CITY OF NORTH MIAMI BEACH

PEDESTRIAN AND BICYCLE SAFETY ANALYSIS

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Executive Summary

The purpose for this study is to lay the groundwork for a network of trails and bikeways in the City of North Miami Beach. The three main reasons for the study are: 1) community interest in recreational bicycling and jogging/walking trails is demonstrated by the constant use of the existing Snake Creek Trail, 2) the existing trail has some problems that should be fixed with a comprehensive view, and 3) the nexus of the trail network needs to be the Fulford City Center, which has the beginnings of becoming a thriving pedestrian oriented mixed-use destination.

This study is the result of the City of North Miami Beach submitting a funding request for fiscal year 2004 to the Miami-Dade County Metropolitan Planning Organization (MPO) Municipal Grant Program in August of 2003. The grant was awarded and funding for the study was combined with City matching funds. The City hired *Dover, Kohl & Partners, town planning*, to create the "City of North Miami Beach Pedestrian and Bicycle Safety Analysis." This study examines the existing network of streets and blocks, analyzes existing and planned trails, recommends physical improvements to the network of paths and trails, and sets forth ways to implement plans for future pedestrian and bicycle trails.

This plan can be treated as the Master Plan for the network of bikeways and trails. It should be included with grant applications to show that the City has already invested time, money, and thought into its alternative transportation needs.

Many Destinations to be Reached on Foot or by Bike

There are many excellent destinations for community members to walk or bike within the City: neighborhood parks, schools, shopping areas, and recreational facilities to name a few. By providing multi-modal connections to these various destinations, more people will be inclined to bike or walk.

New routes

The new routes radiate out from the Fulford City Center. They are named in this study:

- NE 15th Avenue Bikeway, *runing north-south on NE 15th Avenue*
- Fulford City Center Connectors, *providing easy access between the Snake Creek Trail and NE 163rd Street*
- Oleta River State Park Bikeway, *linking Snake Creek Trail to Oleta River State Park*
- Eastern Trail, *crossing the northeastern neighbohoods of the city and passing through East Greynolds Park to Sunny Isles Boulevard*
- Greynolds Trail, *creating a new "loop" from the eastern end of Snake Creek Trail to the western end through Greynolds Park*
- Southern Trail, *linking the south western neighbohoods to the Fulford City Center*
- FIU Bikeway, *linking Fulford City Center to FIU*
- NE 159th Street Trail, *crossing the southern neighbohoods of the city connecting Oak Grove Park to other trails*
- Western Trail, *connecting the western neighborhoods to the Snake Creek Canal and the Fulford City Center*

- West Dixie Bikeway, *a future Miami-Dade County planned regional trail*

The City will want to make the system user friendly. At key locations, perhaps there might be "trail heads" with information about the trail for users, such as paper maps of the trails, with destinations. Signs along the way can show the routes, and distances to destinations similar to those in a National Park Service trail system.

Over the length of any one trail, its design character will change based on changes with the existing conditions of roadways, intersections, etc. This study identifies seven design configurations to be applied throughout the system. These are schematically represented in cross section. Each of these cross sections should be evaluated with existing conditions in the future when the actual design for each bikeway or trail gets underway. The seven configurations are:

- Striped bike lanes with pedestrian enhancements,
- Bike routes without striping, but with pedestrian enhancements,
- Striped bike lanes without pedestrian enhancements,
- Residential streets with wide medians,
- Multi-use trails for bikes and pedestrians,
- Fulford City Center Connector with multiple lanes and parallel parking, and
- Fulford City Center Connector with two lanes and perpendicular parking

Fulford City Center

The core destination is intended to be the Fulford City Center. Fulford has not yet become the highly sought after mixed use neighborhood people would like it to be, but the potential is there. Greater Miami-Dade County is growing in population and reinvestment in older neighborhoods is spreading north from the City of Miami. The City has been doing its part in public infrastructure improvements. Now it is up to private property owners to redevelop their properties in Fulford. Fundamental design aspects that need special attention in the Fulford City Center are associated with:

- Building Placement
- Building Orientation
- Windows
- Parking and Bike Parking
- Architectural standards
- A quicker administrative review process

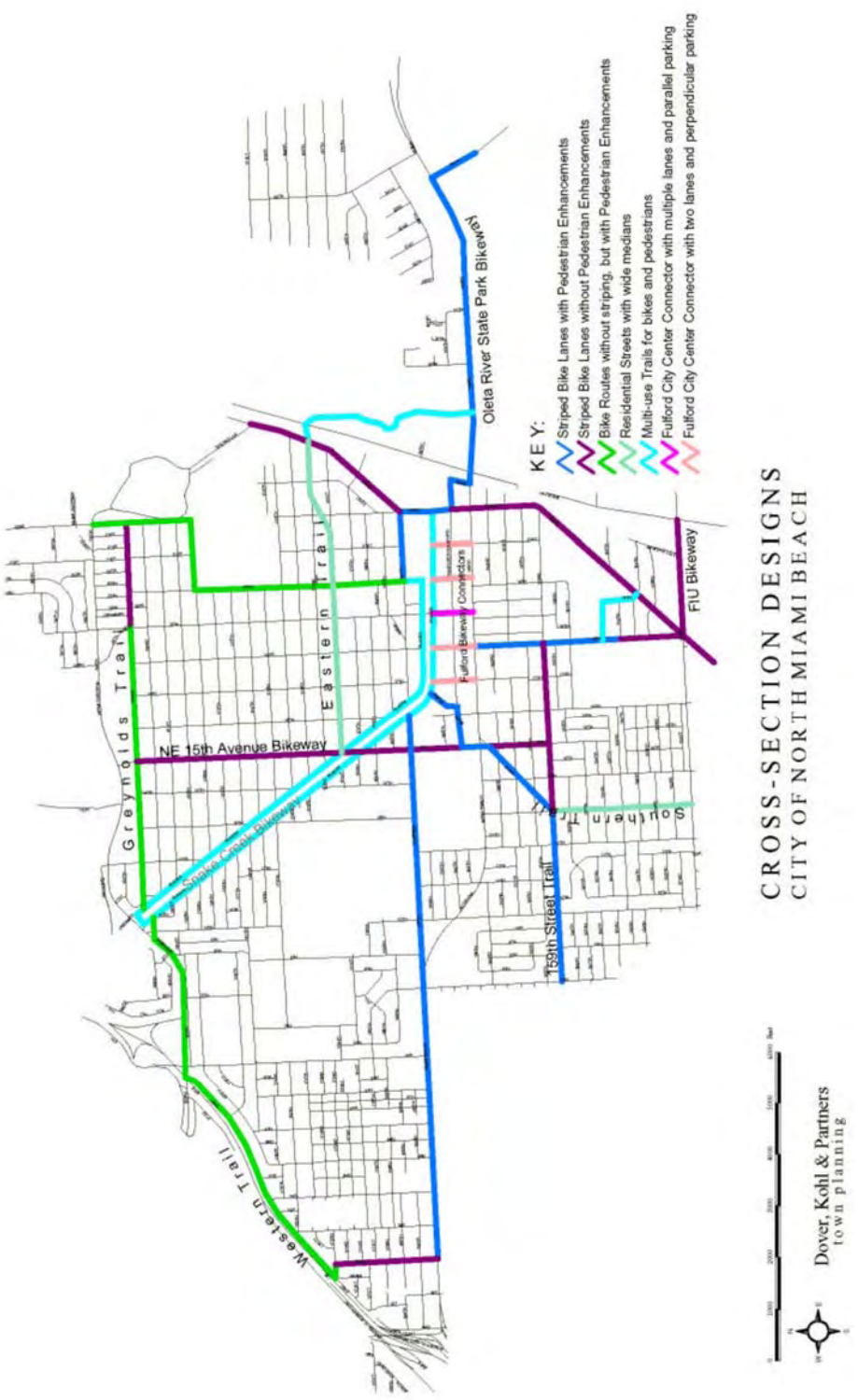
Next steps

The proposed bikeways, trails, and street improvements identified in this study should be prioritized and earmarked for future available funding. The City should continue to pursue grants and capital improvement programs to further enhance the network of trails. Pedestrian and bicycle safety should remain a priority within the City of North Miami Beach. Prior to any roadway improvements, the City's Engineering Department should examine all plans and proposals to confirm that improvements include measures to increase bicycle and pedestrian safety. By continuing to better the community's transportation network, North Miami Beach will uphold its high quality of life that residents cherish.

Map of Trails and Existing Destinations
Only the Snake Creek Trail currently exists.

Map of Cross-Section Designs

The cross sections identified on this map are described in greater detail in Section 3 of this report.



1. Introduction

Realizing the importance for the need to improve bicycle and pedestrian safety, the City of North Miami Beach aims to further enhance their network of trails and to provide additional opportunities to encourage people to walk or bike throughout town. By implementing the Snake Creek Trail, the City has demonstrated that it places a great importance on providing safe and functional routes for people on bikes and on foot. The trail's popularity among the residents shows that the City as a community is ready for a comprehensive network of trails and bikeways. The City continues to support enhancement projects for the trail, such as the recent approval to purchase exercise stations.

Transportation planners acknowledge that as more and more people are faced with the negative impacts of uncontrolled growth and sprawling development (greater Miami-Dade County), it is important to examine alternative methods of transportation. To preserve and enhance the community character and sentiment of North Miami Beach residents, continued emphasis must be placed on multiple methods of transportation.

This study is the result of the City of North Miami Beach submitting a funding request for fiscal year 2004 to the MPO Municipal Grant Program in August of 2003. The grant was awarded and combined with City matching funds. The City hired Dover, Kohl & Partners to create the "City of North Miami Beach Pedestrian and Bicycle Safety Analysis."

This study examines the existing network of streets and blocks, analyzes existing and planned trails, recommends physical improvements to the network of paths and trails, and sets forth ways to implement plans for future pedestrian and bicycle trails. The Pedestrian and Bicycle Safety Analysis is guided by five key principles:

1. Protect and enhance the community's transportation network and quality of life.
2. Provide accessibility to all residents to trails and pathways.
3. Modify and improve existing trails and pathways to improve safety of shared roadway space, protect the pedestrian and bicyclist from traffic, and provide adequate space for pedestrians and bicycles.
4. Plan for new trails and pathways.
5. Improve the urban form to better accommodate the needs of pedestrians and bicyclists.

Pedestrian and bicycle facilities are good for the community because they provide:

- a recreational amenity that will be unique for its users,
- opportunities for residents to walk and bike and interact socially, building the bonds that reinforce a sense of belonging and therefore strengthening the community as a whole,
- the community with an amenity that makes the City a desirable place to live and evoke community pride, and
- the opportunity for individuals who cannot, or who choose not to, drive: a dignified transportation alternative.

Why this Study?

The purpose for this study is to lay the groundwork for a network of trails and bikeways in the City of North Miami Beach. The three main reasons are:

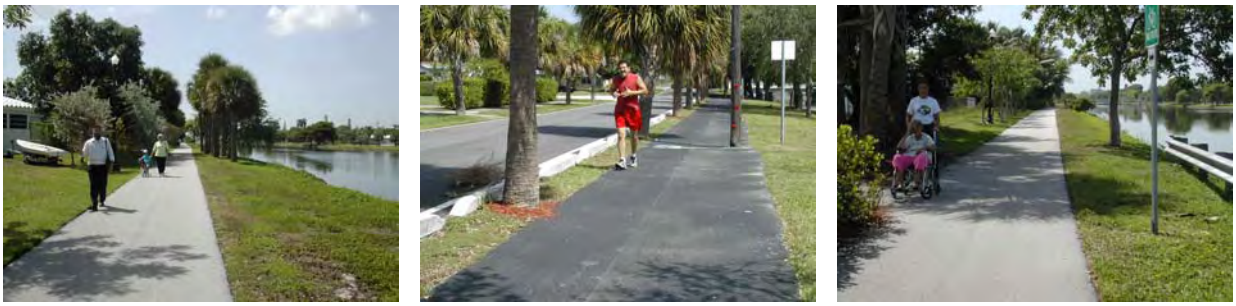
1) Community interest in recreational bicycling and jogging/walking trails is demonstrated by the constant use of the existing Snake Creek Trail,

2) The existing trail has some problems that should be fixed with a comprehensive view, and

3) The nexus of the trail network needs to be the Fulford City Center, which has the beginnings of becoming a thriving pedestrian oriented mixed-use destination.

Snake Creek Trail

The existing trail, approximately two miles in length along the Snake Creek Canal, experiences daily usage, accommodating a range of bicyclists, joggers, walkers, and roller-bladers. The majority of users appear to be using the trails for recreational purposes. The busiest times are during the afternoons on weekend days. Along some portions of the trail, especially near the Fulford City Center, people do appear to be using the trail system to run errands, an alternative to driving cars. There appears to be a higher usage of the trails where the trail is easily accessible and located in close proximity to community destinations. The path is paved for its entire length and illuminated for most of its length. At intersections and bridges the bicycles have to ride on the sidewalks. No cars are allowed along the path.



The existing network of trails accommodates a variety of users.

In addition to the Snake Creek Trail, there are just a couple additional streets lined with bike lanes. Most of the streets within the City have sidewalks. Despite the City's valiant effort to construct and enhance the trail, there are a few areas where improvements are needed. These are further described in Section 5 of this report.

How to use this Study

The primary use of this study is to discover and become familiar with the many opportunities for enhancing the bicycle and pedestrian amenities within the City of North Miami Beach. With that knowledge, an implementation strategy can be devised. This strategy will need to change over time, as particular funding sources or other opportunities become available. The first step toward an implementation strategy is shown in Section 6, Next Steps.

This plan can be treated as the Master Plan for the network of bikeways and trails. Additional routes, their paths, and features are described in Section 5. Cross sections are shown in Section 3, "Great Streets for Pedestrians and Bicyclists," for typical street configurations that can be used for roadway improvements.

The Study should be included with grant applications to show that the City has already invested time, money, and thought into its alternative transportation needs. If an organization has to choose which of several applicants gets the financial assistance, the ones that win are the ones with a compelling vision and implementation strategy.

2. Opportunities for Enhanced Bike and Pedestrian Amenities Based on Existing Conditions

Recent Capital Improvements

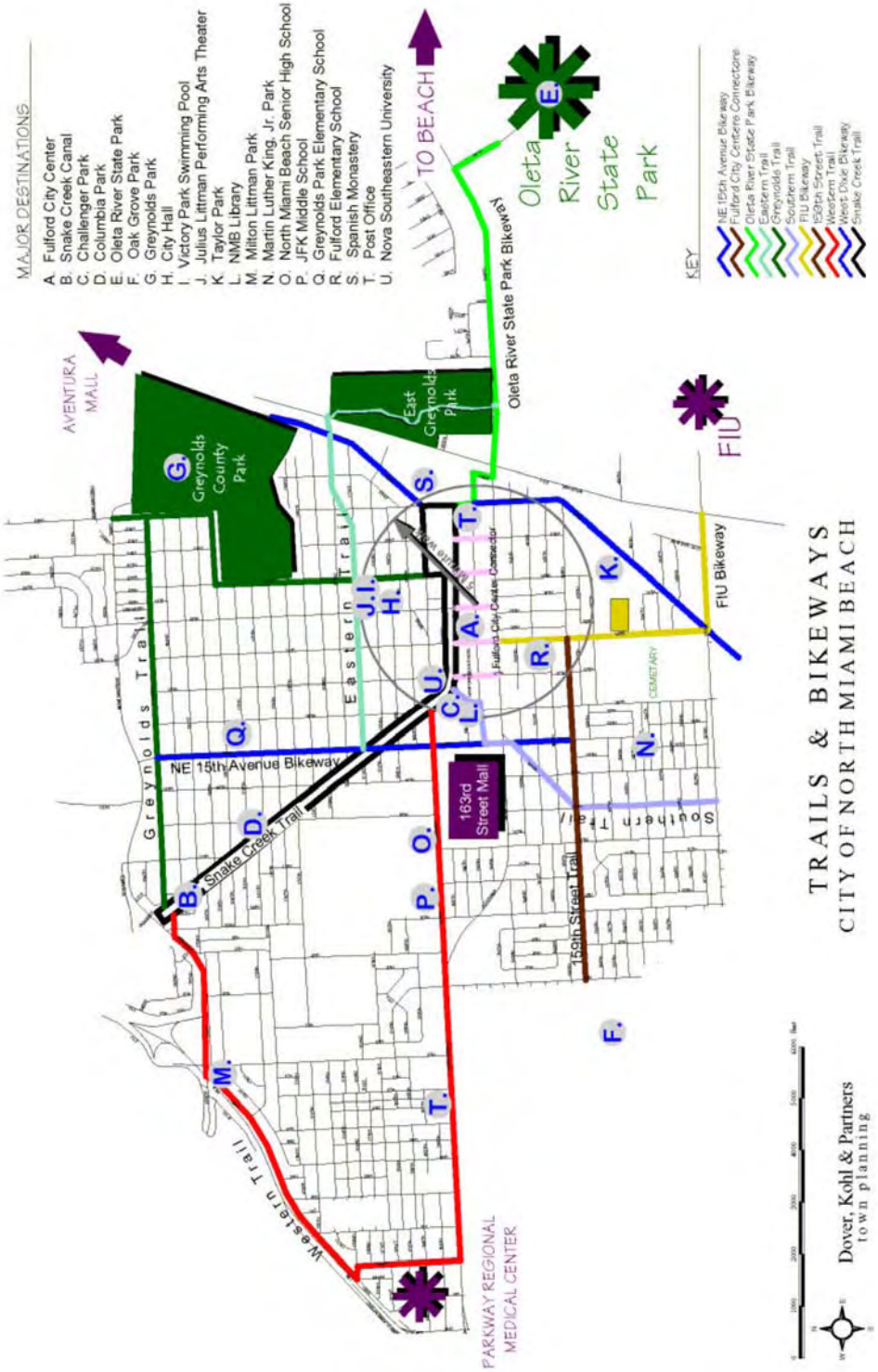
Through the City's "Proud Neighborhoods Program", many improvements along the trail and sidewalks have taken place. The "Proud Neighborhoods Program" is the City's Capital Improvements project to add sidewalks to streets, repave streets, improve lighting, and plant shade trees along these sidewalks and trails.

The City's Proud Neighborhoods Program helps with better connections to the existing trail.

Great Nearby Destinations

There are many excellent destinations for community members to walk or bike within the City: neighborhood parks, schools, shopping areas, and recreational facilities to name a few. By providing multi-modal connections to these various destinations, more people will be inclined to bike or walk to get from point A to point B. The map and images that follow show the various destinations that people could easily access by bike or walking, by adding safety measures and shade trees along the routes.

The map below shows the major destinations in and around town. The new routes also shown on the map are described in Section 5, "Proposed Bicycle Network Improvements."



Destinations include:

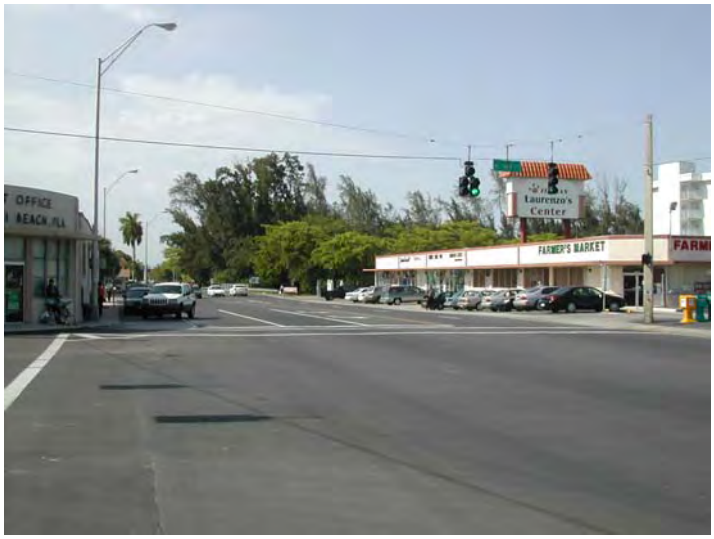
- Fulford City Center
- Mall at 163rd Street
- Snake Creek Canal
- Challenger Park
- Columbia Park
- Oleta River State Park
- Greynolds Park
- Oak Grove Park
- City Hall
- Victory Park Swimming Pool
- North Miami Beach Senior High School
- JFK Middle School
- Greynolds Park Elementary School
- Fulford Elementary School
- Two Post Offices
- Parkway Regional Medical Center
- Spanish Monastery
- Nova Southeastern University
- Florida International University
- Aventura Mall
- The Beach, of the Atlantic Ocean
- Uleta Community Center
- De Leonardis Community Center
- Washington Park Community Center
- Highland Village Community Center
- Neighborhood Resource Centers
- NMB Library
- Patricia A. Mishcon Athletic Field
- Arthur I. Snyder Tennis Center
- Martin Luther King Jr. Park
- Taylor Park
- Milton Littman Park
- Schenkenberger Park
- Silverman Park
- Fulford Park
- Aqua Bowl Lake
- Botanical Garden on 13th Avenue
- Julius Littman Performing Arts Theater
- McDonald Center

The Columbia Park "tot lot" on Snake Creek Canal

Bike trail leading to Challenger Park

Victory Park Municipal Swimming Pool

The eastern end of Fulford City Center has the North Miami Beach Post Office, Laurenzo's Market, and various small businesses.



Existing Wide Public Rights-Of-Way

There are wide rights-of-way throughout the city, providing plenty of room for bike trails or paths.

3. Great Streets for Pedestrians and Bicyclists

Making Streets Walkable

More than any other feature, streets define a community's character. Since North Miami Beach was platted during the time of the City Beautiful movement, the legacy from its town planners is a network of interconnected blocks and streets, easy for pedestrians and bicyclists to maneuver to various parts of town.

As streetscape projects and infill developments are in the planning stage, it is important to consider the following basic strategies:

1. Design for pedestrians first.
The configurations of great streets consistently provide a high-caliber experience for pedestrians as a baseline obligation, and go on from there to accommodate all other required modes of travel.

2. Scale matters.
A street should function as a three-dimensional outdoor room, surrounding its occupants in a space that is welcoming and useable, especially for pedestrians. A ratio of 1:3 for building height to street width is often cited as a minimum benchmark of success, although even more narrowly proportioned street spaces can produce a still more satisfying urban character.

Although pedestrians are invariably more comfortable on narrower streets, great streets vary in size and shape and are successful in many different configurations. Width is only part of the recipe. From an urban design point of view, there are extremely successful eight-lane roads just as there are miserable failures two lanes wide. Streets need to be sized properly for their use and matched in proportion to the architecture and/or trees that frame them. The Champs-Elysées in Paris, for example, is 230 feet wide but it is considered a "great street;" the scale of the boulevard is defined three-dimensionally. Buildings on the Champs-Elysées are 75 to 80 feet tall, creating an effective sense of enclosure. By contrast, residential streets in Paris have a right-of-way only twenty-two feet wide—just seventeen feet curb-to-curb, plus a sidewalk—and the houses that line both sides are two stories tall. Classic streets in American streetcar suburbs feature shallow front yards, broad planting strips for trees, and relatively narrow pavement; the trees on both sides enhance the spatial definition. The design ratio of height to width is followed on most great streets around the world.

3. Design the street as a unified whole.
An essential distinction of great streets is that the whole outdoor room is designed as an ensemble, including utilitarian auto elements (travel lanes, parking, curbs), public components (such as the trees, sidewalks, street furniture, and lighting) and private elements (buildings, landscape, and garden walls). As tempting as it may be to separate these issues, by for example leaving building placement and orientation out of the discussion when planning new thoroughfares, all the public and private elements must be coordinated to have a good effect. For example, the best city streets invariably have buildings fronting the sidewalk, usually close to the

street. The random setbacks generated by conventional zoning only rarely produce this effect, so the land development regulations along a given corridor must be rethought in conjunction with any road improvement (especially with widening). In some cases, minimum height of buildings should be regulated to achieve spatial definition, almost impossible to attain with one-story buildings. Similarly, the old routine of widening roads but citing last-minute budget problems as the reason to leave street trees or sidewalks "for later" is unacceptable, comparable to building a house with no roof.

4. Include sidewalks almost everywhere.
Without sidewalks, pedestrian activity is virtually impossible. The design matters, too. One of the simplest ways to enhance the pedestrian environment is to locate the walkway at least 5 or 6 feet away from the curb, with the street trees planted in between. Pedestrians will be more willing to utilize sidewalks if they are located a safe distance away from moving automobile traffic. The width of the sidewalk will vary according to the location. On most single-family residential streets, five feet will usually suffice, but more width is needed on townhouse streets to accommodate stoops. On Main Streets, fourteen feet is usually most appropriate, but the sidewalk must never fall below an absolute minimum of eight feet wide.

5. Shade!
Motorists, pedestrians, and cyclists all prefer shady streets. Street trees should be placed between automobile traffic and pedestrians, for an added layer of psychological security for pedestrians. Street trees with fairly continuous canopies that extend over the travel lanes and the sidewalks should be the norm. This is especially vital on arterial roadways or other wide streets that contain expanses of concrete and asphalt and depend on trees for spatial definition. Main Streets are a special case, in which excessive tree plantings can interfere with clear views to signage and merchandise. In areas like these where continuous plantings of street trees are undesirable or inappropriate, architectural encroachments over the sidewalk like awnings, arcades and colonnades, and cantilevered balconies can be used in place of trees to protect pedestrians from the elements and shield storefronts from glare. The taller buildings and tighter height-to-width ratio on Main Streets also produce some shade. In downtown areas, streetlights, bus shelters, benches, and other street furniture occupy the wider sidewalks and provide the appropriate separation between pedestrians and the curb.

6. Make medians sufficiently wide.
Where divided thoroughfares are unavoidable, the medians must be generous enough to serve as a pedestrian amenity. For street trees to thrive and for pedestrians to have adequate refuge when crossing streets, the medians need to be sized accordingly.

7. Plant the street trees in an orderly manner.
Great streets are not the place to experiment with random, romantic, or naturalistic landscaping. Urban trees should be planted in aligned rows, with regular spacing, using consistent species. This will not appear rigid or mechanistic, for trees do not grow identically; rather, the power of formal tree placement is that it at once shapes the space, reflects conscious design, and celebrates the intricacy and diversity within the species. More importantly, the shade produced by the trees

will be continuous enough to make walking viable, and the spatial impression of aligned trees also has a traffic calming effect.

8. Use smart lighting.
Streets should be well lit at night both for automobile safety and pedestrian safety. Pedestrians will avoid streets where they feel unsafe. "Cobra head" light fixtures on tall poles spaced far apart do not provide for pedestrian safety. Shorter fixtures installed more frequently are more appropriate, and can provide light under the tree canopy as street trees mature.

9. Allow on-street parking in suitable locations.
On-street parking provides further separation between pedestrians and moving cars and also serves as a traffic calming device because of the "visual friction" and alertness it triggers. Parallel parking is often better than head-in or diagonal parking because it requires less space, although diagonal parking is acceptable in exceptional cases on shopping streets if the extra curb-to-curb width is not achieved at the expense of properly sized sidewalk space. Parking near the fronts of buildings also encourages people to get out of their cars and walk, and is essential to leasing street-oriented retail space.

10. Resist parking lots in front of buildings.
The bulk of a building's parking supply should not be up against the sidewalk or facing the street but should occur behind the building instead (or in a few cases, beside the building). The acres of surface parking between storefronts and the street are responsible for the negative visual impact of the typical commercial "strip". Such a disconnected pedestrian environment is in part due to bad habits on the part of auto-oriented chain stores, but also reflects the large setbacks and high parking requirements in conventional zoning. If the rules are changed to provide "build-to" lines rather than mandatory front setbacks for commercial buildings, it is possible to grow streets with real character.

Streets are the public living rooms in a community. Buildings located along streets sell for great addresses, street scene, and the convenience to walk places. Street oriented architecture does not turn its "back" to the street; doors, windows, balconies, and porches face the street, not blank street walls. In this way, a level of safety is reached by creating "eyes on the street." In a thriving town, street oriented architecture makes the public realm between buildings satisfying.

Typical Street and Bikeway Cross Sections

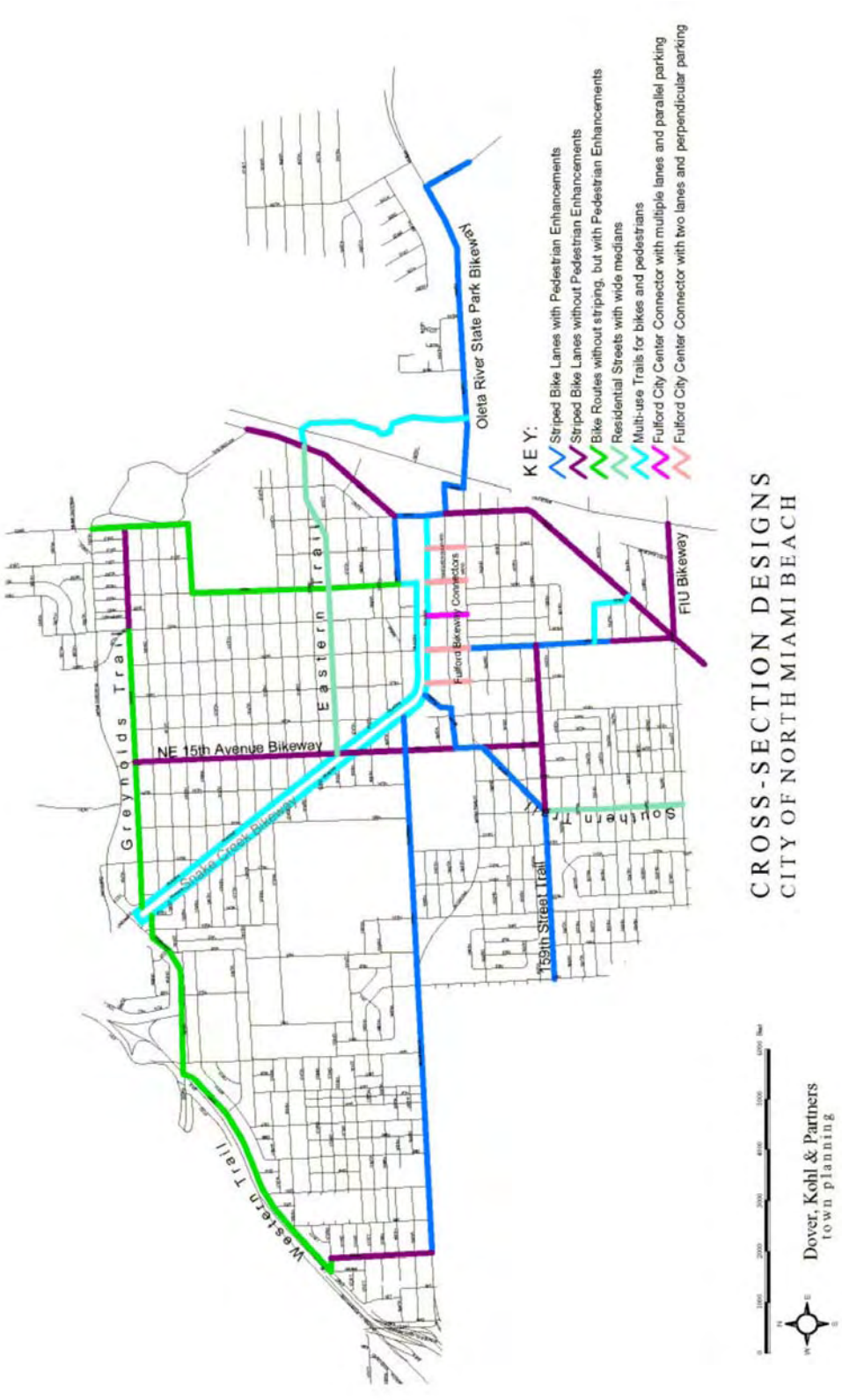
Seven design configurations for improving bikeways and trails in North Miami Beach are identified in the pages that follow. These are schematically represented in cross section. Each of these should be evaluated with existing conditions in the future when the actual design for each bikeway or trail gets underway.

The seven configuration types are:

1. Striped bike lanes with pedestrian enhancements,
2. Bike routes without striping, but with pedestrian enhancements,
3. Striped bike lanes without pedestrian enhancements,
4. Residential streets with wide medians,
5. Multi-use trails for bikes and pedestrians,
6. Fulford City Center Connector with multiple lanes and parallel parking, and
7. Fulford City Center Connector with two lanes and perpendicular parking.

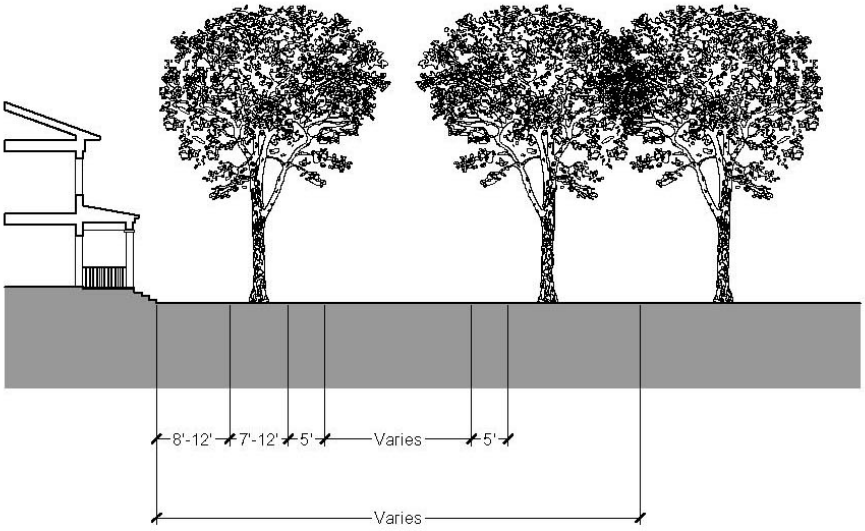
The map on the next page identifies where each of these configurations should occur on the overall route map. The cross sections are on the pages following the map.

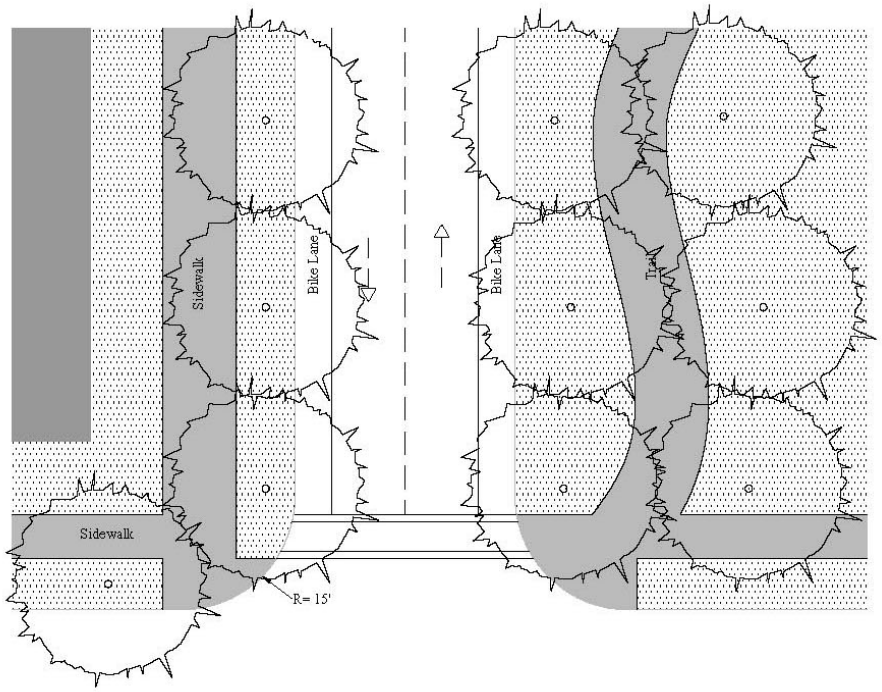
Map of Cross Section Types



Striped bike lanes with pedestrian enhancements

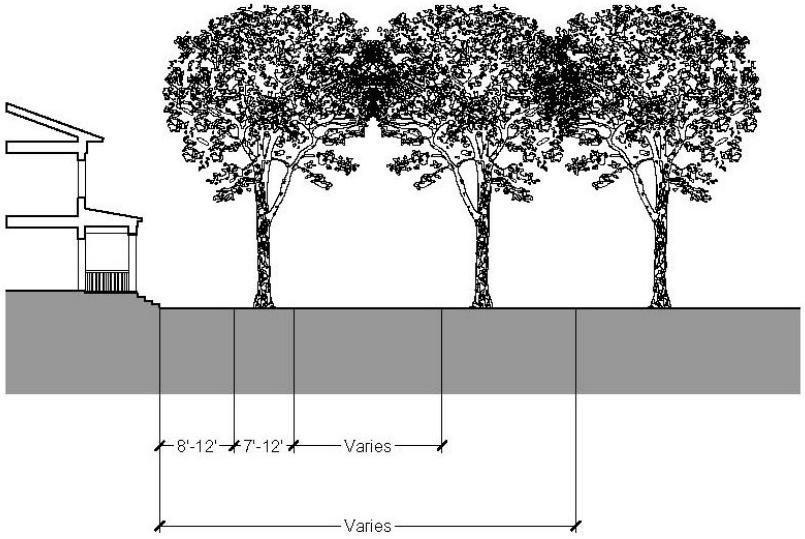
Use this design on high volume roadways, where bicyclists are serious bikers. Recreational jogging, walking, and slow speed bicycling can occur on the sidewalks. The enhancements to the sidewalks should include a width of eight to twelve feet and shade trees should be planted along the route.

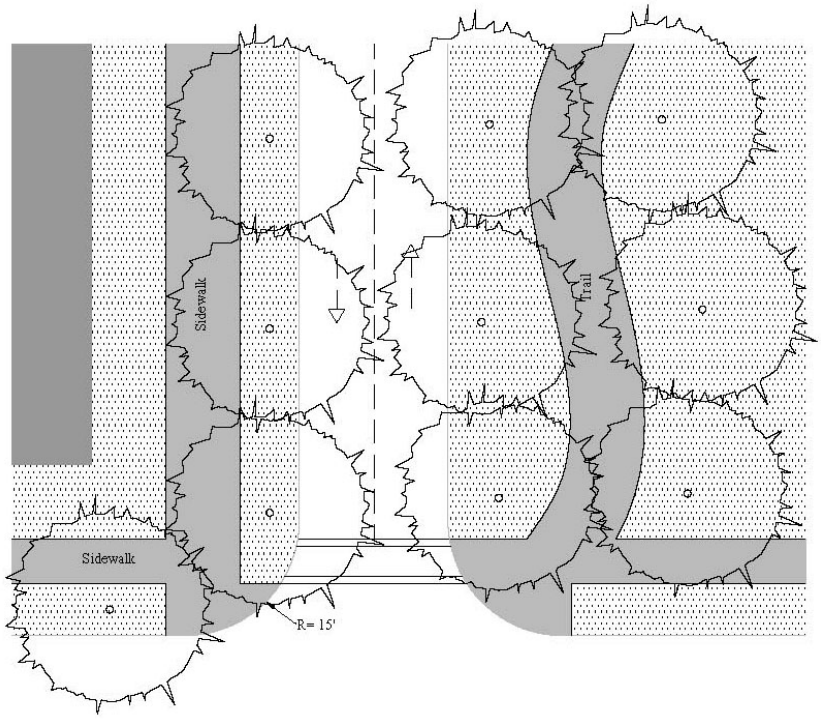




Bike routes without striping, but with pedestrian enhancements

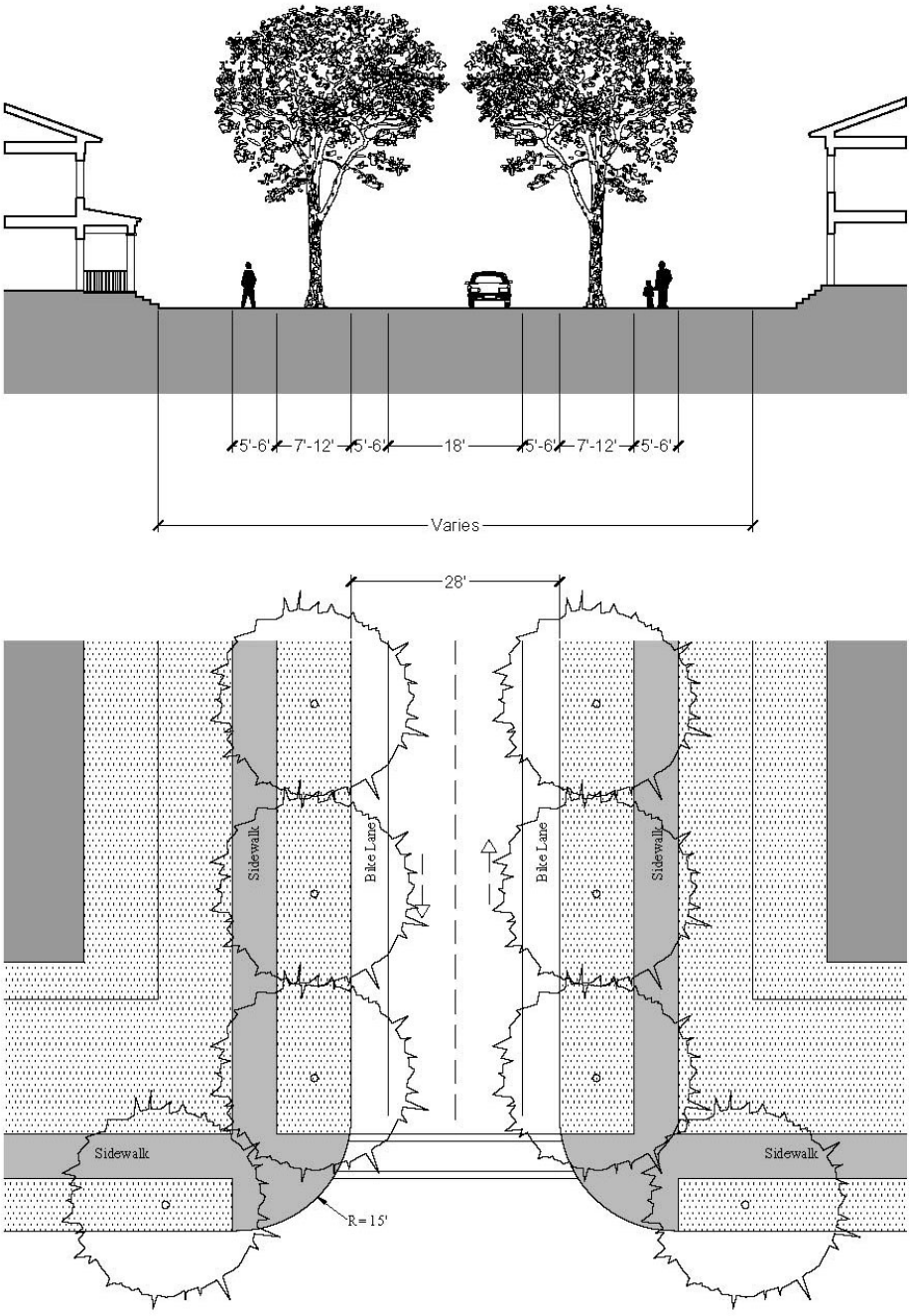
Use this design on low traffic volume roadways, where the emphasis for the trail is for both bikes and pedestrian mobility. Motorists and bicyclists can share the roadway. "Bike Route" and "Share the Road" signs should be placed along the roadway at regular intervals. Striping the bike lanes is not necessary. Recreational jogging and walking can take place on the sidewalks. The enhancements to the sidewalks should include a width of eight to twelve feet and shade trees should be planted along the route.





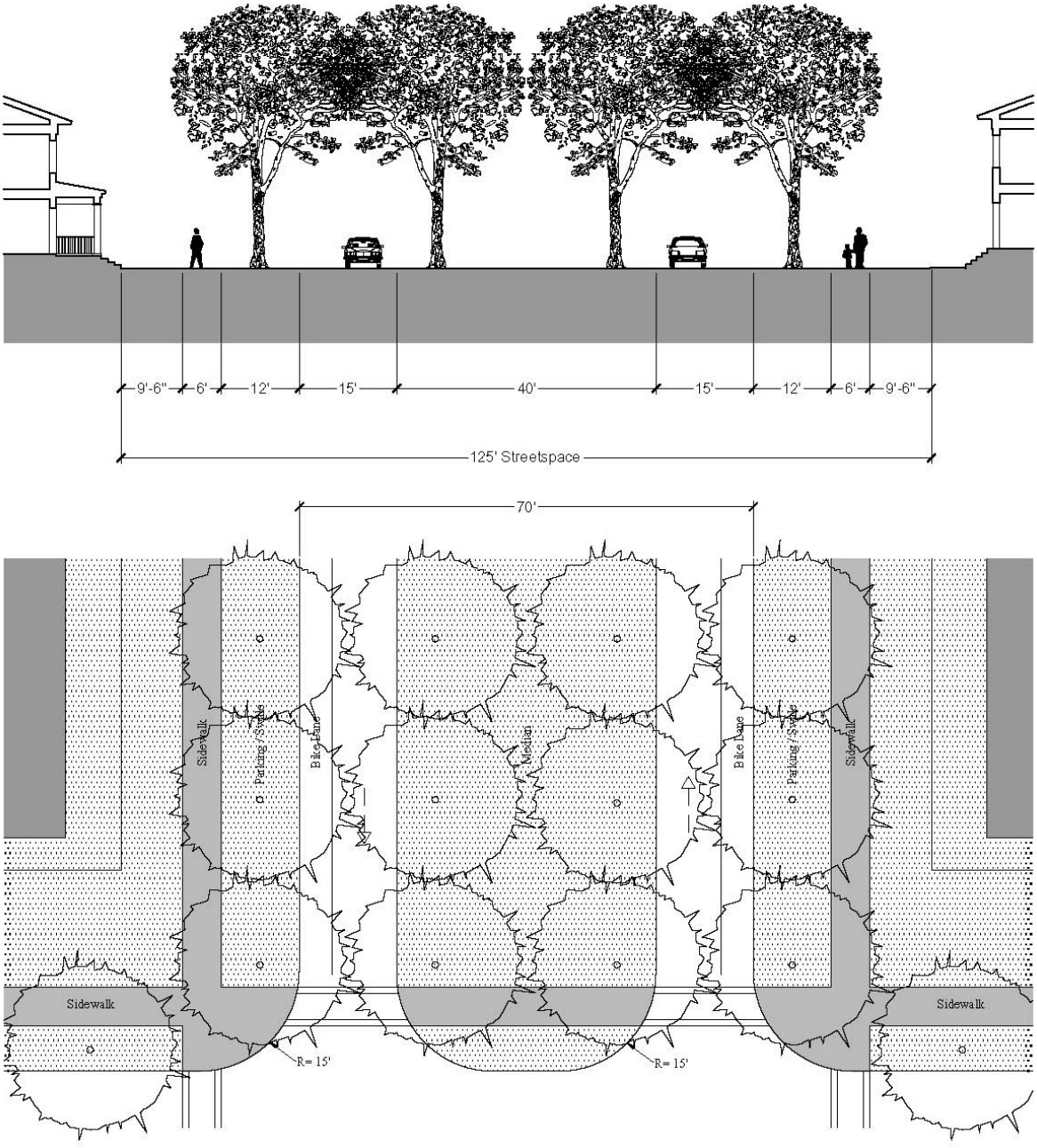
Striped bike lanes without pedestrian enhancements

Use this design on trails intended primarily for connecting bicycle routes.



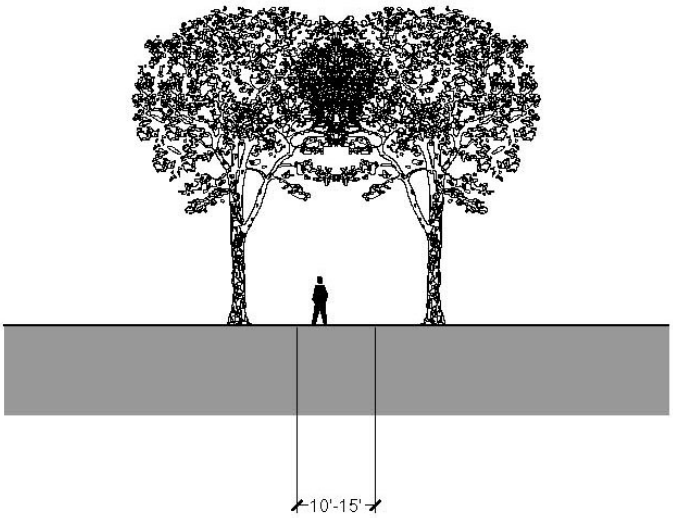
Residential streets with wide medians

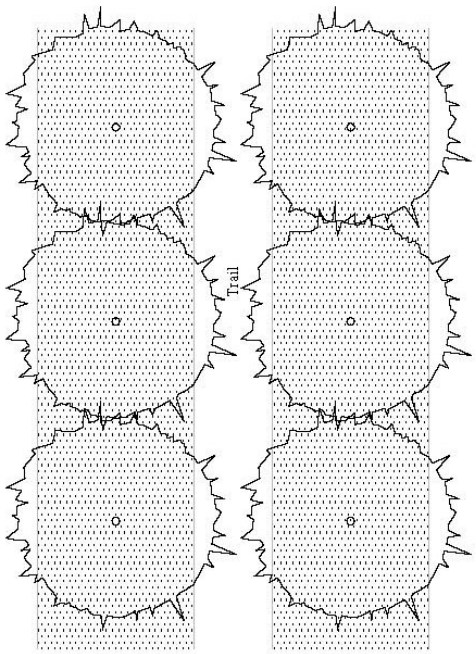
Use this design on residential streets with wide medians, such as NE 13th Avenue, Miami Drive, and NE 171st /172nd Streets. Motorists and bicyclists can share the roadway. "Bike Route" and "Share the Road" signs should be placed along the roadway at regular intervals. Recreational jogging and walking can take place on the sidewalks, or in a trail inside the median, such as on NE 13th Avenue. The enhancements to the sidewalks should include a minimum width of eight feet and shade trees should be planted along the route.



Multi-use trails for bikes and pedestrians

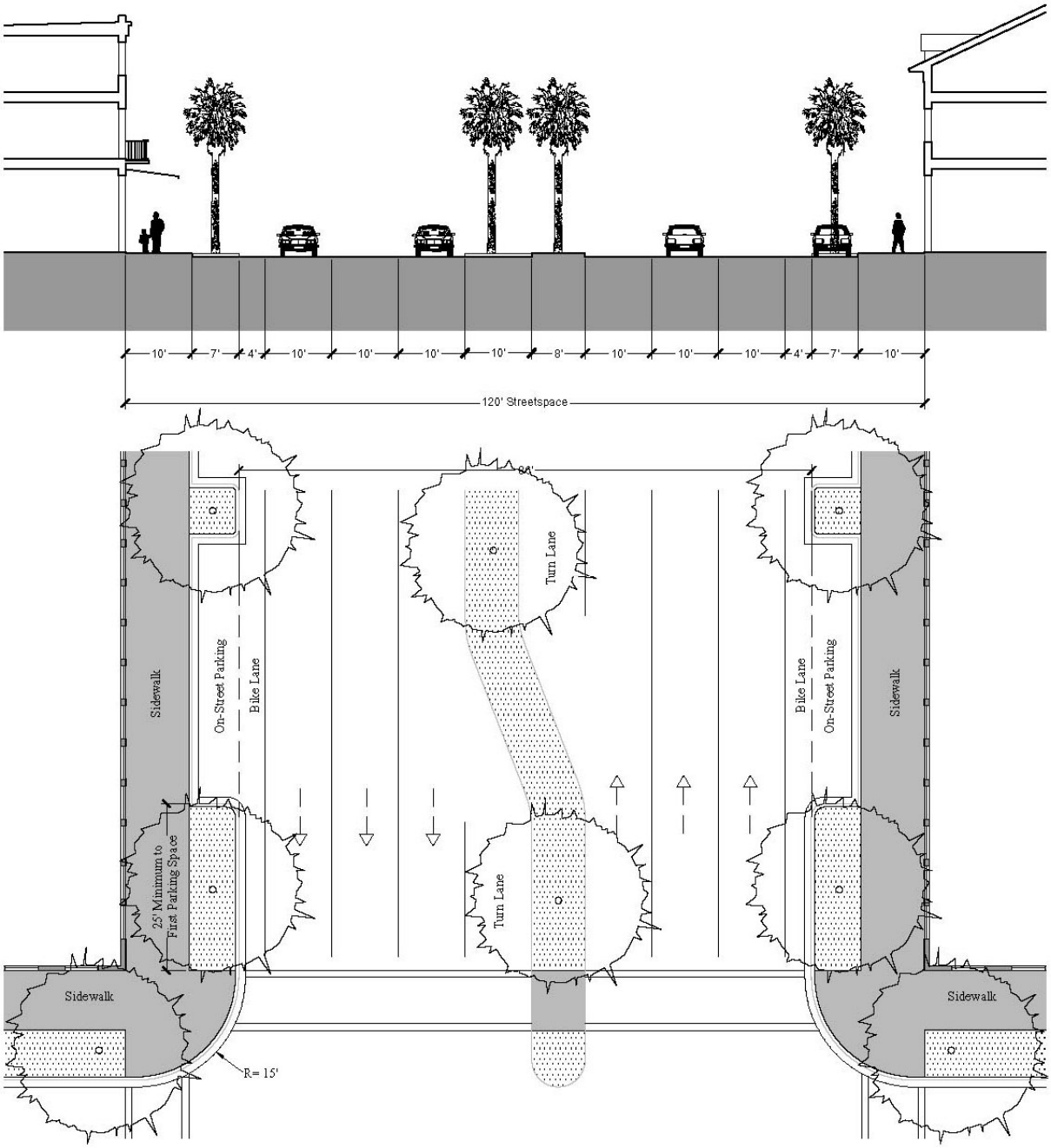
This is an option for connecting routes off the existing roadways, such as through a park. Snake Creek Trail is this type of trail. These trails will not be used by bicyclists in a hurry to get to a particular destination. Instead these trails are used more for casual recreation by joggers, pedestrians, and slow bicyclists.





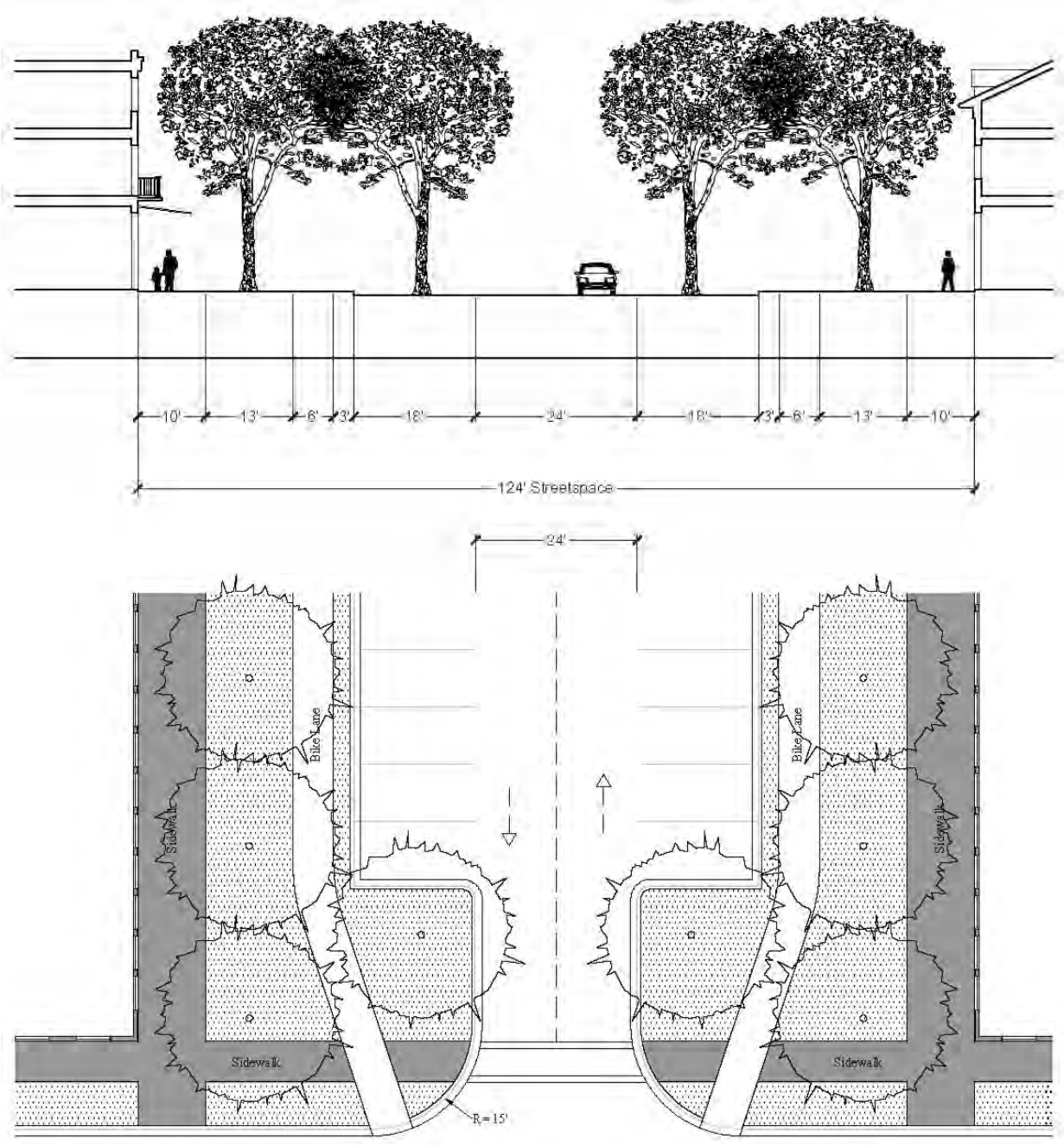
Fulford City Center Connector with multiple lanes and parallel parking

This cross section is specifically for NE 19th Avenue, between NE 163rd Street and Snake Creek Canal, in the Fulford City Center. Existing here today are multiple lanes of travel and parallel parking spaces. With minor changes to the curbs bumping into the roadway and travel lane width, bike lanes can easily be added to the street.



Fulford City Center Connector with two lanes and perpendicular parking

This cross section is specifically for NE 17th, 18th, 20th, and 21st Avenues, between NE 163rd Street and Snake Creek Canal, in the Fulford City Center. These are low volume traffic streets some of which have perpendicular parking spaces used by neighboring buildings. Bike lanes can easily be added to the streets, with regularizing the parking spaces and planting street trees.



4. Proposed Pedestrian Improvements

The City's Center: Fulford

Fulford City Center is the heart of North Miami Beach. Located along Hanford Boulevard, the City Center is a revitalizing community destination with a mix of uses and local amenities. A Master Plan and corresponding Code was created for the City Center by Treasure Coast Regional Planning Council at the request of the South Florida Regional Planning Council. The plan and code serve as essential tools in guiding development in this growing center.

Fulford City Center represents the greatest opportunity for a healthy pedestrian environment. A healthy pedestrian environment generally occurs where traffic is slowed and a mix of uses is present. Within the City Center, there are multiple destinations to which people can walk to or ride their bike. The City Center is a park-once environment where people can drive to the center and walk to multiple destinations.

The City has gone to great lengths to implement the Master Plan. Street and sidewalk improvements, resulting in narrowing vehicular travel lanes and creating on-street parking, have helped to create this pedestrian environment. Benches, bicycle racks, street trees, street lamps, and directional signage line the boulevard. When driving through the City Center you realize you have entered a special place – a place where vehicular travel is balanced with pedestrian and bicycle travel. While the City has done the right thing in improving the public right-of-way along Hanford Boulevard, there remains the need for private investment in the center of town.

Retailers, businesses, residents, and investors who decide to locate to the City Center must continue to uphold the Master Plan and Code for the City Center. They must create the built-environment based on these standards, paying particular attention how buildings meet the street. For both retailers and businesses to succeed in the area, storefronts must appeal to pedestrians. Doors and windows should face the street. By windows and doors facing the street, there should be clear views to merchandise. Sidewalks should be a sufficient width and awnings or colonnades should cover the sidewalks to create shade and protect pedestrians from climatic elements. Buildings should be mixed-use, creating opportunities for residents, businesses, and visitors with multiple destinations to visit in the Center.

There are currently plans to construct a mixed-use building on an infill site within the City Center. Preliminary plans show the building located close to the street, with windows and doors facing the sidewalk along the boulevard. The building proposed would be multi-story, programmed for a mix of uses. The project is one of the first infill development projects to come forward and meet the standards set forth in the Master Plan and Code for the City Center.

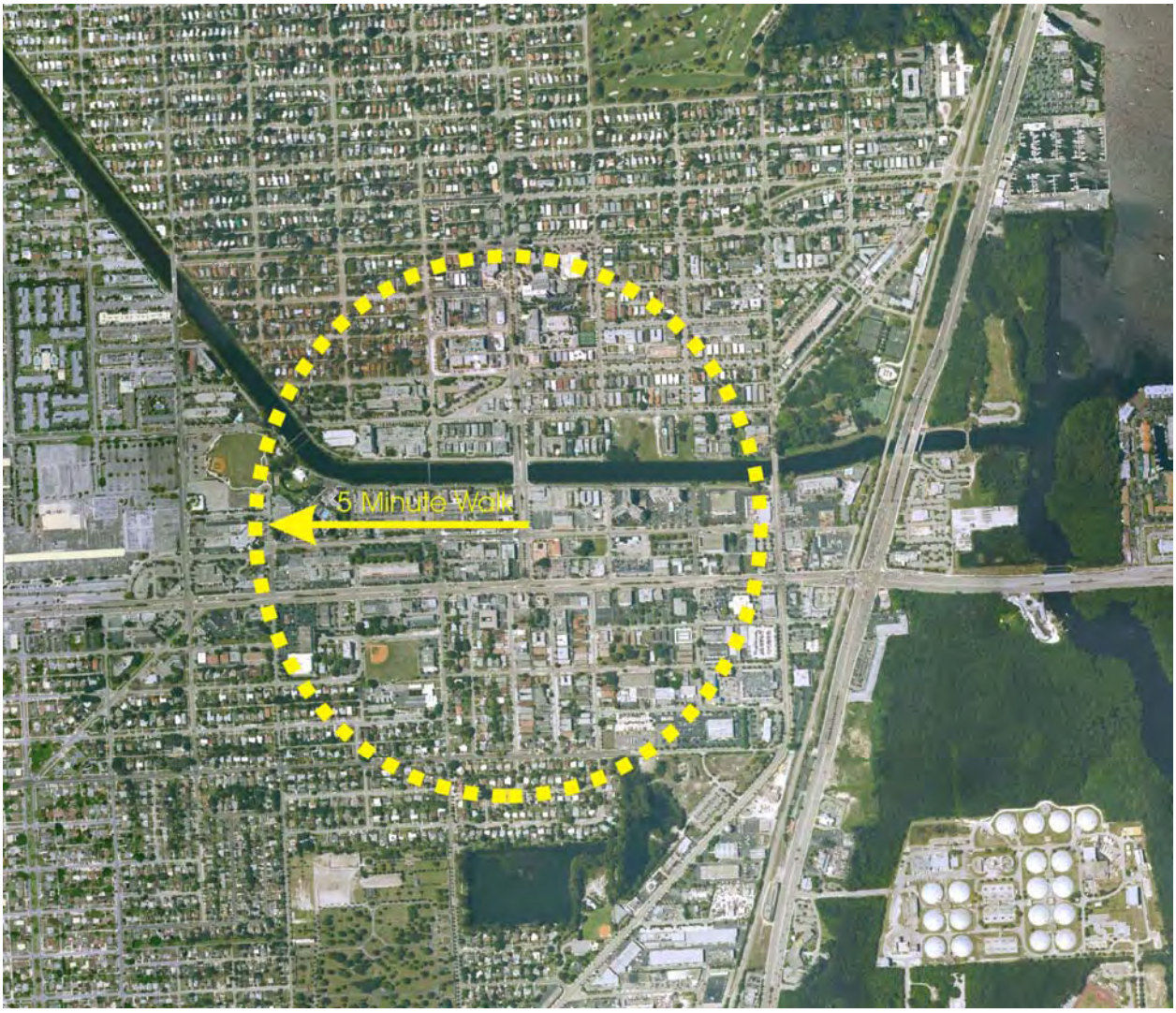
Mixed use buildings help the energy of a downtown because the type of activities and services are more diverse, and people will be out on the sidewalks at various times of the day and night adding natural safety to the streets.

Fulford City Center: improvements within the right of way are done well. The wide sidewalk will be needed for future shoppers and for out-door dining.

The street trees, benches, bike racks, wide sidewalks, and on-street parking create preferred streetscape conditions for pedestrians and business patrons. The building in this photo is positioned properly for a Main Street: up against the sidewalk providing shelter for pedestrians; however, the front has no windows and therefore nothing interesting to look at for those walking by.

Encouraging People to Walk

Most people will walk a distance of approximately ¼ mile (1320 feet) before turning back or opting to drive or ride a bike rather than walk. This dimension is a constant in the way people have settled communities for centuries. Most neighborhoods built before World War II are ¼ mile from center to edge. This distance relates to the manner in which people define the edges of their own neighborhoods. Of course, neighborhoods are not necessarily circular in design, nor is that desirable. The ¼ mile radius is a benchmark for creating a neighborhood unit that is manageable in size and feel and is inherently walkable. For this reason, the focus of pedestrian enhancements for the Fulford City Center should be focused on improvements within the circle shown in the diagram below:



Fundamental Town Planning for Fulford City Center

The following list of town planning design aspects should be applied to new construction in the Fulford City Center. These are fundamental in nature and can be applied to any walkable community center, no matter what size:

- Building Placement: buildings should be located along the outer edge of the sidewalk to promote pedestrian access between shopfronts. There should be a "build-to" line which determines building placement in various street and building conditions throughout the City Center.

- Building Orientation: the fronts of buildings must be oriented to the street. This means the primary entrance to the building faces the street. This insures the use of sidewalks, so more people will walk down the sidewalks, making a safe public environment, and attracting motorists to stop or return to the location in the near future.

- Windows: windows with habitable space behind them have to face the street. This offers natural surveillance to the street, making pedestrians feel safe.

- Parking: parking requirements may need to be changed to allow for shared parking. The same parking space can be utilized to serve different land uses at different times of the day, from daytime commuters, to shoppers and visitors, to evening diners and residents. This may increase the development potential of properties along major corridors in the City.

- Bike Parking: Zoning ordinances for the Fulford City Center should require businesses to provide bike parking. The City should create a bike parking plan for public facilities. Safe, secure parking is often cited as a barrier to bike use.

- Architectural standards: the implementation of architectural standards, which reflect the architectural character of North Miami Beach, will produce a higher standard of building quality for infill and redeveloped buildings.

- Administrative review process: potential obstacles to re-development in the review process need to be identified and evaluated. Streamlining the review process for pedestrian-oriented, mixed-use projects will encourage developers to undertake these types of projects.

Continue Capital Improvements

The new sidewalk and streetscape projects funded through the City's "Proud Neighborhoods Program" certainly have helped pedestrian mobility throughout the City. This work should be continued, especially for projects within the City Center. One improvement needed to the residential streets is to add more shade trees instead of the palm trees.

5. Proposed Trail Network Improvements

Improvements to Snake Creek Bikeway Loop

When riding along the Snake Creek Bikeway, it will not take too long to discover the design of the path changes at different locations along the route. This is due to the fact that the path was built in stages as funding became available and due to the various physical conditions along the route. This study does not suggest making the Snake Creek Bikeway uniform in its design, but applying the best design based on the physical constraints or conditions along the intended routes. It should be anticipated that additional routes added to the City's network of bikeways will vary in character and design as they are built in stages in the future.

The Snake Creek Bikeway functions as both a pedestrian exercise route and a bike path. This is likely due to the attraction by residents to enjoy the scenery of the waterway while jogging, walking, or bicycling. Also the path is unique for the city, and the path forms a loop making it a natural location for endurance exercises such as running and jogging. The map below shows the location for the Snake Creek Bikeway.

Pathway Width:

Generally the width along the bikeway is satisfactory. Some conflicts between pedestrians and bicyclists do occur at busy times on the weekends. The City should take advantage of any opportunities for widening the path that arise, however the priority of new efforts should focus on safety and adding new routes that connect to this existing bikeway.

Safety:

Most of the suggested improvements for Snake Creek Bikeway are focused on making the trail safer for its users. General improvements, described in greater detail in pages that follow, include:

1. Removing physical obstructions that effectively narrow the width of the pathway,
2. Continuing regular maintenance,
3. Providing better access to and from the bikeway,
4. Good lighting
5. Increasing signage, and
6. Assisting with an effort to improve respect for bikers and pedestrians.

1. Removing physical obstructions that effectively narrow the width of the pathway

There are only a few locations along the trail where these obstacles occur. The photo on the right shows a wood pole in the middle of the trail. The Public Works Department should make an inventory of these obstructions and make a concerted effort to move or remove them to open up the pathway.

2. Continuing regular maintenance

Generally, the canal frontage looks well maintained. The problems identified here are not major problems.

Fences and guard rails should be checked regularly and repairs made as soon as possible. A rail should be added to the back side of this one on NE 165th Street so that sharp edges can be eliminated.

Poorly marked bike lanes do not remind motorists to share the road with bicyclists. Improvements here on NE 165th Street should include detaching the trail from the roadway with landscaping between the roadway and the trail. Keeping the street two-way is possible by narrowing the travel lanes. Some pavement may need to be extended into what is grass now to get a wide enough landscaped strip between the roadway and the trail.

Community members have complained about trash and even shopping carts left along the trail. Perhaps figuring out why the shopping carts keep ending up here might spark an idea for a solution.

3. Providing better access to and from the bikeway

Residents near the trail have identified this area south of 180th Street on Glades Drive as a problem location for accessing to and from the trail. This is a common problem along the western trail, where the curb separates the trail from the roadway.

This photo is looking east. Notice that a bicyclist wanting to go north has to turn to the right, then make a sharp left, almost a U-turn, to get on the trail. The maneuver to get off the trail from the north to go west is likewise difficult, requiring a U-turn for the bicyclist.

By opening the curb in two additional locations, bicyclists can maneuver on and off the trail in a better free flowing manner.

4. Good Lighting

Most of the bikeway is lighted by street lamps. Streets should be well lit at night both for bicycle and pedestrian safety. Pedestrians will avoid streets and trails where they feel unsafe. Public Works should regularly check for burned out lights or areas that are under illuminated at night, and add lights where needed. "Cobra head" light fixtures on tall poles spaced far apart do not provide for pedestrian safety. Shorter fixtures installed more frequently are more appropriate, and can provide light under the tree canopy as trees mature.

5. Increasing Signage

There is adequate signage at intersections; however, more signage is needed along the straight stretches. These long stretches are where motorists can gain speed and should be reminded that there is a bike lane there. Painting the Bike symbol in the lane works perhaps better than the signs on a post, since motorists look at the road pavement to stay in a lane. Posting "share the roadway" signs can also help.

Lane markings too pale and no bicycle symbol. Striping both sides of trail will increase visibility.

6. Assisting with an effort to improve respect for bikers and pedestrians

The biggest safety issue for bicyclists and pedestrians is to get respect from motorists. Periodic policing is needed to send reminders to residents and workers along the trail, to keep their vehicles off the trail. Additional shade trees along streets will help eliminate this problem too.

Cars parked in the bike lane because there is limited shade along the street.

Specific Problem Areas

West Dixie Highway at NE 167th Street

At this location bicyclists are forced into on-coming traffic, unless they move off the road into the private parking lot at the corner. The travel lanes are wide enough that they can be narrowed and a bike lane can be striped within the roadway. The pole and tree at the corner should be moved for bicyclists to safely turn to the right. Alternatively, the City could try to purchase the minimal amount of square footage from the owner of the parking lot to enlarge the turning radius for the bikeway, leaving the traffic signal pole and the tree where they are.

NE 15th Avenue & Snake Creek Canal

To get to the other side at this intersection, bicyclists have to cross two streets: NE 171st Street and NE 15th Avenue. Notice three signs are needed to guide bicyclists. With the striped bike lanes on NE 15th Avenue as part of its proposed improvements, the crosswalk for bikes should bend to the left instead of turning to the right. Even though this left maneuver will cross on to the bridge, the bicyclists will only have to cross one street, NE 15th Avenue.

Miami Gardens Drive and Snake Creek Canal

Currently the west side of the bike trail ends at Miami Gardens Drive. Miami Gardens Drive is in the foreground of this photograph, looking towards the trail. The footpath across the bridge is the only means to get back to the east side of the canal, and is too narrow. Striping in the roadway across the bridge or widening the bridge is recommended.

Across Miami Gardens Drive is the remnant of a county trail that was created during the "Decade of Progress" capital improvements program begun in the early 1970s. This routes crosses under I-95 and avid bicyclists can ride up into Broward County on this trail. Despite the fact that it is in need of maintenance, the connection across Miami Gardens Drive to the City's Snake Creek Trail is awkward. The solution would be to have the trail cross at NE 10th Avenue, continue south to the little alley shown in the bottom photo on this page. NE 10th Avenue is in the foreground of this photo, the alley is blocked off by the wood barricade, and the trail is just beyond the yellow house. Having the trail run down this short alley makes a direct and safer route for the bicyclists between 10th Avenue and the Snake Creek Trail.

NE 19th Avenue and the Canal

There is a concrete median at the bridge on NE 19th Avenue that crosses the north side of the canal. This makes bicyclists turn south, cross Snake Creek Canal, then cross NE 19th Avenue, and again cross the canal to connect back up to the trail. The median should have an accessible crossing on the north side of the canal to avoid this awkward maneuver.

The width of the travel lanes on the bridge suggests that a striped lane is possible within the roadway. This would avoid the conflict of bikes on the sidewalk edge of the bridge where pedestrians cross.

Aerial Pipes over the Canal at various locations

There is technology now that makes boring under ground safe and economical. These pipes should be buried under the canal to improve the appearance of the waterway.

New Routes and Trails:

This study identifies new routes organized by connecting destinations within the City and its environs. The most important aspect is spreading the bike and pedestrian routes throughout the City, giving convenient access to as many residents as possible. For the residents, seeing the signs or markings on a regular basis will send a constant reminder that the system is there and available.

The city will want to make the system user friendly. At key locations, perhaps there might be a "trail head" with information about the trail for users. Suggested features could include:

- A sign showing a map of the whole system, showing destinations,
- A sign showing a map of the specific trail where the sign is located,
- A free paper map for the taking that shows the whole system and destinations, and
- Signage with distances in feet or miles to destinations or to the intersections of other trails, similar to what the National Parks Service does with hiking trails in national parks.

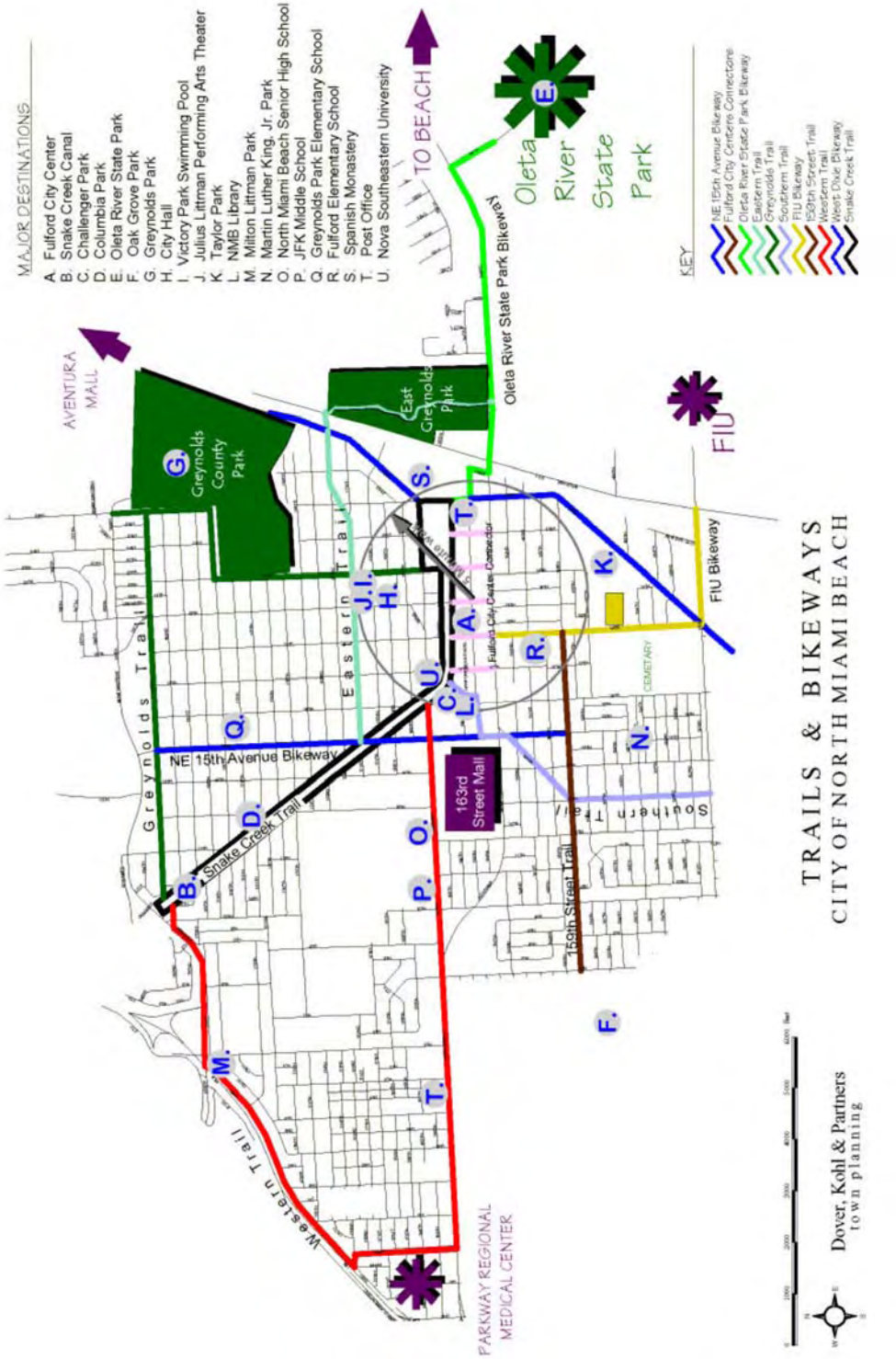
The trail system should be promoted to the community as a unique amenity for public use. A free map can be distributed to local businesses for distribution to customers, and can be sent to residents, and/or included in community newsletters or papers. Sponsoring community events, perhaps bike related events, at destinations along the bikeways could encourage new users. The Snake Creek Trail goes through Challenger Park, making it the most logical place for large events.

Nine additional routes are proposed after studying the city's network of streets and destinations. These routes will form an interconnected network of designated bikeways that can be used for recreation and as a route for bicyclists to get around town for their daily needs. Each of the nine routes is described in further detail in the pages that follow:

- NE 15th Avenue Bikeway
- Fulford City Center Connectors
- Oleta River State Park Bikeway
- Eastern Trail
- Greynolds Trail
- Southern Trail
- FIU Bikeway
- NE 159th Street Trail
- Western Trail
- West Dixie Bikeway

The map on the next page identifies the locations for these routes. Part of the success of the Snake Creek Trail is that it forms a loop, perfered for exercise laps. The map shows how new "loops" are created with the addition of more trails.

Map of Trails and Existing Destinations



NE 15th Avenue Bikeway

This route connects:

- The northern city limits near Miami Gardens Drive,
- Greynolds Park Elementary School
- Snake Creek Canal
- Hanford Drive leading to Fulford City Center
- The Mall at 163rd Street
- NE 159th Street

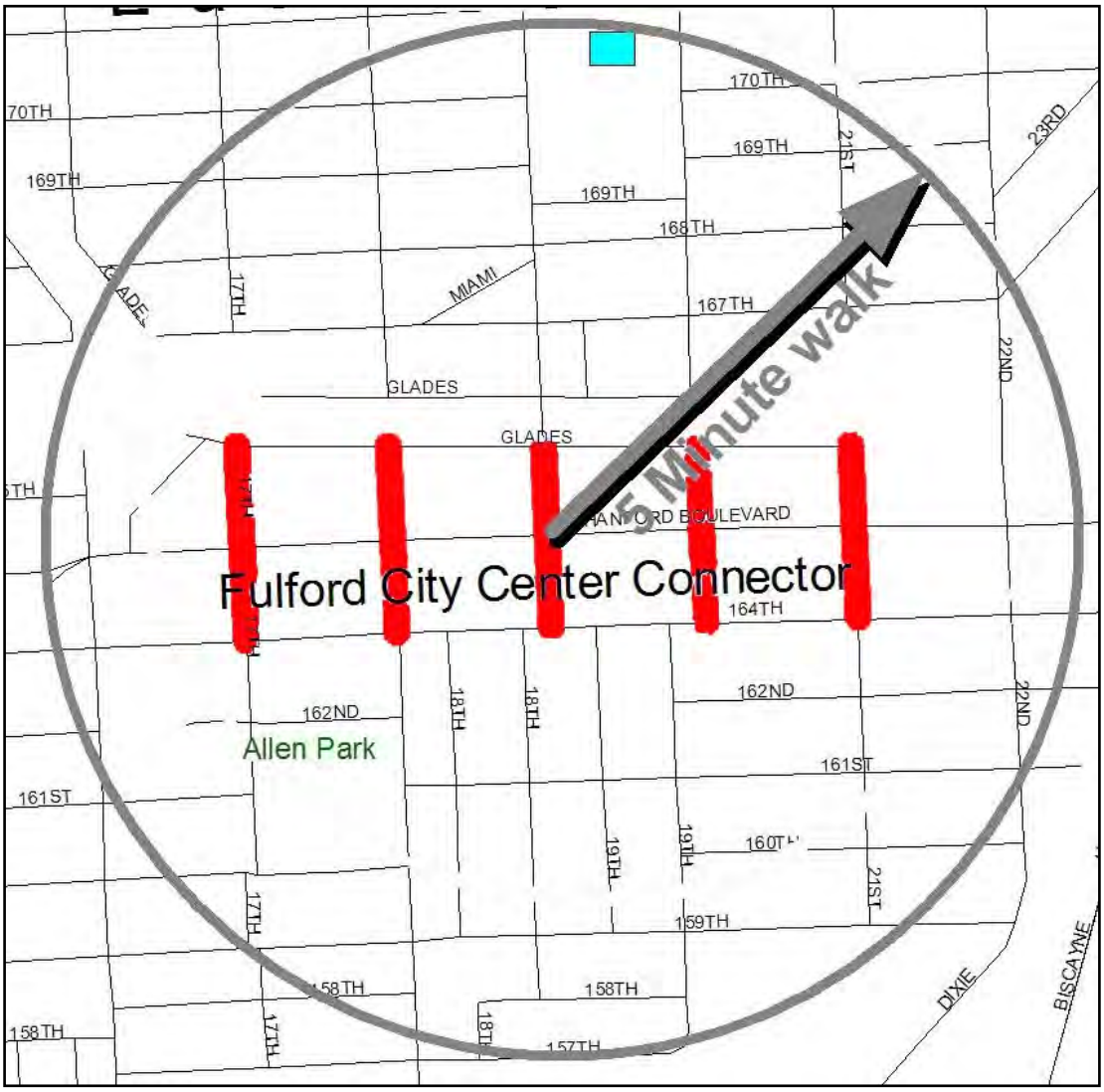
Why this location?

Miami-Dade County Public works has designed and budgeted improvements to this north-south roadway, County Project 20040433. NE 15th Avenue is a heavily traveled route and will be the primary bike route for residents north of Snake Creek Canal and south of 163rd Street whose destination will be the Mall or the Snake Creek Canal. The commercial area on Miami Gardens Drive near NE 15th Avenue has food establishments, offices, and neighborhood serving retail used by the residents in the northern part of the city. With the new Wal-Mart about to open, the Mall will become more of a destination for young teenagers whose only means to get there will likely be by foot or by bike.

Details:

The roadway improvements include striped bike lanes on both sides of the street from Miami Gardens Drive south to NE 15th Avenue. The bike lane widths will be 5 feet wide where there is no curb, and 4 feet plus the 1½ foot gutter with a curb. The roadway pavement is presently about 22 feet wide. This will be widened another 20 feet to provide a 10 ft wide scramble/left turn lane in the center, and the two bike lanes. The bridge on NE 15th Avenue crossing Snake Creek will be widened to provide continuous bike lanes and 6 foot wide sidewalks on both sides of the bridge. The swales north of the bridge will be wide enough for landscaping at 14 feet wide. Just south of the bridge the swale between the curb and the sidewalk is 13 feet wide. Houses that face NE 15th Avenue will have what appears to be a reduction of their front yard, since the existing right of way extends beyond the existing pavement, particularly on the west side of the street.

Fulford City Center Connectors



This route connects:

- Hanford Boulevard and NE 163rd Street to the existing Snake Creek Canal Bikeway, along 17th, 18th, 19th, 20th, and 21st, Avenues.

Why this location?

Since the Snake Creek Trail already serves the community, it makes good sense to make it convenient to bike from the canal to the revitalizing main street of Hanford Boulevard.

Details:

These connectors are suggested to be striped lanes on both sides of the roadway, between the travel lanes and the parking spaces. The recent sidewalk improvements support the pedestrian activity in the City Center sufficiently. Bicycle racks are needed near the intersections with Hanford Boulevard, visible from the approach to Hanford Boulevard.

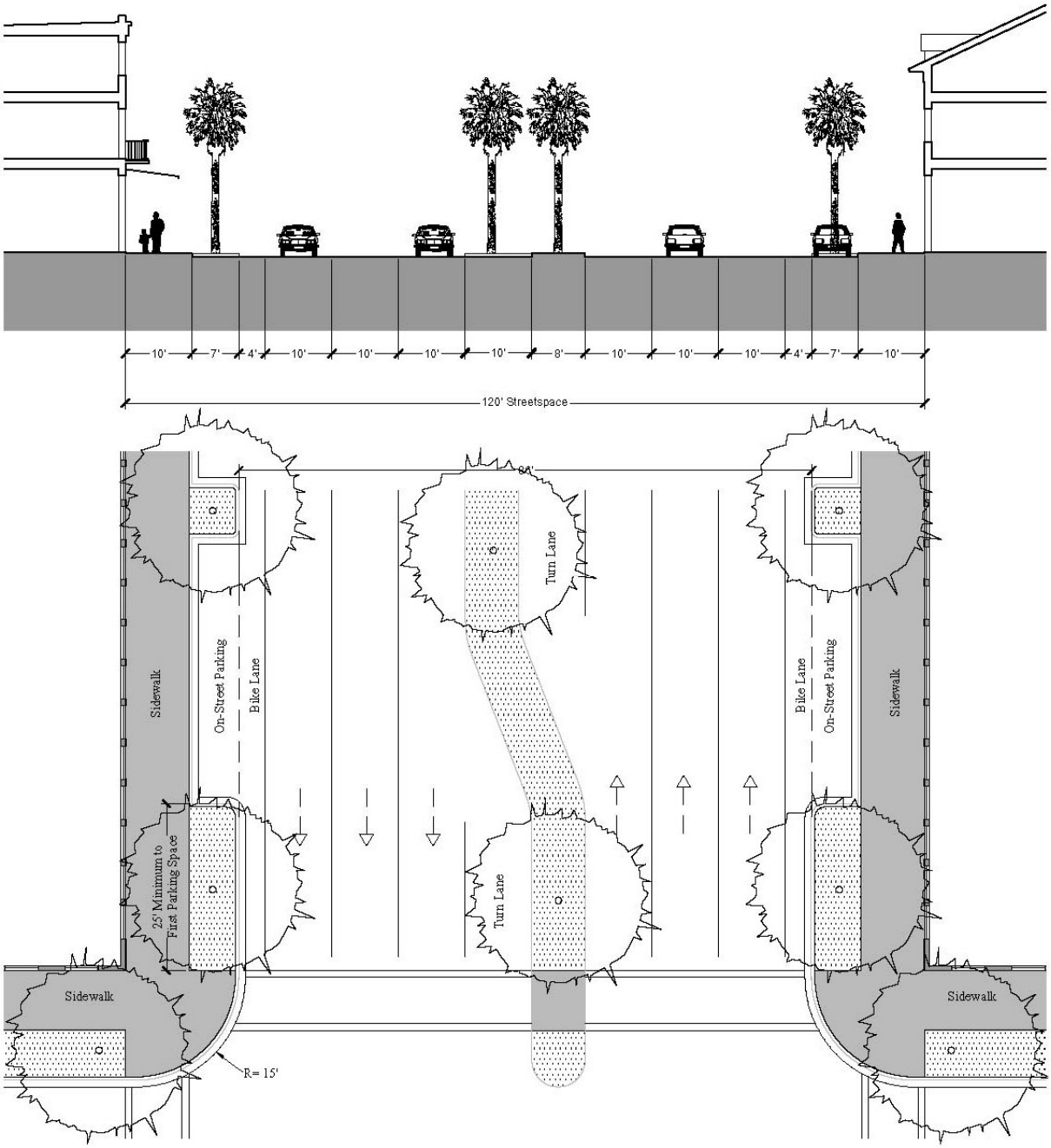
The large concrete area ahead of the parking lane (sometimes called "pork chops") at the intersections of Hanford Boulevard are logical locations for expanded bike racks. There are a few bike racks along Hanford Boulevard, but racks at these locations will be more visible to a bicyclist when approaching from the Snake Creek Bikeway.

There is sufficient room within the roadway to stripe bike lanes on both sides of the street. This street has such a low volume of traffic that pedestrians feel comfortable walking in the roadway instead of on the sidewalk.

On 19th Avenue, the striped parking lanes could be narrowed about 18 inches to make a little more room for bike lanes. This photo shows the width of a typical car. Notice that the car is parked about 18 inches from the curb and has approximately two feet to the travel lane of the roadway.

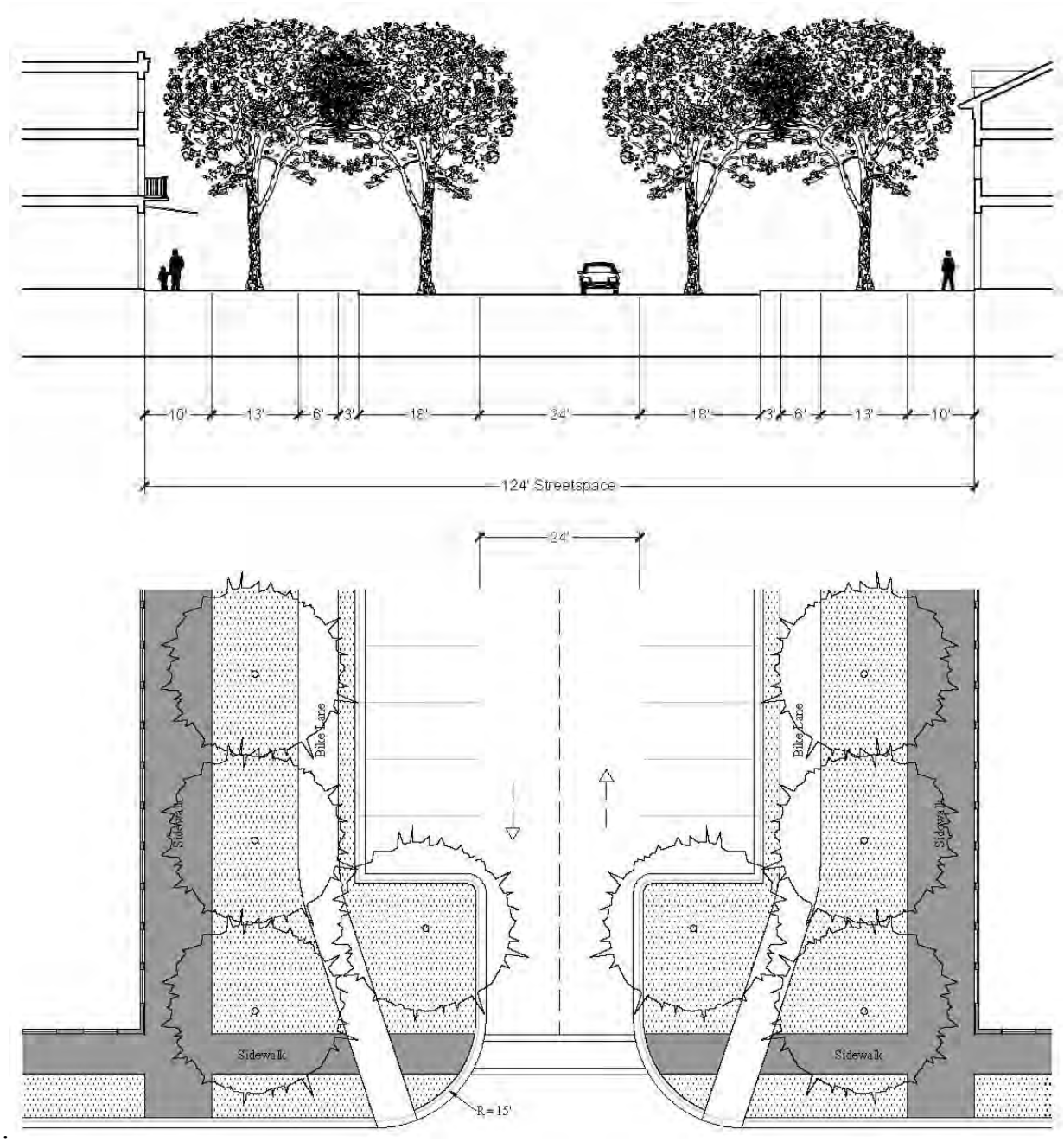
Fulford City Center Connector with multiple lanes and parallel parking

Use this cross section for any future improvements to NE 19th Avenue between the Snake Creek Canal and NE 163rd Street. The diagram below is the same diagram found on page 25. It is duplicated here for convenience.

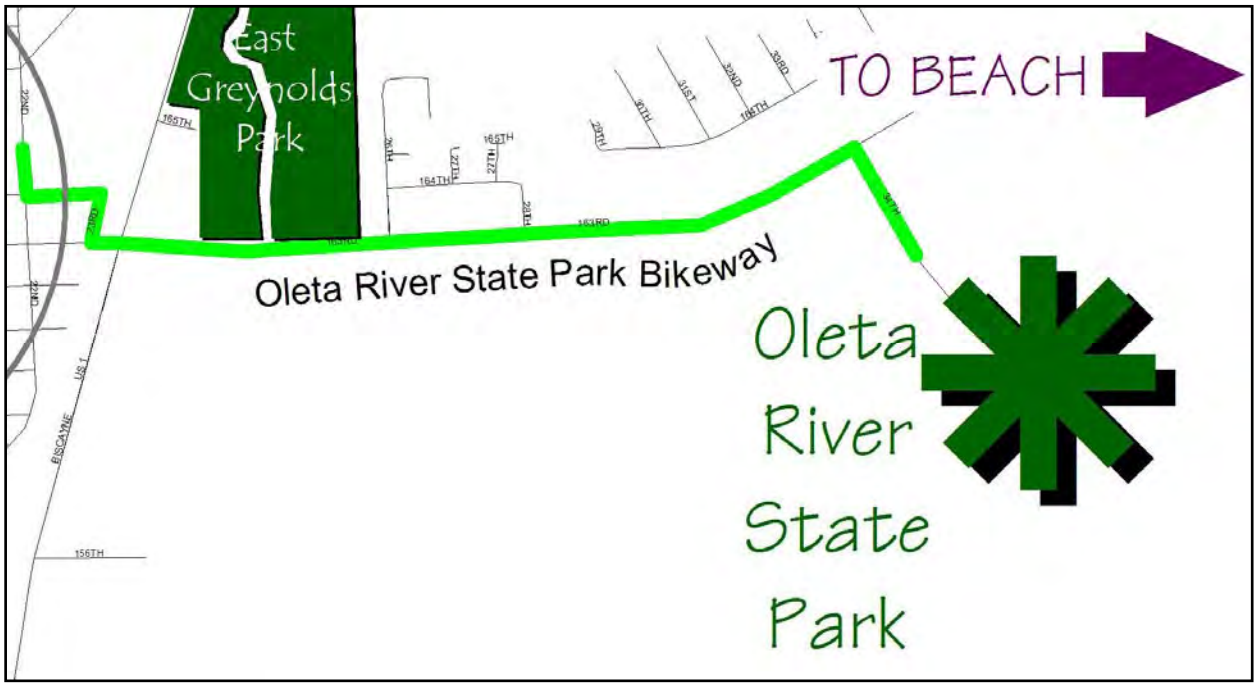


Fulford City Center Connector with two lanes and perpendicular parking

Use this cross section for any future improvements to NE 17th, 18th, 20th, and 21st Avenues between the Snake Creek Canal and NE 163rd Street. The diagram below is the same diagram found on page 26. It is duplicated here for convenience.



Oleta River State Park Bikeway



This route connects:

- Snake Creek Bikeway to Oleta River State Park.

The route starts at the Snake Creek canal, goes south on West Dixie Highway one block to Hanford Boulevard, then swings around behind the block with Laurenzo's Market to NE 163rd Street, then crosses Biscayne Boulevard and continues on Sunny Isles Boulevard to NE 35th Avenue, a signalized intersection at the entrance to Oleta River State Park.

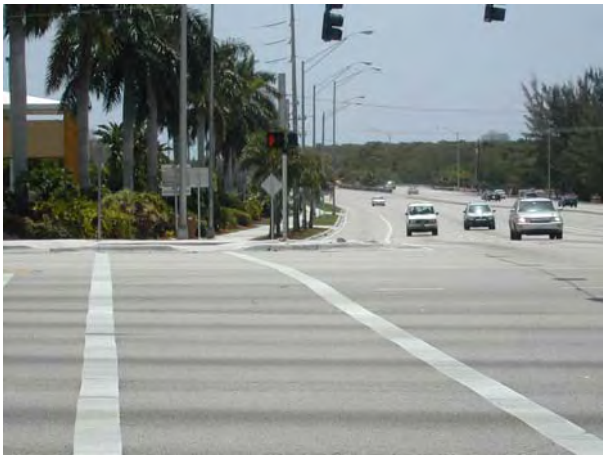
Why this location?

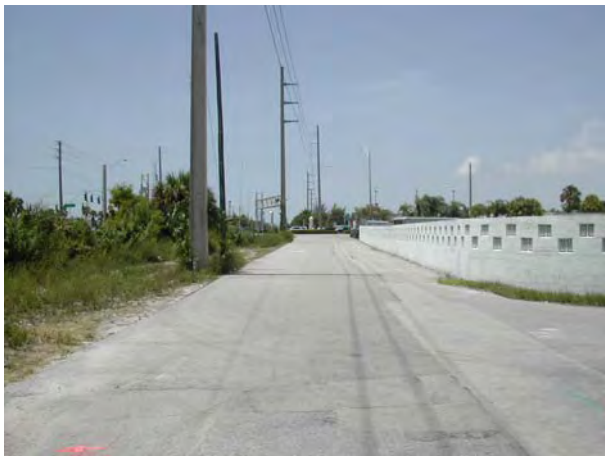
Since the Snake Creek Trail currently is used primarily for recreation, and is a destination of sorts for the residents, how wonderful it will be to extend the recreational system to include Oleta River State Park. The Miami-Dade MPO has recommended funding the bike lanes on this route in fiscal year 2009/2010. The City's Transportation Enhancement Program application to the MPO for this route is called "Bikepath Connector Project."

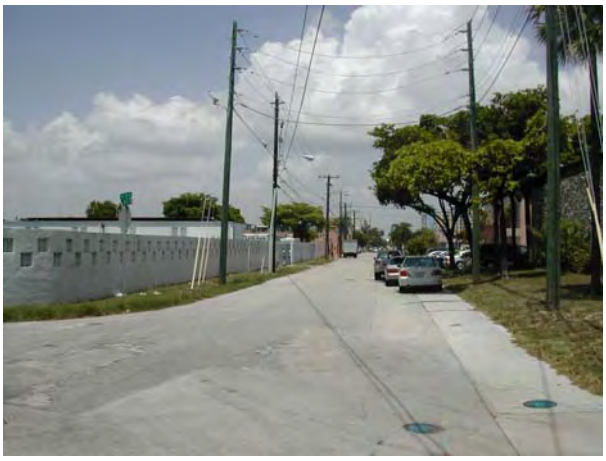
Details:

The bike routes will be striped lanes on both sides of the streets along the route. The bike lanes will fit within the existing pavement. The sidewalk should be widened on the north side of Sunny Isles Boulevard, which is not part of the application for funding sent to the MPO.

The sidewalk on the north side of Sunny Isles Boulevard should be enhanced for joggers and pedestrians. Shade trees are needed and the sidewalk should be widened to 8 feet. There is sufficient room near Biscayne Boulevard as seen in this photograph; however, further east there is a frontage road and curb cuts which may require specific design consideration.

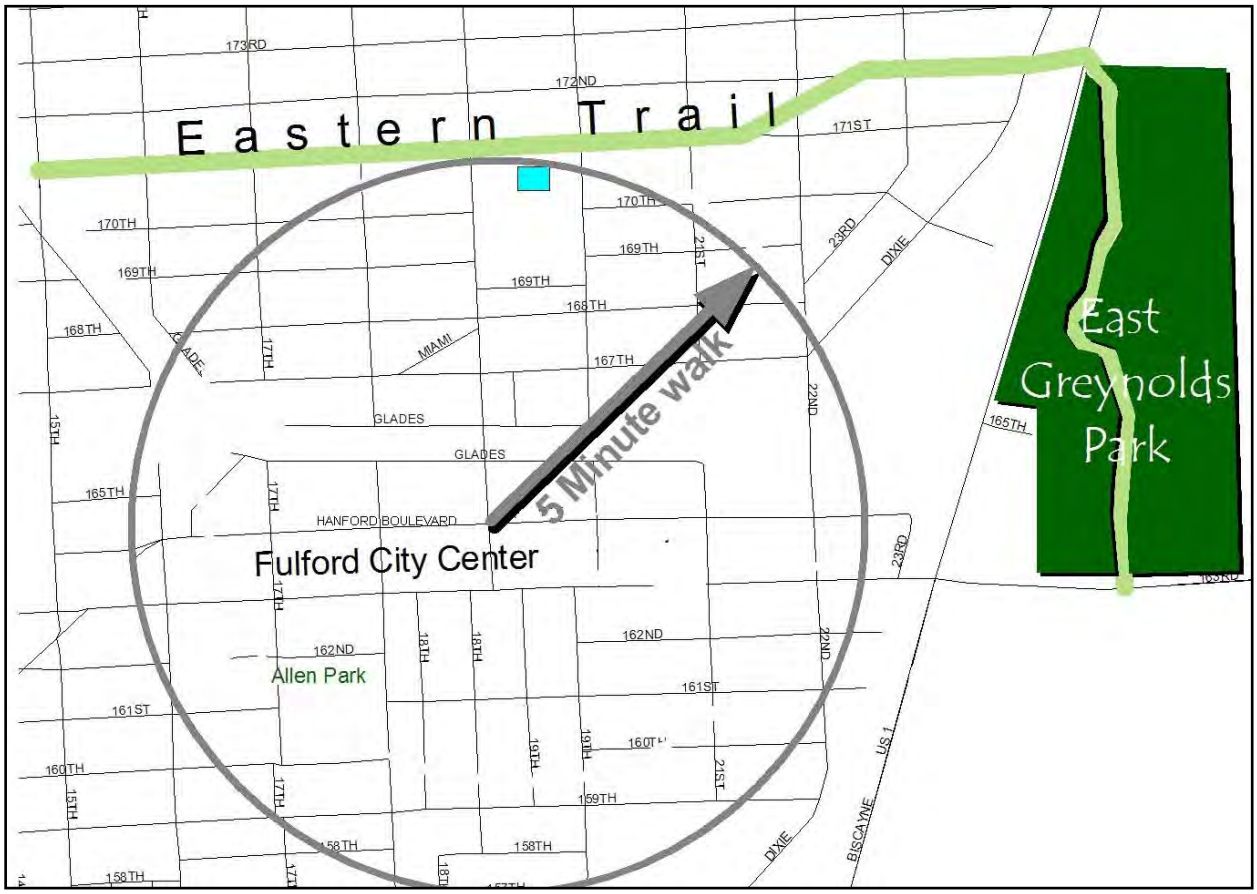






Locating the route behind the block that has Laurenzo's Market will be safer for bicyclists than cycling down West Dixie Highway and then along 163rd Street.

Eastern Trail



This route connects:

- Snake Creek Bikeway
- City Hall, Julius Littman Performing Arts Theater, and Victory Park Municipal Swimming Pool,
- East Greynolds Park
- Oleta River State Park Trail

The route starts at 171st Street and the Snake Creek Canal. Heading east past the Victory Park Swimming Pool it swings up to 172nd street where it passes the historic entrance marker to the City before crossing Biscayne Boulevard. Then it continues through East Greynolds Park where it connects to the proposed Oleta River State Park Bikeway along Sunny Isles Boulevard. In East Greynolds Park connecting the trail will require a new bridge across the waterway.

Why this location?

171st Street is a pleasant east west street through the northern part of the city. It has a wide landscaped median and it connects the municipal buildings on NE 19th Avenue to the City's historic eastern entrance on Biscayne Blvd. The community will gain an additional recreational destination by connecting the trail to East Greynolds Park, which currently is difficult to access.

Details:
Along 171st/172nd Streets, the sidewalks should be shaded, and the bike route can be marked with signage. A striped lane is not needed here. The segment of the route through East Greynolds Park should be used as a multi-purpose trail like the Snake Creek Trail. This will need to be a carefully designed project working with the County's Parks Department and the Department of Environmental Resource Management. The trail may require board walks crossing waterways.

171st/172nd Streets have extremely wide travel lanes on both sides of the median. In some places the current striping suggests that there is already a bike lane there. Adding signage for the bike route, and adding shade trees for the pedestrians are simple additions to a really attractive street.

Greynolds Trail

This route connects:
Snake Creek Trail to Greynolds Park along the northern edge of the City on 183rd Street; and the Fulford City Center to Greynolds Park along NE 20th/22nd Avenue. Victory Park Swimming pool is along this route.

Why this location?
NE 183rd Street for most of its length has houses with driveways only on the south side of the street. A detached bike lane on the north side would be uninterrupted by driveways. Portions of the NE 183rd Street roadway between NE 19th Avenue and NE 21st Avenue have been striped with bike lanes on both sides of the street. Greynolds Park has the Oleta River flowing through it and offers picnic areas, boating, canoeing, and bird watching. In addition, the park is home to the Greynolds Golf Course

Details:
See the photos that follow on the next page.

A detached jogging and pedestrian trail can be added in the swale along Greynolds Park. Bicycles should remain in the roadway and can be marked with "Bike Route" and "Share the Road" signs.

At the northwest corner of the Park along NE 22nd Avenue, the swale is narrower. The jogging and pedestrian trail can end at the entrance to Greynolds Park. Signage for the bike route should continue north to NE 183rd Street.

The Victory Park Municipal Swimming Pool is a popular neighborhood amenity and one visited often by children on bicycles.

NE 183rd Street already has striped bike lanes from NE 22nd Avenue by Greynolds Park west to NE 19th Avenue.

The majority of the length of NE 183rd Street has houses only on one side. A jogging and pedestrian trail could be detached from the roadway on the north side of the street. Signage marking the bike route in the roadway will be adequate for bicyclists.

West of NE 12th Avenue, driveways are on both sides of the streets. Here a wide sidewalk of 8 feet should be added to the north side of the street to connect the jogging/pedestrian trail the remaining short distance to the Snake Creek Trail.

Southern Trail

This route connects:

- NE 13th Avenue Flowering Tree Park to the Fulford City Center and to the Snake Creek Trail.

Why this location?

This route will serve the residents in the southwestern area of the City. The Flowering Tree Park could become a destination for people to enjoy if connected to the bikeway system. Some of the small triangular blocks, "left over" from the diagonal Miami Drive intersecting with the City grid of streets, have been recently landscaped and have curving walkways.

Details:

This route stays on two roadways: NE 13th Avenue, and Miami Drive.

This section of NE 13th Avenue has recently been improved with a large median planted with flowering trees and has a winding concrete footpath. There is one lane of traffic on both sides of the street. Striped bike lanes could easily be added to both sides of the street adjacent to the median, as is suggested along NE 171st Street.

Miami Drive has a very wide right-of-way, 125 feet across, currently with one lane of traffic in each direction. The reason for the width is that the city founders conceived of this road as a major thoroughfare connecting to the City of Miami further south. Three alternative approaches will work to add this street to the bikeway system:

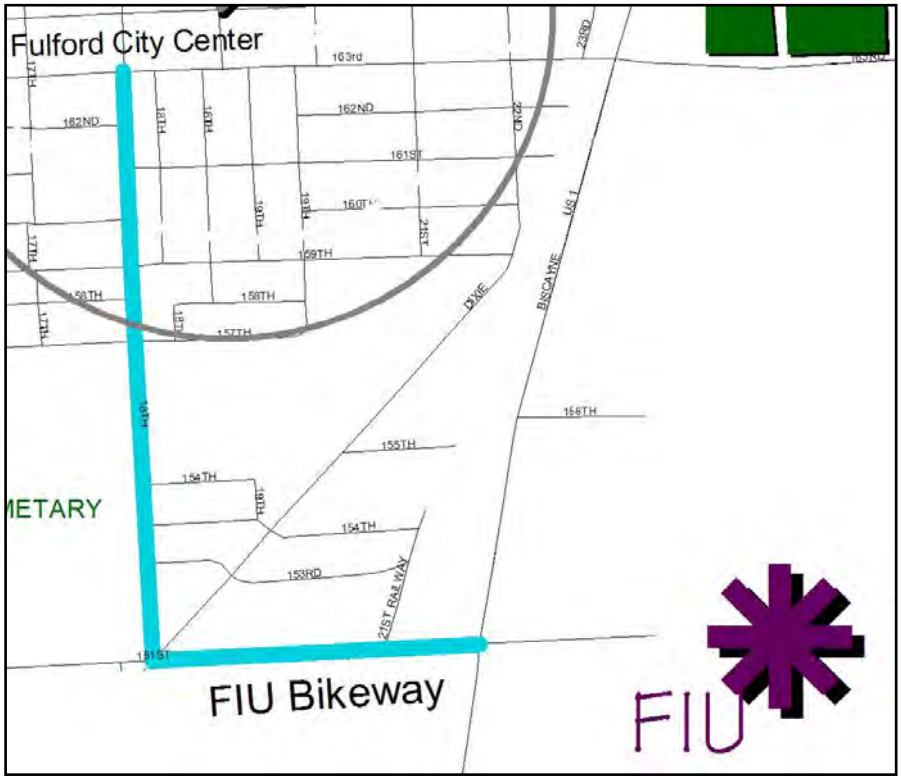
1. Stripe bike lanes on both sides of the roadway and create a jogging and walking trail detached from the roadway in the wide swales,
2. Create a median following a similar design used for the NE 13th Avenue Flowering Tree Park and stripe bike lanes on both sides of the roadway, or
3. Close Miami Drive to vehicular traffic and create a long linear park, with bike lanes and jogging/walking paths, from NE 159th Street to NE 163rd Street. It may be desirable to only close one or two blocks and leave the remaining segments open to traffic with the trail continuing through.

A fast approach for installing a bikeway would be to put it within the large swale on both sides of Miami Drive, detached from the roadway. The photo shows how there is plenty of room for the other two alternatives described on the previous page.

Linking the smaller parks recently created with dedicated bikeways makes sense.

Bike lanes could easily be added to the existing roadway. Instead of striping bicycle lanes, bike route signage will be adequate here. The meandering path in the middle of the park should be limited to pedestrians, joggers, and small children on bikes.

FIU Bikeway



This route connects:

- Fulford City Center
- Fulford Elementary School
- Florida International University, north campus

Why this location?
Many FIU students and faculty live in the area and can benefit from an opportunity to ride or walk to school. Fulford Elementary school is also on the route.

Details:
This route runs south from the City Center along NE 18th Avenue, then east to the FIU campus along NE 151st Street.

On NE 18th Avenue, there should be a striped lane on both sides of the street from NE 163rd Street south to NE 151st Street.

Sidewalks should be widened on the east side of NE 18th Avenue. The pedestrian trail could continue around the lake and connect to Taylor Park.

On NE 151st street, a striped lane should be sufficient. Additional pavement may need to be added for the bike lanes.

There is sufficient width in the swale along Taylor Park for additional picnic tables, and perhaps an exercise station. This is also a good location for an informal kiosk about the City's trail system once it becomes more complete.

The impressive view from NE 18th Avenue across the lake in Taylor Park makes it a natural stopping/resting point for recreational bicyclists and joggers

159th Street Trail

This route connects:

- Western city limits near Oak Grove Park
- Southern bikeway
- FIU bikeway

Why this location?

A safe east-west route is needed across the southern part of the City. In keeping with the approach of connecting parks and schools, NE 159th Street is the logical location

Details:

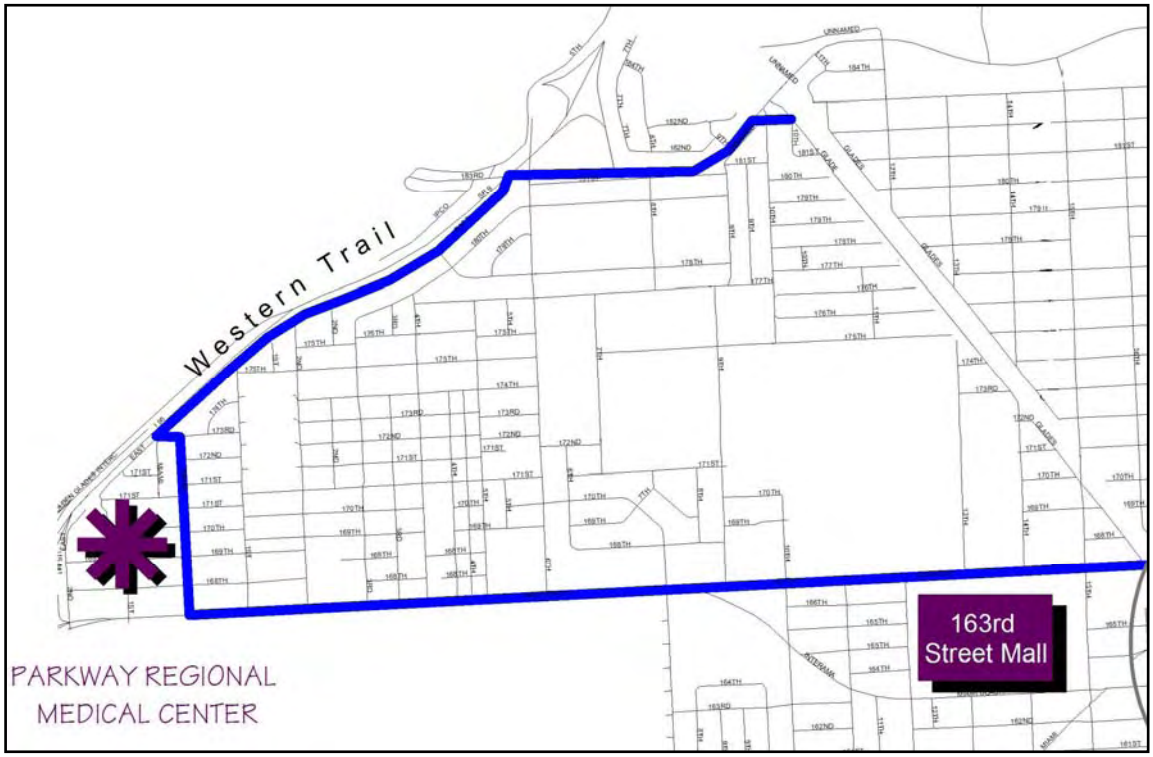
Currently there is a sidewalk on both sides of NE 159th Street for its entire length. There are no curbs. Along some blocks the swales are used for parallel parking by residents, and along other segments there are driveways crossing the swales. The on-street parking should not be discouraged. The parked cars add a "safety barrier" for pedestrians on the sidewalk, and do help slow traffic.

Because of the heavy volume of traffic on NE 159th Street, the best design approach is to stripe a line on both sides of the street. Additional width in the roadway may be needed. However, narrowing travel lanes on this street will help slow down the traffic. The sidewalks should be enhanced by widening them to a width of 8 feet, and by planting shade trees in the swale where the tree canopy along the street is deficient.

Future bike lanes along both sides of NE 159th Street could be striped on both sides of the street. The swale appears to be wide enough allow the parallel parking to remain and to widen the sidewalk. Trees offering shade to pedestrians and bicyclists are needed on some blocks along this street.

Some blocks have wider swales making it easier to widen the sidewalks. Compare this photo with the one above it. Notice the trees. Both photos are taken from the same place on NE 9th Avenue, but looking in opposite directions.

Western Trail



This route connects:

- Snake Creek Bikeway
- Milton Littman Park, at NE 6th Ave and Miami Gardens Drive
- Parkway Regional Medical Center
- Windward and Uleta Neighborhoods
- JFK Middle School
- North Miami Beach High School
- Mall at 163rd Street
- Challenger Park

Why this location?

This route completes a loop into the western reaches of North Miami Beach starting at Snake Creek Trail at Miami Gardens Drive and ending at Challenger Park. Even though North Miami Beach High School and JFK Middle School are in a county enclave, having the connecting route provides a safe alternative route for students and teachers who live within walking or biking distance.

Details:

The character of this route will change from segment to segment given the varied existing conditions. Portions of this route will be difficult to implement, and may have to occur in incremental construction phases as solutions and funding becomes available.

The northern segment of the Western Bikeway will be relatively easy to implement. Most of the route can occur in the frontage road that occurs next to Miami Gardens Drive. Signage marking the route will be adequate. Striping is not necessary.

Renovations to the intersection of NE 6th Avenue and Miami Gardens Drive are needed to make the intersection crossable by foot or by bike. The southbound right turn lane on to NE 6th Avenue from Miami Gardens Drive, with its wide turning radius, will have to be removed. A tighter radius will force cars to slow down when making the turn, and will need signage reminding them to yield to pedestrians and bicyclists that are in the crosswalk. The crosswalk will need to be added.

The route along East Avenue, up against Interstate-95 should be detailed like the route along Miami Gardens Drive, with signage. This route should continue to be planned despite the recent roadway improvements that resulted from residents asking the City to use moneys previously set aside for this bike route.

The existing striping on N. Miami Avenue offers the appearance of striped bike lanes on both sides of the street, when in fact it is not. Signage marking the bike route in the roadway will be adequate for bicyclists. N. Miami Avenue terminates near the I-95 right-of-way and receives only local traffic north of NE 167th Street.

The real challenge for this route is along the north side of NE 167th Street between N. Miami Avenue and NE 8th Avenue. Bike lanes are recommended on both sides of the street from Miami Avenue to NE 9th Avenue. A wide detached sidewalk is recommended for joggers and pedestrians, a promenade. To achieve a width of 8 to 10 feet for the sidewalk, additional right-of-way or easements will be necessary to obtain. The trail may require "jogging" around existing buildings constructed up to the right-of-way line. The City will have to coordinate curb access and reconfiguring parking spaces with individual property owners.

The western Bikeway crosses through sections of unincorporated Miami-Dade County where JFK Middle School and North Miami Beach High School are located. The City will have to work with the County to implement this segment of the bikeway since it is outside of the City Limits. The best design approach would be to continue the wide sidewalk on the north side of the roadway, detaching it from traffic and drop-off lanes, as suggested for the commercial strip to the west. Striped bike lanes should continue the length of NE 167th Street to Challenger Park.

West Dixie Bikeway

This route connects:

- Southern City limits along West Dixie Highway
- Northern City limits along West Dixie Highway
- Aventura Mall beyond the northern city limits.

Why this location?

This route is already designated a bike route by Miami-Dade County. It serves a regional purpose for avid bicyclists.

Details:

Other than a few signs, there are no visible clues that dignify this as a bike route. This route should be a low priority for North Miami Beach, but should be supported if the County were to decide to make improvements along the route.

6. Next Steps

The proposed bikeways, trails, and street improvements identified in this study should be prioritized and earmarked for future available funding. The trails are listed below in order of what appears to be the highest to lowest significance for the community. The City should continue to pursue grants and capital improvement programs to further enhance the network of trails. Pedestrian and bicycle safety should remain a priority within the City of North Miami Beach. Prior to any roadway improvements, the City's Engineering Department should examine all plans and proposals to confirm that improvements include measures to increase bicycle and pedestrian safety. By continuing to better the community's transportation network, North Miami Beach will uphold its high quality of life that residents cherish.

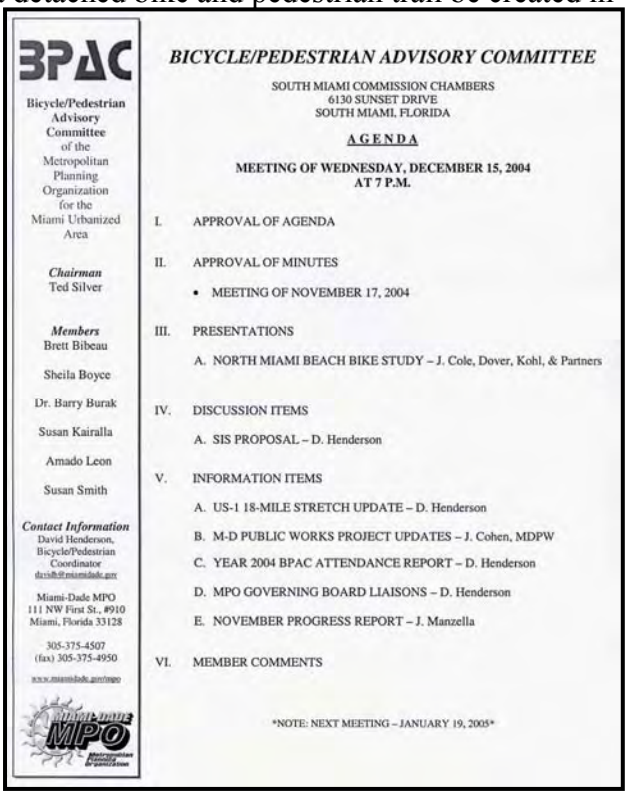
PROPOSED TRAILS AND IMPROVEMENTS

Proposed Trail	**Primary Service Need**	**Funding**	**Schedule**
Snake Creek Trail Improvements	Bicycle / Pedestrian	City of North Miami Beach	On-going
NE 15th Avenue Bikeway	Bicycle	Miami Dade County Public Works	2006 - 2007
Fulford City Center Connectors	Bicycle / Pedestrian	City of North Miami Beach	On-going
Oleta River State Park Bikeway	Bicycle	Miami – Dade County Municipal Planning Organization (MPO)	2009 - 2010
Eastern Trail	Bicycle / Pedestrian	Un-determined	Un-determined
Greynolds Trail	Bicycle / Pedestrian	Un-determined	Un-determined
Southern Trail	Bicycle / Pedestrian	Un-determined	Un-determined
FIU Bikeway	Bicycle	Un-determined	Un-determined
159th Street Trail	Bicycle / Pedestrian	Un-determined	Un-determined
Western Trail	Bicycle / Pedestrian	Un-determined	Un-determined
West Dixie Bikeway	Bicycle	Miami-Dade County	Un-determined

Suggestions from the MPO's Bicycle/Pedestrian Advisory Committee

On Wednesday, December 15, 2004, Joseph Kohl presented the findings and recommendations from this Pedestrian and Bicycle Safety Study to the Bicycle/Pedestrian Advisory Committee of the Metropolitan Planning Organization for the Miami Urbanized Area. It was well received by the committee. Those in attendance offered the following suggestions:

1. The cross section design for the 'Fulford City Connectors with two lanes and perpendicular parking' seemed un-safe to them. The bicycle lane was behind parking spaces arranged perpendicular to the street. This cross section has been changed in the report to show the bike lane located within the landscaped area between the parking spaces and the sidewalk. There was discussion about whether or not the bike lanes were needed if there is a low volume of traffic on those streets.
2. An additional north-south route should be added along NE 10th Avenue for safe access to/from the schools on NE 167th Street (North Miami Beach High School and JFK Middle School). The southern area of the City would benefit from this, however NE 10th Avenue does traverse the pocket of unincorporated Miami-Dade County requiring the County's participation in implementation.
3. Jeff Cohen from Miami-Dade County Public Works mentioned that he thought speeding is a problem along the edge of Greynolds Park. He suggested that instead of the "signage only" approach for the Greynolds Trail a detached bike and pedestrian trail be created in the swale. Alternatively traffic calming strategies could be applied along the route to slow the vehicles down. Mr. Cohen also mentioned that the Bike Trail could possibly enter the Park and be completely separated from the edge of the road.
4. Mr. Cohen also mentioned that Miami-Dade County Public Works has been discussing the addition of bike lanes on the access road to Florida International University east of Biscayne Boulevard. This would connect directly to the City's FIU route described in this study on page 55. M-D Public Works would be more inclined to construct this bike lane if the City would show them their intentions. Mr. Cohen was given a copy of the Study to take back to the Public Works Department.



BPAC

Bicycle/Pedestrian Advisory Committee of the Metropolitan Planning Organization for the Miami Urbanized Area

Chairman
Ted Silver

Members
Brett Bibeau
Sheila Boyce
Dr. Barry Burak
Susan Kairalla
Amado Leon
Susan Smith

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BICYCLE/PEDESTRIAN ADVISORY COMMITTEE

SOUTH MIAMI COMMISSION CHAMBERS
6130 SUNSET DRIVE
SOUTH MIAMI, FLORIDA

AGENDA

MEETING OF WEDNESDAY, DECEMBER 15, 2004 AT 7 P.M.

I. APPROVAL OF AGENDA

II. APPROVAL OF MINUTES
- MEETING OF NOVEMBER 17, 2004

III. PRESENTATIONS
A. NORTH MIAMI BEACH BIKE STUDY – J. Cole, Dover, Kohl, & Partners

IV. DISCUSSION ITEMS
A. SIS PROPOSAL – D. Henderson

V. INFORMATION ITEMS
A. US-1 18-MILE STRETCH UPDATE – D. Henderson
B. M-D PUBLIC WORKS PROJECT UPDATES – J. Cohen, MDPW
C. YEAR 2004 BPAC ATTENDANCE REPORT – D. Henderson
D. MPO GOVERNING BOARD LIAISONS – D. Henderson
E. NOVEMBER PROGRESS REPORT – J. Manzella

VI. MEMBER COMMENTS

NOTE: NEXT MEETING – JANUARY 19, 2005