



# BICYCLE AND PEDESTRIAN MOBILITY PLAN

for the City of Miami Gardens

EXECUTIVE SUMMARY



Prepared for



Prepared by



Kimley-Horn and Associates, Inc.



# Bicycle and Pedestrian Mobility Plan for the City of Miami Gardens

*Prepared for:*

***City of Miami Gardens***



***Miami-Dade MPO***



*Prepared by:*

**Kimley-Horn and Associates, Inc.**



**Kimley-Horn  
and Associates, Inc.**

©Kimley-Horn and Associates, Inc.

2013

042602009

The preparation of this report has been financed in part by the U.S. Department of Transportation (USDOT), through the Federal Highway Administration (FHWA) and/or the Federal Transit Administration (FTA), the State Planning and Research Program (Section 505 of Title 23, U.S. Code) and Miami-Dade County, Florida.

The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation.

# BICYCLE AND PEDESTRIAN MOBILITY PLAN FOR THE CITY OF MIAMI GARDENS

## INTRODUCTION

Located in the North-Central area of Miami-Dade County, the City of Miami Gardens is generally bounded by Countyline Road to the north, NW 151<sup>st</sup> Street to the south, N Miami Avenue/NE 2<sup>nd</sup> Avenue to the east, and NW 47<sup>th</sup> Avenue and NW 57<sup>th</sup> Avenue to the west. As the third largest city in Miami-Dade County, Miami Gardens spans approximately 20 square miles and is home to over 105,000 residents, as well as SunLife Stadium, Calder Race Track, and several bustling commercial corridors. With its proximity to the Golden Glades Interchange, the City is easily accessed by Florida's Turnpike, Interstate 95, and the Palmetto Expressway (SR 826). In addition, the South Florida Regional Transportation Authority (SFRTA) Tri-Rail commuter rail line runs along the southeast border of the City. The City's Parks and Recreation Department boasts 18 municipal parks along with the county's Library Walking Trail, Dolphin Linear Park, Snake Creek Trail, and Scrub Oak Preserve.

It is critical to enhance non-motorized transportation mobility and accessibility in Miami Gardens to connect the City's activity centers, neighborhoods, and community facilities. Pedestrian and bicycle-friendly environments invite residents to patronize local businesses, walk or bike to work and school, and access public transportation for longer trips. Furthermore, promoting walking and bicycling in Miami Gardens achieves important sustainability, health, and recreation goals as well.

The City of Miami Gardens is continually seeking ways to enhance its pedestrian and bicycle facilities. Collectively, the City's Recreational Trails Master Plan, Comprehensive Development Master Plan, and Roadway Assessment Study have been the springboard towards the vision and development plan for the future of pedestrian and bicycle facilities in Miami Gardens. This Plan presents improvement strategies developed through technical analysis to enhance the important non-motorized transportation network of Miami Gardens.

## PLAN OBJECTIVE

The primary objective was to prepare a bicycle and pedestrian mobility plan for the City of Miami Gardens.

This mobility plan develops and recommends projects to help connect the City's activity centers, neighborhoods, and community facilities. The plan incorporates the City's existing Recreational Trails Master Plan with greenways and blueways and an established sidewalk construction program based on the city-wide comprehensive Roadway Assessment Study. Furthermore, this mobility plan utilizes urban design concepts to:

- Enhance the city-wide bicycle/pedestrian safety network
- Provide bicycle facilities and amenities for use as a method of transportation



# BICYCLE AND PEDESTRIAN MOBILITY PLAN FOR THE CITY OF MIAMI GARDENS

- Improve traffic flow and safety for intermodal transportation
- Refine goals as identified in the City's Transportation Element of the Comprehensive Development Master Plan

The development of this plan incorporated public input and participation.

## PURPOSE AND NEED

Improving bicyclist and pedestrian mobility within the City of Miami Gardens is consistent with the City's Comprehensive Development Master Plan (CDMP) and also helps to meet several important community objectives. The first goal of the Transportation Element of the City's CDMP is to develop and maintain a safe, convenient, accessible and efficient transportation system. Within this goal, the City lists several strategies such as designing for pedestrian accessibility and installing bicycle lanes and bicycle parking as well as an overall objective to provide a safe and convenient pedestrian and bicycle network including links to schools, recreational facilities, bus stops, and major trip generators.

## LITERATURE REVIEW

An important element of a successful multimodal mobility plan is to understand prior initiatives that can provide information about the context within which this plan exists and can provide information about projects that can be used as a starting point for enhancing multimodal mobility. Recommendations and projects identified in prior studies that may affect the outcome of this plan have been identified.

The following data sources, studies, and plans were reviewed as part of this effort.

- National Household Travel Survey
- U.S. Census Journey-to-Work Data
- Florida Department of Transportation Work Program
- Miami-Dade MPO Transportation Improvement Program (TIP)
- Miami-Dade MPO 2035 Long Range Transportation Plan (LRTP)
- USDOT Complete Streets
- Context Sensitive Solutions
- NACTO Urban Bikeway Design Guide
- FHWA's How to Develop a Pedestrian Safety Action Plan
- City of Miami Gardens Recreational Trails Master Plan
- State Road 7 Livable Communities Corridor Study
- City of Miami Gardens Roadway Assessment Report





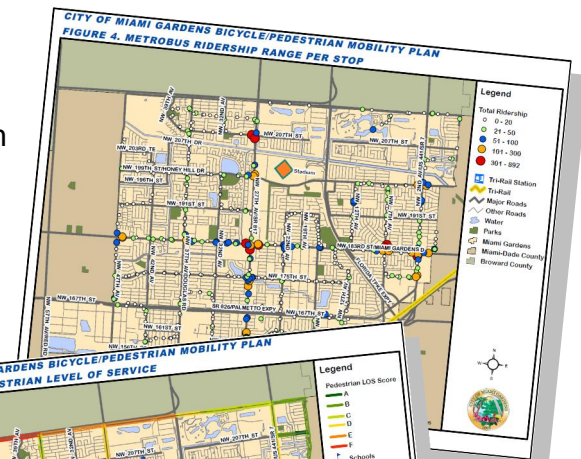
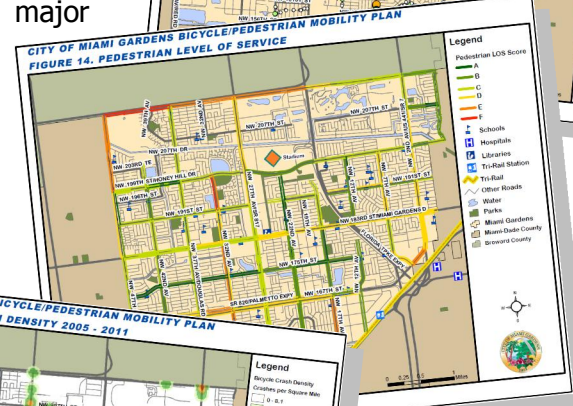
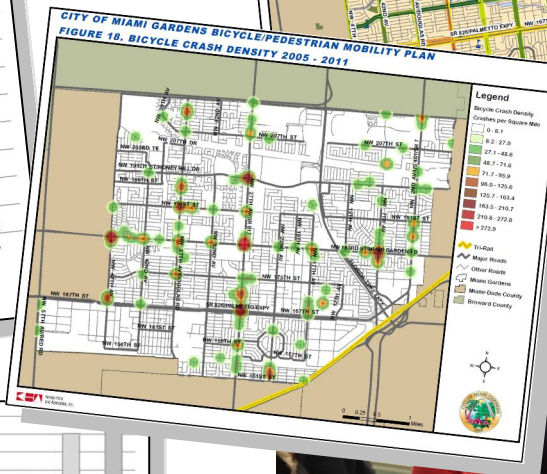
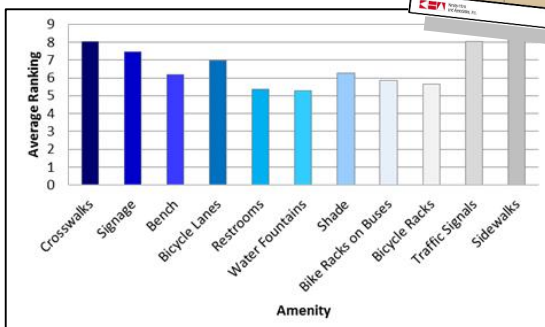
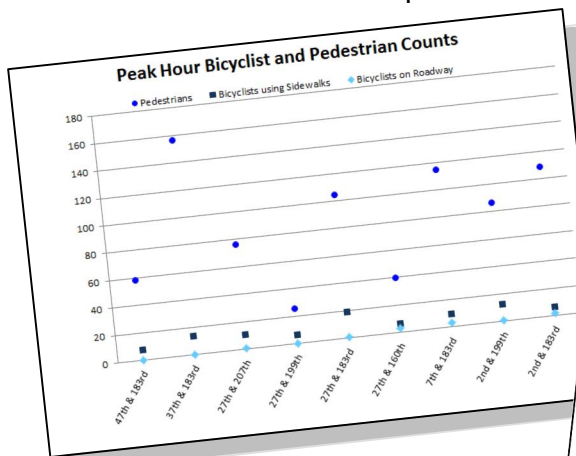
# BICYCLE AND PEDESTRIAN MOBILITY PLAN FOR THE CITY OF MIAMI GARDENS

## TRANSPORTATION MOBILITY ANALYSIS

A general transportation mobility analysis was conducted to identify bicycle and pedestrian mobility issues through data analysis in the City of Miami Gardens. The analysis was based on existing conditions, data collected for this Plan, and an online bicycle and pedestrian survey. The purpose of this task was to collect data that will allowed the study team to properly assess the existing conditions of alternative travel modes in Miami Gardens, and to analyze the future bicycle and pedestrian infrastructure needs.

The transportation mobility analysis consisted of:

- GIS map series that illustrate existing transportation mobility conditions and community features
- Field observations
- Bicycle and pedestrian level of service calculations for major roadways
- Bicyclist and pedestrian counts at major intersections
- Bicycle and pedestrian crash data
- Online bicycle and pedestrian survey
- Public workshop



# BICYCLE AND PEDESTRIAN MOBILITY PLAN FOR THE CITY OF MIAMI GARDENS

## GOAL AND OBJECTIVES

On August 3<sup>rd</sup>, 2012, the Steering Committee for the project met to identify the main goals and objectives for this Plan in consideration of the results of the Literature Review and Transportation Mobility Analysis. The goals discussed at that meeting are listed below.

- Provide bicycle and pedestrian access to the new City Hall that is under construction on the east side of NW 27<sup>th</sup> Avenue.
- Improve connectivity from the new City Hall to Dolphin Linear Park to promote active transportation and recreation.
- Create a connection between the Snake Creek Trail and Sun Life Stadium, potentially through coordinating with Florida's Turnpike Enterprise on their PD&E.
- Create a long-term project for a walking and bicycling connection to the Golden Glades Tri-Rail Station.
- Prioritize improvements near schools.
  - 18 elementary schools
  - 5 middle schools
  - 2 high schools
- Provide safety improvements near high-volume bus stops.
- Provide bicycle access to the Betty T. Ferguson Recreational Complex on NW 199<sup>th</sup> Street.
- Create more accessibility to the Dolphin Linear Park including wayfinding signs and potentially allowing bicycles during certain times of the day (commuting hours).
- Establish bike friendly business districts.

## RECOMMENDED IMPROVEMENTS

Bicycle and pedestrian mobility recommendations were developed for the City of Miami Gardens based on input from the Steering Committee and the prior work tasks of this Plan, including the literature review, transportation mobility analysis, and the identification of goals and objectives. All improvements have been developed under an overarching principle to support and prioritize pedestrians and bicyclists within the City through use of context sensitive solutions (CSS) and complete streets principles as discussed in the Literature Review component of this report.

The capital projects represent the Engineering "E" of the League of American Bicyclists' "Five E" multimodal planning process. The remaining four "Es" each have individual recommendations summarized at the end of the Plan – Education, Encouragement, Enforcement, and Evaluation. The projects are organized as follows.





# BICYCLE AND PEDESTRIAN MOBILITY PLAN FOR THE CITY OF MIAMI GARDENS

## ***Area Wide Improvements***

- Project 1: Pedestrian Throughway Zone
- Project 2: Pedestrian Shade Corridors
- Project 3: Pedestrian Lighting
- Project 4: Pedestrian Signalization Improvements
- Project 5: Automated Pedestrian Detection
- Project 6: Bicycle Lanes
- Project 7: Bicycle Boulevard Corridors
- Project 8: Bike Boxes
- Project 9: High Density Bicycle Parking
- Project 10: Low-Speed Design Principles
- Project 11: Pedestrian Crossing Treatments
- Project 12: Pedestrian Mobility Improvements
- Project 13: Non-Motorized Trails
- Project 14: School-Related Improvements
- Project 15: Bus Stop Improvements
- Project 16: Bike Friendly Business Districts

## ***Site-Specific Improvements***

- Project 17: New City Hall Access
- Project 18: City Hall and Dolphin Linear Park Connectivity
- Project 19: Snake Creek Trail and Sun Life Stadium Connectivity
- Project 20: Golden Glades Tri-Rail Station Access
- Project 21: Betty T. Ferguson Recreational Complex Access
- Project 22: Dolphin Linear Park Wayfinding

## ***Non-Engineering Improvements***

- Project 23: Education Improvements
- Project 24: Encouragement Improvements
- Project 25: Enforcement Improvements
- Project 26: Evaluation and Monitoring

When taken as a comprehensive whole, the 26 projects will increase the safety and mobility of the residents and visitors of Miami Gardens for years to come. Table ES-1 lists approximate costs of improvement items associated with the recommended projects and Figure ES-1 depicts the existing, planned and recommended bicycle and pedestrian facilities within the City of Miami Gardens.



# BICYCLE AND PEDESTRIAN MOBILITY PLAN FOR THE CITY OF MIAMI GARDENS

**Table ES-1: Associated Project Costs for Planning Purposes**

Item	Approximate Cost	Associated Project Number																									
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Bike Barometers/Counters	\$20,000 each																										
Bike Box	\$10,000																										
Bike Lanes	\$5,000 - \$50,000 per mile																										
Bike Racks	\$1,200 each																										
Brick Crosswalk	\$13 per SF																										
Bulbout	\$5,000 - \$20,000 each																										
Bus Shelter	\$10,000 each																										
Concrete Sidewalk	\$11 per SF																										
Bicycle and Pedestrian Counts	\$350 per intersection																										
Crosswalk Striping	\$3 per LF																										
Curb Ramp with warning surface	\$3,000 each																										
Multi-Use Trails	\$250,000 per mile																										
Neighborhood Traffic Circle	\$250,000 each																										
Pedestrian-Level Street Lights	\$5,000 each																										
Scored Concrete Crosswalk	\$12 per SF																										
Sharrow Pavement Marking	\$400 each																										
Signage	\$400 each																										
Stamped Colored Concrete Crosswalks	\$15 per SF																										
Standard Street Light (Cobra Head)	\$10,000 each																										
Weight-Sensing Surface Treatment	\$1,000 each																										
Synthetic Pedestrian Shading	\$15 per SF																										
Traffic Calming Circle	\$12,000 each																										
Trail Underpass	\$500k to over \$2M																										

Sources: BIKESAFE: Bicycle Countermeasure Selection System, Federal Highway Administration  
City of Portland, Bureau of Transportation  
Florida Department of Transportation, Pay Item Cost History  
Grade-Separated Trail Crossings, 2008 National Trails Symposium Pedestrian Districts Study, Metropolitan Transportation Commission  
PEDSAFE: Pedestrian Safety Guide and Countermeasure Selection System, Federal Highway Administration





**FIGURE ES-1. EXISTING FACILITIES, PLANNED FACILITIES, AND RECOMMENDED IMPROVEMENTS**





