



City of  
**FORT MYERS**

# BICYCLE AND PEDESTRIAN PLAN

July 2007



 **GLATTIG JACKSON KERCHER ANGLIN, INC.**  
*community planning and design*

*in strategic association with*

 **KITTELSON & ASSOCIATES, INC.**  
TRANSPORTATION ENGINEERING/PLANNING

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City of  
FORT MYERS



# BICYCLE AND PEDESTRIAN PLAN

## executive summary

### INTRODUCTION TO THE PLAN

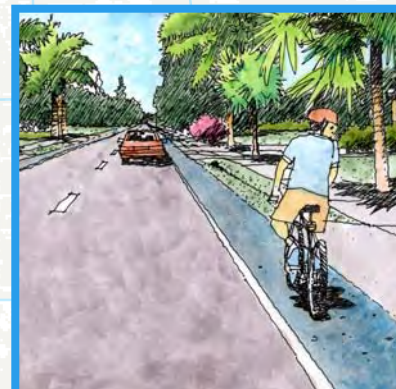
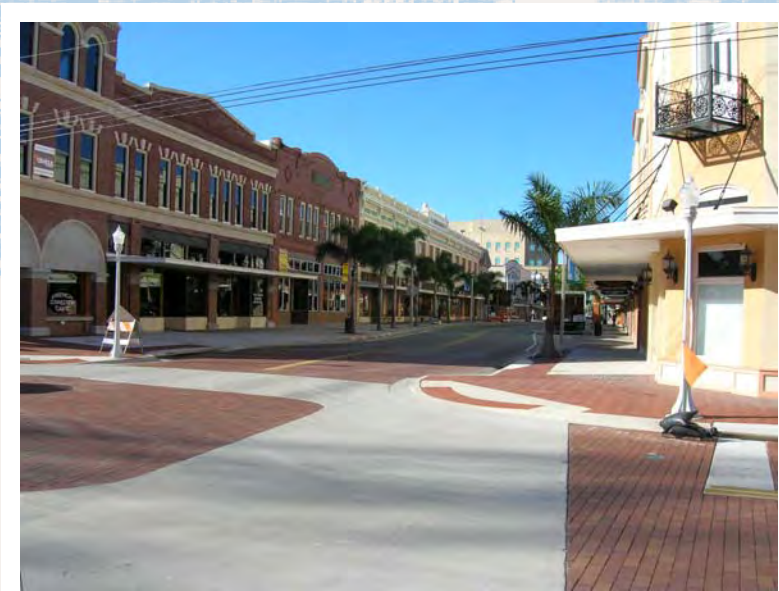
The City of Fort Myers hired Glattig Jackson to develop a Bicycle and Pedestrian Plan that would define a system of sidewalks, bike lanes, paths, greenways and trails within the City. This system is intended to be multi-purpose and provide an interconnected network for non-motorized transportation, wildlife and recreation in a manner that is sensitive to the needs of various user groups, the natural and built environment, and constraints of management, maintenance, and funding capabilities.

Expanding the breadth of the bicycle and pedestrian network in Fort Myers is an essential step to promoting cycling and walking as a desirable means of transportation and as a way of daily life. In cities around the United States, surveys consistently identify the lack of facilities as the primary reason that more people do not choose walking or cycling as a mode of travel. Indeed, at present Fort Myers's sidewalk and bicycle facility networks are discontinuous: many local streets even in older, established neighborhoods of Fort Myers lack sidewalks, and at present the city has only seven miles of dedicated bicycle facilities. The benefits that a robust bicycle and pedestrian network offers for healthy living and the ambitions of a city desiring a more balanced, sophisticated transportation system (and indeed that Fort Myers has committed to through its planning policies) depend on a stronger bicycle and pedestrian realm.

### BICYCLE/PEDESTRIAN FACILITIES OVERVIEW

A number of existing plans and official documents served as starting points for the planning process, including the Fort Myers Comprehensive Plan and area plans that address specific neighborhoods in the City. Also considered were local ordinances, state and national guidelines, design and safety standards, and potential funding sources that are pertinent to the development of a high quality bicycle and pedestrian facilities. Although many of the plans and local ordinances briefly address bicycle facilities, the City of Fort Myers Bicycle and Pedestrian Plan will fill a much-needed void for alternative transportation and recreation within the City.

Kittelson and Associates (KAI) preformed a detailed assessment of the existing conditions for pedestrians and bicyclists in Fort Myers. The identification of priority areas for improved pedestrian and bicycle facilities was based on two criteria: the locations with existing demand and high potential for walking/bicycling trips and locations that are unsafe or otherwise unsupportive of pedestrian and bicyclist trips. Areas identified as "high potential" for walking and bicycling were based on population density, auto ownership, immigrant population, transit routes, and non-motorized trip generators. KAI then examined areas that are unfriendly to pedestrians and bicyclists using crash data, a Pedestrian Friendly Index (PFI), sidewalk gaps, the number of travel lanes, average daily traffic, and bicycle facility gaps.



**EXISTING CONDITIONS ANALYSIS**

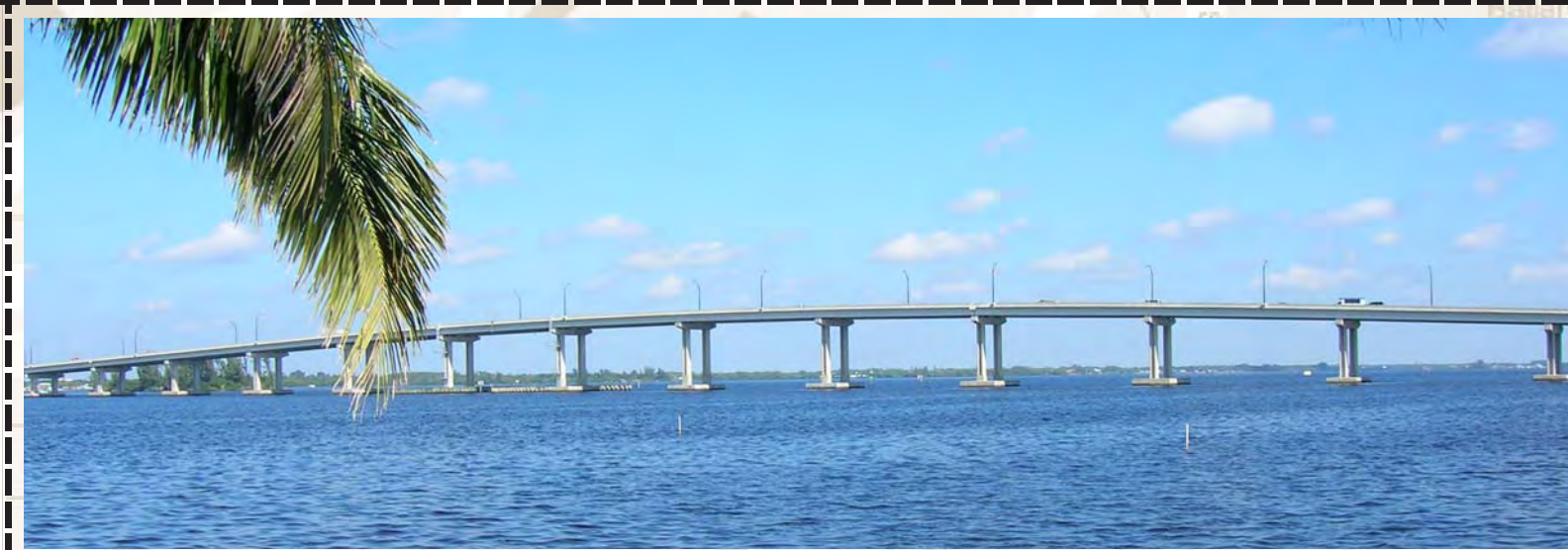


**PEDESTRIAN IMPROVEMENT PRIORITIES**

Improvement Type	Description	Location
Safety	Identify and mitigate cause of high pedestrian crash and fatality frequencies.	Cleveland Avenue
		Palm Beach Boulevard
Schools	Schools with nearby pedestrian fatalities not identified under other pedestrian improvement criteria. Additional study near these schools is needed to determine crash causes and appropriate mitigations.	Dunbar School
		Franklin Park School
		Lee Middle School
Sidewalk Gaps	Fill in sidewalk gaps along high-volume roadways, especially where transit routes and pedestrian-trip generators are located.	Multiple arterial and collector segments
Low Pedestrian Friendliness Areas	These areas suffer from a lack of connectivity and/or sidewalks gaps, despite otherwise high walking potential. Improvements should focus on increasing connectivity, sidewalk coverage, and installing other pedestrian amenities.	Northeastern Fort Myers near Palm Beach Boulevard /Marsh Avenue
		Area to the northeast of Cleveland Avenue/Colonial Boulevard
		South of Colonial Boulevard, east of Summerlin Road & west of Deleon Street

**BICYCLE IMPROVEMENT PRIORITIES**

Improvement Type	Description	Location
Safety	Identify and mitigate cause of high bicycle crash and fatality frequencies.	Cleveland Avenue
Primary Corridors	These corridors connect major destinations within Fort Myers and are essential to be included in the Fort Myers bicycle network. Determination need to be made if bike lanes, off-street paths or bicycle boulevards provide the best solution.	Cleveland Avenue
		Palm Beach Boulevard
		Dr. Martin Luther King Jr. Boulevard
Secondary Corridors	These corridors provide key connections between the primary corridors and should be included in the Fort Myers bicycle network. Determination need to be made if bike lanes, off-street paths or bicycle boulevards provide the best solution.	Marsh Avenue
		Hanson Street
		McGregor Boulevard



**WAYFINDING**

Wayfinding is the organized movement of pedestrian and vehicles through a complex environment. It frequently involves layers of information such as maps, signs, landmarks or icons to direct a user to a destination. A good wayfinding system helps users experience an environment in a positive way and facilitates getting from point A to point B. The goal of this system is to welcome visitors and reassure guests that they are on the correct route as they find their destination. It is important to keep in mind that unfamiliar environments make special demands upon the user. Even the simplest settings can involve a jumble of information that must be stored and processed before it can become meaningful.

**IMPLEMENTATION**

**Policies and Ordinances**

In adopting this plan, it is essential for Fort Myers to adopt policies promoting bicycling as a safe, desirable, convenient means of transportation for recreational, commuter and visitor-oriented purposes. With that, the city should set tangible policy goals.

An increasingly common approach in cities that have solidified their reputations as bicycle- and pedestrian-friendly cities is to set a general goal for integration of cycling and walking into the city's transportation system.

As the Fort Myers Comprehensive Plan organizes its policy direction into larger goals and progressively specific objectives, policies, actions and standards, the following suggested language should be used to guide future plan amendment to adequately address Fort Myers's commitment to promoting and enhancing its bicycle and pedestrian system. The Transportation Element of the Comprehensive Plan is organized around a single, broad goal to "provide an efficient, safe and responsive City transportation system consistent with environmental and land use goals," so the recommendations here begin at the Objective level.

- Define transportation projects to expand and promote bicycling and walking throughout the City of Fort Myers.
- Provide safe and convenient travel options for cyclists and pedestrians by ensuring that facilities designed for their use are well maintained.
- Promote freedom of mobility for all Fort Myers residents by designating bikeways for long-range travel and regional connections, commuting, recreation, and institutions and neighborhood uses.
- Complete the balance of Fort Myers's transportation system by providing adequate trip-end facilities for bicycles and pedestrians.

**Logical Phasing and Project Priorities**

The following priorities will define how sidewalks and bicycle facilities are to be constructed in the City.

**Serving community first – Safe routes to school**

*Higher sub-priority:* Projects that meet the "high potential" evaluation criteria that also overcome barriers.

*Lower sub-priority:* Projects where serving areas of "high potential" evaluation criteria can easily be accomplished without crossing barriers.

**Extending routes to schools and parks**

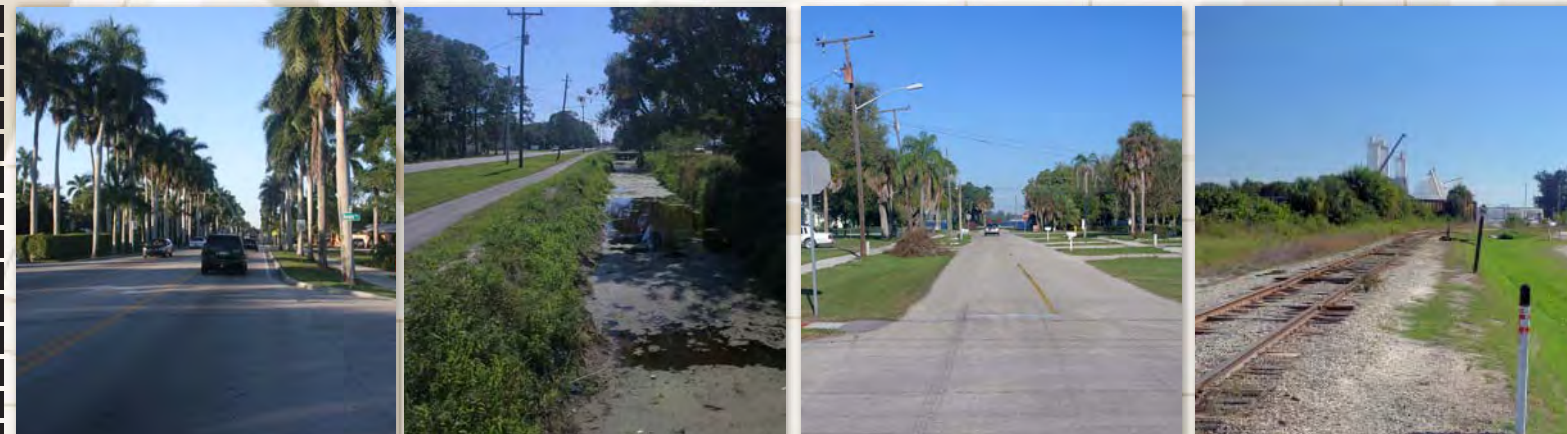
*Higher sub-priority:* Projects that meet the "high potential" evaluation criteria that also overcome barriers.

*Lower sub-priority:* Projects where serving areas of "high potential" evaluation criteria can easily be accomplished without crossing barriers.

**Completing community connections**

*Higher priority:* Projects that meet the "high potential" evaluation criteria in low pedestrian friendliness zones (i.e. zones with PFI scores below 0.5).

*Lower priority:* Projects in high pedestrian friendliness zones.





### GREENWAYS, TRAILS, BICYCLE AND PEDESTRIAN VISION

The Bicycle and Pedestrian Plan is a vision for a well-connected Fort Myers in which every street is friendly to bicycles and pedestrians. In order to focus this connectivity on the community facilities that are the foundations of life in the city, the plan designates routes for cyclists and pedestrians to be coordinated with a wayfinding system. The plan focuses on serving the community first and foremost: a bicycle and pedestrian system should keep all citizens of Fort Myers in mind and help the city to connect its people to their necessary destinations and the commercial, civic and cultural institutions that give the city its character and purpose. However, the plan keeps in mind that walking and cycling may be more than a recreational activity for some residents of the city: accordingly, a main focus of the plan's intent is the provision of safe and convenient routes to schools and parks, understanding that mobility offers independence even for younger residents. The following sections detail the types of facilities that contribute to this network.

#### GREENWAYS

At their heart greenways are trail facilities, although in the nomenclature of this plan they have been designated as greenways to emphasize that they are routes either independent of a public street or intended to emphasize or celebrate features of the landscape. The Seminole Rail Corridor that traverses Fort Myers north to south is the most direct and long-reaching opportunity for a greenway facility in a rail corridor and offers an off-road transportation 'spine' to the city.

#### BICYCLE FACILITIES

Providing for bicyclists is an important part of building transportation infrastructure. Bicyclists can be found on almost every type of roadway, from rural highways to local streets, and the majority of these roads have no special facilities designated for bicycling. Bicycle facilities need to be built, maintained and operated so that bicyclists can use them safely and comfortably: drainage grates, railroad tracks, potholes, utility covers, gravel, wet leaves, pavement joints and many other surface irregularities have a profound impact on bicyclists and can quickly cause a fall and serious injury.

#### PEDESTRIAN FACILITIES

Sidewalks to serve pedestrians are an integral part of a pedestrian system: they connect buildings and facilities along a street and allow pedestrians safe passage away from the threat of moving vehicles. This plan recommends that sidewalks be placed on both sides of any street contributing to the effective street network, or any street that connects to two (2) or more streets. The City will prioritize this construction over any streets that do not contribute to the effective network ('non-network streets').

#### MULTIPURPOSE TRAILS

Multipurpose trails allow joint bicycle and pedestrian activity on facilities that are separated from the street. For purposes of this plan, they are fundamentally the same facility type as the greenway trails (namely, accommodating both pedestrians and bicyclists in a single facility) and may use the same general facility design standards. It is important to include these trails on both sides of the streets where they have been designated to help preserve safety along these roads.



### PUBLIC INVOLVEMENT

The public involvement process was an outgrowth of the Parks and Recreation Master Plan process in 2006. During the workshops for the Master Plan—which included a Bicycle Focus Group and a Pedestrian Focus Group—stakeholders consistently identified a strong need for alternative transportation options and linear recreation facilities.

The City formed a Bicycle and Pedestrian Advisory Board to serve as the steering committee for the Bicycle and Pedestrian planning process. Further public input was gathering during several stakeholder group meetings on January 25-26, 2007 and series of public meetings March 25-26, 2007.

Given the broad constituency of stakeholders involved in the public process, the needs identified were remarkably consistent with one another. They also largely echoed the needs identified in the existing conditions analysis:



### PUBLIC EXPRESSED NEEDS

- ➔ The arterial roads in the City are the biggest obstacle to connectivity.
- ➔ Efforts need to be made to influence the FDOT design of these roads to include bicycle and pedestrian facilities.
- ➔ Parallel routes to the major arterial roads need to be looked at in the interim for alternate means of connectivity.
- ➔ The impending reconstruction of I-75 needs to include bicycle and pedestrian connections at the interchanges of state roads 80 and 82 and county road 884.
- ➔ The Edison Bridge should be considered for Bicycle and Pedestrian facilities.
- ➔ Pedestrians crossing Palm Beach Boulevard is a major safety concern.
- ➔ The City bicycle and pedestrian system needs to connect to the larger County and regional systems
- ➔ The major utility, drainage and rail corridors should be should be looked at for potential greenways
- ➔ Providing safe routes for children to get to schools and parks should be a priority



# Conceptual Bicycle System Master Plan






The Bicycle and Pedestrian Plan is a vision for a well-connected Fort Myers in which every street is friendly to bicycles and pedestrians. In order to focus this connectivity on the community facilities that are the foundations of life in the city, the plan designates routes for cyclists and pedestrians to be coordinated with a wayfinding system.

## Map Legend





### BICYCLE FACILITY TYPES

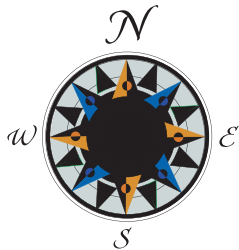
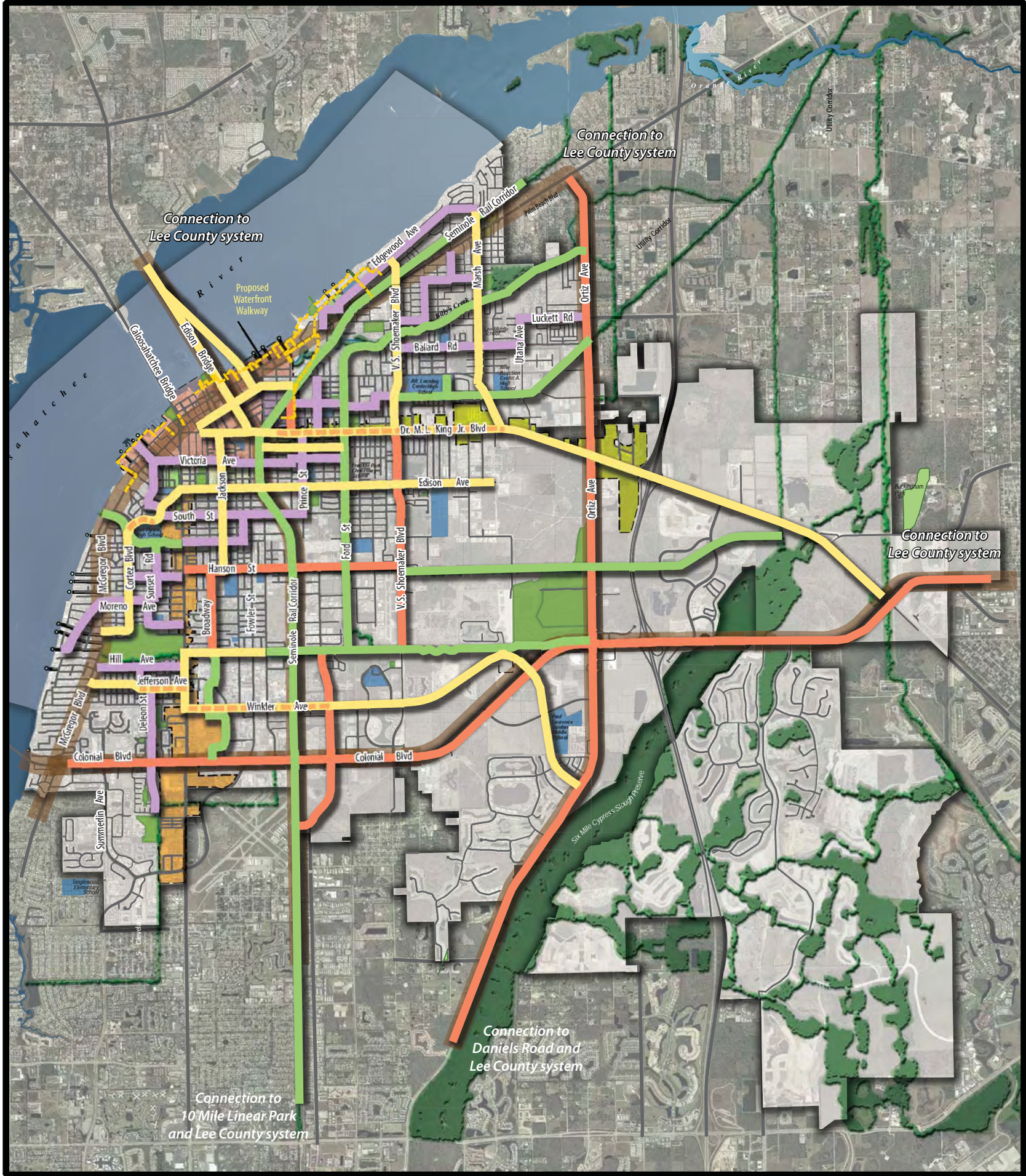
-  **On-Street Bike Lanes**  
Dedicated facilities on street (inside curbs) providing the 'main streets' of the bicycle network.
-  Existing lanes are indicated with overlain dashed lines.
-  **Bike-Friendly Streets**  
Streets with edge treatment and calming that carry designated bicycle routes but do not have standard-width dedicated lanes.
-  **Off-Street Trails**  
Single-use bicycle trails or shared pedestrian trails parallel to streets and roads. These off-street trails are separate from the roadway.
-  **Proposed Bike Greenways**  
Similar trail facilities to off-street trails, though generally located in designated park or nature areas. Some greenways proposed in the plan are based on railroad conversion opportunities: these are primarily recreational routes, though their longer-range regional function makes them an important part of the overall network as well.

### COMMUNITY FACILITY TYPES

-  Park Site
-  Existing School
-  Conservation Land
-  Street-end Parks Along River
-  Proposed County Facilities

### SPECIFIC PLAN AND REDEVELOPMENT AREAS

-  Downtown Redevelopment Plan
-  MLK and VSS Boulevards Plan
-  Central Fort Myers Area
-  Cleveland Avenue Redevelopment Plan Areas



**Data Sources:** City of Fort Myers GIS, Florida Geographic Data Library, Lee County Property Appraiser, Aerials Express (March 2006)

Map produced March 2007



City of Fort Myers, Florida  
Department of Public Works



A number of existing documents informed the Fort Myers Bicycle and Pedestrian Plan. The following plans, ordinances, standards, legislation, and funding sources were reviewed during the planning process:

#### Existing Plans

- Fort Myers Comprehensive Plan
- Fort Myers Downtown Area Plan
- Cleveland Avenue Redevelopment Plan
- Dr. Martin Luther King and Veronica S. Shoemaker Boulevards Redevelopment Plan
- Palm Beach Boulevard Community Plan and FDOT Design for State Road 80
- 2000 Florida Statewide Comprehensive Outdoor Recreation Plan (SCORP)

#### Local Ordinances

- Streets and Sidewalks Ordinance — McGregor Boulevard
- Traffic and Circulation Ordinance

#### State and National Guidelines/Manuals

- AASHTO Guide for the Development of Bicycle Facilities
- The Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways (Florida Green Book)

#### National Legislation

- Americans with Disabilities Act
- Rails to Trails Act

#### Potential Funding Sources

- Federal Funds

## 2.1 EXISTING PLANS

### 2.1.1 *Fort Myers Comprehensive Plan*

The transportation element of the Fort Myers Comprehensive Plan is the cornerstone on which transportation decisions in the city are made. It is incumbent on the City to meet the obligations that it sets for itself in its Comprehensive Plan and achieve its goal: to “provide an efficient, safe and responsive City transportation system consistent with environmental and land use goals”. This goal is supported by objectives, policies, actions and standards that address multimodal transportation (especially transit, bicycle and pedestrian activity), concurrency and adequate transportation system capacity, energy efficiency, adequate parking, the need for caution and sensitivity to context in road-widening projects, and intergovernmental coordination.

With specific regard to bicycle issues, Policy 1.3 of the Transportation Element directs the City to “create a network of bicycle facilities to link all residential and activity areas of town.” One of the supporting actions



of this policy is the adherence to FDOT standards for the construction of facilities (Action 1.3.2). A similar policy guiding pedestrian facilities calls for creating “a network of pedestrian facilities to link residential areas and activity areas of town, especially pedestrian-intensive uses such as schools, recreation sites and commerce areas.” To enact this policy, the City must implement the section of the City’s Growth Management Code that requires sidewalks on all new streets, and that adjacent property owners be responsible for their maintenance and liability.

### *2.1.2 Fort Myers Downtown Area Plan*

The City of Fort Myers hired Duany Plater-Zyberk in 2001 to create a redevelopment plan for downtown Fort Myers. This plan focuses on the area bounded generally by Victoria Avenue on the south, Evans Avenue on the east and the Caloosahatchee River on the north and west.

One pertinent aspect of the Downtown Area Plan is a thoroughfares section detailing street designs. While the Monroe Street concept is the only one that includes dedicated space for bicycle facilities, the combination of traffic volumes and the other elements of the designs (especially lane widths) would likely result in an amenable environment for cyclists elsewhere. Overall the Downtown Area Plan’s treatment of streetscapes and roadway design was intended to enhance walkability of downtown Fort Myers, with particular emphasis on sidewalk expansion the improvement of the business environment by increasing available on-street parking. Given the commercial nature of the downtown and the need for ground-level retail and business establishments to have easy pedestrian access from the street, the Downtown Area Plan makes judicious use of the limited room of downtown’s streets.

### *2.1.3 Cleveland Avenue Redevelopment Plan*

A consultant team led by EDAW and working locally with McMahon and Associates is currently developing a plan for the redevelopment and streetscape of Cleveland Avenue within the City of Fort Myers, beginning south of the area covered in the Downtown Area Plan. Currently this plan is still undergoing internal review and has not yet been made available to the public.

### *2.1.4 Dr. Martin Luther King and Veronica S. Shoemaker Boulevards Redevelopment Plan*

A team led by Dover Kohl and Partners created a plan for the communities along Dr. Martin Luther King, Jr. and Veronica S. Shoemaker Boulevards.

The plan focuses on neighborhood revitalization, which has been impeded by the widening of Martin Luther King (State Road 82). Though the Florida Department of Transportation (FDOT) added on-street bicycle facilities as a component of its widening project, the Dover Kohl plan emphasizes that this widened right-of-way has impacted business viability along Martin Luther King. A major element of the plan’s revitalization effort is an enhanced pedestrian realm and better access to businesses and buildings fronting the street. The plan also recommends replacing existing bicycle facilities with on-street parking.



### 2.1.5 *Palm Beach Boulevard Community Plan and FDOT Design for State Road 80*

Prepared for the community east of central Fort Myers in both the city and unincorporated Lee County, this plan for State Road 80 incorporated a wide range of community-articulated concerns to present a general plan for redevelopment. In particular, it recognized the need for traffic calming on Palm Beach Boulevard, noting that high speeds are not mitigated by the wide roadway design and that there are few traffic signals along the road.

### 2.1.6 *2000 Florida Statewide Comprehensive Outdoor Recreation Plan (SCORP)*

The 2000 SCORP is a general policy document that addresses the future outdoor recreation needs of Florida's population. It is pertinent to the Fort Myers Bicycle and Pedestrian Plan because of its guidelines for the creation of off-road trails and greenways. The Southwest Florida region—defined by SCORP as Sarasota, Charlotte, Lee, Collier, Glades and Hendry Counties—is noted in the Plan as having abundant opportunities to utilize the region's waterways and coastal access for recreational use.

## 2.2 LOCAL ORDINANCES

### 2.2.1 *Streets and Sidewalks Ordinance – McGregor Boulevard*

Section 78-31 of the ordinance designates McGregor Boulevard as an historic and scenic boulevard and prohibits certain activities in its right-of-way:

- Removal of palms within 20 feet of either side of its existing paved surface.
- New street connections, intersections, or widened intersections
- Widening or modification of the appearance of McGregor itself

These prohibited activities list exceptions—among them the construction of bicycle paths, provided that construction of these paths does not require the removal of any palm.

### 2.2.2 *Traffic and Circulation Ordinance*

Chapter 134 of the Fort Myers Code of Ordinances includes design and construction standards for public streets. These standards generally conform to the requirements of the *Florida Department of Transportation Manual of Minimum Standards for Design and Construction and Maintenance for Streets and Highways* (see 2.4). The following list summarizes requirements that pertain to bicycle and pedestrian facilities and includes citations from the code:

- Traffic lanes shall have a minimum width of 12 feet (Sec. 134-54).
- A given property shall have a maximum of two access points. Access points shall be 330 feet apart on arterial and collector streets (using a centerline measurement) and 125 feet along all other streets except those with single-family residential uses (Sec. 134-63).



- Streets shall be provided with sidewalks on each side of the street at a minimum width of five feet (Sec. 134-73). The maintenance of public sidewalks in safe condition is the responsibility of the adjacent property owner.
- Bicycle facilities shall be provided whenever a new arterial or collector road is built or additional lanes are added to existing arterial or collector roads (Sec. 134-74).

### 2.3 AASHTO GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES

Public agencies and consultants recognize the AASHTO *Guide for the Development of Bicycle Facilities* as the national standard manual for bicycle facilities and has been put to widespread use in planning and designing bikeways, highways, and streets. Usage of the Guide has grown rapidly as more bikeway projects have been funded and developed following the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991. The National Cooperative Highway Research Program (NCHRP) is currently sponsoring an effort to update the guide. In particular, the Guide does not reflect recent changes to the Manual on Uniform Traffic Control Devices (MUTCD) and the AASHTO *Policy on Geometric Design of Highways and Streets* (AASHTO 'Green Book').

### 2.4 THE MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS (FLORIDA GREEN BOOK)

This Florida Department of Transportation (FDOT) manual establishes uniform minimum standards and criteria for the design, construction, and maintenance of all public streets and highways, including pedestrian and bicycle facilities. On FDOT projects, the more stringent standards of the Plans Preparation Manual are applicable. Some jurisdictions adopt their own standards, consistent with and supplementing those of the Florida Green Book. The Green Book's guidance for pedestrian and bicycle facilities is based on the principles that:

- All new highways [i.e., any "public way for purposes of traffic"], except limited access highways, should be designed and constructed under the assumption they will be used by pedestrians.
- To varying extents, bicycles will be ridden on all streets and highways where they are permitted. Bicycle-safe design practices, as described in the Green Book, should be followed during initial roadway design to avoid costly subsequent improvements.

As they apply to pedestrian and bicycle concerns, the standards of the Florida Green Book are referenced in the *Florida Bicycle Facilities Planning and Design Handbook* and the *Florida Pedestrian Facilities Planning and Design Handbook*. Though these are not manuals they are intended as aids to planners, engineers and other designers of roadways and bicycle and pedestrian facilities.

The Transportation Element of the Fort Myers Comprehensive Plan, as mentioned previously, commits to using FDOT standards in construction of new facilities:



### 2.4.1 *Bicycle Lane Widths*

The Manual and the supporting *Bicycle Facilities Planning and Design Handbook* note the value of bicycle lanes to all highway users. In addition to creating a smooth, efficient and safe sharing of the highway, bicycle lanes also have the following benefits:

- Establishing the correct riding position for bicyclists.
- Sending a message to motorists that bicyclists have a right to the roadway.
- Establishing the correct riding direction for bicyclists.
- Reducing motorist and bicyclist sudden swerves (lane changing).
- Reducing serious bicycle crashes by up to 80% within some corridors.
- Guiding bicyclists through intersections on the safest, most predictable course.
- Permitting bicyclists to pass stopped motorists and queue properly at traffic signals.
- Permitting motorists to pass bicyclists on 2-lane roadways.

There are many secondary benefits of bike lanes as well:

- Providing added border width.
- Enhancing highway drainage and reducing vehicle hydroplaning.
- Creating an essential buffer between the pedestrian and motorist.
- Improving opportunity for landscaping (border width).
- Reducing pedestrian/bicyclist conflicts (no longer on sidewalks).
- Increasing turn radii at driveways and intersections.
- Improving sight distances. Bicycle lanes are to be used on future FDOT urban roadway sections, *whenever right of way and existing curb/drainage sections permit*. Occasionally it is possible to convert wide curb lanes on multi-lane highways to bike lanes by reducing the travel lane widths to 11 ft. (3.3 m), and turn lanes to 10 ft. (3.0 m). The width of the bike lane is included within the motorist clear zone and horizontal clear distance. Additional clearance is not required.

Standard bicycle lane widths for differing roadway types are:

- Urban (curb & gutter) 4 ft. (1.2 m)
- Urban with Parking 5 ft. (1.5 m)
- Rural Section 5 ft. (1.5 m)

The minimum width of an urban bike lane from left side stripe to face of curb is four (4) feet. The 13 inch (450 mm) gutter included on most curbs and gutter sections provides for this additional requirement. Certain edge conditions may dictate additional desirable bicycle lane width.

#### 2.4.1.1 *Bicycle Lanes on Curb and Gutter Sections*

Bicyclists do not generally ride near a gutter because of the possibility of debris, of hitting a pedal on the curb, of an uneven longitudinal joint, or of a steeper cross slope. However, many novice bike riders will ride in a gutter if the roadway is too narrow, and thus bike lanes help reduce this



problem. Bicycle lanes in this location should have a minimum width of 4 ft. (1.2 m) from the edge of pavement to the motor vehicle travel lane. Since Florida measures most dimensions from the edge of pavement, it can be assumed an additional 1.5 ft. (0.5 m) lateral separation exists from the curb face. See graphic on next page.

#### 2.4.2 *Bicycle/Parking Lanes*

A bicycle lane may be put on an urban curbed street where a parking lane is provided. The required bicycle lane width for this location is 5 ft. (1.5 m).

The minimum combined bike lane/parking lane width is 13 ft. (3.9 m). This space is to provide adequate width for the bicyclist to avoid car doors without encroaching upon the motor vehicle lane.

Bicycle lanes should always be placed between the parking lane and the motor vehicle traffic lane.

Bicycle lanes between the curb and the parking lane can create obstacles for bicyclists from opening car doors and poor visibility at intersections and driveways. They also prohibit bicyclists from making left turns; therefore, this placement should not be considered. This treatment may not be appropriate on sections with narrow motorist lanes.

Transition taper lengths around parking lanes are based on speed, sight distances, type of vehicles, and related factors.

Make sure that both the bicyclist and motorist are given adequate information and decision making time.

When parking and bike lanes are used in a pattern as shown in the graphic at right, the motorist ends up with added turning radii; sometimes a needed bonus for trucks and buses. To reduce maintenance, and improve the life of markings, make sure bike lane markings may be kept out of the turning radius. To reduce wrong way bike riding, always use directional arrows in bike lanes.

#### 2.4.3 *Paved Shoulders and Rural Bike Lanes*

Adding or improving shoulders often can be the best way to accommodate bicyclists in rural areas. Paved shoulders are also a significant safety benefit to motor vehicle traffic. Where funding is limited, adding or improving shoulders on uphill sections first will give slow moving bicyclists needed maneuvering space and decrease conflicts with faster moving motor vehicle traffic. Current FDOT standards call for a 5 ft. (1.5 m) wide paved shoulder on the outside edge of all rural roadway sections (*Plans Preparation Manual*, Vol. 1, Ch. 2 for details). Additional width can be considered when heavy truck volumes or other conditions warrant. Since bicyclists often ride on shoulders, smooth paved shoulder surfaces should be provided and maintained. Pavement edge lines 6 inch (150 mm) wide supplement surface texture in delineating the shoulder from the motor vehicle lanes.

##### 2.4.3.1 *Shoulder Width*

The minimum paved shoulder width is 5 ft. (1.5 m) when designated as a bike lane or intended to accommodate bicycle travel. The combined width of the paved shoulder or bike lane and the width of the adjacent motor vehicle travel lane determine whether or not bicyclists and motorists can



safely pass each other. The FDOT standard of a 12 ft. (3.6 m) lane with a 5 ft. (1.5 m) shoulder provides for adequate separation of bicyclists and motor vehicles when speeds exceed 60 km/h (45 mph), the percentage of trucks, buses, and recreational vehicles is high, or static obstructions exist at the right side. At speeds above 45 mph (60 km/h), bicyclists need a 6 ft. (1.8 m) minimum lateral separation from trucks. The full 12 ft. (3.6 m) width travel lanes in combination with 5 ft. (1.5 m) paved shoulders accommodates this lateral separation need. Due to the buildup of debris, and the trapped condition a bicyclist faces, shoulders on bridges are especially important. Bridge shoulder width, as a minimum, should match the approach roadway shoulder width. Bridges exceeding a 3% grade benefit from wider shoulder widths. The added width compensates for climbing wobble conditions and higher descent speeds.

#### 2.4.4 *Wide Curb Lanes*

Wide curb lanes no longer meet FDOT requirements and are not used on new construction on state roadways. Local jurisdictions may still use them though they are a "least preferred" option in Florida. Although wide curb lanes benefit motorists and bicyclists by providing additional operating space compared to a 12 ft. (3.6 m) lane, only 5% of bicyclists feel comfortable using these facilities. In some conditions, a wide curb lane may still be the only practicable option. The following principles and details are provided.

On highway sections without bicycle lanes, a right lane wider than 12 ft. (3.6 m) can better accommodate both bicycles and motor vehicles in the same lane and thus is beneficial to both bicyclists and motorists. In many cases where there is a wide curb lane, motorists will not need to change lanes to pass a bicyclist. Also, more maneuvering room is provided when drivers are exiting from driveways or in areas with limited sight distance. In general, a lane width of 14 ft. (4.2 m) of usable width is desired. Usable width would normally be from edge of pavement (gutterpan seam), but adjustments need to be made for drainage grates, parking and longitudinal ridges between pavement and gutter sections. If 14 ft. (4.2 m) of usable width is available, and speeds and traffic volumes are low, a 3 ft. (0.9 m) shoulder may be striped next to an 11 ft. (3.3 m) lane. When 16 ft. (4.8 m) is available, it should be striped as a 4 foot (1.2 m) bike lane and a 12 foot (3.6 m) lane. Restriping to provide wide curb lanes may also be considered on some existing multi-lane facilities by making the remaining travel lanes and left turn lanes narrower. This should only be performed after careful review of traffic characteristics along the corridor.

#### 2.4.5 *General Signing and Marking of Bike Lanes*

In Florida, designated bike lanes are to be marked with signs and pavement markings. Standard FDOT striping is shown in its *Roadway Traffic and Design Standards*. The bike lane is separated from the regular travel lane by a 6 to 8 inch (150 - 200mm) solid lane line. Pavement markings are used within the lane to designate the bike lane. The diamond shape Preferential Lane Symbol is used as required by the *MUTCD*. Additionally, Florida uses the bicycle symbol to clarify the purpose of the bike lane and an arrow to provide guidance on legal direction of travel. (*Roadway and Traffic Design Standards*) Bicycle Lane signs, R3-17, are used to supplement the pavement markings.

#### 2.4.6 *Directionality*



Bicycle lanes should always be one-way facilities, be marked as such, and carry traffic in the same direction as adjacent motor vehicle traffic. FDOT suggests that two-way bicycle lanes on one side of the roadway are unacceptable because they promote riding against the flow of motor vehicle traffic. Wrong-way riding is a major cause of bicycle crashes and violates the Rules of the Road stated in the Uniform Vehicle Code.

#### *2.4.7 Bicycle Lanes on One Way Streets*

On one-way streets, bicycle lanes should be on the right side of the street, except in areas where a bicycle lane on the left will decrease the number of conflicts (e.g. those caused by heavy bus traffic). Although not recommended, contra-flow bike lanes (those in an opposing direction from the normal traffic flow) on one-way streets may be allowed to provide connectivity for bicycles within a roadway system. They can be used to fill gaps in the system or provide a more convenient route for bicyclists. Bicyclists using these lanes will be coming from a direction motorists do not expect. Also, traffic control, signs and signals, must be provided for the contra-flow bicyclists. Ideally, instead of using a contra-flow bike lane, the lane could be put on a parallel facility.

#### *2.4.8 Additional Emphasis Markings*

In especially hazardous rural and higher speed suburban locations, such as bridges, curves and areas where motorists frequently run off the roadway, added emphasis may be given to the markings. In these locations, additional glass beads, special bicycle-safe markers, and other treatments should be considered. Standard size Raised Pavement Markings (RPMs) and raised barriers present a hazard to bicyclists and shall not be used to delineate bicycle lanes. Experimental low level RPMs, inset into the pavement, are being tried in test sections with effective results. RPMs may be considered for special areas where additional guidance and control are warranted. Also, thermoplastic pavement markings pose a hazard to bicyclists because they are slick, especially when wet. The Florida Department of Transportation has developed a special thermoplastic mix using additional grit to combat this problem. A thermoplastic that makes a sound when a car drives over it is being tested south of Gainesville. This edgeline alerts motorists and bicyclists that a motorist is driving on the edgeline.

#### *2.4.9 Designated versus Undesignated Bike Lanes*

In some cases, the designer may not wish to designate a bike lane with pavement markings and signs. Undesignated bike lanes differ from shoulders in being striped to the left of right turn lanes. This allows for the eventual designation of the bike lane. Preliminary research and observations reveal a wider separation of motorists and bicyclists when wide curb lanes are converted to lanes of even as little as 3 - 3.5 ft. (0.9-1.1 m). However, the Department prefers, in many instances, to leave this substandard width undesignated. There are some cases where even a full width 4 foot (1.2 m) space may be left undesignated. Decisions on when to designate and leave undesignated should be made by a joint partnership of the Department and the local Bicycle Advisory Committee (BAC). The following are some reasons a designer may wish to leave a bike lane unmarked:

- Short or discontinuous
- Rural with a low probability of use





- First segment, to be joined later by other pieces.

There are, however, advantages to marking a bike lane. Some of the advantages of designating a bike lane are as follows:

- Reminds motorists to stay alert for bicyclists
- Creates a true system of support
- Provides system continuity
- Further reduces likelihood of wrong way sidewalk riding
- Allows signing warning against wrong way riding.

#### 2.4.10 Pedestrian Facilities

For pedestrians, the Green Book emphasizes the minimization of conflict between pedestrians and vehicles. This is ideally accomplished through creating independent systems for pedestrian travel. If this is not practical, other *horizontal separation* should be considered. For urban highways with substantial pedestrian-vehicle conflict, the following help to reduce the number of collisions:

- Eliminate left and or/right turns
- Prohibit free flow right turn movements
- Prohibit right turn on red
- Provide separate signal phases for pedestrians

##### 2.4.10.1 Crossings

Care should be taken in the protection of pedestrians at crossings. Minimally:

- Curb ramps meeting the requirements of ADA Accessibility Guidelines and the Florida Accessibility Code for Building Construction should be constructed at crosswalks at all intersections where curbs and sidewalks are constructed in order to give persons with disabilities safe access.
- Crossing should be placed at locations with ample sight distances.
- At crossing, the roadway should be free from changes in alignment or cross section.
- The entire length of crosswalk shall be visible to drivers at a sufficient distance to allow a stopping maneuver.
- Stop bars shall be provided adjacent to all signalized crosswalks to inform drivers of the proper location to stop. The stop bar should be well separated from the crosswalk, but should not be closer than 4 feet.
- Crosswalks shall be easily identified and clearly delineated, in accordance with MUTCD

Stopping sight distances for the driver are important to pedestrian safety. FDOT recommends a clear view of the pedestrian approach for at least 15 feet from the outside travel lane. Illumination of crossings should also be considered. If a pathway is adjacent to a street or highway, however, it should not be illuminated to a level more than two times of that of the roadway.



## 2.5 NATIONAL LEGISLATION

### 2.5.1 *Americans With Disabilities Act*

The Americans with Disabilities Act (ADA) gives persons with disabilities the protection from discrimination that was achieved during the Civil Rights era. Access to civic life by people with disabilities is a fundamental goal of the Act. To ensure that this goal is met, Title II of the ADA requires State and local governments to make their programs and services accessible to persons with disabilities. This requirement extends not only to physical access at government facilities, programs, and events, but also to policy changes that governmental entities must make to ensure that all people with disabilities can take part in, and benefit from, the programs and services of state and local governments. As that has been implemented on a local level, the ADA defines Accessibility Guidelines (ADAAG) and requires local governments to respond to the following concerns:

- *Width.* Sidewalks must meet minimum width standards, defined as 36 inches, though new sidewalk facilities should exceed this requirement. Additional maneuvering space is necessary for a pedestrian using a wheelchair to turn, to pass by other pedestrians, to operate and pass through an entrance door, to use a sidewalk telephone or to activate a pedestrian crossing button. A 60-inch (1525-mm) minimum width can accommodate turns and passing space and is recommended for sidewalks adjacent to curbs in order to provide travel width away from the drop-off at street edge; a 48-inch width can accommodate side-by-side travel with a service animal.
- *Cross slope.* The cross slope of a sidewalk should not exceed a ratio of 1:48 (2%). Excessive cross slope requires additional energy to counteract and tends to direct wheelchair users into the street, particularly when it is wet, icy, or snowy underfoot. At driveways there should be a minimum 36-inch passage with a cross slope of no more than 1:48 (2%). Corners at intersections should comply in both directions, since the running slope of one walkway will be the cross slope of another.
- *Curb ramps.* A curb ramp or other sloped area is required wherever a new or altered pedestrian walkway crosses a curb or other barrier to a street, road, or highway. Similarly, a curb ramp is required wherever a new or altered street intersects a pedestrian walkway. A curb ramp may be perpendicular to the curb it cuts or parallel with the sidewalk. Other designs may also comply, including sidewalks that ramp down to a lesser curb height, with a short perpendicular curb ramp to the street; blended or at-grade connections, or raised crossings that connect at sidewalk level. Level landings should be provided at the top of perpendicular curb ramps, and the boundary between the sidewalk and street should be detectable underfoot.
- *Crossings.* Crossings should take into consideration the needs of blind and vision-impaired pedestrians at intersections. When pedestrian signals are provided, their crossing and timing information should be available to all users.

### 2.5.2 *Rails to Trails Act*

In 1983, Congress amended the National Trails System Act to establish “a national policy to preserve established railroad rights-of-way for future reactivation of rail service, to protect rail transportation corridors, and to encourage energy efficient transportation use.” Section 8(d) of this amended Act (often



referred to as the “Railbanking Act” or the “Rails to Trails Act”) established the concept of “railbanking,” allowing a conversion of a rail corridor to a trail once the rail right-of-way has been legally abandoned. Railbanking allows a rail carrier to transfer an unprofitable or unwanted line—by sale, donation, or lease—to a public or private entity (called an “interim trail manager”) that is willing to assume financial responsibility for the management of the right-of-way.

The process is administered by the Surface Transportation Board (STB), which has developed regulations governing the program. The process works as follows:

- An agency interested in developing a trail can request a railbanking order within 30 days after the railroad owner files an application for abandonment with the STB.
- The STB will consider “late-filed” railbanking requests so long as it has jurisdiction to do so. The STB’s authority to railbank the corridor is terminated only after abandonment authorization is issued, and the railroad notifies the STB that it has taken steps to consummate the abandonment.
- Either a public agency or a qualified organization can submit a railbanking request to the STB. A statement of willingness to assume financial and legal responsibility must accompany the request. Since the railroad company must agree to negotiate a railbanking agreement, a copy of the request for railbanking must be served on the railroad at the same time it is sent to the STB.
- Once the parties notify the STB that an agreement is reached for transfer of the corridor to the trail operating agency, the corridor is added to the national “railbank” for so long as the trail use continues or until the corridor is needed for future restoration of rail service.

## 2.6 POTENTIAL FUNDING SOURCES

### 2.6.1 Federal funds

Federal transportation funds are derived from a wide range of sources, and parts of these funds can be used for funding bicycle networks through the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

The following are programs of the Act:

- *Transportation Enhancements* – This is a program providing primary support for pedestrian and bicycle facilities and conversion of unused rail lines to trails.
- *Recreational Trails* – The Recreational Trails Program is, as its name implies, primarily a recreation-oriented program distributing funding to the States to develop and maintain recreational trails and trail-related facilities.



- *Surface Transportation Program* – This is one of the larger funding sources through SAFETEA-LU, funded at almost \$35 billion. Surface Transportation Funds can be used for any project, and they are not limited to the federal-aid highway system. Projects include bicycle transportation (such as on-street lanes), pedestrian walkways and safety improvements. This is a diverse category of transportation improvements.
- *Safe Routes to School* – SAFETEA-LU introduced the Safe Routes to School program, intended to improve safety for children walking or bicycling to school. In particular, communities can use funds to slow traffic on roads serving schools and to build pathways, bike lanes and sidewalks near schools. Additionally, a portion of the Safe Routes funding must be used for non-infrastructure activities such as enforcement, encouragement and education programs, assisting the implementation of bicycle facilities through engaging potential users of facilities in better understanding them and feeling more comfortable using them.

In Florida, the Safe Routes to School program is administered by the Florida Department of Transportation as the *Safe Ways to School* program. Funding is distributed primarily through two different divisions, one on infrastructure and the other on non-infrastructure programs.

- *Congestion Mitigation and Air Quality* – The Congestion Mitigation and Air Quality (CMAQ) program is designed to help communities with air quality problems develop less-polluting transportation alternatives, including bicycling and walking facilities.

CMAQ funding has increased in SAFETEA-LU from the previous TEA-21 levels, though it also introduces more stringent standards that place more metropolitan areas in non-attainment of air quality goals, thus increasing competition for funding. Federal funds are distributed to states, but most of this funding is programmed at the MPO level as part of a broader plan to reduce air pollution.



This memorandum summarizes the existing conditions and deficiencies of the Fort Myers, Florida transportation network as it relates to safe, comfortable, and convenient pedestrian and bicycle travel. Kittelson & Associates, Inc. (KAI) determined priority locations for pedestrian and bicycle improvements based on both the existing condition for non-motorized users and the potential to attract large numbers of walking and bicycling trips.

This memorandum does not identify specific solutions for the identified deficiencies. However, the information presented here will help guide the development of a preferred pedestrian and bicycle project list as part of the Pedestrian and Bicycle Master Plan final recommendations.

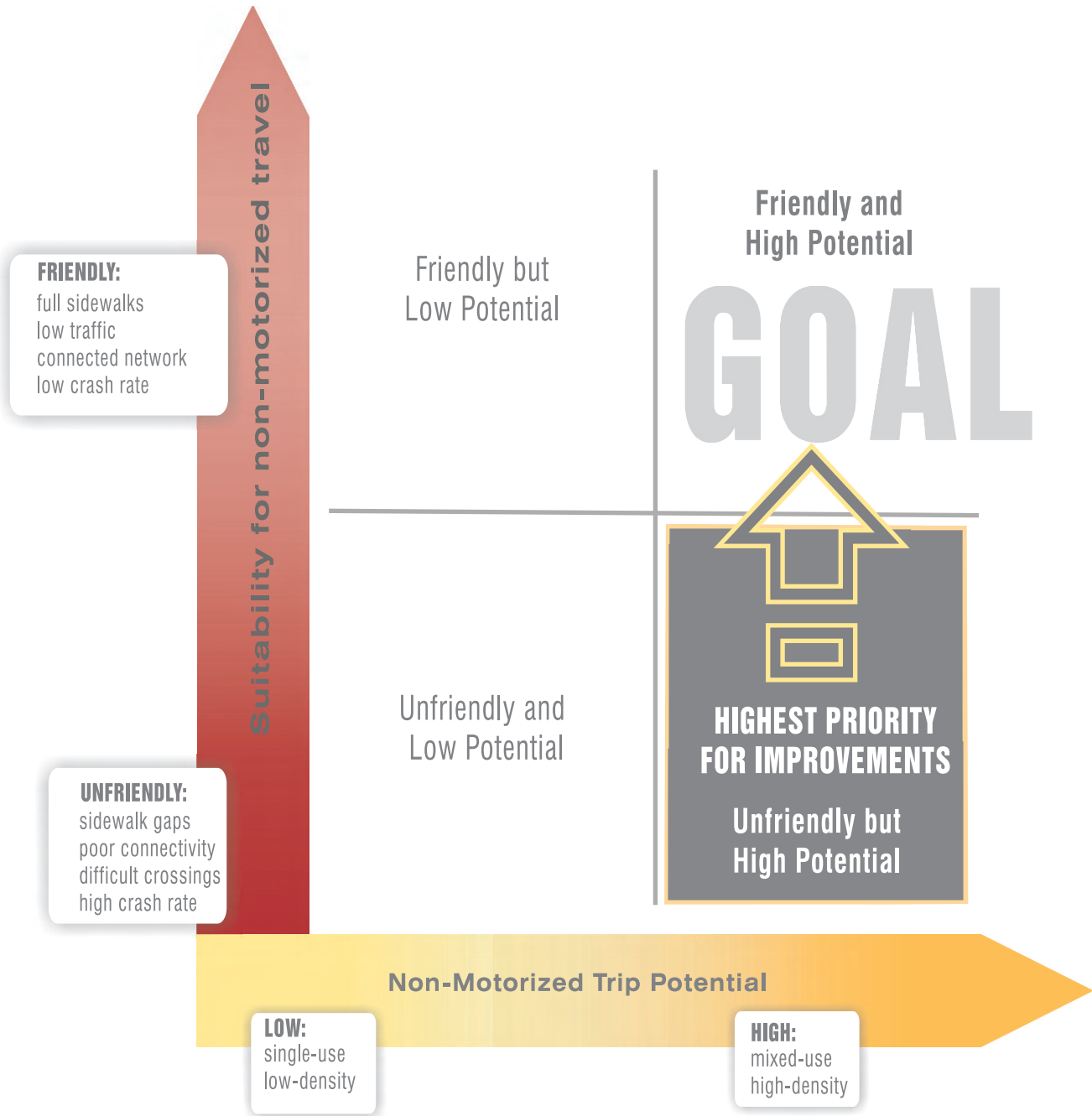
### 3.1 METHODOLOGY

This memorandum considers bicycle and pedestrian conditions within the Fort Myers city limits. Figure 1 depicts the Fort Myers study area and roadway network. KAI prioritized potential pedestrian and bicycle improvement locations based on two sets of criteria:

- Locations with existing demand and high potential for walking and bicycling trips.
- Locations unsafe or otherwise unsupportive of pedestrian and bicyclist trips.

KAI used a combination of the two sets of criteria highlighted above to prioritize areas in need of improvements. The criteria were analyzed based on several parameters listed in Table 1. The table indicates the parameters applicable to either walking or bicycling trips. GIS data provided by the City and obtained from United States Census data were used to map and analyze the parameters. Based on the analysis, several improvement priorities within the City were identified.





**Prioritization Process for Pedestrian and Bicycle Improvement Locations**

**FIGURE 2**

Locations with a high-potential for walking and cycling, but missing or deficient pedestrian and cycling infrastructure are the highest priority for improvement, as conceptually indicated in Figure 2. Investment in improvements at these locations will have the greatest positive impact on the Fort Myers pedestrian and bicycling environment. Hence the goal is to identify the unfriendly locations with high potential such that improvements can be identified to create safe and comfortable user environments where they are most needed. For example, pedestrian enhancements on a major arterial running through a high-density neighborhood may be given higher priority than improvements on the same facility in an industrial area where there are fewer pedestrians.

**Table 1 Applicability of Walking and Bicycling Parameters**

	<b>Parameters</b>	<b>Walking</b>	<b>Bicycling</b>
<b>Non-Motorized High Trip Potential Criteria</b>	Population Density	✓	✓
	Percent of Household Without Car	✓	✓
	Immigrant Population	✓	✓
	Trip Generators	✓	✓
	Transit Routes	✓	✓
<b>Unsafe/Hazards Criteria</b>	Crash History	✓	✓
	Number of Travel Lanes	✓	✓
	Average Daily Traffic	✓	✓
	Pedestrian Friendliness Index	✓	
	Absence of Sidewalks	✓	
	Absence of Bike Lanes		✓



Figure 2. Prioritization Scheme (11x17)





## 3.2 EXISTING CONDITIONS ANALYSIS

### Identifying High-Potential Areas

High-potential locations have land-use conducive to a large number of walking and bicycling trips. Because distance is an important consideration in whether or not to walk or bike for a particular trip, these high-potential areas will likely be higher-density, with a mix of land uses to support shorter trip distances. Locations near pedestrian and bicycle generators, such as schools and transit routes, are also considered high-potential.

Based on the available data, this study uses the following identifiers for high-potential pedestrian and bicycling areas: population density, auto ownership, immigrant population, transit routes, and non-motorized trip generating land uses. These criteria are discussed in detail below.

#### *Population Density*

Higher population density is indicative of more pedestrian and bicycle activity for two reasons: 1) a higher concentration of people will increase the concentration of trip-making activity across all modes and 2) higher densities result in shorter trips on average, which are more conducive to walking and cycling. The analysis in this memorandum uses year 2000 United States Census (Reference 1) population data to estimate population density at the census block level for Fort Myers, FL.

Figure 3 depicts the population density for the City of Fort Myers in people per square mile. As Figure 3 shows, the majority of the land area in Fort Myers is undeveloped or has low-density development except for areas near the Caloosahatchee River, on the western and northeastern sides of the City. Many of the built-out sections of the City have fairly low density for an urban area, with relatively few areas having densities exceeding 5,000 people per square mile. The highest densities are just to the south of downtown and in the northeastern part of the City.

#### *Auto ownership*

According to the National Cooperative Highway Research Program's *Commuting in America* report (Reference 2), households that own fewer cars are more likely to satisfy travel needs via walking or bicycling. Consequently, auto ownership by household is one of the criteria used to identify high-potential locations. KAI estimated auto ownership in this plan as the number of households without a car per square mile based on 2000 Census block group data.<sup>1</sup>

Figure 4 shows the density of households that do not own an automobile by Census block group. Based on 2000 Census data, 18% of Fort Myers households do not own cars compared to only 8% of all Florida households. As Figure 4 shows, auto ownership is not spread evenly throughout the City; block groups with low vehicle ownership are centered on Dr. Martin Luther King Jr. Boulevard from downtown to Michigan Link. A second area of low auto ownership density is along Palm Beach Boulevard, east of Palmetto Avenue to the eastern city limits. A third, less pronounced, band of low vehicle ownership households is located east of Cleveland Avenue and west of Fowler Street. A fourth area of low auto ownership density is south of Colonial Boulevard, east of Summerlin Road and west of Deleon Street.

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<sup>1</sup> The Census Bureau does not publish auto ownership data at the block level.



Figure 3 Pop Density



Figure 4 Household with no-car density



### *Immigrant Population*

According to the *Commuting in America* report, immigrants who have lived in the United States for five or fewer years are over twice as likely to walk, and four times as likely to bicycle to work. Immigrants arriving between five and ten years ago show similar, though less pronounced, commute patterns, indicating their gradual assimilation with the society. Consequently, locations with high concentrations of immigrants are likely places for high levels of pedestrian and bicycle activity. KAI estimated immigrant status in this plan as the percentage of residents who have resided in the United States for ten or fewer years based on 2000 Census data, calculated by census block group.<sup>2</sup>

Figure 5 shows the proportion of recent immigrants in the City. Two main concentrations of immigrants appear in Figure 5: in the northeastern section of the City along Palm Beach Boulevard and to the south of Dr. Martin Luther King Jr. Boulevard, either side of Fowler Street.

### *Non-Motorized Trip Generators*

Certain land uses are more predisposed to attracting walking and cycling trips than others. For the purposes of this study, schools, parks, hospitals and outdoor shopping areas are considered non-motorized trip generators. Schools and parks are often destinations for children; walkers and cyclists also use parks for exercise or recreation. Hospitals are not typically major bicycle trip generators, but must be accessible to the handicapped pedestrians. Outdoor shopping areas are popular for individuals of all ages. The City of Fort Myers provided KAI with data on the locations of these land uses.

Locations with high numbers of pedestrian and bicycle trips are determined by the availability of destinations to satisfy pedestrian and bicycle travel needs as well as by the household characteristics discussed above. Figure 6 shows the pedestrian and bicycle trip generators located within Fort Myers. A ¼ mile buffer is shown around each school and hospital, representing an approximately five minute walking distance. Compared to the demographic indicators of high-potential areas, schools are spread evenly throughout the populated portions of the City, with the exception of the area to the south of Dr. Martin Luther King Jr. Boulevard and along Fowler Street and to the east of I-75.

Outdoor shopping areas are located primarily along Cleveland Avenue and in downtown. There are two major hospitals within the city limits: Lee Memorial Hospital located west of Cleveland Avenue and south of South Street, and Southwest Florida Regional Medical Center located on the northeast quadrant of Winkler Avenue and Evans Avenue. Several city parks are located within the city limits. Based on input from the public at an open house for the project, city residents would like to have pedestrian and bicycling trails connecting various parks around the city.

Areas of concentrated employment are also likely to attract walking and bicycling trips. However, detailed employment data for Fort Myers were unavailable for this study. To compensate for this lack of data, transit route locations were used as a proxy for employment, as described below.

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<sup>2</sup> The Census Bureau does not publish immigration data at the block level.



Figure 5 Immigrant Population



Figure 6 Trip Generators



### *Transit Routes*

Transit routes signify likely locations for areas with high pedestrian and bicycle activity for two reasons. Transit riders typically walk (and sometimes bicycle) to/from their trip ends once they exit/board the transit vehicle. Therefore, pedestrian volumes are often higher along roads served by transit. Secondly, transit routes are typically planned to serve major retail and commercial areas, and retail and commercial areas are common destinations for pedestrian and bicycle trips as well as transit (and automobile) trips.

Consequently, transit routes can serve as a proxy for the location of major trip attractors. This is important, as extensive land use data on the location of major shopping and employment centers were not readily available for use in this plan, except for a few outdoor shopping areas. The City of Fort Myers provided KAI with data on transit route locations. Figure 6 also shows transit routes within the city. They are located in all areas of the City along most arterials and many collectors, with the exception of McGregor Boulevard.

### *Summary*

In summary, Figures 3 to 6 indicate that destinations are located throughout the City that will likely attract large numbers of pedestrian and bicycle trips. Schools and transit routes (as well as the retail and employment areas adjacent to transit route) especially are spread throughout Fort Myers. However, the demographic characteristics most conducive to walking and cycling are concentrated in specific areas of the City. These areas are along Dr. Martin Luther King Jr. Boulevard, in the very northeastern section along Palm Beach Boulevard, and along Fowler Street from Dr. Martin Luther King Jr. Boulevard to Colonial Boulevard.

For the most part, bicycling and walking are not distinguished when identifying high-potential locations; areas identified as high walking potential match those identified as having high bicycling potential.



### **Identifying Pedestrian and Bicycle Unfriendly Areas**

Urban roadways need to be safe to walk along and provide a convenient and pleasant place for pedestrians. Thus, there are two primary aspects to measuring the quality of the pedestrian environment: safety and comfort. While one may exist in isolation, both are needed to provide an adequate pedestrian environment. Unsupportive locations for pedestrian and biking trips typically lack infrastructure such as sidewalks and bike lanes dedicated to serving non-motorized roadway users. In addition, poor roadway connectivity and high-traffic roadways that serve as barriers to walking and cycling trips often characterize these areas.

For this study we used the following criteria to identify areas unsupportive for walking, bicycling, or both: crash history, sidewalks, bike facilities, average daily traffic (ADT), number of lanes, pedestrian friendliness index (PFI). These identifiers are discussed in detail below.

#### *Crash History*

The City of Fort Myers provided historical pedestrian and bicycle crash data from January 2002-August 2006 for analysis in this plan. KAI coded these data into GIS for analysis. Crash records included crash location by intersecting roadways, crash severity, and also distinguished pedestrian from bicycle crashes. However, detailed information on crash causes or exact location of the crash within the roadway was not available. Specific safety hazards at the identified locations are not identified due to the lack of detailed crash data; additional analysis and field observations at these locations are needed to provide this level of detail.

KAI analyzed crashes based on crash density (number of crashes per square mile) and severity to identify high-risk locations. Crash density does not take into account exposure (the number of pedestrians or bicyclists using a particular facility), and therefore does not necessarily represent the most dangerous locations on a per user basis. However, it does identify areas with high concentration of crashes. As such, safety improvements made in areas with high crash frequencies typically have the highest potential for crash reductions. Pedestrian and bicycle crashes are considered separately.

#### **Pedestrian Crash Analysis**

KAI analyzed pedestrian crash locations within Fort Myers in order to determine locations that may pose a safety threat to pedestrians. Figure 7 shows results from this analysis, including crash densities for all pedestrian crashes, as well as the locations of pedestrian fatalities. Overall, 267 pedestrian crash locations were recorded in Fort Myers from January 2002-August 2006. Crash density measures the concentration of crashes. Figure 7 also shows school zones with pedestrian fatalities.

While pedestrian crashes occurred throughout Fort Myers in the past five years, two locations stand out with crash densities considerably higher than the remainder of the City: Palm Beach Boulevard near Marsh Avenue and Cleveland Avenue near Victoria Avenue. These locations have crash densities nearly twice as high as any other facilities in Fort Myers. Cleveland Avenue south of Victoria Avenue to Carrell Road and Palm Beach Boulevard south from Marsh Avenue to Veronica Shoemaker Boulevard also have high crash frequencies compared to the rest of Fort Myers.





Figure 7 Pedestrian Crashes



There were 14 fatal pedestrian crashes in Fort Myers from 2002-2006 as shown in Figure 7. Some of the fatalities occurred close to school zones, especially near Edison Park School, Dunbar School, Edgewood School and Lee Middle School. Unfortunately, detailed information (e.g. location within the intersection or direction of travel) for the fatalities is not available to conduct in depth analysis of these crashes. Most of the fatalities occurred in locations already identified above as having high crash frequencies, with four occurring on Palm Beach Boulevard.

### **Bicycle Crash Analysis**

Overall, 197 bicycle crashes locations were recorded in Fort Myers from January 2002- August 2006; Figure 8 depicts the crash density resulting from these crashes as well the location of bicycle crash fatalities. Unlike pedestrian crashes, bicycle crashes are spread much more evenly throughout the City, with many crashes even occurring on local streets.

There are concentrations of crashes along Cleveland Avenue from South Street to Collier Avenue and a smaller concentration at Palm Beach Boulevard/Marsh Avenue. However, the more even distribution of bicycle crashes indicates that spot improvements are unlikely to reduce bicycle crash frequencies significantly. Rather, improvements will need to be made on a system-wide basis. There are two reported bicycle fatalities in Fort Myers; one along Cleveland Avenue near Lee Memorial Hospital and Fort Myers High School and a second near Fort Myers Middle School; both are close to school zones.

### *Pedestrian Friendliness Index*

The pedestrian friendliness of an area is often difficult to quantify, but typically includes such elements as sidewalks, pedestrian-oriented land use and well-connected street networks. Thus, historic districts and well-preserved downtowns are more likely to be pedestrian friendly than are more recently developed suburban commercial centers.

This plan assesses pedestrian friendliness using the Pedestrian Friendliness Index (PFI) model described in Parks and Schofer (2006) (Reference 3). This model is based on sidewalk and network connectivity data provided by the City of Fort Myers. Average building setback is also a part of the original model but was not included here because of the lack of available data. PFI ratings range from 0-1, with 0 indicating a poor pedestrian environment and 1 indicating a good pedestrian environment. The Parks and Schofer research concludes that the PFI model is a reliable methodology to identify areas with potential for high pedestrian activities.

KAI divided Fort Myers into square cells one-quarter mile on each side and calculated the PFI separately for each cell. Because the model calculations are automated through GIS, KAI was able to apply the PFI for over 500 separate cells, which would not have been possible using a traditional friendliness rating based on field visits. Figure 9 shows the results of the PFI calculations. The measure primarily tests network connectivity and sidewalk provision. Cells with no roadways did not receive a rating, and are colored gray in Figure 9.



Figure 8 Bicycle Crash



Figure 9 PFI



The PFI ratings for Fort Myers show a large range, with scores generally higher for areas near to the Caloosahatchee River. This is reasonable, as the neighborhoods nearest the water are typically older than those further inland, and older neighborhoods tend to be more pedestrian friendly. The areas with the highest PFI rating are in downtown, along Dr. Martin Luther King Jr. Boulevard between Fowler Street and Highland Avenue, and in the area bounded by Cleveland Avenue, Hanson Street, Fowler Street and Dr. Martin Luther King Jr. Boulevard.

The high rating for these areas indicates that the existing street network provides reasonably direct pedestrian routes with sidewalks provided on many of the roadways. However, neighborhoods with high ratings may still contain roadways that are dangerous for pedestrians or act as barriers to pedestrian activity because of high traffic volumes.

The lowest ratings in the City are concentrated in the south along Colonial Boulevard and Winkler Avenue and areas around Palm Beach Boulevard. Neighborhoods located along Colonial Boulevard and Winkler Avenue nearly all score below 0.1 on the 0-1 scale. The areas around Palm Beach Boulevard have a rating of 0.3 or less, even though it is categorized as a high-potential pedestrian area by several indicators. This is due to poor connectivity and missing sidewalks on most streets. High potential areas scoring poorly on the PFI will be discussed in detail in the section on prioritizing pedestrian improvement locations.

### *Sidewalks Gaps*

Sidewalks are considered to be a necessary condition for a high-quality pedestrian environment, playing an important role in both the safety and comfort of the pedestrian network. Urban roadways without sidewalks are usually inaccessible to many pedestrians with disabilities and are uncomfortable for all pedestrians. This memorandum only considers collectors and arterials when identifying critical sidewalk gaps. While local, low-volume streets without sidewalks are undesirable, arterials and collectors lacking sidewalk facilities are a greater threat to achieving a safe and comfortable pedestrian network. Fort Myers provided KAI with sidewalk centerline data for this analysis. While the PFI is partially based on sidewalk coverage, it doesn't allow for identification of specific gaps. Figure 10 depicts the location of sidewalk gaps along arterials and collectors within Fort Myers.

Most arterials and collectors in Fort Myers have sidewalks on at least one side of the street. Major roadways with sidewalks on only one side include Colonial Boulevard, Ortiz Avenue, and Six Mile Cypress Parkway. Notable exceptions where sidewalks are absent completely are portions of Metro Parkway and Hanson Street, and the three bridges over the Caloosahatchee River. Several other higher-order streets lack sidewalks on one side of the streets, with major gaps occurring on Ortiz Avenue, Marsh Avenue and Colonial Boulevard.



Figure 10 Sidewalk Gaps



### *Number of Travel Lanes*

Increasing the number of travel lanes on a particular facility affects pedestrian and bicycle travel in two ways: more travel lanes correlates to higher traffic volume and generally higher speed and more travel lanes make it more difficult for pedestrians and bicyclists to cross the roadway. Roadways with many lanes may require special improvements to make pedestrian and bicycle travel more convenient, such as pedestrian refuge islands and treatments that facilitate left-turns for cyclists. KAI used travel lane data provided by Fort Myers to identify collector and arterial facilities that may act as barriers to non-motorized travel because of their width. Figure 11 shows the number of lanes on major roadways in the City.

### *Average Daily Traffic*

As with the number of travel lanes, roadways with higher Average Daily Traffic (ADT) are less friendly for pedestrian and bicycle travel. Higher volume streets are more difficult for pedestrians to cross and less comfortable to walk along. For bicyclists, high traffic streets make the provision of dedicated bicycle facilities (e.g. bike lanes) more critical and also increase the difficulty of making left-turns. KAI used ADT data provided by Fort Myers to identify collector and arterial facilities that may act as barriers to non-motorized travel due to high traffic volumes.

As discussed above, sidewalk provision is most critical along busy streets with high traffic volumes. Additionally, wider and busier streets are more difficult for pedestrians to cross. Figure 11 shows the number of lanes and ADT for all collectors and arterials for which data were available. Typically, roadways become difficult for pedestrians to cross without a signal when traffic exceeds 10,000 ADT.

ADT exceeds 10,000 on several major facilities in Fort Myers, including Palm Beach Boulevard, Cleveland Avenue, Winkler Road, Fowler Street and Colonial Boulevard. These facilities should be considered priorities for pedestrian crossing improvements. Sidewalk gaps on these facilities are also priorities for improvements. As expected, these facilities also have four or more travel lanes. Most other roadways in Fort Myers have only two travel lanes.

Higher volume roadways also make it more difficult for cyclists to ride confidently and comfortably in motor vehicle travel lanes and increase the need for dedicated bicycle facilities, whether on- or off-street. Large high-volume streets of concern for cycling are generally the same as those for pedestrians, and include Cleveland Avenue, Colonial Boulevard and Dr. Martin Luther King Jr. Boulevard.



Figure 11 Number of Lanes and ADT





### *Bicycle Facility Gaps*

Although bicycles have a legal right to travel on every roadway from which they are not expressly prohibited, providing dedicated bicycle facilities often improves the safety and convenience of bicycle travel. Bicycle facilities, as considered in this plan, consist of both off-street paths or trails and on-street facilities that include space dedicated solely to bicycle use (e.g. bike lanes). Bicycle facility data were provided by Fort Myers.

Figure 12 shows the existing bicycle facilities in Fort Myers. Overall, the City has under 10 miles of bike lanes and less than three miles of off-street paths, based on the GIS data provided by the City. Consequently, connectivity within Fort Myers using dedicated bicycle facilities is severely lacking in almost all areas. The one exception is a nearly continuous path from Ortiz Avenue to west of Cleveland Avenue via a combination of off-street path and bike lanes. Otherwise, building connectivity into the Fort Myers bicycle facility network should be a major priority. The bicycle prioritization section will consider possible locations and corridors for initial expansion of the bicycle network.

Bicycle lanes should be considered on all streets with more than 3,000 ADT, while shared lanes may work well at lower volumes, depending on travel speeds. Note that off-street paths may not provide an adequate substitute for safe on-street facilities in many cases; however, as cyclist destinations are often located along major roadways.



Figure 12 – Bicycle Facility Gap



### 3.3 PEDESTRIAN PRIORITY SITES

The existing conditions walkability analysis shows that several locations in Fort Myers rate poorly from a pedestrian safety and/or comfort standpoint. KAI prioritized locations for pedestrian improvements using the key indicators of pedestrian potential and suitability discussed in previous section. Figure 13 shows the identified priority areas. These priority areas are discussed in detail below.

#### *1. Cleveland Avenue Safety*

Safety is a critical concern along Cleveland Avenue. Areas south of downtown are a major concern, especially near Victoria Avenue and Hanson Street. The presence of Fort Myers High School, Edison Park School, Lee Memorial Hospital, Lions Park and commercial establishments in the area creates a high pedestrian trip generation environment. The corridor is also located in areas with high densities of population and households without cars, as well as high proportions of recent immigrant populations. In addition to being more likely to walk, recent immigrants may be more vulnerable to pedestrian-car collisions because they are less accustomed to walking on high-volume roadways.

#### *2. Palm Beach Boulevard Safety*

The eastern parts of Palm Beach Boulevard have characteristics very similar to Cleveland Avenue. Palm Beach Boulevard, near the Edgewood School, Palm Beach Boulevard/Marsh Avenue and Palm Beach Boulevard/Palmetto Avenue has high pedestrian crash densities, with four pedestrian fatalities around those two intersections. The area also has a high density of households without cars and high immigrant populations.

Relatively low volumes on Palm Beach Boulevard for a four-lane roadway (approximately 10,000 ADT) indicate that a road diet to three or even two lanes is a possibility here. Such a reduction in roadway width may improve pedestrian crossing safety, and could provide the necessary right-of-way for bike lanes. Road diets to provide space for sidewalks and ease pedestrian crossings should be explored along other major roadways in Fort Myers as well.

Detailed study along these two corridors is needed to determine appropriate safety solutions. Solutions should include a combination of providing proper amenities for pedestrians, like safe sidewalks, crossing improvements, and access management to reduce conflict points. Possibilities to improve crossing safety include provision of pedestrian median islands, crosswalks and/or pedestrian signals such as HAWK (High-intensity Activated Walk) signals.

#### *3. Schools with Pedestrian Needs*

Apart from the schools identified above, the crash data analysis showed that other areas around schools are also prone to a higher number of crashes. Namely, Dr. Martin Luther King Jr. Boulevard near Dunbar School and Franklin Park School, and Marsh Avenue/Ballard Road near Lee Middle School have experienced fatal crashes in last five years. These areas should be studied in detail to determine appropriate mitigation.



Figure 13 Pedestrian Priority



#### *4. Sidewalk Gaps*

Sidewalks are missing along Fort Myers transit routes in several locations, as shown in Figure 13. These are key locations for sidewalk projects, because roadways with transit are typically associated with relatively high volumes of both pedestrians and automobiles. Figure 10 and 13 also shows other critical missing sidewalk areas along arterials and collectors. Providing safe pedestrian facilities on at least one of the Caloosahatchee River crossings is also a priority.

#### *5. Low PFI Areas*

Figure 13 shows three neighborhoods in Fort Myers that rate well in pedestrian potential, but have PFI ratings below 0.3 in most places. These areas are: 1) Northeast part of the city along east Palm Beach Boulevard and Marsh Avenue; 2) Area surrounded by Cleveland Avenue, Colonial Boulevard, Metro Parkway and Carrell Road; and 3) South of Colonial Boulevard, east of Summerlin Road and west of Deleon Street. These neighborhoods require improved pedestrian infrastructure in order to fully realize their pedestrian potential.

Further study in these neighborhoods should locate opportunities for connectivity enhancements (such as pedestrian-only paths where no roadway currently exists) as well as strategic locations for sidewalks, crosswalks and other pedestrian enhancements. Because these neighborhoods include several schools, further sections of this plan should consider the possibility of state and federal Safe Routes to School funding to improve the pedestrian environment in these locations.

### **3.4 BICYCLE PRIORITY SITES**

The analysis of the high potential and unfriendliness parameters for bicycle trips shows that Fort Myers currently has very few bicycle facilities and poor connectivity within its bicycle network. At the same time, several roadways within the City are characterized by high volumes and multiple travel lanes in either direction, making cycling along and across these roads difficult. The following section relates the deficiencies to the high-potential areas identified earlier to prioritize the corridors and locations where bicycle network improvements are most needed. Figure 14 shows the identified priority areas. These priority areas are discussed in detail below.

#### *1. Cleveland Avenue Safety*

Figure 14 shows one corridor requiring bicycle safety improvements: Cleveland Avenue from Dr. Martin Luther King Jr. Boulevard to Colonial Boulevard. Of the approximately 200 bicycle crashes that occurred in Fort Myers in the past five years, nearly 20% occurred on this corridor. Detailed study on this corridor is needed to identify specific safety improvements. However, consideration should be given to reducing Cleveland Avenue to a 5-lane section, which would allow for provision of bicycle lanes. In addition, parallel bike routes may be identified for commuter bicycle traffic, e.g. Grand Avenue and/or Broadway Road.

#### **Bicycle Connection Needs**

As discussed above, the sheer lack of bicycle facilities in Fort Myers is the primary impediment to safe and comfortable bicycle travel within the City. In an ideal network, bike routes should be spaced approximately every ½ mile and form a continuous network with connections to all major destinations.



Figure 14 Bicycle Priority Sites



However, Fort Myers has under 15 total miles of bicycle facilities. Future improvements should focus on expanding these facilities into a connected network.

Figure 14 shows six corridors for bicycle travel in Fort Myers that provide key connections between major destinations within the City. Three corridors each are identified as primary and secondary travel corridors. Although the primary bicycle corridors follow the approximate alignments of Cleveland Avenue, Dr. Martin Luther King Jr. Boulevard and Palm Beach Boulevard, the principal bicycle travel facilities need not follow these roadways. There are multiple possibilities for providing these connections, including bicycle lanes on higher-volume streets, bicycle boulevards on low-volume streets, and off-street paths.

Off-street paths often provide the most comfortable facility for cyclists, especially inexperienced ones. However, right-of-way constraints make safe and financially feasible off-streets paths difficult to construct in many cases. Bicycle boulevards, which use existing low-traffic streets paralleling major streets as bicycle routes are frequently a more practical solution than off-street paths, for which adequate right-of-way is often not available.

The following section describes the identified corridors in detail.

### *2. Cleveland Avenue Corridor*

In addition to being a safety concern, Cleveland Avenue, especially to the east between Cleveland Avenue and Fowler Street, has high population density, low auto-ownership and high immigrant populations. As such, the area is identified as a primary bicycle corridor. The area lacks bike facilities which may be accommodated along the transit route on Broadway, or other north-south roadways in the area depending on feasibility.

### *3. Dr. Martin Luther King Jr. Boulevard Corridor*

Similar to the Palm Beach Corridor, the Dr. Martin Luther King Jr. Boulevard corridor, east of downtown Fort Myers has several characteristics that are conducive for bicycle traffic. The area has relatively high population and household without car densities. There are several schools located along the roadway, increasing the importance of bicycle and pedestrian safety. Bicycle crashes densities are also relatively high in the area. Hence, the area is ripe for bicycle improvements and has been identified as a primary travel corridor for bicycle traffic.

### *4. Palm Beach Boulevard Corridor*

As discussed in the pedestrian section, the east side of Palm Beach Boulevard has several characteristics that are conducive to high bicycle traffic. The area has relatively high population density, especially along the river, higher density of households without a car and relatively high immigrant population. The roadway has a high crash density compared to other Fort Myers facilities, especially around the Palm Beach Boulevard/Marsh Avenue intersection. In addition, the roadway lacks pedestrian and bicycle facilities. Hence, good bicycle connections between this area and downtown are a primary goal for the Fort Myers bicycle network. Potential corridors could be along Riverside Drive and/or Edgewood Avenue with Palmetto Avenue providing connection to Terry Park and Shady Oaks Park.



The roadway does have bicycle lanes from Cranford Avenue to Michigan Avenue. However, parallel bike routes along Michigan Avenue or Blount Street and north-south route along Palms Avenue or High Street could likely provide additional bicycle connectivity in the area.

#### *5. Marsh Avenue Corridor*

Marsh Avenue provides an important north-south connection in the northeast part of the city, connecting Palm Beach Boulevard, Michigan Avenue, and Dr. Martin Luther King Jr. Boulevard. It provides access to Billy Bowlegs Park, Lee Middle School and Michigan Elementary School. It also serves relatively high population density and immigrant populations, especially southeast of Marsh Avenue/Palm Beach Boulevard intersection. The corridor has been identified as secondary travel corridor for bicycle traffic.

#### *6. Hanson Street Corridor*

Hanson Street serves relatively high population density without car and high concentration of immigrant population. The section of roadway from Broadway to Fowler Street has experienced high crash density with one fatality. The roadway serves City of Palms Park and Fort Myers Middle School. These factors resulted in the area to be identified as secondary travel corridor.

#### *7. McGregor Boulevard Corridor*

McGregor Boulevard is a historic facility serving old neighborhoods along the Calohatchee River. Due to its historic designation, there is limited ability to make additional improvements on the roadway. However, the roadway serves as an important connection on the west side of the city. Providing a bicycle facility along the roadway would serve as an amenity to the City. In addition, parallel routes along Cortex Boulevard could provide bicycle access to Fort Myers High School and Lee Memorial Hospital. As a result, the corridor has been identified as secondary travel corridor.

### **3.5 CONCLUSIONS AND RECOMMENDATIONS**

#### *Summary of Findings*

KAI analyzed the existing pedestrian and bicycling conditions in Fort Myers through consideration of walking and biking facilities, crash history, and potential for high pedestrian and bicycling demand. The following list describes the major findings from this analysis.

- Several areas with high-potential for walking and bicycling were identified, based on auto-ownership, population density, and concentrations of recent immigrants. The primary areas are located in the northeastern portion of the City, along Dr. Martin Luther King Jr. Boulevard, between Cleveland Avenue and Evans Avenue, and south of Colonial Boulevard to the west of Cleveland Avenue.
- KAI identified specific land uses with a high propensity for attracting walking and cycling trips, including schools, parks and outdoor shopping areas. Provision of pedestrian and bicycling facilities near these land uses should be given high priority.





- Over 250 pedestrian crashes within Fort Myers were recorded from 2002-2006, including 14 fatalities. These crashes are concentrated along Palm Beach Boulevard and Cleveland Avenue, with heavy concentrations near Palm Beach Boulevard/Marsh Avenue and Cleveland Avenue/Victoria Avenue.
- Nearly 200 bicycle crashes within Fort Myers were recorded from 2002-2006, including two fatalities. The highest concentration of bicycle crashes is along Cleveland Avenue. Bicycle crashes are more evenly spread throughout the City than are pedestrian crashes.
- Several roadways in Fort Myers carry large volumes of traffic over multiple lanes, creating potential barriers to pedestrian and bicycle travel. Roadways that are potential barriers include Cleveland Avenue, Colonial Boulevard, and Dr. Martin Luther King Jr. Boulevard. Attention to pedestrian crossings and bicycle travel along these corridors is required.
- Many of the arterial roadways in Fort Myers lack sidewalks on one or both sides of the roadway. Sidewalk gaps that occur along streets with transit routes or adjacent to land uses associated with high volumes of pedestrians are the largest concern.
- Fort Myers has a very sparse network of dedicated bicycle facilities, with less than 15 total miles of bicycle facilities in the City. Providing a connected bicycle network is a top priority to improve cycling conditions in Fort Myers.

#### *Recommendations*

Based on the above analysis, KAI identified several locations for pedestrian and bicycle improvements. These locations are anticipated to have a high impact on the community and provide safe and connected pedestrian and bicycle networks. Table 2 provides a summary of recommendations based on the existing conditions analysis.



**Table 2 Summary of Recommendations**

<b>Pedestrian Improvement Priorities</b>		
<b>Improvement Type</b>	<b>Description</b>	<b>Location</b>
Safety	Identify and mitigate cause of high pedestrian crash and fatality frequencies.	Cleveland Avenue
		Palm Beach Boulevard
Schools	Schools with nearby pedestrian fatalities not identified under other pedestrian improvement criteria.. Additional study near these schools is needed to determine crash causes and appropriate mitigations.	Dunbar School
		Franklin Park School
		Lee Middle School
Sidewalk Gaps	Fill in sidewalk gaps along high-volume roadways, especially where transit routes and pedestrian-trip generators are located.	Multiple arterial and collector segments
Low Pedestrian Friendliness Areas	These areas suffer from a lack of connectivity and/or sidewalks gaps., despite otherwise high walking potential. Improvements should focus on increasing connectivity, sidewalk coverage, and installing other pedestrian amenities.	Northeastern Fort Myers near Palm Beach Boulevard /Marsh Avenue
		Area to the northeast of Cleveland Avenue/Colonial Boulevard
		South of Colonial Boulevard, east of Summerlin Road and west of Deleon Street
<b>Bicycle Improvement Priorities</b>		
<b>Improvement Type</b>	<b>Description</b>	<b>Location</b>
Safety	Identify and mitigate cause of high bicycle crash and fatality frequencies.	Cleveland Avenue
Primary Corridors	These corridors connect major destinations within Fort Myers and are essential to be included in the Fort Myers bicycle network. Determination need to be made if bike lanes, off-street paths or bicycle boulevards provide the best solution.	Cleveland Avenue
		Palm Beach Boulevard
		Dr. Martin Luther King Jr. Boulevard
Secondary Corridors	These corridors provide key connections between the primary corridors and should be included in the Fort Myers bicycle network. Determination need to be made if bike lanes, off-street paths or bicycle boulevards provide the best solution.	Marsh Avenue
		Hanson Street
		McGregor Boulevard

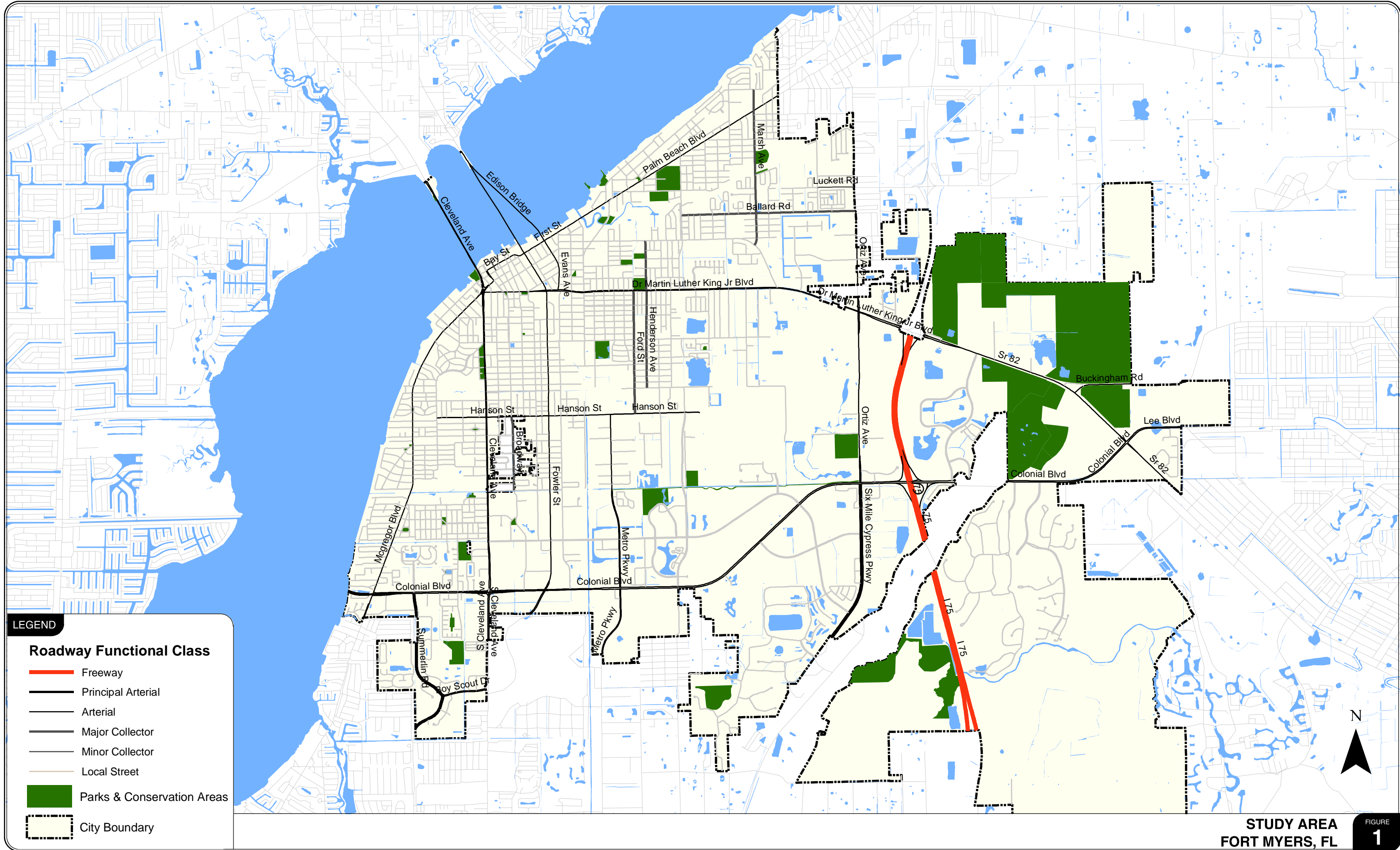
As Table 2 shows, bicycle improvements focus on providing suitable bicycle facilities on specific corridors. Pedestrian improvement relate to improving safety and connectivity, and reducing sidewalk gaps. As the project moves forward, these areas should be considered for future improvements, along with input from the citizen, public officials and coordination with Lee County bicycle and pedestrian plan, and other on-going plans for the City.



### 3.6 REFERENCES

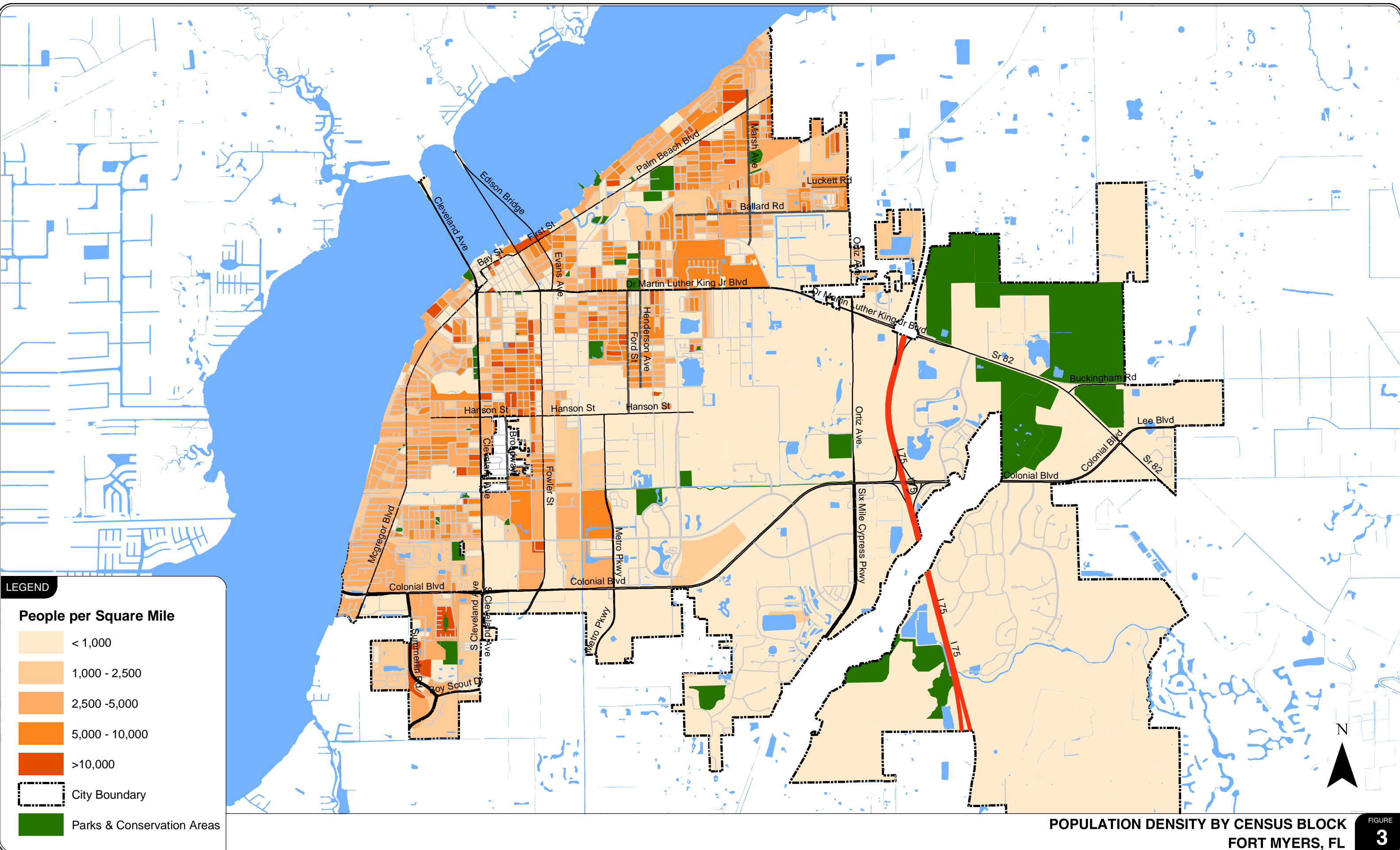
- 1) US Census Bureau. 2000 Census Data <http://www.census.gov/main/www/cen2000.html>.
- 2) National Cooperative Highway Research Program Report 550, Commuting in America III: The Third National Report on Commuting Patterns and Trends. Transportation Research Board, Washington D.C., 2006
- 3) Parks and Schofer, 2006. Characterizing neighborhood pedestrian environments with secondary data. Transportation Research Part D 11, 250-263.



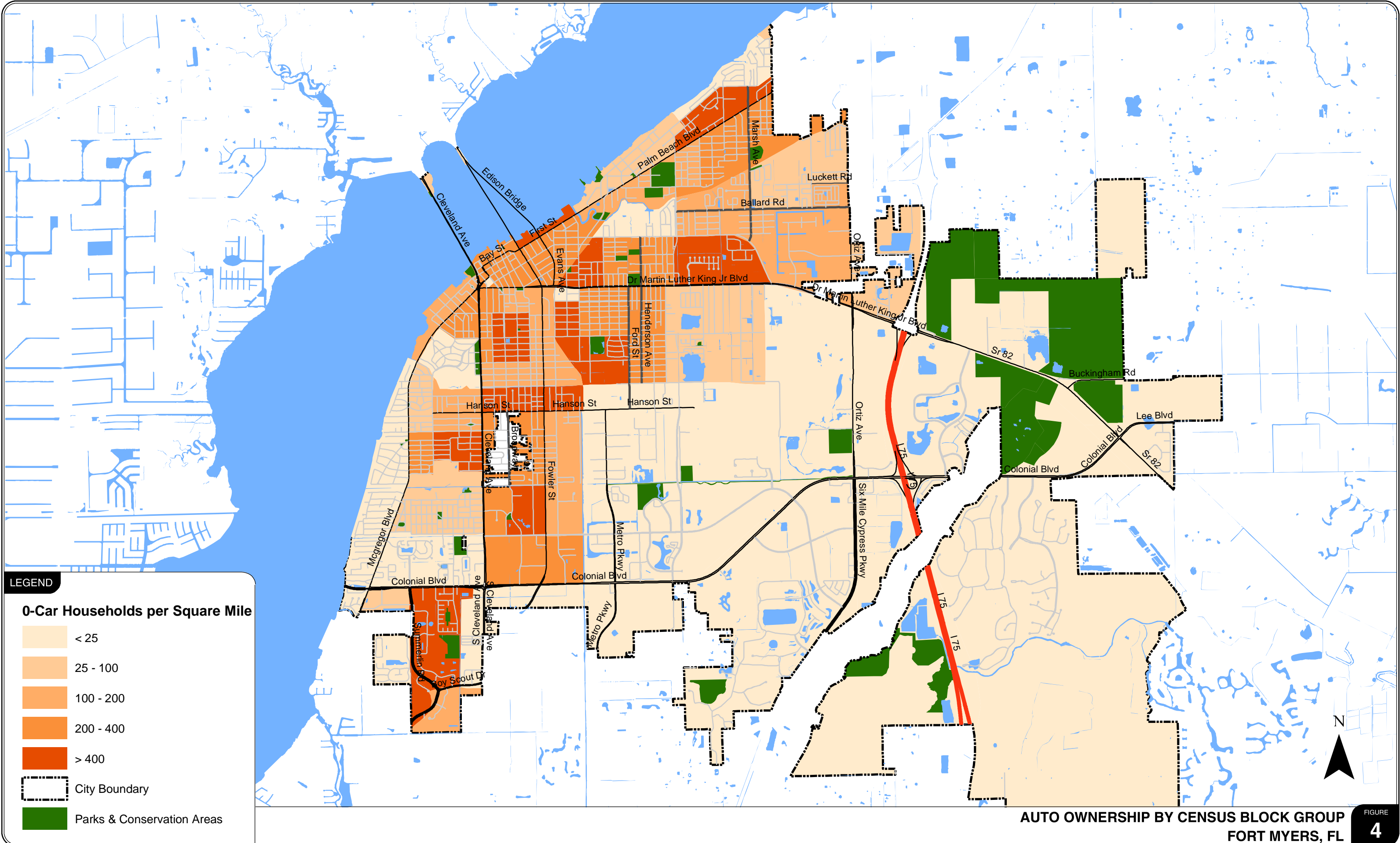


**STUDY AREA  
FORT MYERS, FL**

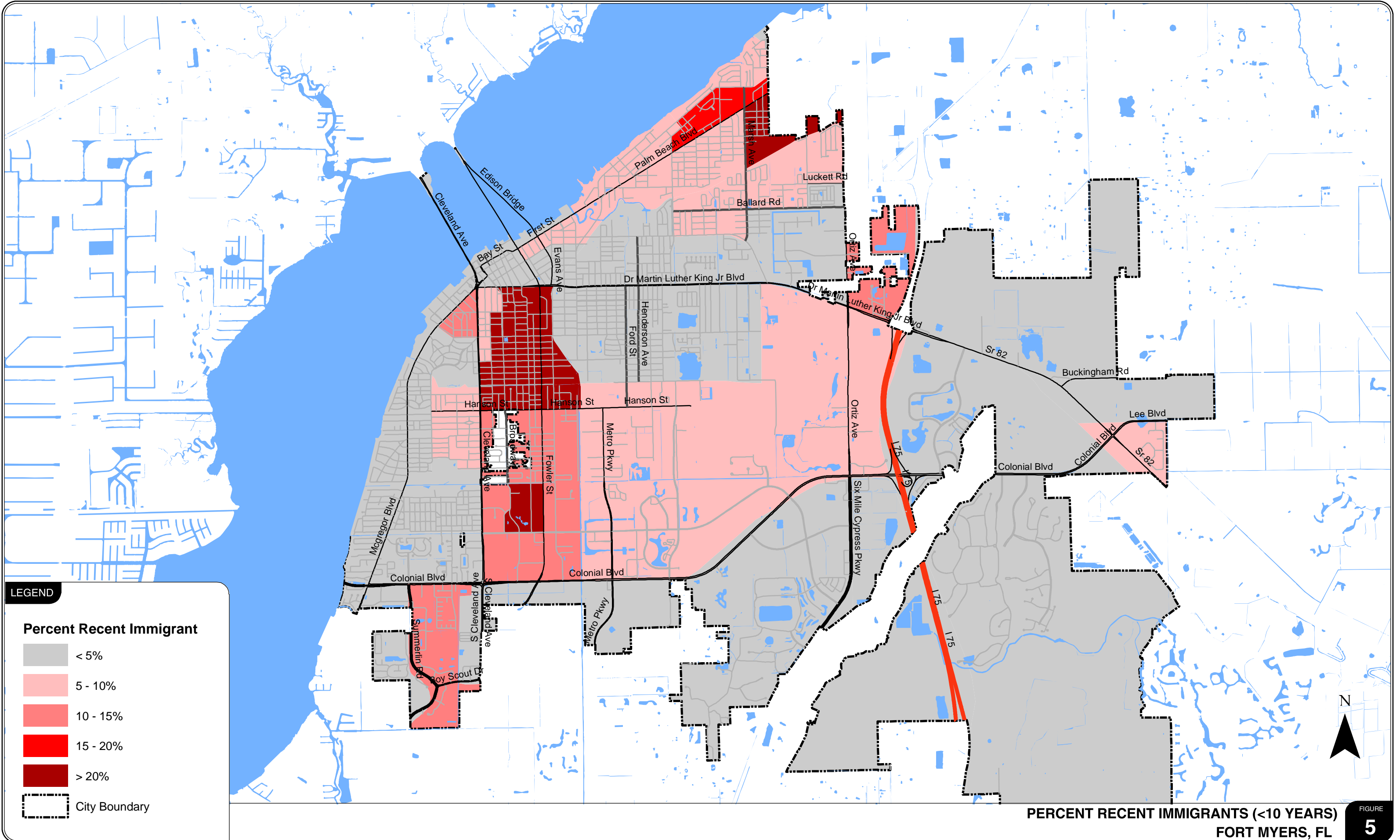
FIGURE  
**1**



**POPULATION DENSITY BY CENSUS BLOCK  
FORT MYERS, FL**

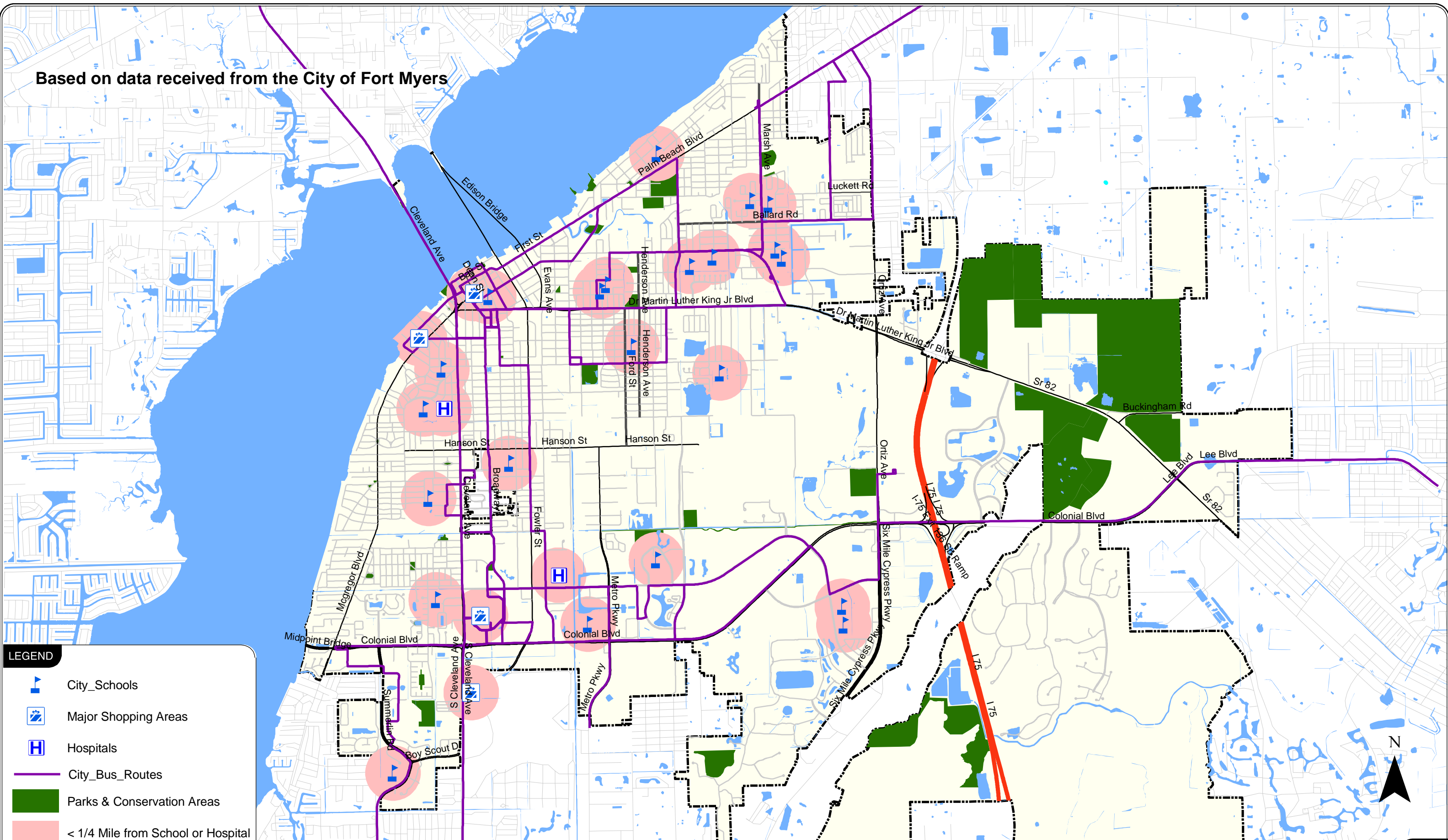


**AUTO OWNERSHIP BY CENSUS BLOCK GROUP  
FORT MYERS, FL**










PERCENT RECENT IMMIGRANTS (<10 YEARS)  
FORT MYERS, FL

Based on data received from the City of Fort Myers



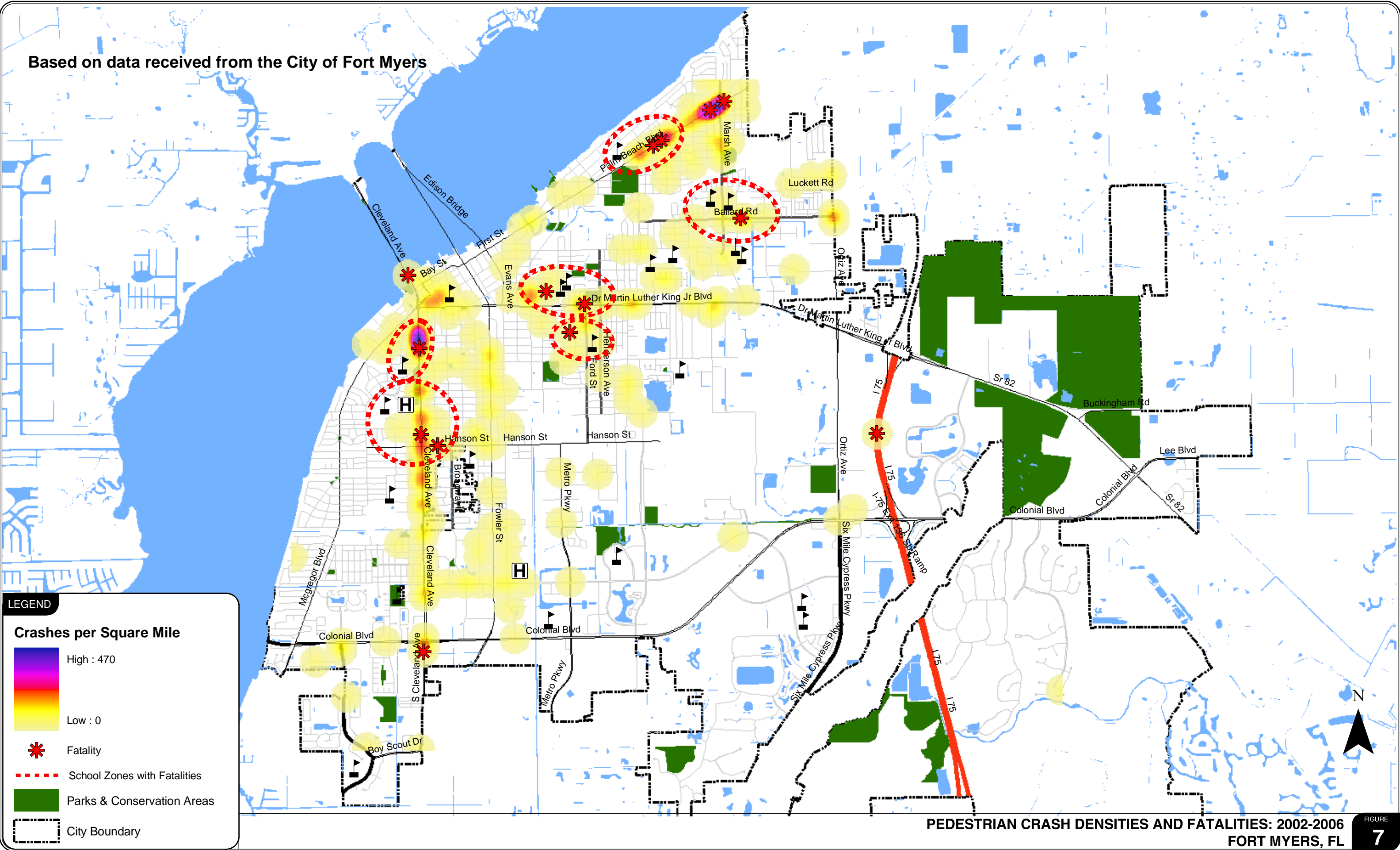
**LEGEND**

-  City\_Schools
-  Major Shopping Areas
-  Hospitals
-  City\_Bus\_Routes
-  Parks & Conservation Areas
-  < 1/4 Mile from School or Hospital
-  City Boundary

**PEDESTRIAN AND BICYCLE TRIP GENERATORS  
FORT MYERS, FL**



Based on data received from the City of Fort Myers



**LEGEND**

**Crashes per Square Mile**

High : 470

Low : 0

\* Fatality

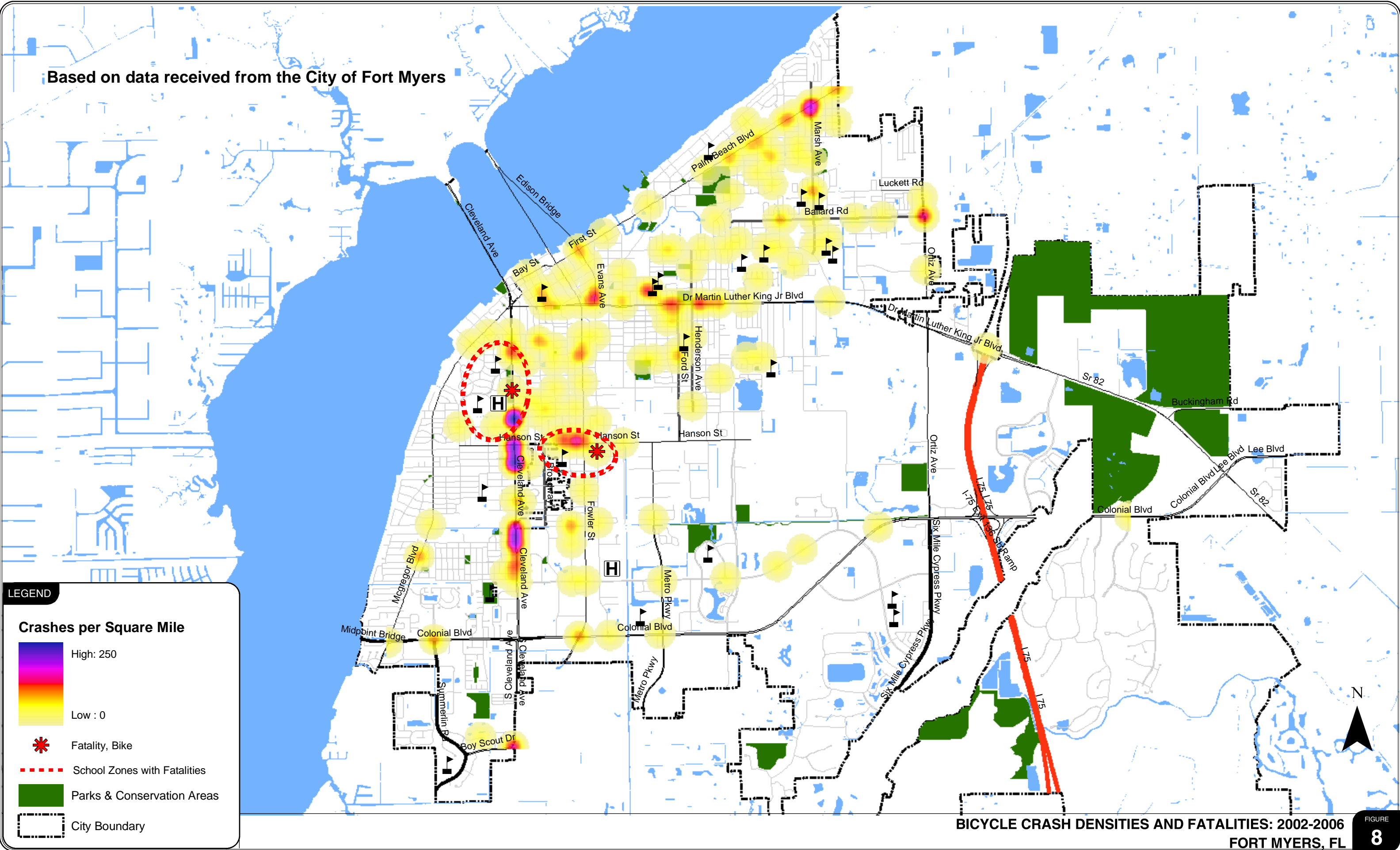
- - - School Zones with Fatalities

■ Parks & Conservation Areas

- - - City Boundary

PEDESTRIAN CRASH DENSITIES AND FATALITIES: 2002-2006  
FORT MYERS, FL

Based on data received from the City of Fort Myers



**LEGEND**

**Crashes per Square Mile**

High: 250

Low : 0

\* Fatality, Bike

- - - School Zones with Fatalities

Parks & Conservation Areas

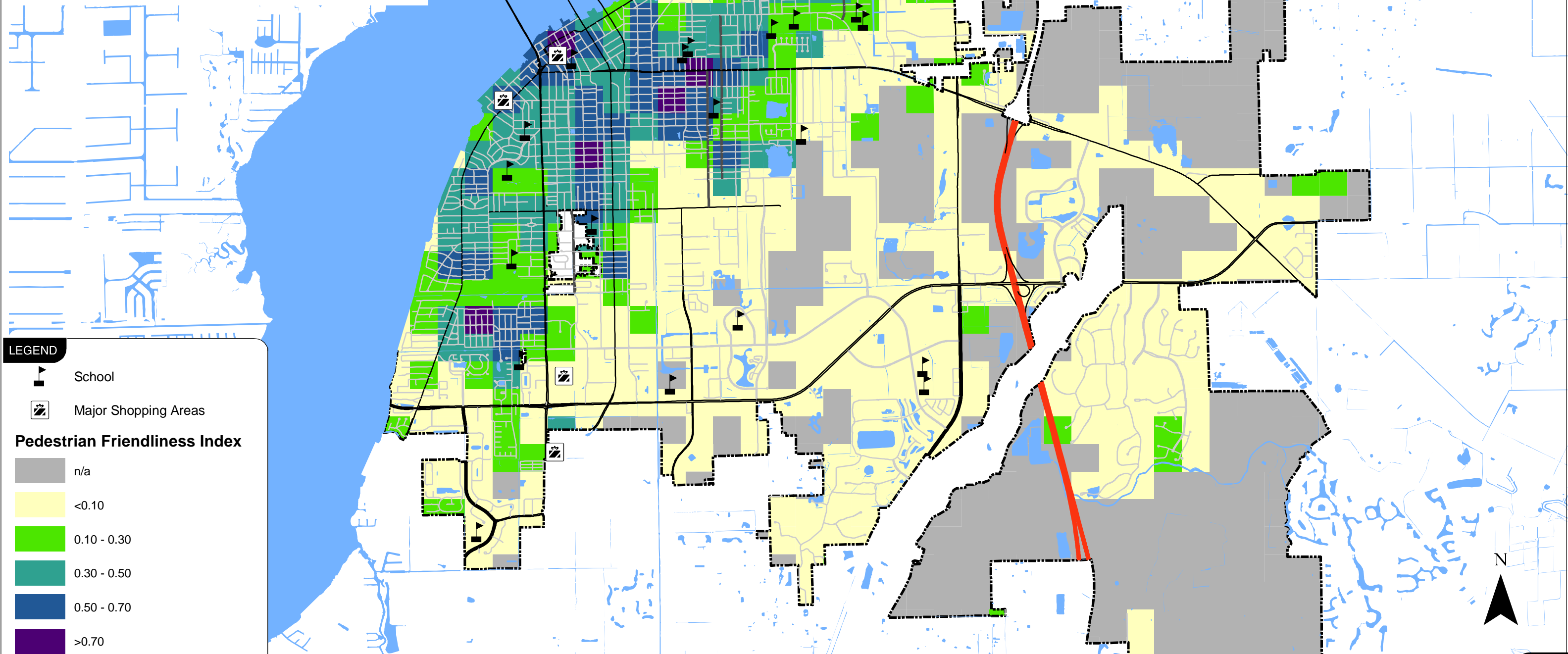
City Boundary

**BICYCLE CRASH DENSITIES AND FATALITIES: 2002-2006  
FORT MYERS, FL**

Rating based on Pedestrian Friendliness Index developed by Montgomery County, MD, and calculated using calibrated model described in Parks and Schofer (2006).

- Calculation is based on 4 variables:
- Sidewalk coverage,
  - Block length,
  - Census-block density, and
  - Intersection type.

A rating near 0 indicates a poor pedestrian environment, while a rating close to 1 indicates a good pedestrian environment.



**LEGEND**

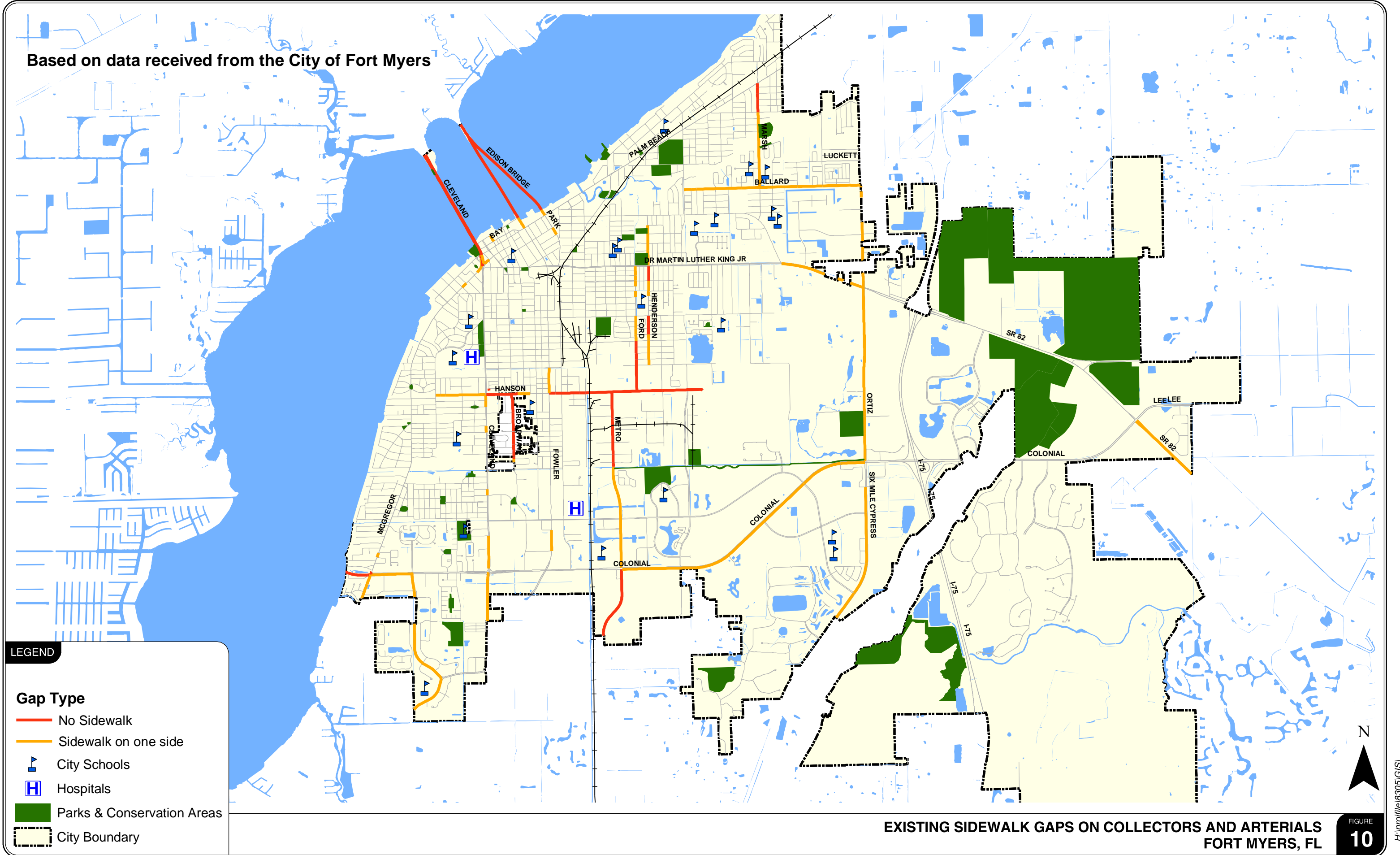
- School
- Major Shopping Areas

**Pedestrian Friendliness Index**

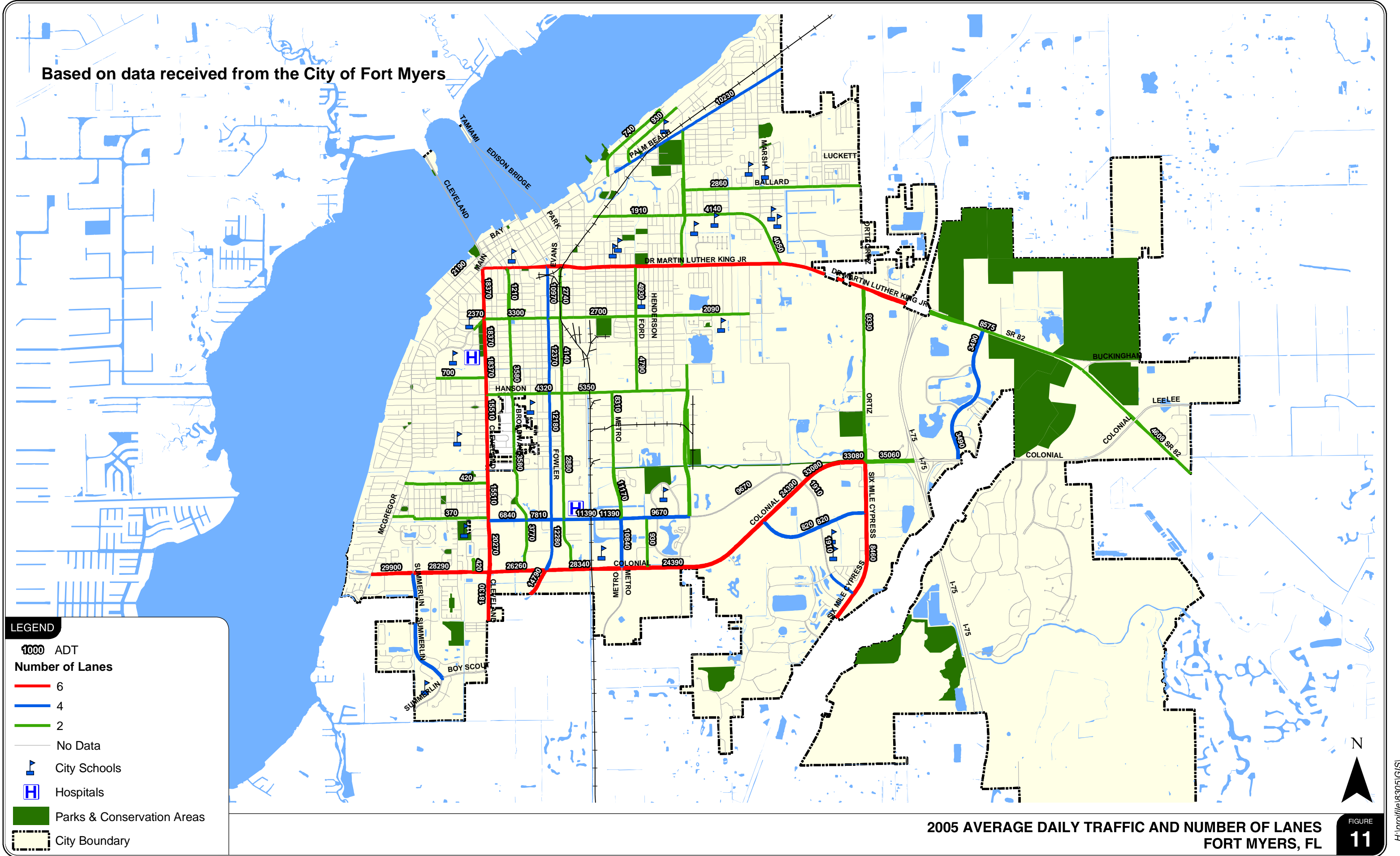
- n/a
- <0.10
- 0.10 - 0.30
- 0.30 - 0.50
- 0.50 - 0.70
- >0.70
- City Boundary

**PEDESTRIAN FRIENDLINESS INDEX  
FORT MYERS, FL**

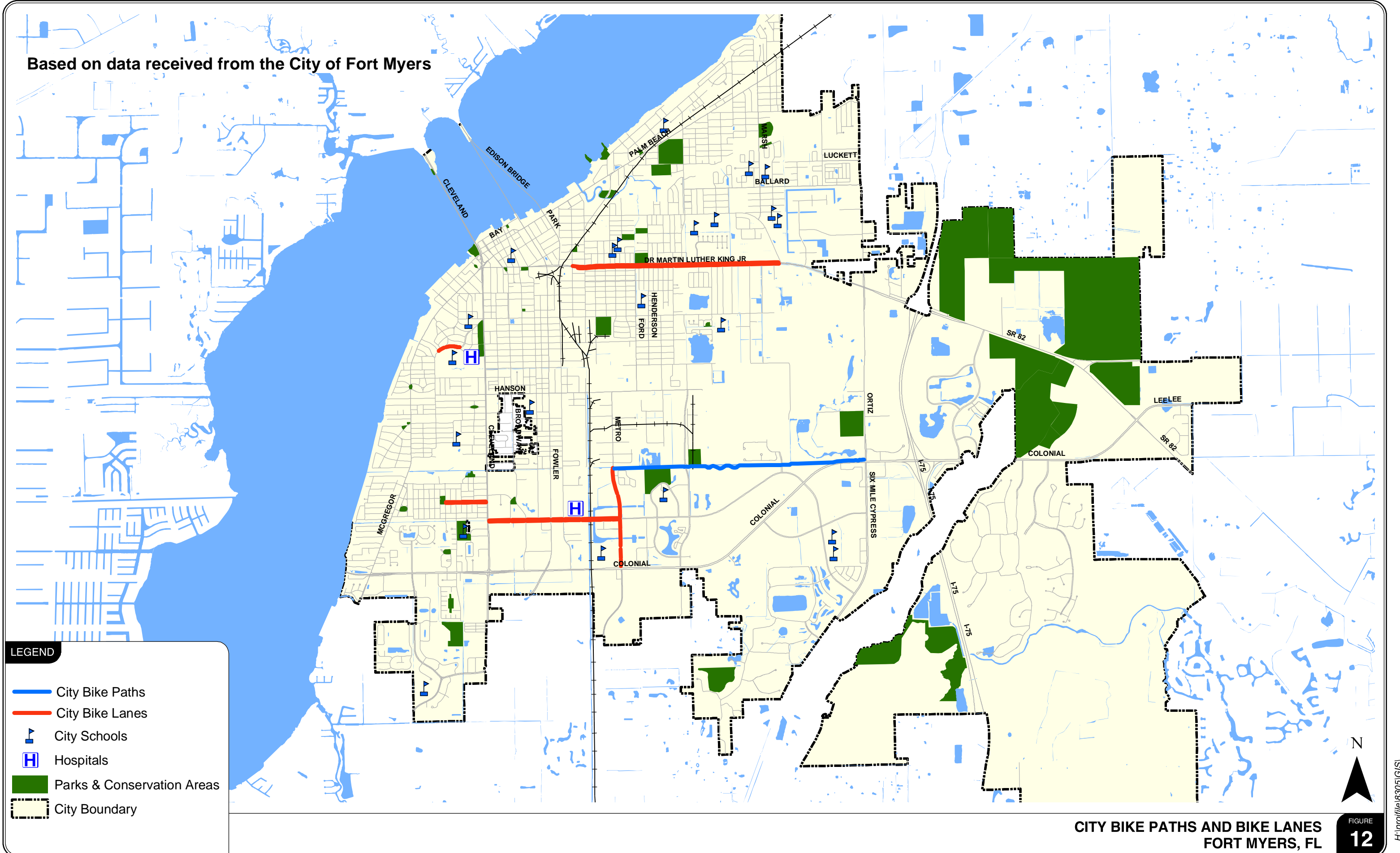
Based on data received from the City of Fort Myers



Based on data received from the City of Fort Myers



Based on data received from the City of Fort Myers

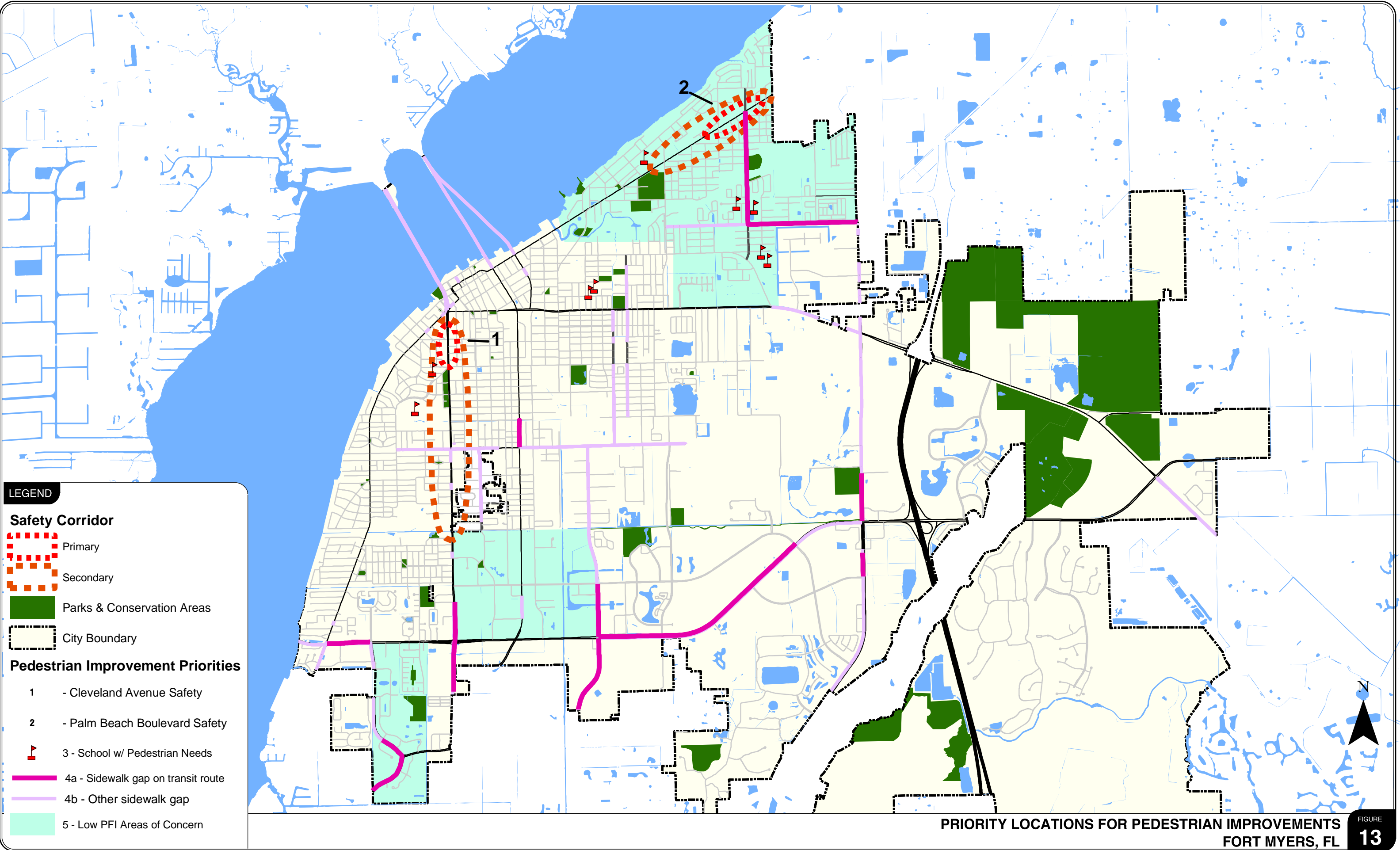


**LEGEND**

- City Bike Paths
- City Bike Lanes
- ▲ City Schools
- H Hospitals
- Parks & Conservation Areas
- City Boundary

**CITY BIKE PATHS AND BIKE LANES  
FORT MYERS, FL**

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**LEGEND**

**Safety Corridor**

- Primary
- Secondary

Parks & Conservation Areas

City Boundary

**Pedestrian Improvement Priorities**




- 1 - Cleveland Avenue Safety
- 2 - Palm Beach Boulevard Safety
- 3 - School w/ Pedestrian Needs
- 4a - Sidewalk gap on transit route
- 4b - Other sidewalk gap
- 5 - Low PFI Areas of Concern

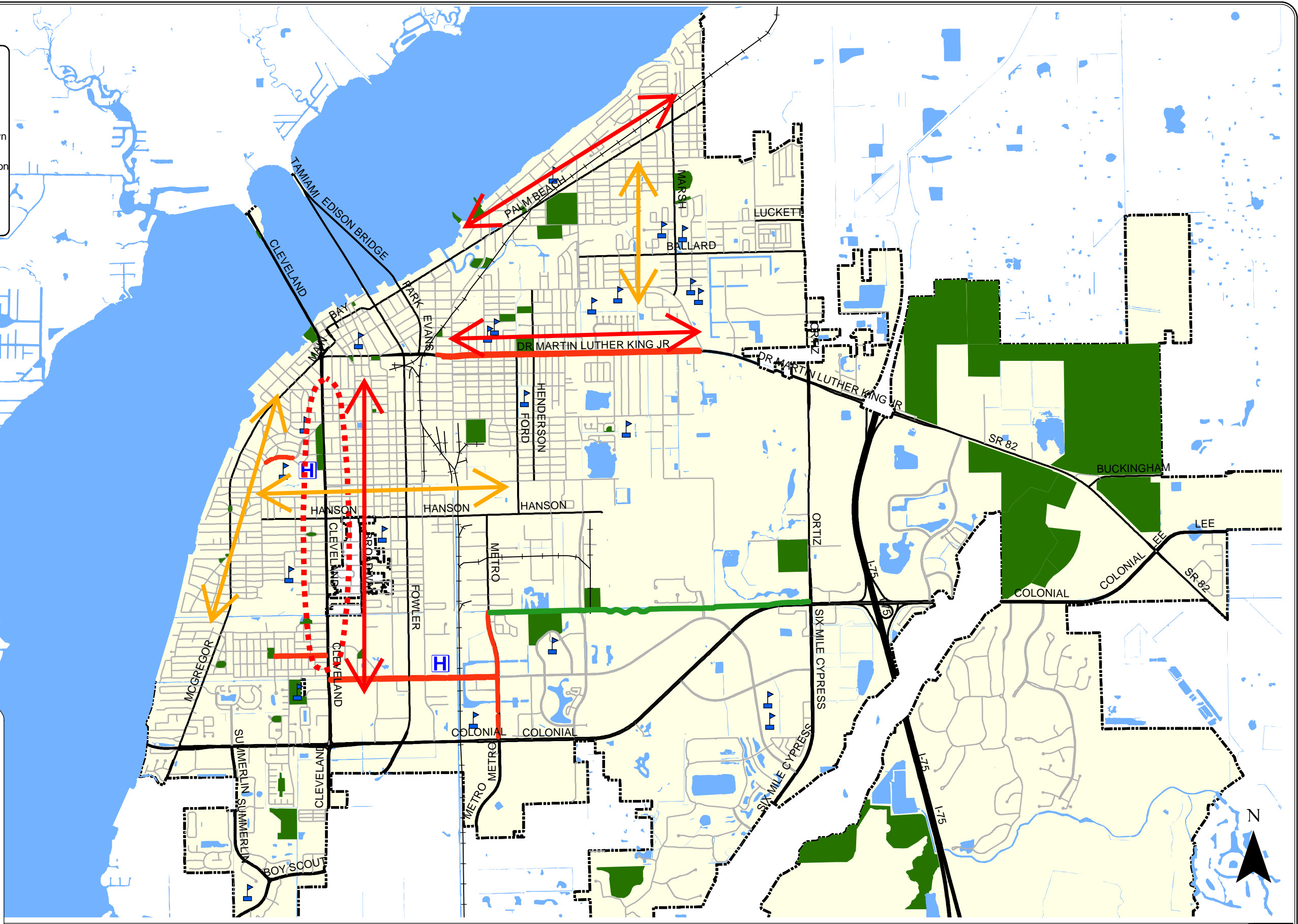
**PRIORITY LOCATIONS FOR PEDESTRIAN IMPROVEMENTS  
FORT MYERS, FL**

**Bicycle Corridor Priorities**

1	Cleveland Ave. to Downtown
2	MLK Jr. Ave. to Downtown
3	Palm Beach Blvd. to Downtown
4	Palm Beach to MLK Connection
5	McGregor to East Connection
6	McGregor to Downtown

**LEGEND**

- Existing Bike Lanes
- Existing Off-Street Path
- - - Safety Improvement Corridor
- ↔ Primary Travel Corridor
- ↔ Secondary Travel Corridor
-  City Schools
-  Hospitals
-  City Boundary



**BICYCLE IMPROVEMENT PRIORITIES  
FORT MYERS, FL**

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The public involvement process was a natural outgrowth of the engagement of stakeholders already begun during the Parks and Recreation Needs Assessment process, completed in May of 2006. A major finding of the Parks and Recreation Plan's public involvement identified a strong community desire for walking and biking facilities in Fort Myers. In order to examine the relevant issues more in-depth, the City formed an Advisory Board and the Glatting Jackson team conducted a series of stakeholder meetings and public meetings.

#### 4.1 PARKS AND RECREATION MASTER PLAN VISIONING: BICYCLE FOCUS GROUP

During the Parks and Recreation Master Plan Visioning Workshops, bicycle and pedestrian user groups identified specific areas of concern within the City. The bicycle focus group provided the following ideas for consideration:

- Manuel's Branch Trail should be built from the river to points east to include park-like features
- The North Colonial Linear Park should be preserved and upgraded to create a link to the 10 mile canal
- Drainage easements should be used for trails, including:
  - North Airport
  - Sam's to Fleischman park pedestrian link
  - Golf course link
- As Cleveland Avenue is redeveloping, there is an opportunity to utilize adjacent streets for bicycle and pedestrian access.
- Colonial, SR 80 and SR 82 all need bicycle and pedestrian facilities.
- The City should design and build for multi-modal access, not just sidewalks.
- Maintenance of existing facilities needs to be improved, and policy should be reformed on who is responsible for ROW maintenance.
- Billy's Creek Trail
  - Trail head/ preserve should be added off of off Palm Avenue
- There is an opportunity to create a riverside "Riverwalk."

#### Pedestrian Focus Group

The pedestrian focus group identified the following priorities for consideration in developing a more comfortable and safe pedestrian environment:

- Grade sidewalks to improve drainage.
- Provide a high quality system within ½ mile of schools and parks--"Safe Route to Schools" and Parks
- Create "links" in areas of poor connectivity
- Narrow the crossings distance on big streets
- Add shade and places to sit, drinking fountains
- Develop a wayfinding system
- Create inducements for businesses to have sidewalks





During the workshop, some of the predominant points of discussion were as follows:

- The major arterial roads in the City are the biggest obstacle to connectivity.
- Efforts need to be made to influence the FDOT design of these roads to include bicycle and pedestrian facilities.
- Parallel routes to the major arterial roads need to be looked at in the interim for alternate means of connectivity.
- The impending reconstruction of I-75 needs to include bicycle and pedestrian connections at the interchanges of State Roads 80 and 82 and County Road 884.
- The Edison Bridge should be considered for Bicycle and Pedestrian facilities.
- Pedestrians crossing Palm Beach Boulevard are a major safety concern.
- The City Bicycle and Pedestrian system needs to connect to the larger County and regional systems
- The major utility, drainage and rail corridors should be should be looked at for potential greenways
- Providing safe routes for children to get to schools and parks should be a priority

#### 4.3 STAKEHOLDER MEETINGS

On January 25<sup>th</sup> and 26<sup>th</sup>, representatives from Glattig Jackson met with several stakeholder groups in an effort to integrate the Bicycle and Pedestrian Master Planning efforts with other efforts in the City. Individual meetings were held with the Lee County School District, The Fort Myers Redevelopment Agency the Cleveland Avenue consulting team, the Edison Ford Estate Manager and the Fort Myers Planning Department. During the Parks and Open Space Master Planning process meetings were also held with the Lee County Parks and Recreation Department and the Stormwater Master Planning team. The intent of these meetings was to not only insure that Bicycle and Pedestrian Master Plan was in accord with the other City and regional planning efforts but also to investigate the possibility of mutually beneficial solutions.

#### 4.4 PUBLIC MEETINGS

On March 28<sup>th</sup> and 29<sup>th</sup> the Glattig Jackson team, with assistance from Cella Molnar and Associates, conducted a series of public meetings in the City. Three separate locations-- the Lee Memorial Hospital Auditorium, The Riverside Community Center and the Stars Complex—were chosen to capture representative groups within the different demographic areas of the City. There were no attendees at the meeting at the Riverside community center. A summary of comments for each meeting location follows:

##### **Lee Memorial Hospital Meeting:**

- 10 Mile Canal Greenway stops at Crystal Street.
  - The Bicycle and Pedestrian Master Plan proposes connecting to this greenway by using the Seminole Railroad corridor.
- The crossings at Daniels and Colonial are the biggest challenges.



- The Presbyterian Home near Altamonte Street is a concern because many elderly people are trying to cross Colonial.
- Marking and signage is critical: we need more signs and color pavement.
- Multi-use trails need to be 10-12' wide.
- Biking through some of the industrial areas is not safe, but the City has plans for adding lighting.
- Runners prefer to run on soft surfaces like shell rock and asphalt—not concrete.
- Bikes should not be on sidewalks.
- The City needs better law enforcement of the rules.
- The consultants should look at comparable communities and stress the cultural shift that needs to occur in order to accept walking and biking as a viable alternative to driving.
- Access to schools is important.
- Need to identify trip end facilities on the map.
  - The City needs more bike racks.
- Several State roads have double right on red, which ruins the opportunity for bike lanes. The consequences of this need to be impressed on the FDOT.
  - Daniels Parkway
  - 6 Mile Cypress
  - Interstate interchanges
- Crossing the big streets is the most dangerous part for pedestrians.
  - But can't reduce street capacity
  - Need to educate and encourage the public to cross at the intersections rather than mid-block.

#### Stars Complex Meeting:

- A lot of existing bike paths lack continuity and end suddenly.
- A change in the path's surface, i.e. from asphalt to concrete, is often a cause for confusion for cyclists.
- Some of the DOT roads like Daniels Pkwy are so wide, they are hard to cross.
- Dr. MLK Jr. Blvd is an especially difficult road to cross.
- Pedestrian bridges should be included as necessary to link in neighborhoods.
- The plan should be implemented as soon as possible.
- Many of the long term corrections to the main streets may take time to evolve, but the City should do some of the simpler things as soon as possible.
  - Clear signage could greatly help to guide users through the viable alternate street routes
  - Painting of lanes and adding share markings could greatly enhance safety.

#### 4.5 PUBLIC INVOLVEMENT AND NEEDS ASSESSMENT SUMMARY

The public involvement process was intentionally designed to reach a broad spectrum of people and interest groups. It is remarkable that given the broad range of stakeholders who gave their input, the same predominant themes continued to emerge as the greatest concern to the community:

- The major arterial roads in the City are the biggest obstacle to connectivity.



- Efforts need to be made to influence the FDOT design of these roads to include bicycle and pedestrian facilities.
- Parallel routes to the major arterial roads need to be looked at in the interim for alternate means of connectivity.
- The impending reconstruction of I-75 needs to include bicycle and pedestrian connections at the interchanges of state roads 80 and 82 and county road 884.
- The Edison Bridge should be considered for Bicycle and Pedestrian facilities.
- Pedestrians crossing Palm Beach Boulevard is a major safety concern.
- The City bicycle and pedestrian system needs to connect to the larger County and regional systems
- The major utility, drainage and rail corridors should be should be looked at for potential greenways
- Providing safe routes for children to get to schools and parks should be a priority

The public involvement process not only confirmed the findings of the Existing Conditions Analysis, but also clarified why certain connectivity issues exist and their specific locations.



The Bicycle and Pedestrian Plan is a vision for a well-connected Fort Myers in which every street is friendly to bicycles and pedestrians. In order to focus this connectivity on the community facilities that are the foundations of life in the city, the plan designates routes for cyclists and pedestrians to be coordinated with a wayfinding system.

The intent of this plan is to focus on serving the community first and foremost: a bicycle and pedestrian system should keep all citizens of Fort Myers in mind and help the city to connect its people to their necessary destinations and the commercial, civic and cultural institutions that give the city its character and purpose. However, the plan keeps in mind that walking and cycling may be more than a recreational activity for some residents of the city: accordingly, a main focus of the plan's intent is the provision of safe and convenient routes to schools and parks, understanding that mobility offers independence even for younger residents.

Perhaps the most notable condition in Fort Myers is its distribution of street typologies within its existing transportation network. The City has a limited number of true arterial streets that provide connectivity over longer distances. Although large sections of central Fort Myers are composed of a connected grid of streets, the City's arterials have evolved into the predominant routes for more regionally-oriented connectivity. The remaining streets, regardless of their function in the transportation system, tend to have the following features: single travel lanes per direction, typically 10 to 12 feet in width, with open swale drainage.

With this condition in mind, the Plan Vision focuses on a two-tiered approach to enhancing the transportation network for pedestrians and cyclists:

1. Short term: Begin development through a focus on a secondary network of safe streets for bicycles and pedestrians that parallels main roads.
2. Long term: Streets being reconstructed should be adapted to truly serve the concerns of the bicyclist and pedestrian.

Page 58 is an illustrative map of the City of Fort Myers Bicycle and Pedestrian Plan. The following sections detail the types of facilities that contribute to this network.



INSERT MASTER PLAN MAP



## 5.1 GREENWAYS

At their heart greenways are trail facilities, although in the nomenclature of this plan they have been designated as greenways to emphasize that they are routes either independent of a public street or intended to emphasize or celebrate features of the landscape. In Fort Myers, the greatest opportunities for greenways lie along the City's rivers and creeks and disused or underused railroad corridors. The Seminole Rail Corridor that traverses Fort Myers north to south is the most direct and long-reaching opportunity for a greenway facility in a rail corridor and offers an off-road transportation 'spine' to the city. Additional greenway opportunities include the provision of trails along drainage canals, along Billy's Creek and in existing utility easements.

One very important advantage of greenways is the connection to natural systems that they offer and the potential for special interaction between the natural and built environments. River corridor greenways, such as along Billy's Creek, allow for a buffer between development and nature, offer a connection to water-based recreation (such as Lee County's 'Blueways' plan) and expose the user to a different view of the environment than a facility along a street would. As envisioned in this plan, greenways also provide connections to a larger regional system of greenways and trails, offering the most direct recreational opportunities for either short-distance or long-distance uses.

## 5.2 BICYCLE FACILITIES

Providing for bicyclists is an important part of building transportation infrastructure. Bicyclists can be found on almost every type of roadway, from rural highways to local streets, and the majority of these roads have no special facilities designated for bicycling. In Fort Myers, only seven miles of on-street bike lanes currently exist to safely accommodate cyclists on principal streets. Bicycle facilities need to be built, maintained and operated so that bicyclists can use them safely and comfortably: drainage grates, railroad tracks, potholes, utility covers, gravel, wet leaves, pavement joints and many other surface irregularities have a profound impact on bicyclists and can quickly cause a fall and serious injury.

As mentioned previously, the bicycle facilities proposed in this plan have taken two priorities into consideration: 1) the need for a balanced transportation system to connect schools, parks, amenities and other important destinations in Fort Myers and, 2) the great expense of large-scale infrastructure changes. While the plan is designed to connect Fort Myers to the facilities that serve its communities, it does so with sensitivity to the high cost of reconstructing streets. That said, projects to be developed from this plan should follow one of two general guidelines:

1. ***Streets not being reconstructed*** for bicycle or sidewalk improvements or from other capital improvement projects should elect a facility type that is appropriate to their existing design and function. These types include provision for bicycles that recognizes the cyclist's use of a street or road but that does not formally designate a separate bicycle facility. These are based on the concept of a safe secondary network of streets that allow travel alternatives to main roads and highways where conditions of the





roadway design and built environment have created challenges for safe cycling. This plan is designed in accordance with American Association of State Highway and Transportation Officials (AASHTO) and the Florida Department of Transportation (FDOT) standards for the construction of bicycle facilities; when the existing width of streets does not allow these dimensions to be met, they should not be officially designated facilities.

**2. Streets being reconstructed** for reasons of a capital improvement project should follow the AASHTO and FDOT standards for new facilities. Where a street is designed to be reconstructed within the existing right-of-way and the recommended dimensions for new facilities do not fit, the project development process should seek to identify acceptable alternative routes for the route designated in the plan so that the plan's overall intent is met.

Many of the streets recommended for bicycle routes in Fort Myers cannot accommodate facilities meeting AASHTO and FDOT standards to be added to their existing roadways. Thus the recommendation on these streets is that they be marked on their surface to clearly indicate their shared function, even if they do not have formally-designated bicycle lanes. Further discussion of this concept of 'shared streets' or 'bicycle-friendly streets' follows later in this section of the plan.

This plan is designed to be implemented with a variety of facility types, designed below. These types form a hierarchy based on the amount of separation and comfort afforded to the cyclist and pedestrian, but the conditions and constraints of a given street will likely determine which of the types is appropriate to use. The Master Plan map recognizes that generally a route will need to use one of the facility types described here, but the interconnection of all of these types across the map forms a more complete network for cyclists.

**5.2.1 Bicycle trails** – Trails accommodating both pedestrians and cyclists should be designed to a minimum width of 10 feet to allow safe passage in two directions. The width may be increased as needed; any such increase should be based on the perceived need for using the facility.

Due to the shared use of these trails involving bicycles, they should have a smooth paved surface and any vertical elements (such as bollards or bridge railings) should be clearly visible and placed with a frequency that is safely navigable for moving bicycles.

**5.2.2 Bicycle lanes** – Bicycle lanes are facilities in the carriageway (i.e. inside the edge of pavement) that are dedicated for bicycle travel. Although current AASHTO standards specify a minimum width of four feet for dedicated lanes, wider lanes are often desirable—especially on urban streets with on-street parking. *This plan recommends a **minimum width of five feet** for any on-street bicycle lanes.*

Based on the current condition of streets in Fort Myers, bike lanes do not comfortably fit on many streets. As discussed previously, many local streets in the City are constructed with relatively narrow travel lanes and open swale drainage. In keeping with the Plan's intent to develop a complete bicycle and pedestrian network that capitalizes on opportunities to work with existing facilities (i.e. to avoid street reconstruction), this plan does not



As such, bicycle lanes have been designated on streets where they do fit *without required changes to the vehicular capacity*. In other words, the routes recommended in this plan should be accommodated without removing travel lanes from roadways. Though particular routes have been identified in the Master Plan Map, bicycle lanes can be added to any street if the carriageway currently allows widths of at least 15 feet in the outermost travel lane (assuming that no on-street parking is allowed in this lane). This width allows safe passage of both moving vehicles and bicycles by re-striping the roadway to separate the travel lane into a narrower travel lane and an adjacent bicycle lane (for example, a 15-foot lane would be re-striping to a ten-foot travel lane and a five-foot bicycle lane).

As a general policy, bicycle lanes should be provided on all arterial and collector streets in new construction or reconstruction and should have a minimum width of five feet. While the width that is considered to be the bicycle lane can include the gutter pan of a curb-and-gutter drainage system, the cyclist should have a minimum of four feet of smooth riding surface.

*5.2.3 Safe bicycle streets* – As discussed previously, the construction of many of Fort Myers’s local streets prohibits adding on-street bicycle lanes without expensive reconstruction. Instead of pursuing a dedicated bicycle lane on every street in the bicycle network, the plan recommends a complementary *safe bicycle street* to be shared with bicycle and vehicular traffic. These streets are the cornerstone of a secondary network. Typically any street with traffic volumes below 800 average daily trips (ADT) can function as a safe bicycle street, or one where cyclists may share the principal travel lane safely and confidently and where the design of the road both controls driver speed and allows motorists to pass a more slowly moving cyclist. The routes designated in the plan have been chosen due to their proximity to schools or parks, their opportunities for safely crossing larger roads (especially at signalized intersections) or their general connectivity through neighborhoods.

The AASHTO Guide for the Development of Bicycle Facilities describes signed shared roadways (bike streets) as “those that have been identified by signing as preferred bike routes” and recognizes the preference for low-volume roadways and proximity to community destinations (such as parks, schools or commercial districts) as reasons why routes might be so designated.

Generally, these types of streets have been chosen to meet the following objectives:

- the route provides through and direct travel, especially in neighborhood and school areas
- the route connects discontinuous segments of shared use paths or bike lanes
- street parking is not allowed
- a smooth, continuous surface has been provided

In terms of physical design, the Plan envisions these streets as using a wide, brightly-colored edge treatment to calm traffic and remind the motorist that these facilities are to be shared. ‘Sharrows’ symbols—or other increasingly common markers for shared lanes combined with vertical signage—should be used to further designate these routes to cyclists and emphasize to all users that they are shared streets.



### 5.3 PEDESTRIAN FACILITIES

Sidewalks to serve pedestrians are an integral part of a pedestrian system: they connect buildings and facilities along a street and allow pedestrians safe passage away from the threat of moving vehicles.

This plan recommends that sidewalks be placed on both sides of any street contributing to the effective street network, or any street that connects to two (2) or more streets. The City will prioritize this construction over any streets that do not contribute to the effective network ('non-network streets'). Within this general policy, the following three priorities will be used to determine an order of construction:

**First priority:** All streets within a half-mile (0.5-mile) distance of schools or parks, as measured by walking distance along public rights of way.

**Second priority:** All collector and arterial streets and any local streets between a half-mile and a mile distance from schools or parks.

**Third priority:** All other effective network streets.

Pedestrians are also considered users of greenways (Section 5.1) and multipurpose trails (section 5.4) and the design of these facilities and their amenities (such as fountains, benches, and trailheads) should reflect the needs of users moving at walking speed.

### 5.4 MULTIPURPOSE TRAILS

Multipurpose trails allow joint bicycle and pedestrian activity on facilities that are separated from the street.

As they are intended to be separate from greenways, these trails are conceived as accommodating bicycles and pedestrians on high speed and/or high volume roads. For purposes of this plan, they are fundamentally the same facility type as the greenway trails defined in Section 5.1 (namely, accommodating both pedestrians and bicyclists in a single facility) and may use the same general facility design standards. The primary difference between these two types is that multipurpose trails serve the needs of bicycles and pedestrians along roadways and offer a safer alternative to on-street bicycle lanes on roads posing potential safety conflicts. It is important to include these trails on *both sides* of the streets where they have been designated to help preserve safety along these roads.



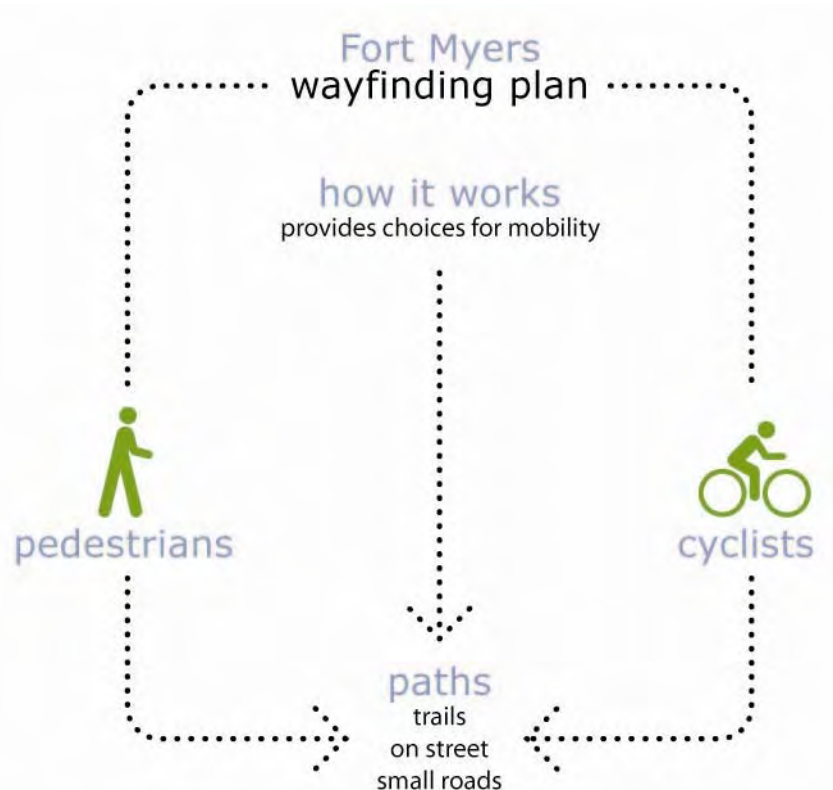
## 6.1 Wayfinding Plan Summary

The following sign design guidelines describe all signage to be placed along routes proposed in this plan. This summary provides illustrations of the sign palette and a sign application location criterion that outline the implementation/installations of the signage.

In addition to creating a signature image for the trails/routes, the signage is intended to provide vital information to users about their surrounding environment, including change in traffic and promote effective use of the paths and directional signage to highlight connectivity.

Wayfinding is the organized movement of pedestrians and vehicles through a complex environment. It frequently involves layers of information such as maps, signs, landmarks or icons to direct a user to a destination. A good wayfinding system helps users experience an environment in a positive way in addition to facilitating movement from point A to point B. The goal of this system is to welcome visitors and reassure guests that they are on the correct route as they find their destination.

Unfamiliar environments make special demands upon the user. Even the simplest settings can involve a jumble of information that must be sorted and processed before it can become meaningful.



## 6.2 Project Goals and Constraints

Whether it is a child going to school, a tourist exploring the area attractions or an avid cyclist testing his or her skills, the City of Fort Myers has a network of possibilities. Every trip has a beginning and an end point and as the user matches the purpose of his or her trip to a route, the following factors help them chose a path.

- a. Time journey will take.
- b. Safety (e.g. from traffic)
- c. Enjoy-ability
- d. Engagement with other users

The following goals of this wayfinding and signage plan derive from the users needs listed above.

### Goals

1. Create a network of signs that promote connectivity and safety.
2. Develop a sense of continuity that help users plan and make decisions at key points.
3. Create visual cohesion of the trails by establishing a uniform design language.

These goals will be accomplished by providing three types of environmental graphics:

- Trail Markers - these will be located along paths as an iconic reminder and a trail branding devise.
- Directional/warning signs - which will be located along a prescribed route at key decision points.
- Kiosks - these will serve as a pedestrian directional that promotes walk-ablilty.

### Constraints

1. Signs must respect the Manual on Uniform Traffic Control Devices (MUTCD) standards and comply with any Florida Department of Transportation (FDOT) restrictions.
2. Work with the path system designed for Ft. Myers.
3. Visually incorporated trail wayfinding system with the Downtown Development Authority's (DDA) signage system.



### 6.3 Sign Palette

#### 6.3.1 Comparables

In developing the Wayfinding and Signage Plan for the City of Fort Myers, existing systems in other cities were surveyed. The intention was to understand, what aspects of each system were successful and use this information enhance the signage in Fort Myers. The highlights are of note from the study:

- Ease of maintenance should be a consideration in the design of all structures.
- Consistency can be achieved through use of color and material.
- Visual Clutter can be reduced by the use of existing poles when possible.










### 6.3.2 Trail Identity



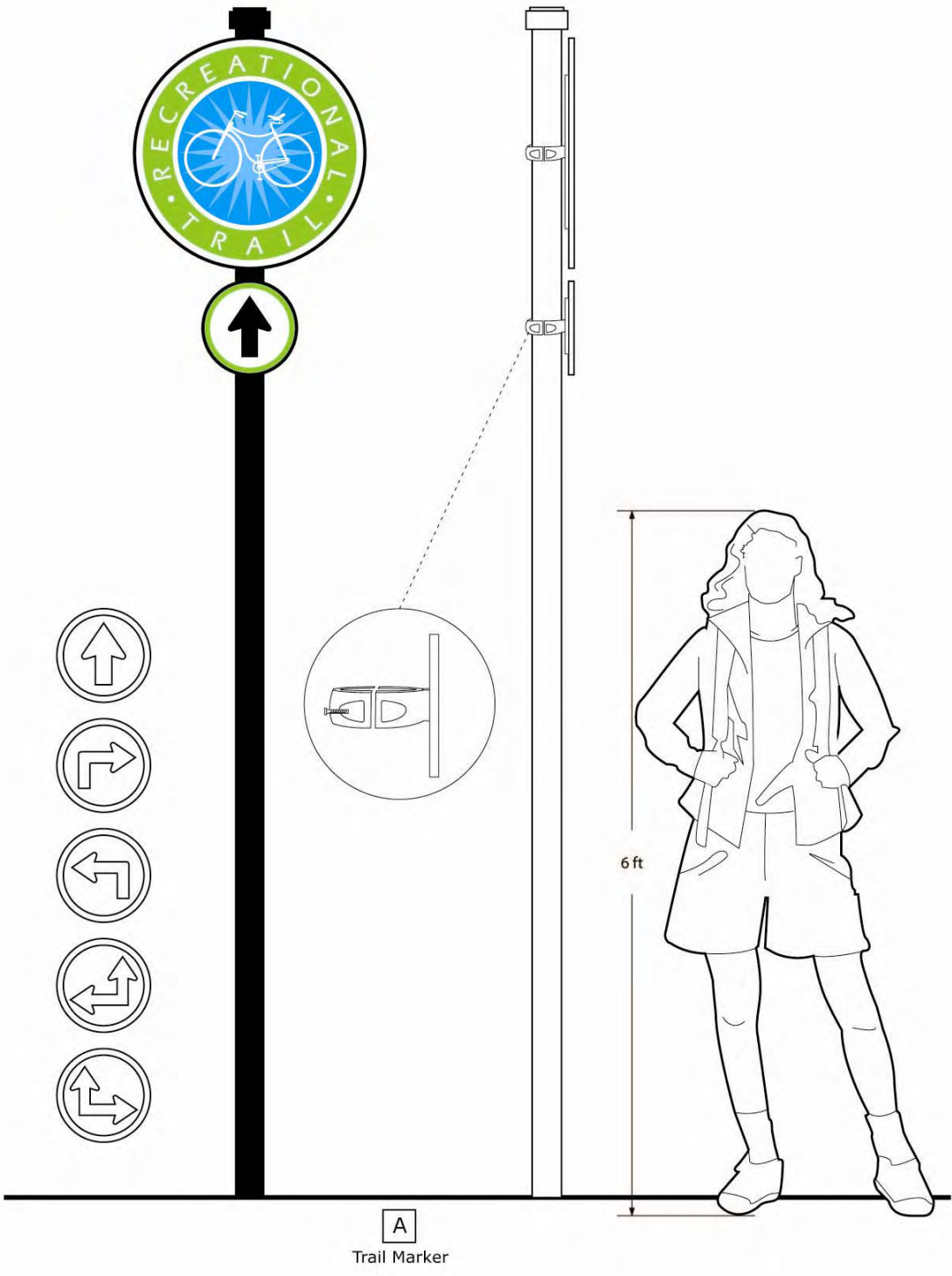
There are two groups of signs **Bike Route signs** and **Recreational Trail signs**. Bike Route signs are to be placed on On Street Bike Lanes and Bike Friendly Streets. The Recreational Trail signs are to be placed on Off-street and on Greenways. This helps users distinguish between different types of facilities.

**Fabrication Specifications:**  
 Aluminum sign panel 3/8" thick  
**Artwork is painted not vinyl**  
 All surfaces automotive grade paint with clear coat finish  
 3" aluminum pole  
 All white graphics and Stop Signs are engineer grade reflective vinyl

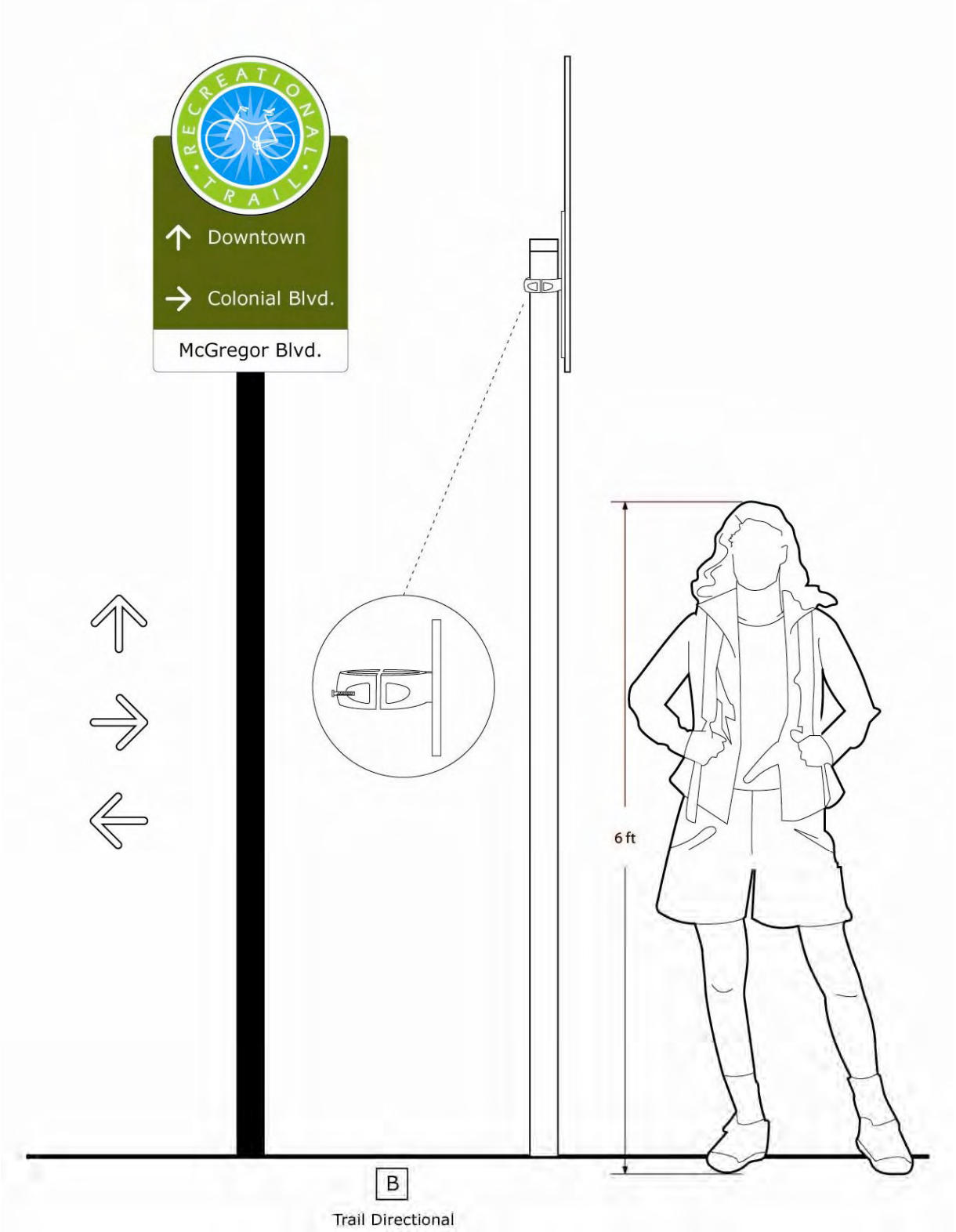
<b>C1</b>		Blue - Process Cyan
<b>C2</b>		Green 1 - 335 C
<b>C3</b>		Green 2 - 357 C
<b>C4</b>		Green 3 - 376 C
<b>C5</b>		Green 4 - 378 C
<b>C6</b>		Black
<b>C7</b>		White

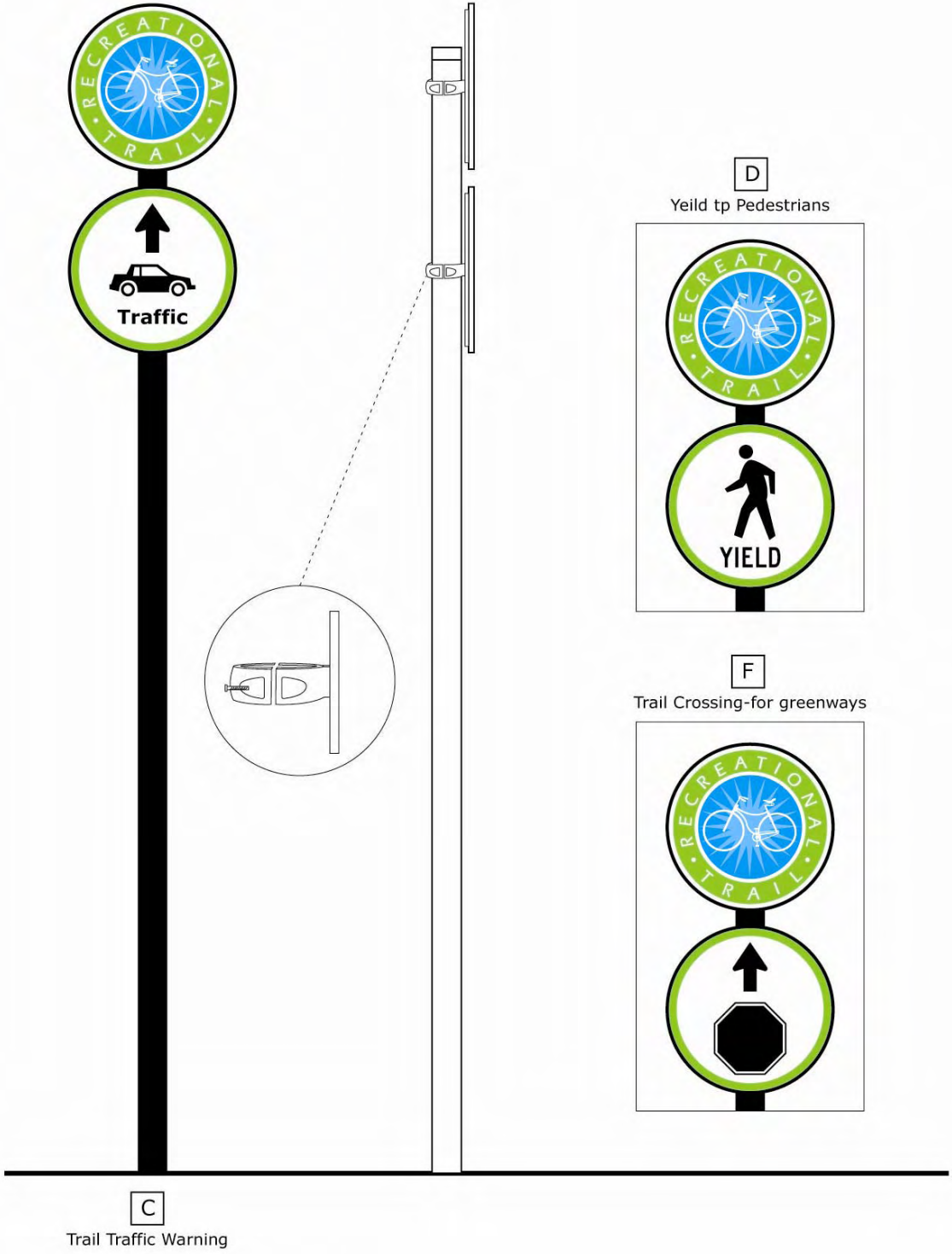


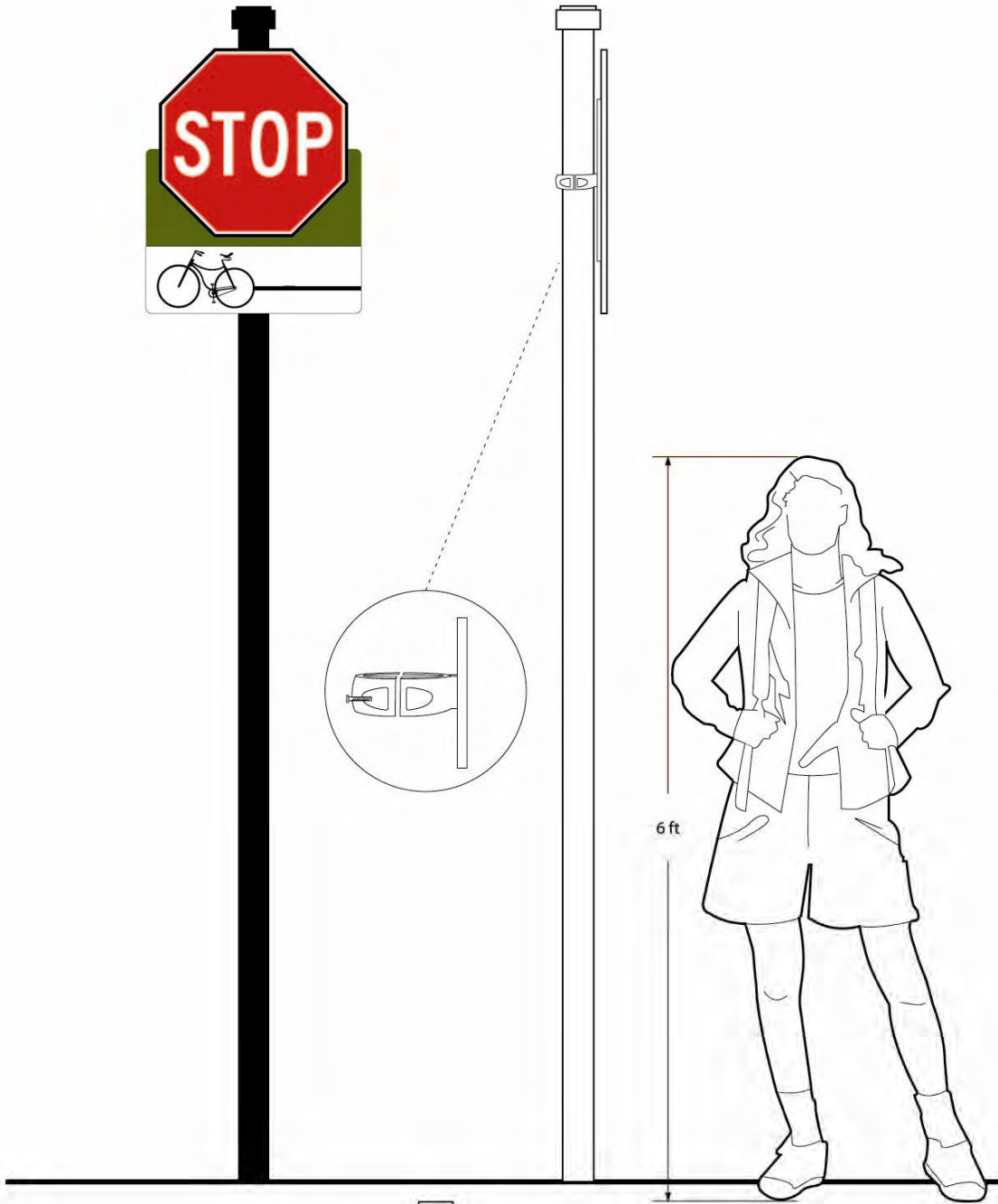
6.3.3 Recreational Trail Sign Palette





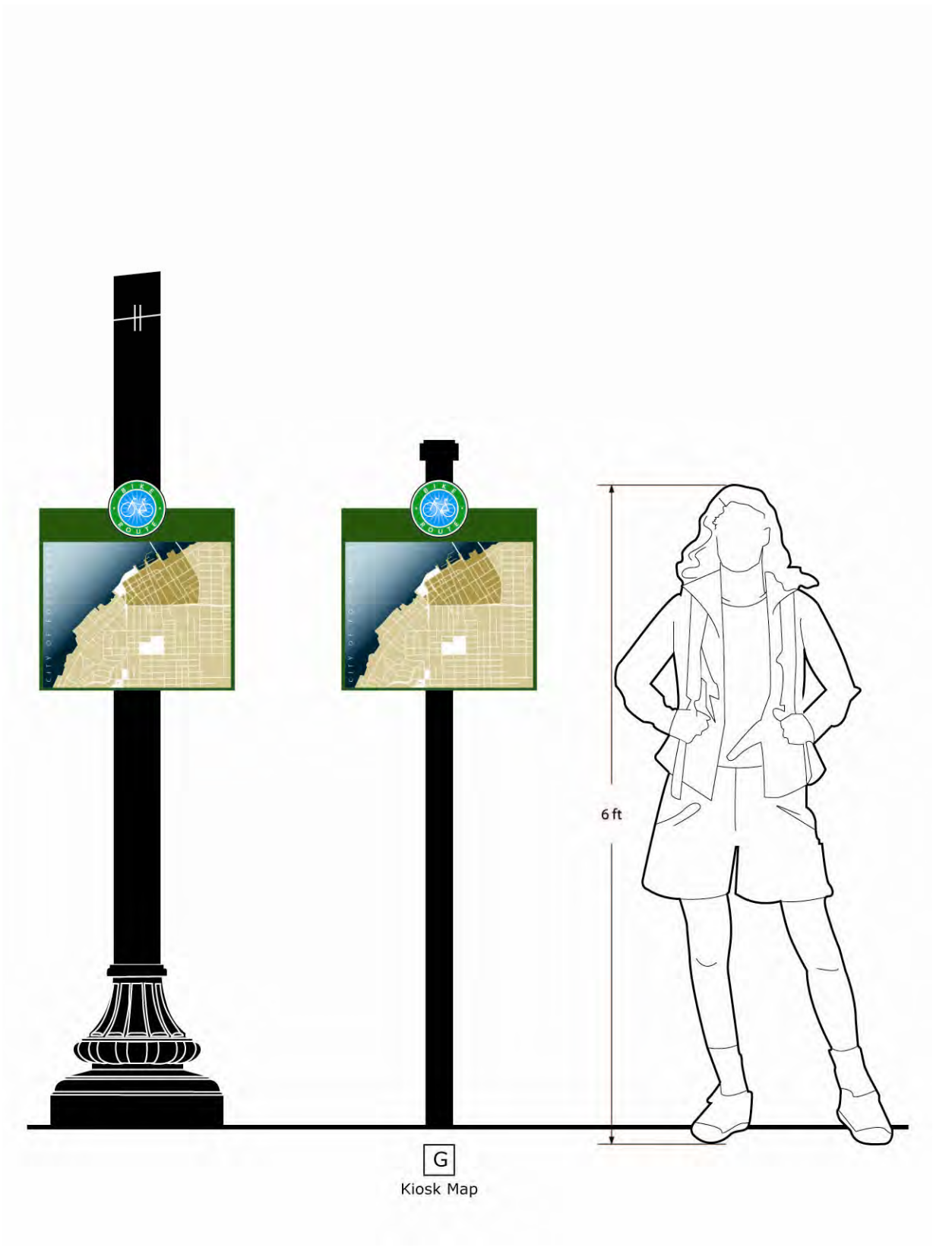




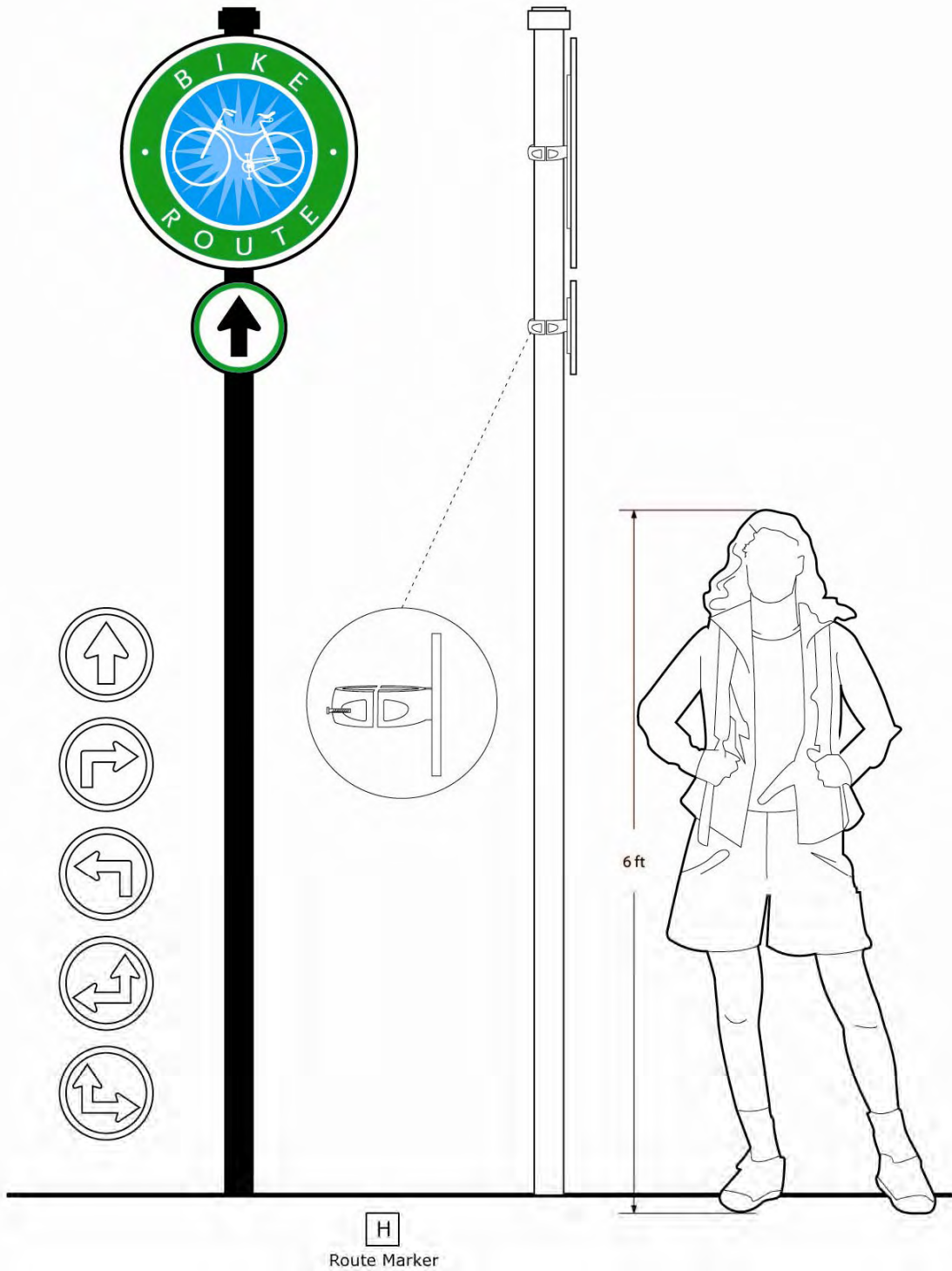


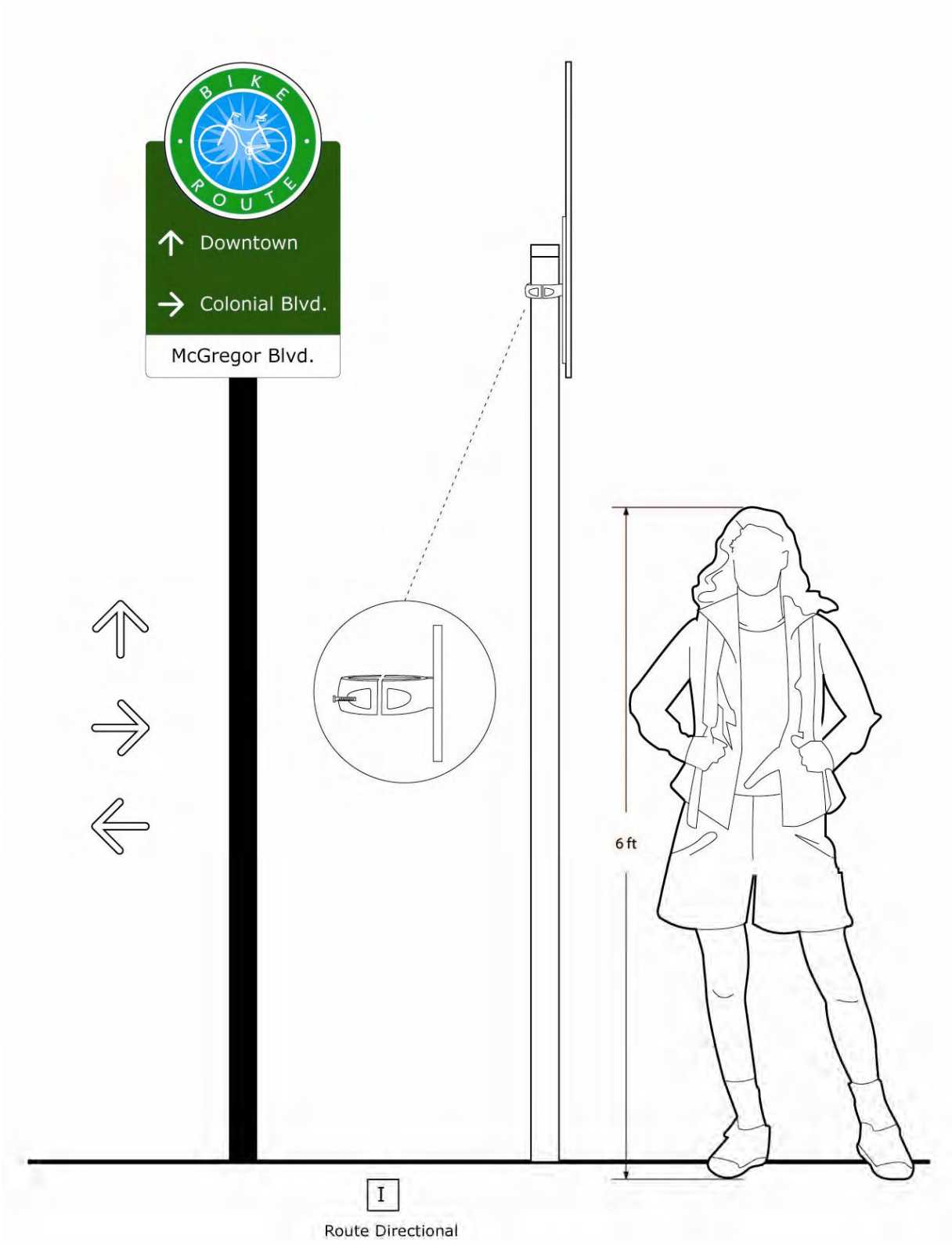
E  
Trail Stop Sign-for greenways

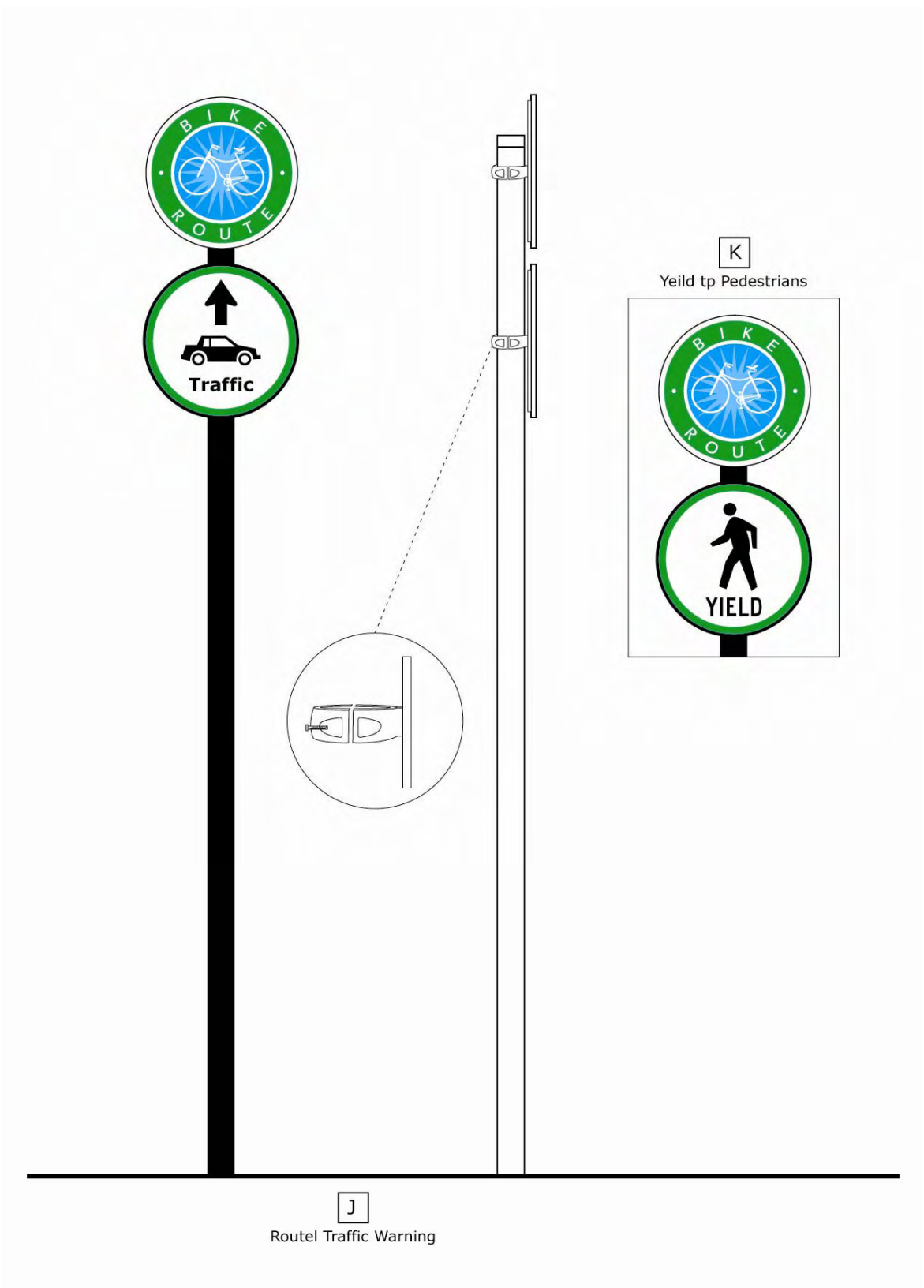


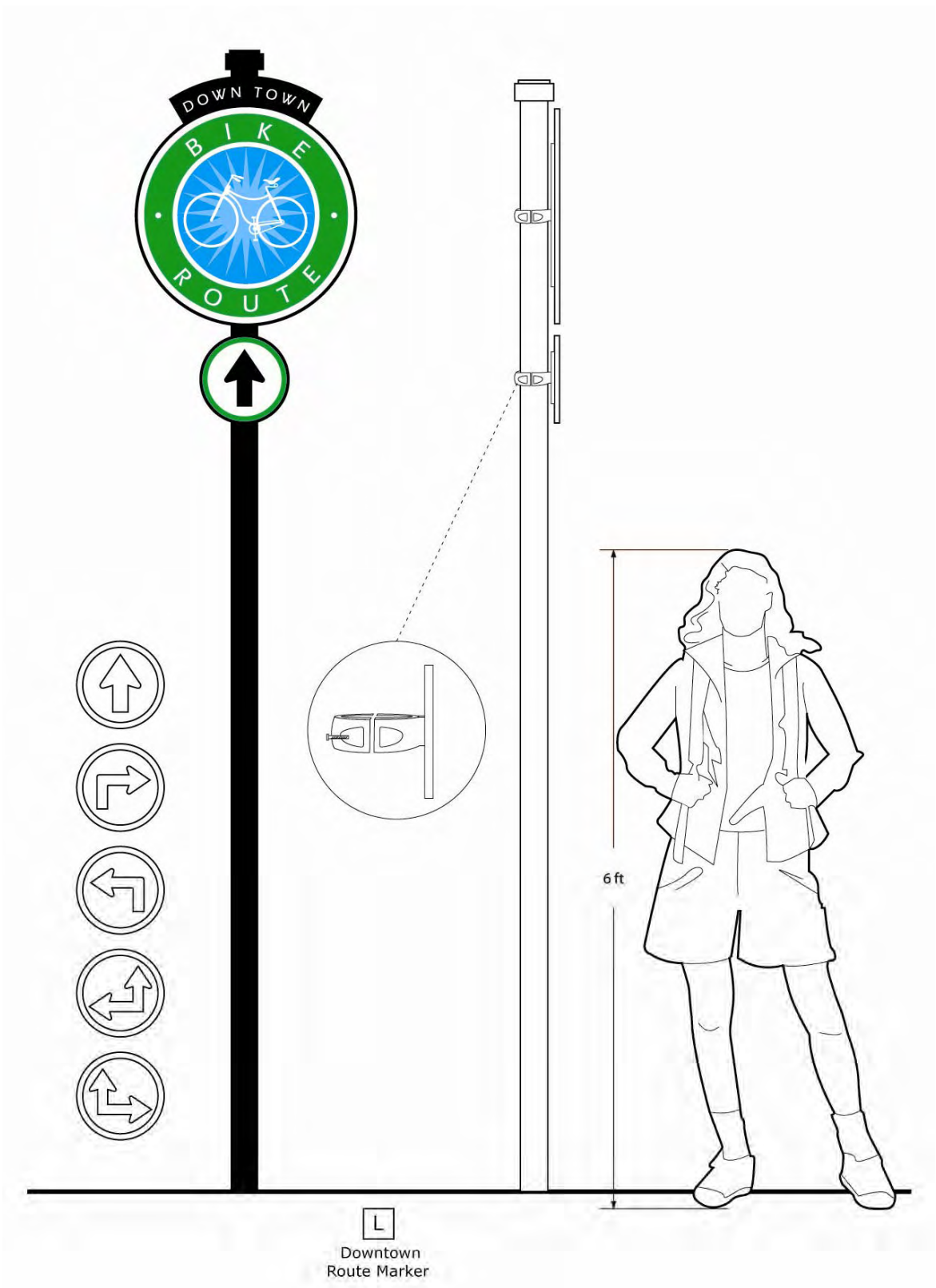


6.3.4 Bike Route Sign Palette

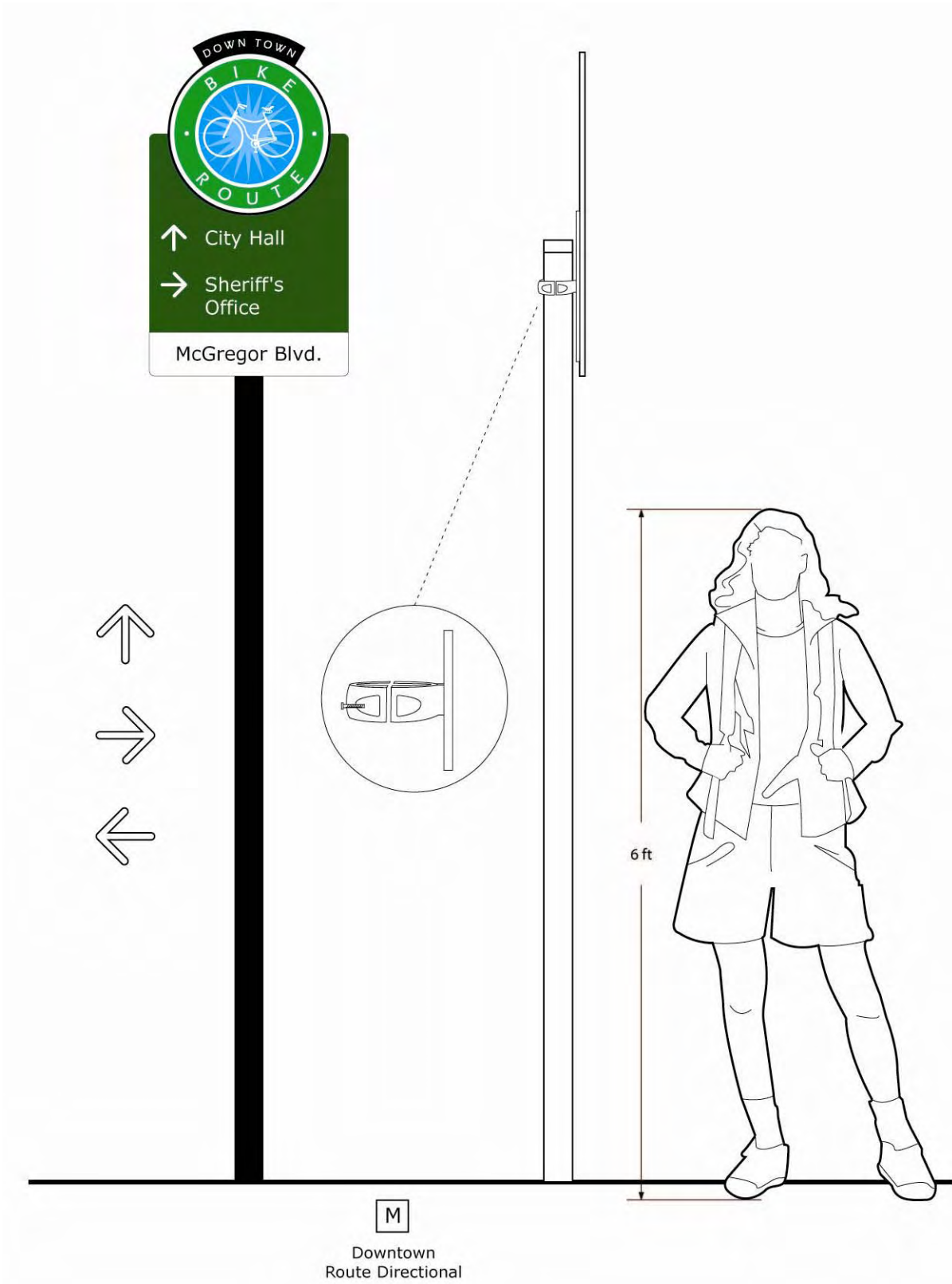


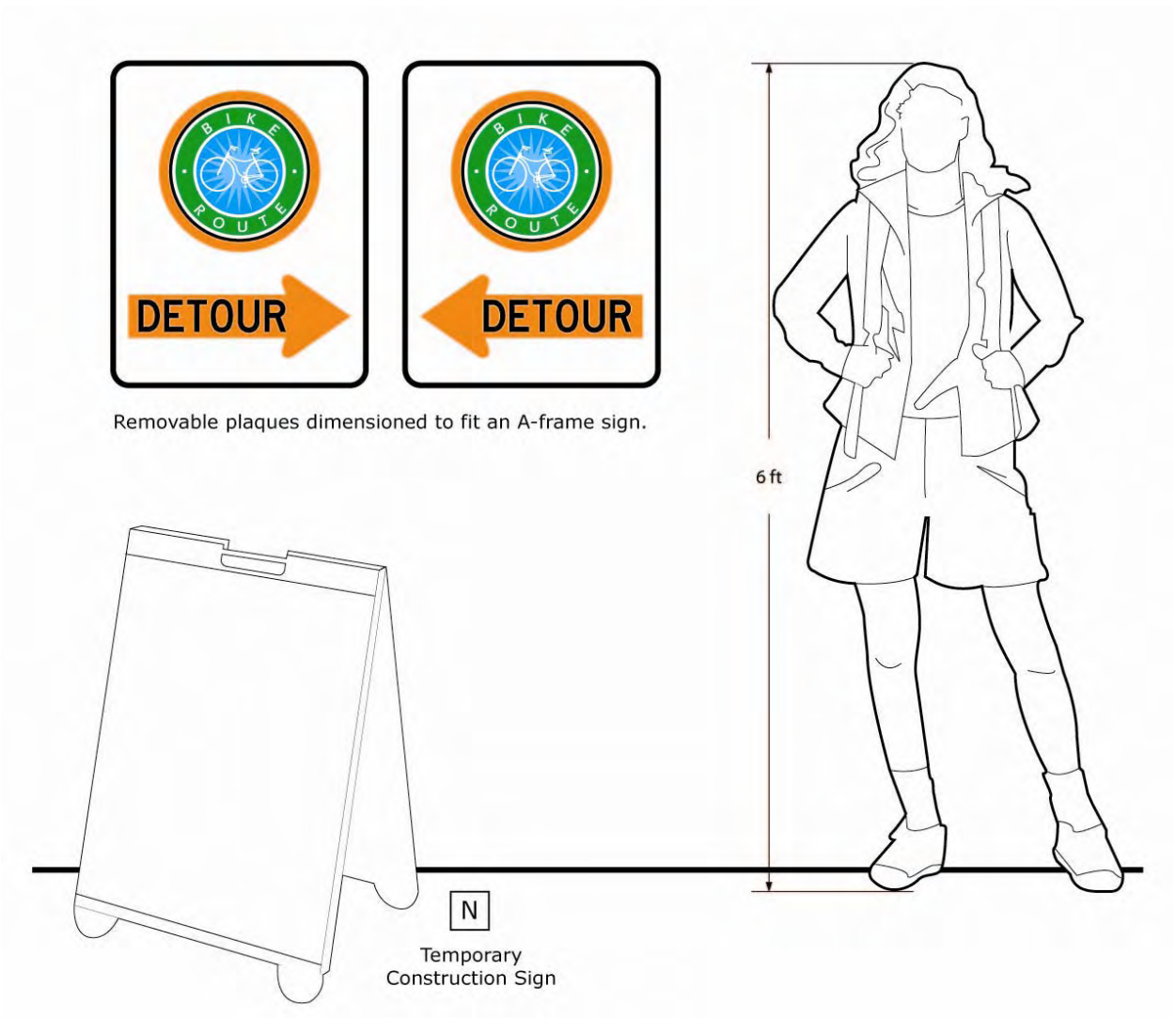












### 6.3.5 Kiosk Map Detail

The following illustration is a detail of the kiosk map that is to be strategically placed in downtown Fort Myers. The aim is to promote pedestrian traffic in the area by providing a tool that creates familiarity and promotes walkability.





### 6.4 Sign Application Location Criteria Action Plan

The following criteria are to be used as a guideline when assigning locations of particular signs along a given bike trail or route. A full-sized Sign Master Plan Diagram is attached as Appendix B. It is important to note that this is a general recommendation, therefore prior to installation each sign should be field-tested. As these sign recommendations would be placed in a living and constantly changing setting, the specific application of these recommendations may need to be adapted as needs and special environmental conditions dictate.

Signs A-F are for Recreational Trails, i.e. Greenways

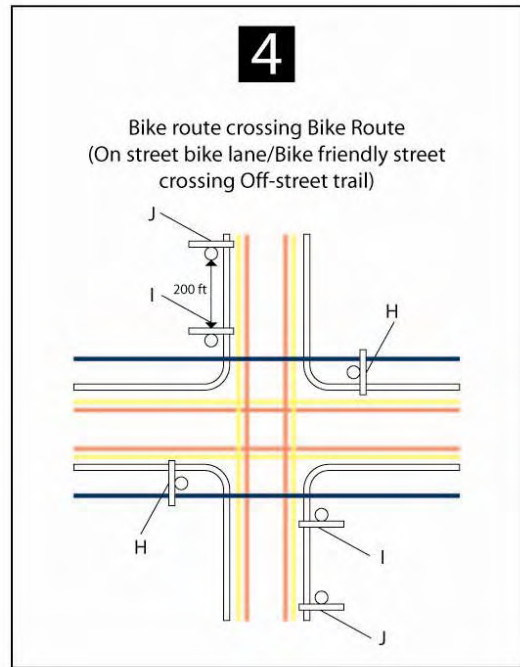
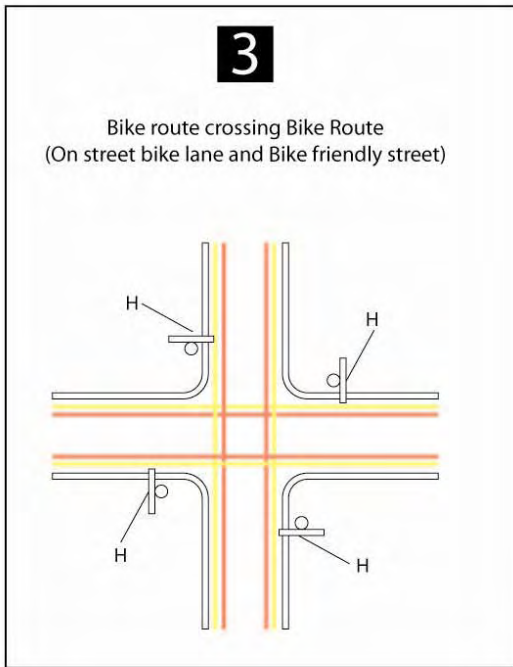
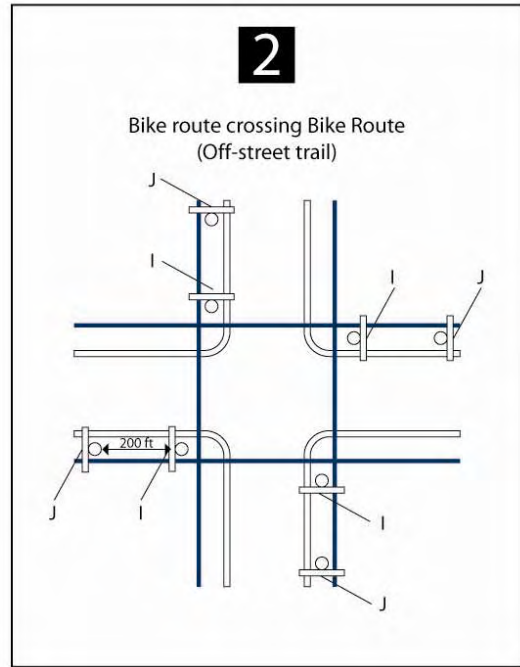
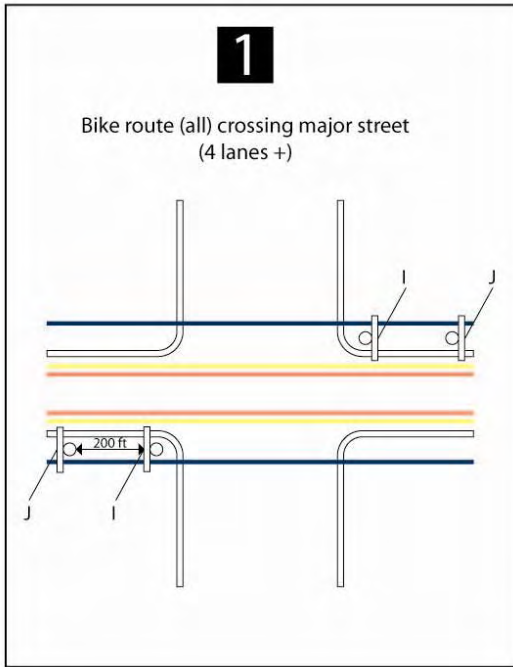
Sign G is the Kiosk intended for the downtown areas

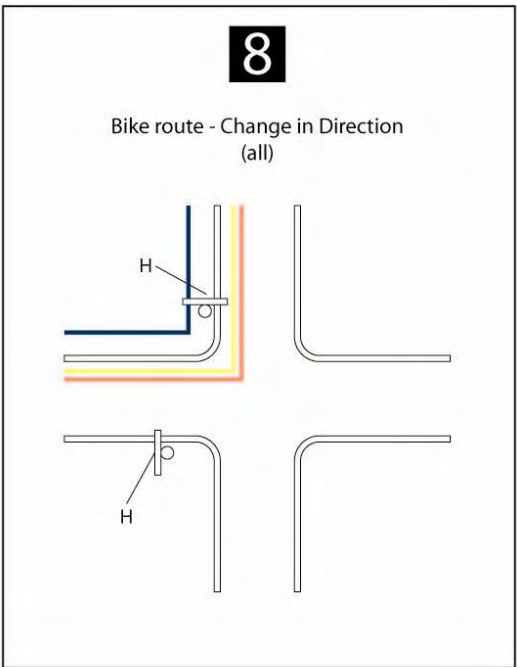
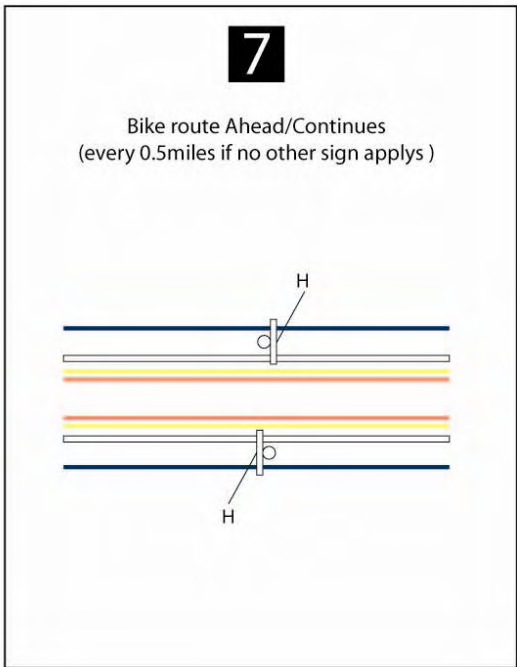
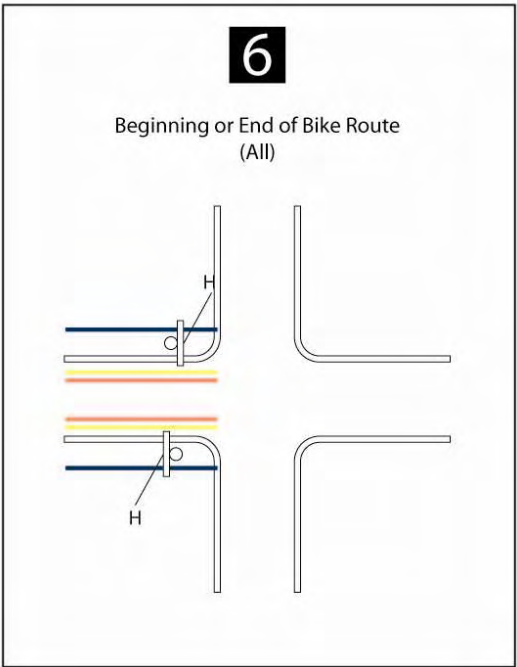
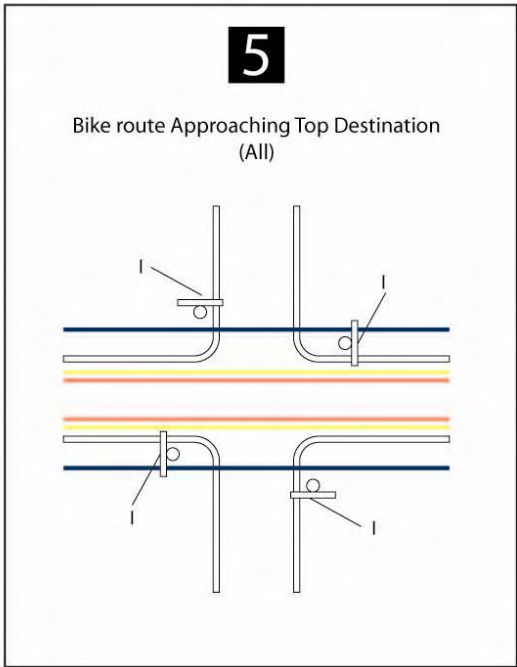
Signs H-K are for Bike Routes, i.e. On street bike lanes, Bike friendly streets, and Off-street trails.

Sign Type	Location Criteria
A/H – Trail Marker	Trail marker signs are to be placed at the beginning and end of every path and every occasion where two paths intersect. If the path is more than a half a mile (0.5 miles) long and no other signs from the palette are used, a trail marker sign should be placed every half mile (0.5 miles).
B/I – Trail Directional	Trail markers are to be replaced by trail directionals, in an occasion when two major streets (list of relevant streets can be found below) intersect e.g. Dr. Martin Luther King Jr. Blvd. and Cleveland Ave. In addition a directional sign should be used when a top destination is approaching (list of top destination can be found below)
C/J – Trail Traffic Warning	High traffic warning signs should be placed in every case that a bike trail/route intersection with a street that has more than four lanes of traffic. Signs should be placed in advance of the intersection allowing the user time to make a decision if necessary.
D/K – Yield to Pedestrians	Yield to pedestrian signs are to be placed only along On Street Bike Lanes, Off street Trails and Greenways as they approach areas that have recorded high pedestrian traffic. The locations of these signs have not been sited and are To Be Determinate with site specific interests.
E – Stop Signs	Stop signs are intended for greenways only. They shall be placed in locations where the greenways cross major streets i.e. streets with more than two lanes of traffic.
F – Trail Crossing	Trail crossing signs work in partnership with E (stop signs) They are to be placed 200 feet before the stop sign to warn fast moving users to slow down and be aware of vehicular traffic and stop ahead
G – Kiosk Map	The kiosk map is intended for the downtown district only and is to be attached to existing light fixtures and on new poles only when light fixtures are not available.
M & N	Within the downtown areas (indicated in grey in sign master plan), signs I and H should be <b>replaced</b> by M and N.

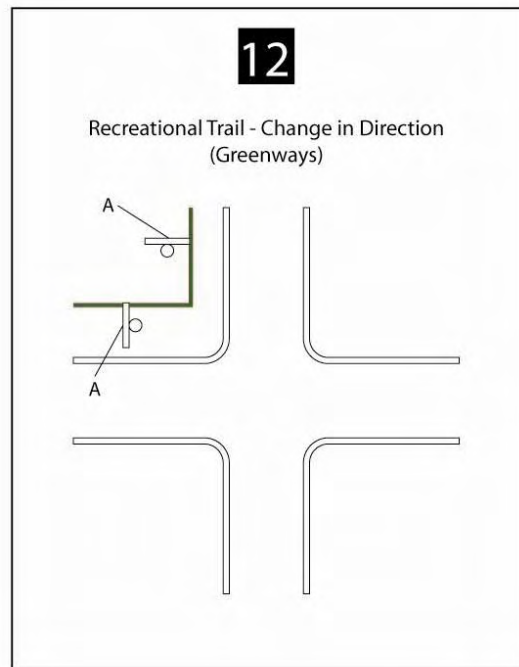
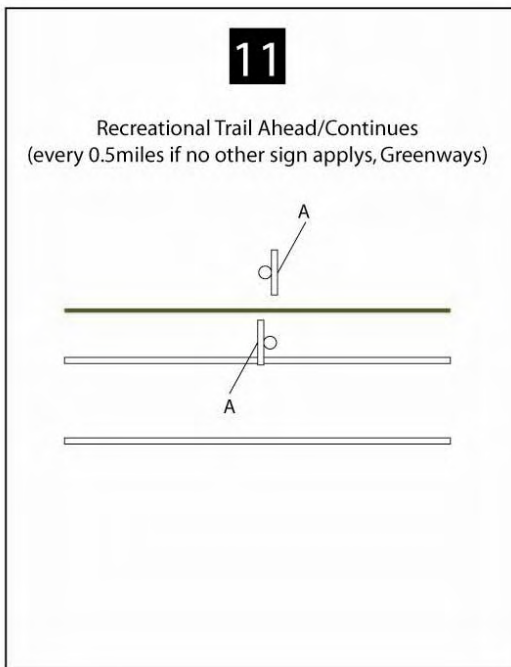
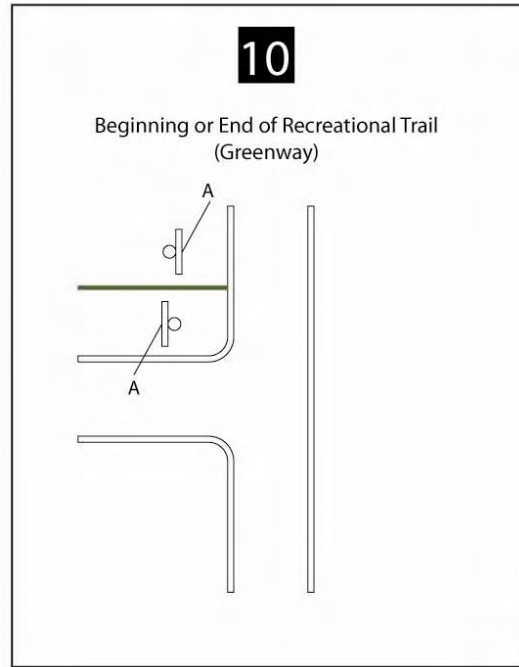
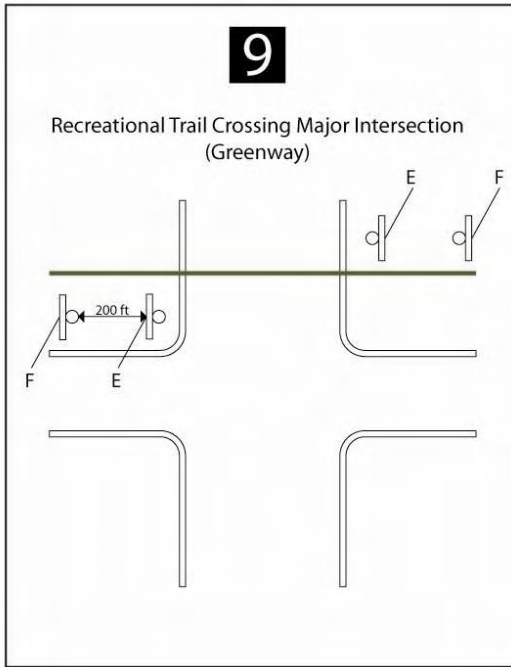


**WAYFINDING AND SIGNAGE PLAN – DESIGN GUIDELINES**



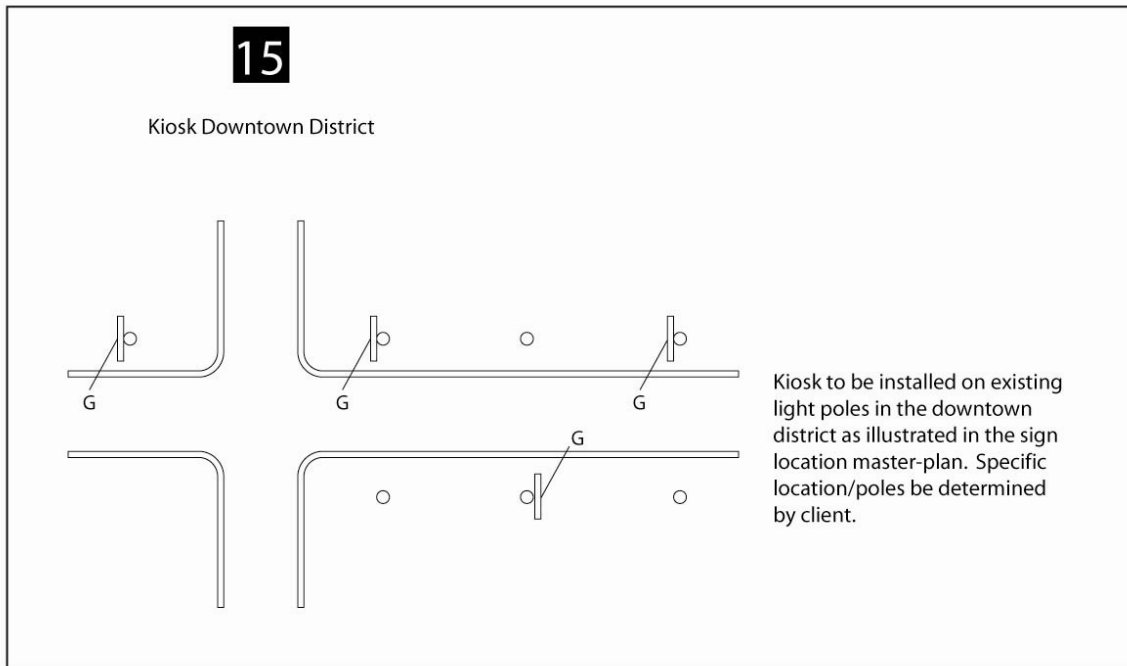
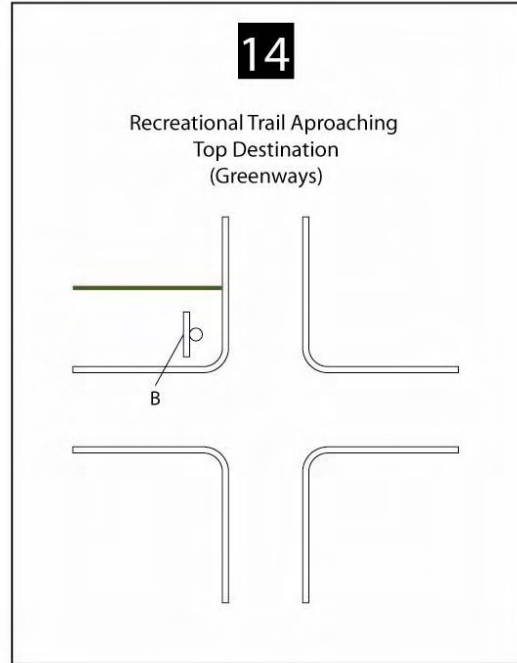
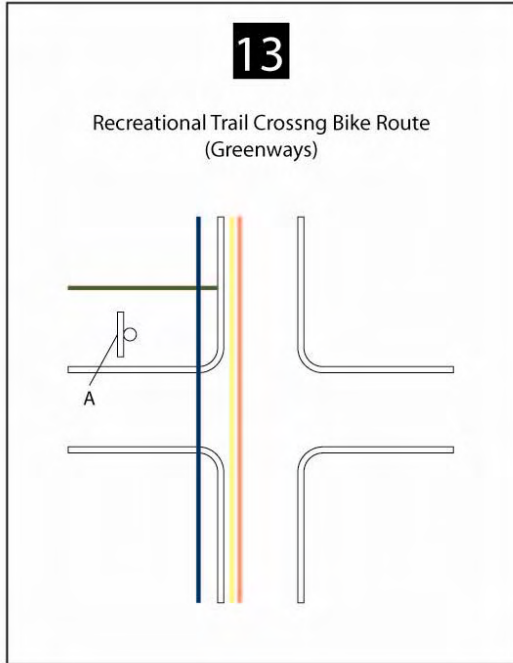


**WAYFINDING AND SIGNAGE PLAN – DESIGN GUIDELINES**





**WAYFINDING AND SIGNAGE PLAN – DESIGN GUIDELINES**



## 7.1 POLICIES AND ORDINANCES

In adopting this plan, it is essential for Fort Myers to adopt policies promoting bicycling as a safe, desirable, convenient means of transportation for recreational, commuter and visitor-oriented purposes. With that, the city should set tangible policy goals.

An increasingly common approach in cities that have solidified their reputations as bicycle- and pedestrian-friendly cities is to set a general goal for integration of cycling and walking into the city's transportation system.

As the Fort Myers Comprehensive Plan organizes its policy direction into larger goals and progressively specific objectives, policies, actions and standards, the following suggested language should be used to guide future plan amendment to adequately address Fort Myers's commitment to promoting and enhancing its bicycle and pedestrian system. The Transportation Element of the Comprehensive Plan is organized around a single, broad goal to "provide an efficient, safe and responsive City transportation system consistent with environmental and land use goals," so the recommendations here begin at the Objective level. Recommended policies and actions are explained in greater detail in later sections of this chapter.

### **Objective: Define transportation projects to expand and promote bicycling and walking throughout the City of Fort Myers.**

Policy: The City shall plan for the provision and designation of bicycle and pedestrian facilities for a twenty-year period.

Policy: The City shall require the incorporation of bicycle and pedestrian facilities in any transportation improvement projects requiring road widening.

Policy: The City shall work with LeeTran to integrate bicycle facilities with transit service.

Action: Work with LeeTran to equip all buses with bicycle racks or other bicycle carrying capacity.

Standard: Equip all buses with bicycle racks by 2015.

Action: Work with LeeTran to broaden its route system, allowing transit to serve a longer-distance function complementing the bicycle network of central Fort Myers.

### **Objective: Provide safe and convenient travel options for cyclists and pedestrians by ensuring that facilities designed for their use are well maintained.**

Policy: The City shall develop a regular street-sweeping schedule on all streets containing on-street bicycle facilities or designated as bike-friendly streets.



**Objective: Promote freedom of mobility for all Fort Myers residents by designating bikeways for long-range travel and regional connections, commuting, recreation, and institutions and neighborhood uses.**

Policy: Work with Lee County and its other municipalities to ensure that destinations outside of Fort Myers are accessible by bicycle.

**Objective: Complete the balance of Fort Myers's transportation system by providing adequate trip-end facilities for bicycles and pedestrians.**

Policy: The City shall work to provide adequate trip-end facilities for bicycles.

Action: Revise land development regulations to include bicycle parking standards and provision requirements from development projects.

Action: Add bicycle parking and storage into the city's parking fund, and dedicate easily accessible space in all City parking facility to be used for bicycle and parking storage.

Standard: In any City parking facility of forty (40) parking spaces or greater, the equivalent of one (1) automobile space shall be dedicated for bicycle storage using either bike lockers or a bicycle storage rack that allows the bicycle to rest on its frame.

Action: Explore the creation of a Transportation Management Association (TMA), in which the City and private businesses and organizations would participate, to facilitate and manage trip-end facilities and other services for multi-modal transportation users.

Policy: Schools within the City shall have adequate trip-end facilities.

Action: Develop an agreement with the Lee County School Board to explore access opportunities to schools and other educational facilities that will connect to the larger Fort Myers bicycle and pedestrian system.

## 7.2 LOGICAL PHASING AND PROJECT PRIORITIES

The following priorities will define how sidewalks and bicycle facilities are to be constructed in the City. Projects on the list have been prioritized, though

### 7.2.1 *Serving community first – Safe routes to school*



The first priority of the plan is to safely connect schools and parks to other community facilities and neighborhoods. With this, projects within one half-mile of schools and park facilities will be implemented first.

To refine that level of prioritization, it is useful to consider the distribution of need for pedestrian and bicycle facilities throughout the City. As identified in the analysis of existing conditions in Chapter 3, potential bicycle and pedestrian improvements have been based on two sets of criteria: 1) locations with high potential for walking and bicycling trips and 2) locations that are unsafe or generally unsupportive of pedestrian and bicyclist trips. These sets of criteria guide the general prioritization of improvements, focusing first on those potential improvements where demand or possibility for bicycle and pedestrian trips are high but where environmental conditions are not conducive to those mode choices. In other words, sub-prioritization is to be based on serving the areas of greatest need or potential in the community but where that need is not being met by inadequate facilities.

Within this set of criteria, as defined in Chapter 3, are land uses conducive to a large number of walking and bicycling trips, namely higher-intensity land uses with a greater mix of origins and attractions within short distances; high population density; and lower automobile ownership rates. When considering the social geography of Fort Myers, it is highly important to note that these different “criteria areas” are separated by barriers such as Cleveland Avenue (US 41) and Palm Beach Boulevard (SR 80).

*Higher sub-priority:* Projects that meet the ‘high potential’ evaluation criteria that also overcome barriers.

*Lower sub-priority:* Projects where serving areas of ‘high potential’ evaluation criteria can easily be accomplished without crossing barriers.

### 7.2.2 *Extending routes to schools and parks*

The second priority in implementing the plan is to continue the first priority’s routes connecting schools and parks to other community facilities and neighborhoods. This involves the extension of the area around schools and parks from one half-mile to one mile. Additionally, this priority seeks to provide adequate pedestrian facilities along all collector and arterial streets (as per the City’s policy as defined in Chapter 2).

The same sub-priorities help to refine the order in which improvement projects should be introduced:

*Higher sub-priority:* Projects that meet the ‘high potential’ evaluation criteria that also overcome barriers.

*Lower sub-priority:* Projects where serving areas of ‘high potential’ evaluation criteria can easily be accomplished without crossing barriers.



7.2.3 *Completing community connections*

The City's third priority should be on completing connections and providing sidewalks and bicycle facilities (according to the Master Plan) to all other City streets. Chapter 3 based its assessment of pedestrian friendliness on a Pedestrian Friendliness Index (PFI) model based on sidewalk and network connectivity. Though this measure is directed primarily at evaluating the pedestrian realm, it is a useful indicator for bicycle facilities as well in that areas with higher PFI scores support pedestrian activity and may feature facilities that help to provide a balance between vehicle travel and other modes. Thus, within this third priority, it is important to focus on projects that can bridge the gap in the pedestrian friendliness of the surrounding context.

*Higher priority:* Projects that meet the 'high potential' evaluation criteria in low pedestrian friendliness zones (i.e. zones with PFI scores below 0.5) as defined in Chapter 3.

*Lower priority:* Projects in high pedestrian friendliness zones.

7.2.4 *Specific Project Priorities*

Given these general priorities, the table below offers a list of projects as identified in the Master Plan Map in the order that they should be executed. It identifies the type of facility that each project represents as a part of the Master Plan Map.

**RECOMMENDED PROJECT PRIORITIES FOR NON-SIDEWALK BICYCLE/PEDESTRIAN FACILITIES**

PRIORITY	PROJECT	FACILITY TYPE	DESCRIPTION
1	Edgewood Avenue	Bike-Friendly Street	Street treatment/symbol markers and signposting from Marsh to Seaboard
2	Prince Street Connection	Bike-Friendly Street	Street treatment/symbol markers and signposting from South to Martin Luther King
3	South Street Connection	Bike-Friendly Street	Street treatment/symbol markers and signposting from Prince to Cortez
4	Cortez Boulevard Re-Striping	On-Street Bicycle Lanes	Street treatment to re-stripe existing travel lanes from Edison to Sandra around Fort Myers High School campus
5	Cortez Boulevard Added Lanes	On-Street Bicycle Lanes	Widen Cortez Boulevard between Sandra and Moreno to accommodate 5-foot bicycle lanes on either side of roadway.
6	Jackson Avenue Bicycle Lanes	On-Street Bicycle Lanes	Re-stripe existing wide lanes from Martin Luther King to Edison to accommodate 5-foot bicycle lanes.
7	Polk Street Connection	Bike-Friendly Street	Street treatment/symbol markers and directional signposting (indicating both route and turns/transitions) on Marion from V.S. Shoemaker to Polk, on Polk from Marion to Washington, and on Washington from Polk to Marsh.



8	Veronica S. Shoemaker Bicycle Lane	On-Street Bicycle Lanes	Add a bicycle lane along right lane of the on northbound carriageway from Martin Luther King to Michigan.
9	Sunset-Moreno Connection	Bike-Friendly Street	Street treatment/symbol markers and directional signposting on Sunset Road from Linhart to Moreno and on Moreno Avenue from Sunset Rd. to McGregor.
10	High Street Connection	Bike-Friendly Street	Street treatment/symbol markers and signposting from Martin Luther King to Michigan.
11	Hill Avenue	Bike-Friendly Street	Street treatment/symbol markers and signposting from McGregor to Cleveland.
12	Seminole Rail Corridor 1	Greenway Trail	14-foot paved trail within existing railroad right-of-way from Palm Avenue south. Connection should extend past Colonial Boulevard and Fort Myers city limits to connect to 10-mile Linear Trail.
13	Seminole Rail Corridor 2	Greenway Trail	14-foot paved trail within existing railroad right-of-way from Palm Avenue northeast to City Limits.
14	Lincoln Boulevard 1	On-Street Bike Lanes	Re-stripe existing travel lanes to accommodate 5-foot bicycle lanes on Lincoln Blvd from Palm to Ford
15	Veronica S. Shoemaker Multi-Use Path	Multi-Use Path	10-foot paved trail on the east side of roadway from Palm Beach to Michigan.
16	Hanson Street Multi-Use Path	Multi-Use Path	10-foot paved trail on the north side of roadway from Cleveland to Veronica S. Shoemaker.
17	Avocado Drive	Bike-Friendly Street	Street treatments/symbol markers and signposting from McGregor to street-end park at the end of Gasparilla Drive
18	Victoria Avenue	Bike-Friendly Street	Street treatments/symbol markers and signposting on Victoria Avenue from McGregor to Central.
19	Palm Avenue Connection	Multi-Use Path	Multi-Use Path along east side of Palm Avenue from Seminole Rail Corridor trail south to Martin Luther King
20	Winkler-Cleveland Bicycle Lanes	On-Street Bicycle Lanes	Construct 5-foot bicycle lanes on both sides of Cleveland Avenue north of Winkler Avenue to Jefferson Avenue to connect discontinuous east-west routes on those two streets.
21	Ford Street Trail	Greenway Trail	Greenway trail following general alignment of Ford Street north of Martin Luther King connecting to Billy's Creek.
22	Indian Street/B Street/C Street Connection	Bike-Friendly Street	Street treatments/symbol markers and signposting on Indian Street from Palm to Ford Street, providing a connection across Ford Street trail to B Street, continuing bike-friendly street treatment to Delaware Street, on Delaware from C Street to B Street, and east on B Street from Delaware to V.S. Shoemaker
23	Fowler Street Sidewalks	Sidewalks	Minimum 5-foot sidewalks on both sides of Fowler Avenue where they do not exist currently (from Martin Luther King to Hanson).
24	Edison Street Bicycle Lanes	On-Street Bicycle Lanes	Widen two-lane section of roadway to accommodate 5-foot bicycle lanes on each side from Cortez to Jackson.
25	Jackson Avenue Bicycle Lane Extensions	On-Street Bicycle Lanes	Widen two-lane section of roadway to accommodate 5-foot bicycle lanes on each side from Edison to Hanson.



26	Broadway Multi-Use Path	Multi-Use Path	Improve existing trail on the west side of the roadway to a minimum 10-foot width.
27	Carrell Road Bicycle Lanes	On-Street Bicycle Lanes	Widen two-lane section of roadway to accommodate 5-foot bicycle lanes on each side.
28	Carrell-Cleveland Connection	On-Street Bicycle Lanes	5-foot bicycle lanes on both sides of Cleveland Avenue south of Carrell Road to Jefferson Avenue to connect discontinuous east-west routes on those two streets.
29	Marsh-Michigan Link Bicycle Lanes	On-Street Bicycle Lanes	Widen two-lane section of roadway to accommodate 5-foot bicycle lanes on each side of Michigan from Martin Luther King to Marsh and on Marsh from Michigan to Edgewood Drive.
30	Ortiz Multi-Use Paths 1	Multi-Use Path	10-foot multi-use bicycle/pedestrian paths on both sides of Ortiz from Palm Beach Boulevard to Martin Luther King Boulevard.
31	Luckett Road	Multi-Use Path	10-foot multi-use bicycle pedestrian path on south side of Luckett from Nuna to Ortiz
32	Ortiz Multi-Use Paths 2	Multi-Use Path	10-foot multi-use bicycle/pedestrian paths on both sides of Ortiz from Martin Luther King to Colonial.
33	New York-Utana Connection	Bike-Friendly Street	Street treatments/symbol markers and signposting on New York from Nuna to Utana and on Utana from New York to Ballard
34	Van Buren Connection	Bike-Friendly Street	Street treatments/symbol markers and signposting from Palm Beach to Washington
35	Jefferson Bike Lanes	On-Street Bike Lanes	Continue bicycle lanes from existing terminus of bike lanes at Princeton west to McGregor.
36	V.S. Shoemaker Multi-Use Trail	Multi-Use Path	10-foot multi-use bicycle-pedestrian path on east side of roadway from Martin Luther King to North Colonial Linear Park.
37	Canal Street Connection	Bike-Friendly Street	Street treatments/symbol markers and signposting on Canal from Cleveland to Royal Palm and on Royal Palm from Canal to South
38	Ballard Road Bicycle Lanes	On-Street Bike Lanes	Widen two-lane section of roadway to accommodate 5-foot bicycle lanes on each side of Ballard from V.S. Shoemaker to Utana.
39	Thomas-Market Connection	Bike-Friendly Street	Extend Victoria Avenue bike-friendly street from Central to Ford using Thomas and Market Streets, making appropriate turns using Central and Palm to connect the route. Project includes signposting and street treatments/markers.
40	Colonial Boulevard Multi-Use Paths	Multi-Use Paths	10-foot paths on both sides of Colonial from Metro to Ortiz.
41	Deleon Street	Bike-Friendly Street	Street treatments/symbol markers and signposting on Deleon from Jefferson south to Deleon Park
42	Ardmore-Harvard-Euclid	Bike-Friendly Street	Street treatments/symbol markers and signposting on Ardmore from Cortez to Harvard, on Harvard from Ardmore to Euclid and on Euclid from Harvard to Victoria
43	Challenger Parkway	On-Street Bike Lanes	Widen two-lane section of roadway to accommodate 5-foot bicycle lanes on each side of Challenger from the Linear Park to Six Mile Cypress.



### 7.3 ENVIRONMENTAL IMPACTS

Many of the on-street facilities recommended in this plan are designed to use existing street sections, though off-street trails are proposed as well. Where trails do not currently exist, there are potential alignments that may require impacts to wetlands or other environmentally sensitive areas.

Additionally, it is a guiding principle of this plan that bicycle and pedestrian improvements can be accommodated *as much as possible* within existing infrastructure. That said, facilities are recommended to minimize the expansion of roadway or trail width and therefore impervious surfaces.

The greatest potential for environmental impact will likely come from expanding the sidewalk system in the city, especially on smaller local streets. Many of the city’s street sections employ an open swale system of drainage in which stormwater runoff is entirely treated and percolates on site. As sidewalks are constructed into the right-of-way, the open swales may need improvement (namely deeper excavation) in order to allow storage until the soils allow all runoff to percolate. Failure to improve the swales when sidewalks are constructed can lead to pooling and impassibility of the sidewalk.

### 7.4 PERMITTING REQUIREMENTS

Typically, permitting requirements are less complicated for bicycle facilities located on streets than they are for trails. The schedule below provides general guidance on requirements for trails, greenways and other bicycle facilities and notes caveats on scheduling expectations.

AGENCY	NATURE OF PERMIT	NORMAL SCHEDULE TIME
Southwest Florida Water Management District	Local endangered species impacts	Mandatory 30-day response, permit typically within 3-6 months
	Wetland impacts	
Army Corps of Engineers	Major wetland impacts	No mandatory response time
Florida Fish and Wildlife Commission	On-site endangered species	60-90 day response, permit typically 3-6 months
United States Fish and Wildlife Service	On-site endangered species	Minimum 90-day response
Florida Department of Environmental Protection	Health concerns, wastewater for facilities	30-day response
City of Fort Myers	Building permits for facility structures	30-45 days
	Street permits	60 days





## 7.5 SAFETY AND SECURITY

Ensuring safety of bicycle and pedestrian facilities is of utmost importance to the success of Fort Myers's bicycle and pedestrian network. With that, facility design and route designation have taken into account the users of the City's transportation system.

### 7.5.1 *Intersection treatments*

Around 40 percent of pedestrian collisions occur at roadway intersections, and an additional 8 percent at driveway or alley intersections. It has also been found that intersections are present in half of bicycle-motor vehicle collisions. A variety of factors play a role in these types of collisions, from the geometric design of the intersection (width, turning radius, auxiliary turn lanes) to speeds of motor vehicles to the age and behaviors of pedestrians, bicyclists, and motorists. The main objective of the research that has uncovered these findings is to develop hazard indices that will allow planners, engineers, and other practitioners to easily identify features at intersections that place pedestrians and bicyclists at risk. By then developing user-friendly guides to get the information in the hands of practitioners, the indices can be used to identify hazardous locations. Specific countermeasures can then be implemented to reduce certain types of hazards. Intersection indices should also be helpful in influencing future intersection design, as well as accommodating the needs of pedestrians with disabilities.

### 7.5.2 *At-Grade Crossings*

This plan does not recommend the implementation of grade-separated pedestrian crossings (pedestrian bridges) due to their high cost and limited convenience to the pedestrian or cyclist with regard to the destinations that he or she may be trying to reach. In general, challenges perceived to warrant the construction of a grade-separated pedestrian intersection should be surmountable by careful treatment of the roadway design itself.

### 7.5.3 *School Crossings*

It is recommended that the City work with the Lee County School District in coordinating the locations of school crossing guards to maximize safety for students using the designated routes to reach schools. As the recommendation of the sidewalk policy calls for the area within one half-mile of school sites to have sidewalks added first, as the network is completed the location of crossing guards will be consistent with a thorough network. Crossing guards should be located at intersections that can accommodate bicycle trips to schools as well.

The School District prepared a report for the City to identify problem areas and recommendations for particular pedestrian and bicycle enhancements to improve access to schools. These areas have generally guided the designations for pedestrian and bicycle facilities throughout the city, especially with regard to school locations, but the location of crossing guards should be used as a factor in identifying specific alignments for these facilities. When crossing guards have been located at key intersections due to



particular safety issues, the city should explore refining the location of a bicycle or pedestrian route to take advantage of this assistance being offered.

## 7.6 EDUCATIONAL PROGRAMS

Education is an important element in increasing bicycling while also improving safety. It is often assumed that as more trips are made through cycling and walking, the number of crashes will also increase. Other cities' bicycle and pedestrian programs have demonstrated that this need not be the case. Probably the most effective way to improve the safety of walking and cycling is simply to improve the quality of bicycle and pedestrian facilities, as has been described in previous chapters. For example, bicycle lanes result in less competition for road space between bicycles and motor vehicles, while narrowed lanes and more frequent crossing refuge areas mean lower motor vehicle speeds and shorter unprotected distances that pedestrians must cross and face potential vehicle conflict. However, bikeways, sidewalks and trails cannot do it alone; there is also a need for proper *education* of both youth and adults; pedestrians, cyclists and motorists alike.

*Education* has many different implications when it comes to bicycling and walking, these three being principal among them:

- Developing safe cycling skills in children;
- Teaching adult cyclists their rights and responsibilities; and
- Teaching motorists how to more effectively share the road with cyclists and pedestrians.

Education goes hand-in-hand with *encouragement* to increase cycling; together they improve skills and raise awareness. For example, a bicycle commute day encourages more people to ride for transportation purposes, but it also teaches urban riding skills and the importance of wearing a helmet. Teaching children cycling skills and the importance of wearing a helmet builds confidence as riders and encourages them to ride more both as children and future adults.

Encouragement includes such measures as:

- Providing a bikeway network, end-of-trip facilities, and bicycle-transit services as has been discussed in this section and Section 5.
- Holding encouragement events, such as bicycle commute days, business challenges (Eugene), BikeFest (Portland), BikeWeek (Boulder), and large-group public bicycle rides (Montreal, Seattle).
- Providing incentives or advocacy group membership, and other nonfinancial incentives.
- Providing information and/or maps with recommended cycling routes, end-of-trip facilities, bicycles-on-transit services, education programs, and other bicycle related activities.

### 7.6.1 Florida Traffic and Bicycle Safety Education Program



FDOT funds the Florida Traffic and Bicycle Safety Education Program based at the University of Florida. It provides funding annually (from the federal SAFETEA-LU program) through a mini-grant program designed to help school districts establish, maintain or enhance their traffic safety and education programs.

Currently, the process to enhance the grant system is defined in the following steps.

1. Each school forms a School Traffic Safety Team.
2. A bicycle/pedestrian safety component is written into the "School Improvement Plan" dealing with safe routes, a safety committee, and a safety education curriculum.
3. A school-wide travel survey is conducted at the beginning of the project to assess the various transportation modes students use to go to and from school.
4. A school site design analysis and a neighborhood site assessment are conducted to determine the conditions of street traffic, parent and bus drop-off locations, sidewalks, crossings, and the overall safety of existing routes to school.
5. Attitudinal surveys are administered to parents and students, identifying their concerns.
6. A list of planned improvements are generated and presented to the appropriate government entity for consideration and funding using a variety of monetary sources, including state/federal "safety" dollars and sidewalk "enhancement" funds.
7. Traffic Safety Training is given to physical education teachers, school resource officers, and crossing guards.
8. Finally, a Traffic Safety Education curriculum is implemented for students. Parents are encouraged to participate through "walking school bus" programs and other "safe" neighborhood initiatives.

To ensure a successful widespread education program, the City should work with the Lee County School Board in developing these "mini-programs."

## 7.7 FACILITY MAINTENANCE

While implementing bikeway facilities is important, keeping them in good condition is equally important. When a bicycle lane becomes filled with debris, for example, cyclists are forced into the motor vehicle lane. Poor bikeway maintenance can contribute to accidents and deter potential cyclists unwilling to risk flat tires, skidding on city streets, or navigating standing water due to inadequate drainage facilities. Sidewalks and other street infrastructure that do not undergo adequate maintenance may lead to such conditions as



collapsed sidewalks over drainage basins or unlevel concrete panels that deter movement in wheelchairs and provide a hazard to vision-impaired pedestrians.

Typically, the responsibilities for maintenance rest with the agency constructing the facility, though it is common for state departments of transportation to cede maintenance of sidewalks and street landscaping to local governments. The following recommended steps outline how the City of Fort Myers can assume maintenance responsibilities, dividing the larger responsibility of maintenance into different ‘stages’ or categories.

### *7.7.1 Assessment and Status Reporting*

As the resources needed to continually survey and report on sidewalks, bicycle trails and other bicycle and pedestrian facilities are potentially unrealistic for such a task, this plan recommends establishing a program that allows citizen response to facility problems. The City currently does not have a targeted program allowing public input on the condition of pedestrian and bicycle infrastructure to be directed to the Department of Public Works in an efficient manner.

Recommendations for this include updating the City website to include a prominently displayed feature allowing citizens to report on infrastructure deficiencies. Comparable programs collect information in standard mailing address format and are able to compile databases of reporting events tying an incidence of deficiency to the time it was reported, the location and the nature of the deficiency. The City can utilize its geographic information systems (GIS) resources to physically locate these deficiency events and to better direct Department of Public Works staff and resources to address repairs and improvements.

### *7.7.2 Maintenance and Repairs*

In the case on on-street bicycle facilities, the most important maintenance is in street sweeping and, where applicable, keeping curb-and-gutter drainage within its original design function so that standing water does not make bicycle facilities inoperable. The City can meet this objective by instituting a street-sweeping program on designated bicycle routes at least once per week.

For sidewalks, the City has already enacted an ordinance placing all responsibility for sidewalk maintenance on adjacent property owners. This responsibility shall include keeping the sidewalk free of dirt and normal debris and, when the responsibilities are within the abilities of property owners, maintenance of the facilities and preservation of their functional integrity.

However, it is often politically difficult to require private maintenance of the sidewalks in the public right of way and, in the absence of a strong enforcement schedule of this requirement, property owners may not be inclined to expend funds on what they see as a public facility. To address this, the City should consider a program offering property tax credits for any maintenance performed at a property owner’s expense. Public support for a sidewalk program such as that endorsed in this plan would likely be easier to maintain if the City makes a clear and proactive effort to acknowledge the benefit of sidewalks and the effort that private landowners extend in maintaining them.

### *7.7.3 Contingency Measures and Temporary Route Changes*



In the event of street closures due to special events, repairs and construction or weather-related conditions, appropriate measures should be taken to preserve continuity in the bicycle and pedestrian system.

#### *7.7.3.1 Selection of Alternative Routes*

Alternative routes must be determined to accommodate the bicycle or pedestrian route when its principal route is not passable. The alternative route should minimize deviation from the principal route by using parallel streets. When parallel streets are not available, the alternative route should divert the bicyclist and/or pedestrian to the nearest designated facility and should return to the principal route at the nearest possible point that it is operational.

If a particular facility type needs to be accommodated on a roadway type that is not compatible (for example, if a bike-friendly street route must be temporarily rerouted to a larger street which would not carry such a designation), the City Engineer should determine appropriate placement of the bicycle and pedestrian travel. The City Engineer may choose to allow the sidewalk to be used for bicycle travel but must ensure that any section of sidewalk carrying bicycle travel be appropriately signposted for the length of the detour (see Section 7.7.3.2).

#### *7.7.3.2 Signposting of Detour Routes*

Section 6.3.4 details a sign type (Type N, Temporary Construction Sign) to be used in signposting detours. The folding, ground-mounted nature of these signs is intended to maximize their flexibility and versatility.

In the event that these folding signs are not available, the City should explore the creation of smaller weather-resistant adhesive decals reflecting the design of the Trail Identity Signs (see Section 6.3.2 in the Wayfinding Chapter) to be applied to standard orange detour signs that are commonly used for vehicular detours per MUTCD standards. These decals would allow the vehicle-oriented detour sign to serve a dual purpose as long as the bicycle/pedestrian route shares the same temporary rerouting.

In general, detour signs should be placed at every turn in the route (one sign per direction) and if a route is following a continuous path, at a minimum of once every 1000 feet.

#### *7.7.3.3 Public Notice of Changes*

The City should include detours of bicycle and pedestrian routes in any public notice on street closures or detours either mailed or otherwise distributed. The following format is suggested as a basic guide for how to communicate route changes, including a sample map to show recommended routes for detours as per the City Engineer's discretion and the guidelines in Section 7.7.3.1:



## NOTICE OF TEMPORARY STREET CLOSURE

The City of Fort Myers will be closing Pine Street from 1<sup>st</sup> Street to 2<sup>nd</sup> Street from January 2, 2007 to January 5, 2007 for repairs. Only traffic coming from or going to a property on this section of Pine Street will be allowed to use the street. Residents are advised to use the following detours (see the map below for illustration):

- **VEHICLES:** 1<sup>st</sup> Street or 2<sup>nd</sup> Street south to City of Palms Boulevard and then north again to resume travel on Pine Street.
- **BICYCLE ROUTE:** 1<sup>st</sup> Street north to Elm Street and then continue on Elm to 4<sup>th</sup> Street, use 4<sup>th</sup> Street bicycle lane south to Pine Street and then resume travel on Pine Street.



### 7.7.4 Transportation Management Associations (TMAs)

TMAs are private, non-profit, member-controlled organizations that provide transportation services in a particular area, such as a commercial district, mall, medical center or industrial park. They are used as broad solutions to managing transportation problems or resource scarcity in these issues, primarily parking shortages and challenges in reaching a popular destination. They are staffed *Transportation Management*



*Coordinators* (TMC) are professionals who work for TMAs or individual employers. Many TMAs in the United States were created in response to parking shortages and other concerns related to private motorized vehicles, but some of the best known examples have developed into highly sophisticated organizations working with transit, ride-sharing and bicycle and pedestrian options. The Lloyd District TMA in Portland, Oregon, perhaps the nation's most successful TMA, currently consists of 69 member businesses representing approximately 9,000 employees.

One of the principal advantages of a TMA is that it allows private businesses and organizations (which can include local governments and chambers of commerce) to share the cost and responsibility of providing facilities and services that will benefit them directly. While this plan and the suggested policies in the first part of this chapter recommend actions for the City to take in promoting bicycle and pedestrian activity, a TMA allows private beneficiaries of a more balanced transportation system to share the effort of its success. Participation in the TMA is voluntary, but participants can benefit from the programs and services that the TMA provides.

This plan recommends that the City explore possibilities for creating a TMA to serve downtown Fort Myers in which the City would be an active participant. Downtown in particular is constrained from providing unlimited parking to meet the demands of its employees and visitors, and the expense the City incurs in providing additional parking facilities is proportionally greater downtown (both from higher land costs and the loss of property tax revenue from valuable downtown properties being absorbed by public ownership) than it would be elsewhere in the city. This ongoing transportation problem suggests that a solution based on sharing and allocating resources may be more appropriate. While parking is a major concern in Fort Myers, the TMA can take a role in providing options for users who do not wish to drive downtown and making this mode choice one that has equally accessible and safe facilities for the user.

Though downtown Fort Myers is a busy and active employment destination, it is relatively small compared to larger city downtowns and the City will likely need to take a proactive role in organizing and administering the TMA. As membership increases, the City would transition out of this administrative role and the TMA's membership board would hire staff to handle these responsibilities.

The following basic outline identifies the principal benefits for downtown Fort Myers in forming a TMA and lists recommended actions to help realize these benefits:

- Participants in the TMA have an immediate inventory of parking available through the City (including on-street parking located in City rights-of-way) and through other member participants. The TMA allows participants to articulate their parking demands and helps a limited supply be allocated to meet these demands. This practice is sometimes referred to as *parking brokerage* and reduces the need for providing additional parking.
- The TMA, composed of member organizations, can collect information from its members such as the locations of employee residences. This information can help the City and the TMA identify priority locations for transit service, reassess the priorities for bicycle and pedestrian facility enhancements listed in Section 6.2.4 of this plan chapter.
- The TMA is supported by member dues payments and, as a private entity, is responsible for staffing and providing for facilities. From the standpoint of bicycle and pedestrian needs, the TMA



can help to identify resources, such as bicycle storage and parking and shower facilities for cyclists, and make these resources available to users that are affiliated with TMA member organizations.

## 7.8 LAND PROTECTION MECHANISMS

In the case of off-street trails proposed as part of the City's Parks and Open Space Master Plan or Lee County's Greenways Master Plan, Fort Myers needs to ensure that land designated for these facilities remains available for them when they are to be constructed.

Using the Bicycle and Pedestrian Master Plan Map (in Chapter 5 and Appendix A) as an official designation of planned and intended routes will allow the City of Fort Myers to retain the routes designated when development activity occurs in the area of their alignment.

Chapter 2 discussed the concept of railbanking as part of the Rails to Trails Act. Using this approach, the City of Fort Myers (in partnership with Lee County) can secure rail rights of way once legal abandonment has occurred but before the rail facilities have been removed.

### 7.8.1 *Lee County Conservation 2020*

Since its inception in 1997, the Lee County Conservation 2020 Program has purchased over 11,000 acres of environmentally sensitive lands throughout Lee County. Some acquisitions are small and buffer existing preserve areas acquired through other conservation lands programs such as the State's Florida Forever. Other acquisitions have connected important flow-ways such as the 5 parcels acquired between the Lee County and Florida Fish and Wildlife Conservation Commission co-managed Hickey's Creek Mitigation Park and the East County Water Control District managed Greenbriar Swamp. Also, large acquisitions like Prairie Pines Preserve, over 2,700 acres, and Wild Turkey Strand Preserve, over 2,500 acres, have protected large contiguous landscapes and established opportunities to create new corridors for wildlife usage and public enjoyment.

There are specific public use goals for Conservation 2020 that are compatible with those of the Greenways Program in that hiking/pedestrian trails and non-motorized, off-road biking trails will be provided where appropriate. Such trails established will help make connections to other trail systems and provide important facilities along the way such as parking, restrooms, picnicking areas and water access for non-motorized vessels.

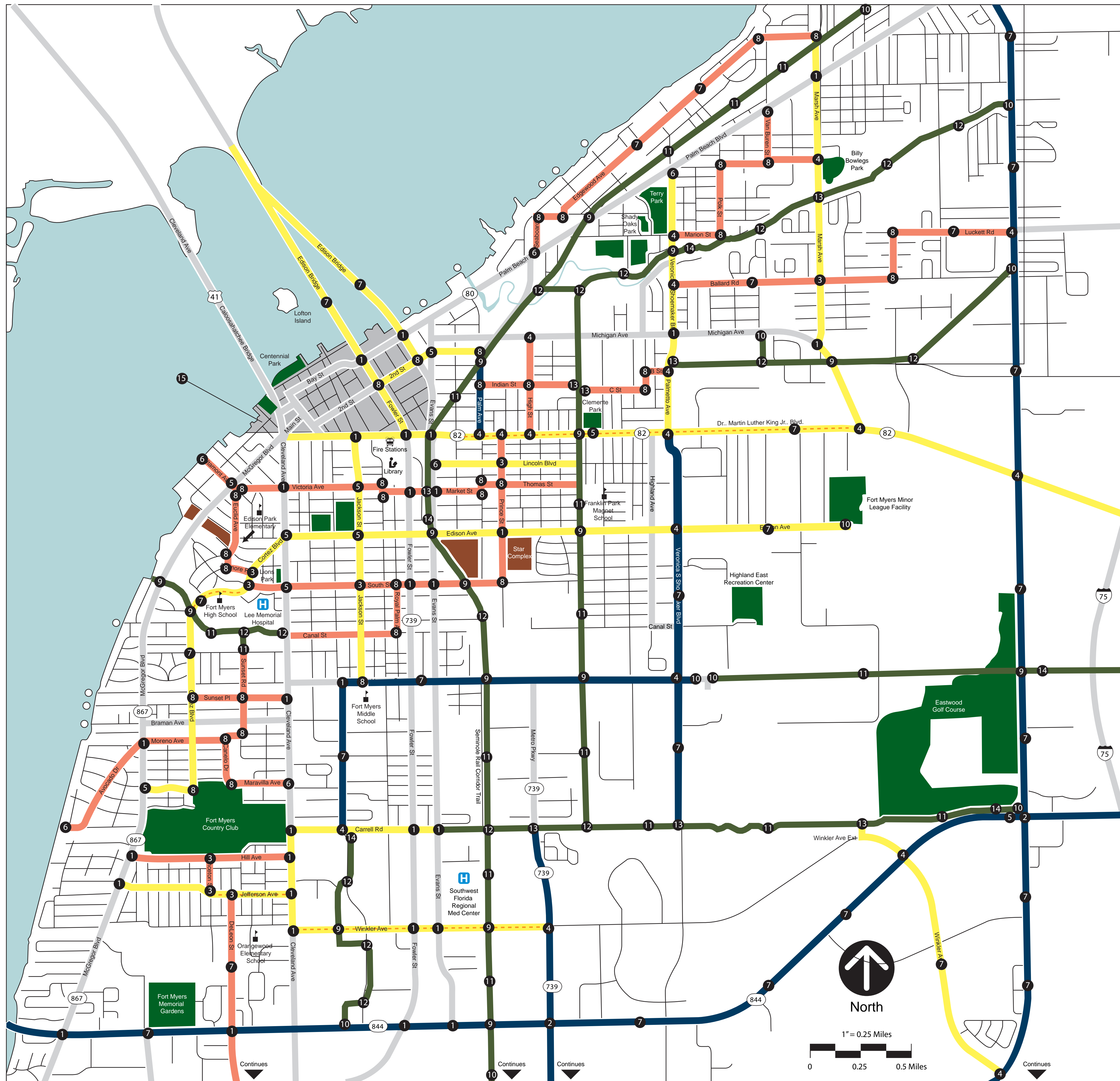




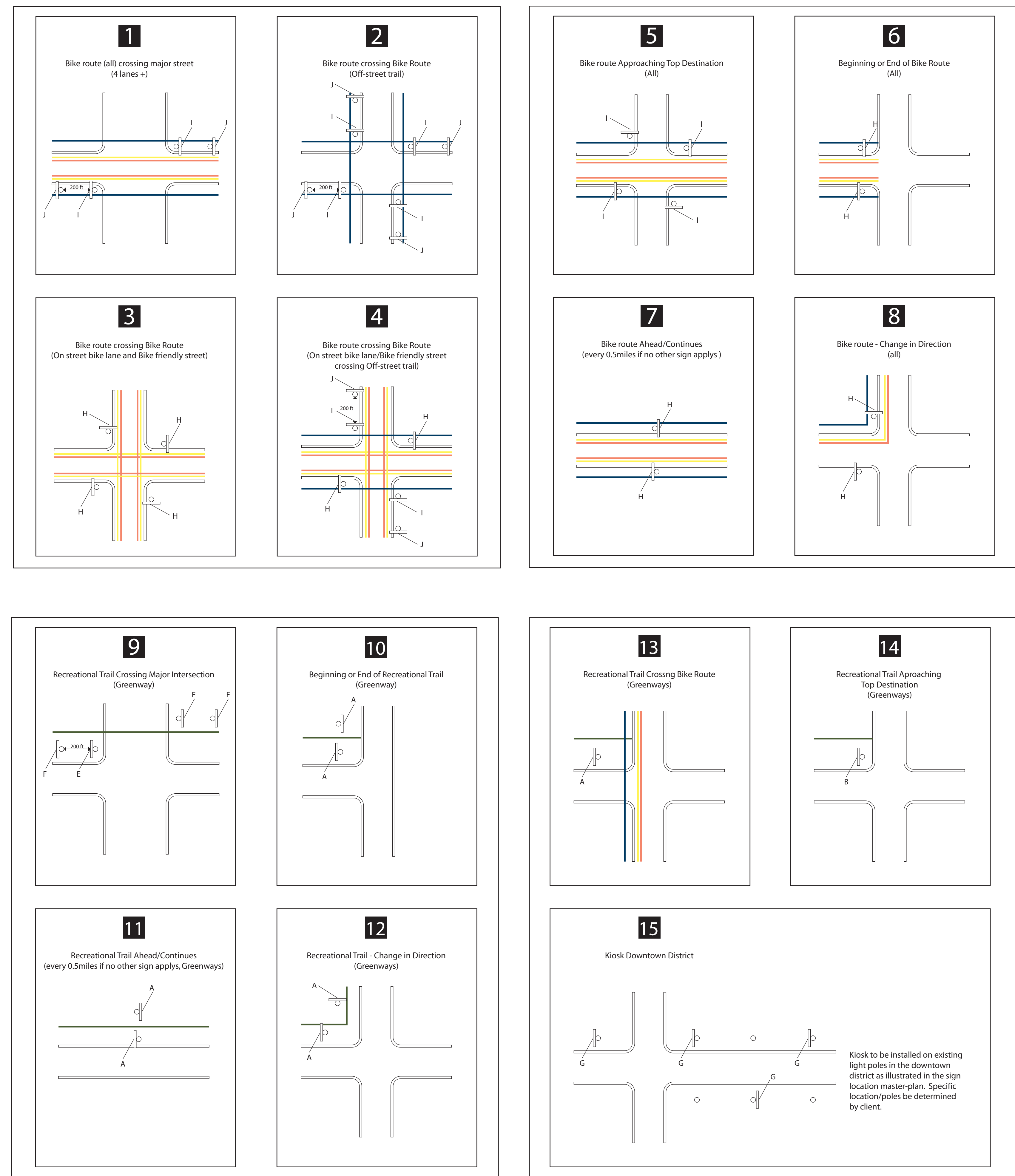


# Wayfinding Signage Master Plan

See Chapter 6 of the Bicycle-Pedestrian Master Plan Report for a more detailed explanation of the Wayfinding Signage.



## Signage Configuration Diagrams (refer to map for locations)



### Bicycle & Pedestrian Facilities Legend

- On street bike lane**  
Dedicated facilities on the street (inside curbs) providing the "main street" of the bicycle network.
- Bike friendly street**  
Streets with edge treatment and calming that carry designated bicycle routes, but do not have standard-width dedicated lanes.
- Off-street trail**  
Single-use bicycle trails or shared pedestrian trails parallel to streets and roads. These off-street trails are separate from the roadway.
- Greenway**  
Similar trail facilities to off-street trails, though generally located in designated park or nature area.
- Existing lanes are indicated with overlain dashed lines**
- Major Streets**
- Minor Streets**

- Hospitals**
- Library**
- Fire Dept.**
- Schools**
- Street-end Park Along River**
- Bus Routes**  
[www.ridethestran.com](http://www.ridethestran.com)



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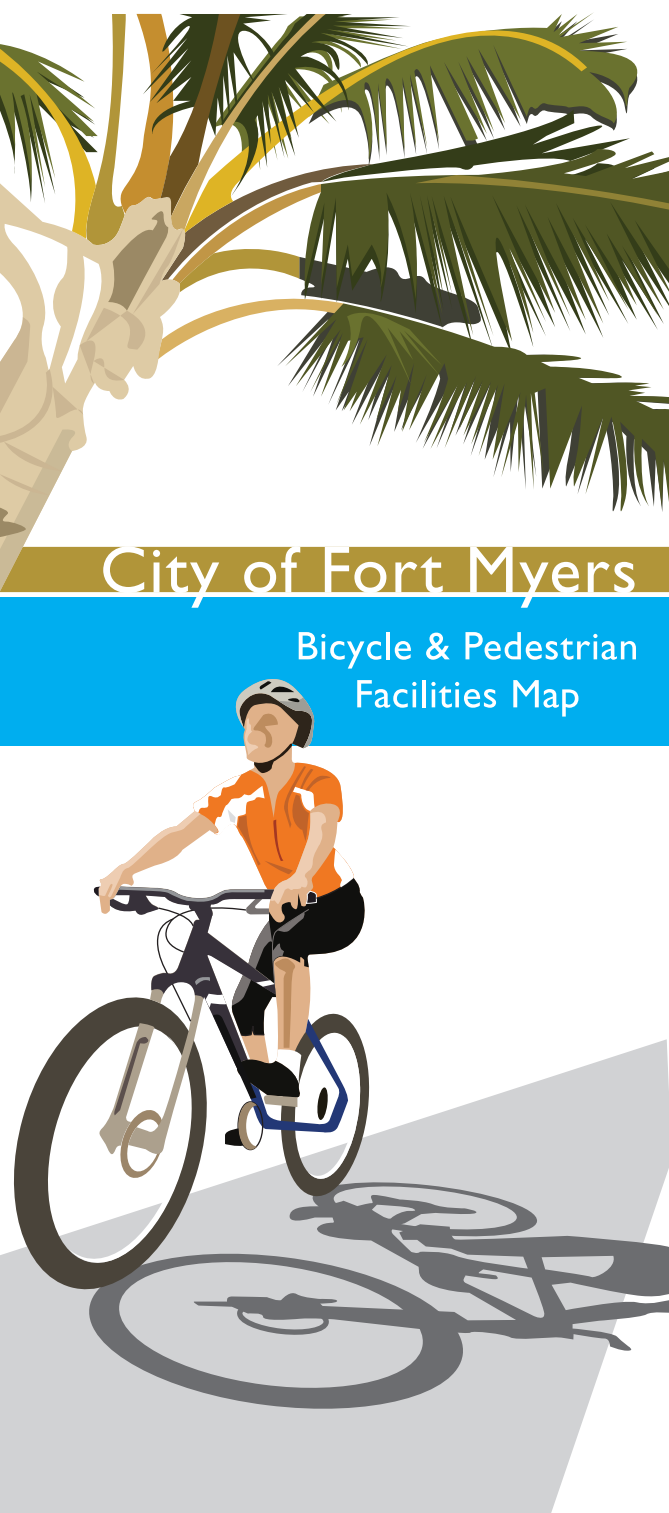
# City of Fort Myers

Bicycle trails map on reverse



You are Here  
Bicycle trails map on reverse

Prepared by:  
GLATTING JACKSON KERCHER ANGLIN  
www.glatting.com • www.walkable.org



City of Fort Myers  
Bicycle & Pedestrian Facilities Map

## Florida's Bicycle Safety Laws

**Legal Status – Bicycles are Vehicles**  
In Florida, the bicycle legally defined as a vehicle. Bicyclists have the same rights to the roadways and must obey the same traffic laws as the operators of other vehicles. These laws include stopping for stop signs and read lights, riding with the flow of traffic, using lights at night, and yielding the right-of-way when entering a roadway.

With few exceptions, there is only one road and it is up to bicyclists and motorists to treat each other with care and respect. Strict adherence to the law in the foundation for this respect.

**Traffic Law Highlights**  
Bicycle Regulations (see Section 316.2065, F.S.)

A bicyclist must obey all traffic controls and signals.  
A bicyclist must use a fixed, regular seat for riding.

No bicycle may be used to carry more persons at one time than the number for which it is designed or equipped, except that an adult rider may carry a child securely attached to his or her person in a backpack or sling, a bicycle rider must carry any passenger who is a child under 4 years of age, or who weigh 40 pounds or less, in a seat or carrier that is designed to carry a child of that age or size and that secures and protects the child from the moving parts of the bicycle. A bicycle rider may not allow a passenger to remain in a child seat or carrier on a bicycle when the rider is not in immediate control of the bicycle.

A bicycle rider or passenger who is under 16 years of age must wear a bicycle helmet fastened securely to the head. The helmet must meet the standards of the American National Standards Institute (Z90.4) or Snell Memorial Foundation (1984) or Consumer Product Safety Commission (1997).

At least one hand must be kept on the handlebars while riding.

Parents and guardians must not knowingly allow a child or minor to violate any provision of this section.  
Every bicycle must be equipped with a brake or brakes which allow the rider to stop within 25 feet from a speed of 10 miles per hour on dry, level, clean pavement.

**Sidewalk Riding (see Section 316.2065, F.S.)**  
When riding on sidewalks or in crosswalks, a bicyclist has the same rights and duties as a pedestrian.

A bicyclist riding on the sidewalk or in crosswalks must yield the right-of-way to pedestrians and must give an audible signal before passing.

Fort Myers local governments prohibit sidewalk riding in the downtown area. Local law enforcement agencies can provide copies of local ordinances.

**Lighting (see Section 316.2065, F.S.)**  
A bicycle operating between sunset and sunrise must be equipped with a lamp on the front exhibiting a white light visible from 500 feet to the front and both a red reflector and a lamp on the rear exhibiting a red light visible from 600 feet from the rear.

Additional lighting is permitted and recommended.

**Roadway Position (see Section 316.2065, F.S.)**  
A bicyclist operating on a one-way street with two or more traffic lanes may ride as close to the left hand edge of the roadway as practicable.

Riding in single file is required except on bike paths or parts of roadways set aside for exclusive use of bicycles, or when two people riding side-by-side within lanes will not impede traffic flow.

**Left Turns (see Section 316.151(1)(b) and (c), F.S.)**  
A bicyclist intending to make a vehicle left turn is entitled to full use of the lane from which the turn is made. After scanning, signaling, and moving to the center of the lane, the bicyclist must check the signal, then proceed when it is green and safe to do so.

In addition to the normal vehicle left turn, a bicyclist may proceed through the right-most portion of the intersection and turn as close to the curb or edge as possible at the far side. After complying with any official traffic control device, the bicyclist may proceed to the new direction of travel.

Another option available to a bicyclist is to dismount and walk through the intersection in the crosswalk like a pedestrian.

**Signaling Turns (see Section 316.155(2) and 316.157(2), F.S.)**  
A signal of intent to turn must be given during the last 100 feet traveled by the vehicle before turning. If a bicycle needs both hands for control, the signal need not be given continuously.

A bicyclist may signal intent to turn right either by extending the left hand and arm upward or by extending the right hand and arm horizontally to the right side of the bicycle.

**Headsets (see Section 316.304.F.S.)**  
A bicyclist must not wear a headset, headphones, or other listening device other than a hearing aid when riding. Wearing a headset blocks out important audio cues needed to detect the presence of other traffic.

**Civil Penalties (see Section 318.18(1), (2) and (3), F.S.)**  
Civil penalties may be issued for violations of bicycle laws as well as the moving and non-moving violations.

**Limited Access Facilities and Interstate Highways (see Section 316.091, F.S.)**  
Bicycles shall not operate upon a limited access facilities or interstate highways.

**Local Ordinances**  
Local governments can adopt ordinances regulating bicycle riding. Some local governments may also have regulations and licensing ordinances. Sidewalk riding may be prohibited entirely or only in certain areas such as business districts. Local law enforcement agencies can provide copies of local ordinances.

### About this map:

This map illustrates the City of Fort Myers bicycle and pedestrian facilities. It differentiates between existing and proposed facilities and distinguishes between different types of paths. The goal is to help you enjoy this beautiful city and take advantage of alternative forms of transport.

Information Credit:  
Bicycle Facilities of Lee County Brochure

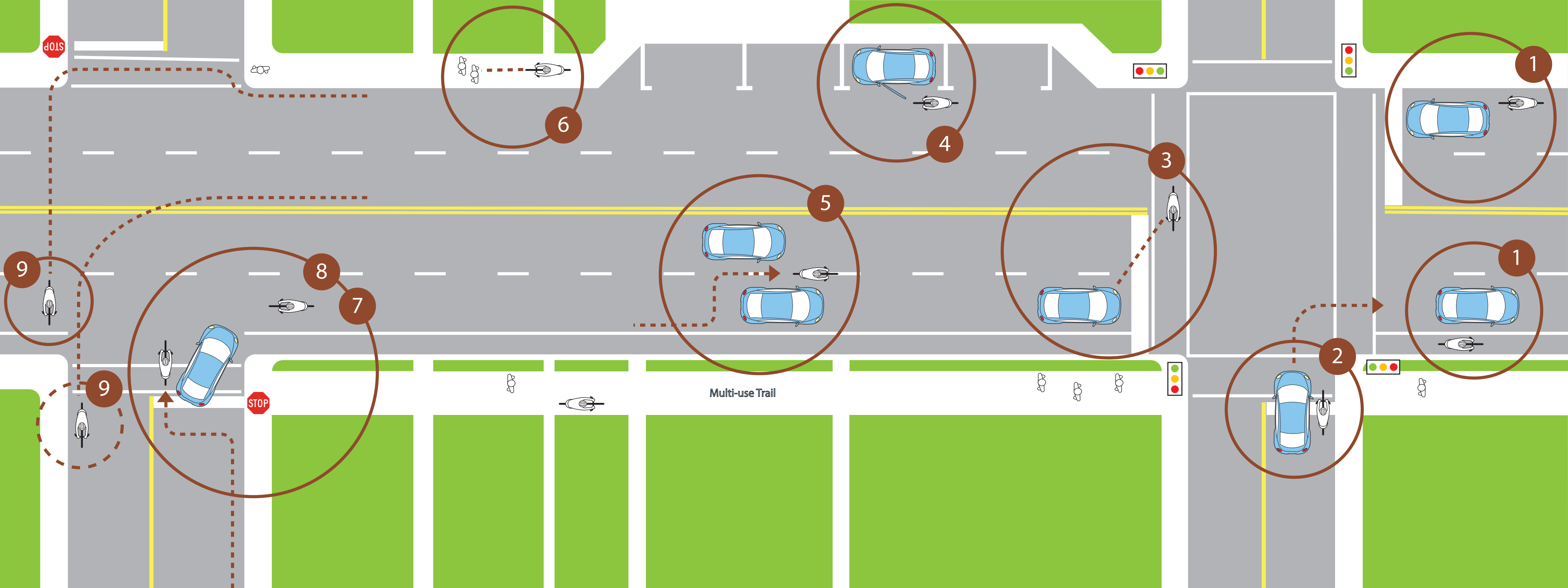
## Bicycle Safety Information

- Obey Applicable Lane Rules**  
Ride with Traffic flow and as far right as practical. Use bike lane if available. Ride to right-most portion of road when wide enough to share with cars. When lane is too narrow to share safely, ride further out in traffic lane.
- Do Not Pass on the Right**  
Do not overtake an automobile when approaching an intersection or when the automobile has a turn signal flashing.
- Scan the Road Around You**  
Watch constantly for cars, people, debris, grates, etc. Make eye contact with drivers. Assume they don't see you until they stop. Learn to look over your shoulder without losing balance or swerving left. Some bicyclists use rear view mirrors.
- Watch for Opening Car Doors**  
Whenever possible, ride about a car door's width away from parked cars.
- Never Weave Between Cars**  
Ride in a straight line and avoid weaving between parked cars. Motorists may not see you when you re-enter traffic flow.
- Ride Slowly on Sidewalks**  
On sidewalks, pedestrians have the right-of-way. You must give them an audible warning when you pass (voice, bell, or horn). Do not cross driveways or intersections without looking carefully for traffic. **Riding on sidewalks is prohibited in the downtown area (illustrated in map above).**
- Never Ride Against Traffic**  
Motorists do not look for bicyclists riding on the wrong side of the road. In Florida the bicycle is legally defined as a vehicle. Bicyclists must obey the same traffic laws as operators of other vehicles. This rule does not apply when riding on sidewalks.
- Follow Lane Markings**  
Do not turn left from the right lane. Do not go straight in a lane marked right-turn only.
- Choose the Best Way to Turn Left**  
There are two ways to make a left turn: 1. As in driving, move into the left lane and turn left. 2. Like a pedestrian, ride straight to the far side crosswalk, and walk your bike across. Always use hand signals.
- Use Light at Night**  
The law requires a white headlight (visible for at least 500 feet ahead), and rear reflector or trial light (visible at least 600 feet from behind). Nearly 60 percent of all fatal bicycle accidents occur during twilight and night hours.
- Use Hand Signals**  
Hand signals tell motorists and pedestrians what you intend to do. Signal as a matter of law, of courtesy, and of self-protection.
- Observe Skill Level of Off-Road Trails**  
Off-road trail systems vary in levels of difficulty. Choose a trail system fit for your personal skill level. To prevent injury, always wear a helmet while riding off-road.
- Always Wear a Helmet**  
Nearly 75 percent of all bicycle-related deaths result from head injuries. Wearing a helmet is optional for persons 16 years or older, but Florida law requires a bicycle rider or passenger under 16 to wear a bicycle helmet meeting specific safety standards.

### The Street-Smart Cyclist

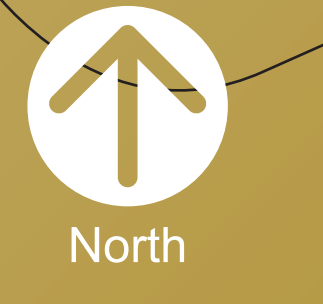


Obey Traffic Signs, Signals and Laws  
Bicyclists must obey all the rules that apply to the driver of a motor vehicle if they are to be taken seriously by motorists.



# Bicycle & Pedestrian Facilities Map

Detail downtown map on the reverse.



1" = 0.25 Miles  
0 0.25 0.5 Miles

## Top Destination

### Local Bicycle Shop Information

Trikes & Bikes Pro Shop Inc  
3453 Fowler St  
Fort Myers, FL 33901  
(239) 936-1851

Bike Route Inc  
8595 College Pkwy # B1  
Fort Myers, FL 33919  
(239) 481-3376

Fort Myers Schwinn Cyclery & Fitness  
3630 Cleveland Ave  
Fort Myers, FL 33901  
(239) 939-2899

A J Barnes Bicycle Emporium  
15248 S Tamiami Trl # 150  
Fort Myers, FL 33908

- 1 Edison and Ford Winter Estate 2350 McGregor Blvd Fort Myers, FL 33901
- 2 Centennial Park
- 3 Harbor Side Event Center 1375 Monroe Street Fort Myers, FL 33901
- 4 Lee County Sheriff's Office 1700 Monroe St Fort Myers, FL 33901
- 5 City Hall 2200 2nd St Fort Myers, FL 33901
- 6 SW Florida Museum of History 2300 Peck St, Fort Myers, Florida 33901
- 7 Imaginarium 2000 Cranford Ave Fort Myers, FL 33916
- 8 Skatium 2250 Broadway Fort Myers, FL 33901
- 9 City of Palms Park Red Sox Training Facility 2201 Edison Ave, Fort Myers, Florida 33901
- 10 Stars Complex 2880 Edison Ave Fort Myers, FL 33916
- 11 Fort Myers Country Club 3591 McGregor Blvd, Fort Myers, FL 33901
- 12 Eastwood Golf Course 4600 Bruce Herd Lane Fort Myers, FL 33994
- 13 Calusa Nature Ctr. & Planetarium 3450 Ortiz Ave Fort Myers, FL 33905

## Legend

### Bicycle & Pedestrian Facilities

#### Existing Facilities

Existing lanes are indicated with overlain dashed lines

#### Proposed Facilities

**On street bike lane**  
Dedicated facilities on the street (inside curbs) providing the 'main street' of the bicycle network.

**Bike friendly street**  
Streets with edge treatment and calming that carry designated bicycle routes, but do not have standard-width dedicated lanes.

**Off-street trail**  
Single-use bicycle trails or shared pedestrian trails parallel to streets and roads. These off-street trails are separate from the roadway.

**Greenway**  
Similar trail facilities to off-street trails, though generally located in designated park or nature area.

Major Streets  
Minor Streets

Hospitals	Library
Fire Dept.	Street-end Park Along River
Schools	Bus Routes www.ridetheetran.com



## Using a Bus Bike Rack:

- 1
- 2
- 3
- 4





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Meeting Minutes: Ft. Myers Bicycle and Pedestrian Master Plan

Meeting Date: 03/28/07

Project No: 19876

Location: Lee Memorial Hospital – Auditorium

Purpose: Draft Master Plan Review

Attendees: Client: Saeed Kazemi, Leigh Eby Scrabis, Susan Teston – Lee County Schools  
Glatting Jackson: Joe Webb, Joel Mann, Jonathan Mugmon, Payaal Patel  
Kittelson and Associates: Sagar Onta, Jamie Parks

Compiled By: Joe Webb

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**Public Comments:**

- 10 Mile Canal Greenway stops at Crystal Street. The Plan proposes connecting to this greenway by using the Seminole Railroad corridor.
- The crossings at Daniels and Colonial are the biggest challenges
  - The Presbyterian Home near Altamonte Street is a concern because many elderly people are trying to cross Colonial.
- Marking and Signage is critical
  - More signs
  - Color Pavement
- Multi-use trails need to be 10-12' wide.
- Biking through some of the industrial areas is not safe
  - The City has plans for adding lighting.



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- Runners prefer to run on soft surfaces
  - Shell rock
  - Asphalt
  - Not concrete
- Bikes should not be on sidewalks
- The City needs better law enforcement of the rules
- The consultants should look at comparable communities and stress the cultural difference that need to occur to further accept walking and biking as viable alternative to driving.
- Access to schools is important
- Need to identify trip end facilities on the map
  - The City needs more bike racks
- Several State roads have double right on red, which ruins the opportunity for bike lanes. The consequences of this need to be impressed on the FDOT.
  - Daniels Parkway
  - 6 Mile Cypress
  - Interstate interchanges
- Crossing the big streets is the most dangerous part for pedestrians
  - Can't reduce street capacity
  - Need to educate and encourage the public to cross at the intersections rather than mid-block.
- Need to add key to maps on slides for readability.



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Meeting Minutes: Ft. Myers Bicycle and Pedestrian Master Plan  
Meeting Date: 03/29/07  
Project No: 19876  
Location: Ft. Myers City Hall – 4<sup>th</sup> Floor Conference Room  
Purpose: Draft Master Plan Review  
Attendees: Client: Saeed Kazemi, Al Abdo, Board Members  
Glattig Jackson: Joe Webb, Joel Mann, Jonathan Mugmon,  
Payaal Patel  
Kittelsohn and Associates: Sagar Onta, Jamie Parks  
Compiled By: Joe Webb

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- Only three board members attended the meeting, therefore there was no quorum.
- Review Comments:
  - Make all signs with international symbols instead of English words
  - Need to display existing facilities proposed facilities differently on the map
  - Fowler and Evans Streets are designed to be one way couplets
    - Saeed will provide copies of these plans
  - The plan should show how the City plans are tying in with the County plans around the perimeter of the City.
  - Education is important also.
    - Need to educate people as to the high risk of crossing in the middle of the block
    - Need a Jaywalking ordinance and need to enforce it.



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Meeting Minutes: Ft. Myers Bicycle and Pedestrian Master Plan  
Meeting Date: 03/29/07  
Project No: 19876  
Location: STARS Community Center  
Purpose: Draft Master Plan Review  
Attendees: Client;  
Glattig Jackson: Joe Webb, Joel Mann, Jonathan Mugmon,  
Payaal Patel  
Kittelsohn and Associates: Sagar Onta, Jamie Parks  
Compiled By: Joe Webb

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- Public Comments:
  - A lot of existing bike paths lack continuity and end suddenly.
  - A change in the path's surface, i.e. from asphalt to concrete, is often a cause for confusion for cyclists.
  - Some of the DOT roads like Daniels Pkwy are so wide, they are hard to cross.
  - Dr. MLK Jr. Blvd is an especially difficult road to cross.
  - Pedestrian bridges should be included as necessary to link in neighborhoods
  - The plan should be implemented as soon as possible
  - Many of the long term corrections to the main streets may take time to evolve, but the City should do some of the simpler things as soon as possible.
    - Clear signage could greatly help to guide users through the viable alternate street routes
  - Painting of lanes and adding share markings could greatly enhance safety.





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Meeting Minutes: Ft. Myers Bicycle and Pedestrian Master Plan

Meeting Date: 03/29/07

Project No: 19876

Location: Fort Myers City Hall

Purpose: Advisory Board Meeting

Attendees: Client: Chairman Greg Rawl, Board Member David Senger,  
Public Works Director Al Abdo, City Engineer Saeed Kazemi,  
Staff Engineer Retno Widinarti  
Glatting Jackson: Joe Webb, Joel Mann, Jonathan Mugmon,  
Payaal Patel  
Kittelson and Associates: Sagar Onta, Jamie Parks  
McMahon Associates: Mike Spitz

Compiled By: Joe Webb

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**Item No. 1** Bicycle Pedestrian Master Plan Presentation by Glatting Jackson and Associates. Joe Webb from Glatting Jackson and Associates stated that they would talk about the analysis of the development of the Bicycle Pedestrian Master Plan. Joel Mann from Glatting Jackson and Associates will talk about the Bicycle Pedestrian Master Plan vision of how we envision meeting the needs of the community of bicyclists and pedestrians. Jonathan Mugmon from Glatting Jackson will talk about way finding and next steps, and finally priorities, questions and comments will be discussed. Mr. Webb stated that this is a continuation of the study from Burton and Associates and Glatting Jackson and Associates that started in 2005 with the Parks and Recreation Needs Assessment Study. Mr. Webb stated that the Needs Assessment Analysis identifies bicycle pedestrian facilities being the top priority. Mr. Webb stated that number one (1) on the list was bicycle pedestrian and number three (3) being safe sidewalks and shade. Mr. Webb stated they went on to develop a Parks and Open Space Master Plan which laid out trails and greenways throughout the City, but this effort has included an analysis of transportation and understanding more of the conductivity in the city as a whole. Mr. Webb stated that they are trying to develop this plan in partnership with multiple agencies and organizations, which they have been meeting with including The Bicycle Pedestrian Advisory Board, Lee County and The Florida Department of Transportation. Mr. Webb stated that the Southwest Florida Water Management has a big say on some or the barrier roads in the City, which makes it a difficult challenge. Mr. Webb stated that intergrading this with many other plans in the city he feels that the Downtown Study is an excellent plan and Lee County's Greenways and Trail Plan is a great plan for them to work



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with providing a plan that would allow people to get from their homes into the regional system and a statewide system. Mr. Webb stated that this is the first part of the public review and input process which consist of analysis and from there we will have other agencies reviewed starting with The Florida Department of Transportation being first and finally a presentation with the city council within the next few months. Sagar Onta from Kittleson and Associates stated that their analysis to identify the priority locations that have efficient and potential usage was from information provided by the U.S. Census Bureau crash data reports, GIS information and land use data (as far as different kinds of shopping areas) and other land usage data from The City of Fort Myers. Mr. Onta stated that they reviewed areas with potential for high trip generation and areas friendly and comfortable for bicycles and pedestrians. Mr. Onta stated that for the high trip generation list of criteria's that were looked at were population density, persons in households without cars, immigrant population, transit routes, schools and shopping areas. Jamie Parks from Kittleson and Associates stated that there are four (4) main high-density areas for walking and bicycling one (1) Palm Beach Boulevard, two (2) Dr. Martin Luther King Junior Boulevard, three (3) the corridor of Dr. Martin Luther King Junior Boulevard between Cleveland Avenue and Fowler Street and four (4) being south of Colonial Boulevard. Mr. Parks stated that the crash history for pedestrians is one (1) Cleveland Avenue and Victoria Street having two (2) fatalities and two (2) Palm Beach Boulevard near March Avenue having (4) fatalities, altogether fourteen (14) total pedestrian fatalities citywide in the last five (5) years most of them near schools. Mr. Parks stated that the bicycle crash history is two (2) fatalities. Mr. Parks stated that for the crash history for bicycles Cleveland Avenue is the only corridor that stands out as having the higher crash rate, other then that they are spread out all around the city. Mr. Parks stated that based on this analysis there are three (3) recommendations for priority improvements for pedestrians one (1) being safety improvements at the high crash locations at Palm beach and Cleveland Avenue, two (2) is to improve sidewalk connections for the high potential areas for walking and biking trips and three (3) is placing sidewalks along major roads including transit routes. Mr. Parks stated that the goal is to connect all destinations in Fort Myers, the major streets being Palm Beach Boulevard, Dr. Martin Luther King Junior Boulevard and Cleveland Avenue. Joel Mann from Glatting Jackson and Associates stated that the big issues of safety and accessibility are a major concern. Mr. Mann stated that our primary challenge is the large streets that are not safe and are difficult to work with because of the design. Mr. Mann stated that the strong network allows for parallel routes to work with for a first step to improve for bicycles and pedestrians. Mr. Mann stated that the primary issue is not pure recreation and we see that our plan can be a part of a balanced transportation system network for all users in mind. Mr. Mann stated that there are good opportunities to use the Seminole Gulf Railway and canals that may be parallel to a main corridor that can connect long distances. Mr. Mann stated that multi use trails are recommended along major roads with safe accessible widths to accommodate pedestrians and bicyclists. Mr. Mann stated that urban streets with a bike lane in the street are safer because of all the driveways and that symbols and colors are used in the bike lanes for safety. Mr. Mann stated that the Lee County Greenways Master Plan has trailways coming into the city to connect to the full network. Mr. Mann stated that transit routes need sidewalks for safety for pedestrians coming and going. Payal Patel from Kittleson and Associates stated that as they looked at the trail system they



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considered the concerns and terms of the user to see what they wanted for enhancements as they go along the trails. Ms. Patel stated that the main concern was getting from one place to another, the time from getting from one place to another, safety; enjoy ability in the environment, and engaging with other users such as other bicyclists, other pedestrians and vehicles. Ms. Patel stated one of our goals is to create a network of signs to work in conjunction each other. Ms. Patel stated that in addition we want to highlight key decision points users may encounter so that they can be directed to local attractions and top destinations they may want to see. Ms. Patel stated that the sign system is compatible with the new system that is going into place for the downtown area, which compliments it and that will be done with directionals, skateways and kiosks. Ms. Patel stated that as part of the sign system there are five (5) important things about the area we are concerned with being paths, ditches, districts, landmarks and edges. Ms. Patel stated that they also compared Fort Myers to other cities in Florida and around the country that were using sign systems and the one in Sarasota is very interesting and works very well. Ms. Patel stated that as part of their recommendation there would be two (2) systems, one (1) would go on bike routes and the other would go on recreational trails and sign logos would be developed for users to recognize. Ms. Patel stated that the signs would be for multi use trails and signs would be accommodating all kinds of users. Ms. Patel stated there would be a trail identification system so users will know which trail they are on and where you are going. Ms. Patel stated that the trail directionals would let users know of any coming up attractions, the street users are on and the way users are going. Ms. Patel stated that there will be trail warning signs for any change of environment or conditions that will be coming up that users need to be aware of. Ms. Patel stated that there will be traffic warnings and stop signs with trail crossing signs to warn users to slow down before the stop signs. Ms. Patel stated that kiosks would be used mainly around downtown on existing sign poles so no new sign poles will need to be installed, which will help walk ability. Albert Abdo the Director of Public Works stated that all trail signs need to be recognizable for international visitors because of vacationers that do not read English. Ms. Patel stated they would be installing signs that are very recognizable. Mr. Mugmon stated they are still in the draft stage and will be receiving that information to use international signs. Ms. Patel stated users could plan a trip by using the maps. Mr. Webb stated our next step will be to incorporate the public input we received last night and today, sit before and discuss with the FDOT in Bartow Florida to see if there will be any specific conflicts, then review again and state what more was found to the Bicycle and Pedestrian Advisory Board. Chairman Greg Rawl stated that the state roads would be the issue when meeting with the Florida Department of Transportation. Mr. Webb stated that in the long term when these roads are rebuilt they need to be bicycle and pedestrian friendly and at crossings we need to make sure the timing and other things are appropriate and not ignored. Mr. Webb stated we are trying to solve the short term, by creating conductivity by the adventitious part of our good bone structure but on the other hand the long term needs to be looked at in a different fashion. Mike Spitz from McMahan and Associates stated that in addition it is not only a state road issue it is a funding issue. Mr. Webb stated they are hoping to present their plan to council within the next couple month to get final approval. Mr. Kazemi stated that for the Bicycle and Pedestrian Advisory Board's information that Glatting Jackson and Associates had a similar meeting last night with the public to discuss the



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McGregor Boulevard area. Mr. Kazemi stated that after this meeting today they will meet to discuss the eastern portion of the city and again tonight to discuss the central portion of the City to cover all areas. Mr. Kazemi stated that east of Interstate 75 does not need to be discussed because it is newly constructed and sidewalks are already in place. Board Member Senger stated that Colonial Boulevard has no sidewalks. Chairman Rawl stated that the recommendation of the connectivity map recommended all streets should have sidewalks and to do an overlay of the proposed sidewalks on a map of streets where they are missing for comparison. Chairman Rawl stated that the comparison map would be helpful for Mr. Kazemi and the City plans for the future. Mr. Mann stated that the central part of the City has only one (1) sidewalk but our recommendation is to have two (2). Mr. Webb stated that an exact comparison would be included in the report of the existing streets missing sidewalks. Mr. Kazemi stated that it should be in the study and mapping that Evans Avenue will be a one way Street soon and Fowler Street should be made a one way Street in ten (10) to fifteen (15) years from now. Mr. Kazemi stated that when those streets are constructed the Florida Department of Transportation would install bicycle lanes, sidewalks and crossings that will extend to Hanson Street and that the plan will be provided for Mr. Webb. Mr. Webb stated he would use the information from this group to rank where the most improvements are needed. Board Member Senger stated people in non-vehicle homes in high-density areas that walk or bike should be cross-referenced with high crash areas, death areas or accident locations. Mr. Parks stated that they did that and facilities were also added to that comparison. Mr. Parks stated that three (3) major in and out routes for Palm Beach Boulevard, Dr. MLK and Cleveland Avenue could have parallel routes. Mr. Parks stated they want to illuminate this corridor and the goal is to make sure the corridor is well served and safe. Board Member Senger stated those three (3) streets are high-risk areas but ideal routes in and around the City. Mr. Onta stated that Broadway Street and Jackson Street are parallel to Cleveland Avenue and could be safer routes. Mr. Onta stated that Broadway Street south of Hanson Street has an existing trail and has enough room for a full trail. Chairman Rawl stated on the comparison map you may want to show existing county facilities to show interconnectivity, also Florida Power and Light right-of-ways and corridors could be used. Mr. Webb stated Seminole Railroad was also looked at and they have met with Environmental Consulting Technologies and discussed using the shared drainage facilities. Mr. Kazemi stated that Environmental Consulting Technologies is the consultant designing the city Storm water Master Plan. Mr. Kazemi stated that the city talked to Seminole Railway Organization to set the maintenance of the right of way in lieu of installing bicycle paths or trails. Mr. Webb stated the right of way for the railway is around 100' on both sides. Mr. Kazemi stated that those areas do not get maintained on Palm Beach Boulevard and the City will maintained them if the railroad will allow is to use it, but nothing has been decided yet. Mr. Mann stated that the composition of the trails would depend on what the service area is, especially in slower speed areas. Mr. Mann stated that the preference is for asphalt on off street roads with no driveways, where bikers want to go a little faster and asphalt is suited for joggers who oppose concrete. Mr. Mann stated that this has been proposed. Mr. Webb stated that the boardwalk would go along some of the waterfront on McGregor Boulevard. Chairman Rawl stated that the bicycle path tie in with Lee County paths would be first priority for the bicycle stand point and with the pedestrian stand point it would compare



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where the sidewalks are now to where we need them then integrate that in with the higher risk areas. Chairman Rawl stated it would tie into the City and Lee County plan for the ten-mile filter marsh at linear park. Chairman Rawl stated that the City tries to get the most out of their funds, which are limited to \$50,000.00 per each of the six (6) wards. Mr. Abdo stated that when infrastructures improvements are approved the sidewalks are included into the plan. Mr. Abdo stated that the money for each ward is for repairing existing sidewalks only. Mr. Kazemi stated that the only money we have right now is from the funding for the reconstruction areas and are for sidewalks on one side of the street. Board Member Senger stated that the safety issue is a problem with road and sidewalk set up which is conducive to causing accidents and also with people drinking at night. Board Member Senger stated that education is a factor because people simply cross in mid street where there are no medians. Board Member Senger stated that this is dangerous and in other states a citation would be given. Board Member Senger stated that with improvements with Lee County connections and safety issues resolved and an overall plan a lot will be accomplished. Chairman Rawl stated that the highest death rate is on Palm Beach Boulevard. Mr. Kazemi stated that some of the Glatting Jackson and Associates would propose some type of crossing for the Greenway Trail Crossing on Colonial Boulevard. Mr. Abdo stated that the problem on Palm Beach Boulevard is not only the lack of crosswalks but also a Cultural problem. Mr. Parks stated that installing more traffic signals are in the master plan. Mr. Abdo stated the blocks are far apart and most accidents are near Marsh Avenue. Mr. Webb stated that he has observed that area many times at different times of the day and a lot of people run across the street to get to the shopping center or get to the day labor pick up area and then it happens again at the end of the day. Mr. Abdo stated that raised medians would help and also spending time to educate the people. Mr. Webb stated there was another issue of bicyclists riding the wrong way because that is how it was in their Country. Mr. Mann stated that because there is a mile between each signal it reduces the crossing distance for pedestrians. Mr. Mann stated that it must be coordinated with the states design for more signals for crossings with cross bars. Mr. Webb stated that he requested from Chris Cella at Cella and Associates the latest version of the plans for State Road 80 but do not have them yet. Mr. Webb Stated that another priority is the Safe Roads to School Program. Mr. Webb stated that there are multiple places where the sidewalk is right in front of their own property and then there is a block without one and then a block with one so on. Joe Jiang entered the room at 4:00 o'clock. Mr. Webb stated that McGregor Blvd is in the County Greenways Plan. Mr. Mann stated they find it difficult to work on McGregor Boulevard as a street to accommodate a bike lane because there is no more ability to move the curb lanes out and the turn lanes are needed because of the constant volume of traffic all day long. Mr. Webb stated that he met with John Scarborough from Lee County and the endeavor was that within a half mile of every home there should be able to have a safe network to get you into the County network then get you into the regional network. Mr. Kazemi stated we have to incorporate to their plan. Chairman Rawl stated that there is a walkway plan along parts of the waterfront on McGregor Boulevard. Mr. Webb stated that was approved and was a part of the Parks and Open Space Master Plan and the street ends were always promoted as the destination. Mr. Kazemi stated there was a walk on agenda item to discuss, that was not put on the agenda with Glatting Jackson and Associates, which is a public shower facility proposed to be



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installed at Centennial Park. Mr. Kazemi stated the idea was from a developer and that developer would pay fifty 50 percent of the cost for the parks purpose and now this committee is asking if we can use this for the bicyclists as they come into town to work. Board Member Senger stated that there is a group of runners that also can use it as a place to meet. Mr. Abdo stated that there has been a problem right along with the public restrooms facility. Mr. Abdo stated that policing a facility like that would be a monumental task and the Fort Myers Police Department and Parks Department feel it would be a tough challenge. Mr. Mann stated to build it might not be the most prudent or efficient use of the resources. Mr. Mann stated that if it's going to be a facility for serving people coming downtown to work there is an opportunity to work with the businesses that are interested in promoting facilities and create a Transportation Management Association. Mr. Parks stated that there is a large one in Portland and Chicago, where there is a shortage of parking, which is very successful and works well by businesses and the private bike shop owners agreed to oversee it for free as long as they rent bicycles at their shops. Board Member Senger stated that in Milwaukee the pavilion building was near the parks and golf course and the County Nursery was across the street so the County Parks public employees were always on site to watch over the facility. Board Member Senger stated that this relieved the Police Department from some of the duty but the homeless were always a worry. Mr. Mann stated that staffing is needed for Fort Myers and that would be difficult. Mr. Mann stated that the reason they have looked at something that would not be strictly the City's responsibility is because it is really serving the people that will be using it. Mr. Mann stated that if businesses or offices have people bicycling to work they would be saving on parking spaces and the businesses would be members of Transportation Management Association, which would provide the staffing. Mr. Webb stated that generally facilities are often done within businesses. Mr. Webb stated that Glatting Jackson and Associates' new office building was built in Orlando to include shower facilities to encourage the employees to bike. Mr. Mann stated that a public facility at Centennial Park would be a liability and the benefit is not proportional to the risk. Mr. Spitz stated that a park facility would be hard to operate and maintain and serve only a small percentage of the City. Mr. Spitz stated that incentives could be made for property owners when they build or rehabilitate their buildings that they include those facilities. Mr. Webb stated that my recommendation is to try to include that a Transportation Management Association could be developed over time and incentive and encouragement be made as a part of the reduction of congestion of traffic. Mr. Abdo stated that the owners of the future Vue Condominium stated that if they receive their permits to build they would contribute fifty (50) percent up to two hundred fifty thousand (\$250,000.00) for the Centennial Park facility but if they do not build their condominium they will not contribute. Mr. Kazemi stated that there has been a problem with getting and keeping members on the Bicycle Pedestrian Advisory Board which has been meeting for over four (4) years and need to speak to our council people to recruit and nominate new members.

There no further business to come before the meeting, the meeting adjourned at 5:00 P.M.



# Conceptual Parks System Master Plan

## Map Legend

- City Limits
- Non-Residential Area
- Existing Neighborhood Park Site and Service Area Boundary
- Existing Private Recreational Site and Service Area Boundary
- Underserved Neighborhood Park Area
- Existing Community Park Site and Service Area Boundary
- Underserved Community Park Area
- County Parks and Service Area Boundary
- Existing School
- Conservation Land
- Proposed Greenway
- Bike Path - County Designated
- Sidewalk (shared) - County Designated
- Street-end Parks Along River

## Urban Parks & Plazas

- 1 Kiwanis Park
- 2 Park of Palms
- 3 Harts' Palm Park

## Neighborhood Parks

- 1 Allen Park
- 2 Billy Bowlegs Park
- 3 Bowling Green Park
- 4 Caloosa Park
- 5 Clemente Park
- 6 Coronado Park
- 7 Dunbar Park
- 8 Dupree/ Aztec Park
- 9 Freemont Park
- 10 Golfview Park
- 11 Jefferson Park
- 12 Lions Park
- 13 Manor Park
- 14 Manuel's Branch
- 15 McCutcheon Park / Project Play
- 16 Orangewood Park
- 17 Riverside Park
- 18 Seminole Park
- 19 Wes Notl Park
- 20 Winkler Park
- 21 Yawkey Park
- 22 Trailhead Park

## Community Parks

- 1 Centennial Park
- 2 Fleishman Park
- 3 Shady Oaks
- 4 Stars Complex

## Scenic Parks

- 1 Henley Riverview
- 2 Edison Bridge/ US41 Causway
- 3 North Shore US41 Causway
- 4 Twin Park

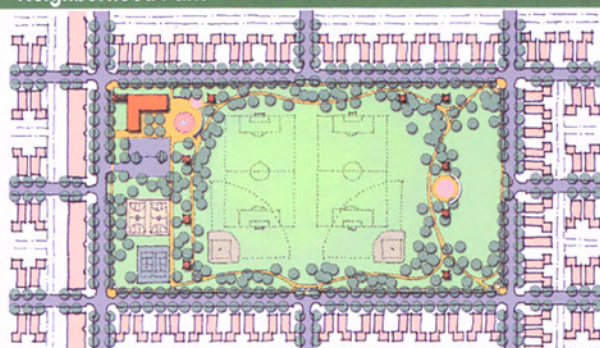
## Specialized Parks

- 1 Caloosa Nature Center
- 2 City of Palms Park
- 3 Eastwood Golf Course
- 4 Fort Myers Golf Course
- 5 Fort Myers Skate Park
- 6 Fort Myers Skatium
- 7 Tarpon Street Pier
- 8 Yacht Basin

## Prototypical Park Plans

### Neighborhood Park

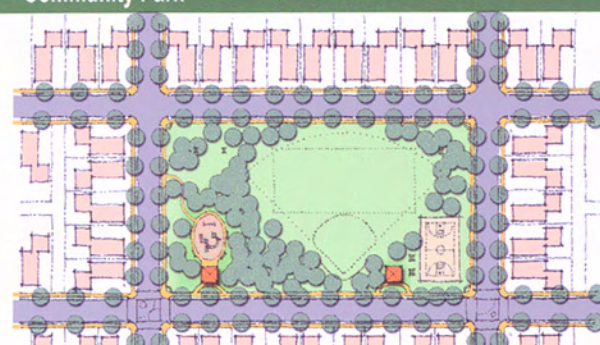
- Size**  
3 to 5 Acres
- Location**  
1/4 to 1/2 Mile Walking Distance for all Residents
- Typical Features**  
Active Uses  
Activity Building  
Multi-purpose Fields / Open Space  
Play Structures  
Court Games (Basketball, Tennis, Shuffleboard, Horseshoes, Volleyball)
- Passive Uses**  
Internal Walking Trails  
Seating and Picnic Areas  
Passive Open Space / Quiet Areas
- Park Function**  
Fulfill the need for nearby residents for passive recreation and non-league sports activities.



- Park Design and Planning Features / Issues**
- Restroom Near Play Spaces / Picnic Areas
  - Shade Structures
  - Perimeter Road and Parking
  - Shared Parking with School / School Drop Off Area
  - Front Doors of Surrounding Buildings Face Park
  - Neighborhood Sidewalks Tie Into Park
  - Neighborhood Sidewalks Tie Into Park

### Community Park

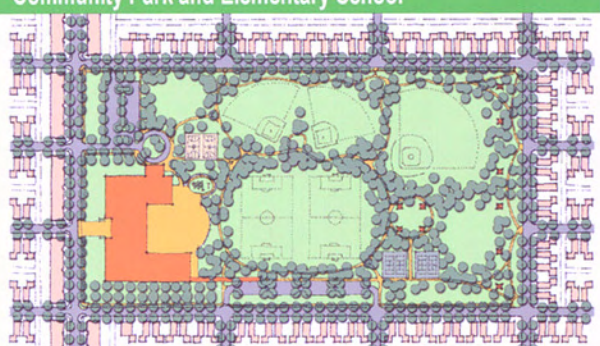
- Size**  
+20 Acres
- Location**  
2 to 3 Mile Service Area
- Typical Features**  
Active Uses  
Community Center / Activity Building  
Multi-purpose Fields / Open Space  
Play Structures  
Splash Play (adjacent to restrooms)  
Court Games (Basketball, Tennis, Shuffleboard, Horseshoes, Volleyball)  
Skate Park / Skate Trail
- Passive Uses**  
Internal Walking Trails  
Seating and Picnic Areas  
Passive Open Space / Quiet Areas  
Nature Areas
- Park Function**  
Fulfill the need for nearby residents for passive recreation and non-league sports activities. Include some activities that cannot be accommodated in neighborhood parks.



- Park Design and Planning Features / Issues**
- Restroom Near Play Spaces / Picnic Areas
  - Shade Structures
  - Perimeter Road and Parking
  - Off-street Parking for Community Building
  - Community Building Entrance Fronts on Main Street
  - Front Doors of Surrounding Buildings Face Park
  - Neighborhood Sidewalks Tie Into Park
  - Adult Recreation Facilities Segregated from School
  - School Frontage on Collector Street
  - Multi-family Residences on Collector Street
  - Court Sports Located on Busy Street

### Community Park and Elementary School

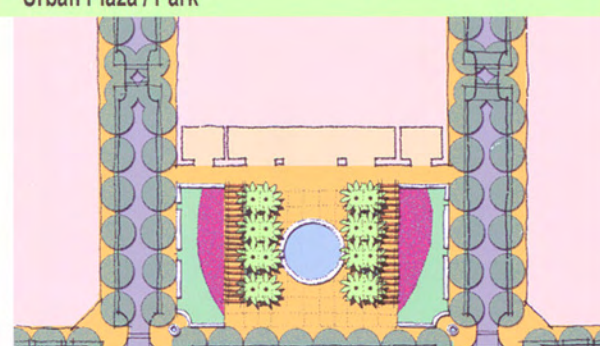
- Size**  
20 to 100 Acres
- Location**  
2 to 3 Mile Service Area
- Typical Features**  
Active Uses  
Activity Building  
Multi-purpose Fields / Open Space  
Play Structures  
Splash Play (adjacent to restrooms)  
Court Games (Basketball, Tennis, Shuffleboard, Horseshoes, Volleyball)
- Passive Uses**  
Internal Walking Trails  
Seating and Picnic Areas  
Passive Open Space / Quiet Areas
- Park Function**  
Fulfill the need for nearby residents for passive recreation and non-league sports activities. Include some activities that cannot be accommodated in neighborhood parks, and sharing community recreation resources.



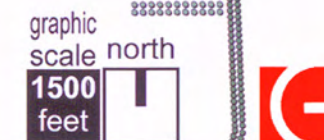
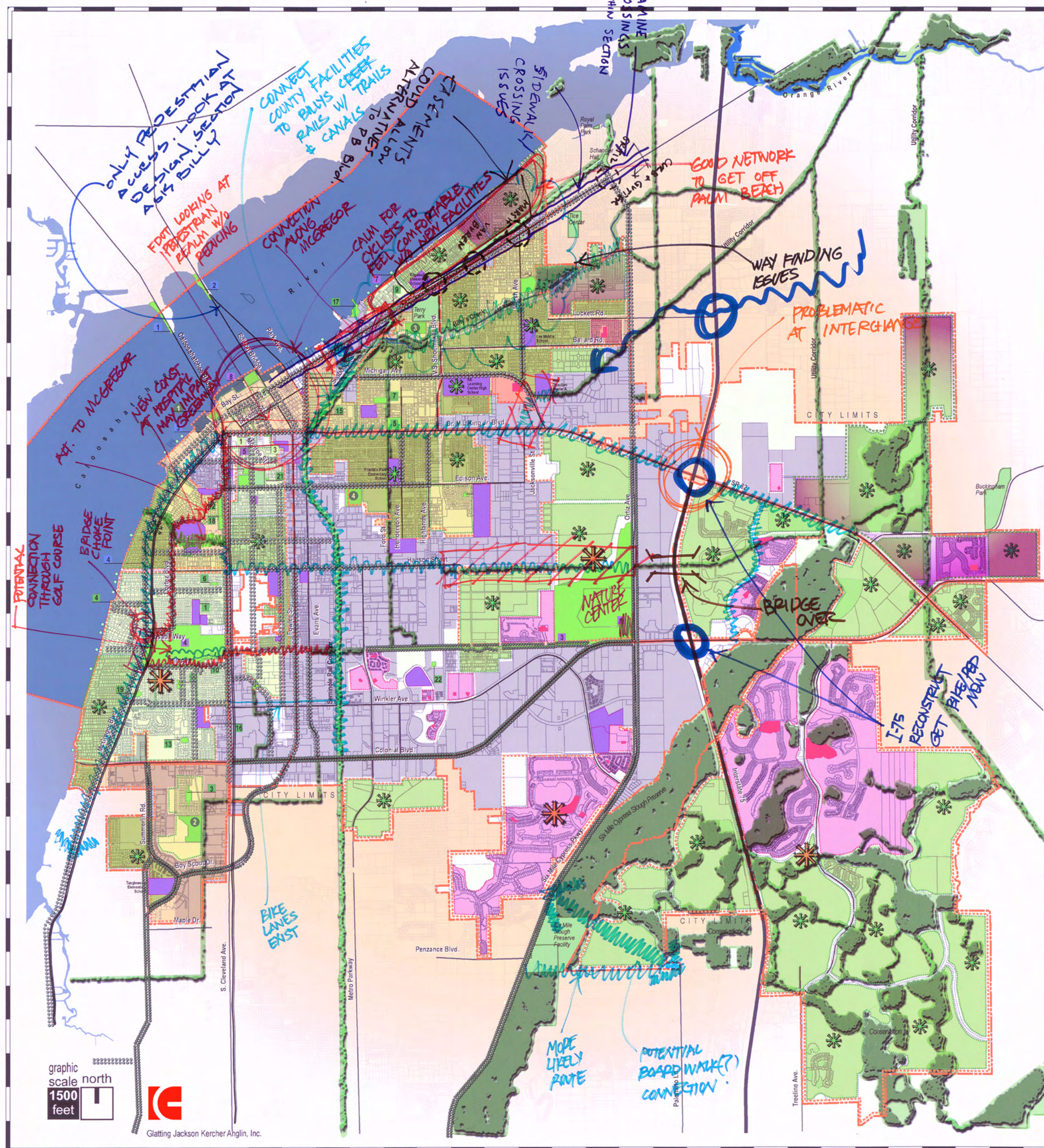
- Park Design and Planning Features / Issues**
- Restroom Near Play Spaces / Picnic Areas
  - Shade Structures
  - Perimeter Road and Parking
  - Shared Parking with School / School Drop Off Area
  - Front Doors of Surrounding Buildings Face Park
  - Neighborhood Sidewalks Tie Into Park
  - Play Fields and Courts Shared with School
  - Adult Recreation Facilities Segregated from School
  - School Frontage on Collector Street
  - Multi-family Residences on Collector Street

### Urban Plaza / Park

- Size**  
1/4 to 1 Acre
- Location**  
1/4 Mile Service Area in Downtown Business District
- Typical Features**  
Plaza Space  
Space for Small or Temporary Stage  
Moveable Seating  
Fixed Seating Areas  
Fountains
- Passive Uses**  
Space Within or Adjacent for Food Vendors  
Grass Area and Ornamental Plantings  
Small Play Space
- Park Function**  
Provide open spaces in downtown business and mixed use areas for mid-day and evening uses, such as dining, afternoon or evening concerts, classes, and socials.



- Park Design and Planning Features / Issues**
- Shade Structures and Tree Plantings
  - Perimeter Road and Parking
  - Building Entrance Fronts on Park / Plaza
  - Front Doors of Surrounding Buildings Face Park
  - Sidewalks Tie Into Multiple Park Entrances
  - Premium Materials for Paving and Structures



Glattig Jackson Kercher Anghin, Inc.

Designate a 'Bike Route'  
Roads paralleling Cleve Ave + Palm Bk Blvd.  
McGregor: narrow medians 750 (lane is 14')  
- Broadway/Solomon  
Hanson St Ext: P/S or B/L!  
(Not like Shoemaker Ext)  
AND Sidewalk to N-Bound Shoemaker MLK to Mich Ave

SIDEWALKS  
- 80 ✓  
- 82 ✓  
- 41 ✓  
- MCGREGOR - FTM  
- Colonial - County and city  
- PLANNING TOOLS THAT MAKE

"SOME MEDIAN DON'T ALLOW CYCLISTS TO FEEL COMFORTABLE AT 'CHOKE POINTS'"  
"NEIGHBORHOODS NOT INTERCONNECTED AS ACT. TO MCGREGOR"  
I-75 RECONSTRUCT

PALM BEACH  
DOT ADDING MEDIAN TO REDUCE WIDTH  
FED X'ING ISSUES



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Meeting Minutes: Ft. Myers Bicycle and Pedestrian Master Plan  
Meeting Date: 07/11/07  
Project No: 19876  
Location: City Hall – Council Chambers  
Purpose: Planning Board Meeting  
Compiled By: City of Fort Myers

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**NO. 4 – PUBLIC HEARING: BICYCLE AND PEDESTRIAN MASTER PLAN** Pursuant to advertisement in the Fort Myers News-Press, issue of June 26, 2007, Affidavit of Publication on file, a public hearing was held at this time on the Bicycle and Pedestrian Master Plan.

#### Overview

The City of Fort Myers hired Glattling, Jackson, Kercher, Anglin, Inc., to develop a Bicycle and Pedestrian Master Plan that would define a system of sidewalks, bike lanes, paths, greenways and trails within the City. The system is intended to be multi-purpose and provide an interconnected network for non-motorized transportation, wildlife and recreation in a manner that is sensitive to the needs of various user groups, the natural and built environment, and constraints of management, maintenance, and funding capabilities. Expanding the breadth of the bicycle and pedestrian network in Fort Myers is an essential step to promoting cycling and walking as a desirable means of transportation and as a way of daily life. In cities around the United States, surveys consistently identify the lack of facilities as the primary reason that more people do not choose walking or cycling as a mode of travel. Indeed, at present Fort Myers' sidewalk and bicycle facility networks are discontinuous: many local streets even in older, established neighborhoods of Fort Myers lack sidewalks, and at present the City has only seven (7) miles of dedicated bicycle facilities. The benefits that a robust bicycle and pedestrian network offers for healthy living and the ambitions of a city desiring a more balanced, sophisticated transportation system (and indeed that Fort Myers has committed to through its planning policies) depend on a stronger bicycle and pedestrian realm.





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### **Recommended Action**

Find consistent with the Comprehensive Plan and Growth Management Code and recommend approval to City Council.

Saeed Kazemi, City Engineer, Engineering Division, Public Works Department, stated that City Council directed staff to develop a master plan for pedestrian and bicycle paths. Mr. Kazemi stated that Glatting, Jackson, Kercher, Anglin, Inc., the same consultant that prepared the park master plan, was hired to develop the Bicycle and Pedestrian Master Plan.

Joe Webb, Senior Planner/Project Manager, Glatting, Jackson, Kercher, Anglin, Inc., stated that an introduction, an analysis of the master plan vision, a wayfinding plan, which was an integral part of the plan, a summary and the next steps would be presented to the Board. Mr. Webb stated that the Bicycle and Pedestrian Master Plan was a continuation of work started initially in May 2006 with the parks and recreation needs assessment and development of the Park and Recreation Master Plan. Mr. Webb stated that the City felt that a look at the interconnectivity and on-road facilities more transportation oriented aspects of bicycles and pedestrians was necessary. Mr. Webb stated that Glatting, Jackson, Kercher, Anglin, Inc. had been working on the Bicycle and Pedestrian Master Plan for about nine (9) months and input from the Planning Board was welcomed. Mr. Webb stated that the plan was developed and intended to be integrated with multiple efforts and other agencies.

Mr. Webb stated that Glatting, Jackson, Kercher, Anglin, Inc. had been working with multiple departments within the City, the Bicycle and Pedestrian Advisory Board, Lee County, Lee County School District, Florida Department of Transportation, South Florida Water Management District and other interest groups. Mr. Webb stated that the Lee County School District was very active in the project and meetings were held with the other agencies as well as public meetings as part of the process. Mr. Webb stated that a thorough review was conducted to integrate the plan with all the intent and concepts previously developed, which included the downtown study, traffic calming plan, the Cleveland Avenue master plan and the on-going storm water master plan, which there was many multiple benefits that could be achieved where the firm felt two (2) possible objectives could be achieved in concert. Mr. Webb stated that during the process meetings had been held, today was the public hearing before the Planning Board and the hope was to move the plan forward with the input from the Board to City Council on July 30, 2007.

Joel Mann, Transportation Planner, Glatting, Jackson, Kercher, Anglin, Inc., stated that the first step taken to begin the work in planning for a bicycle and pedestrian system in Fort Myers was to review background data and identify the areas where the planning efforts could be focused. Mr. Mann stated that areas with higher population and areas where there would be a higher dependency on walking and bicycling as a form of transportation were reviewed. Mr. Mann stated that safety was always a very big concern in planning for bicycle and pedestrian infrastructure. Mr. Mann stated that a review was made of pedestrian crashes and many of the



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crashes had been concentrated on major roads in the City with bicycles crashes having a large concentration along Cleveland Avenue and Hanson Street.

Ms. Brown arrived at the meeting at 1:13 o'clock p.m.

Mr. Mann stated that pedestrian priority areas were found along two (2) of the major corridors in the City, which were Palm Beach Boulevard and Cleveland Avenue. Mr. Mann stated that the recommendation for Palm Beach Boulevard and Cleveland Avenue was to focus on connections to schools, focus on improvements on the streets themselves but at unfriendly areas at intersections, such as Palm Beach Boulevard at Marsh Avenue and Cleveland Avenue at Colonial Boulevard, to focus on pedestrian connections. Mr. Mann stated that focus should be given to closing sidewalk gaps along the major streets and intersecting streets. Mr. Mann stated that a review was made to find corridors where there could be improvements for bicycle facilities, which did not have to be on main streets but on streets where travel patterns and use of bicycles as a major transportation means implied that improvements might yield the greatest value in return for the City on some secondary corridors running perpendicular to Hanson Street leading off of Cleveland Avenue and Marsh Avenue leading off Palm Beach Boulevard and McGregor Boulevard.

Mr. Mann stated that the way the company looked at planning for bicycles and pedestrians was that of a holistic system that was recreation and transportation that would help to balance the transportation for the City. Mr. Mann stated that connecting where people lived to civic facilities would help create character and purpose and a review was made of things that might impede people in the neighborhoods from getting to the civic facilities and/or other designations. Mr. Mann stated that many of the large arterial streets in the City were effective barriers because the roadways were difficult or dangerous to cross. Mr. Mann stated that Interstate-75 had limited crossing opportunities because the roadway was at grade or embanked with only a few interchanges throughout the City. Mr. Mann stated that grade separated intersections on Colonial Boulevard were not designed for pedestrians and made pedestrian and bicycle access difficult to reach Lee County trails and facilities located to the south. Mr. Mann stated that the challenges were that the streets were not safe and very difficult to tame because of aspects of the roadway design. Mr. Mann stated that nonetheless the roadways remained the preferred destinations for many people using bicycles and walking as a means of transportation because of the concentration of retail businesses and community facilities.

Mr. Mann stated that there was a very strong network in Fort Myers with perpendicular streets and a recommendation to upgrade streets, many of which accommodated light traffic volumes throughout the day because the size of the roadway tended to move traffic more slowly. Mr. Mann stated that the types of roadways were used as the foundation with a focus on the streets because of safety. Mr. Mann stated that the large streets were the places where most of the retail businesses were located but the larger streets were not the only way for bicycles and pedestrians to move. Mr. Mann stated that a secondary network that was connected to the major streets and connected throughout the City could provide a safe means of transportation for bicycles and pedestrians.



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Mr. Mann stated that schools and parks were paid particular attention because of the users of the facilities because of children at the schools and all members of the community wanting to participate in parks and recreation facilities. Mr. Mann stated that the bicycle and pedestrian system was looked at as a balance transportation system because bicycle and pedestrian infrastructure could increase more choice. Mr. Mann stated that there were segments of the population in the City that might prefer to or need to use bicycling or walking as opposed to driving as a way of transportation. Mr. Mann stated that a healthier lifestyle for the City would be promoted and would provide a way to celebrate the City and what made the City special. Mr. Mann stated that people tended to pay more attention to the environment when movement was safer and with direct contact to the environment. Mr. Mann stated that to increase the opportunities for travel for bicycles and pedestrians provided a means to see more of the City.

Mr. Mann stated that the steps and strategies used in the study were to think of the users when making transportation decisions that included decisions primarily oriented toward the mobility of bicycles and pedestrians. Mr. Mann stated that there was a focus on safety at the forefront and choosing facilities that reflected the conditions of the environment and infrastructure. Mr. Mann stated that the available resources had to be used wisely to try to find projects that would yield the greatest value. Mr. Mann stated that projects were prioritized in a way that would increase the return for the City and allow residents to understand that the system was evolving as a benefit to the community.

Mr. Mann stated that for pedestrians the most immediate need was sidewalks and as part of development of the plan, how to address a City policy on sidewalks was considered as well as how to define particular conditions where sidewalks could be placed. Mr. Mann stated that the approach was to take the strong network that existed and use the effective network on every street by removing cul-de-sacs, loops, dead end streets and streets that did not connect to two (2) or more streets. Mr. Mann stated that the effective network was utilized as the basis for connectivity. Mr. Mann stated that the system of connected streets was used to focus sidewalk improvements where sidewalks did not exist. Mr. Mann stated that many of the existing sidewalks were actually focused in the network but there were small sections along Palm Beach Boulevard, especially in the northeast section of the City, where sidewalk infrastructure was not as frequent placed.

Mr. Mann stated that a set of priorities were established that would be employed to decide where sidewalks should be placed first. Mr. Mann stated that the proximity to schools and parks was used with the most immediate proximity being within one-half (1/2) miles, a comfortable walking distance for residents to park and the greatest service area for children and young people attending schools. Mr. Mann stated that the one-half (1/2) mile was measured by the walking distance along a public right-of-way for any street within one-half (1/2) of a school or park entrance.

Mr. Mann stated that the second priority focused on all collector and arterial streets with the geographic area expanded up to one (1) mile from schools and parks. Mr. Mann stated that the



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expanded geographic area provided help for the high speed roadways, the streets that had been identified as barriers and perceived by the community to be dangerous, and helped to provide a safer walking experience along the roadways with a confidence that the networks were established in the first priority for users of parks and school. Mr. Mann stated that the third priority was to complete the network and focusing on all other affective network streets. Mr. Mann stated that as the sidewalk network was expanded, the focus would be on streets that did not contribute to the network.

Mr. Mann stated that the Lee County School Board used a two (2) mile distance from schools as an indicator for providing bus service to schools. Mr. Mann stated that the Federal Safe Routes to School Funding Program, which could be used for transportation infrastructure improvements, used two (2) miles as an indicator also. Mr. Mann stated that projects were eligible for funds if within two (2) miles of a school. Mr. Mann stated that there were fifteen (15) schools in the City limits and a review of the walking service area indicated the area covered a vast majority of the City street network. Mr. Mann stated that a lot of the City was already covered with a two (2) mile area and to focus on the system of priorities to school as one (1) of the foundations for enhancing the sidewalk network could provide benefits to the rest of the City because of the overlap. Mr. Mann stated that the fifteen (15) schools in the City and the proximity when the network was aggregated covered much of the street network.

Mr. Mann stated that conditions were specified for how residents could opt out of the sidewalk programs. Mr. Mann stated that the opt out program would be petition driven. Mr. Mann stated that ninety percent (90%) of the residents on a street segment that wanted to opt out of the sidewalk program would have to see and sign the petition, whether or not the resident favored the outcome. Mr. Mann stated that the requirement would ensure that ninety percent (90%) or the vast majority of an area had a chance to consider the issue and sixty percent (60%) of all the property owners on a street had to sign in favor of opting out of the sidewalk program to ensure a clear and fair majority. Mr. Mann stated that the recommendation was not to use the fifty percent plus one (50%+1) because sixty percent (60%) was not too great a burden for the community to expect.

Mr. Spikowski stated that the people would be opting out of the sidewalk program because the residents would be assessed for the improvement. Mr. Mann stated that the decision would be a community preference issue. Mr. Spikowski stated that nothing had been mentioned that the sidewalk program would be completed through assessments. Mr. Kazemi stated that there would not be an assessment so the residents would be opting out because the people did not want sidewalks. Mr. Mann stated that there were further conditions to participate in the opt out program. Mr. Mann stated that improved of safety on arterial and collector roadways was a focus and should be a higher priority for the City. Mr. Mann stated that the opt out program would not be available on arterial and collector roadways. Mr. Mann stated that the opt out program was intended for local streets only and would ensure the issue would be neighborhood driven.

Mr. Mann stated that the opt out program was intended for streets with less than eight hundred (800) trips per day to ensure safe passage with pedestrians using the roadway. Mr. Mann stated that any more than eight hundred (800) trips per day provided not only a steadier flow of traffic but occasionally higher speeds when people were used to using the street as a thoroughfare. Mr. Mann stated that lower speed streets would be allowed to opt out of the sidewalk program. Mr. Mann stated that data collection indicated that eighty fifth (85<sup>th</sup>) percentile speed was greater than twenty-five (25) miles an hour and the street should not be allowed to opt out of the sidewalk program because there was an expected danger for pedestrians walking in the roadway. Mr. Mann stated that the petitions should be good for ten (10) years, which was a reasonable time span for not only a capital improvement plan to be updated but also for a neighborhood change. Mr. Mann stated that a time span less than ten (10) years there could be an expectation that the neighborhood had to take on too much work to opt out of the program and the signers of the petition in favor of opting out have a sense of permanence in the decision.

Mr. Spikowski stated that a neighborhood that wanted to opt out of the sidewalk program would have to meet the criteria. Mr. Spikowski stated that a neighborhood that opted out of the sidewalk program would be links that would not be absolutely essential because people could walk in the street. Mr. Mann stated that people could choose an alternative path if there was an adjacent block with a sidewalk. Mr. Mann stated that the opt out program was a policy recommendation developed for the sidewalk program for the entire City and provided a series of steps via a petition to elect not to have a sidewalk on a block. Mr. Mann stated that the recommendation was that the opt out program be done at the level of street segments or one (1) block between two (2) cross streets. Mr. Mann stated that the recommendation was if a roadway was classified as anything but a local road, such as a collector or arterial, the opt out program was not available.

Mr. Mann stated that the opt out program was not available when a street segment was adjacent to a park facility because the focus was on community facilities to provide a safe network to connect the facilities. Mr. Mann stated that if a street segment was adjacent to a park facility, opting out should not be allowed under any circumstance. Mr. Mann stated that the opt out program was not available when a street segment was within one-half (1/2) mile, measured by walking distance, from a school. Mr. Mann stated that areas adjacent to a park or within one-half (1/2) mile of a school were the areas where there would be the greatest activity for young people walking to school and to provide a safe environment for the children should be a priority of the City so the opt out option should not be allowed.

Mr. Kinsey stated that if ninety percent (90%) of the residents signed the petition to opt out of the sidewalk program, the implication would be that ninety percent (90%) were signing in favor of opting out. Mr. Mann stated that if there were ten (10) residents on a street, nine (9) of the ten (10) residents must sign the petition even if the person signed that the sidewalk should remain according to the program by the City. Mr. Mann stated that the requirement would ensure that ninety percent (90%) of the residents had seen the petition and that residents that might not be interested in having the sidewalk installed only show the petition to the other



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neighbors who do not want the sidewalk. Mr. Kinsey stated that residents that disagreed with opting out of the sidewalk program would be signing the same petition. Mr. Mann stated that the petition should be designed for signatures of those in favor and those opposed to opting out. Mr. Mann stated that sixty percent (60%) of the residents on the street being considered for opting out of the sidewalk program must choose to opt out for the street to be removed from the list of priorities by the City but ninety percent (90%) of the residents must see the petition. Mr. Kinsey stated that to have people on either side of the issue sign the same petition was unusual.

Mr. Mann stated that the priorities for placement of sidewalks in the City were intended to contribute to the affect in the network of connected streets. Mr. Mann stated that a street that was a cul-de-sac, dead end or a street with a lower priority would have the option of increasing the priority or opting into the program and the program was designed for streets not in the effective network. Mr. Mann stated that residents in the neighborhood could want to have a sidewalk sooner than scheduled. Mr. Mann stated that there could be sidewalks all around and the street might not be the highest priority but because of the geography the residents would like to be added into the program. Mr. Mann stated that the same conditions as opting out were used for the opting in program. Mr. Mann stated that ninety percent (90%) of the residents on the street must see and sign the petition with sixty percent (60%) in favor of opting into the program. Mr. Mann stated that the program would allow the addition of non-network streets to the third priority list. Mr. Mann stated that any streets within one-half (1/2) mile of schools or parks that were not considered because the street did not connect to the network could be added into the first priority if the residents wanted the sidewalk.

Mr. Mann stated that trails and greenways were other types of facilities that would constitute a master plan. Mr. Mann stated that greenways were a form of linear park with the use of trail facilities within the park and located off a main roadway for connectivity. Mr. Mann stated that an example was a trail along the side of a golf course in Denver, Colorado. Mr. Mann stated that multi-use trails along roadways were essentially the same facility type and could have the same design standards and construction. Mr. Mann stated that multi-use trails were intended along roadways where there were high volumes of traffic or high speeds and where bicycles or pedestrians would not feel comfortable directly along the roadway. Mr. Mann stated that multi-use trails allowed bicycles and pedestrians to share a facility off the road and were used where there were not frequent driveway cuts. Mr. Mann stated that the multi-use trail was used for new development areas such as along Colonial Boulevard with larger lots and larger spaces between driveways to avoid the frequency of conflict between pedestrians, bicycles and vehicles turning. .

Mr. Mann stated that an option was on-street bicycle lanes with the City currently having seven (7) miles. Mr. Mann stated that in urban condition there would be frequent turning movement and driveways and on-street bicycle lanes would provide more space and visibility for the cyclists. Mr. Mann stated that turning and traffic operations were safer and easier for the vehicles and provided benefits for the cars as well as the cyclists by providing a little buffer in parallel parking, increased sight triangle and sight distance to make turns. Mr. Mann stated that the crossing exposure was reduced and often provided travel lanes for pedestrians trying to



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cross the street. Mr. Mann stated that there were innovative techniques to fit bicycle lanes in as safely and as permanently as possible for the community. Mr. Mann stated that the use of color treatment was used to indicate where there was a transition for a right hand turn lane and where the bicycle lane would stay and the alignment needed to be noticed by the motorist.

Mr. Mann stated that the bulk of the network recommended for the master plan was streets that were safe for bicycles but were essentially shared without any dedicated separately marked facility for the cyclist. Mr. Mann stated that there were many small streets in Fort Myers with twenty (20) and twenty-two (22) foot widths. Mr. Mann stated that to stripe a bicycle lane to meet a standard would not allow a passable width for a travel lane. Mr. Mann stated that due to characteristics of the roadway, such as the amount of traffic using the street, the speed due to traffic calming and other features like lane width, there was not a need to separate the lane and bicyclists could feel comfortable using the street safely along with motorists. Mr. Mann stated that Portland, Oregon, was a leader in bike boulevards where a local street was taken that paralleled a major travel route and given over to bicycles with priority for bicycle movement.

Mr. Mann stated that in Fort Myers there was the Seminole Railroad corridor that traveled through the City north to south and there were drainage canals along major roads that had additional space where bicycle and pedestrian facilities could be added. Mr. Mann stated that there were wide local streets in some places where the additional of a bicycle lane could be done without any reconstruction of the street, without moving curbs or drainage, but would allow an additional and much more visible facility for the bicyclists.

Mr. Mann stated that an effective network was the basis for providing sidewalks throughout the City. Mr. Mann stated that a review was performed of the trails and greenways plan for Lee County and what connections could be added was considered.

Mr. Mann stated that the Lee County plan was used as a guide in where to focus improvements by the City. Mr. Mann stated that greenways were added using the railroad corridor that had been identified by using Billy's Creek and by using the Hanson Street Extension as opportunities for greenway trails to help provide longer range connections out of the City. Mr. Mann stated that added were the off street trails along major streets such as Ortiz Avenue and Colonial Boulevard to provide long distance connections as well. Mr. Mann stated that heavier speed roads were reviewed as the less safe streets for cyclists.

Mr. Mann stated that there were seven (7) miles of bicycle lanes current in the City, mostly along Dr. Martin Luther King Jr. Boulevard and Winkler Avenue. Mr. Mann stated that the proposal was to add to the existing network where there was room to add a bicycle lane without roadway reconstruction. Mr. Mann stated that the bicycle friendly streets were added to the network, which allowed the low volume streets to contribute and provide connections where construction of another facility, a bicycle lane or an off street trail, was difficult or time consuming. Mr. Mann stated that a full network to connect downtown with neighborhoods, neighborhoods with schools and parks, and adding the pedestrian network from the priorities previously described, led to a full network for bicycles and pedestrians in the entire City.



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Mr. Mann stated that a bicycle lane could be added to Jackson Street by the City of Palms baseball field. Mr. Mann stated that the existing travel lane was fifteen (15) feet wide and a bicycle lane could be added at dimensions that met standards to allow safe and convenient travel for both motorists and bicycles and safe passage between the two (2) modes. Mr. Mann stated that local streets off of McGregor Boulevard could be used with the sharing concept, which kept the travel lane passable for the car but allowed bicyclists space by a designated presence on the street with color treatments on the sides of the road. Mr. Mann stated that Fowler Street could be considered for bicycle lanes during future street reconstruction by changing lane widths. Mr. Mann stated that the master plan included choosing facilities where appropriate for the conditions and how the facilities would be added to the network.

Payaal Patel, Graphic Designer, Glattling, Jackson, Kercher, Anglin, Inc., stated that the wayfinding plan was developed to work in cooperation and compliment the bicycle trail plan. Ms. Patel stated that the goals were to ensure that users of the trails would understand the time the journey would take, to promote safety on the trails for pedestrians and bicyclists, enjoy-ability and engagement with other users. Ms. Patel stated that people in cars also had to understand that the streets being used were being shared with cyclists and pedestrians. Ms. Patel stated that two (2) of the goals were achieved by creating a network of signs so that people would understand as travel progressed down the trails that the trails were designated for cyclists and pedestrians. Ms. Patel stated that a sense of continuity was developed so that the whole plan was more cohesive visually as a person drove or walked through the City. Ms. Patel stated that whatever designs were developed had to ensure the signs would compliment the DDA sign system that would be implemented by the City.

Ms. Patel stated that the main types of signs developed were gateways, directional signs and kiosks. Ms. Patel stated that a survey was made of the City to ensure that the nodes, paths and the districts were understood. Mr. Spikowski stated that DDA signage was a proprietary system of signs. Mr. Kazemi stated that DDA signs were the Downtown Development Agency signs that were proposed for the downtown area. Mr. Spikowski stated that the same signs would be used in the whole City. Ms. Patel stated that whatever design was proposed for the signs had to match the color scheme and visual aesthetics of the DDA signs but would not be identical.

Ms. Patel stated that a survey was made of the City to understand all the paths and all the streets that were used by the citizens, how the paths and streets were used, where the traffic was high or low and where there were more pedestrians. Ms. Patel stated that the information was gathered and a review was made of other sign systems in the country to see what would work better for and compliment the City best. Ms. Patel stated that whatever sign was designed needed to compliment the proposed signage for the downtown area and work in unison. Ms. Patel stated that the sign system was divided into two (2) groups. Ms. Patel stated that one (1) sign system was for the recreational trails or greenways and one (1) was for the bicycle routes or on-street/off-street trails and bicycle friendly streets.



Ms. Patel stated that trail identification signs were developed to indicate that the person was on the right path. Ms. Patel stated that a trail directional sign was developed to let users know upcoming destinations and the street the person was on to assist visitors to the City who were not familiar with the street system. Ms. Patel stated that warning signs were proposed to let a user know when there was a high traffic area ahead, when to yield for pedestrians and if there was a stop sign ahead. Ms. Patel stated that cyclists riding on greenways rode very fast and to promote safety, a warning to stop was needed when approaching a big intersection. Ms. Patel stated that a stop sign would be posted on the greenways right before a major intersection.

Ms. Patel stated that kiosk signs would be located in the downtown area to assist users to understand the area better. Ms. Patel stated that the kiosk signs would be attached to existing light poles to ensure that the signage costs did not go too high. Ms. Patel stated that the maps would compliment the trail system and help visitors get familiar with the City. Ms. Patel stated that maps would be provided of the downtown area and a brochure map had been developed to promote safety and assisted people to understand where the trails were located. Ms. Patel stated that the brochure map would explain to the users how to use the trails, where the trails were located, and would assist to understand the different destinations within the City to visit. Ms. Patel stated that a sign master plan was developed to indicate where the signs would be installed, where the signs would be located at intersection and how the signs would connect.

Ms. McCormick stated that the kiosks signs appeared difficult to associate with the other signs. Ms. McCormick stated that the other signs were easy to read with great colors and complimented everything else but the kiosk signs did not appear to tie in as well, especially installed on a lamp post. Ms. McCormick stated that installation of the kiosk signs on existing light posts might save money but would provide a bigger distance from bicycles if traveling on the road or on a sidewalk. Ms. McCormick stated that possibilities for redesign of the kiosk signs should be considered so that bicyclists could see the signs because the kiosks were an integral part of the system.

Ms. Patel stated that the kiosk signs were focused more towards pedestrians because the signs would be located in the downtown area on the sidewalk. Ms. Patel stated that the kiosks would require a person to stop and read the information to understand where the person was in the area. Ms. McCormick stated that the kiosks should be able to be used by bicyclists also. Ms. McCormick stated that the kiosk signs should be characterized more with the other signs to be useful to both pedestrians and bicyclists. Mr. Webb stated that to make the kiosk signs useful to both pedestrians and bicyclists could be accommodated by not being attached to an existing pole or integrating the kiosk signs into another sign that was more readable. Ms. McCormick stated that the kiosks could be identified with a heading to indicate “Biker and Pedestrian Kiosk” or something similar. Ms. McCormick stated that the kiosks should also be tied into the bus routes because the buses did accommodate bicycles. Ms. Patel stated that brochure map highlighted all the bus routes and terminals for transfer.

Mr. Banks stated that the signs should match the uniform traffic control device manual. Ms. Patel stated that the signs matched the requirement, which was to have the signs placed



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seven (7) feet to the bottom. Ms. Patel stated that the shapes, colors and other requirements were met with the proposed signs. Mr. Spikowski stated that several of the signs appeared to be about seven and one-half (7 ½) feet to the bottom. Ms. Patel stated that signs in the right-of-way had to be seven (7) feet to the bottom but the proposed signs would be on the other side and because the signs were not for vehicles, did not have to be as tall. Ms. Patel stated that the signs could be made taller.

Mr. Spikowski stated that some of the drawings indicated that the bottom of the signs were at five and one-half (5.5) feet and located on a sidewalk could be dangerous. Mr. Spikowski stated that the signs would be visible if walking straight on but not sideways. Mr. Spikowski stated that there were signs in the downtown area that should be moved six (6) inches. Ms. Patel stated that the signs would be facing the pedestrians but could be made taller. Mr. Spikowski stated that the signs would be safer if made taller.

Mr. Kazemi stated that the street signs located on Jackson Street were larger. Mr. Kazemi stated that signs were located at Jackson Street and Lee Street and Jackson Street and First Street but the signs were so big that no standards were met. Mr. Kazemi stated that the signs would be change to be as close to the standard as possible. Mr. Kazemi stated that leeway had been provided and the street signs could be larger than a standard sign. Mr. Banks stated that when the signs were made larger, everyone had to be explicit that the signs would be made larger because everyone used the standard manual. Mr. Banks stated that Lee County wanted one (1) type of walk/do not walk sign and the Florida Department of Transportation had another type. Mr. Kazemi stated that the signs that had been installed in the downtown area were very large and would be reduced in size. Mr. Kazemi stated that in a couple of weeks some of the streets in the downtown area would receive new signs that would be closer to the standard.

Ms. McCormick stated that the brochure should include that buses were equipped with bicycle racks and how the racks operated. Ms. Patel stated that safety information on how to better use the trails were included in the brochure but bicycle racks on buses was not covered. Mr. Spikowski stated that a good explanation was needed because the process looked scary to the people who did not use the bicycle racks. Ms. Patel stated that the information could easily be added to the brochure.

Mr. Mann stated that a stronger bicycle and pedestrian network would benefit the City by increasing mobility choice and by connecting destinations. Mr. Mann stated that safety concerns and difficulties in focusing facilities on larger streets led to a secondary network, which could compliment the major streets of the City and provide a secondary network for bicycles and pedestrians. Mr. Mann stated that the plan was easily integrated into the existing of signs and wayfindings. Mr. Mann stated that the plan had been presented to the public in a series of meeting in March 2007 and the public provided positive input. Mr. Mann stated that very good suggestions for changes for had received and incorporated in the plan.



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Mr. Mann stated that a meeting was held with the Florida Department of Transportation about a month ago on the vision of the master plan and the Department found the plan to be a very positive step for the City. Mr. Mann stated that the Florida Department of Transportation further encouraged the City to remain in contact with the Department when projects in the City were developed to incorporate the provisions in the plan into the Florida Department of Transportation projects. Mr. Mann stated that the Florida Department of Transportation wanted to work with the City to help leverage initiatives that the City had undertaken with funding sources from the Florida Department of Transportation and from Federal sources to expand the scope of a project.

Mr. Mann stated that the next step was to make a presentation before City Council on July 30, 2007. Mr. Mann stated that a recommendation as part of the plan was that any arterial and collector streets that had connection to existing parts of the City be equipped with a bicycle facility and as part of existing City policy, new developments be required to install sidewalks. Mr. Mann stated that for streets in new developments that did not have connection to existing parts of the City, the City had the authority during subdivision and development review to determine how connections might be accommodated if the connection on a collector or arterial road might not be the most appropriate. Mr. Mann stated that the general recommendation was that new subdivisions that connected to the existing City network should continue a bicycle and pedestrian connection also.

Mr. Kazemi stated that the current City Code required new subdivisions to install sidewalks on both sides of the streets except a gated community was allowed to install sidewalks on one (1) side only. Mr. Kazemi stated that the policy referred to by Mr. Mann were areas where the City redeveloped streets for utilities and some of the residents indicate that sidewalks were not wanted. Mr. Kazemi stated that the policy of the City was that sidewalks were needed. Mr. Kazemi stated that the City had situations where people sign that sidewalks were not wanted and the same people sign that sidewalks were wanted. Mr. Kazemi stated that the policy would be that City Council would make the decision. Mr. Kazemi stated that the Code was clear on new developments that whoever built a new road had to install sidewalks on both sides.

Mr. Spikowski stated that the priorities established were good. Mr. Spikowski stated that the priorities for the schools, bicycles and the major roads but the third priority had nothing to indicate that the streets leading up to bus routes or stores had any priority over any other streets in the City. Mr. Spikowski stated that streets leading to bus routes or stores were cases where more pedestrian usage and demand would be expected. Mr. Mann stated that the current land development regulations of the City and the Future Land Use Map provided that most of the commercial/business zoning and commercial land use was located along streets that would be dealt with as part of the second priority of connecting arterial and collector streets. Mr. Spikowski stated that the issue was addressed but indirectly. Mr. Mann stated that the issue was not addressed exhaustively either and there were sections where the issue could be added and considered. Mr. Spikowski stated that how many years until the City reached the third priority streets was unknown but the streets adjoining bus routes should be given some preferential treatment with all other things being equal.



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Mr. Mann stated that in terms of a bus oriented transit system, the relocation of routes could mean that over time focus would be on one (1) street that Lee Tran might decide operation would be more efficient if moved to the next street. Mr. Mann stated that buses generally followed a lot of the same areas that the plan would and prioritizing for commercial areas where people would visit other than schools and parks. Mr. Spikowski stated that the areas would be expanding as the City became financially better.

Mr. Kinsey stated that as an extensive on-street bicyclist, vision triangles were important, not so much for on-road but off-road combination bicycle and pedestrian traffic there needed to be standards. Mr. Kinsey stated that landscaping should be set back at residential and commercial driveways to create a nice triangle. Mr. Kinsey stated that when riding a bicycle the old style valley gutters were encountered and the gutter style was not bicycle friendly, especially to a serious rider who needed to transition from on-road to off-road. Mr. Kinsey stated that valley gutters could damage the rim of a real road bicycle. Mr. Kinsey stated that the City needed to be sensitive to the gutter style when requesting developers to build roads to ensure that the gutters were bicycle compatible. Mr. Kazemi stated that the City would be changing from the valley gutters and a driveway would require three (3) feet width, which would be very smooth and would accommodate bicyclists. Mr. Kazemi stated that the details for the gutters were available and the standard of the City was changing and clarifying a smoother transition. Mr. Banks stated that the gutters were the same only a foot wider and the grade line was important.

Ms. McCormick stated that the plan was comprehensive and favorable with great pictures, lots of information, and the City needed a bicycle and pedestrian system because of worries over her child being on the road. Ms. McCormick stated that the plan should be implemented. Ms. McCormick stated that the plan utilized what existed with a minimal amount of money and made the plan workable. Ms. McCormick stated that on a bike ride to Orangewood Elementary School on Deleon Street, there was a lot of construction on the east side McGregor Boulevard and there were no alternative routes. Ms. McCormick stated that there were open pits and the sidewalks were chopped up when trying to ride a bicycle through construction sites. Ms. McCormick stated that part of the review should address what to do when the bicycle and pedestrian routes were not usable due to construction.

Mr. Mann stated that what to do when the bicycle and pedestrian routes were not usable due to construction could be addressed in the plan. Ms. McCormick stated that whether there was a need to address the issue was not certain but there was a problem. Ms. McCormick stated that there was a set route that bicyclists were to take to reach Orangewood Elementary School. Mr. Mann stated that set routes for bicyclist to use were developed regardless of the facility type and sign posting would take place similar to posting signs for motorists to use a detour route in the event of roadway construction. Mr. Mann stated that measures would be taken to let people know that the bike route was under construction and an alternative route provided. Mr. Mann stated that measures to take when roads were under construction could be described very simply as part of the plan or contingency measures during flooding or anything that might restrict use of the route.



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Ms. McCormick stated that the signs in the downtown area were supposed to be distinct so that motorists knew when entering the downtown area and the same should be considered for bicyclists. Ms. McCormick stated that the bicycle route to Orangewood Elementary School had a crossing guard that was not shown in the connection in the proposed bicycle system. Mr. Mann stated that the Lee County School Board prepared a report to identify any deficiencies found in the vicinity of the school. Mr. Mann stated that the report was prepared by the public safety office of the School Board. Mr. Mann stated that the report inventoried crossing guards, observations and concerns from parents and children of the places where people faced danger in trying to cross streets. Mr. Mann stated that crossing guard location were contained in the report but also noted was that crossing guard locations had been changed over the past five (5) years since data collection on sidewalk inventory was completed. Mr. Mann stated that the report could be consulted to ensure that there was consistency in the final version of the master plan presented so that current information from the School Board was reflected.

Ms. McCormick stated that there were existing bicycle routes and there was some updating with the crossings. Ms. McCormick stated that there were three (3) new crosswalks on McGregor Boulevard separate from the crossing guard on the route to Orangewood Elementary School. Mr. Kazemi stated that the City planned to do something about signage but was not part of the Bicycle and Pedestrian Master Plan. Mr. Kazemi stated that the signs for bicyclist entering the downtown area would be distinct and would match the downtown signs for motorists.

Mr. Kazemi stated that new developments were required to provide a sidewalk but there was the variance process that could be used to not provide a sidewalk. Mr. Kazemi stated that City Council directed the Engineering Division to not be in favor of variances to not install sidewalks. Mr. Kazemi stated that the City would attempt to ensure that sidewalks were built. Mr. Kazemi stated that a pay in lieu option would be brought before City Council. Mr. Kazemi stated that conversations were ongoing with developers but the pay in lieu option was not part of the master plan package. Mr. Kazemi stated that the proposal to City Council would be cash in lieu of installation of sidewalks. Mr. Kazemi stated that if a sidewalk would not be connected to anything, a fee would be collected for the installation of sidewalks by the City in other areas. Mr. Kazemi stated that Lee County and the State of Florida had a fee in lieu of option.

Mr. Banks stated that the Board of Adjustments had a terrible time with the issue of sidewalks. Mr. Ford stated that the sidewalk issue was serious and the Board had held discussion previously on the issue. Mr. Ford stated that in the area of the Six Mile Cypress Slough there was a lot of development occurring and eventually the sidewalk system would connect. Mr. Ford stated that installation of sidewalks should take place in new developments. Mr. Kazemi stated that pieces of sidewalk that did not connect anywhere would not meet the requirement proposed in the master plan. Mr. Kazemi stated that collection of funds would allow installation of sidewalks all at once when necessary to connect two (2) points rather than to



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have pieces of sidewalk. Mr. Kazemi stated that if a project was large enough installation of sidewalks would be a requirement even if the connection was not to another system.

Mr. Mudgett stated that Cleveland Avenue did not have bicycle access, which was understandable, but an offset bicycle priority on Grand Avenue made sense where access would be one (1) block off the main thoroughfare. Mr. Mudgett stated that trying to install bicycle friendly facilities on Cleveland Avenue would be a difficult job. Mr. Mann stated that the designated parallel with the intent to service the Cleveland Avenue corridor was Broadway and Jackson Street. Mr. Mann stated that the proposed parallels were a little further away from Cleveland Avenue than Grand Avenue but the condition of Jackson Street with fifteen (15) foot travel lanes made the street a very desirable candidate for a bicycle lane. Mr. Mann stated that Jackson Street also passed the City of Palm Park and the connection between the Park and the downtown area was as direct as could be hoped. Mr. Mudgett stated that how other processes interacted with the Cleveland Avenue plan had been watched but there had not been much interaction. Mr. Mudgett stated that a certain amount of attention should be paid to the Cleveland Avenue plan. Mr. Spikowski stated that Grand Avenue had benefits because the street was awfully close to Cleveland Avenue and people using the bus line or shopping probably would not divert all the way to Jackson Street.

Mr. Webb stated that as part of the master plan process, meetings were held with the people working on the Cleveland Avenue plan. Mr. Webb stated that the first priority for the Bicycle and Pedestrian Master Plan was complete streets. Mr. Webb stated that the plans for Cleveland Avenue envisioned that ultimately with the addition of more right-of-way that there would be bicycle facilities and pedestrian facilities but the plan might be a thirty (30) year objective with the need to acquire additional right. Mr. Webb stated that in the interim, the Bicycle and Pedestrian Master Plan network would serve the community and hopefully, as the evolution of each of the major roads redeveloped, the roadways would become complete streets.

Dan Moser, 1445 Linhart Avenue, member of the City Bicycle and Pedestrian Advisory Board and a bike and pedestrian program coordinator for Lee County Health Department, stated that the consultants were top notch and the City had brought in talent for the Bicycle and Pedestrian Master Plan and the parks and recreation plan. Mr. Moser stated that Mr. Kazemi had pushed the Master Plan to a higher level when the bicycle and pedestrian elements ranked high in the parks and green space master plan. Mr. Moser stated that three (3) of the top five (5) needs and interests in the parks and green space plan related to bicycles and pedestrians and the City realized that the elements needed to be integrated into a transportation and recreation system. Mr. Moser stated that the utilities projects had provided sidewalks in a lot of the established parts of the City where otherwise the older streets would never have sidewalks. Mr. Moser stated that as chairman of the bike and pedestrian advisory committee for Lee County, Lee County could not entertain installation of sidewalks on any roadways but collectors and arterials because there was a \$55,000,000.00 project backlog on the major roads already.

Mr. Moser stated that reconsideration should be made to the policy of maintenance of repair of existing facilities because the burden was on the private property owner adjacent to the



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sidewalk, which made no sense. Mr. Moser stated that the adjacent property owner was required by Code to replace sidewalk that was broken in the right-of-way. Mr. Moser stated that Code Enforcement could determine that a sidewalk was broken and require the adjacent property owner to fix the sidewalk even when the property owner did not cause the problem. Mr. Moser stated that the rule was antiquated and should be addressed because some situations were stalemates and did not get fixed. Mr. Moser stated that the City did not budget for sidewalk repairs because technically the private property owner was supposed to affect repairs. Mr. Moser stated that the question was why the property owners were not required take care of the road to the centerline if the sidewalks had to be taken care of by the owners. Mr. Moser stated that the policy really needed to be addressed and reconsidered because enforcement was haphazard except occasionally the property owners would be contacted to make the repairs to the sidewalk. Mr. Moser stated that most of the time the City made the repairs to the sidewalks but only on a reactive way.

Mr. Moser stated that the City would be able to prioritize project based on the master plan with the prioritizing made easy. Mr. Moser stated that the Bicycle and Pedestrian Advisory Board should be called upon to help with the prioritization and to get the projects listed from top to bottom with the related funding. Mr. Moser stated that Lee County had a five (5) year plan and had the luxury of using \$1,000,000.00 of gas tax money collected in the County, spread across the entire County. Mr. Moser stated that five percent (5%) of road impact fees were also used but had to remain in the impact fee district. Mr. Moser stated that \$3,500,000.00 a year would be used on the bicycle and pedestrian plan but when spread around the entire County, was not a lot of money. Mr. Moser stated that the funds did allow for retrofitting on roads that would otherwise not see any kind of improvements because of roadway expansion or development. Mr. Moser stated that some kind of dedicated funding mechanism would be helpful for the Bicycle and Pedestrian Master Plan but hopefully not ad valorem taxes because funding could become a problem with the proposed tax reforms.

Mr. Moser stated that more emphasis should have been placed on Lee Tran and the transit connection. Mr. Moser stated that the placement of a bicycle on the rack on a bus was easy and took about three (3) seconds but might look worse. Mr. Moser stated that the brochure should include that buses had bicycle racks and how placement on the rack was easy. Mr. Moser stated that the instructions should include how to put the rack up after loading the bicycle and before boarding the bus so the bus driver would not have to wait while the bicyclists returned to secure the rack.

Mr. Moser stated that the policies of opt out and opt in of the sidewalk program were good and would solve a lot of the dilemmas experienced by the City when caught in neighborhood disputes. Mr. Moser stated that the plan was also clear on when a street was not able to opt out of the sidewalk program. Mr. Moser stated that the guidelines provided that very few streets would have the option to opt out of the sidewalk program which was good.

Mr. Moser stated that the wayfinding was sorely needed and Lee County had been working on a wayfinding plan. Mr. Moser stated that now that the parks and recreation divisions were



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active with the trails and greenways plan, which was integrated into the Bicycle and Pedestrian Master Plan, the trails and greenways plan would become a reality and should work together so not to confuse people with two (2) distinct wayfinding methods. Mr. Moser stated that the downtown wayfinding plan had to be clear to prevent people from thinking they were in the downtown area when they actually were at Ortiz Avenue, Six Mile Cypress Parkway and Colonial Boulevard. Mr. Moser stated that Lee County would pick up the wayfinding from that end and hopefully not confuse people because currently only road signs were used.

Mr. Moser stated that the bicycle route and the shared use lane were good as well as providing markings on streets where there was not a need for dedicated side paths or lines in the road but to let motorists know that bicyclists were allowed on the road. Mr. Moser stated that some of the roads mentioned that were not included in the network because the roadways were considered cul-de-sacs or dead end streets could actually could be bicycle and pedestrian routes. Mr. Moser stated that roads that went through non-private property or where the road was closed after the fact could still be good bicycle routes and foot paths.

Mr. Moser stated that the City had missed opportunities on properties located on Colonial Boulevard where the developers were not required to provide side paths where none existed but the paths had been provided by other adjacent developers. Mr. Moser stated that the variance process had not been required. Mr. Moser stated that hopefully the City Community Development Department, Planning Division and zoning section would work better with the Engineering Division in review of projects because oversights had been admitted. Mr. Moser stated that once developers were off the hook to provide the amenities the burden would be on the taxpayers because the developers were not asked to provide funds in lieu of providing the amenity.

Mr. Moser stated that he attended the Board of Adjustments meetings on variances regarding sidewalks to attempt not to let the developments that were clear slip through the system. Mr. Moser stated that the Engineering Division in the last couple of years had realized that sidewalks were needed and if nothing else funds in lieu of policy be provided because installation of the sidewalks might be premature now but eventually would be needed even in the industrial areas. Mr. Moser stated that another oversight was Veronica S. Shoemaker Boulevard because there should have been bicycle lanes or paved shoulders provided. Mr. Moser stated that Veronica S. Shoemaker Boulevard had a sidewalk on one (1) side of the street and a bicycle path on the other side but there was a segment in a very important area that had no facilities with a high speed limit. Mr. Moser stated that south bound Veronica S. Shoemaker Boulevard had sidewalks on both sides of the road with a lower speed limit. Mr. Moser stated that there appeared to be a design oversight that hopefully would not happen in the future with the Bicycle and Pedestrian Master Plan and policy. Mr. Moser stated that new roads, road expansions and development were addressed in the Master Plan or could allude to things already in existence or in the process of being reformed.

There being no one present to be heard, it was moved by Mr. Jarackas and seconded by Mr. Mudgett to find the Bicycle and Pedestrian Master Plan consistent with the Comprehensive





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Plan and Growth Management Code and recommend approval to City Council. Mr. Kinsey stated that specific offerings from the Board should be included in the motion. Ms. McCormick stated that kept in mind should be all things discussed by the Board. There being no one present to be heard, it was moved by Mr. Jarackas, seconded by Mr. Mudgett, and unanimously carried to find the Bicycle and Pedestrian Master Plan consistent with the Comprehensive Plan and Growth Management Code and recommend approval to City Council.