRETARY

September 21, 1994

Ms. Kitty Roedel, Executive Director
Redland Conservancy
P.O. Box 924648
Princeton, Fl. 33092

RE: US-1 Exclusive Buslanes
S.P.N. 87100-1516
W.P.I. 6113959

Dear Ms Roedel:

In mid August you requested on behalf of the Redland Conservancy that the Department approve the attached signage for the US-1 Exclusive Buslanes. In an earlier meeting we discussed the South Dade Greenway Network to be a system of bicycle paths and lanes each path having a distinct name representing its community or area. Your group designated the busway the South Dade Trail. The request you submitted has circled through the Department with a general approval and has now reach my desk for final implementation.

Today, I spoke with Rory Santana, Traffic Operations Engineer, to discuss State policy on this request. As per this conversation the signs can be placed on the bicycle trail only. The signs can not face US-1 Highway or any of the local streets. Mr. Santana requested that the size of the signs should be similar to the "Adopt a Highway" signs which can be seen on our State Highway System. He also informed me that the bicycle path was its own independent corridor and the color scheme did not necessarily have to follow State Roadway Standards.

I would like to sit down with you as soon as possible to finalize the signage and place it in our construction project.

Sincerely,

Alicia Cuervo
Intermodal Engineer
(305) 377-5911

cc: Servando Parapar, FDOT
John Martinez, FDOT
Rory Santana, FDOT
Stephanie Grindell, FDOT

September 19, 1994

Kitty Roedel
Redland Conservatory

Dear Kitty,

Here is some of the information that you requested on the operation of the Pinellas Trail Security Task Force.

The task force was a part of the Pinellas Trail from the start. Early on the planners within the County realized that one of the main issues of the proposed trail would be security. The Trail borders all types of private property, from residential to industrial, where concerns for safety and security was paramount. In a very wise step the County planners decided to let the experts, the various police agencies, handle the questions and concerns. The Chiefs of Police and County Sheriff were consulted and this was the birth of the Security Task Force.

The task force is made up of Law Enforcement representatives from all the corporate and unincorporated areas that the Trail transect along with County planning and engineering people. A Law Enforcement member of that group is the chairman and runs the meetings. The county people actually provide the background support in that they schedule the meetings, send out agendas, organize what activities are needed and generally point the Law Enforcement people in the right direction. The Law Enforcement representatives deal with the law enforcement issues and leave the rest to the planners. It works very well this way.

We also believe that the chairman needs to be, and stay, a Law Enforcement person. If the public calls and/or the media calls upon the task force for security information it should be a security person that answers the question. Credibility may suffer otherwise.

I am sending along a copy of the last meeting agenda so you can see how the flow of the meetings are structured. We are not formal in any way. A lot of questions arise and a lot of answers are discovered. Meetings rarely exceed ninety minutes. We also keep the meetings on a quarterly schedule. Any more frequent and you run the risk of killing the bug with a sludge hammer. Any less frequent and you run the risk of members loosing interest. Quarterly works very well for us. Try it and see how it works for you. If an emergency arises you can always call a special meeting. We usually call upon the chairman to help put out the fires that start sometimes between meetings.

The task force is going to look at a rotating chairman policy where the leadership of the task force is passed among the members. It has been suggested that a chairman and vice-chairman be appointed where the chairman holds the position for one year and

then it's passed to the vice-chairman, a new vice-chairman is appointed, and so on. It spreads the "responsibility" around somewhat more equally among the participants. Our first chairman held the position for four years and I've had it for one and a half years.

The task force chairman also attends other meetings where information and or answers to questions are needed. I have attended about six or eight other meetings in my tenure. Some of those meetings did take place out of town but that was my option to attend or not.

For any additional information on the start-up of the Security Task Force, Kay Medwick, of the Pinellas County Planning Department, should be called. She is a world of information about the Trail. Her phone number is 813-464-4751. She's the best.

Your second question was about the crime on the trail. As I explained on the phone, we are experiencing a downward trend in the number of reported crimes along the trail. Let me back up a little. At first, there was a real concern that the trail would be nothing more than a "corridor of crime". An easy road for the criminal to travel on when they plied their craft. A public nuisance. It didn't happen.

Initially, most of the Law Enforcement people tried to keep statistics on this "increase" in crime that the Trail was bringing to their communities. What they found is that crime did not increase as a result of the Trail. Crime still happened. Crime still happened on the trail. But, and this is an important but, crime did not increase. Let me explain. Unfortunately, crime infects almost everywhere people live today. It seems that it doesn't matter if your rich, poor, ethnic, live in a big house or a little house, "nice" neighborhood, "poor" neighborhood, the potential to be a victim of crime is there. That doesn't change for the trail. You can be a victim of a crime on the trail as you can be anywhere else.

What is significant is that, here in Pinellas County, well over one million people use the Trail every year (More than our resident population). Crime did not increase. The Trail was not a pot of ready victims to be plucked by the unsavory. It didn't happen as predicted. The Pinellas Trail is a safe place to be. People "feel" safe on the trail and they <u>are</u> safe on the trail. The Trail has been so well received by the people that they help control some of the problems. With so many people on the trail it is difficult for potential abusers to act.

The third question was about emergency situations along the Trail and how they are handled. As with all outdoor activities from time to time someone is injured while playing. Most of what we have seen are minor injuries from not wearing protective gear (In-line skates), not paying attention (Running off the trail on your bicycle) and general mishaps. Pinellas County has the enhanced 9-1-

l emergency system which works very well. Calls that come in are automatically routed to the local police and the ambulance. quick responses are the norm.

We have had a few vehicle vs. bicycle crashes at some of our intersections along the Trail. None of those have been a fatality. What usually happens is that the bicyclist will run the stop signs at the intersections because they don't like to stop. The car will be passing and crash. A continuing education and police enforcement for the problem will keep this under control. Our police department will issue citations to bicyclists for flagrant violations. Other departments do the same. It all depends on the problem and where it is.

One last thing about the trail. This trail was constructed very much like a regular street. It is capable of vehicular traffic even though vehicles are banned. The reason for this is two-fold. One, the Trail will hold up longer. Two, emergency (police and medical) can use the trail if needed. At each intersection short poles block entry to the Trail for all but the bicycle and pedestrian. One of those poles is removable. This will permit the passing of a large car and/or ambulance in case the emergency is located between blocks or on a long stretch of open area.

I hope this has answered your questions about the trail and the security of it. Everything new has it's problems. The Trail was no different. It has turned out to be a great asset with very little need for concern.

Tim Melnick
813-738-1831

PINELLAS COUNTY
METROPOLITAN PLANNING ORGANIZATION
14 South Fort Harrison Avenue Clearwater, Florida 34616
(813) 464-4751

AGENDA
PINELLAS TRAIL SECURITY TASK FORCE
THURSDAY, SEPTEMBER 15, 1994 - 9:00 A.M.
PINELLAS COUNTY PLANNING DEPARTMENT, SECOND FLOOR
14 SOUTH FORT HARRISON AVENUE
CLEARWATER, FLORIDA 34616

I. **CALL TO ORDER AND INTRODUCTIONS**
Sgt. Tim Melnick, Chairman
Dunedin Police Department

II. **MEETING MINUTES**
Review and approve meeting minutes from June 9, 1994

III. **ELECTION OF OFFICERS**
Elect Chairman and Vice Chairman

IV. **REPORT FROM TRAIL PARK RANGER**
Jerry Cumings, Pinellas County Park Department

V. **PROGRESS REPORT ON DESIGN/CONSTRUCTION**
Pinellas County Engineering Department

VI. **REPORT FROM SHERIFF'S DEPARTMENT**
Lt. Steve Shipman
Lt. Tom Evans

VII. **REPORTS FROM LOCAL POLICE DEPARTMENTS**

Dunedin	Tim Melnick
Largo	
Belleair	Bob Botsford
Clearwater	B. Farias
Gulfport	Curt Willocks
Tarpon Springs	Joe Ferrantelli
St. Petersburg	Ed Mesmer, Linda Brubaker, Phil Quandt

VIII. **REPORT ON COMMUNITY ACTIVITIES**
Scott Daniels, Pinellas Trails, Inc.

X. **ADJOURNMENT**
Next meeting scheduled for December 15, 1994 or as needed.

MPO/PTSEC/AF PINELLAS AREA TRANSPORTATION STUDY

Appendix C - Policies

South Florida Water Management District
Florida Department of Transportation (2)
Metro Dade County Public Works

General Rules and Regulations

CHAPTER 40E-7

MISCELLANEOUS PROVISIONS

PART V PUBLIC ACCESS AND USE

40E-7.511 Policy and Purpose
40E-7.520 Scope and Applicability
40E-7.521 Definitions
40E-7.523 Access to Management Areas; Closures
40E-7.525 Use of Vehicles, Airboats, and Aircraft; Navigational Restrictions
40E-7.526 Equestrian Activities; Use of Saddle Animals
40E-7.527 Hunting; Possession and Use of Firearms
40E-7.529 Overnight Camping
40E-7.532 Operating Hours
40E-7.534 Special Use Licenses
40E-7.537 General Prohibitions
40E-7.539 Penalties

40E-7.511 Policy and Purpose

The purpose of the rule in this part is to further implement the legislative intent expressed in Sections 259.101, 373.016(2)(h), and 373.59(10) Florida Statutes and District Land Management Policy 5.001, and therefore, to establish regulations governing public access to certain District lands and use of said lands for general public recreational and allied purposes. It is the intent of these regulations to protect the water resources, native plant communities, fish and wildlife populations, and related natural features of these lands together with any cultural improvements thereon.

Specific Authority 259.101, 373.044, 373.113, 373.171 F.S.
Law Implemented 259.101, 373.016, 373.056, 373.103, 373.59 F.S.
History—New 5/24/94

40E-7.520 Scope and Applicability

(1) Everglades Water Conservation Areas One, Two, and Three are exempt and will not be affected or governed by these rules.

(2) The general regulations contained herein are broad in scope and applicable to all management areas designated in the Public Use Guide.

(3) The regulations are applicable to all persons entering upon, using, or visiting said management areas.

(4) A copy of the regulations contained herein shall be posted at entry points, activity areas, and recreation sites equipped with bulletin boards or otherwise made reasonably available to the public.

(5) The District shall publish and make available to the public, upon request, a "Public Use Guide". The Public Use Guide will be considered by the Governing Board at a public meeting advertized in accordance with Chapter 120, Florida Statutes. Only rules adopted by the Governing Board shall be effective. Copies of the Public Use Guide are available during working hours from the District headquarters.

(6) All management areas are open for general public recreational purposes unless otherwise limited, restricted, or prohibited by special provision in this Rule or in the Public Use Guide consistent with the environmental sensitivity of these areas and the purposes for which the lands were acquired. Nothing in this rule shall prevent other federal, state, or local agencies, including but not limited to those with management contracts with the District, from requiring compliance with their own rules, regulations, or laws to the fullest extent of their lawful authority.

Specific Authority 373.044, 373.113 F.S.
Law Implemented 373.016, 373.056, 373.139, 373.1401, 373.59 F.S.
History—New 5/24/94

40E-7.521 Definitions

When used in this part:

(1) "Activity area" means a zone within a management area designated for specific recreational activities.

(2) "Allied purposes" mean other related outdoor activities including, but not limited to, frogging, photography, painting, environmental education, and nature study.

(3) "Designated road" means any road, path, lane, or trail officially designated by name or number for public vehicular travel.

(4) "Entry point" means a designated location or boundary for public access to a management area.

(5) "General public recreational purposes" mean natural resource based outdoor recreational activities including, but not limited to, fishing, hunting, horseback riding, bicycling, swimming, camping, hiking, canoeing, boating, airboating, diving, birding, sailing, and jogging.

(6) "Management area" means any Save Our Rivers land, other District land, or combination thereof, listed in the Public Use Guide and managed as a single and distinct unit for the purpose of restoring, preserving, and protecting the water and related environmental resources of said area, including regulating the public uses thereon.

(7) "Natural Resources" mean water, soils, flora, and fauna.

(8) "Public Use Guide" means the document updated and approved annually by the Board which sets forth the designated management areas, the general rules and regulations governing public use, and any special provisions applicable thereto.

(9) "Recreation site" means an improved or unimproved site established to facilitate public use of a designated management area.

(10) "Recreational trail" means riding, hiking, canoeing, bicycling, or jogging trails for use by the public.

Specific Authority 373.019, 373.044, 373.113, 373.171 F.S.

Law Implemented 373.016, 373.056, 373.069, 373.0693, 373.073, 373.079, 373.083, 373.103, 373.59 F.S.

History—New 5/24/94

40E-7.523 Access to Management Areas; Closures

(1) Access to management areas by the general public is only authorized at designated entry points. Designated entry points for specific management areas shall be set forth in the Public Use Guide.

(2) Management areas or portions of management areas shall be closed to public use under the following conditions:

(a) When necessary for public safety during wildfires or prescribed burns.

(b) When necessary during emergency conditions such as floods, severe weather events, or wildfire danger for public safety and the protection of natural resources. Such closures shall require the approval of the Executive Director and concurrence of the Governing Board. In no event shall such closures exceed thirty (30) days duration absent reconsideration and approval by the Governing Board.

(c) When necessary on a permanent basis to protect natural, historic or archaeological resources. Such closures shall require advance public notice and approval by the Governing Board.

(3) Temporary closures of management areas or portions of management areas will be posted at authorized points of entry to said areas.

Specific Authority 373.044, 373.113 F.S.

Law Implemented 373.016, 373.119, 373.139, 373.59 F.S.

History—New 5/24/94

40E-7.525 Use of Vehicles, Airboats, and Aircraft; Navigational Restrictions

(1) Vehicular travel within management areas is limited to the operation of vehicles licensed for highway use by licensed drivers on designated roads unless otherwise specified in the Public Use Guide.

(2) Management areas or portions of management areas open to off-road travel by licensed or unlicensed swamp buggies, tracked vehicles, and other types of off-road or all terrain vehicles, shall be specified in the Public Use Guide.

(3) Under Section 316.192, Florida Statutes, driving a vehicle in willful and wanton disregard for the safety of persons or property is reckless driving. Pursuant to Section 316.1925, Florida Statutes, any persons who drive vehicles on management areas shall drive in a careful and prudent manner, having regard for the width, grade, curves, corners, traffic and all other attendant circumstances, so as not to endanger the life, limb or property of any person. Failure to drive in such a manner is punishable under Section 316.655, Florida Statutes.

(4) Motorized vehicle operators shall comply with posted speed limits on management area roads. If no speed limit is posted, the speed limit is 20 mph. Speed limits are not applicable to airboats and off-road vehicles, except when the latter are operated on management area roads.

6

(5) Bicycles, horse-drawn carriages and buggies are considered motorized vehicles for the purpose of this rule except that the operators of these conveyances are not required to possess a valid driver's license.

(6) Horses and other saddle animals are not considered to be vehicles for the purpose of this rule.

(7) Airboats may be operated in management area floodplains and littoral zones unless other wise specified in the Public Use Guide.

(8) The take off or landing of either motorized or non-motorized conventional or model air craft, such as airplanes, helicopters, ultra lights, gliders, and hang gliders, on management units is prohibited unless otherwise specified in the Public Use Guide.

(9) Any restrictions to navigation established pursuant to state or federal law, applicable to management areas, shall be specified in the Public Use Guide and reasonably identified in the field by appropriate signs.

Specific Authority 373.044, 373.113 F.S.
Law Implemented 316.192, 316.1925, 316.655, 373.016, 373.139, 373.59 F.S.
History—New 5/24/94

40E-7.526 Equestrian Activities; Use of Saddle Animals

(1) Management areas open to equestrian activities and the use of saddle animals shall be specified in the Public Use Guide.

(2) Where authorized, the use of horses and other saddle animals shall be permitted on all designated roads, other roads, firebreaks, dikes, and ditch banks unless otherwise specified in the Public Use Guide.

(3) The use of horses and other saddle animals on designated hiking trails shall be prohibited.

Specific Authority 373.044, 373.113 F.S.
Law Implemented 316.192, 316.1925, 316.655, 373.016, 373.139, 373.59 FS
History—New 5/24/94

40E-7.527 Hunting; Possession and Use of Firearms

(1) Consistent with Chapter 790, Florida Statutes, and other applicable provisions of local, state and federal law, such as the rules and regulations of the Florida Game and Fresh Water Fish Commission and the United States Department of Interior, Fish and Wildlife Service, hunting, unlawful possession, discharge, and use of firearms, archery equipment, trapping devises and the releasing of free-running hunting dogs are prohibited on management areas unless the land is opened as a public hunting area and these uses are authorized in the specific public hunting area regulations.

(2) Public hunting on management areas is administered by the Florida Game and Fresh Water Fish Commission, or the U.S. Department of the Interior, Fish and Wildlife Service in cooperation with the District. If a management area is included in a public hunting area, it shall be posted as prescribed by Chapter 810, Florida Statutes. Management areas currently established as public hunt areas are noticed in the Public Use Guide.

(3) Public hunting areas shall only be established on management areas with approval of the Board. Board approval shall be given at a public meeting which shall be advertised as required by Chapter 120, Florida Statutes. The District may enter into management agreements with the entity to be responsible for managing the public hunting on the management area. Agreements between the District and the Florida Game and Fresh Water Fish Commission or the United States Fish and Wildlife Service are considered to be authorizations to remove designated game species. The agreements will be available at the District headquarters for review by the public.

Specific Authority 373.044, 373.113 F.S.
Law Implemented 373.016, 373.1401, 373.59, 790, 810.09 F.S.
History—New 5/24/94

40E-7.529 Overnight Camping

(1) Overnight camping on management areas is permitted unless otherwise specified in the Public Use Guide.

(2) Any restrictions applicable to overnight camping shall be specified in the Public Use Guide.

(3) Designated campsites within specific management areas shall be specified in the Public Use Guide and reasonably identified in the field by appropriate signs or markers.

Specific Authority 373.044, 373.113 F.S.
Law Implemented 373.016, 373.139, 373.59 F.S.
History—New 5/24/94

40E-7.532 Operating Hours

Management areas shall be open to public use twenty-four (24) hours a day except during authorized closures as set forth in 40E-7.523(2) above or unless otherwise specified in the Public Use Guide.

Specific Authority 373.044, 373.113 F.S.
Law Implemented 373.016, 373.119, 373.139, 373.59 F.S.
History—New 5/24/94

40E-7.534 Special Use Licenses

(1) A Special Use License, issued at no cost to the public, shall be required to engage in select activities on management areas identified by the Governing Board during the annual update of the Public Use Guide, as set forth in 40E-7.521(8), above, when determined necessary to protect the natural resources of said areas, prevent overuse of facilities, or to avoid conflicts between users. Management Areas with Special Use License requirements, including the daily quota for each management area, shall be specified in the Public Use Guide.

(2) A Special Use Application and License shall be submitted to the District on Form #0830. Upon receipt of a properly completed Special Use Application and License Form #0830, the District's Department of Land Management shall issue Special Use Licenses on a first come first served basis until the daily quota established by the District for that activity is reached.

(3) Special Use Licenses shall only be valid for the dates shown on the License and must be in the possession of the applicant while on the management area. If the applicant is a group, then the license must be in the possession of the designated group leader.

(4) Persons wishing to obtain a Special Use License, when required by the District, may apply in person, call, or write to request a copy of Special Use Application and License Form #0830 from the District at the following address:

Land Stewardship Division
Department of Land Management
South Florida Water Management District
Post Office Box 24680
3301 Gun Club Road
West Palm Beach, FL 33416-4680
Telephone: (407) 686-8800 or Florida WATS 1-800-432-2045

(5) In the event the daily quota has been reached, the District shall notify the Special Use License applicant that the District intends to deny the application, and the applicant may request further consideration by the Governing Board.

(6) The Executive Director shall revoke a Special Use License if the licensee violates any provisions of this Rule or the Special Use License.

Specific Authority 373.044, 373.113 F.S.
Law Implemented 373.016, 373.139, 373.59 F.S.
History—New 5/24/94

40E-7.537 General Prohibitions

The following shall be prohibited on all management units:

(1) Parking a motor vehicle in an unauthorized location or in a manner blocking roads, levees, maintenance berms, gates, or water control structures.

(2) Discharging firecrackers, rockets, or any other fireworks.

(3) Pets, other than leashed dogs and service animals under the control of the owner. This prohibition does not apply to hunting dogs utilized in conjunction with an approved hunting program where the use of dogs is permitted.

(4) Destroying, defacing, or removing any natural feature or native plant, including the felling of dead trees.

(5) Destroying, injuring, defacing, removing, or disturbing in any manner any public building, tower, recorder, gage, sign, gate, fence, equipment, monument, marker, or other structure or improvement.

(6) Destroying or damaging scientific study plots, photo points, transect lines, or survey markers.

(7) Trespassing on, operating, or interfering with the operation of water control structures.

(8) Discharging or disposing of oil, gasoline, or other chemicals and wastes.

(9) Servicing or maintaining vehicles and equipment except when in conjunction with authorized recreational activities and allied purposes.

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(10) Disposing of any garbage, including paper, cans, bottles, waste materials, and rubbish other than in containers provided for such disposition.

(11) Draining or dumping refuse or waste from any travel trailer, camper, mobile home or recreation vehicle other than in places or receptacles designated for such use.

(12) Cleaning fish, game, or food at potable watering stations or in rest rooms, or washing clothing or articles of household use at such facilities.

(13) Using refuse containers or other refuse facilities for disposal of household or commercial garbage or trash.

(14) Installing, erecting, or maintaining any unauthorized camp, building, structure, or sign.

(15) Building a fire other than in an authorized campsite or picnic area or outside of grills, fire places, or fire rings provided by the District or other authorized management agency for such purpose. This prohibition does not apply to portable campstoves or grills provided by the user.

(16) Selling or offering for sale any merchandise without the prior written consent of the District's Governing Board. Requests to the District for consent shall be made in writing, directed to the Land Stewardship Division - Land Management Department, and shall be submitted not less than 28 days prior to the regularly scheduled Governing Board Meeting for consideration. Consideration to such consent shall be given at a regularly scheduled meeting of the District's Governing Board. Although the Board's analysis of requests to sell merchandise within a management area is primarily site specific in nature, considera tion shall be given to such factors as: immediate and potential impact on the environment, immediate and potential impact on members of the public using the management area, the size of the management area in relation to the area impacted by the proposed sale, and overall benefits to the public.

(17) Operating bicycles on trails closed to such use.

Specific Authority 373.044, 373.113 F.S.
Law Implemented 373.016, 373.139, 373.59 F.S.
History—New 5/24/94

40E-7.539 Penalties

(1) Under Section 373.609, Florida Statutes, it shall be the duty of every state and county attorney, sheriff, police officer, and the appropriate city and county official to assist the District, and their agents, in the enforcement of the provisions of this rule.

(2) Any person who violates any provision of this rule is subject to eviction from the premises or arrest and prosecution for a second degree misdemeanor, punishable as provided in s.775.082 or s.775.083 Florida Statutes.

(3) The penalties identified in these rules do not supersede other penalties or options available to District such as civil remedies.

Specific Authority 373.044, 373.113 F.S.
Law Implemented 373.016, 373.59, 373.129, 373.609, 373.613 F.S.
History—New 5/24/94

FLORIDA DEPARTMENT OF TRANSPORTATIC
LAWTON CHILES
GOVERNOR
605 Suwannee Street, Tallahassee, Florida 32399-0450
BEN G. WAT
SECRETAR

MEMORANDUM

Pavement Design Advisory
FPDM Revision Required

DATE: September 27, 1993

TO: District Design Engineers, District Pavement Design Engineers, District Consultant Project Management Engineers

Bruce Dietrich

FROM: Bruce Dietrich, State Pavement Design Engineer

COPIES: District Directors of Production, District Directors of Operations, Jimmy Laircey, Ernest Garcia, Larry Smith, Freddie Simmons, FHWA, Plans Preparation Manual Holders

SUBJECT: **Implementation of Ground Tire Rubber (GTR) in Design**

Three ongoing projects to showcase the technology of using GTR to industry will be completed by this fall. The Department has announced it will implement GTR in all friction course mixes and crack relief layers. To accomplish this implementation as quickly as possible, please immediately begin changing projects scheduled for letting in January, 1994 and thereafter to include GTR pay items. All projects should use GTR pay items by the June, 1994 letting.

The pay items to use are as follows:

337- 5- 2	Asph Conc Friction Course (Rubber)(5/8" FC-2)	SY
337- 5- 3	Asph Conc Friction Course (Rubber)(1" FC-3)	SY
341- 70	Asphalt Rubber Membrane Interlayer	SY
300- 1- 19	Bituminous Material (ARMI)	GA

The use of GTR in friction courses will produce benefits such as improved durability and resilience, as well as eliminating a significant number of waste tires and producing a more workable mix. Note that GTR friction course items should be used for all friction courses in the future, not just those that currently have Latex specified.

The Asphalt Rubber Membrane Interlayer (ARMI) can be used where the pavement design calls for a crack relief layer to delay reflective cracking that can't be eliminated by milling, or where a moisture barrier is needed due to subsurface moisture. The specifications for this pay item include the cost of No. 6 stone cover material at 0.26 to 0.33 cubic feet per square yard. The rubber modified

asphalt binder will be paid for separately by the gallon and should be calculated at 0.6 gallons/sy. The Engineer will be allowed to adjust the application rate upward up to a maximum of 0.8 gal/sy if pavement surface conditions warrant it. Guidelines to construction personnel for determining when to adjust the application rate will be provided by the State Materials Office.

The Materials Office recommends that an ARMI should not be used under a relatively thin overlay due to its cost and the need for sufficient heat in the overlay to properly bond the ARMI with the overlay. A 1.5 to 2 inch initial structural asphalt lift is recommended over the ARMI to provide this heat, with a 2 inch lift preferred. On high type facilities, such as Interstates, high speed multi-lane facilities, or cracked and seated concrete pavements, a minimum overlay thickness of 3 1/2 inches of structural asphalt is recommended over the ARMI. On lower volume roadways, the minimum overlay over an ARMI can be reduced to 1½ inches of Type S. When using an ARMI with the minimum overlay, be aware that constructability complications may arise when it is constructed in conjunction with a paved shoulder. It is recommended that the State Materials Office, or State Pavement Design Engineer be contacted for guidance on these projects until more experience is gained with the ARMIs.

Revisions to pages 22, 23, and 52 of the Flexible Pavement Design Manual that incorporate these changes are attached.

Approved: K.N. Morefield, State Highway Engineer Date: 9/29/93

BD:tt

October 8, 1984

MEMORANDUM

State of Florida Department of Transportation

TO District Design Engineers and District PD&E Engineers

FROM D. C. Bullard, State Design Engineer - Roadways

COPIES TO Messrs. Tom Drawdy, Bill Ventry, Mike Flanagan, Buddy Marcoux
Ron Hock, Ken Morefield

SUBJECT Policy for Incorporation of Bicycle Facilities in Design - Wide Curb Lanes, Bicycle Lanes and Paved Shoulders

On March 16, 1984 the Department adopted an official policy for the incorporation of bicycle facilities in design projects. (See DM 01036-T. E. Drawdy). This policy was to be fully implemented on all appropriate projects beginning with the January 1985 letting.

It has recently come to our attention that some projects are being brought forward that do not comply with the requirement for constructing wide curb lanes within five miles of urbanized areas and in urban areas where bicycle travel is anticipated. Wide curb lanes for these projects are to be provided unless retrofitting is not feasible and the following conditions exist.

1. Right-of-way is inadequate and additional right-of-way is not being acquired.

2. Right-of-way acquisition has advanced to the stage that changes are not feasible.

3. High cost to acquire additional right-of-way to provide the wide curb lane is not feasible.

Projects that fall within the three categories listed above were to be evaluated for retrofitting by utilizing 11' interior lanes, 11' continuous two-way turn lanes or painted medians when interrupted-flow operating conditions exists at low speeds up through 40 mph. The presence of heavy truck traffic (design hour trucks greater than 10%) and intersection design controls were to be evaluated in reducing the center-most lanes to 11 feet.

The Federal Highway Administration has agreed to allow a method of retrofitting projects for which the design has advanced to a stage that redesign (moving the curb out) is not practical. Eleven feet lanes may be used for interior lanes under the conditions previously described and medians may be modified in some cases to provide the additional width for the curb lane. Under restricted right-of-way conditions on a 4 lane highway a 13' curb lane can be provided by striping the inside lane to 11'. This is not the standard 14' width but will provide additional safety for bicyclists.

Typical sections for these curb and gutter projects scheduled for the January 1985 letting or beyond that do not meet the requirements for accommodation of bicyclists should be resubmitted immediately. Failure to do so may result in the project being pulled from the scheduled

letting.

Requirements for paved shoulders must also comply with the March 16, 1984 policy, but do not require a resubmittal of the previously approved typical section.

The fact that recently constructed adjacent projects did not provide for bicyclists is not sufficient justification for not providing the facilities on an upcoming project.

DCB/gh

Form 281-10

MEMORANDUM

State of Florida Department of Transportation

DATE March 16, 1984

TO DISTRICT ENGINEERS, DISTRICT DESIGN ENGINEERS AND CONSULTANTS

FROM Thomas E. Drawdy, Director of Preconstruction and Design

COPIES TO W. Miller, P. White, M. Hilliard, C. Miller, B. Buser, J. Roberts, R. Magahey, M. Flanagan, D. Bullard, R. Hock, D. Burden, FHWA

SUBJECT Policy for Incorporation of Bicycle Facilities in Design - Wide Curb Lanes, Bicycle Lanes and Paved Shoulders
DMO1036

The Department's current policy is to provide for the needs of bicyclists and other non-motorized roadway users within five miles of urbanized area limits (population 50,000 or more). This policy will generally provide for the construction of wide curb lanes, bicycle lanes, or paved shoulders in conjunction with other planned roadway improvements. The lack of adequate right of way and the costs associated with acquisition in built up areas will not allow us to provide this additional width on all projects. Roadway improvements in urban areas (5,000 to 50,000 population) and the more rural sections will be reviewed on a case-by-case basis depending on anticipated bicycle travel and the need for wider pavement or paved shoulders based on other safety and operational benefits. Anticipated bicycle travel is to be considered of sufficient volume when the roadway section is identified for bicycle improvements in The Transportation Improvement Program, The State Transportation Plan (Bicycle Element) or other approved community Comprehensive Bicycle Transportation Plans.

Some of the additional benefits obtained in providing wide curb lanes or paved shoulders are:

1. Wide curb lanes provide for right turns without adjacent lane encroachment.

2. Wide curb lanes allow a vehicle to enter the roadway from either an intersection or driveway without adjacent lane encroachment.

3. Wide curb lanes and paved shoulders will allow a motorist to pass a bicyclist without delay.

4. Paved shoulders eliminate drop-off problems that occur at the edge of roadway pavement, reduce maintenance costs, and improve drainage of the roadway pavement.

Each of the above factors lead to improved traffic flow, add to the capacity of the roadway section, and enhance highway safety.

Wide Curb Lanes

Wide curb lanes (normally 14' wide) are to be provided as the minimum treatment in conjunction with other roadway improvements (curb and gutter construction) within five miles of all urbanized area limits unless right

of way is inadequate and the cost associated with acquisition for this purpose is not feasible. For those projects that require additional right of way for the construction of the roadway the additional width to provide wide curb lanes is to be acquired. With severe right of way limitations 11' interior lanes, 11' continuous two-way turn lanes or painted medians may be used under interrupted-flow operating conditions at low speeds up through 40 mph. The presence of heavy truck traffic (design hour trucks greater than 10%) and intersection design controls should be evaluated in reducing the center-most lanes to 11 feet.

Heavily conjested roadways with significant levels of commerce and numerous intersections are served best with wide curb lanes and not marked as a bike lane or bike route. In no case should an edge line be marked 2 or 3'in on a 14' wide curb lane, since this tends to channel bicyclists into a space that is too narrow.

Wide curb lanes are also to be considered in urban areas (5,000 - 50,000 population) based on anticipated bicycle travel needs as previously identified.

The Federal Highway Administration has recently agreed, in the First District, to allow a method of retrofitting projects for which the design has advanced to a stage that redesign (moving the curb out to provide the 14' curb lane) is not practical. This concept will avoid a redesign of the drainage system and new utility negotiations by retaining the curb to curb width and modifying the lane and median widths. Eleven foot lanes may be used for interior lanes under the conditions described above and median widths may be modified or converted to two-way turn lanes or painted medians to provide the additional width for the curb lane. Each of those projects must be discussed with the Federal Highway Administration on a project by project basis and modified typical sections submitted for approval.

The FHWA has recently agreed to a new striping policy for urban resurfacing projects that will allow restriping to provide wide curb lanes by using 11' interior lanes. (See DM10008 dated January 13, 1984.) This policy is to be applied on all future appropriate urban and urbanized area (curb and gutter) State and Federally funded resurfacing projects.

Bicycle Lanes

Bicycle lanes (4' minimum width) may be warranted in lieu of wide curb lane in some areas of the State. Collectors and the more lightly traveled arterials that have only a moderate level of commerce, and have fewer turning movements, may serve bicyclist with a bike lane. In some of these cases, with curb and gutter construction, it may be desirable to start with a 15' wide curb lane, leaving the section undesignated as a bike facility. In later years as bike traffic studies indicate a need, the lane will have sufficient width to mark the facility as a bike lane by simply adding pavement markings and a stripe 3' from the edge of the pavement. This does not meet current Department criteria for striping as a bike lane but is being successfully applied in California. Design standards will probably be modified to allow this treatment in future years.

The width of the lane and gutter will normally provide 4 to 4 1/2' of surface for use by the bicyclist.

Roadway sections with low to moderate traffic and where it is desirable to attract bicyclists should be considered for 4' wide bike lanes in the initial roadway improvement. A 4' minimum width with urban curb and gutter construction or 5' minimum width with rural type (no curb) construction will be required.

Paved Shoulders

The construction of paved shoulders will improve traffic flow, increase capacity and enhance highway safety. Shoulder pavement will:

1. Provide protection for bicyclist.

2. Allow motorist to pass bicyclist without delays.

3. Reduce edge of pavement drop-off due to wind erosion created by trucks.

4. Provide better roadway pavement drainage and reduce potential for hydroplaning.

5. Reduce potential for run-off the roadway pavement accidents. Edge of pavement drop-offs that occur due to erosion will be further removed from the driving lane.

Shoulder pavement is to be constructed in accordance with the following criteria:

1. All new construction, reconstruction and lane addition projects (4' minimum paved shoulders). Does not apply to short bridge replacement, intersection improvement projects or urban curb and gutter construction.

   a. Mandatory for all projects within five miles of all urbanized areas with a post construction ADT greater than 1600.

   b. Mandatory for all coastal routes where the borrow material is of poor quality for growing grass. These will generally be within 1/2 mile of the coast but may extend beyond this on some projects. A project-by-project evaluation based on the quality of borrow material will be necessary.

   c. Mandatory on the outside shoulder of all rural multilane facilities. The inside shoulder will be paved (4' wide) on the low side of pavement through superelevated curves and extended approximately 300' beyond the P.C. and P.T. of the curve.

   d. Mandatory on all two-lane Major Arterials.

e. Mandatory on all other two-lane highways with a post construction ADT of 5,000 or greater.

f. Optional for all other projects in urban and rural areas based on anticipated bicycle travel and the need for paved shoulders based on other safety and operational benefits.

2. State and Federally funded resurfacing and widen-resurface projects with rural type (no curb) construction (4' minimum paved shoulders).

a. Mandatory for all projects within five miles of all urbanized areas with a post construction ADT greater than 1600.

b. Mandatory for all coastal routes where the borrow material is of poor quality for growing grass. Those will generally be within 1/2 mile of the coast but may extend beyond this on some projects. A project-by-project evaluation based on the quality of borrow will be necessary.

c. Optional for all other projects in urban and rural areas based on anticipated bicycle travel and the need for paved shoulders based on other safety and operational benefits.

Shoulder pavement on non-interstate projects will normally be constructed using Base Group 16 on the Optional Base Chart. The surface will consist of a 1" minimum structural course and a friction course over the full width of the shoulder when a friction course is required.

This memo supersedes Directive 0711-12 dated August 18, 1976 (Paved Shoulders for Free Access Highway).

Additional Design Criteria for bicycle facilities is given in the Department's "Bicycle Facilities Planning and Design Manual - 1982". The manual shall be used to determine the best treatment for a given project.

This policy is to be implemented on projects at the earliest possible date without impacting letting schedules. Full implementation on all appropriate projects will begin with the January 1985 letting.

TED:tj

GUIDE FOR DEVELOPMENT OF BICYCLE FACILITIES

It is the goal of Metropolitan Dade County to develop, operate, and maintain a safe, efficient, and economical traffic circulation system in Metropolitan Dade County that provides ease of mobility to all people and for all goods. One of the objectives of that goal is to provide the safe and convenient movement of pedestrians and non-motorized vehicles alike.

Florida statutes require that the needs of bicyclists and pedestrians be addressed in all local and state transportation plans and programs.

> 316.065(1)(a) - Bicycle and pedestrian ways shall be given full consideration in the planning and development of transportation facilities, including the incorporation of such ways into state and local transportation plans and programs. Bicycle and pedestrian ways shall be established in conjunction with the construction, reconstruction, and other change of any state transportation facility.

To meet the mobility needs of bicyclists, it is necessary to provide adequate and safe space and conditions for shared road use throughout the county's roadway system. All new roadways shall be designed and constructed to provide for bicycle facilities where feasible. This requires special design considerations, including preparing the roadway surface to accommodate 1-1/4" tires (i.e., drainage grates, railroad crossings, lateral joints, placement of RPMs), special lane widening, and shoulder considerations. Roadway improvements will be reviewed to eliminate and minimize obstacles, barriers, and specific hazards to bicyclists.

The following documents are incorporated by reference and are recognized by the County as official documents to be utilized for the design of bikeway facilities.

1. AASHTO Guide for Development of Bicycle Facilities - August 1991.

2. Manual of Uniform Minimum Standards for Design, Construction, and Maintenance (Green Book).

It will therefore be the policy of the Metropolitan Dade County Public Works Department to review all plans and development proposals for provisions to accommodate the safe movement of bicycles and pedestrians, and require the incorporation of bicycle needs into the county's plans for any new road construction, widening, or reconstruction project, if feasible, in accordance with the approved Dade County Bicycle Master Plan.

This policy will generally provide for the construction of wide curb lanes, undesignated lanes, marked bicycle lanes, or paved shoulders in conjunction with other roadway improvements. The lack of adequate right of way and the costs associated with acquisition in built-up areas may not allow us to provide this additional width. Roadway improvements will be reviewed on a case-by-case basis, depending on anticipated bicycle travel, and their conformance with the official and approved Bicycle Master Plan.

WIDE CURB LANES

Wide curb lanes or paved shoulders provide the following:

1. Right turns without adjacent lane encroachment.
2. Permits a vehicle to enter the roadway from either an intersection or driveway without adjacent lane encroachment.
3. Wide curb lanes and paved shoulders will allow a motorist to pass a bicyclist without delay, minimizing side friction.
4. Paved shoulders eliminate drop-off problems that occur at the edge of roadway pavement, reduce maintenance costs, and improve drainage of the roadway pavement.

Each of the above factors leads to improved traffic flow, adds to the capacity of the roadway section, and enhances highway safety.

Wide curb lanes (normally 14' wide) are to be provided as the minimum treatment in conjunction with other roadway improvements

(curb and gutter construction) unless right of way is inadequate and the cost associated with acquisition for this purpose is not feasible.

For those projects that require additional right of way for the construction of the roadway, the additional width to provide wide curb lanes should be considered in the acquisition.

Heavily congested roadways with significant levels of commercial vehicles and numerous intersections are served best with wide curb lanes and not marked as a bike lane or bike route. An edge line should only be marked when an undesignated 4' wide lane can be provided adjacent to the travel lane. A wide curb lane shall not have an edgeline to designate a lane.

Retro-fitting wide curb lanes are not feasible on existing projects if the following conditions exist:

1. Right of way is inadequate and additional right of way is not being acquired.
2. Right-of-way acquisition has already taken place.
3. High cost to acquire additional right of way to provide the wide curb lane makes the project economically unfeasible.

BICYCLE LANES

Bicycle lanes (4' minimum width) may be warranted in lieu of wide curb lane in some areas of the county. Collectors and the more lightly traveled arterials that have only a moderate level of commercial vehicles and have fewer turning movements may be constructed or reconstructed with a bike lane. In cases with curb and gutter construction, it may be desirable to start with a 15' wide curb lane, including a stripe three feet from the edge of the pavement, to create an undesignated bike lane. The width of the lane and gutter will normally provide 4' to 4-1/2' of surface for use by the bicyclist.

PAVED SHOULDERS

The construction of paved shoulders will improve traffic flow, increase capacity, and enhance highway safety. Shoulder pavement will:

1. Provide protection for bicyclist.
2. Allow motorist to pass bicyclist without delays.
3. Reduce edge of pavement drop-off due to wind erosion created by trucks.
4. Provide better roadway pavement drainage and reduce potential for hydroplaning.
5. Reduce potential for run-off-the-roadway pavement accidents. Edge-of-pavement drop-offs that occur due to erosion will be further removed from the driving lane.

Shoulder pavement is to be considered in accordance with the following criteria:

1. All new construction, reconstruction, and lane addition projects (4' minimum paved shoulders). Does not apply to short bridge replacement, intersection improvement projects, or urban curb and gutter construction.
2. All two-lane arterials and collectors in urban areas with a post construction ADT of 5,000 or greater, and based upon anticipated bicycle travel and other safety and operational benefits.

ROW WIDTHS

The Public Works Department will require an increase in the minimum right-of-way width on roadways designated as bike routes in the adopted Bicycle Master Plan from (70) feet to (74) feet.

PUBLIC WORKS MANUAL

The 2-, 4-, and 6-lane typical sections will be modified to provide a minimum (13) foot wide curb lane to accommodate bikeway needs. The Public Works Department will require developers to adhere to the bikeway policy and standards when applicable.

ROADWAY MASTER PLANS

Master plans will be prepared by the Public Works Department or its consultants, for each new roadway project in the TIP. A memorandum will be sent to county agencies, committees, and departments advising that a master plan will be on display in the Director's Conference Room for a two-week period for review and comments. All review comments will be considered for inclusion in the master plan prior to inception of final design.

Where unique or site specific conditions are encountered, or where conflicting needs arise, sound engineering judgment must be applied to achieve solutions that are in keeping with the spirit and purpose of the policy.

Appendix D - Miscellaneous

Florida Greenway Commission
Metropolitan Planning Organization
Palm Beach Post

Greenways

150 GREENWAYS ACROSS FLORIDA SESQUICENTENNIAL CELEBRATION

PROPOSAL FACT SHEET

Background Information

The Florida Greenway Commission was created by Governor Lawton Chiles in the spring of 1993. Its adopted mission is to plan and support a statewide network of greenways linking natural areas and open spaces to benefit Floridians today and in generations to come.

Public education and involvement are key to successful local, regional and statewide greenway initiatives. To excite Floridians and ignite a "prairie fire" of greenway projects, the Florida Greenways Commission proposes a number of greenway events/activities in conjunction with the state's sesquicentennial celebration in 1995. These events/activities are still in the planning stage while we await final word on funding for 1995.

Feature Events / Activities

150 GREENWAYS RECOGNITION PROGRAM

One of the Governor's charges to the commission is to join him in recognizing officially 150 state, regional and local greenway projects in 1995 as a part of the state's sesquicentennial celebration. The commission wants to recognize greenways that represent the tremendous diversity of projects out there - both on the ground and in the planning stage - as well as all the different techniques and partners involved in greenway efforts.

During its fall 1994 public forums, the Florida Greenways Commission will solicit nominations for the 150 Greenways Recognition Program. Eligible greenways will be linear open spaces that are natural or more natural than the surrounding area, provide important ecological and/or recreational/cultural linkages, and are protected and maintained. The nominations, due by the end of 1994, will be screened by the commission, and the selected 150 greenways will be forwarded to the Governor.

(*continued*)

Florida Greenways

The Florida Greenways Program
926 East Park Avenue
Post Office Box 5948
Tallahassee, Florida 32314-5948
(904) 222-6277
Fax (904) 222-1117

1000 Friends of Florida/The Conservation Fund
Partners in Land and Water Conservation

Printed on Recycled Paper

Organizations representing the recognized greenways will receive framed proclamations from the Governor, be included on a commemorative 150 Greenways brochure/map, and be given permission to use the official Florida Greenways logo and special signage.

FLORIDA GREENWAYS SMALL GRANTS PROGRAM

In conjunction with the sesquicentennial celebration, the Florida Greenways Program of 1000 Friends of Florida and The Conservation Fund plans to award grants up to $1000 for projects that stimulate or support community greenway initiatives. These grants, for projects such as brochures, workshops, videos or displays, are possible due to generous funding from the John D. and Catherine T. MacArthur Foundation. Like the nominations for the 150 Greenways, grant applications will be due by the end of 1994.

150 CELEBRATION KICK-OFF RECEPTION

During Florida's 150th birthday celebration, the Florida Greenways Commission plans to host a reception in Tallahassee to recognize the selected 150 Greenways as well as the small greenway grant recipients. The reception will also kick off a series of sesquicentennial greenway events throughout Florida.

GREENWAYS ACROSS FLORIDA EVENTS SESQUICENTENNIAL CELEBRATION

As a part of its greenways sesquicentennial celebration, the Florida Greenways Commission plans to ask the Governor to recognize "Florida Greenways Month." In conjunction with this month of special celebration, greenway sponsors across Florida will be asked to plan local or regional events to highlight their greenways. Sponsors may include member organizations of the commission and the organizations supporting the recognized 150 Greenways. "Florida Greenways Month" events will include a variety of activities, from trips into nature, hiking/biking/canoeing events, to greenway stewardship projects and greenway educational forums. The dates, times, and locations of all featured events will be listed in press materials and an official event flyer.

For more information contact:
Florida Greenways Program
926 East Park Avenue
Tallahassee, Florida 32301
(904) 222-6277

Dade County
Bicycle/Pedestrian Program

Among Florida residents, cycling and walking rank first as the most popular outdoor recreational activities.

In the mid 60's, Dade County officials established a bikeway system to help meet the community's demand. In 1986, County Commissioners adopted the Bicycle Comprehensive Plan, and later hired a full-time Bicycle Coordinator to implement and oversee an area-wide bicycle program. Afterwards, pedestrian issues were included to focus more attention on all non-motorized transportation concerns.

To make our Program truly comprehensive, it must include the elements of Education, Encouragement, Enforcement, and Engineering.

EDUCATION: Non-motorized accidents average 40% of all the fatalities in the County each year. The Bicycle/Pedestrian Program and the Dade County Public Schools System have taken a major step in reducing these accidents with one of the most progressive traffic safety programs in the nation: Bike-Ed America.

Taught to elementary school students over a 6-week period, children receive an in-depth understanding of traffic safety, as well as their rights and responsibilities and proper bicycle handling techniques.

To further educate the public, our Program conducts one-day bicycle "rodeos" and safety events throughout the area for various organizations, such as local hospitals, or health and safety organizations.

We also take part in lectures and meetings with various professional groups who should become more aware of the needs and behaviors of urban cyclists.

ENCOURAGEMENT: Linking cyclists up with public transit is one part of our encouragement support. Our program administers and maintains the Metrorail Bicycle Locker and Bikes-On-Trains programs. (See reverse side for further information.)

We also make ourselves available to the public by responding to a wide-range of requests concerning bicycle/pedestrian-related matters. We distribute informational literature through mail-outs or outlets, such as bike shops and our display booth in Government Center Metrorail station.

Other examples of encouragement are by assisting local charities with bicycle or walking fund-raising events, or working with local bicycle clubs, as well as road, off-road and Bicycle Moto-Cross racing to help build public support for these community activities.

ENFORCEMENT: The bicycle is legally defined as a vehicle in all 50 states. In Florida, cyclists must obey the same laws as motor vehicle operators.

These include:
* obeying traffic signs and signals;
* riding with the flow of traffic; and,
* using lights at night.

In order to assist law enforcement efforts, the Bicycle/Pedestrian Program is working with the Florida Department of Transportation to develop a statewide, computerized registration system.

ENGINEERING: Proper facilities must exist to provide cyclists needed access to businesses, schools, and recreational areas through-out the County.

There are several distinct types of facilities to consider:

* **Sidewalks** and **"Safe Ways to School"** are paths intended primarily for use by pedestrians.

* **Bicycle paths**, are separated from the roadway and designed primarily for cyclists. They are typically 8 to 10 feet in width and bidirectional. Bike paths have proven to be most suitable when located in corridors with few intersections or driveways, where conflicts with motor vehicles can occur.

* A growing number of cyclists use the bicycle as a means of commuting to stores, work, or other locations, and typically travel between 10-20 m.p.h. Studies have indicated that **"on-road" facilities** have a higher safety index than paths. They include: **paved shoulders, wide curb-lanes,** and striped **bike lanes.**

The Bicycle/Pedestrian Program has begun evaluating the County's current roadway and off-road facilities, identifying where and what type of additional facilities are needed.

Bicycle/Pedestrian activities are common in every age, ethnic and financial group. Concern for each individual's safety; their knowledge of skills and responsibilities; and providing proper facilities allows everyone to more fully appreciate our community and strengthens the quality of life.

In meeting its challenge, the Dade County Bicycle/Pedestrian Program requests everyone's support for this dynamic program through the interactions of Education, Enforcement, Engineering, and Encouragement.

Bicycle/Transit Integration Projects

Helping cyclists to travel further and easier than they normally could, the Bicycle/Pedestrian Program and the Metro-Dade Transit Agency have developed two programs working in conjunction with Metrorail:

Metrorail Bicycle Lockers

* Lockers help cyclists who have Metrorail nearby where they live, work, or other places they usually travel. Cyclists may store their bicycle in a locker after arriving at a Metrorail station.

* Lockers are rented at one Metrorail station for:
  » 3 months - $25
  » 6 months - $45
  » one year - $70
  » There is also a $10 key deposit, refunded after the key has been returned.

* These lockers provide a strong, weather safe, protective enclosure to store a normal-sized bicycle, and are available at most Metrorail stations.

* The following Metrorail stations have locker rentals available: Okeechobee, Northside, Brownsville, Earlington Heights, Vizcaya, Coconut Grove, Douglas Road, University, South Miami, Dadeland North, and Dadeland South.

Metrorail Bikes-On-Trains (B-O-T)

* A B-O-T permit allows a cyclist to bring a bicycle on-board Metrorail during regular hours of operation on **weekends** and **holidays**.

  On **weekdays**, a bicycle is only allowed on-board between 10 a.m. to 4 p.m. and between 6:30 p.m. to closing. This means that bicycles are not allowed during the peak hours of Metrorail's operation Monday thru Friday.

* Only a normal-sized adult or children's bicycle is permitted, (tricycles, tandems or mo-peds are not allowed).

* Children under the age of 16 years who wish to use Bikes-On-Trains must be with a parent or guardian who has also been issued a permit.

* To obtain a B-O-T permit, cyclists must read a safety rules pamphlet. Then they are given a short quiz to make sure they understand the rules. Once they pass the quiz, they recieve a B-O-T permit for a $5 fee. This is a one-time charge, and the permit will not need to be renewed, except if it is lost or stolen.

* Some rules are, that cyclists:
  » shall not use escalators or stairs to get to the rail platform (elevators only);
  » shall not ride the bicycle within the station;
  » shall not block pedestrian access on a platform while waiting for a train;
  » shall not block an aisle within a Metrorail car; and,
  » shall hold on to the bicycle at all times while in the station or on a Metrorail train.

* Permits are issued at the Transit Information Booth in the Government Center Metrorail station, 111 N.W. First Street, Downtown Miami. The booth is open weekdays from 7 a.m. to 6 p.m.

Bicycle Commuter Assistance

* A Dade County Suitability Map has been developed which provides useful information to cyclists as an easy means of selecting suitable roads to arrive at their desired destination. Intended to encourage bicycle usage for commuting to work, stores, Metrorail or other locations, this map rates specific roadways throughout Dade County based on speed limits, road widths, the amount of traffic, desirabilty, and as to their relationship to other roads in the area. The map also indicates locations of bike shops, businesses, schools and other areas of interest. Bicycling laws, tips and other important information are also provided. Cyclists may use this map to locate the most suitable road to reach their destination based upon their own cycling ability and skills in dealing with urban traffic situations.

* The Bicycle/Pedestrian Program and the Bayfront Health Club have teamed-up to initiate a demonstration project which provides discounts for bicycle locker renters. This shower program allows cyclists to refresh near their work-place once they have ridden into downtown Miami.

FOR MORE INFORMATION,
PLEASE CONTACT:

THE DADE COUNTY
BICYCLE/PEDESTRIAN PROGRAM
111 N.W. FIRST STREET, SUITE 910
MIAMI, FL 33128

(305) 375-4507

Dade County Comprehensive Development Master Plan

Traffic Circulation Goal

GOAL: DEVELOP, OPERATE AND MAINTAIN A SAFE, EFFICIENT AND ECONOMICAL TRAFFIC CIRCULATION SYSTEM IN METROPOLITAN DADE COUNTY THAT PROVIDES EASE OF MOBILITY TO ALL PEOPLE AND FOR ALL GOODS, IS CONSISTENT WITH DESIRED LAND-USE PATTERNS, CONSERVES ENERGY, AND PROTECTS THE NATURAL ENVIRONMENT.

Recreation and Open Space Goal

GOAL: DEVELOP AND MAINTAIN A COMPREHENSIVE SYSTEM OF PARKS AND RECREATIONAL OPEN SPACES OFFERING QUALITY AND DIVERSITY IN RECREATIONAL EXPERIENCES WHILE PRESERVING AND PROTECTING VALUABLE NATURAL RESOURCES, UNIMPAIRED, FOR THIS AND FUTURE GENERATIONS.

Dade County Bicycle Facilities Development

On November 4, 1993, the Metropolitan Planning Organization Governing Board for the Miami Urbanized Area adopted a progressive policy that requires all new roadway widening or reconstruction projects to provide (where feasible) accommodations for the safe movement of bicycles.

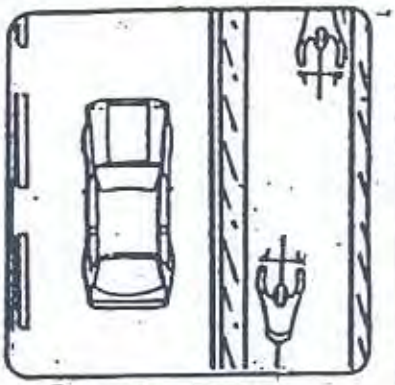
The policy generally calls for the construction of wide curb-lanes, marked or undesignated bicycle lanes, or paved shoulders in construction with other roadway improvements. By adopting this policy, the County improves upon its Comprehensive Development Master Plan commitment to meet the mobility needs of cyclists by providing shared-use facilities throughout our community.

One issue that concerns Bicycle/Pedestrian Program (B/PP) staff is the absence of a maintenance action plan to support new facilities that will be built under the new policy, as well as for those existing. Bike lanes and paved shoulders are especially prone to collecting debris. Unless a schedule is developed for facilities requiring routine maintenance, cyclists will avoid using even the most well designed facilities. Cyclists who choose travel on poorly maintained facilities are at greater risk of injury. This also places the County at a greater liability risk by overlooking such conditions.

It is the B/PP office's position that, until a plan for a dedicated maintenance program is implemented, the construction of wide curb-lanes should be considered the best course of action. This is the only type of facility that is (somewhat) self-maintaining. (See Example A) After wide curb-lanes are in place, restriping the facility to provide bike lanes or paved shoulders can be accomplished at a minimal cost, if desired. This should be done only when funding for maintenance of the facility is dedicated. In the case where a municipality desires a bicycle lane, the city should be required to provide maintenance.

TYPES OF BICYCLE FACILITIES

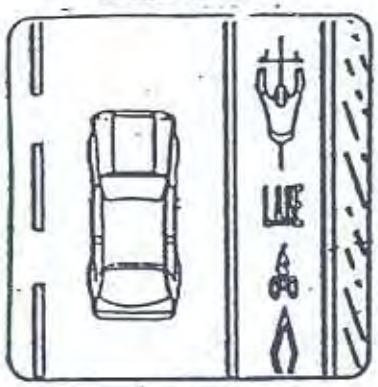
Facility is entirely separate from the roadway .
"Bike Path" signs are installed.
As dedicated facilities, bike paths incur added liability.



Bike Path

Requires dedicated maintenance schedule.
Roadway vacs/street sweepers may not fit into areas where paths travel, a tractor-sweeper is preferred.
Added striping and signage especially at intersections is necessary, and requires inspection annually for wear/damage.

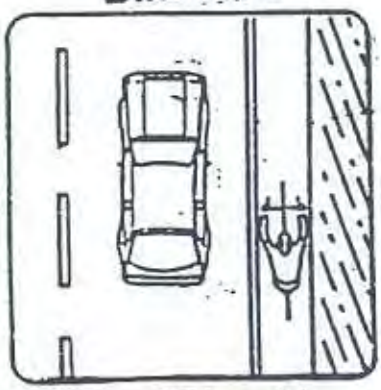
Facility is adjacent to the automobile travel lane and is striped to restrict motorized use.
Diamond markings on pavement & "Bike Lane" signs are installed.
As dedicated facilities, bike lanes incur added liability.



Bike Lane

Requires dedicated maintenance schedule.
Roadway vacs/street sweepers are adequate for routine maintenance.
Added striping and signage is necessary, and requires inspection annually for wear/damage.

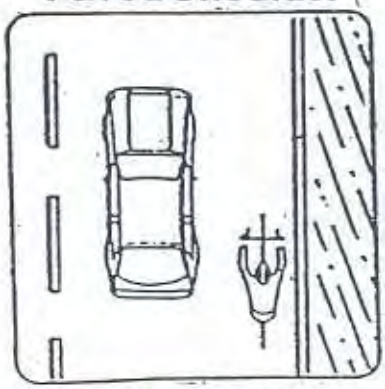
Facility is adjacent to the automobile travel lane and striped to provide an area on the right side of the travel lane for bicycle travel.
"Bicycles Sharing Roadway" signs are advisable for suitable roads.
As undedicated facilities, liability for paved shoulders is reduced.



Paved Shoulder

Requires routine maintenance, mainly due to debris blown from automobiles.
Roadway vacs/street sweepers are adequate for routine maintenance.
Only a single stripe is necessary.

Facility is extra-wide (usually 14') to provide a travel lane shared by motor vehicles and bicycles.
"Bicycles Sharing Roadway" signs are advisable for suitable roads.
As undedicated facilities, liability for wide curb-lanes is reduced.



Wide Curb Lane

Requires less maintenance than the other facilities, since automobiles sweep most debris away from travel area and into gutter pan.
Roadway vacs are adequate when routine maintenance is necessary.
No added striping is necessary.

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Metro-Dade

BICYCLE/PEDESTRIAN PROGRAM

BIKES-ON-TRAINS

GENERAL RULES

Policy: To aid cyclists in traveling further distances with greater ease than they normally would by bike alone. Individuals who have successfully gone through the procedures outlined below are issued a Bikes-On-Trains (B-O-T) permit to bring bicycles on-board Metrorail. (Bicycles are not allowed on the Downtown Metromover.) The program is only designed for conventional, two-wheeled, operational bicycles. Tricycles, tandems, bicycles with training wheels, and mo-peds are prohibited

Safety Instructions and Testing: Before obtaining a B-O-T permit, the applicant must read the safety rules concerning bringing a bicycle on-board Metrorail; then, pass the written safety test. A non-refundable fee of $5 will be charged for each permit issued upon successful completion of the test.

Eligibility: B-O-T permits are issued at the Transit Information Booth at Government Center Metrorail Station (Downtown Miami) to persons 16 years of age or older. The permit must be affixed to the exterior of the cyclist's clothing at all times while the cyclist in on Metrorail property. Children under 16 years may obtain a permit, but must be with a parent or guardian (who has also been issued a permit) when bringing their bikes on-board Metrorail.

Liability: A waiver indemnifying and releasing Metro-Dade County from all injury, loss, and/or damage involving any bicycle brought into Metrorail station areas and aboard trains under this program must be signed by all registrants at the time the B-O-T permit is issued. For minors (persons under age 18), the waiver and indemnity agreement must be co-signed by a parent or guardian present during issuance of the permit or notarized to this effect.

Revocation of Permits: Cyclists failing to abide by the Rules and Regulations outlined for this program will be subject to the revocation of their B-O-T permit and may face fines and/or arrests.

TRANSPORT RULES

Hours of Use: "Permitted" passengers may bring their bicycles on-board Metrorail trains during the regular hours of operation on weekends and holidays. On weekdays, bicycles are not allowed during the peak-hours: from start-up to 10 a.m. and between 4:00 p.m. to 6:30 p.m.

Entering Stations: Cyclists will approach a handicap gate with the Bikes-On-Trains permit in clear view of the station attendant. The cyclists will then pay the posted fare into the fare box immediately adjacent to the handicap gate, enter the station, then bring the bicycle through the handicap gate.

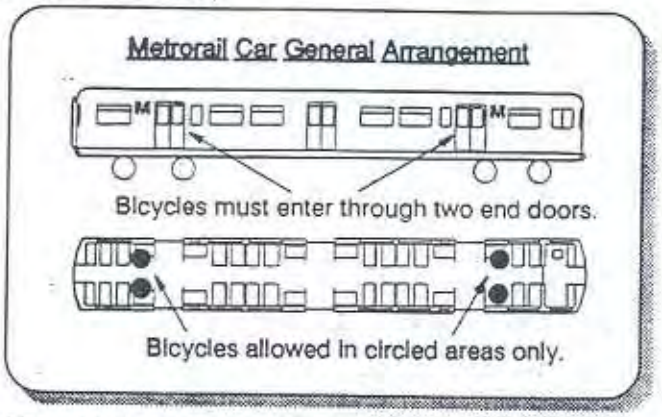
Getting to the Platform: Passenger/cyclists may get to the station platforms by using the elevators only, unless under special instruction by authorized personnel Only two bicycles are allowed on the elevators at one time. When boarding elevators, non-bicyclist passengers will have priority over passenger/cyclists. Additionally, the passenger/cyclists may not use the elevator while it is in use by non-bicyclist passengers.

Passenger/cyclists will show extreme courtesy towards other passengers when placing their bicycles in or taking their bicycles out of the elevators.

Waiting for the Train: Passenger/cyclists shall wait for the train near the bench/billboard area of the platform, clear of the yellow edge of the platform, and shall not block pedestrian travel.

- over -

Boarding the Train: Passenger/cyclists shall be prepared to enter the train with no impediments presented to other passengers on the platform or in the train. They may enter only through the two end-doors of the last car of a train, and may never use the middle door of the car or the aisle of the car between the two end-doors. Passenger/cyclists must wait until all exiting and entering passengers have cleared the doorway before moving bicycles into the train. No more than four (4) bicycles will be allowed on a train at any one time; two (2) at each end. (See diagram below.)



Aboard the Train: Whether standing or sitting, passenger/cyclists must hold the bicycles firmly at all times, and not allow the bicycles to lean against any part of the car or other passengers. The bicycle must not block any aisles or doors used by passengers.

Exiting the Train/Station: Passenger/cyclists shall wait for all passengers to exit the car before exiting themselves. They must follow the same procedures for the elevators as in getting to the platform and will exit the station through a handicap gate.

RULES AND REGULATIONS

1. Metrorail Bikes-On-Trains permits are not transferable.

2. Bicycles allowed under this program shall not be longer than 80 inches, not higher than 48 inches, or wider than 22 inches.

3. Bicycles must be clean, free of excess grease and dirt, and not have any sharp projections.

4. Bicycles shall not be left unattended at any time and the passenger/cyclists shall be in full control of the bicycles at all times.

5. Bicycle riding in Metrorail stations, including walkways and adjacent bus facilities areas, is strictly prohibited. Bicycle riding shall be allowed only in areas intended for vehicle traffic, such as parking lots and access roads.

6. In case of emergency evacuation of a Metrorail train, bicycles shall be placed on top of the seats and abandoned on the train. Metro-Dade County assumes no responsibility for bicycle loss or damage.

7. During the times when bicycles are permitted, authorized MDTA personnel or police may temporarily deny cyclists access to Metrorail station areas, platforms or trains during passenger congestion, until the congestion has cleared.

8. Since passenger/cyclists will be using handicap facilities throughout the trip, it is mandatory that handicap passengers have priority over passenger/cyclists; both in entering and exiting stations, use of the elevator and while on the train or platform.

9. In addition to the above stated rules and regulations, cyclists must abide by the instructions and directives of MDTA personnel, Metrorail train operators, police and fire officials at all times.

For more information, contact:
Dade County Bicycle/Pedestrian Program
111 NW First St., Suite 910
Miami, FL 33128
(305) 375-4507

THE PALM BEACH POST WEDNESDAY AUGUST 3 1994

New park could aid Florida Bay

By KIRK BROWN
Palm Beach Post Staff Writer

Nearly 100,000 acres of swampland in southern Dade County would become part of the national park system under legislation that a South Florida congressman plans to introduce.

Much of the property could be flooded so the water would drain into Florida Bay, which is suffering from a lack of fresh water that has triggered the death of sea grass beds and caused harmful algae blooms.

The bill being prepared by U.S. Rep. Peter Deutsch, D-Lauderhill, calls for creating the Coastal Everglades National Preserve, which would encompass 81,629 acres between Everglades and Biscayne national parks.

His proposal also includes boundary changes that would increase the size of Everglades National Park by 17,298 acres.

Most of the land involved is privately owned. It is largely undeveloped except for a prison, a gravel company operation and some tomato fields.

Deutsch stressed that state and county officials — and not the federal government — would be responsible for acquiring the property, which covers an area about five times larger than Palm Beach County's Agricultural Reserve.

Dade County and the South Florida Water Management District recently agreed to spend up to $50 million to acquire 60,000 acres in the area. Water managers already have spent $7 million on an adjacent 28,000-acre tract that the Florida Game and Fresh Water Fish Commission manages.

Placing these lands under control of the National Park Service would avert confusion and a lack of coordination that may result from having multiple government agencies as the property's owners, Deutsch said.

STAFF GRAPHIC

"From a management perspective, it makes a lot of sense," said Deutsch, a first-term congressman whose district includes Everglades National Park.

The property that would be designated as the coastal Everglades preserve includes crucial breeding areas for endangered American crocodiles and also sites frequented by roseate spoonbills and other wading birds.

Increasing the amount of water flowing through the area would enhance its environmental value and also help cure Florida Bay's ailments, predicted James Webb, Florida regional director for the Wilderness Society. Webb is working with Deutsch's staff to draft the proposed legislation.

Deutsch said he doubts that his bill can be introduced in time to win passage before Congress adjourns for the year.

If not, he will try to get the measure approved in 1995. U.S. Sen. Bob Graham, D-Fla., has expressed interest in cosponsoring the bill.

Dade County
Bicycle/Pedestrian Program

Among Florida residents, cycling and walking rank first as the most popular outdoor recreational activities.

In the mid 60's, Dade County officials established a bikeway system to help meet the community's demand. In 1986, County Commissioners adopted the Bicycle Comprehensive Plan, and later hired a full-time Bicycle Coordinator to implement and oversee an area-wide bicycle program. Afterwards, pedestrian issues were included to focus more attention on all non-motorized transportation concerns.

To make our Program truly comprehensive, it must include the elements of Education, Encouragement, Enforcement, and Engineering.

EDUCATION: Non-motorized accidents average 40% of all the fatalities in the County each year. The Bicycle/Pedestrian Program and the Dade County Public Schools System have taken a major step in reducing these accidents with one of the most progressive traffic safety programs in the nation: Bike-Ed America.

Taught to elementary school students over a 6-week period, children receive an in-depth understanding of traffic safety, as well as their rights and responsibilities and proper bicycle handling techniques.

To further educate the public, our Program conducts one-day bicycle "rodeos" and safety events throughout the area for various organizations, such as local hospitals, or health and safety organizations.

We also take part in lectures and meetings with various professional groups who should become more aware of the needs and behaviors of urban cyclists.

ENCOURAGEMENT: Linking cyclists up with public transit is one part of our encouragement support. Our program administers and maintains the Metrorail Bicycle Locker and Bikes-On-Trains programs. (See reverse side for further information.)

We also make ourselves available to the public by responding to a wide-range of requests concerning bicycle/pedestrian-related matters. We distribute informational literature through mail-outs or outlets, such as bike shops and our display booth in Government Center Metrorail station.

Other examples of encouragement are by assisting local charities with bicycle or walking fund-raising events, or working with local bicycle clubs, as well as road, off-road and Bicycle Moto-Cross racing to help build public support for these community activities.

ENFORCEMENT: The bicycle is legally defined as a vehicle in all 50 states. In Florida, cyclists must obey the same laws as motor vehicle operators.

These include:

- obeying traffic signs and signals;
- riding with the flow of traffic; and,
- using lights at night.

In order to assist law enforcement efforts, the Bicycle/Pedestrian Program is working with the Florida Department of Transportation to develop a statewide, computerized registration system.

ENGINEERING: Proper facilities must exist to provide cyclists needed access to businesses, schools, and recreational areas through-out the County.

There are several distinct types of facilities to consider:

- **Sidewalks** and **"Safe Ways to School"** are paths intended primarily for use by pedestrians.
- **Bicycle paths**, are separated from the roadway and designed primarily for cyclists. They are typically 8 to 10 feet in width and bidirectional. Bike paths have proven to be most suitable when located in corridors with few intersections or driveways, where conflicts with motor vehicles can occur.
- A growing number of cyclists use the bicycle as a means of commuting to stores, work, or other locations, and typically travel between 10-20 m.p.h. Studies have indicated that **"on-road" facilities** have a higher safety index than paths. They include: **paved shoulders, wide curb-lanes,** and striped **bike lanes**.

The Bicycle/Pedestrian Program has begun evaluating the County's current roadway and off-road facilities, identifying where and what type of additional facilities are needed.

Bicycle/Pedestrian activities are common in every age, ethnic and financial group. Concern for each individual's safety; their knowledge of skills and responsibilities; and providing proper facilities allows everyone to more fully appreciate our community and strengthens the quality of life.

In meeting its challenge, the Dade County Bicycle/Pedestrian Program requests everyone's support for this dynamic program through the interactions of Education, Enforcement, Engineering, and Encouragement.

South Dade Greenway Network

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