

Miami-Dade Metropolitan Planning Organization
in conjunction with
Miami Downtown Development Authority
present

Bicycle/Pedestrian Mobility Plan
For the Miami Downtown Development Authority Area



Prepared by:
Kimley-Horn and Associates, Inc



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

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CONTEXT

Downtown Miami is a world class destination for residents, tourists, commerce, and culture. Significant redevelopment and densification have taken place in the past and a similar trend is expected to continue in the foreseeable future. In addition, the downtown condo market is recovering strongly from one of the most historic boom-turned-busts in U.S. housing market history. The population growth resulting from these trends is positively impacting Downtown Miami’s commercial base as well.

Downtown Miami is the hub of the South Florida urbanized region. In fact, as the Downtown Development Authority’s (DDA) Master Plan 2025 Vision Statement states, “Downtown Miami is the business, social and cultural epicenter of the Americas, which capitalizes on its unique position as a major world city in a tropical waterfront environment.”



It is critical to enhance non-motorized transportation mobility and accessibility for Downtown Miami to sustain its status as a major world city. Pedestrian-friendly downtown environments invite residents and tourists alike to patronize downtown businesses, enjoy beautiful waterfront vistas, walk to work, access public transportation for longer trips, and marvel at the spectacle

of grand boulevards. Furthermore, promoting walking and bicycling in the Downtown achieves important sustainability, health, and recreation goals as well.



The Miami-Dade Metropolitan Planning Organization (MPO), Miami DDA, and the City of Miami are continually seeking ways to strengthen Downtown Miami's status as the world class epicenter of the Americas. The 2025 Downtown Miami Master Plan and Miami 21 present an aggressive vision and development plan for the Miami of the 21st century. An efficient and robust transportation system is vital to sustain and underpin the planned growth. This Plan presents improvement strategies developed through technical analysis to enhance the important non-motorized transportation network of Downtown Miami to support sustainable growth.





PLAN OBJECTIVE

The primary plan objective is to prepare a bicycle/pedestrian mobility plan for the Miami Downtown Development Authority (DDA) area.

This mobility plan should develop and recommend projects to help implement the DDA's goals related to bicycle and pedestrian mobility including creating great streets and community spaces, elevating grand boulevards to prominence, and leveraging the iconic tropical waterfront. Furthermore, this mobility plan should focus on improving multimodal access to public transportation, which will promote regional connectivity.

OUTLINE

The mobility plan consists of the following four main components.

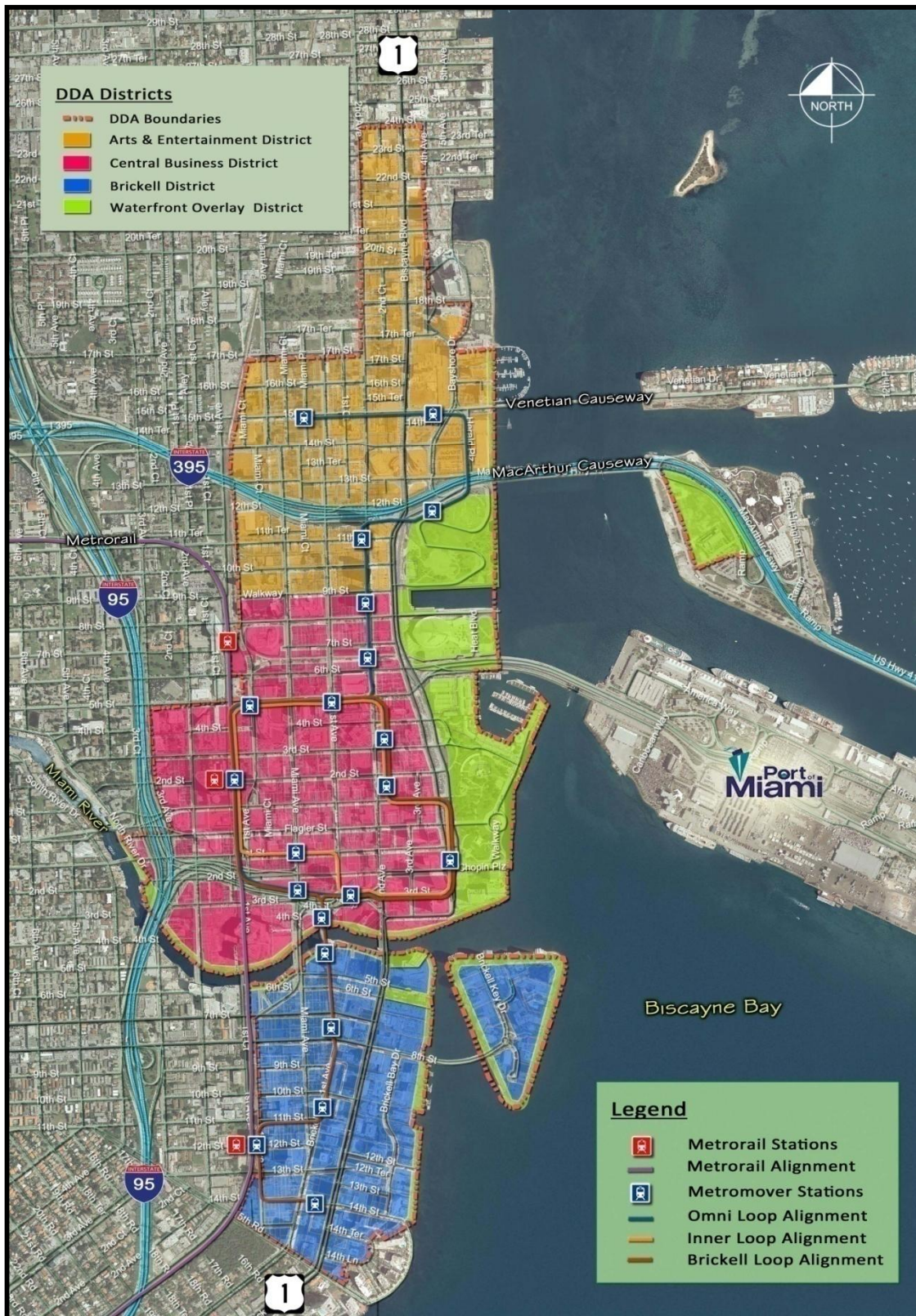
- Literature Review
- Transportation Mobility Analysis
- Goals and Objectives
- Recommended Improvements

The DDA study area is depicted on the map in Figure 1 on the following page.





Figure 1: Study Area Map



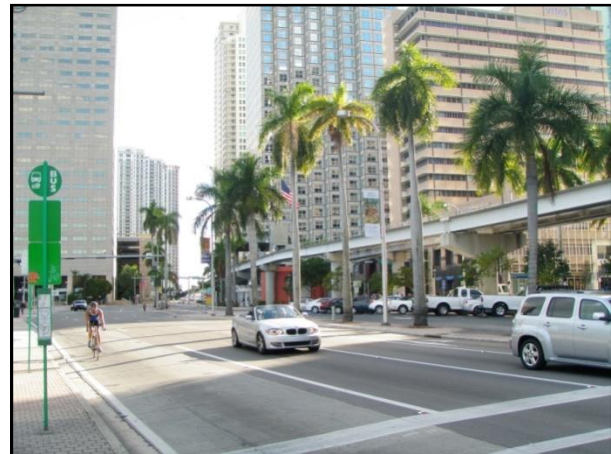


LITERATURE REVIEW

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. 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. A brief summary of the review of each item is included.

- DWNTWN Miami... 2025 Downtown Miami Master Plan
- DDA Residential Closings and Occupancy Study
- National Household Travel Survey
- U.S. Census Journey-to-Work Data
- Florida Department of Transportation Work Program
- Miami-Dade MPO Transportation Improvement Program (TIP)
- City of Miami Capital Improvement Program (CIP)
- City of Miami 2030 Bicycle Master Plan
- Miami Downtown Transportation Master Plan
- DDA Transportation Enhancement Strategies for Downtown Miami
- Miami River Urban Infill Plan
- Miami River Corridor Multimodal Transportation Plan
- M-Path Master Plan
- Miami-Dade MPO 2035 Long Range Transportation Plan (LRTP)

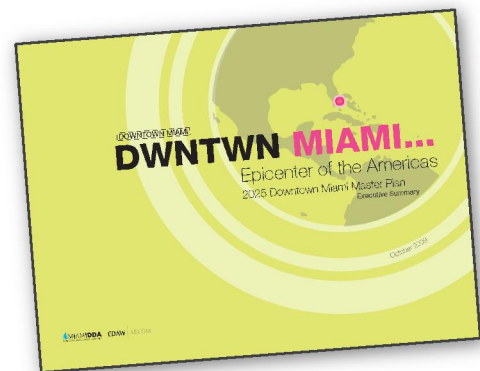




DWNTWN Miami... 2025 Downtown Miami Master Plan

The Miami DDA in conjunction with EDAW/AECOM and the guidance of the Greater Miami Chamber of Commerce – New World Committee Downtown Master Plan Task Force developed a master plan for Downtown Miami with a long-term horizon of 2025. The goal of the master plan was to create a connection between, and to reach the maximum potential of each of the distinct districts within the DDA area. This master plan was built upon a solid foundation of previous studies prepared for the Downtown Miami’s mobility, aesthetics, and urbanism. The intent of the document was to create an action-oriented master plan that will allow for instant implementation since it provides goals with a timeline frame ranging from “now” (present day) up to “long-term” (year 2025). It should be noted that, as mentioned before, Downtown Miami is underway to becoming a world class city which will in turn develop the most livable urban center in the nation and it will strengthen its position as an international center for commerce, culture, and tourism. The 2025 Downtown Miami Master Plan establishes the following goals:

- Enhance our position as the business and cultural epicenter of the Americas
- Leverage our beautiful and iconic tropical waterfront
- Elevate our grand boulevards to prominence
- Create great streets and community spaces
- Promote transit and regional connectivity



These goals promote a green urban environment where pedestrian mobility is the transportation priority.



DDA Residential Closings and Occupancy Study

The Miami DDA commissioned an update of the Residential Closings and Occupancy Study prepared by Goodkin Consulting and Focus Real Estate Advisors. The report update was published in March 2010. Major findings are summarized below.

- Occupancy in new condominium buildings including owners and renters increased 12 percentage points from 62 percent to 74 percent of completed units between May 2009 and February 2010.
- Completed buildings studied included 75 condo buildings representing a total of 22,079 units. Two new buildings totaling 876 units are expected to be completed in the near term.
- Approximately 87 percent of the 16,415 sold condo units are filled with full-time residents.
- Substantial household growth is predicted to continue in Downtown Miami. The substantial supply of new condominium units is increasingly being brought to market as rental stock, generating a highly competitive rental market that translates into greater affordability and choice attractive to the substantial downtown employment base.
- The Brickell area accounts for the largest concentration of new condominium buildings/units in the downtown area, representing about 10,400 units. The Central





Business District (CBD) and the Wynwood/Edgewater area represent other large markets.

The applicability of this study for the Bicycle and Pedestrian Mobility Plan is that the increasing demand for urban living creates additional need for sustainable non-motorized transportation solutions to serve the resulting urban trip patterns.

National Household Travel Survey

According to the 2001 National Household Travel Survey, nearly one-half of all trips are less than three miles in length. Approximately 28 percent of trips are less than one mile. Yet less than one percent of all trips are made by bicycle according to United States Census data. Although comprehensive travel mode and trip length data is expensive to collect and not frequently updated, it is unlikely that percentages are significantly different than they were in 2001. In a geographic area such as Downtown Miami, it is likely that the percentage of short trips is even higher than the national average.



Active transportation, such as bicycling, walking, or accessing public transportation, has the potential to serve a greater market share of trips than it currently does. Facilities such as wide sidewalks, pedestrian crossing features at key intersections, bicycle parking areas, and interconnected bike lanes are important for attracting a greater modal share for alternative

travel modes. Focusing planning efforts on alternative transportation modes is vital.

U.S. Census Journey-to-Work Data

The United States Bureau of the Census measures transportation data for work trips only using a sampling of respondents that complete the census long form as part of the annual



American Community Survey (ACS). Updated socioeconomic, demographic, and housing information is now available on an annual basis.

Journey-to-work data for the Miami DDA area was extracted from geographic information system (GIS) data available from the Census ACS. The most recent year of data available for this study is from 2008.

Work trip characteristics in Downtown Miami demonstrate that Downtown residents are more likely to make work trips on foot than in the City, County, and State as a whole. Although “drove alone” is still the dominant journey-to-work mode within the Downtown, the percentage of single occupant vehicles is 7 percent less than in the County and 9 percent less than in the State as a whole.

Table 1: Journey to Work Data

Description	Downtown Miami (DDA Study Area)		City of Miami		Miami-Dade County		State of Florida	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Car, truck, or van	10,144	80.14%	122,481	79.40%	941,634	86.70%	7,353,552	89.99%
Drove alone	8,908	70.37%	108,065	70.05%	840,379	77.37%	6,491,993	79.45%
Carpooled	1,236	9.76%	14,416	9.35%	101,255	9.32%	861,559	10.54%
Public Transportation	1,014	8.01%	18,845	12.22%	61,239	5.64%	160,424	1.96%
Motorcycle	0	0.00%	347	0.22%	2,165	0.20%	24,632	0.30%
Bicycle	40	0.32%	452	0.29%	3,456	0.32%	45,333	0.55%
Walked	674	5.32%	5,433	3.52%	21,745	2.00%	131,860	1.61%
Other means	254	2.01%	2,409	1.56%	15,032	1.38%	103,960	1.27%
Worked at home	532	4.20%	4,145	2.69%	39,192	3.61%	344,756	4.22%



Florida Department of Transportation Work Program

The Florida Department of Transportation (FDOT) prepares an annual work program for projects to be completed in the next five years. Miami-Dade County falls within the jurisdiction of FDOT District Six. The FDOT 2010 – 2014 work program was reviewed to determine what projects are expected to be completed within the next five years. According to Florida Statute 335.065, bicycle and pedestrian ways shall be established in conjunction with the construction, reconstruction, or other change of any state transportation facility. The following projects are programmed by FDOT that are of interest to this Plan.

**Table 2: FDOT Work Program
Projects within the Miami DDA Area**

FM Number	Location	From	To	Improvement	Year
412473-1	Brickell Avenue	SE 25 th Road	SE 4 th Street	Rigid Pavement Rehabilitation	2010
424407-1	SW 1 st Street	Miami River	Miami River	Bridge Replacement PD&E	2010
251670-1	I-395	NW 17 th Avenue	Macarthur Causeway	PD&E / EMO Study	2010
414624-1	Biscayne Boulevard	NE 15 th Street	NE 35 th Terrace	Flexible Pavement Reconstruction	2010
418334-1	Riverwalk	SW 2 nd Avenue Bridge	S Miami Avenue Bridge	Bike Path/Trail	2011
420907-1	Miami River Greenway	NW 12 th Avenue	SW 5 th Street	Bike Path/Trail	2011
414633-1	Flagler Street	West 14 th Avenue	West 2 nd Avenue	Flexible Pavement Reconstruction	2014
251156-3	Port of Miami	Port of Miami	Macarthur Causeway	Tunnel	2014



Miami-Dade MPO Transportation Improvement Program (TIP)

The Miami-Dade MPO prepares the annual Transportation Improvement Program (TIP) consistent with federal guidelines. The TIP in effect at the time of this Plan is the FY 2009/10 to FY 2013/14 TIP adopted by the Miami-Dade MPO Governing Board on May 28, 2009. The TIP specifies proposed transportation improvements to be implemented in Miami-Dade County over the coming five years. The TIP was reviewed to determine programmed projects within the study area. Programmed projects are depicted in the table below. FDOT projects identified in the previous section under FDOT Work Program are not repeated in the table below.

**Table 3: Miami-Dade MPO TIP
Projects within the Miami DDA Area**

FM Number	Location	From	To	Improvement	Year
PW671203	NW 14 th Street	Civic Center	Biscayne Boulevard	Widening to 3 Lanes	N/A
PW000306a	NE 2 nd Avenue	NE 20 th Street	NE 36 th Street	Traffic Operations Improvement	2011
PW671204	NW 20 th Street	Civic Center	Biscayne Boulevard	Resurfacing and Re-striping 4 Lanes	N/A

City of Miami Capital Improvement Program (CIP)

The City of Miami prepared the Capital Improvement Program (CIP) as part of the budgeting process for projects expected to be built over the next five years. The latest CIP available at the time of this Plan is the FY 2008/09 to FY 2013/14 CIP. The City of Miami CIP was reviewed to determine programmed projects within the study area. GIS data for CIP projects were provided by the City of Miami. CIP projects are mapped in Figure 2.



City of Miami 2030 Bicycle Master Plan

The City of Miami published their first Bicycle Master Plan in September 2009. This Bicycle Master Plan was developed with the guidance of previous bicycle study efforts locally and nationally. The study assessed the existing conditions, public input, and city staff recommendations to establish the citywide bicycle network plan and bicycle parking plan. This effort can be used as guidance for the development of the bicycle network and parking for the period 2010-2030 within the Downtown study area. The Plan identified that most of the existing corridors within the city are primarily designed for automobile use. Very few bicycle facilities exist within the Downtown area, which makes for an unsafe environment for bicyclists along these corridors. The Bicycle and Pedestrian Mobility Plan for the Miami DDA Area will build upon the bicycle network established in the City of Miami 2030 Bicycle Master Plan.

Miami Downtown Transportation Master Plan

The Miami Downtown Transportation Master Plan (MDTMP) was developed in 2003 to set a general framework for the transportation system in Downtown Miami. As a result, the master plan generated a series of recommendations for the Downtown through the year 2020. The MDTMP focused on maintaining levels of mobility for employees, residents, and visitors. Emphasis was placed on the use of transit (Metrorail, Metromover, shuttles, etc.) and improving the pedestrian environment. Since this study was published, a few other studies have been done including these recommendations and expanding to provide a more pedestrian-oriented environment. The most recent study was developed by the Miami DDA in their 2025 Downtown Miami Master Plan.



Figure 2: City of Miami CIP Improvements





DDA Transportation Enhancement Strategies for Downtown Miami

An evaluation of the City of Miami's existing transportation system and development of transportation enhancement strategies for Downtown Miami was completed in early 2009. The purpose of this project was to set the framework and identify all the potential roadway, transit, and bicycle/pedestrian facility improvements to achieve these objectives. The study evaluated the City's existing transportation system and provides potential improvement strategies. A series of maps were developed to illustrate the transportation system and the potential improvements. As a result of an interactive process with the DDA, this report also includes a prioritization of the already planned projects and the development of conceptual improvements. As part of this effort, a series of improvements have been identified to improve the safety of the existing users and to encourage current automobile users to walk and/or bike for their mobility needs within Downtown Miami. The pedestrian/bicycle improvements are expected to enhance access to the transit system to provide better alternative travel options to automobile. These recommendations are listed in Table 4.

Miami River Corridor Urban Infill Plan

In 2002, Kimley-Horn prepared the first Miami River Corridor Urban Infill Plan for the Miami River Commission. The Miami River Commission joined efforts with the City of Miami, Miami-Dade County and Miami River Corridor stakeholders to kick-start this Urban Infill effort. The plan was built upon previous plans for the Miami River including the Miami River Greenway Action Plan, Miami River Master Plan, Miami River Study Commission Report, and Miami River Commission's Water Quality Improvement Plan. The Urban Infill Plan focused on establishing a unified vision for the future use and development along the Miami River. This plan mainly promotes and protects river interests, encourages smart redevelopment within the Miami River Infill Area, creates public awareness of the river, and defines and protects the quality of life along the river. In addition, the Urban Infill Plan provides a vision for the future of the Miami River Corridor



as a true multimodal transportation system. The plan also identifies specific recommendations to improve pedestrian mobility.

**Table 4: DDA Transportation Enhancement Strategies
Pedestrian/Bicycle Improvements**

Project	Purpose Served	Status
Bicycle Path Improvements along 14th Street	Connect the Performing Arts Center/Entertainment Area to the University of Miami Medical Center Health District	Planned
Bicycle Path Improvements along NW 1st Avenue	Connect Downtown Miami Government Center to the proposed bicycle lanes along 14 th Street	Planned
FEC Urban Greenway Corridor	Greenway along the FEC railroad right-of-way to connect Bayfront Park to the bicycle lanes on NW 1 st Avenue	Planned
M-Path Greenway	Connect the existing bicycle lanes on SW 15 th Road to the Brickell Metrorail Station	Planned
Miami River Greenway M-Path Connector	Connect the Miami River Greenway to the M-Path Greenway starting at SW 7 th Street	Planned
Pedestrian Corridor Improvements <ul style="list-style-type: none"> ▪ Miami Avenue ▪ Biscayne Boulevard ▪ Flagler Street ▪ W. 2nd Avenue ▪ N. 5th Street ▪ N.E. 2nd Avenue ▪ N.E. 3rd Street ▪ N.E. 1st Avenue ▪ N.E. 2nd Street ▪ S. 1st Street ▪ N. 4th Street 	Pedestrian corridor improvements and connection of existing pedestrian corridors to provide a continued corridor	Miami Downtown Transportation Master Plan
Pedestrian Connections/Walkways	Miami Riverwalk Connection between American Airlines Arena and Bayside along with other existing walkways	Miami Downtown Transportation Master Plan



Miami River Corridor Multimodal Transportation Plan

Kimley-Horn developed the Miami River Corridor Multimodal Transportation Plan for the Miami-Dade MPO and the Miami River Commission. This plan addressed various types of transportation along the river. The plan incorporated the Miami River Greenway Action Plan (MRGAC) as well as the relationship between the MRGAC and multiple modes of transportation improvements along the corridor. These include pedestrian, bicycle, transit, and roadway improvements. The plan developed a multimodal transportation plan that envisioned alternative modes of transportation that will alleviate the traffic congestion on the adjacent roads and increase the functionality of the Miami River Corridor, including steps necessary for completion of the Miami River Greenway. Project recommendations were made for the Upper River, Middle River, and Lower River. The Lower River section includes a portion of the DDA study area.

M-Path Master Plan

Kimley-Horn developed the M-Path Master Plan for the Miami-Dade MPO in 2007. The M-Path is currently a nine-mile, eight-foot wide multi-use path that connects Downtown Miami to SW 67th Avenue (Ludlam Road) in South Miami. The M-Path was built within Miami-Dade Transit right-of-way, meandering under the elevated Metrorail. Along the corridor, discontinuities exist and the path does not meet current trail design standards for bi-directional multi-use paths. The objective of the M-Path Master Plan was to address operational issues and problem areas along the alignment with a comprehensive program for the path as a whole. M-Path concerns and issues were identified and documented by our team at the outset of the plan through corridor inventories and photography. Guiding principles were developed to provide focus for design standards and trail improvements. Trail design standards were established that will guide the improvement of existing segments and will serve as a basis for the design of future segments and connections to the M-Path. A conceptual design was prepared on aerial photography that identified locations



for trail improvements such as enhanced intersection crossings, trail re-alignments, safety features, signage, lighting, landscaping, and Metrorail plaza treatments.

Miami-Dade MPO 2035 Long Range Transportation Plan (LRTP)

The Miami-Dade Metropolitan Planning Organization (MPO) updates their LRTP every five years per federal legislation requirements. The LRTP outlines expenditures for surface transportation programs including highways, transit, safety, research and freight. The current LRTP is for long term planning horizon 2035. The 2035 LRTP was adopted by the MPO Governing Board late 2009. The plan addresses several transportation improvements, including mobility, safety, security, economic vitality, environment, connectivity, and system preservation. The plan identified several projects in the vicinity of the DDA area. Some of these projects include rubber-tire mass transit, traffic operations improvements, bridge rehabilitation/construction, Port of Miami access improvements, and bicycle and pedestrian facilities. Tables 5 and 6 summarize these projects.

**Table 5: Miami-Dade 2035 LRTP Cost Feasible Plan
Projects in Priorities I to IV**

Facility	From	To	Description
Coral Way-Brickell Trolley	Brickell Metrorail/Metromover Station	Ponce de Leon Boulevard	Implement rubber tire trolley service
Downtown-Brickell Trolley	Brickell Metrorail/Metromover Station	Omni area	Implement rubber tire trolley service
NE 2 nd Avenue	NE 20 th Street	NE 91 st Street	Street/Traffic Operational Improvements
SR 5/US-1/Biscayne BRT	Omni Terminal	Aventura Mall	Premium transit improvement
SW 1 st Street Bridge	over Miami River	US-1	Bridge replacement
Downtown/Port Access			Construct I-95 NB Slip ramp on NW 6 th Street; Implement NE/NW 5 th /6 th /Port Blvd. improvements for access between POM and I-95 Slip ramp
SR 5/US-1/Biscayne Boulevard			Expand SB left turn lane for trucks entering Port



**Table 6: Miami-Dade 2035 LRTP Cost Feasible Plan
Non-Motorized Projects**

Facility	From	To	Description
NE 2 nd Avenue	NE 20 th Street	NE 36 th Street	Bicycle Facility Improvements
Safe Route to School Program	Southside		Non-motorized Facility Improvements
North Miami Avenue	NW 14 th Street	NW 29 th Street	Bicycle Facility Improvements (Restriping)
North Miami Avenue	NW 5 th Street	NW 14 th Street	Bicycle Facility Improvements (Restriping)
NW 2 nd Avenue	NW 17 th Street	NW 20 th Street	Pedestrian Facility Improvements
NW 3 rd Court	I-95	NW 8 th Street	Pedestrian facility Improvements
South Miami Avenue	SW 14 th Terrace	SW 12 th Street	Bicycle Facility Improvements (restriping)
South Miami Avenue	SW 6 th Street	SW 3 rd Street	Bicycle Facility Improvements (restriping)
SW/NW 1 st Avenue	SW 2 nd Street	NW 20 th Street	Bicycle Facility Improvements (restriping)
SW 2 nd Avenue	SW 15 th Road	SW 8 th Street	Bicycle Facility Improvements (restriping)
Overtown Greenway (except portion between NW 3 rd and 7 th Avenue)	Miami River Greenway	Bicentennial Park	Trail Improvements



TRANSPORTATION MOBILITY ANALYSIS

Text to be developed later in the plan.



GOALS AND OBJECTIVES

Text to be developed later in the plan.



RECOMMENDED IMPROVEMENTS

Text to be developed later in the plan.