SAFER PEOPLE SAFER STREETS LOCAL ACTION PLAN

An Initiative of the USDOT Mayor's Challenge for Safer People, Safer Streets

Adopted by the Miami-Dade Board of County Commissioners June 7, 2016

MIAMI-DADE COUNTY

COMPLETE STREETS THE WAY WE ROLL

HEALTH FOUNDATION of south florida

neat streets MIAMI

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www.MiamiDade.gov/NeatStreets

MEMORANDUM

Agenda Item No. 14(A)(4)

TO: Honorable Chairman Jean Monestime and Members, Board of County Commissioners

DATE: June 7, 2016

FROM: Abigail Price-Williams County Attorney

SUBJECT: Resolution adopting the Miami-Dade Safer People, Safer Streets Local Action Plan and directing the County Mayor to coordinate with the Safer People, Safer Streets Local Action Team, the relevant County Departments and the Metropolitan Planning Organization to ensure funding and implementation of the plan

Resolution No. R-529-16

The accompanying resolution was prepared and placed on the agenda at the request of Prime Sponsor Commissioner Dennis C. Moss.

Abigail Price-Williams
County Attorney

APW/smm

MEMORANDUM

(Revised)

TO: Honorable Chairman Jean Monestime
and Members, Board of County Commissioners

DATE: June 7, 2016

FROM: Abigail Price-Williams
County Attorney

SUBJECT: Agenda Item No. 14(A)(4)

Please note any items checked.

_____	**"3-Day Rule" for committees applicable if raised**
_____	**6 weeks required between first reading and public hearing**
_____	**4 weeks notification to municipal officials required prior to public hearing**
_____	**Decreases revenues or increases expenditures without balancing budget**
_____	**Budget required**
_____	**Statement of fiscal impact required**
_____	**Statement of social equity required**
_____	**Ordinance creating a new board requires detailed County Mayor's report for public hearing**
√	**No committee review**
_____	**Applicable legislation requires more than a majority vote (i.e., 2/3's ____, 3/5's ____, unanimous _____) to approve**
_____	**Current information regarding funding source, index code and available balance, and available capacity (if debt is contemplated) required**

Approved _____ Mayor
Veto _____
Override _____

Agenda Item No. 14(A)(4)
6-7-16

RESOLUTION NO. R-529-16

RESOLUTION ADOPTING THE MIAMI-DADE SAFER PEOPLE, SAFER STREETS LOCAL ACTION PLAN AND DIRECTING THE COUNTY MAYOR OR COUNTY MAYOR'S DESIGNEE TO COORDINATE WITH THE SAFER PEOPLE, SAFER STREETS LOCAL ACTION TEAM, THE RELEVANT COUNTY DEPARTMENTS AND THE METROPOLITAN PLANNING ORGANIZATION TO ENSURE FUNDING AND IMPLEMENTATION OF THE PLAN

WHEREAS, this year more than 200 Miami-Dade residents will die on our roads, reinforcing Miami-Dade's dubious distinction as the 4th most dangerous metropolitan area in the nation for pedestrians; and

WHEREAS, in February 2015, United States Department of Transportation ("USDOT") Secretary Anthony Foxx announced a nationwide initiative to help reduce pedestrian and bicycle fatalities called the USDOT Mayors Challenge for Safer People, Safer Streets; and

WHEREAS, Miami-Dade was among the first communities in the nation to announce its participation in the Challenge and sent a Miami-Dade delegation to the USDOT Mayor's Challenge for Safer People, Safer Streets Summit; and

WHEREAS, in September 2015, Mayor Carlos A. Gimenez and Neat Streets Miami Chairman, Commissioner Dennis C. Moss, District 9, appointed a 22 member multi-disciplinary task force (the "Safer People, Safer Streets Local Action Team") comprised of community leaders to create an action plan that reduced pedestrian and bicycle crashes and encouraged more biking, walking and transit use in Miami-Dade; and

WHEREAS, over the last six months, the Safer People, Safer Streets Local Action Team pursued a methodical approach in developing the Safer People, Safer Streets Local Action Plan by: first assessing local conditions; identifying national best practices; conducting a walking tour of two urbanized corridors; participating in a Safe Streets Summit and developing recommendations to help increase safety on Miami-Dade's roads; and

WHEREAS, to facilitate the action plan's implementation, County departments have begun identifying those items that they can realize in the short-term through the creation of an "Early Adoption Plan,"

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that this Board:

Section 1. Adopts the Miami-Dade Safer People, Safer Streets Local Action Plan.

Section 2. Directs the County Mayor or County Mayor's designee to work with the Safer People, Safer Streets Local Action Team and coordinate quarterly meetings to ensure implementation of the Miami-Dade Safer People, Safer Streets Local Action Plan and provide an annual report of the progress of the Safer People, Safer Streets Local Action Plan to the Board of County Commissioners.

Section 3. Directs the County Mayor or County Mayor's designee to assign the Transportation and Public Works Department to lead the implementation and support of the Safer People, Safer Streets Local Action Plan in coordination with the Parks, Recreation and Open Spaces Department, Miami-Dade Police Department and Miami-Dade Regulatory and Economic Resources Department.

Section 4. Directs the County Mayor or County Mayor's designee to work with the Miami-Dade Metropolitan Planning Organization to coordinate its programs and resources with the Safer People, Safer Streets Local Action Plan.

Section 5. Directs the County Mayor or County Mayor's designee to pursue funds and evaluate programs that can further the Safer People, Safer Streets Local Action Plan vision of providing a more livable Miami-Dade through the realization of healthier, safer streets accommodating all modes of transportation.

The Prime Sponsor of the foregoing resolution is Commissioner Dennis C. Moss. It was offered by Commissioner **Dennis C. Moss**, who moved its adoption. The motion was seconded by Commissioner **José "Pepe" Diaz** and upon being put to a vote, the vote was as follows:

Jean Monestime, Chairman	**aye**		
Esteban L. Bovo, Jr., Vice Chairman	**aye**		
Bruno A. Barreiro	**aye**	Daniella Levine Cava	**aye**
Jose "Pepe" Diaz	**aye**	Audrey M. Edmonson	**aye**
Sally A. Heyman	**aye**	Barbara J. Jordan	**aye**
Dennis C. Moss	**aye**	Rebeca Sosa	**aye**
Sen. Javier D. Souto	**absent**	Xavier L. Suarez	**absent**
Juan C. Zapata	**absent**		

The Chairperson thereupon declared the resolution duly passed and adopted this 7th day of June, 2016. This resolution shall become effective upon the earlier of (1) 10 days after the date of its adoption unless vetoed by the County Mayor, and if vetoed, shall become effective only upon an override by this Board, or (2) approval by the County Mayor of this Resolution and the filing of this approval with the Clerk of the Board.

MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS

HARVEY RUVIN, CLERK

By: Christopher Agrippa
Deputy Clerk

Approved by County Attorney as
to form and legal sufficiency.

Bruce Libhaber

Table of Contents

List of Appendices

Acknowledgements

The Miami-Dade County Action Plan for Safer People, Safer Streets represents six months of work by the Local Action Team (LAT) appointed by Miami-Dade Mayor Carlos A. Gimenez and Chairman of Neat Streets Miami Miami-Dade Commissioner Dennis C. Moss, District 9.

This work was made possible through funding from the Health Foundation of South Florida (HFSF) and Miami-Dade County. To help execute this project, Miami-Dade County partnered with the engineering and planning consulting firm Kimley-Horn and Associates to prepare the Assessment and Action Plan documentation and Urban Health Solutions to conduct public engagement events. Efforts were guided with the assistance of the LAT team members.

Miami-Dade Local Action Team (LAT) for Safer People, Safer Streets

Alice Bravo	Director	Miami-Dade Transportation and Public Works
Brian Breslin	Founder	ReFresh Miami
Claudius Carnegie, Ph.D	CTAC	Florida International University
Benjamin de la Peña	Director, Strategy	Knight Foundation
Tabitha Fazino	Administrative Dir.	Miami-Dade County School Board
Cesar M. Garcia-Pons	Associate Principal	Perkins+Will
Honorable Oliver G. Gilbert III	Mayor	City of Miami Gardens
Alina Hudak	Deputy Mayor	Miami-Dade County
Ramiro Inguanzo	Assistant City Mgr	Village of Bal Harbour
Jack Kardys	Director	Miami-Dade Parks, Recreation and Open Spaces
Kevin Kerwin	Director	City of Miami Parks and Recreation
Jimmy Morales	City Manager	City of Miami Beach
Nicholas Namias, M.D.	Chief, Trauma	Jackson Memorial
Gus Pego	Secretary	Florida Department of Transportation, District 6
Juan Perez	Director	Miami-Dade Police Department
Dr. Lillian Rivera	Administrator	Florida Department of Health in Miami-Dade
Alyce Robertson	Executive Director	Miami Downtown Development Authority (DDA)
Paul Schwiep	Chairman	Citizens' Independent Transportation Trust
Eli Stiers	Partner	Stiers Law
Honorable Philip K. Stoddard	Mayor	City of South Miami
Debbie Swain	Principal	Milian, Swain & Associates
Peter Wood	V.P. of Programs	Health Foundation of South Florida

Miami-Dade Local Action Team (LAT) Staff Resource Group

Kimberly Brown, AICP	Principal Planner	Regulatory and Economic Resources, Planning
Carlos Cruz-Casas, P.E.	Asst. Dir., Transp.	Miami-Dade Transportation and Public Works
Yanek Fernandez	Traffic Engineer III	Miami-Dade Transportation and Public Works
Patrice Gillespie Smith	Manager	Neat Streets Miami
Miguel Gonzalez	Asst. County Attorney	Miami-Dade County Attorney's Office
David Henderson	Bike and Ped Program	Miami-Dade Metropolitan Planning Organization
Zak Lata, P.E.	Bike, Pedestrian, ADA	Florida Department of Transportation, District 6
Gianni Lodi	Section Supervisor	Regulatory and Economic Resources, Dev Srvcs
Gaspar Miranda, P.E.	Asst. Dir., Hwy Engin.	Miami-Dade Transportation and Public Works
Maria Nardi	Chief, Planning Design	Miami-Dade Parks, Recreation and Open Spaces
Leandro Oña, P.E.	Chief, Rdwy Engin.	Miami-Dade Transportation and Public Works
Stewart Robertson, P.E.	Vice President	Kimley-Horn and Associates, Inc.
Joshua Rodriguez	Ped. Educat. Specialist	Miami-Dade Police Department
Jill Sanchez	Lieutenant	Miami-Dade Police Department
Mark Woerner, AICP	Asst. Dir., Planning	Regulatory and Economic Resources, Planning

Executive Summary

Miami-Dade County has embraced the United States Department of Transportation (USDOT) Mayor's Challenge for creating Safer Streets, Safer People. Over 200 of our friends and neighbors will die this year on Miami-Dade County roadways. Traffic deaths are on the rise again after years of declining numbers – fatalities jumped 8.1 percent in the first half of 2015 according to the National Highway Traffic Safety Administration (NHTSA). The Miami-Fort Lauderdale urbanized area is the 4th worst in the nation for pedestrian fatalities, according to Smart Growth America's *Dangerous by Design 2014* report, utilizing a pedestrian danger index calculated using pedestrian fatalities, population, and percentage of people commuting on foot. The annual number of bicyclist injuries in Miami-Dade County has more than doubled since 2006.

In September 2015, Miami-Dade Mayor Carlos A. Gimenez and Chairman of Neat Streets Miami, Miami-Dade Commissioner Dennis C. Moss, District 9, appointed approximately twenty community leaders to tackle the growing epidemic of bicyclist and pedestrian fatalities. The group was asked to (1) offer their expertise, (2) challenge the norm, and (3) deliver results for all residents. The Local Action Team was supported by County and State staff from the Florida Department of Transportation (FDOT); the Metropolitan Planning Organization (MPO); Miami-Dade Parks, Recreation and Open Spaces (MDPROS); Regulatory and Economic Resources (RER); Police; and Transportation and Public Works departments.

The Action Plan developed by the Local Action Team (LAT) is a compilation of recommendations discussed during LAT meetings, input from the public as articulated in ongoing discussions and workshops, as well as data compiled from the Assessment. The action items are meant to provide initial guidance and will need to be updated as the relevant agencies move to the implementation phase.

In Miami-Dade, we want people of all abilities – from our children to our grandparents – to be comfortable moving around our beautiful community, whether on foot, by bicycle, riding transit, or in a car. We can build a street network that supports healthy and sustainable communities, keeps more money in people's pockets, increases economic competitiveness, and adds to the character of our great community. By offering more and better transportation choices, we can decrease the demand on our streets and reduce our impact on the environment.

Chapter 1: Miami-Dade LAT Vision, Goal, and Outcome

Miami-Dade County has embraced the United States Department of Transportation (USDOT) Mayor's Challenge for creating Safer Streets, Safer People. Neat Streets Miami, within the Miami-Dade Parks, Recreation and Open Spaces (MDPROS) Department organized the Local Action Team (LAT), which is comprised of a diverse group of local thought leaders, including elected officials and community leaders in fields which have a stake in creating a safer community, such as healthcare, transportation, schools, law enforcement, recreation, technology, philanthropy, civic, local and state government.

A Fatal Problem

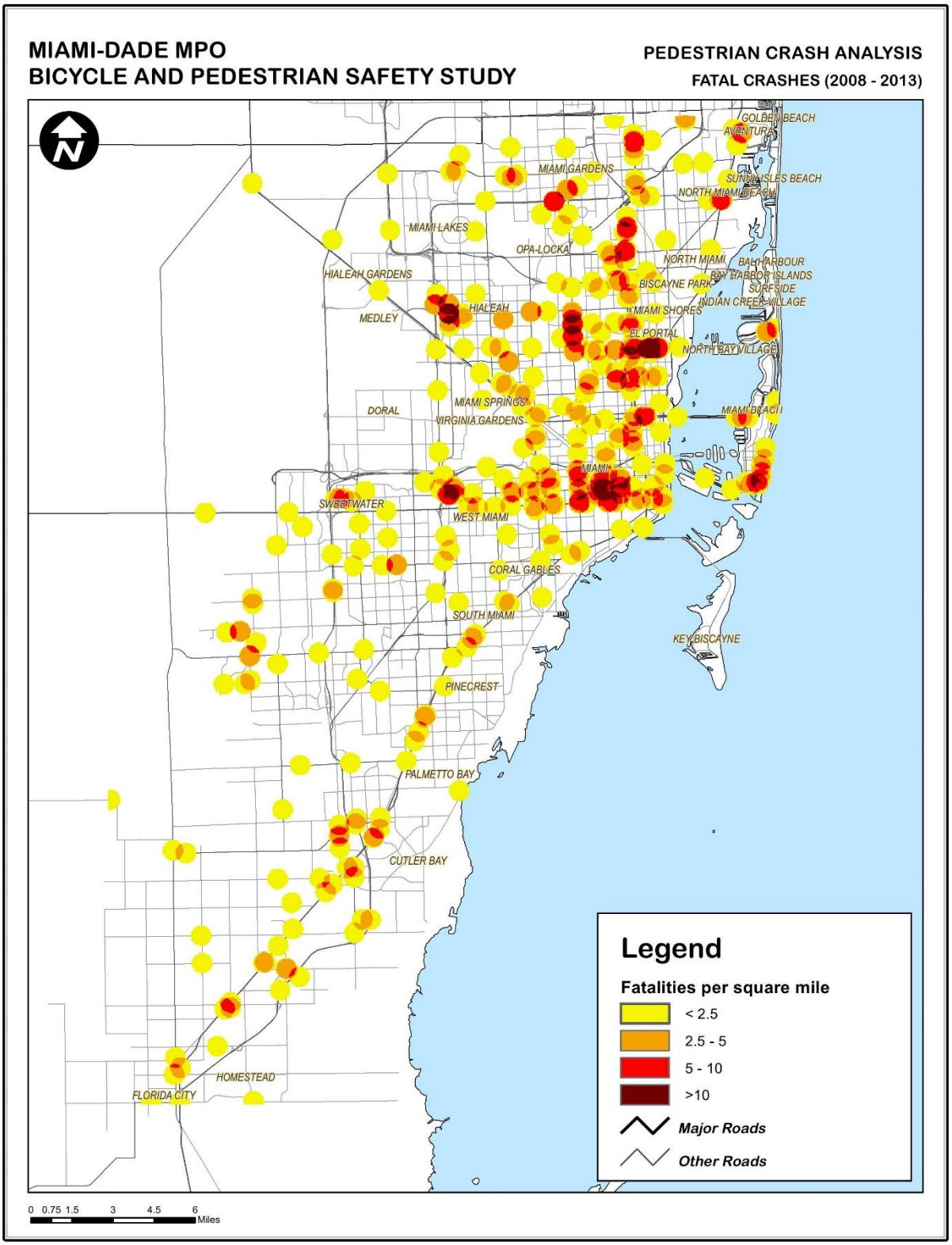
Over 200 of our friends and neighbors will die this year on Miami-Dade County roadways. Traffic deaths are on the rise again after years of declining numbers – fatalities jumped 8.1 percent in the first half of 2015 according to the National Highway Traffic Safety Administration (NHTSA). Traffic deaths are the leading cause of death between ages 5 and 34, according to the Centers for Disease Control (CDC).

The Miami-Fort Lauderdale urbanized area is the 4th worst in the nation for pedestrian fatalities, according to Smart Growth America's *Dangerous by Design 2014* report, measured with a pedestrian danger index calculated using pedestrian fatalities, population, and percentage of people commuting on foot. The three regions that ranked worse than Miami are all in Florida, highlighting Florida's dubious position as the most dangerous state in the nation for pedestrians.

Unfortunately it's no safer for bicyclists in Miami-Dade. The number of bicyclist injuries in Miami-Dade County has more than doubled since 2006. The magnitude of the bicycle safety problem is even worse when considering trauma center records, which indicate a data gap within highway safety crash records for bicyclists. Together, bicyclists and pedestrians account for over one-third of all traffic deaths in Miami-Dade, despite accounting for only a tiny fraction of total miles traveled.

Understanding the Problem

Much work has gone into understanding the pedestrian and bicyclist safety problem. The map on the following page highlights the critical nature of the problem by illustrating the high crash areas within Miami-Dade County. More information is presented in the Assessment.


MIAMI-DADE MPO
BICYCLE AND PEDESTRIAN SAFETY STUDY
PEDESTRIAN CRASH ANALYSIS
FATAL CRASHES (2008 - 2013)
GOLDEN BEACH
AVENTURA
MIAMI GARDENS
SUNNY ISLES BEACH
NORTH MIAMI BEACH
MIAMI LAKES
OPA-LOCKA
NORTH MIAMI
BAL HARBOUR
BAY HARBOR ISLANDS
SURFSIDE
INDIAN CREEK VILLAGE
HIALEAH GARDENS
BISCAYNE PARK
HIALEAH
MEDLEY
MIAMI SHORES
EL PORTAL
NORTH BAY VILLAGE
DORAL
MIAMI SPRINGS
VIRGINIA GARDENS
MIAMI BEACH
MIAMI
SWEETWATER
WEST MIAMI
CORAL GABLES
SOUTH MIAMI
KEY BISCAYNE
PINECREST
PALMETTO BAY
CUTLER BAY
HOMESTEAD
FLORIDA CITY
Legend
Fatalities per square mile
< 2.5
2.5 - 5
5 - 10
>10
Major Roads
Other Roads
0 0.75 1.5 3 4.5 6
Miles

The Mayors' Challenge

In January 2015, USDOT Secretary Anthony Foxx challenged local government leaders to raise the bar for bicyclist and pedestrian safety by joining a year-long "Mayors' Challenge for Safer People and Safer Streets" effort. In March 2015, USDOT and communities from across the nation, including Miami-Dade County, launched the Challenge during the Mayors' Summit for Safer People, Safer Streets. Mayors and other elected officials participate by leading a call to action and forming a Local Action Team (LAT) to advance safety and accessibility goals by taking on one or more Challenge activities. The Challenge is based on the 2010 USDOT Policy Statement on Bicycle and Pedestrian Accommodation. To date, more than 200 cities have signed on to the USDOT Mayor's Challenge.

The Local Action Team for Safer People, Safer Streets

In September 2015, Miami-Dade Mayor Carlos A. Gimenez and Chairman of Neat Streets Miami Miami-Dade Commissioner Dennis C. Moss, District 9, appointed approximately twenty community leaders to tackle the growing epidemic of bicyclist and pedestrian fatalities. The group was asked to (1) offer their expertise, (2) challenge the norm, and (3) deliver results for all residents. The Local Action Team was supported by County and State staff from the Florida Department of Transportation (FDOT); the Metropolitan Planning Organization (MPO); Miami-Dade Parks, Recreation and Open Spaces (MDPROS); Regulatory and Economic Resources (RER); Police; and Transportation and Public Works departments.

Miami-Dade LAT Vision

The Safer People, Safer Streets vision is to provide a more livable Miami-Dade through the realization of healthier, safer streets accommodating all modes of transportation.

Goal of the LAT Report

The goal is to create an Action Plan that reduces pedestrian and bicycle crashes and encourages more biking, walking and transit use by achieving Safer People and Safer Streets.

Outcomes

The outcomes desired are (1) a measurable reduction in bicycle and pedestrian crashes countywide and (2) an overall increase in bicycling, pedestrian, and transit activity.

Complete Streets

A Complete Street, as defined by the National Complete Streets Coalition (NCSC), is a street where the entire right-of-way is planned, designed, and operated for all modes of transportation and all users regardless of age or ability. Complete Streets make it easy to cross the street, walk to shops, catch the bus, bike to work, and enjoy many other healthy activities.

As described by the NCSC, there is no singular design prescription for Complete Streets – each one is unique and responds to its community context (Complete Streets FAQ, National Complete Streets Coalition, www.completestreets.org). Some features that a Complete Street may include are sidewalks, bike lanes (or other innovative bicycle facilities), special bus lanes, comfortable and accessible public transportation stops, frequent and safe crossing opportunities, median refuges, accessible pedestrian signals, landscaped curb extensions, bioswales, roundabouts, on-street parking, and secure bicycle parking, among others. A Complete Street in a suburban area may look different than a Complete Street in the urban core, but both are designed with the same principles in mind to balance safety and convenience for everyone using the road.

Chapter 2: Mayor's Challenge Activities

There are seven Mayor's Challenge Activities established by the USDOT. These seven activity areas serve as a framework for organizing the recommendations in the Action Plan.

Take a Complete Streets Approach

Complete Streets Approach

Complete Streets make it safe and convenient for people of all ages and abilities to reach their destination whether by car, train, bike, or foot. A Complete Streets approach starts with a policy commitment to prioritize and integrate all road users into every transportation project.

Identify and Address Barriers

Fix Barriers

Identify and address barriers to make streets safe and convenient for all road users, including people of all ages and abilities and those using assistive mobility devices. The ability for older adults, young children, and people with disabilities to travel safely is critical to freedom of mobility and quality of life. People may have challenges with eyesight, reaction times, cognitive ability and muscle dexterity that make travel difficult.

Gather and Track Biking and Walking Data

Gather Data

The lack of systematic data collection related to walking and bicycling transportation, such as count data, travel survey data, and injury data, creates challenges for improving non-motorized transportation networks and safety. Communities that routinely collect walking and biking data are better positioned to track trends and prioritize investments.

Use Context Sensitive Street Designs

Design Right

Transportation agencies are encouraged, when possible, to go beyond designing walking and bicycling facilities to the minimum standards. It is more effective to plan for increased usage than to retrofit an older facility. Planning projects for the long-term should anticipate likely future demand for bicycling and walking facilities and not preclude the provision of future improvements.

Take Advantage of Maintenance Opportunities

Take Advantage of Maintenance Opportunities

Take advantage of opportunities to create and complete ped-bike networks through maintenance. Expanding and improving roads and facilities to build biking and walking networks as part of regular and routine resurfacing and other maintenance programs can be a low cost alternative to building new roads or widening existing roads.

Improve Walking and Biking Safety Laws and Regulations

Improve Laws and Regulations

Traffic laws such as reduced speed, failure to yield, passing, and helmet laws can be effective in improving safety for pedestrians, bicyclists, and others.

Educate and Enforce Proper Road Use Behaviors By All

Educate and Enforce

Highly-visible and well-publicized targeted enforcement tied with educational campaigns has shown to be effective in reducing crashes.

Chapter 3: Action Plan

The Action Plan developed by the Local Action Team (LAT) is a compilation of recommendations discussed over six months of LAT meetings, input from the public as articulated in ongoing discussions and workshops, as well as data compiled from the Assessment presented later in this report.

In Miami-Dade, we want people of all abilities – from our children to our grandparents – to be comfortable moving around our beautiful community, whether on foot, by bicycle, riding transit, or in a car. Through implementation of the Action Plan, we can build a street network that supports healthy and sustainable communities, keeps more money in people's pockets, increases economic competitiveness, and adds to our community's character. By enhancing and increasing our transportation options, we can create streets that move more people with fewer vehicles.

Complete Streets Approach

Complete Streets make it safe and convenient for people of all ages and abilities to reach their destination whether by car, transit, bike, or foot. A Complete Streets approach starts with a policy commitment to prioritize and integrate all road users into every transportation project. Walking and bicycling should not be an afterthought in roadway design.

ID	Item	Actions	Lead Agency	Outcome (*)	Addresses
A-1	Leadership	**Convey culture shift by publicly announcing** the importance of pedestrian and bicycle safety and the results of the Local Action Team work.	Mayor's Office	1, 2	Encouragement
A-2		**Issue policy memo** to Directors and Staff. Identify key staff to be charged with integrating Complete Streets into all relevant policies and procedures.	Mayor's Office	1, 2	Encouragement
A-3	Empowerment	**Empower staff** to implement a Complete Streets approach on Miami-Dade County street projects in the urbanized area. Update standard Public Works details to incorporate Complete Streets elements (see D-1).	Mayor's Office, Transp and Public Works, MPO	1, 2	Engineering
A-4		Traffic study requirements **should be inclusive of pedestrian and bicycle safety** when considering traffic flow capacity. Traffic study requirements should prioritize pedestrian and bicycle safety over traffic flow capacity in cases where it is clear that there would be detrimental impact.			
A-5	Funding	**Fund Complete Streets as the default setting.** Ensure cost estimates consider the need for bike, pedestrian, and transit improvements in roadway projects. Prioritize project funding to those that have established an approved modal hierarchy (see F-2).	Mayor's Office, Transp and Public Works, MPO	1, 2	Engineering
A-6		Expand the use of **local funds** to address pedestrian and bicycle safety improvements to help mitigate for increased crash exposure caused by increasing levels of traffic.	Mayor's Office, Transp and Public Works, RER	1, 2	Engineering, Legislative
A-7		Use **municipal CITT funds** to implement Complete Streets improvements.	Municipalities, CITT	1, 2	Engineering
A-8	Cultivating Buy-In	Establish a mini-grant program to **fund and empower community support groups** to perform work that supports Complete Streets.	MDPROS	1, 2	Encouragement
A-9	Health	Identify and disseminate evidence-based practices that support **connections between health and the built environment**.	Health Department	1, 2	Education; Encouragement
A-10	Safety	Authorize "**no right on red**" in high pedestrian activity areas.	Transp and Public Works, FDOT	1	Engineering, Legislative

(*) - Outcomes:

1 - Reduce the number of pedestrian and bicyclist crashes.

2 - Increase the amount of walking, cycling, and transit trips.

Fix Barriers

The ability for older adults, young children, and people with disabilities to travel safely is critical to freedom of mobility and quality of life. Our transportation network should take into consideration that people may have challenges with eyesight, reaction times, cognitive ability and muscle dexterity that make travel difficult.

ID	Item	Actions	Lead Agency	Outcome (*)	Addresses
B-1a	Safety Innovation	**Create a "Safety Innovation" program** to implement new techniques such as those described in the MPO's *Application of Innovative Strategies to Improve Bicycle Safety and Mobility* .	Transp and Public Works, MPO, FDOT	1	Engineering
B-1b		**Partner with a local or national university** to evaluate new strategies while meeting the requirements of the FHWA "Request to Experiment" process. Support local agencies within the experimentation process.	Transp and Public Works, MPO, FDOT	1	Engineering
B-1c		**Support local agencies/municipalities** within the FHWA "Request to Experiment" process.	Transp and Public Works, MPO, FDOT	1	Engineering
B-2a	Elderly Pedestrian Safety	Implement **speed control techniques** in areas with high elderly populations.	Transp and Public Works, Parks	1	Legislative; Safety
B-2b		Expand the **Alliance for Aging's pedestrian safety training program** and tie the program to the receipt of a Golden Passport.	Transp and Public Works, Parks	1	Legislative; Safety
B-2c		Adopt the **Age-Friendly Initiative's strategies for senior mobility**. http://www.hfsf.org/miamidadeagefriendlyinitiative/projects.html	Transp and Public Works, Parks	1	Legislative; Safety
B-3	High Crash Areas	Fast track funding for projects in **high crash areas** as defined in the MPO's *Pedestrian and Bicycle Safety Plan.*	Transp and Public Works, MPO, FDOT	1	Legislative; Safety
B-4	Road Diet Pilot Projects	Implement and evaluate at least two **road diet pilot projects in** 2016-2017 to explore the benefits and impacts of lane eliminations using temporary traffic control devices. See Assessment report for potential locations.	Transp and Public Works	1	Engineering; Safety

Fix Barriers

The ability for older adults, young children, and people with disabilities to travel safely is critical to freedom of mobility and quality of life. Our transportation network should take into consideration that people may have challenges with eyesight, reaction times, cognitive ability and muscle dexterity that make travel difficult.

ID	Item	Actions	Lead Agency	Outcome (*)	Addresses
B-5a	Remove Construction Barriers	Enforce **stricter standards for requests for construction-related sidewalk and lane closures**, emphasizing sidewalk closures only as a last resort.	Transp and Public Works, Municipalities	1	Engineering; Safety
B-5b		**Prioritize pedestrians** by creating temporary walkways in place of on-street parking during construction if sidewalks must be closed. Follow Seattle's program as a guide. http://sdotblog.seattle.gov/2015/10/15/sidewalk-closures-last-resort-in-new-construction-zone-rule/	Transp and Public Works, Municipalities	1	Engineering; Safety
B-6	First Mile / Last Mile	Prioritize funding for **first mile/last mile connection projects** to improve access to transit stations and solve gap problems. Begin with projects identified in the MPO's *Non-Motorized Network Connectivity Plan* and *Transit System Bicycle Master Plan.*	MPO, Transp and Public Works, Municipalities	1, 2	Engineering; Connectivity
B-7	Bike Share Strategy	Identify locations for **additional bike share facilities** to strategically address first mile/last mile connection problems.	Municipalities, Transp and Public Works	1, 2	Engineering; Connectivity
B-8	Safe Access to Parks	Create implementation strategy for **Safe Routes to Parks** as required in the CDMP ROS-8-D.	Parks, RER, Transp and Public Works, MPO	1, 2	Engineering; Connectivity
B-9	Ensuring Proper Clearance	**Enforce the alignment of utilities and roadway infrastructure** so that it maximizes unobstructed right-of-way for pedestrians.	Transp and Public Works, RER	1,2	Engineering; Safety

(*) - Outcomes:

1 - Reduce the number of pedestrian and bicyclist crashes.
2 - Increase the amount of walking, cycling, and transit trips.

Gather Data

The lack of systematic data collection related to walking and bicycling transportation, such as count data, travel survey data, and injury data, creates challenges for improving non-motorized transportation networks and safety. Communities that routinely collect walking and biking data are better positioned to track trends and prioritize investments.

ID	Item	Actions	Lead Agency	Outcome (*)	Addresses
C-1a	Count Program	Enhance frequency of MPO **bicyclist and pedestrian count program**.	MPO	1	Education; Engineering
C-1b		Expand use of **before-and-after bicyclist and pedestrian counts** on key projects such as Project Development & Environment (PD&E) studies and FDOT's Bicycles on Limited Access Facilities project.	FDOT	1	Education; Engineering
C-2	Count Data Equality	**Incorporate bicyclist and pedestrian counts** in all transportation studies to the level of motor vehicle counts.	Transp and Public Works, FDOT	1	Education; Engineering
C-3	Crash Databases	**Enhance crash databases** to include circumstances, design of street, etc.	FDOT	1	Education; Engineering
C-4a	Before-and-After Evaluations; Reporting	Measure impact of Complete Streets projects and policies (**pre and post evaluations on individual projects**).	Transp and Public Works, FDOT, MPO, Health Dept	1, 2	Evaluation
C-4b		Create a **countywide report card** to measure the implementation of Complete Streets at the County level.	Transp and Public Works	1, 2	Engineering; Evaluation
C-5	Enforcement Data	Engage law enforcement agencies in **data collection and reporting of enforcement efforts** related to speed, pedestrian laws, and bicycling laws.	Law Enforcement	1	Evaluation
C-6	Technology-Based Data	Explore additional **technology-based data sources** for tracking bicyclist and pedestrian behavior such as Google data and activity-app data.	MPO, FDOT	1, 2	Evaluation
C-7	Road Safety Audits	Conduct at least **two multimodal transportation focused road safety audits per year** engaging a wide range of user groups and technical disciplines.	Transp and Public Works, FDOT, MPO, MDPROS	1, 2	Evaluation
C-8	Analytic Tool	Develop an analytic tool that each department and agency can use **to evaluate and quantify the broad benefits of Safer Streets implementation**.	Health Dept, MDPROS, MPO, Transp and Public Works	1, 2	Evaluation

(*) - Outcomes:

1 - Reduce the number of pedestrian and bicyclist crashes.
2 - Increase the amount of walking, cycling, and transit trips.

Design Right

Transportation agencies must go beyond designing walking and bicycling facilities to the minimum standards. Planning projects for the long-term should anticipate likely future demand for bicycling and walking facilities and not preclude the provision of future improvements.

ID	Item	Actions	Lead Agency	Outcome (*)	Addresses
D-1a	Design Guidelines	Develop and utilize **Complete Streets Design Guidelines**to help inform engineering projects pursuant to Miami-Dade County Resolution 995-14, including street typology.	Transp and Public Works, MPO	1	Engineering
D-1b		Update pertinent sections of the **Transportation and Public Works Manual** to incorporate Complete Streets where appropriate.	Transp and Public Works	1	Engineering
D-2	10-Foot Travel Lanes	Utilize design guidelines from FDOT's *Plans Preparation Manual* and the NACTO *Urban Street Design Guide* for implementing **10-foot travel lanes**.	Transp and Public Works	1	Engineering
D-3	Connected Network of Multi-Use Paths	Create an extensive, **connected network of exceptional multi-use paths**, including but not limited to Underline, Rickenbacker, Ludlam Trail, and Miami River Greenway, throughout Miami-Dade County.	Parks, RER, Transp and Public Works	1, 2	Engineering; Connectivity
D-4	Buffered Bike Lanes	Implement **buffered bike lanes** per the new FDOT design standard by **narrowing travel lanes** to 10 feet.	Transp and Public Works, FDOT	1, 2	Engineering
D-5a	Road Diets; Separated Bike Lanes	Conduct a **lane elimination master plan** to identify overbuilt roadways, particularly in the urban core, where lane elimination strategies could result in separated bike lanes, wider sidewalks or transit priority lanes.	Transp and Public Works, FDOT	1, 2	Engineering
D-5b		Pursue the implementation of **separated bike lanes** through the lane elimination process.	Transp and Public Works, FDOT	1, 2	Engineering
D-6	Design Speed	Establish "**design speed**" based on a context sensitive approach in urban areas, focusing on vulnerable road users and allowing for a target speed.	Transp and Public Works, FDOT	1	Engineering; Safety
D-7a	Signal Crossing Safety	Grow Miami-Dade's use of l**eading pedestrian intervals (LPIs)** to all signalized intersections to improve pedestrian visibility and allow pedestrians to establish position in the right-of-way.	Transp and Public Works, FDOT	1	Engineering; Safety
D-7b		Provide **longer walk times** for crossing the street in high volume pedestrian areas and in areas of concentrated elderly populations by using the MUTCD-approved 2.8 feet per second walking time.	Transp and Public Works, FDOT	1	Engineering; Safety
D-7c		Implement **audible pedestrian signals** in high volume pedestrian areas, including but not limited to Downtown Miami, and where identified by safety studies.	Transp and Public Works, FDOT	1	Engineering; Safety
D-8	High Impact Projects	Demonstrate our community's commitment to all modes by implementing **specific high-impact projects**, such as Pedestrian Priority Zone, Biscayne Green project, South Miami Avenue Master Plan, and Brownsville/Model City Bicycle Boulevard Plan.	Transp and Public Works, Municipalities	1, 2	Engineering; Encouragement

(*) - Outcomes:

1 - Reduce the number of pedestrian and bicyclist crashes.

2 - Increase the amount of walking, cycling, and transit trips.

Create Networks through Maintenance					
Expanding and improving existing roads and facilities to build biking and walking networks as part of regular and routine resurfacing and other maintenance programs can be a low cost alternative to building new roads or widening existing roads.					
ID	**Item**	**Actions**	**Lead Agency**	**Outcome (*)**	**Addresses**
E-1	CIP Projects	Incorporate Complete Streets and Safe Streets elements into **existing locally-funded capital improvement projects** including streetscaping, resurfacing, and intersection projects by reviewing the project scope and assessing what improvements could be included.	Transp and Public Works, Municipalities	1, 2	Engineering
E-2	Design Reviews	Ensure that all **street projects are reviewed for bicycle and pedestrian enhancements** during the scoping and early design stages.	Transp and Public Works	1, 2	Engineering
E-3	Design Guidelines	Establish **re-design criteria** for Complete Streets elements. Incorporate re-design criteria into the Complete Streets Design Guidelines and pertinent sections of the Public Works Manual (see D-1).	Transp and Public Works	1	Engineering
E-4	Safety Projects	**Proactively identify projects** from FDOT and MPO bicycle and pedestrian safety studies in high crash corridors that could be implemented through maintenance	FDOT, MPO, Transp and Public Works	1	Engineering
E-5	Maintenance Projects	Review existing roadway typical sections for opportunities to **implement buffered bike lanes through maintenance projects**. FDOT has been successful at implementing bicycle facilities through its resurfacing process.	Transp and Public Works, Municipalities	1,2	Engineering
E-6	Funding	Ensure **funding for maintenance** is given equal consideration as funding for initial implementation of projects.	Transp and Public Works, Municipalities	1, 2	Engineering
E-7	Aesthetics	Provide more resources for **integrating aesthetics investments in right-of-way maintenance**, including trees, street furniture, wayfinding, and other beautification elements, as these are proven methods of enhancing the walking, biking, and transit experience and calming traffic..	Mayor's Office, Transp and Public Works, Parks, Municipalities	1, 2	Engineering; Safety

(*) - Outcomes:

1 - Reduce the number of pedestrian and bicyclist crashes.

2 - Increase the amount of walking, cycling, and transit trips.

Improve Safety Laws and Legislation					
Traffic laws such as reduced speed, failure to yield, passing, and helmet laws can be effective in improving safety for pedestrians, bicyclists, and others.					
ID	**Item**	**Actions**	**Lead Agency**	**Outcome (*)**	**Addresses**
F-1	Vision Zero	Adopt **Vision Zero** as the overarching policy for vulnerable road user safety in Miami-Dade County. (A)	Mayor's Office	1	Legislative; Safety
F-2	Modal Hierarchy	Create a Miami-Dade **modal hierarchy** including a review committee to establish and approve modal hierarchy for major corridors, potentially modeled on Chicago's process. http://www.cityofchicago.org/content/dam/city/depts/cdot/Complete%20Streets/CompleteStreetsGuidelines.pdf	Transp and Public Works	1, 2	Legislative; Encouragement; Engineering
F-3	CDMP Requirements	Adopt pedestrian and bicycle level of service (LOS) as **CDMP requirements** to elevate the prominence of these modes to that of the automobile.	RER	1, 2	Legislative; Encouragement; Engineering
F-4	Redevelopment Opportunities; Code Changes	As adjacent land use redevelops along major thoroughfares, **require additional right-of-way set aside** (which may involve an amendment to Chapter 33, 1-33), based on a Complete Streets, Context Sensitive vision for the corridor. Utilize the Typical Roadway Section and Zoned Right-of-Way Study as a guide.	RER, Transp and Public Works, Municipalities	1, 2	Engineering; Legislative
F-5	Speed Limits	Pursue legislation that provides the County and municipalities flexibility when **developing speed limits in urban areas**. Utilize published research in NCHRP Report 3-67 as a guide for alternative speed limit methodologies. (i.e., Slow Zone NYC).	Transp and Public Works	1	Engineering; Legislative
F-6a	Vulnerable User Laws	**Support "NO TEXTING WHILE DRIVING" legislation** to make it a primary offense rather than just a secondary offense.	Mayor's Office	1	Legislative; Safety
F-6b		**Support stiffer penalties** for failure to come to a complete stop before turning right-on-red.	Mayor's Office	1	Legislative; Safety
F-6c		**Increase cost of violating pedestrian and bicycle laws** such as failure to yield right-of-way to pedestrians and safe bicycle passing distance.	Mayor's Office	1	Legislative; Safety
F-7	TDM	**Pursue legislation requiring Transportation Demand Management (TDM)**, which would promote bicycling, walking, ridesharing, and transportation assurance programs. Build upon existing transit incentives.	Mayor's Office; Municipalities	1	Legislative; Encouragement

(*) - Outcomes:

1 - Reduce the number of pedestrian and bicyclist crashes.
2 - Increase the amount of walking, cycling, and transit trips.

(A) - Similar **Vision Zero** programs have been adopted in New York, Chicago, San Francisco, Portland, and Stockholm. http://www.visionzeroinitiative.com/

Educate and Enforce Proper Road Use					
Highly-visible and well publicized targeted enforcement tied with educational campaigns has shown to be effective in reducing crashes.					
ID	**Item**	**Actions**	**Lead Agency**	**Outcome (*)**	**Addresses**
G-1	Shift the Culture	Expand **culture shifting programs** such as Safe Routes to School, Safe Routes to Parks, Bike 305, and MDPD's Pedestrian Safety Program. Build upon Bike 305's success and coordinate all bicycle and pedestrian safety information in one place online, making these tips and guidelines easier to access and understand.	School Board, Parks, Transp and Public Works, Law Enforcement	2	Encouragement
G-2	Encouragement Practices	Pursue grants that enable law enforcement agencies to conduct **encouragement practices** (i.e., Tampa light give away).	Law Enforcement	2	Encouragement; Enforcement
G-3	Parks/Police Partnership	Encourage **parks/police partnership** (bike rodeos/safety training UM Education Program). (i.e., Safety Town)	Parks, Law Enforcement	1, 2	Enforcement; Education
G-4	Distracted Driver Program	Develop and implement a **Miami-specific distracted driver program** building from FDOT's "Alert Today, Alive Tomorrow."	Mayor's Office	1	Education
G-5a	Educate All Stakeholders	Create cumpulsory **bicycle training program** for elementary/middle school students.	School Board	1	Education; Encouragement
G-5b		Engage the Miami-Dade Health Department regarding ways to leverage the **Make Healthy Happen Miami** campaign to promote walking and bicycling (**Make Safe Streets Happen**).	Parks, Health Department	2	Education; Encouragement
G-5c		Develop **educational material aimed at businesses** on the value of investing in all modes based on the League of American Bicyclists subject material. Include the value of bicyclists as customers to businesses.	Parks, MPO	2	Education; Encouragement
G-5d		Support **Bicycle Friendly Community, Business, and University designations** through the League of American Bicyclists for Miami-Dade & area partners.	Parks, RER, MPO	2	Education; Encouragement
G-5e		Target bike share facilities and other infrastructure with **bike safety information**.	MPO, Municipalities	1, 2	Education; Encouragement
G-6	Training	**Host training sessions** for County staff and consultants about innovative methods of incorporating safe streets into the urban fabric. Partner with FDOT to build from their investment in staff for Complete Streets training.	MPO, Transp and Public Works	2	Education
G-7a	Enforcement	Provide **educational tools/training to law enforcement** related to the modal hierarchy and pedestrian priority.	Law Enforcement, MPO, Parks	1, 2	Enforcement; Education
G-7b		**Pursue stronger enforcement** of school zones, intersection encroachments, "no right turn on red," and "rolling right on red" violations.	Law Enforcement	1, 2	Enforcement; Education
G-7c		**Pursue grant funds** that can enable police departments to conduct targeted enforcement operations.	Law Enforcement	1, 2	Enforcement; Education

(*) - Outcomes:

1 - Reduce the number of pedestrian and bicyclist crashes.
2 - Increase the amount of walking, cycling, and transit trips.

Chapter 4: Assessment

The first task in crafting the Local Action Plan was to conduct a two-part assessment including (1) national best practices and countermeasures that can be adopted in Miami-Dade County and (2) local conditions, policies, and standards related to walking and biking.

National Scan

A national scan was conducted to identify best practices related to safety countermeasures, traffic calming, complete streets guidelines, complete streets policies, and implementation strategies.

Safety Countermeasures

Safety is the number one priority for the U.S. Department of Transportation (USDOT) and it's the agency's policy to provide safe and effective pedestrian accommodation wherever possible. The Federal Highway Administration (FHWA) encourages the use of specific proven pedestrian safety countermeasures that can help achieve local, State and National safety goals. According to crash modification factors (CMFs) published by FHWA, the top two pedestrian safety countermeasures are providing a separated walkway along a road (i.e. – sidewalks in urban/suburban areas) and providing raised medians/refuge islands in the center of the roadway.

FHWA's Office of Safety has promoted the evidence-based safety benefits of accessible sidewalks or walkways along both sides of streets and highways in urban areas—particularly near school zones and transit locations—and where there is frequent pedestrian activity. FHWA's Safety Office has encouraged the consideration of raised medians in curbed sections of multilane roadways in urban and suburban areas, particularly in areas with a combination of high volumes of traffic, a significant number of pedestrians, and intermediate or high travel speeds. These basic forms of infrastructure perform well in evidence-based studies of safety countermeasures.

FHWA created a document that helps state and local officials know where to begin addressing pedestrian safety issues: *How to Develop a Pedestrian Safety Action Plan (FHWA-SA-05-12)*. The agency completed the guide in 2006, and the National Highway Traffic Safety Administration (NHTSA) updated it in 2009 to include sections on law enforcement and education. NHTSA provided grant funding to promote pedestrian safety education and enforcement programs in five of the focus areas: Chicago, Detroit, Florida, New Mexico, and North Carolina. In their proposals, the awardees outlined location-specific plans to implement pedestrian education and enforcement

programs and strategies to complement existing or planned engineering treatments to improve infrastructure over the course of 3 to 4 years. In Florida, the focus area was within FDOT District 7 including Hillsborough, Pinellas, and Pasco counties. The purpose was to reduce the number and severity of pedestrian crashes. Through previous funding, FDOT had developed a major educational campaign delivered through a variety of media outlets. The campaign ran concurrently with the implementation of high-visibility crosswalk striping projects.

To determine the effectiveness of the *Focused Approach to Pedestrian Safety*, FHWA completed evidence-based evaluations. The study also found the following:

- The focused approach showed overall positive results with far-reaching consequences, such as raising the visibility of pedestrian safety in focus locations, drawing attention to and generating momentum and resources for addressing pedestrian safety issues, improving participants' understanding of and attitudes toward pedestrian safety issues, increasing the ability of participants to advocate for pedestrian safety improvements, and providing them with practical tools and techniques for assessing and solving pedestrian safety problems.
- Designation as a focus State helped raise awareness and added legitimacy to pedestrian safety approaches not previously employed.
- The focused approach spurred changes in policies focused on pedestrian safety, such as California promoting the development of pedestrian safety action plans by local governments through the State, business processes such as **Chicago's pedestrian safety staff working with the police department to improve the consistency and comprehensiveness of data collected at crash scenes**, and institutional structures such as Chicago forming a **multidisciplinary Mayor's Pedestrian Advisory Council** that includes a pediatrician who specializes in traumatic injuries and fatalities in children.
- Prior to participation in the program, some focus States had not used any targeted safety funding to address pedestrian safety. The focused approach helped draw attention to pedestrian safety and led to applying resources to pedestrian safety efforts.

A more comprehensive evaluation conducted in 2010 included a look at all of the FHWA focus areas and turned up additional encouraging results. In the States that had not been designated as pedestrian focus States, pedestrian fatalities between 2002 and 2008 decreased 4.7 percent and the overall fatality rate decreased 11.2 percent. During that same period, fatalities decreased

12.1 percent, and the overall fatality rate decreased by 21.8 percent in pedestrian focus States -- more than double. Although those declines cannot be attributed solely to FHWA's efforts in focus States and cities, the agency believes that the $1 million total expenditure of contract money over the 6-year period was a sound investment.

Miami is currently listed as one of 26 FHWA focus cities for pedestrian safety. The *FHWA Focused Approach to Safety* provides additional resources to eligible high priority States to address the Nation's most critical safety challenges through additional program benefits such as people, time, tools and training. This approach increases awareness on critical severe crash types, leads to key safety infrastructure improvements, assists in prioritizing limited resources, and creates positive organizational changes in safety culture, policies and procedures.

FHWA provides a wealth of information related to conventional safety countermeasures that have been shown through evidence-based performance outcome studies to reduce pedestrian fatalities. Still pedestrian safety remains a key concern in urban transportation. Pedestrian fatalities represent as much as 20 percent of all traffic-related fatalities in Florida, despite accounting for less than 10 percent of all trips and probably less than 1 percent of miles traveled.

Cities that have seen some of the most dramatic pedestrian safety results over time follow a more dramatic course. For example, **Stockholm's Vision Zero** (http://www.visionzeroinitiative.com/) is a policy aimed at reducing serious traffic crashes to zero and is shown to have the greatest results since its beginning in 1997. Instead of working to change people's behavior, Vision Zero aims to address the fundamental design decisions that may create the environment for crashes to occur in urban areas. The country's most dangerous roads and urban streets were redesigned to reduce vehicle speed and protect pedestrians and cyclists. Today, Stockholm's traffic death rate is 0.7 per 100,000 people, among the lowest in the world.

The Netherlands has followed a similar course, building national infrastructure to slow vehicles and protect vulnerable road users in urban areas. In 1975, its traffic death rate was 20 percent higher than in the United States, but in 2008, it was 60 percent lower. Today, roads in the Netherlands are among the safest on Earth.

A design guidelines resource book produced by World Resources Institute (WRI) called *Cities Safer by Design* provides evidence-based recommendations for community streets and neighborhoods. The report covers measures that can reduce vehicle speed and traffic conflict, making walking, cycling and access to transit and public spaces safer. It introduces design principles, safety benefits, application suggestions, and evidence for each measure.

Evidence suggests that these measures have the potential to improve road safety. Shortening crosswalk distances, either by narrowing streets or adding medians or refuge islands, can cut pedestrian exposure to car traffic. According to European data presented in *Cities Safer by Design*, each meter or yard of crosswalk shortening can reduce pedestrian crashes by 6 percent. Well-designed bike lanes with physical separation also protects cyclists from car traffic, while the bike lane width should allow comfortable cycling. **The creation of a protected on-street bike path in New York City resulted in a 63 percent drop in crashes and injuries of all kinds.**

Research shows that narrower streets result in slower travel speeds. In *Residential Street Typology and Injury Accident Frequency*, Peter Swift (2003) found that as streets widen, accidents per mile increase exponentially, which can only partially be explained by increased traffic volumes. The Texas Transportation Institute (TTI) found that on suburban arterial straight sections, higher speeds should be expected with greater lane widths. A study called *Relationship of Lane Width for Urban and Suburban Arterials* was conducted by the Midwest Research Center and found no indication, except in limited cases, that the use of 10- to 11-foot lanes caused more crashes than the use of 12-foot lanes on arterial roadways. The narrower lane widths were either associated with lower crash frequencies or showed no statistically significant difference in crash frequencies.

Data reported in *Cities Safer by Design* emphasize two ways to improve traffic safety in cities.

- Build and retro-fit urban environments to reduce the need for individual vehicle trips.
- Reduce vehicle speeds in urban areas where cars, pedestrians, and bicyclists mix.

Specific design features that have been found to be associated with cities exhibiting lower pedestrian fatality rates include the following.

- Urban design that includes smaller block sizes, frequent street connections, and narrower streets.

- Arterials and intersections that reduce conflicts between road users by providing clear crossings, medians, and refuge islands.
- Provision of a wide range of pedestrian facilities ranging from pedestrian-only streets to basic, consistent sidewalks.
- Bicycling networks that feature separated bicycle lanes and special attention to design at intersections.
- Safety improvements around mass transportation stations.

Research shows that walking and bicycling injury rates are lower in areas where a greater percentage of the population walk or bike frequently. In a 2003 study that appeared in the peer-reviewed journal *Injury Prevention*, Peter L. Jacobsen found a clear link between lower injury rates and greater numbers of walkers and bicyclists. Based on comprehensive data from over 100 American and European cities, Jacobsen found that per-capita injury rates are lower as walking and bicycle riding increase. The data suggest that a place where walking and bicycling rates doubled would result in one-third more pedestrian and bicyclist injuries, but the risk of injury in these same places would fall 34 percent. If the number of walkers and bicyclists halved, fewer total injuries would occur, but the risk of injury would go up 52 percent. Jacobson offered a theory as to why this phenomenon occurs – drivers become more attentive when there are lots of bicyclists and pedestrians in their immediate area. Since it is unlikely that the people walking and bicycling become more cautious if their numbers are larger, the result indicates that the behavior of motorists likely controls the frequency of collisions with people walking and bicycling.

Subsequent studies have confirmed the lower injury rate finding for areas with higher non-motorized mode shares. In a 2015 Canadian study published in *BMJ Open*, Kay Teschke et al. found that for traffic-related injuries, areas with higher shares of bicyclists among all travelers had lower hospitalization rates than other regions. Interestingly, the study also found that areas with compulsory helmet-wearing legislation did not experience reduced hospitalization rates.

Complete Streets Policies

Complete Streets is an approach to transportation policy, urban planning, and public works that re-thinks the way streets are planned, designed, maintained and delivered. A Complete Streets approach to transportation and design views streets as public spaces that should be safe and usable by all types of people—pedestrians, drivers, public transit users, and bicyclists. The approach has been endorsed and advocated by the AARP, the USDOT Secretary, and the public

health community. Its benefits range from economic to health and safety to environmental. In addition, robust transit systems can reduce the number of people driving and thus help to reduce potential conflicts between non-motorized users and motor vehicles.

The National Complete Streets Coalition, a part of Smart Growth America, is actively working with its many member organizations to develop flexible and helpful model policies for the use by advocates, legislators, and transportation professionals in communities, regions, and states across the country. Our approach, as discussed below, is aimed at achieving systematic change in transportation engineering and planning.

The **National Complete Streets Coalition have identified ten elements** of a comprehensive Complete Streets policy.

- Includes a vision for how and why the community wants to complete its streets.
- Specifies that "all users" includes pedestrians, bicyclists, and transit passengers of all ages and abilities, as well as trucks, buses, and automobiles.
- Applies to both new and retrofit projects, including design, planning, maintenance, and operations, for the entire right-of-way.
- Makes any exceptions specific and sets a clear procedure that requires high-level approval.
- Encourages street connectivity and aims to create a comprehensive, integrated, and connected network for all modes.
- Is adoptable by all agencies to cover all roads.
- Directs the use of the latest and best design criteria and guidelines while recognizing the need for flexibility in balancing user needs.
- Directs that Complete Streets solutions will complement the context of the community.
- Establishes performance standards with measurable outcomes.
- Includes specific next steps for implementation of the policy.

The National Complete Streets Coalition publishes an annual report of all Complete Streets policies including ranking the policies of jurisdictions that adopted new Complete Streets policies in the previous year. *The Best Complete Streets Policies of 2014*, published in February 2015, found that nationwide a total of 712 jurisdictions now have Complete Streets policies in place, including 30 states, 58 counties, and 564 municipalities.

Miami-Dade County's Complete Streets resolution was passed in 2014. While it did not rank in the overall top 10 of the 70 new policies that were adopted in 2014, Miami-Dade's resolution did rank highly amongst "County Resolution" type policies, scoring 1st place within that category of newly adopted Complete Streets resolutions. Overall Miami-Dade County's Complete Streets resolution ranks 5th of 30 "County Resolution" type policies on the books. Furthermore, Miami-Dade County is the most populous county in the nation to pass a Complete Streets resolution.

Complete Streets Guidelines

The **National Complete Streets Coalition has identified five implementation steps** to move from a complete streets policy to changes that apply across all departments within a jurisdiction.

1. Planning: Assessing current procedures and activities and planning for the full implementation of Complete Streets.
2. Changing procedure and process: Updating documents, plans, and processes used in transport decision-making, from scoping to funding, and creating new ones if necessary.
3. Reviewing and updating design guidance: Updating or adopting new design guidance and standards to reflect current best practices in providing multimodal mobility.
4. Offering training and educational guidance: Providing ongoing support to transportation professionals, other relevant agency staff, community leaders, and the general public so that they understand the Complete Streets approach, the new processes and partnerships it requires, and the potential new outcomes from the transportation system.
5. Measuring: Creating or modifying existing metrics to measure success in accommodating all users on the project and network levels.

The national scan reveals several best practice complete streets design guidelines. The following list organizes the guideline publications by type from national to local jurisdiction.

National Publications

- National Association of City Transportation Officials (NACTO)
  - *Urban Street Design Guide* http://nacto.org/publication/urban-bikeway-design-guide/
  - *Urban Bikeway Design Guide* http://nacto.org/publication/urban-street-design-guide/
- Institute of Transportation Engineers (ITE)/Congress for the New Urbanism (CNU)
  - *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach* http://www.ite.org/css/

City Publications

- City of Boston
  - *Boston Complete Streets: Design Guidelines*
    http://bostoncompletestreets.org/
- City of Charlotte
  - *Urban Street Design Guidelines*
    http://charmeck.org/city/charlotte/Transportation/PlansProjects/pages/urban%20street%20design%20guidelines.aspx
- City of Dallas
  - *Complete Streets Manual*
    http://dallascityhall.com/departments/pnv/strategic-planning/Pages/completestreets.aspx
- City of Philadelphia
  - *Complete Streets Design Handbook*
    http://www.philadelphiastreets.com/complete-streets
- City of Chicago
  - *Complete Streets Design Guidelines*
    http://www.cityofchicago.org/city/en/depts/cdot/provdrs/future_projects_andconcepts/news/2013/mar/complete_streetsdesignguidelines.html
- Washington, D.C. DOT
  - *Complete Streets Policy*
    http://odd.greatergreaterwashington.org/files/2010/ddotcompletestreets.pdf
- Los Angeles County
  - *Model Design Manual for Living Streets*
    http://publichealth.lacounty.gov/place/PLACE_The_Model_Design_Manual_for_Living_Streets.htm

Research shows that in implementing "complete streets" programs, many leading cities update their street design guidance as a way to assess, inventory and better align across departments and agencies the many processes and procedures involved in the design, delivery and maintenance of city streets and street networks. In most cases, these processes have evolved across multiple departments with reference only to the specific mandate of those departments, and without regard to the experience of the full range of users of any given streets.

Among cities with best-in-class approaches to Complete Streets, many, including Chicago, Boston, Philadelphia, and Dallas – have developed guidelines that **focus at least as deeply on process and context as on technical design guidance**. This is in part because jurisdiction over every element of the roadway involves so many different local departments. Clear guidance about context and usage as they relate to specific design elements—as well as about the agencies that must be consulted regarding each element of the roadway—helps to provide a path toward resolving competing priorities that must be resolved in order to achieve complete streets goals.

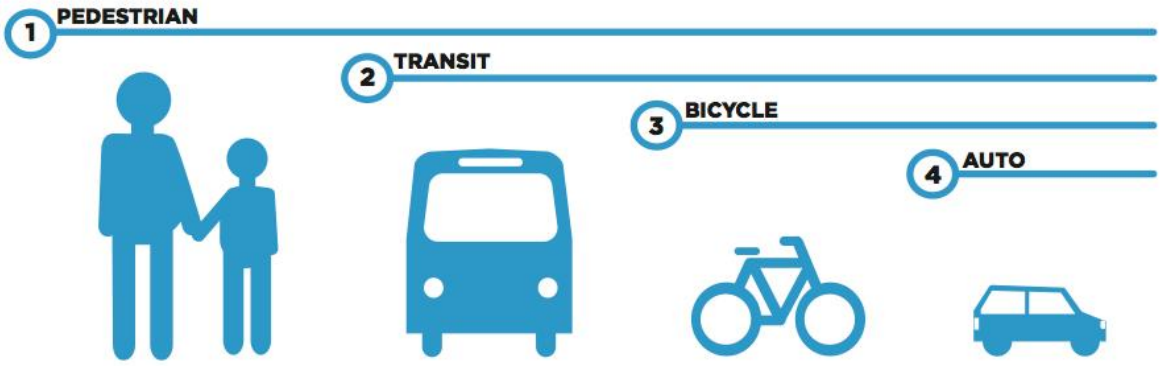
Of note is the difference between transportation criteria manuals (such as the City of Austin's extensive TCM) and the emerging generation of complete streets manuals. The critical differences lie in both intent and design. Transportation criteria manuals, for instance, focus on highly specific engineering criteria, standards, and specifications, and rules for implementing code. By contrast, the best complete street guidelines start not with a focus on compliance, but with **a focus on usage and safety for all users of streets**; they also seek to serve all those involved in the delivery of streets.

Best in class complete streets design guidelines typically address the following items.

- Overarching complete streets approach and goals
- Street elements (sidewalks, intersections, curbsides, etc.)
- Street typologies and land use considerations by street type
- Design parameters (cross-sections)
- Roles of agencies and entities involved in delivery of streets

Modal Hierarchies

Some best-in-class cities have begun to utilize transportation modal hierarchies to inform design and operations decisions. In Chicago, the default hierarchy is (1) pedestrian, (2) transit, (3) bicycle, and (4) automobile. Project-specific alternative hierarchies may be submitted to the City's Compliance Committee for approval. For example, transit may be the top priority mode along a major transit corridor; automobile may be the top priority mode in an industrial corridor or along a parkway with no bus service.



COMPLETE STREETS CHICAGO

Implementation Steps

Strong implementation plans recognize that delivery of a manual, no matter how well crafted, does not equate to implementation. Implementation depends on the development of processes and systems that support changes in the ways that multiple departments and private developers conduct business. It is about a shift in mindset, habit and in some cases, code -- not just a manual.

Not all cities focus equally well on the period after publication of their manuals. Those that do well typically focus on a handful of key tasks.

Key Task: Training

Both to ensure successful integration of complete streets practices into day-to-day business in relevant departments, and to help ensure public understanding of and support for complete streets, training is needed.

Key Tool: Checklists

Checklists are a standard tool to help local staff to ensure that street projects adhere to complete streets principles and guidelines. These checklists range from those that are closely tied to a particular set of detailed guidelines and design parameters (e.g., Boston and Philadelphia's checklists) to those that are more general and geared at ensuring that the full range of users has been considered and their needs prioritized (e.g., the Bay Area MTC's routine accommodation checklist, and the New Jersey DOT's Checklists).

Key Tool: Strategic Implementation Plans

Although Dallas's complete streets initiative has been slow to gain traction, its planned approach is comprehensive and worthy of review. Creation of a strategic implementation plan is one of the three key deliverables detailed in the city's RFP for the Dallas complete streets initiative. (The other two are the "vision map" and the complete streets guidelines document.) The requested scope for the city's strategic implementation plan includes the following outcomes.

- Recommendations for regulatory and procedural/administrative changes needed to facilitate implementation of the complete streets vision.
- Cost estimates of recommended changes.
- Recommendations around a phased or incremental approach to implementation

- Identification and prioritization of roadway improvement projects to provide "quick wins" to sustain momentum.
- Development of a funding program for the prioritized roadway projects through a combination of the Capital Improvement Program, State and Federal funds.
- Development of **conceptual plans for at least 15 catalyst/demonstration capital projects** for specific roadway segments to demonstrate "complete street" solutions to a range of multi-modal design issues.
- Recommendations for a program to measure the impacts, outcomes and effectiveness of the Complete Streets Initiative.

Chicago's design manual has a focus on usability for engineers that integrates context sensitivity and complete streets principles in a highly actionable and efficient way, and also has a clear articulation of delivery processes. The document is positioned as a work in progress, with work groups identified to carry out specific tasks (e.g., mapping) in the future.

Funding Policies

A review of funding policies in best-of-class cities reveals that cities successful in making significant strides in cutting traffic fatalities have in common a strong commitment to local funding of Complete Streets initiatives. Washington D.C. cut traffic fatalities by 73 percent between 2001 and 2012 through consistent implementation of relatively low-scale improvements aimed at slowing motor vehicles and creating street environments where motorists naturally drive in a more respectful manner. Street improvements included in-pavement crosswalk signage, stop for pedestrian signage with fine amounts, traffic calming, more frequent mid-block crosswalks, separated bike lanes, and automated enforcement. Rather than waiting for outside funding to implement a Complete Streets project, the D.C. DOT incorporates low speed design principles into streetscape projects already in local budgets. Complete Streets are supplemented when possible by Federal and State grants, but these are not solely relied upon for implementation.

New York was able to improve safety with many low-cost solutions that reduced fatalities and pedestrian crashes; traffic fatalities have fallen to an all-time low. Targeted spending to install low-cost features to make walking safer included the creation of pedestrian refuge islands, new left-turn lanes to better manage traffic, curb extensions to shorten crossing distances, pedestrian fences to encourage pedestrians to use crosswalks, and modifying signal timing to include more time to cross the street.

Complete Streets improvements can be incorporated into existing maintenance projects. Low cost multimodal improvements implemented through striping or restriping can eliminate or postpone the need for expensive roadway widening. Complete Streets implementation does not mean an immediate retrofit of all streets, but rather incremental changes to the built environment resulting from a shift in everyday planning and engineering practices.

Enforcement Campaigns

Enforcement campaign programs have been proven effective at improving traffic law compliance rates. Programs that combine decoy pedestrians, warnings, informational flyers to give to violators, community feedback, and citations deliver optimum results. One week of a targeted enforcement program can result in increased yielding behavior for a year. Studies of local enforcement programs include the 2004 study of a program in Miami Beach documented in *Effects of a Driver Enforcement Program on Yielding to Pedestrians*, by Ron Van Houten and J.E. Louis Malenfant.

Cameras that use video analytics and radar to determine if a vehicle is stopped when a pedestrian is in the crosswalk can be installed to enforce pedestrian right of way. Signage for Chicago's crosswalk enforcement initiative notifies drivers that they must yield to pedestrians in crosswalk at the enforcement locations. Cameras in Washington D.C. record drivers as pedestrians step into crosswalks. Violations are issued to drivers who fail to stop for pedestrians who have the right of way. A team of officers and employees review the photos/videos from the enforcement cameras before issuing tickets to ensure that the violation notices are valid.

Transportation and Health Tool (THT)

The Transportation and Health Tool (THT) was developed by the U.S. Department of Transportation (USDOT) and the Centers for Disease Control and Prevention (CDC) to provide

easy access to data that practitioners can use to examine the health impacts of transportation systems.

The tool provides data on a set of transportation and public health indicators for each U.S. state and metropolitan area that describe how the transportation environment affects safety, active transportation, air quality, and connectivity to destinations. You can use the tool to quickly see how your state or metropolitan area compares with others in addressing key transportation and health issues. It also provides information and resources to help agencies better understand the links between transportation and health and to identify strategies to improve public health through transportation planning and policy.

https://www.transportation.gov/transportation-health-tool

How to Use the Tool

- View indicator data
- Learn more about the indicators used in the tool
- Identify strategies to improve transportation and health outcomes
- Explore information, resources, and research about the relationship between transportation and health
- Understand how the tool assigns scores to states and metropolitan areas
- Review how and why the tool was developed

State Policies and Standards

This section provides information related to legislation, policies, and standards at the State level.

Legislation

Florida was the second state in the nation to adopt State legislation related to bicycle and pedestrian ways, what today would be known as Complete Streets legislation. In 1984, the State legislature enacted Florida Statute 335.065 (Bicycle and Pedestrian Ways along State Roads and Transportation Facilities). Chapter 335 provides statutes related to the State Highway System (SHS); therefore, the term “department” in F.S. 335.065 refers to the Florida Department of Transportation (FDOT).

335.065 Bicycle and pedestrian ways along state roads and transportation facilities.—

(1)(a) Bicycle and pedestrian ways shall be given full consideration in the planning and development of transportation facilities, including the incorporation of such ways into state, regional, and local transportation plans and programs. Bicycle and pedestrian ways shall be established in conjunction with the construction, reconstruction, or other change of any state transportation facility, and special emphasis shall be given to projects in or within 1 mile of an urban area.

(b) Notwithstanding the provisions of paragraph (a), bicycle and pedestrian ways are not required to be established:

1. Where their establishment would be contrary to public safety;
2. When the cost would be excessively disproportionate to the need or probable use;
3. Where other available means or factors indicate an absence of need.

(2) The department shall establish construction standards and a uniform system of signing for bicycle and pedestrian ways.

(3) The department, in cooperation with the Department of Environmental Protection, shall establish a statewide integrated system of bicycle and pedestrian ways in such a manner as to take full advantage of any such ways which are maintained by any governmental entity. For the purposes of this section, bicycle facilities may be established as part of or separate from the actual roadway and may utilize existing road rights-of-way or other rights-of-way or easements acquired for public use.

According to the National Complete Streets Coalition, Florida's legislation, although groundbreaking at the time it was first passed, has considerable weaknesses in the areas of design flexibility, context sensitivity, performance measures, and implementation steps. Nevertheless, the F.S. 335.065 has been integrated into FDOT's design manuals and is frequently cited in the implementation of designated bike lanes and sidewalks on the State Highway System.

Policy

In 2014, FDOT adopted a Complete Streets Policy. FDOT Policy Topic No. 000-625-017-a establishes the goal of the Department of Transportation to implement a policy that promotes safety, quality of life, and economic development in Florida. The policy recognizes context-sensitivity and the needs of transportation system users of all ages and abilities including not limited to cyclists, freight handlers, motorists, pedestrians, and transit users. The policy recognizes that Complete Streets require transportation system design that considers local land development patterns and built form, and covers all of the State Highway System including the Strategic Intermodal System (SIS).

Although the National Complete Streets Coalition scores the FDOT policy well from a context sensitivity criteria, it scores low in design flexibility, exceptions, performance measures, and implementation steps.

FDOT Complete Streets Implementation Plan

To improve implementation of Complete Streets in Florida, FDOT partnered with Smart Growth America to develop and publish the *Complete Streets Implementation Plan: Multimodal Development and Delivery* in December 2015. The recommendations in this plan address the findings of a series of interactive workshops conducted for FDOT's Complete Streets Implementation Team in the spring and summer of 2015. The plan outlines a five-part implementation framework and process for integrating a Complete Streets approach into FDOT's practices to ensure that future transportation decisions and investments address the needs of all users of the transportation network and respond to community goals and context. The implementation framework in this plan includes the following items.

- Revising guidance, standards, manuals, policies, and other documents.
- Updating decision-making process.
- Modifying approaches for measuring performance.
- Managing internal and external communication and collaboration during implementation.
- Providing ongoing education and training.

Design Standards

FDOT's design standards include three primary documents.

- *Plans Preparation Manual* (PPM), for design plan preparation on the State Highway System.
- *Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways* (commonly known as the Florida Greenbook), minimum standards for streets and highways including streets under local jurisdictions.
- *Standard Roadway Design Indexes*, which includes standard details for design of elements of the State Highway System.

FDOT is frequently cited as having amongst the most progressive design standards of state DOTs. FDOT was an early adopter of incorporating designated bike lanes into the State Highway

System. Lane width standards are flexible based on design speed to allow for narrower lanes in lower speed conditions. The Transportation Design for Livable Communities (TDLC) chapter of the PPM allows for further relaxation of design standards within a context sensitive approach.

Recent modifications to the PPM include strengthening the standard bike lane design from a minimum 4-foot conventional bike lane to a 7-foot buffered bike lane (*2015 Plans Preparation Manual, Chapter 8, Section 8.4.1*). Furthermore, the standard lane width in urban areas was reduced from 12 feet to 11 feet (*FDOT Roadway Design Bulletin 14-17*), while maintaining the option to go down to 10-foot lanes when the design speed is 35 miles per hour or less to provide space for bicycle facilities (*2015 Plans Preparation Manual, Chapter 25, Tables 25.4.5.3 and 25.4.5.4*). *PPM Chapter 25 Table 25.4.5.3* provides for a minimum through lane width of 10 feet for urban curb-and-gutter roadways during resurfacing projects with 35 miles per hour design speed and less than 10 percent trucks. In addition, AASHTO states in *A Policy on Geometric Design of Highways and Streets*, for urban arterial roadways, lane widths vary from 10 to 12 feet. Under interrupted-flow (signalized) conditions operating at speeds of 35 miles per hour or less, narrower lane widths are normally adequate and present some advantages.

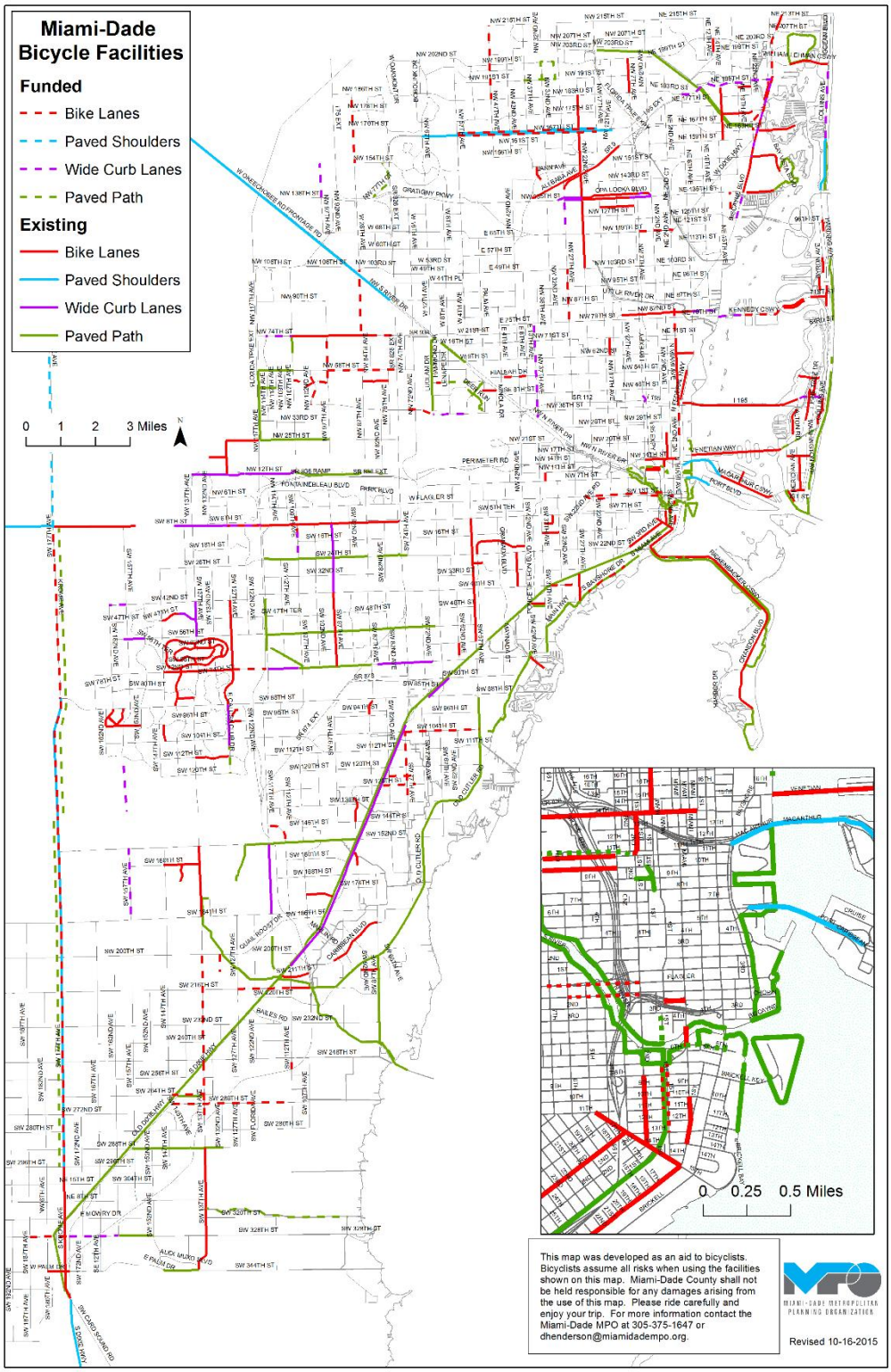
FDOT participates in FHWA experimentation related to new traffic control devices, signage, and pavement markings such as the shared lane markings (sharrows) and rectangular rapid flash beacons (RRFBs) at unsignalized crosswalks.

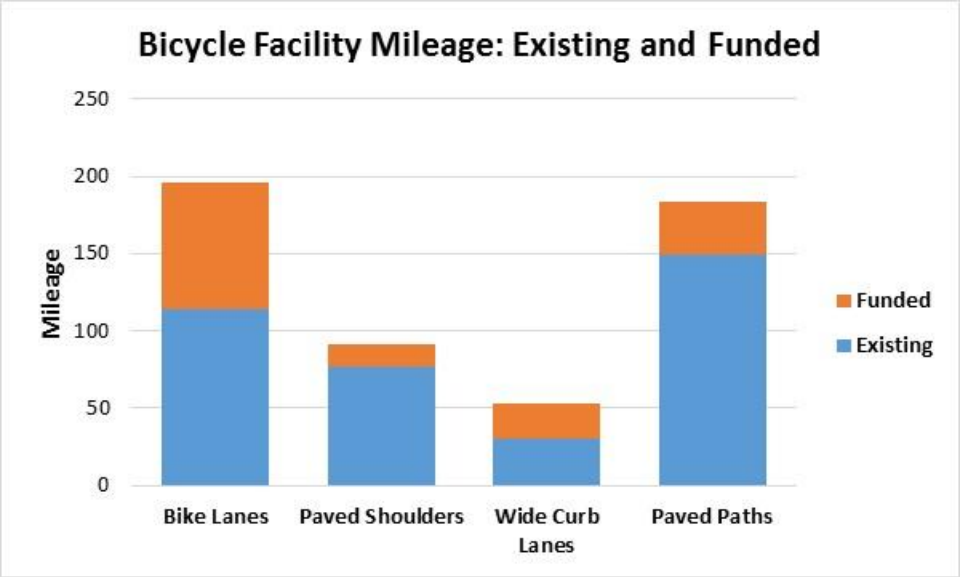
Local Conditions

This section provides information related to current conditions within Miami-Dade County related to bicycling in walking with particular focus paid to facilities, programs, and safety data. A subsequent section within this Assessment will examine local policies and standards and draw comparisons to national Complete Streets guidance.

Miami-Dade Bicycle Facilities, Existing and Funded

The Miami-Dade MPO maintains a detailed database of existing and funded bicycle facilities. There are over 370 miles of paved paths and roads with bike lanes, paved shoulders or wide curb lanes in Miami-Dade County. Almost 110 of the 370 miles of facilities have been built since 2010. Transportation projects that will add another 150 miles of paved paths and other bike facilities are included in the MPO's five-year Transportation Improvement Program (TIP). An updated map (October 2015) of existing and funded bicycle facilities is shown on the following page.


Miami-Dade
Bicycle Facilities
Funded
Bike Lanes
Paved Shoulders
Wide Curb Lanes
Paved Path
Existing
Bike Lanes
Paved Shoulders
Wide Curb Lanes
Paved Path
0 1 2 3 Miles
0 0.25 0.5 Miles
This map was developed as an aid to bicyclists. Bicyclists assume all risks when using the facilities shown on this map. Miami-Dade County shall not be held responsible for any damages arising from the use of this map. Please ride carefully and enjoy your trip. For more information contact the Miami-Dade MPO at 305-375-1647 or dhenderson@miamidadempo.org.
Revised 10-16-2015



Sidewalks are common on most roadways in Miami-Dade County and are far more prevalent than designated bicycle facilities. There is no known comprehensive database of sidewalk facilities in Miami-Dade County.

Municipal Plans

Many municipalities have completed bicycle and pedestrian mobility plans including Aventura, Coral Gables, Cutler Bay, Doral, Hialeah, Homestead, Miami, Miami Beach, Miami Gardens, Miami Shores, Miami Springs, North Miami, Palmetto Bay, Pinecrest, Sweetwater, and South Miami. These plans have led to numerous implemented projects and have helped to raise awareness of non-motorized transportation issues and concerns at local and neighborhood levels throughout Miami-Dade County.

Miami-Dade Walking and Bicycling Count Data

Several sources provide trip-making data related to transportation modes, including walking and bicycling.

- USDOT National Household Travel Survey (2009) – The USDOT conducts the National Household Travel Survey (NHTS) approximately every 5-7 years. Data are available at the urbanized area level. The most recent survey found that **10 percent of all trips in the Miami-Fort Lauderdale urbanized area are made on foot or by bicycle**, which

accounts for all trip types and trip purposes. Approximately 9 percent of trips are walking and 1 percent are bicycling.

- U.S. Census Bureau, American Community Survey (ACS) – The U.S. Census Bureau provides data on walking and bicycling through the ACS. Advantages of ACS data include that it is published annually, which facilitates year-to-year trend comparisons, and that data are available at smaller geographical areas such as counties and municipalities. Disadvantages include that the data only account for work trips and that the data do not account for multiple modes within a trip (i.e. – rode a bicycle to a train station). The most recent Miami-Dade ACS data (2014) found that walking as the primary mode accounted for 2.0 percent of work trips and bicycling as the primary mode accounted for 0.6 percent of work trips.
- Miami-Dade MPO bicyclist and pedestrian count program (2014) – The MPO conducts a periodic manual count program at approximately fifty (50) sites around the County. Counts are conducted at the same locations in both the winter season and the summer season, and on weekdays and weekend days. Seasonal as well as day-of-the-week comparisons can be made, as well as periodic comparisons to prior years because most counts are conducted at the same location as prior count programs. Change-over-time is discussed in the next section.

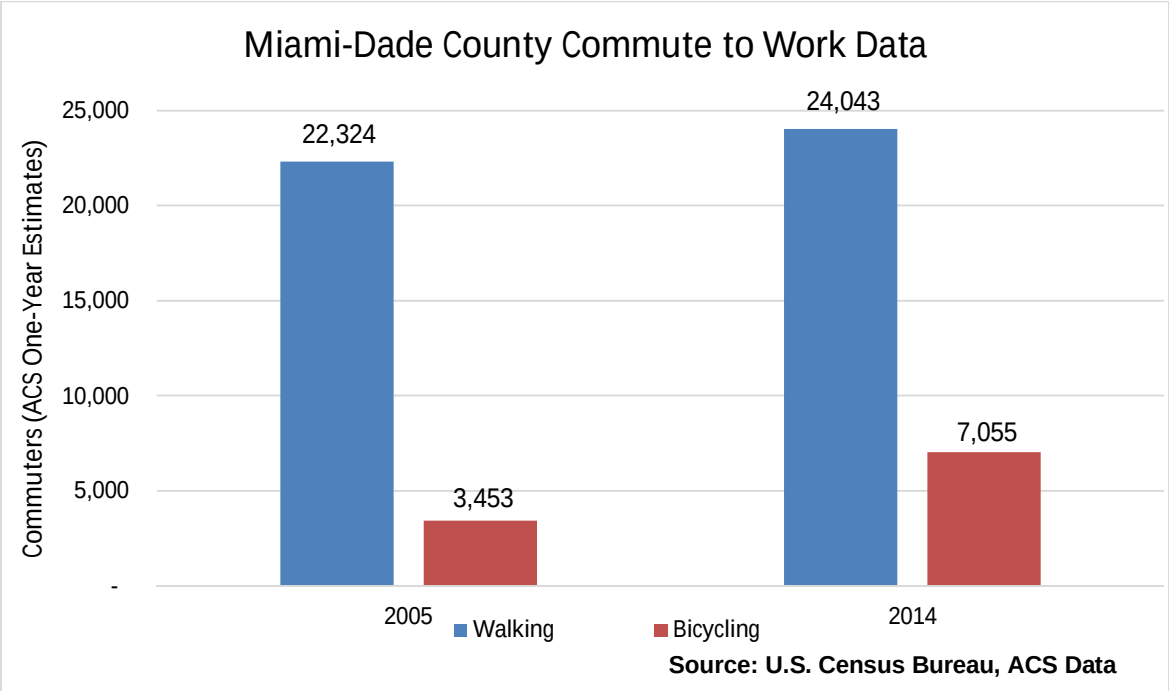
Measuring Change Over Time

Data sources point to increasing levels of walking and bicycling in Miami-Dade County, especially since the middle of the last decade. For example, **bicycle use for work trips in Miami-Dade County doubled between 2005 and 2014**. According to ACS one-year estimate data, approximately 7,000 Miami-Dade workers commute by bicycle (as their primary mode). This is up from approximately 3,500 bicycle commuters in 2005. Although bicycling makes up a small portion of Miami-Dade commute trips, that portion is increasing faster than any other mode and faster than the national average for large cities.

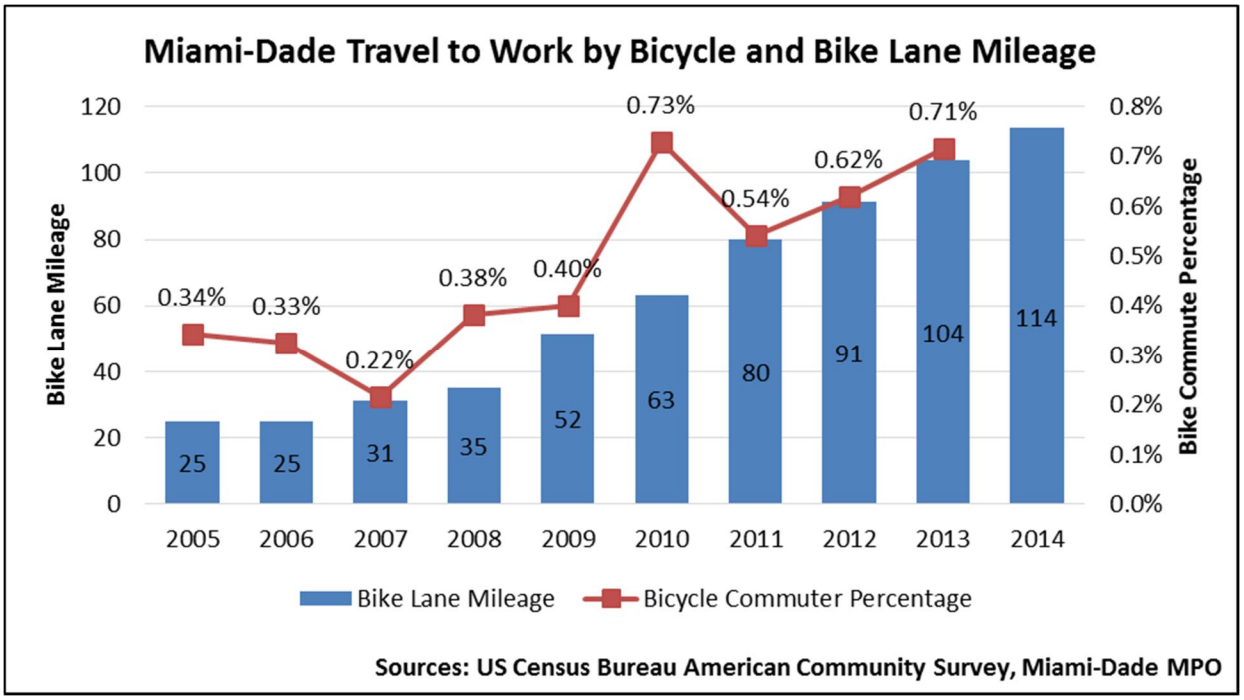
Young people comprise a greater percentage of bicycle commuters compared to their share of the workforce in Miami-Dade County. Younger adults (20-24 years old) make up 9 percent of the working population but 16 percent of people who commute by bicycle.

A comparison between the 2007 and 2014 MPO bicyclist and pedestrian count programs reveals similar findings that support a general increase in walking and bicycling.

- **Walking is on the rise.** – Of the 42 manual count sites common between the 2007 and 2014 count programs, the number of pedestrians rose 11 percent between 2007 and 2014.
- **Bicycling is on the rise.** – At same-location sites, the number of bicyclists rose 43 percent between the 2007 and 2014 count programs.
- **The rise in bike trips is distributed throughout the County.** – At same location sites, almost three-fourths of the sites (31 of 42) saw an increase in bicycle traffic.
- **More people bike on the weekend.** – The 2014 manual counts show that weekend bicycle usage is 14 percent higher than weekday usage for the same locations.
- **Just as with motor vehicle traffic, there is a seasonal adjustment for bicycle trips in Miami-Dade.** – The 2014 data show bicycle trips during the winter count session were 9 percent higher than during the summer session. However, it is interesting to note that weekday trips were virtually unchanged between winter and summer while the weekend trips comprised the entire magnitude of the seasonal adjustment.
- **When you build it, they will come.** – The data demonstrate significant increases in bicycle trip activity at before-and-after locations where facilities were built between 2007 and 2014. For example, the Black Creek Trail was refurbished and extended during this time period; the count location on an original section of the Black Creek Trail near SW 127th Avenue saw an increase of 220 percent in bicycle traffic.

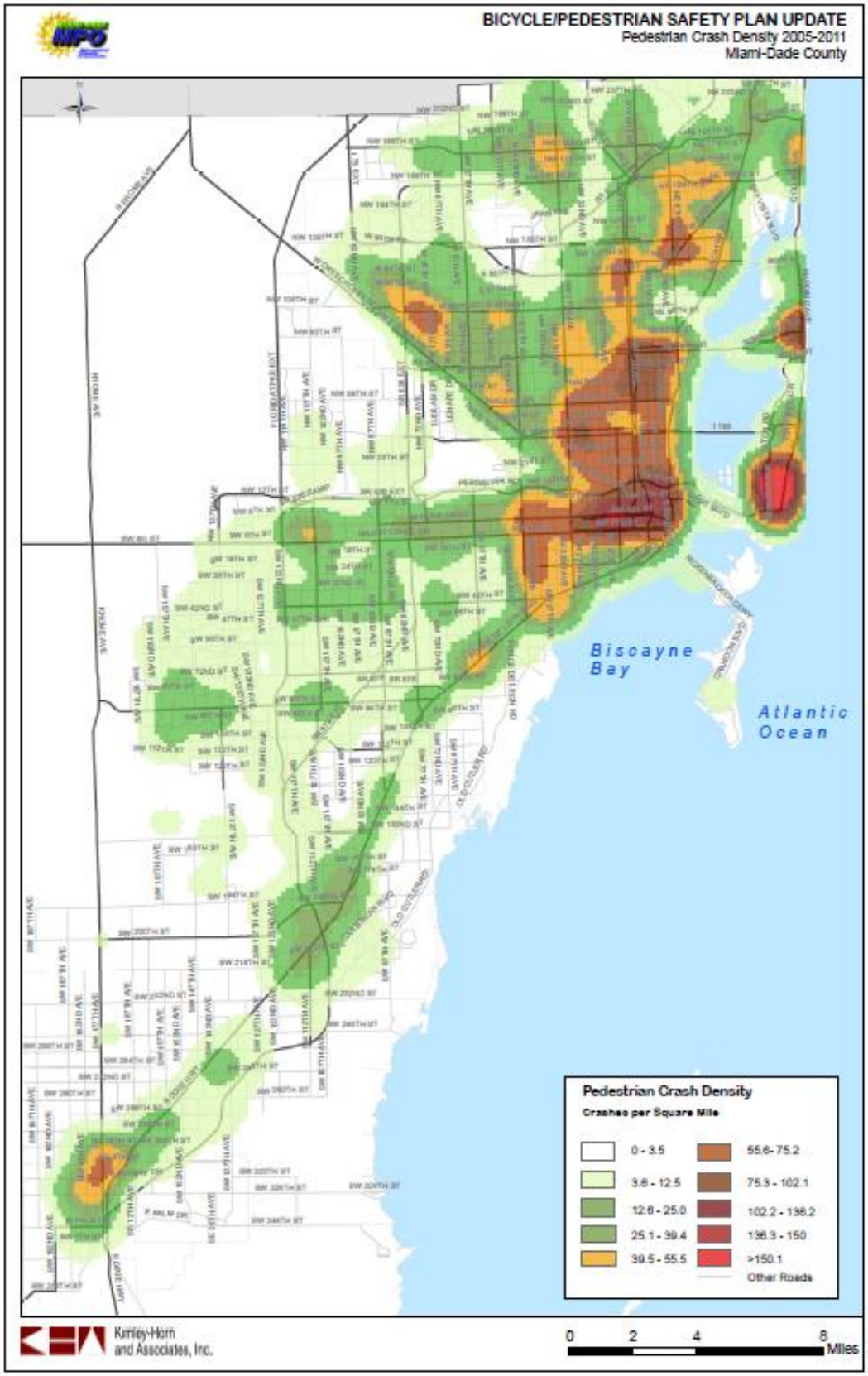


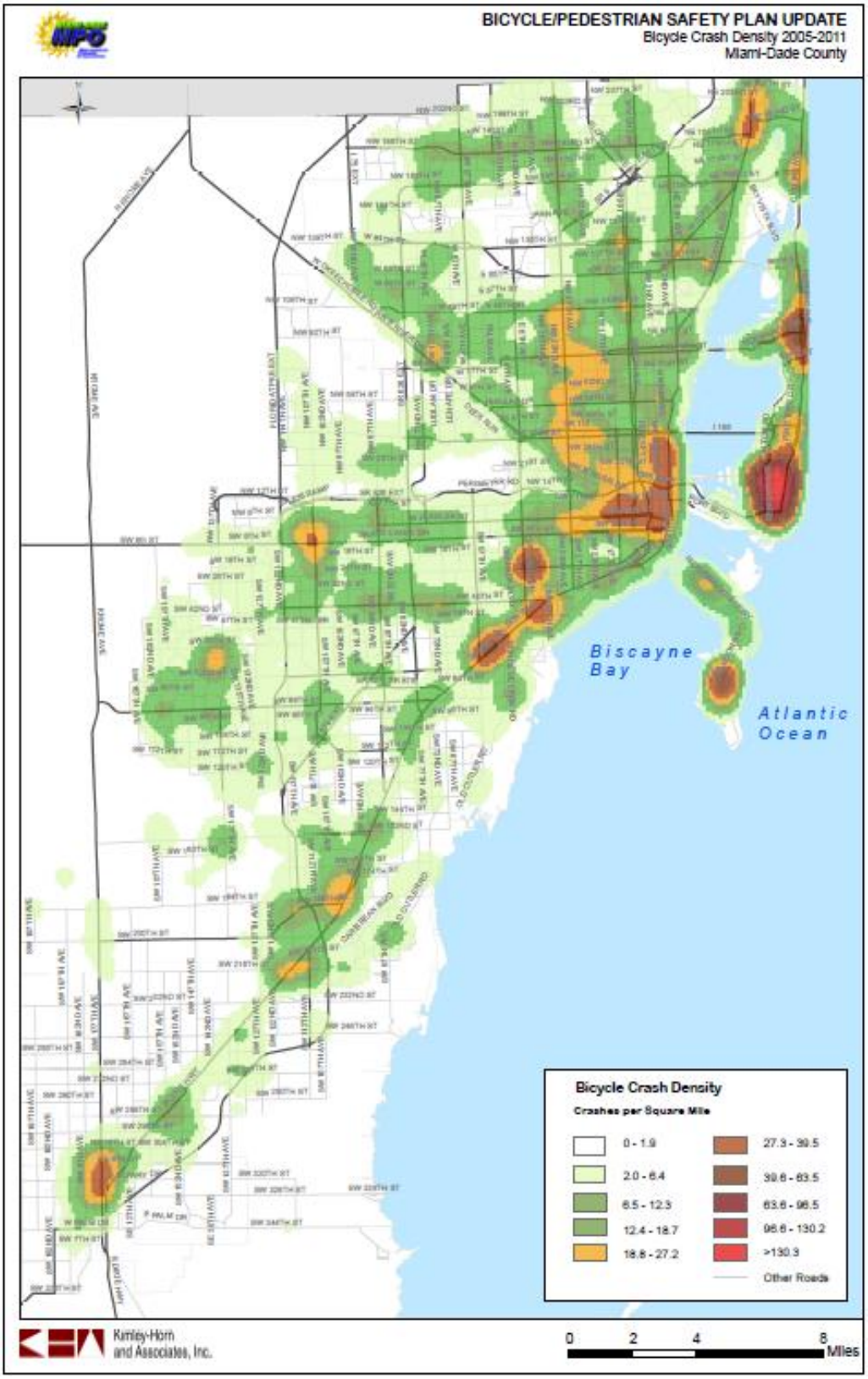
Access to a safe network of designated bike facilities is an important factor in a person's decision to travel by bicycle. This can be seen in the relationship between the change in the mileage of bike facilities and percentage of commuting that is done by bike. Since 2007, bike commuting trips and mileage of bike lanes have both tripled.

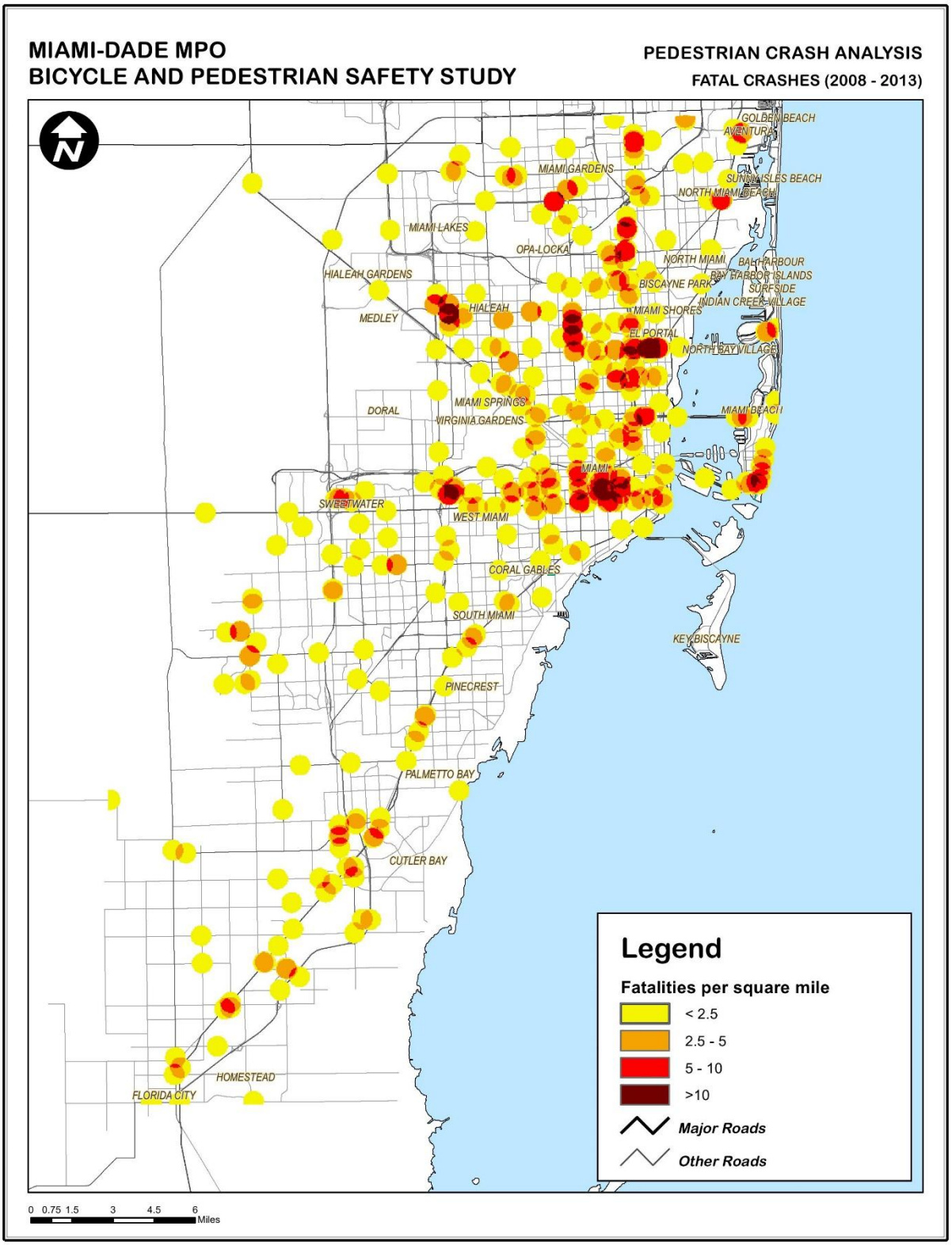


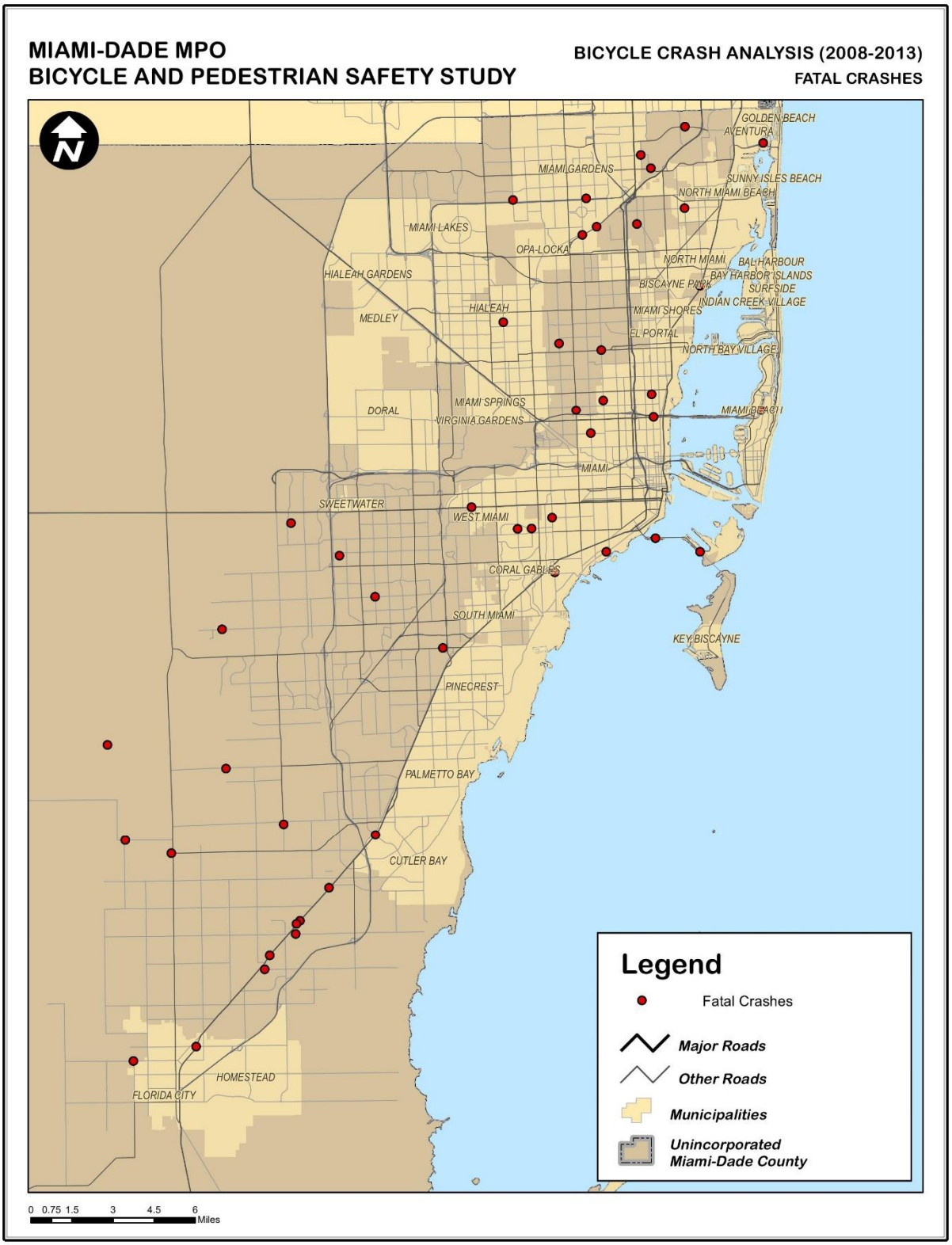
Crash Data

Miami-Dade crash data for pedestrians and bicyclists are available from the Florida Department of Highway Safety and Motor Vehicles (DHSMV). The Miami-Dade MPO has conducted numerous studies in recent years to analyze the crash data and make recommendations that target the crash patterns identified. The maps on the following pages depict crash densities for pedestrians and bicyclists observed during a recent study of seven years of crash data.


BICYCLE/PEDESTRIAN SAFETY PLAN UPDATE
Pedestrian Crash Density 2005-2011
Miami-Dade County
Biscayne Bay
Atlantic Ocean
Pedestrian Crash Density
Crashes per Square Mile
0 - 3.5
3.6 - 12.5
12.6 - 25.0
25.1 - 39.4
39.5 - 55.5
55.6 - 75.2
75.3 - 102.1
102.2 - 138.2
138.3 - 150
>150.1
Other Roads
Kimley-Horn and Associates, Inc.
0 2 4 8
Miles


BICYCLE/PEDESTRIAN SAFETY PLAN UPDATE
Bicycle Crash Density 2005-2011
Miami-Dade County
Biscayne Bay
Atlantic Ocean
Bicycle Crash Density
Crashes per Square Mile
0 - 1.9
2.0 - 6.4
6.5 - 12.3
12.4 - 18.7
18.8 - 27.2
27.3 - 39.5
39.6 - 63.5
63.6 - 96.5
96.6 - 130.2
>130.3
Other Roads
Kimley-Horn and Associates, Inc.
0 2 4 8 Miles


MIAMI-DADE MPO
BICYCLE AND PEDESTRIAN SAFETY STUDY
PEDESTRIAN CRASH ANALYSIS
FATAL CRASHES (2008 - 2013)
GOLDEN BEACH
AVENTURA
MIAMI GARDENS
SUNNY ISLES BEACH
NORTH MIAMI BEACH
MIAMI LAKES
OPA-LOCKA
NORTH MIAMI
BAL HARBOUR
BAY HARBOR ISLANDS
SURFSIDE
INDIAN CREEK VILLAGE
HIALEAH GARDENS
BISCAYNE PARK
HIALEAH
MEDLEY
MIAMI SHORES
EL PORTAL
NORTH BAY VILLAGE
DORAL
MIAMI SPRINGS
VIRGINIA GARDENS
MIAMI BEACH
MIAMI
SWEETWATER
WEST MIAMI
CORAL GABLES
SOUTH MIAMI
KEY BISCAYNE
PINECREST
PALMETTO BAY
CUTLER BAY
HOMESTEAD
FLORIDA CITY
Legend
Fatalities per square mile
< 2.5
2.5 - 5
5 - 10
>10
Major Roads
Other Roads
0 0.75 1.5 3 4.5 6
Miles


MIAMI-DADE MPO
BICYCLE AND PEDESTRIAN SAFETY STUDY
BICYCLE CRASH ANALYSIS (2008-2013)
FATAL CRASHES
GOLDEN BEACH
AVENTURA
MIAMI GARDENS
SUNNY ISLES BEACH
NORTH MIAMI BEACH
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OPA-LOCKA
NORTH MIAMI
BAL HARBOUR
BAY HARBOR ISLANDS
HIALEAH GARDENS
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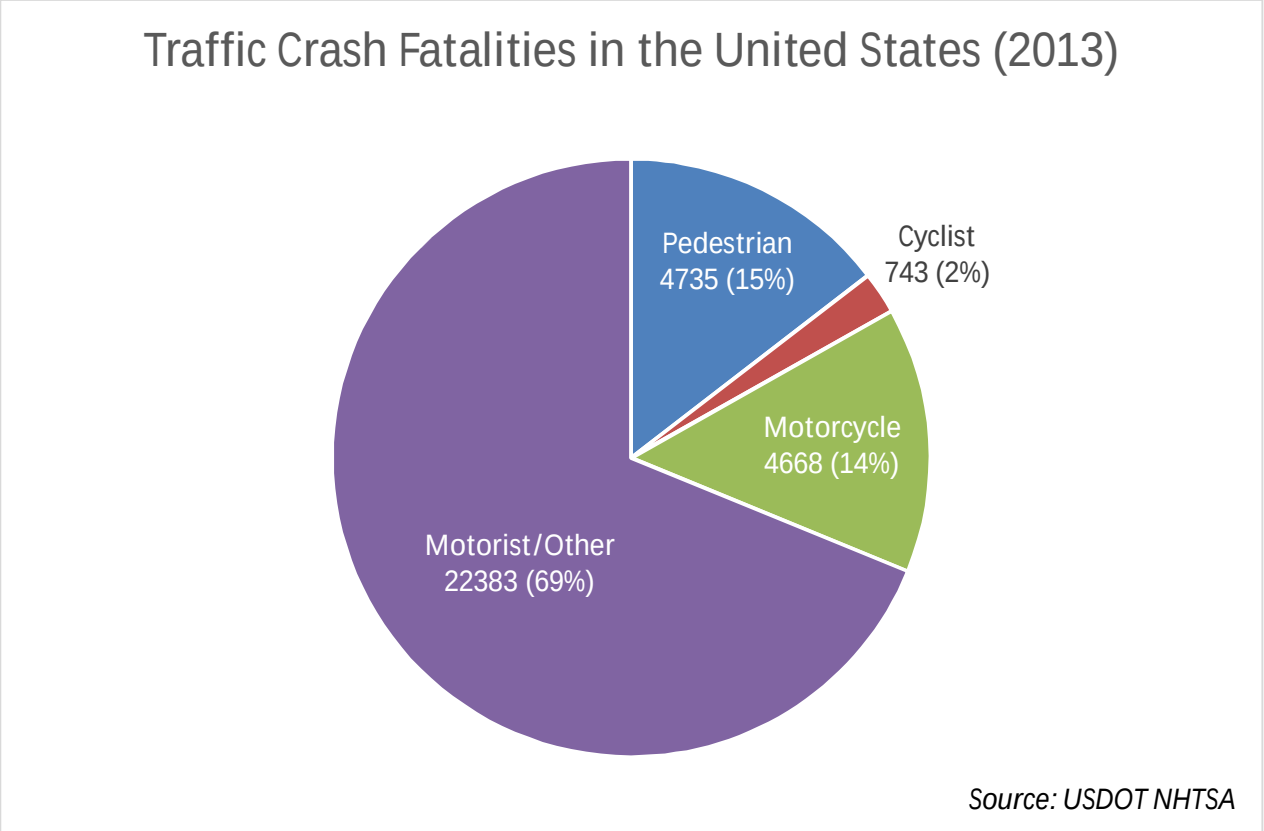
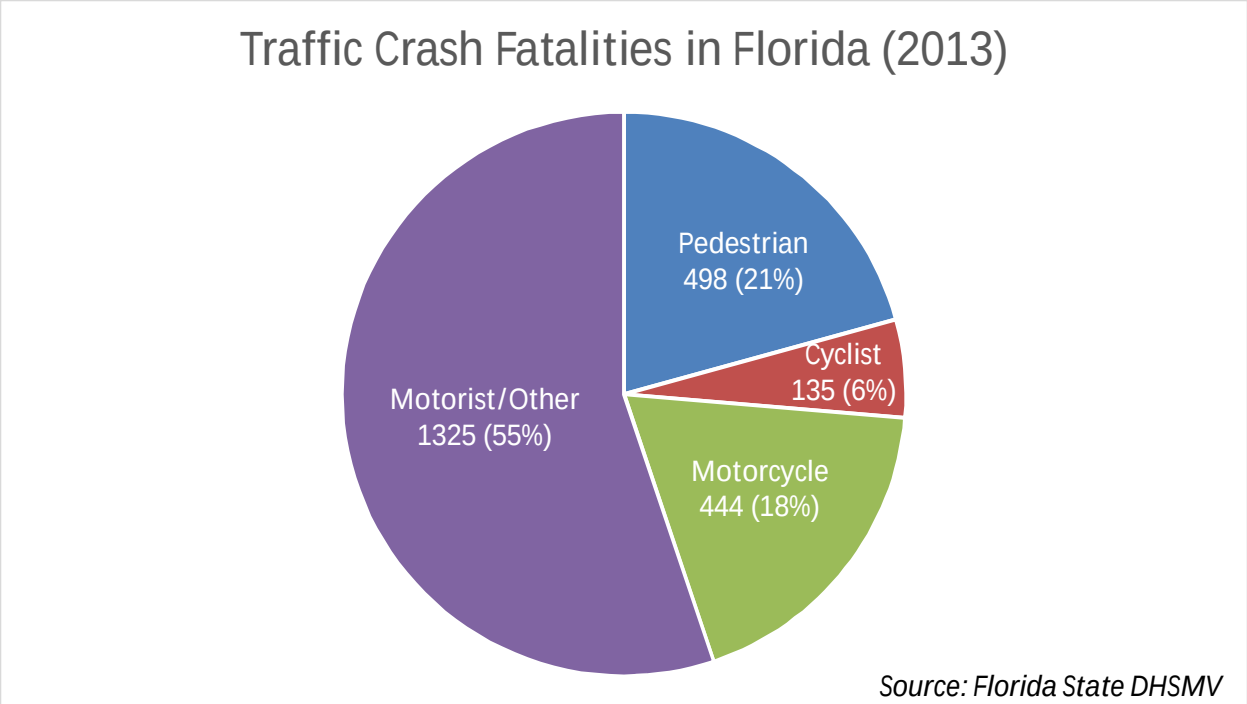
SURFSIDE
INDIAN CREEK VILLAGE
HIALEAH
MEDLEY
MIAMI SHORES
EL PORTAL
NORTH BAY VILLAGE
DORAL
MIAMI SPRINGS
VIRGINIA GARDENS
MIAMI BEACH
MIAMI
SWEETWATER
WEST MIAMI
CORAL GABLES
SOUTH MIAMI
KEY BISCAYNE
PINECREST
PALMETTO BAY
CUTLER BAY
HOMESTEAD
FLORIDA CITY
Legend
Fatal Crashes
Major Roads
Other Roads
Municipalities
Unincorporated Miami-Dade County
0 0.75 1.5 3 4.5 6
Miles

Miami-Dade exhibits a higher percentage of pedestrian and bicyclist fatalities than the State of Florida and the United States as a whole. In comparisons of the fifty states, Florida is considered to have a high percentage of bicyclist and pedestrian fatalities. In comparisons of counties within Florida, Miami-Dade is considered to have a high percentage of bicyclist and pedestrian fatalities.

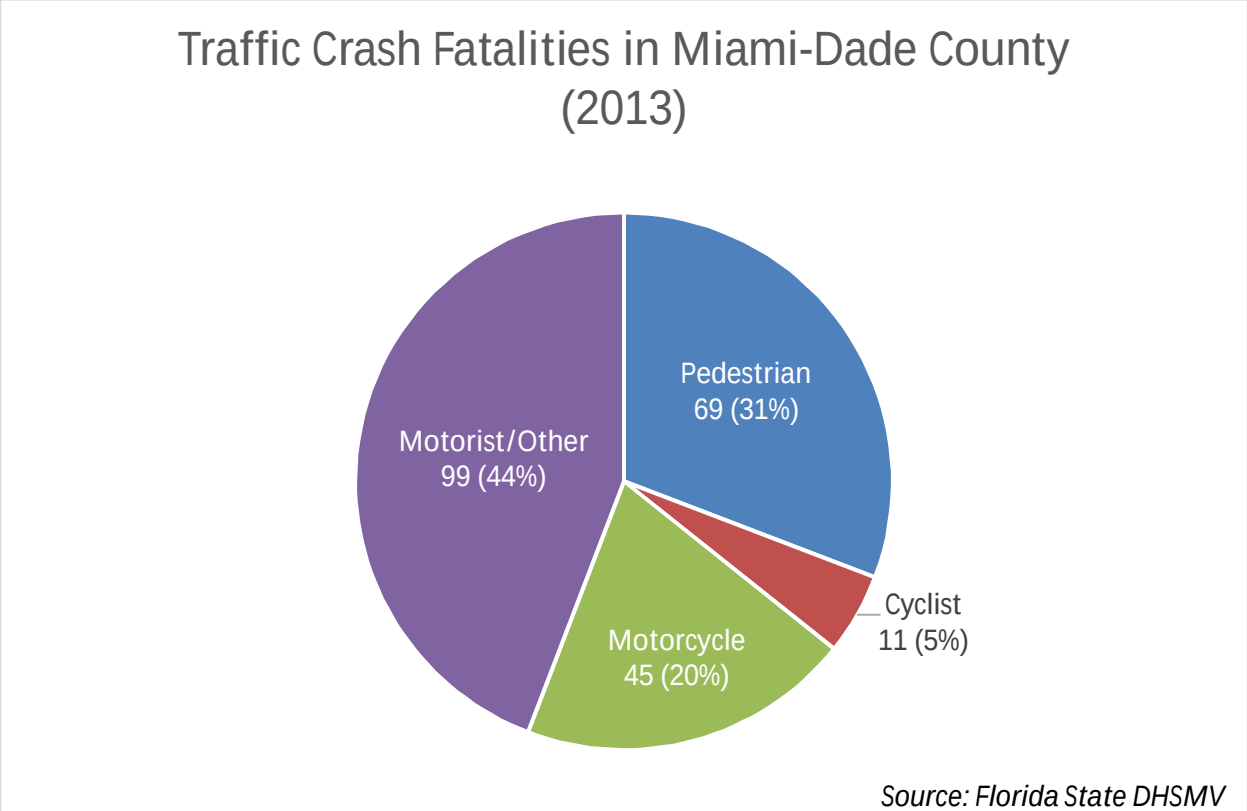
The following series of pie charts illustrate the fact that Miami-Dade exhibits a high percentage of fatalities that are pedestrian fatalities. The percentage of traffic crash fatalities that are pedestrian fatalities for the nation, state, and county are listed below.

- **Percentage of traffic crash fatalities that are pedestrian fatalities**
  - United States – 15 percent
  - Florida – 21 percent
  - Miami-Dade – 31 percent



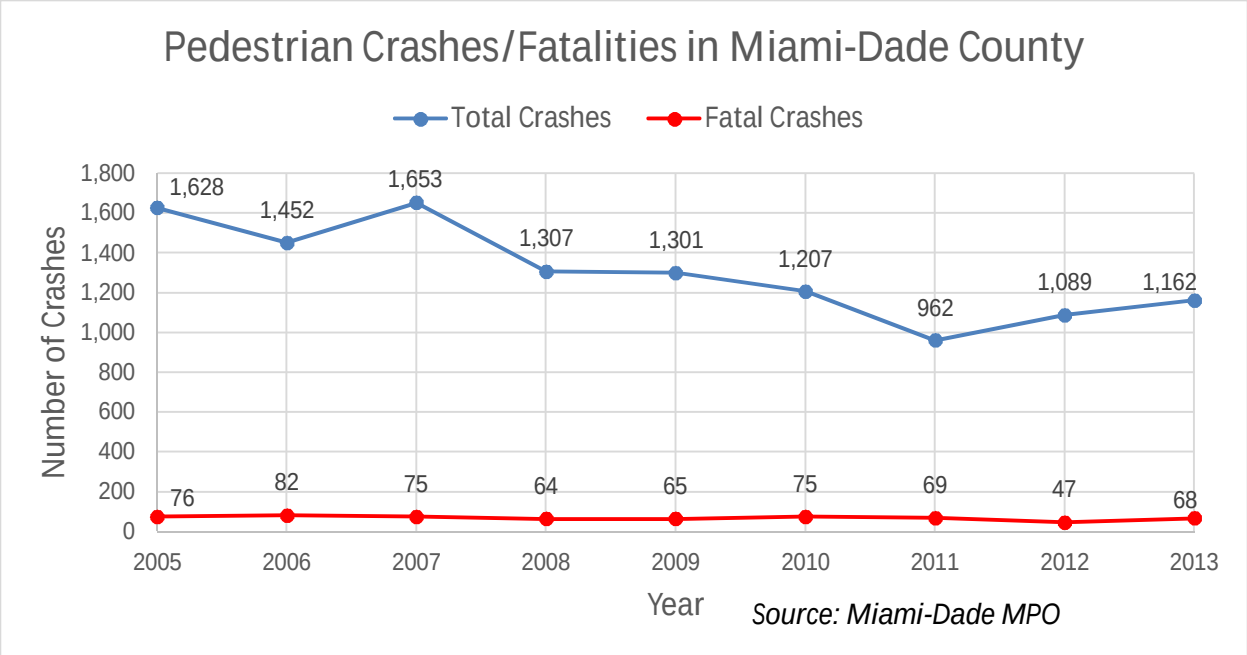


Source: Florida State DHSMV

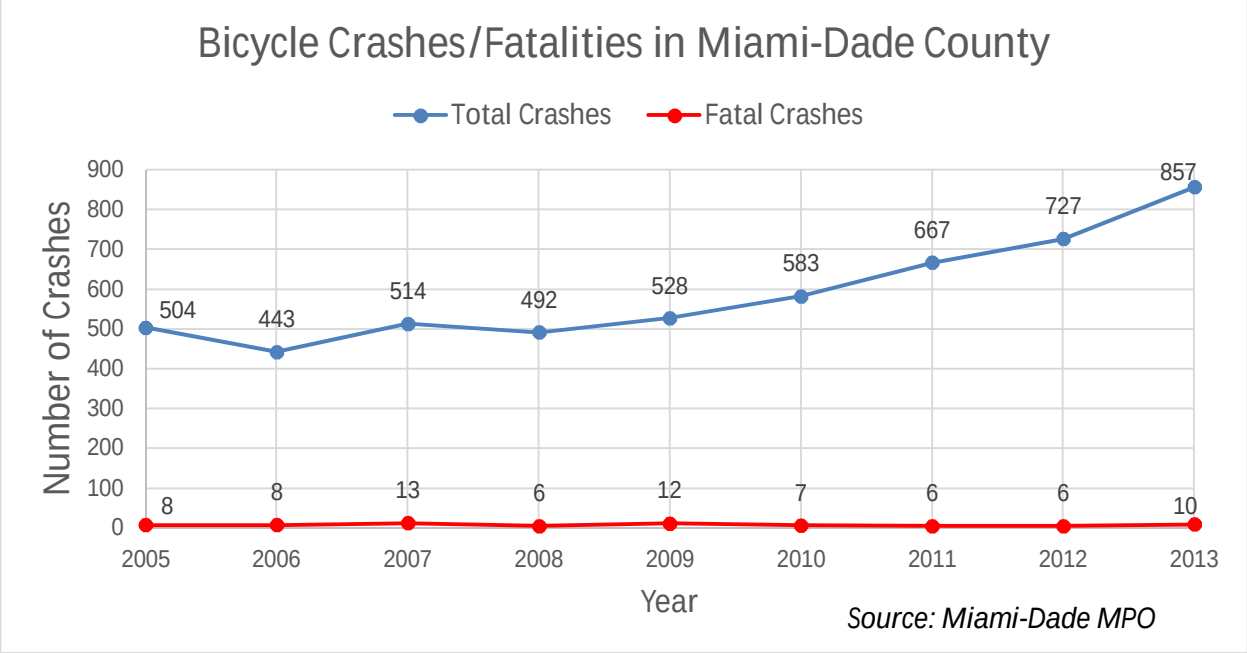


Source: Florida State DHSMV

The number of pedestrian crashes in Miami-Dade County consistently declined for over twenty years between 1990 and 2011. In recent years, there has been a slight upward trend in the total number of pedestrian crashes. However, bicycle crash data show a more dramatic increase between 2007 and 2013, which is approximately the same time period that is associated with the increase in bicycling measured by multiple data sources.

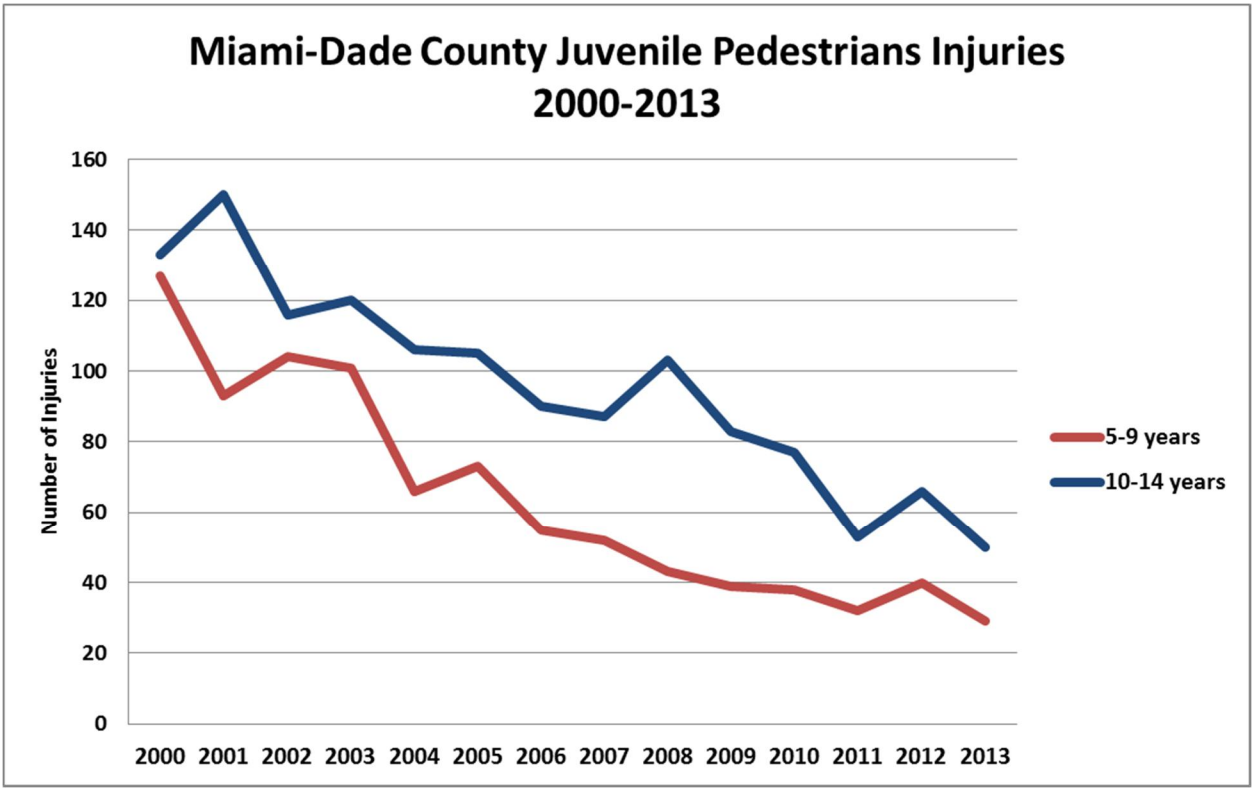


Source: Miami-Dade MPO



Source: Miami-Dade MPO

There has been a sharp measured decline in juvenile pedestrian-hit-by-car incidents and juvenile pedestrian fatalities in Miami-Dade County, which is likely attributed to the success of the University of Miami's WalkSafe Initiative.



Local Policies and Standards

This section provides information related to legislation, policies, and standards at the Miami-Dade County level.

Miami-Dade Complete Streets Resolution

Miami-Dade County Resolution No. R-995-14 was passed in November 2014 directing the Mayor or designee to develop in conjunction with FDOT, the MPO, and other applicable entities, a plan for implementation of a Complete Streets program for Miami-Dade County.

Miami-Dade County joined some 700 plus other communities that have adopted Complete Streets policies in recent years. The County is now in the process of moving from a Complete Streets policy to a Complete Streets program. The ultimate goal is to ensure that all County departments and all developers plan, evaluate, and implement projects related to the upgrade and delivery of

improvements to roadways through a Complete Streets "lens." Making that transition involves multiple steps and an active management process.

As mentioned previously, Miami-Dade County's Complete Streets resolution scores relatively well from the National Complete Street Coalition's grading scale, ranking 5th of 30 nationally in its category. The resolution scores well from planning-related aspects such as intent, all modes/users, all projects/phases, network, and context sensitivity. However, the resolution did not score well on implementation-related aspects such as exceptions, design flexibility, performance measures, and implementation steps. According to the NCSC analysis, implementation of the resolution will require a concerted effort amongst many County department and elected leadership.

Comprehensive Development Master Plan (CDMP)

Miami-Dade County's Comprehensive Development Master Plan (CDMP) includes numerous policies related to Complete Streets, pedestrianism, and non-motorized transportation.

Complete Streets Policies

Objective TE-4. By 2015, Miami-Dade County shall develop a "Complete Streets" program to be considered in the design and construction of new transportation corridors and reconstruction of existing corridors, wherever feasible.

Policies TE-4A and TC-3C. By 2015, Miami-Dade County shall develop a "Complete Streets" program which will be sensitive to the needs of the users of all modes of transportation including bicyclists and pedestrians and include the following components: street typology based on land use context due to how a roadway passing through different land uses will vary in character; hierarchy of street types and designs; provision of sidewalks and bicycle facilities; adequate landscaping and street furniture; bus lanes and transit facilities; improve aesthetics, and design for the safety of all users, including vulnerable populations such as children and seniors.

Policy LU-9U. By 2015, Miami-Dade County shall evaluate and propose update(s) to the Guidelines for Urban Form, Mixed Use Development and Urban Center provisions of this plan in coordination with the "Complete Streets" program to be developed pursuant to Transportation Element Objective TE-4. The updates shall address, as appropriate, the

maximum allowable FARs (floor area ratios), intensity and density of development, allowances that facilitate transit supportive mixed developments, and shall enhance and further the implementation of the County Area Planning Program and support the intent of the Complete Streets Program.

Policy ROS-8D. Miami-Dade County shall update the *Miami-Dade Urban Design Manual*, the *Standard Details of the Public Works Manual*, and other relevant county plans and regulations to incorporate where appropriate, the "Great Streets Planning Principles" contained in the *Miami-Dade Parks and Open Space System Master Plan* and incorporation of "Complete Streets" components, where feasible. Changes to be incorporated include a hierarchy of street types and designs (gateway streets, civic streets, heritage streets, and neighborhood streets), and complete street measures such as provision of sidewalks and bicycle facilities, pedestrian friendly design, adequate landscaping and street furniture, on-street parking, bus lanes and transit facilities, and clearly defined crosswalks and signalization to provide safe routes to parks.

Other Relevant CDMP Policies

Policy LU-1D. In conducting its planning, regulatory, capital improvements and intergovernmental coordination activities, Miami-Dade County shall seek to facilitate the planning of communities which include recreational, educational and other public facilities, houses of worship, places of employment, and safe and convenient circulation of automotive, pedestrian and bicycle traffic throughout the communities.

Policy LU-1T. Miami-Dade County through its land development regulations shall encourage developments that promote and enhance bicycling and pedestrianism through the provision of bicycle and pedestrian facilities and other measures such as building design and orientation, and shall discourage walled and gated communities.

Policy LU-9K. By 2016, Miami-Dade County shall initiate the review and revision of its Subdivision Regulations to facilitate the development of better planned communities. The Public Works Department shall specifically review and update the Subdivision Regulations for urban design purposes. Changes to be considered shall include provisions for:

i) Open space in the form of squares, plazas, or green areas in residential and commercial zoning categories; and

ii) A hierarchy of street types and designs, ranging from pedestrian and bike paths to boulevards that serve both neighborhood and areawide vehicular and pedestrian trip making needs by addressing cross sections, corner radii, connectivity and rationality of street and pathway networks, and balanced accommodation of automobiles, pedestrians, bicyclists, and landscaping.

Objective TE-1. Miami-Dade County will provide an integrated multimodal transportation system for the circulation of motorized and non-motorized traffic by enhancing the Comprehensive Development Master Plan and its transportation plans and implementing programs to provide competitive surface transportation mode choice, local surface mode connections at strategic locations, and modal linkages between the airport, seaport, rail and other inter-city and local and intrastate transportation facilities. These plans and programs shall seek to ensure that, among other objectives, all transportation agencies shall consider climate change adaptation into their public investment processes and decisions.

Objective TE-2. In furtherance of pedestrianism and other non-motorized modes of transportation in the planned urban area, Miami-Dade County shall enhance its transportation plans, programs and development regulations as necessary to accommodate the safe and convenient movement of pedestrians, non-motorized vehicles and motorized vehicles.

Policy TE-2A. The County shall continue to promote and assist in the creation of a Countywide system of interconnected designated bicycle ways, and promote the implementation of the *Miami-Dade Bicycle Facilities Plan.*

Policy TE-2B. The County shall continue to develop a comprehensive countywide greenways network providing continuous corridors for travel by pedestrians and non-motorized vehicles incorporating elements of the adopted South Dade Greenway Network Master Plan and the North Dade Greenways Plan.

Policy TE-2C. In road construction and reconstruction projects, roadway designs shall protect and promote pedestrian comfort, safety and attractiveness in locations where the Land Use Element seeks to promote activity along road frontages, such as in areas planned for community- or neighborhood-serving businesses, and all existing and planned Urban Center and rapid transit stations and mass transit corridors. Such measures should include, wherever feasible, on-street parking, wide sidewalks, and abundant landscaping at the street edge.

Additionally, boulevard section designs should be utilized where appropriate, including central through lanes and frontage lanes for local traffic and parking, separated from the through lanes by landscaped areas, with frequent opportunities for pedestrians to safely cross the through lanes, and right of way to facilitate these designs should be reserved or acquired where necessary. Roadway pedestrian facility considerations shall also be consistent with the policies addressing pedestrianism contained in the Land Use Element.

Policy TE-2D. Miami-Dade County's top priority for constructing new sidewalks and bicycle facilities after completion of the "Safe Routes to Schools" program shall be to provide continuous sidewalks and bicycle facilities along the following: a) existing rapid transit stations and transit centers, b) existing parks and recreation open spaces, c) both sides of all County collector and arterial roadways within 1/4 mile of all existing transit stations and centers, and d) at least one side of County collector and arterial roadways between 1/4 and 1/2 mile of all existing transit stations, centers and corridors. All new development and redevelopment in these areas shall be served by sidewalks and bicycle facilities. It is the policy of Miami-Dade County that municipalities in the County establish similar priorities for their jurisdictions, and that FDOT do the same with regard to State roads. In all new construction and reconstruction of collector and arterial roads inside the UDB served by Metrobus, sidewalks and bicycle facilities should be provided along all such roads between bus stops and any existing or planned intersecting residential or community-serving business streets within, at a minimum, 1/4 mile of the bus stops.

Policy TE-2E. The County shall require accommodation of non-motorized transportation facilities in plans for future arterial and collector road construction, widening or reconstruction projects where designated by the Bicycle Facilities Plan, wherever feasible.

Policy TE-2G. The County shall encourage inclusion in, and review, all plans and development proposals for provisions to accommodate safe movement of bicycle and pedestrian traffic, and facilities for securing non-motorized vehicles in all new development and redevelopment and shall address this as a consideration in development and site plan review.

Policy TE-2H. The County shall ensure that sidewalks are well-maintained and free from tripping hazards and barriers to promote comfortable and safe sidewalk conditions for pedestrians of all ages and abilities through actions such as, but not limited to, providing tree

grates covering tree planting areas in or adjacent to sidewalks; trimming overgrown bushes and trees within road rights-of way, as appropriate; and the repair or replacement of broken and uneven sidewalk pavement.

Objective TE-5. By 2015, Miami-Dade County shall evaluate the designation of multimodal transportation corridors as "Activity Corridors" on the Land Use Plan Map, Land Use Element and Transportation Element.

Policy TE-5A. By 2015, Miami-Dade County shall evaluate the designation of multimodal transportation corridors as "Activity Corridors" on the Land Use Plan Map, Land Use Element and Transportation Element such as NW/SW 27, 42, 57, 87, 107 and 137 Avenues, and NW 103, 36/41 Streets, W. Flagler Street, Tamiami Trail (SW 8 St.), Coral Way (SW 24 St.), Bird Road Drive (SW 40/42 St.), Kendall Drive (SW 88 Street), Coral Reef Drive (SW 152 St.), and South Dixie Highway (US 1). The evaluation shall address the following objectives:

a) Allowed uses,
b) Development density and intensity,
c) Urban design guidelines, and
d) Multimodal components.

Traffic Circulation (TC) Goal. Develop, operate and maintain a safe, efficient and economical traffic circulation system in Miami-Dade County that provides ease of mobility to all people and for all goods, is consistent with desired land use patterns, conserves energy, protects the natural environment, enhances non-motorized transportation facilities, supports the usage of transit, and stimulates economic growth.

Policy TC-2A. The County shall continue to maintain and enforce the minimum right-of-way requirements as established in the *Public Works Manual* and in Chapter 33, Zoning, *Code of Miami-Dade County*, to ensure Countywide continuity of the thoroughfare system. The County shall review roadway design standards and right-of-way reservations and shall propose changes as may be necessary to better accommodate projected vehicular and non-vehicular movement in the corridors and design features recommended in the Transportation and Land Use Elements.

Objective TC-3. The County's transportation system will emphasize safe and efficient management of traffic flow, the safety of pedestrians and bicyclists, and enhance and encourage the use of transit.

Policy TC-3D. The County shall design new roadways in a way that supports transit usage and incorporates planned rapid transit corridors, dedicated bus lanes and other transit improvements to further incentivize and facilitate the use of transit, wherever feasible.

Policy TC-4F. The County shall consistently improve strategies to facilitate a Countywide shift in travel modes from personal automobile use to pedestrian, bicycle and transit modes. The priority for transportation infrastructure expenditures shall be to insure that pedestrian, bicycle and transit features are incorporated into roadway design.

Policy TC-5D. The County shall encourage interconnectivity between neighborhoods, local services, schools, parks, employment centers, and transit stops and stations; discourage cul-de-sac and walled-in subdivision designs; and facilitate pedestrian-oriented urban design that connects neighborhoods and provides accessibility for non-drivers.

Policy TC-6E. The County shall pursue and support transportation programs (e.g., rapid transit, premium bus service, managed lanes, and bikeways) that will help to maintain or provide necessary improvement in air quality and which help conserve energy.

Policy TC-6F. Design new roadways in such a manner as to make them compatible with the surrounding environment, complement adjacent development and provide aesthetically pleasing visual experience to the user and the adjacent areas.

Policy MT-8A. Miami-Dade County shall enhance transit facilities to ease transfer with other modes (e.g., park-ride garages and lots with short-term and long-term parking, kiss-and-ride areas, ride-sharing priority parking spaces for carpool and vanpool, motorcycle/scooter parking, bicycle lockers and racks, covered pedestrian walkways, taxi and jitney stands).

Policy MT-8B. In the planning and design of rapid transit sites and stations and transit centers, high priority shall be given to providing a safe, attractive and comfortable environment for pedestrians, bicyclists and transit users; such amenities shall include weather protection, ample paved walkways, sidewalks, lighting, and landscaping, and ancillary uses that provide conveniences to transit patrons such as cafes, newsstands and other retail sales.

Policy ROS-3B. The County shall improve and promote non-motorized access to existing park and recreation open spaces by implementing the North Miami-Dade Greenways Master Plan and South Miami-Dade Greenway Network Master Plan, as well as improved sidewalks and trails, to improve connectivity between parks and residences, schools, activity centers, and transportation nodes.

Policy ROS-5F. Continue to implement and consider expansion of segments of the North Miami-Dade Greenways Master Plan and South Miami-Dade Greenway Network Master Plan that provide recreation and environmental benefits while improving connectivity to parks, natural areas, and other recreational facilities.

Objective ROS-8. The Miami-Dade County Parks and Open Space System Master Plan (OSMP), through a 50-year planning horizon, shall guide the creation of an interconnected framework of parks, public spaces, natural and cultural areas, greenways, trails, and streets that promote sustainable communities, the health and wellness of County residents, and that serve the diverse local, national, and international communities.

Policy ROS-8C. Miami-Dade County shall utilize the Parks and Open Space Design Criteria or “Pattern Book”, to guide the development of the public realm. The public realm includes new and existing parks, public spaces, natural and cultural areas, greenways, trails, street corridors, and private spaces that are open to the public. The criteria shall promote beauty, community character and connectivity and include standards to assure compatibility with adjoining uses, conservation and energy efficiency, as well as signage and way-finding requirements.

Policy ROS-8E. By 2014, Miami-Dade County shall develop a greenways prioritization plan to prioritize areas to be designated for greenways, trails, and bicycle lanes, and update the North Miami-Dade Greenway Master Plan and South Miami-Dade Greenway Network Master Plan and the CDMP to include such greenways. The update shall include the designation of the Western Greenway and implementation of the Miami-Dade County Trail Design Guidelines and Standards. On an on-going basis, Miami-Dade County shall coordinate with State, regional, federal, and local government agencies to establish a countywide interconnected system of non-motorized pathways that link neighborhoods, parks, natural areas, civic centers, schools, and commercial areas to achieve goals and objectives through a diverse combination of financing methods, partnerships, and interagency coordination.

Policy EDU-3E. When considering a site for possible use as an educational facility, the Miami-Dade County Public Schools should review the adequacy and proximity of other public facilities and services necessary to the site such as roadway access, transportation, fire flow and portable water, sanitary sewers, drainage, solid waste, police and fire services, and means by which to assure safe access to schools, including sidewalks, bicycle paths, turn lanes, and signalization.

Policy EDU-4D. Miami-Dade County shall coordinate with the Miami-Dade County Public Schools and municipalities to provide for pedestrian, bicyclist and traffic safety in the school areas, and signalization for educational facilities.

Policy CHD-1A. Miami-Dade County shall create a network of sidewalks, trails, accessible parks and recreation facilities that establishes a pedestrian-friendly environment, which encourages physical activity and links destinations, such as restaurants, shops, work places and neighborhood-based retail to each other and residential areas.

Policy CHD-1E. Designate locations for carpooling and bus stops that encourage residents to maintain a daily level of walking as part of their commute, and are designed in a manner that reflects the character of the community or district where the stops are located.

Policy CHD-1F. Adopt and implement by 2014 high-quality streetscape design standards and facade treatments to reflect the character of the community to attract pedestrian activity.

Policy CHD-1G. Promote coordination between jurisdictions in the planning and implementation of bicycle, trail, transit, pedestrian and other alternative transportation modes to establish continuous networks that support healthy communities.

Policy CHD-1H. Adopt and implement by 2014 a signage and way-finding program within the public realm that is an aesthetic enhancement to the community. It should clearly inform residents and visitors of key locations, corridors and pedestrian/bicycle routes to destinations and amenities.

Policy CHD-1I. Create walkable environments between tourist destinations through design guidelines that take measures to enhance the public realm and encourage pedestrian/bicycle activity.

Policy CHD-3A. Design and develop neighborhoods that can facilitate children walking safely to Miami-Dade County Schools.

Policy CHD-3B. Encourage walking and bicycle riding as a means of transportation to and from school, by implementing capital projects that support the development of safe routes to school.

Policy CHD-3C. Prepare design standards for lighting as a pedestrian safety measure along streets, paths, crosswalks and other points of vehicular conflict, as well as within public spaces.

Policy CHD-3D. Update street design standards to incorporate traffic-calming measures, such as special paved crosswalks at key intersections and/or mid-block crossings, where applicable to promote pedestrian safety.

Miami-Dade County Code of Ordinances

Miami-Dade County's Code of Ordinances includes legislation related to walking and bicycling typically similar to State law, especially as it relates to items such as the definition of a bicycle as a vehicle, regulating the operation of bicycles, and regulating pedestrian crossings at unmarked crosswalks.

Some of the key aspects of Miami-Dade County's Code related to non-motorized transportation are as follows. Please see Miami-Dade County Code Section 30-221, 30-262, 30-263, 30-264, and 30-273, 30-275, and 33-122 for the actual Code language. The Miami-Dade County Office of the County Attorney has provided a detailed summary of pedestrian/bicyclist legislation in Miami-Dade County, which is found in the LAT binders.

- Human-powered vehicles are allowed on sidewalks in most instances. Local authorities are not prevented from regulating the operation of bicycles.
- Bicyclists have the rights and the duties applicable to other vehicle drivers when operating in the roadway.
- Bicyclists have the rights and the duties applicable to pedestrians when operating on a sidewalk or crosswalk.
- Bicyclists must yield the right-of-way to any pedestrian when operating on a sidewalk or crosswalk and must give an audible signal before overtaking and passing.

- Bicyclists operating upon a roadway at less than normal speed of traffic are compelled to ride as close as practicable to the right hand curb or edge of the roadway except under three situations including overtaking another vehicle proceeding in the same direction, preparing for a left turn, or when reasonably necessary to avoid certain conditions such as objects in the roadway or substandard lane widths.
- Bicyclists may not ride more than two abreast.
- Bicyclists are required to have a white light head lamp when riding at night and a red light or reflector on the rear of the bicycle.
- Pedestrians shall be subject to traffic control devices at signalized intersections.
- If sidewalks are provided, no pedestrian shall walk along the roadway unless required by other circumstances.
- Where sidewalks are not provided, pedestrians shall walk only on the shoulder on the left side of the roadway in relation to the pedestrian's direction of travel.
- Pedestrians are generally permitted to cross outside of marked or unmarked crosswalks as long as they yield right-of-way to vehicles upon the roadway.
    - One exception is that pedestrians are not permitted to cross outside of crosswalks between adjacent intersections at which traffic control signals are in operation.
- Miami-Dade County Zoning Code provides provisions for bicycle parking at certain types of land use.

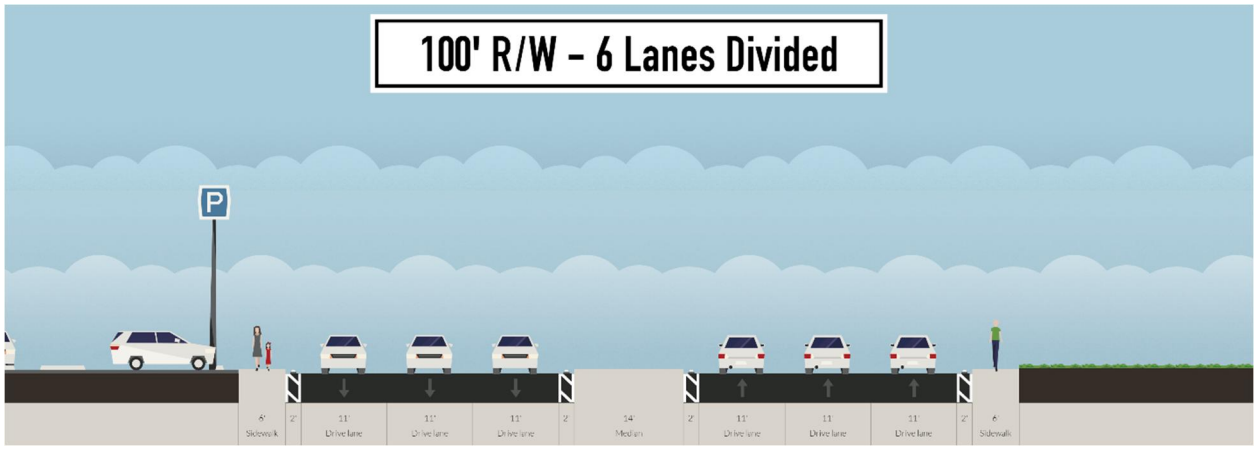
Right-of-Way Constraints

Right-of-way constraints are a significant concern in Miami-Dade County. The County's typical street rights-of-way are narrower than corresponding streets on the State Highway System and in neighboring counties. This creates difficulties when applying Complete Streets principles to streets whose rights-of-way were established based on a design that did not include bicycle facilities or wide sidewalks. Applying design techniques for addressing Complete Street designs within constrained rights-of-way is one of the most important topics from an engineering standpoint for the Action Plan to consider.

Street Design Manuals

Miami-Dade County street designs are contained within the *Public Works Manual*, including Part 1 Standard Details. Typical section details are often based on older, narrower right-of-way assumptions, which sometimes do not allow enough space for robust Complete Streets. For

example, a County typical section for a four-lane arterial roadway with a striped median assumes a 70- to 74-foot right-of-way width, which when accounting for the median width and the 6-foot sidewalks, does not leave enough space for designated bike lanes. Similarly, many six-lane roadways are built within 100-foot rights-of-way, which include three 11-foot travel lanes in each direction, 2-foot curb-and-gutter on all sides, a 14-foot median, and 6-foot sidewalks on both sides. Typical right-of-way widths were established before designated bicycle facilities were a component of roadway design. The *Public Works Manual* was written during a time period when maximizing motor vehicle speed and efficiency were primary design goals.



Although the design elements and standard details have generally not been updated to incorporate Complete Streets principles, designers and engineers can utilize County-recognized standards such as the Florida Greenbook, which has been updated to include design flexibility for many Complete Streets principles. The Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways (the Florida Greenbook) is intended to provide minimum standards for use on all public streets that are not part of the State Highway System. The May 2013 Florida Greenbook includes expanded sections in Chapter 8 (Pedestrian Facilities) and Chapter 9 (Bicycle Facilities) to provide improved guidance. In addition, the Traditional Neighborhood Development (TND) chapter provides guidance related to working within context sensitive areas. The TND chapter states that arterial and collector roadways are typically found along the edges of traditional neighborhood developments, although TND design guidance is given for “thoroughfares” of 35 miles per hour design speed or less.

The National Association of City Transportation Officials (NACTO) *Urban Street Design Guide* and *Urban Bikeway Design Guide* also apply to urban core contexts. In addition, Miami-Dade

County follows FDOT Standard Indexes for many standard details associated with street and roadway design.

Assessment Summary

The following is a brief summary of findings from the Assessment.

- There is no silver bullet for improving street safety. It will be accomplished through a combination of solutions that provide for engineering, education, and enforcement strategies.
- FHWA provides a wealth of information related to conventional safety countermeasures that have been shown through evidence-based performance outcome studies to reduce pedestrian fatalities.
- However, pedestrian and bicyclist fatality rates remain high especially when compared to likely exposure methods.
- Cities that have made more dramatic changes in pedestrian and bicyclist fatality rates have implemented a strong focus on reducing motor vehicle speeds in urban core areas.
- Research shows that narrower streets result in slower travel speeds. Furthermore, studies show that reducing lane width is not associated with an increase in crash rates.
- Studies show that per-capita injury rates are lower as walking and bicycle riding increase.
- The National Complete Streets Coalition (NCSC) have identified ten elements of a comprehensive Complete Streets policy. Each of the ten elements relate to either planning or implementation.
- The NCSC grades each Complete Streets policy from state and local jurisdictions. The Miami-Dade County Complete Streets resolution scores highly on planning factors but poorly on implementation factors (it scores low in design flexibility, exceptions, performance measures, and implementation steps).
- Although the County *Public Works Manual* includes typical sections based on older, narrow rights-of-way, design elements and standard details have generally not been updated to incorporate Complete Streets principles. However, designers and engineers can utilize County-recognized standards such as the *Florida Greenbook* and NACTO *Urban Street Design Guide* to incorporate Complete Streets elements.

- On some streets, lane elimination strategies may be appropriate to incorporate Complete Streets elements where rights-of-way are too narrow to accomplish mobility goals within the current street configuration.
- The City of Miami and Miami-Dade County have endorsed the Downtown Pedestrian Priority Zone (DPPZ). However, implementation of several of its specific recommendations remains elusive, in part due to the conventional approach associated with maintaining motor vehicle speeds and reducing delay.

Chapter 5: Summary and Next Steps

Over 200 of our friends and neighbors will die this year on Miami-Dade County roadways. Traffic deaths are on the rise again after years of declining numbers. However, no amount of traffic deaths on Miami-Dade streets and roadways are inevitable or acceptable. We have the tools to be able to solve the challenge of making our streets safer.

Miami-Dade County has embraced the United States Department of Transportation (USDOT) Mayor's Challenge for creating Safer Streets, Safer People. The Miami-Dade County Action Plan for Safer People, Safer Streets is the foundation for establishing multi-disciplinary actions for creating an environment where people of all abilities – from our children to our grandparents – will be comfortable moving around our beautiful community, whether on foot, by bicycle, riding transit, or in a car.

The Miami-Dade County Action Plan for Safer People, Safer Streets represents six months of work by the Local Action Team (LAT) appointed by Miami-Dade Mayor Carlos A. Gimenez and Chairman of Neat Streets Miami Miami-Dade Commissioner Dennis C. Moss, District 9. With this Action Plan, Miami-Dade County is making a bold new commitment to improve street safety countywide. Over seventy actions are identified along with which departments or agencies will be responsible for implementation. Actions are organized using the seven Mayor's Challenge activity areas. Actions range from expanded enforcement against dangerous moving violations like speeding and failing to yield to pedestrians, to new street designs that achieve a balance for safer pedestrian and bicyclist space with accommodating motor vehicle mobility, to funding initiatives that expand the resources available for Complete Streets projects, to targeted education programs that will demonstrate and encourage people regarding the value of safe streets within our community. County leadership will convey this culture shift by implementing the recommendations of the Local Action Plan.

There is no silver bullet that will end traffic fatalities. However, this Action Plan represents a framework for beginning to drive down fatalities and move toward a fatality-free street system that we can all enjoy. Miami-Dade County staff are working on an early adoption plan that will identify first steps and associated timeframes.

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