

# STEP

Safe Transportation for  
Every Pedestrian



## MPO and DOT Partnership for Complete Streets Projects

Ricardo Gutierrez, Broward MPO  
Brad Salisbury, Florida Department of Transportation  
Stephanie Garcia, Broward MPO  
July 29, 2020



U.S. Department of Transportation  
Federal Highway Administration

# Meet the Panelists



**Ricardo Gutierrez**  
**Broward MPO**



**Brad Salisbury**  
**Florida DOT**



**Stephanie Garcia**  
**Broward MPO**

# Housekeeping

- ⇒ **Submit your questions**
- ⇒ **Webinar archive: [www.pedbikeinfo.org/webinars](http://www.pedbikeinfo.org/webinars)**
- ⇒ **Certificates and professional development hours**
- ⇒ **Follow-up email later today**



# Safe Transportation for Every Pedestrian (STEP)





## The Spectacular Seven

# STEP

Safe Transportation for Every Pedestrian

# New STEP Resources



Send Becky Crowe **STEP UP** photos and information  
[rebecca.crowe@dot.gov](mailto:rebecca.crowe@dot.gov)

## STEP STUDIO

Tools for selecting and implementing countermeasures for improving pedestrian crossing safety



U.S. Department of Transportation  
Federal Highway Administration



### Publicly-Supported Road Diet Reduces Speeds in Alexandria

Alexandria Department of Transportation and Environmental Services

#### KEY ELEMENTS:

- Public support
- Speed reduction

stops, and upgraded curb ramps. Staff also presented options for more comprehensive corridor improvements such as a Road Diet, buffered bike lanes, new crosswalks, vehicle turning restrictions, and crosswalk visibility enhancements. In addition to dedicated space for bicyclists and shorter, safer

aven locations, the benefits from slower sight distance, per turn lane.

### Pedestrian Hybrid Beacon (PHB)

SAFE TRANSPORTATION FOR EVERY PEDESTRIAN  
COUNTERMEASURE TECH SHEET



High speeds and multiple lanes of traffic create challenges for pedestrians crossing at unsignalized locations.

PHBs can warn and control traffic at unsignalized locations and assist pedestrians in crossing a street or highway at a marked crosswalk.

PHBs can reduce pedestrian crashes by **55%**

#### FEATURES:

- Beacons stop all lanes of traffic, which can reduce pedestrian crashes.

#### OFTEN USED WITH:

- High-visibility crosswalk markings
- Raised islands
- Advance STOP or YIELD signs and markings

A Pedestrian Hybrid Beacon head consists of two red lenses above a single yellow lens. Unlike a traffic signal, the PHB rests in dark until a pedestrian activates it via pushbutton or other form of detection. When activated, the beacon displays a sequence of flashing and solid lights that indicate the pedestrian walk interval and when it is safe for drivers to proceed (see figure on back page).

The PHB is often considered for installation at locations where pedestrians need to cross and vehicle speeds or volumes are high, but traffic signal warrants are not met. These devices have been successfully used at school crossings, parks, senior centers, and other pedestrian crossings on multilane streets. PHBs are typically installed at the side of the road or on mast arms over midblock pedestrian crossings.

U.S. Department of Transportation  
Federal Highway Administration

Safe Roads for a Safer Future  
Investment in Safer Streets



June 2018, Updated | FHWA-SA-18-064



[https://safety.fhwa.dot.gov/ped\\_bike/step](https://safety.fhwa.dot.gov/ped_bike/step)

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## Tech Sheets & Case Studies

SAFE TRANSPORTATION FOR EVERY PEDESTRIAN CASE STUDY

### Publicly-Supported Road Diet Reduces Speeds in Alexandria

Alexandria Department of Transportation and Environmental Services

**KEY ELEMENTS:**

- Public support
- Speed reduction

Community members can provide valuable insights into pedestrian safety on their streets, adding support to local projects such as the King Street Road Diet in Alexandria, Virginia. The City of Alexandria's Complete Streets policy requires that city maintenance and capital projects improve the transportation network for all users, so when a 1.6 mile segment of King Street was slated for resurfacing, the city had an opportunity to address longstanding community concerns and seek feedback on design options for improving the corridor.

stops, and upgraded curb ramps. Staff also presented options for more comprehensive corridor improvements such as a Road Diet, buffered bike lanes, new crosswalks, vehicle turning restrictions, and crosswalk visibility enhancements. In addition to dedicated space for bicyclists and shorter, safer pedestrian crossings at seven locations, the city also identified driver benefits from slower vehicle speeds, increased sight distance, and the addition of a center turn lane.



This section of King Street has a bus lane, residences, multiple churches, a

## VIDEOS

# For More Information:

**Becky Crowe**  
FHWA Office of Safety  
[Rebecca.Crowe@dot.gov](mailto:Rebecca.Crowe@dot.gov)

**Peter Eun**  
FHWA Resource Center  
[peter.eun@dot.gov](mailto:peter.eun@dot.gov)

[https://safety.fhwa.dot.gov/ped\\_bike/step/resources/](https://safety.fhwa.dot.gov/ped_bike/step/resources/)



U.S. Department of Transportation  
Federal Highway Administration

**BROWARD** 

# COMPLETE STREETS

Better Streets • Better Broward • Better Life

Commitment and Evolution of Complete Streets



# Broward MPO



## MPO Board representation:

- Broward County Commissioners (5)
- Broward Municipalities (31)
- South Florida Regional Transportation Authority (SFRTA/Tri-Rail) (1)
- Broward County School Board (1)

### ***Our Mission:***

*To collaboratively plan, prioritize, and fund the delivery of diverse transportation options.*

### ***Our Vision:***

*Our work will have measurable positive impact by ensuring transportation projects are well selected, funded, and delivered*

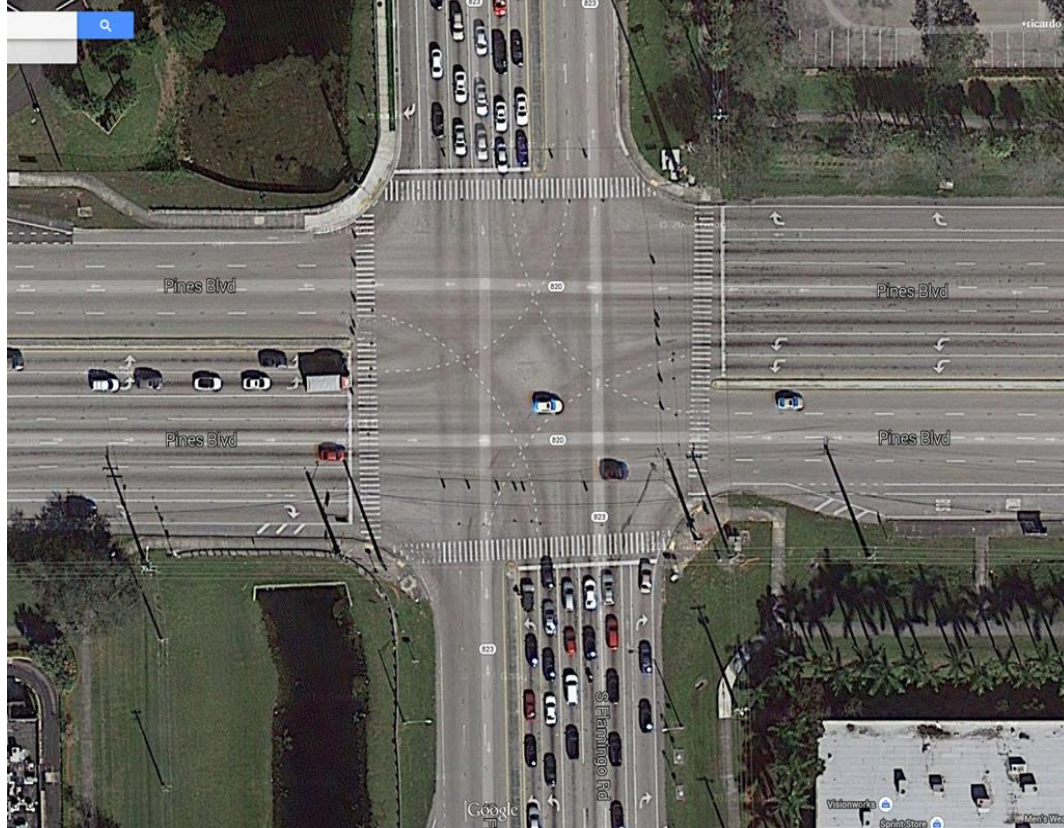


# Growth

2010



# MANAGING CONGESTION...



Flamingo Road and Pines Blvd, Pembroke Pines



Cypress Creek Road and Andrews Ave, Fort Lauderdale

# HOW IT STARTED?

- Transformation 2035 Long-Range Transportation Plan (December 2009)
- **Focus on moving people, not cars**
- Allocated large portion of funding to transit and bicycle/pedestrian projects
- Produced a prioritized list of bicycle/pedestrian projects for the region

*Foundation for our Complete Streets Initiative*



# WHY CREATE COMPLETE STREETS?

## CHOICE

FOR ALL USERS



Complete Streets benefit all users. Children in strollers, people with limited mobility, bicyclists, and transit riders are just a few. In Complete Streets, pedestrians, bicyclists, transit riders, and motorists can travel safely and efficiently - together.

## SAFETY

SAFER ACCESS AND ELEMENTS FOR EVERYONE



Complete Streets provide safe access to cross the street, walk to shops, ride the bus, or drive for work and play. Many safety elements such as highly visible crosswalks, LED lights, curb-extensions, and green bill lanes will make Prospect Road safer for all users.

## HEALTH

ENCOURAGES MORE MOVEMENT FOR A HEALTHY COMMUNITY



Complete Streets encourages healthy activities and communities. Complete Streets projects are designed to encourage more biking, walking, and transit use.

## ECONOMIC

LOCAL SUPPORT AND GROWTH



Complete Streets projects create a more welcoming environment that helps to raise property values, increases investments in communities, attracts new business, and supports existing local businesses.

# COMPLETE STREETS – NOW WHAT?

- Education and Training
  - Broward Complete Streets Initiative
- Develop a Process – How do we go from planning to actual “projects”?
  - Mobility Program
- Establish Partnerships
  - Jurisdictional owners



# BROWARD MPO COMPLETE STREETS INITIATIVE

“to provide the necessary tools (education and training) to our local governments in implementing Complete Streets in their respective communities”

# CS INITIATIVE

- Training & Education
- Technical Assistance & Resources
- CS Advisory Committee
- Community Engagement events





# Training Opportunities

## NACTO



**DESIGNING  
URBAN STREETS  
& BIKEWAYS**

## Innovative Bikeway Design



## FHWA Scalable Risk Assessment



## New Mobility and CS



# Safe Streets Summit



2017



Safe Streets Summit 2017. City of Sunrise, FL.

2019



Safe Streets Summit 2019. City of Miami, FL.

2018



Safe Streets Summit 2018. West Palm Beach, FL.

2020



Safe Streets Summit 2020. City of Fort Lauderdale, FL.

# Key Partnerships

- Establish partnerships with Jurisdictional owners and government agencies



Technical resources

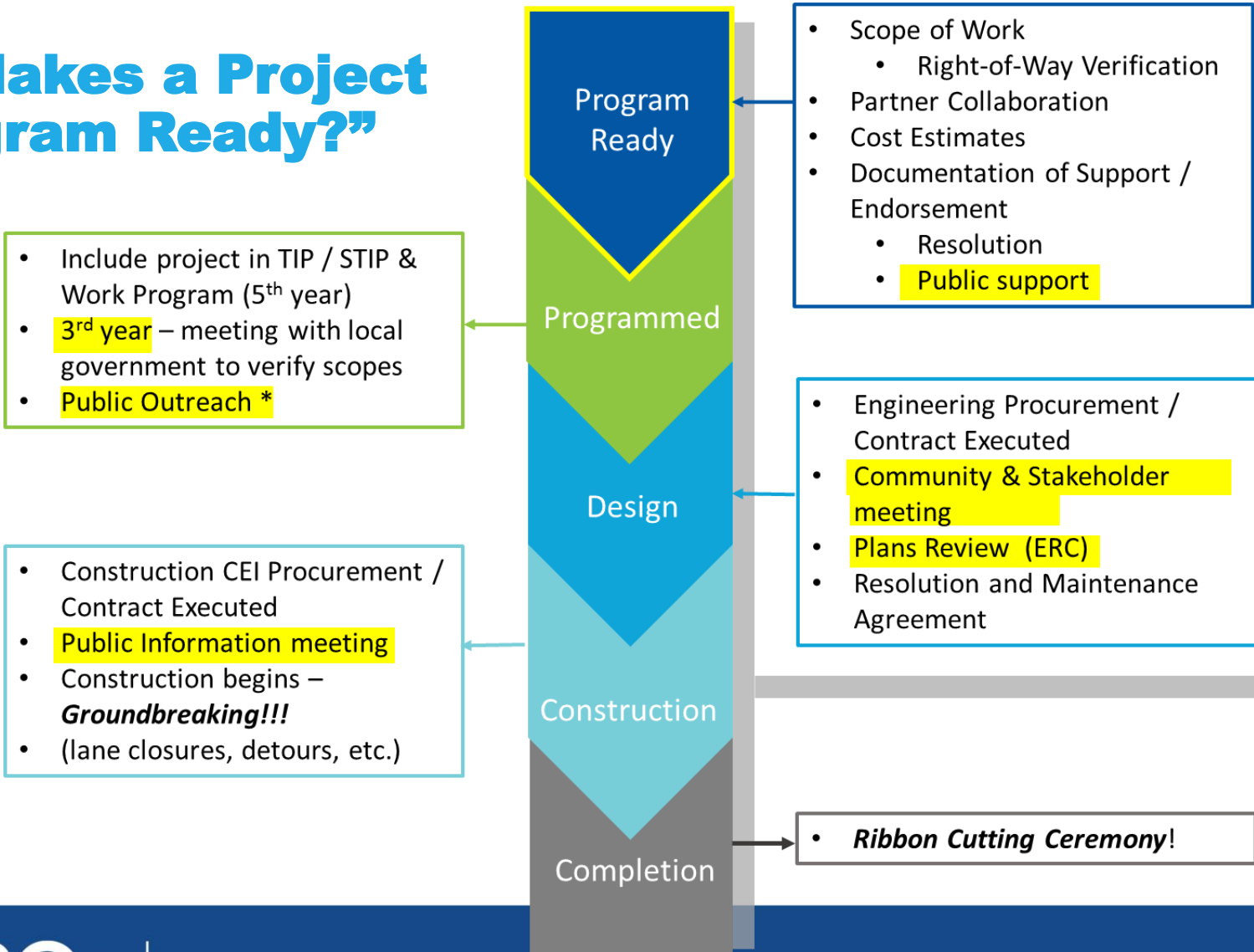


# Mobility Program

A process – How do we go from planning to actual “projects”?

# The Process

## What Makes a Project “Program Ready?”





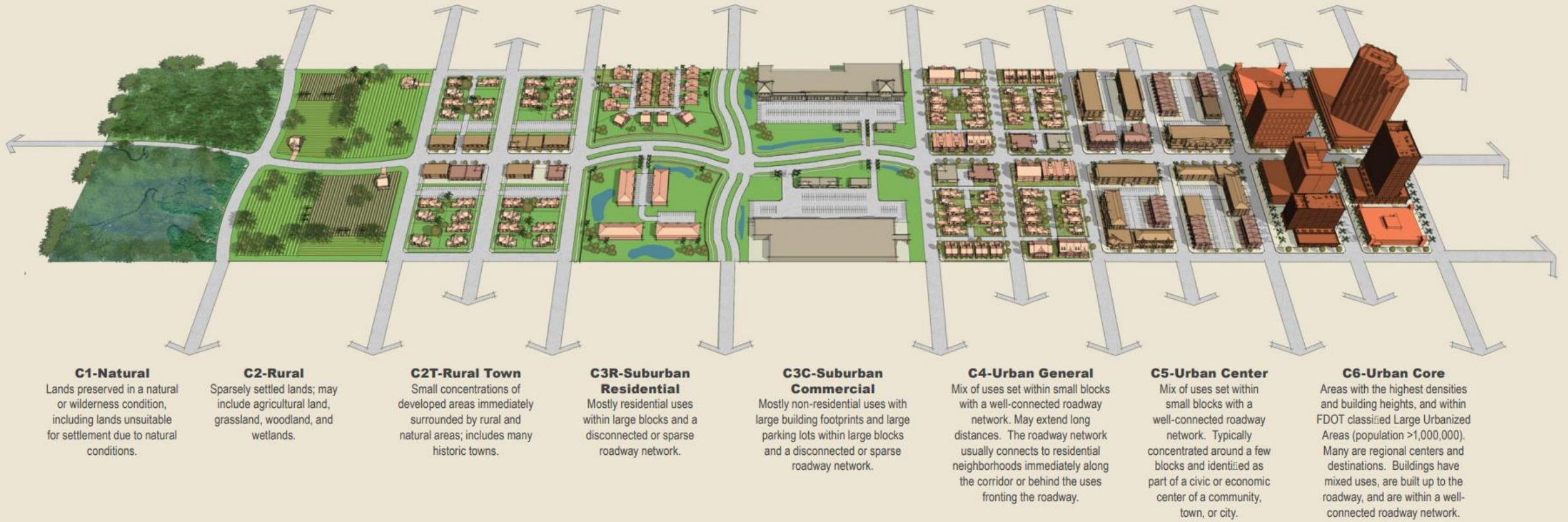
Florida Department of  
**TRANSPORTATION**

# Mobility Program

**Brad Salisbury**  
**FDOT District IV Design Project Manager**

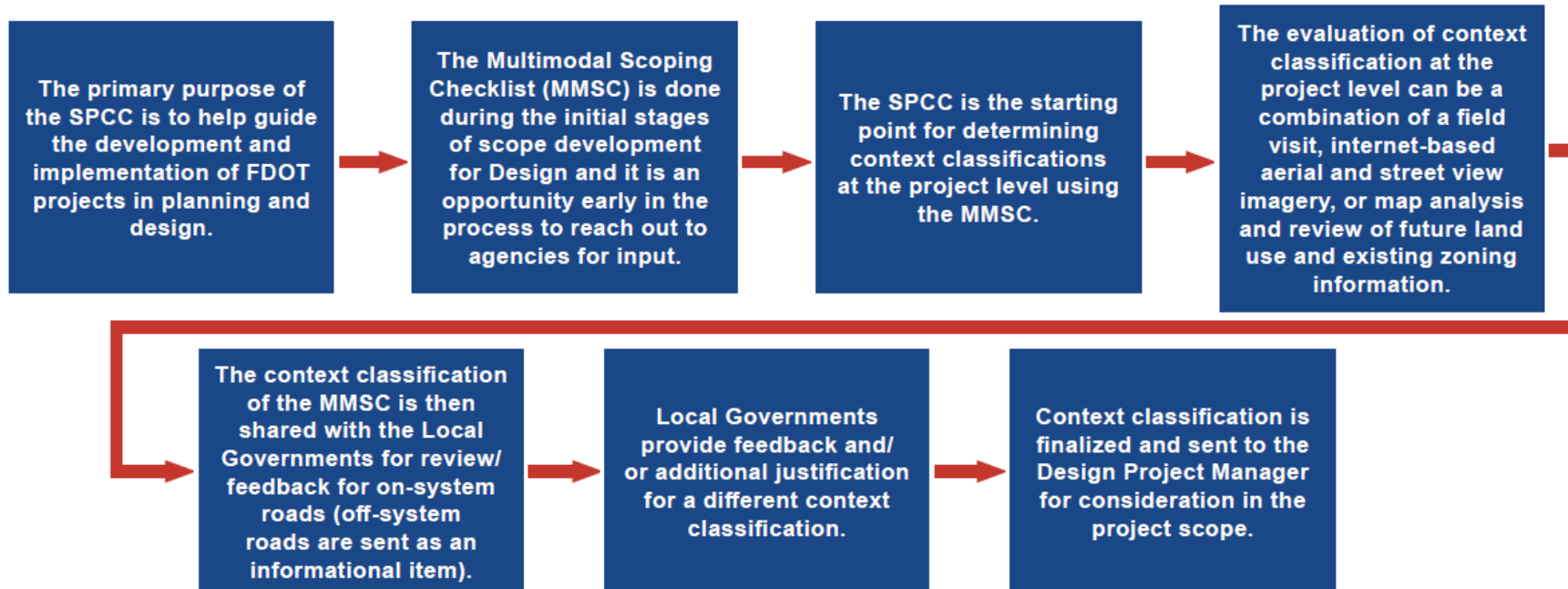
# FDOT Context Classification

## FDOT CONTEXT CLASSIFICATIONS



- Context Classification determines various roadway design criteria as specified in the Florida Design Manual (FDM)
- FDOT conducted an effort to determine the Statewide Provisional Context Classification (SPCC) for all state roads
- Context Classification is further refined for each project through the Multimodal Scoping Checklist (MMSC)

## Integration of FDM, SPCC, and MMSC





## Safe Transportation for Every Pedestrian (STEP)

- **Countermeasures**
  - **Raised Crosswalks**
  - **Crosswalk Visibility Enhancements**
  - **Pedestrian Refuge Island**
  - **Pedestrian Hybrid Beacon**
  - **Rectangular Rapid Flashing Beacon (RRFB)**
  - **Road Diet**



## Partnership between FDOT, Broward MPO and our Local Agencies



**Raised Crosswalks**  
Old Dixie Highway, City of Fort Lauderdale



**High Visibility Crosswalks**  
Hillsboro Blvd. City of Deerfield Beach



**Pedestrian Refuge**  
Sunrise Blvd., City of Fort Lauderdale



Pedestrian Hybrid Beacon  
A1A  
St. Lucie County



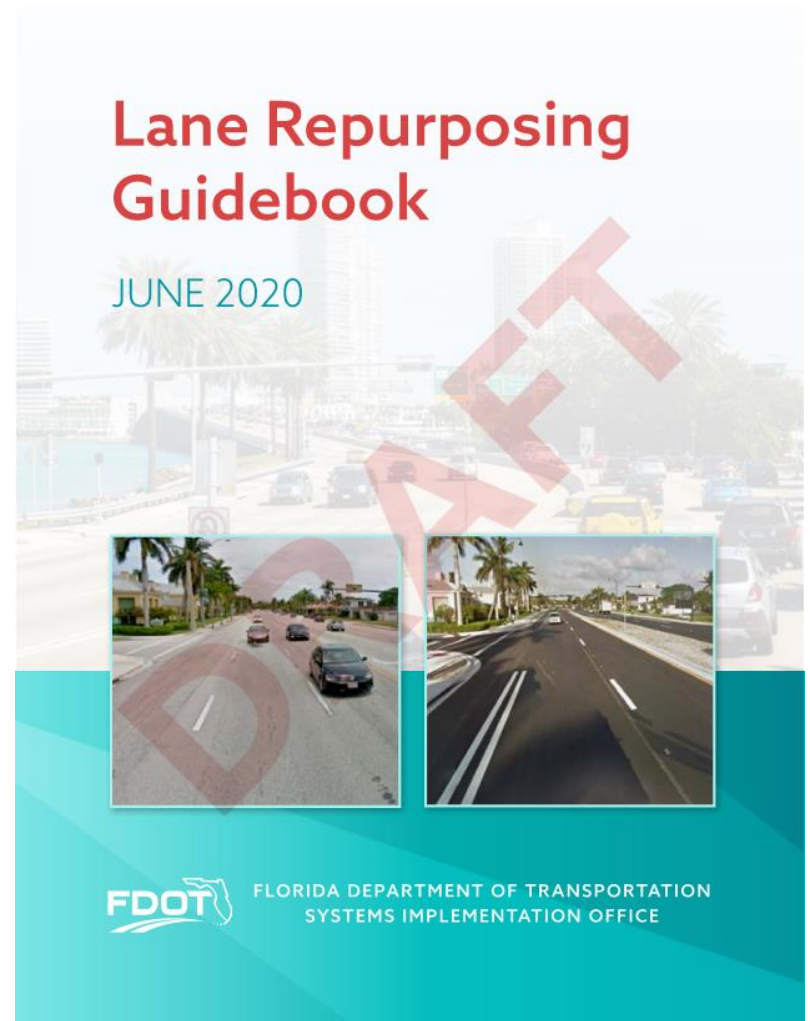
Exclusive Pedestrian Phase, A1A, Fort Lauderdale



RRFB, A1A, Lauderdale By The Sea

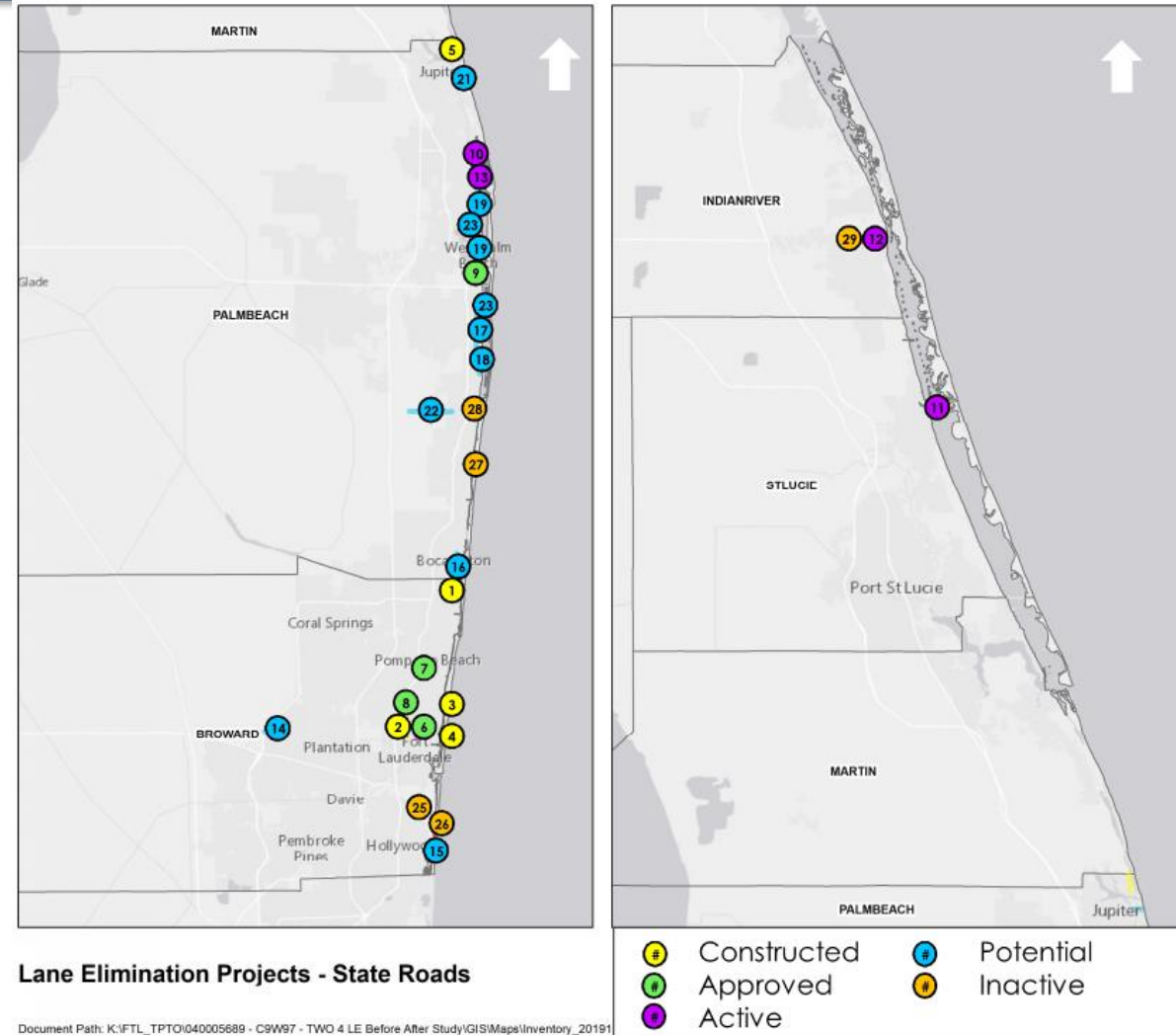
## Lane Elimination/Road Diet/Lane Repurposing

- Formalized process outlined in Florida Design Manual and upcoming Lane Repurposing Guidebook
- Process requires local agency initiation, public outreach and Commission resolution
- Guidebook will provide local agencies with best practices, example projects, and implementation steps

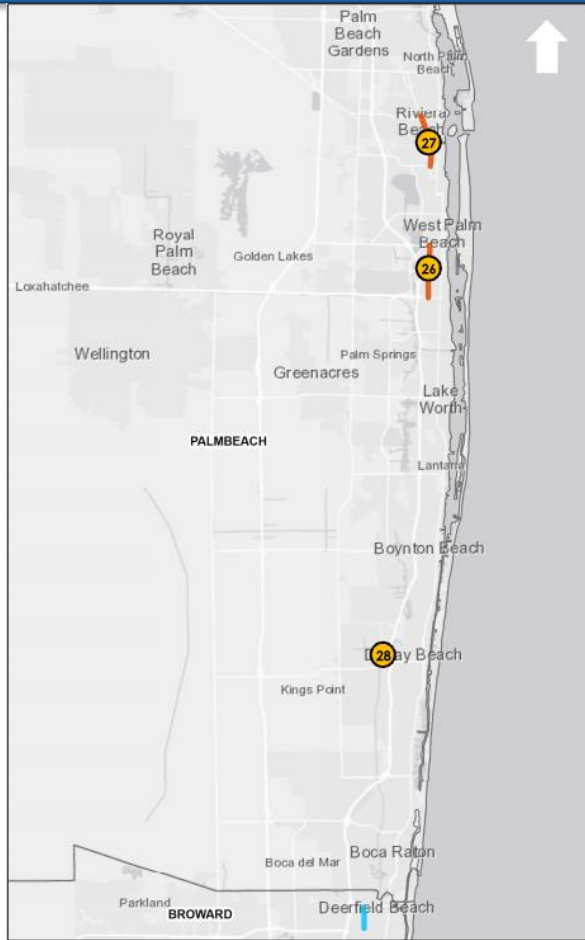


## Lane Elimination/Road Diet/Lane Repurposing

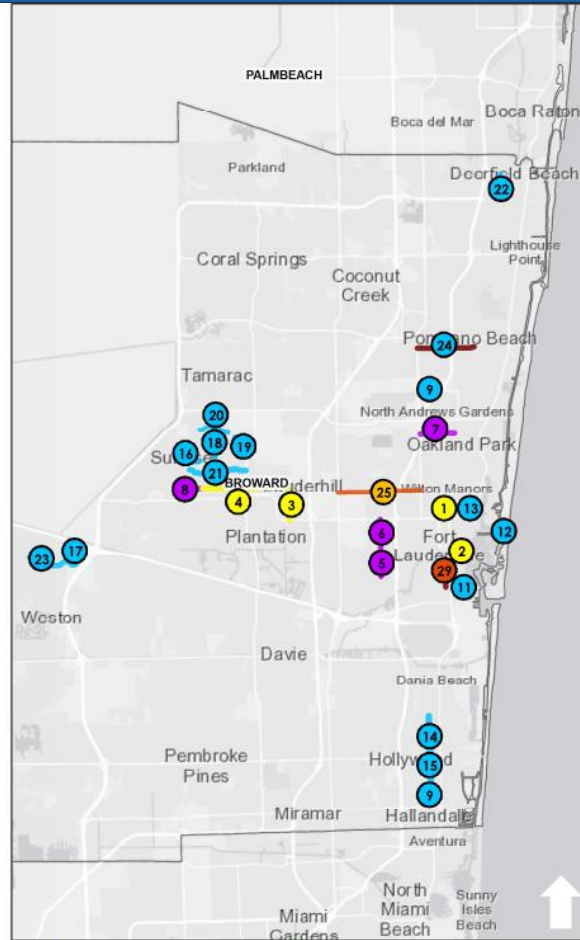
- FDOT District 4
  - 29 State Road Projects, 5 completed
  - 29 Non-State Road Projects, 4 completed
- D4 currently conducting a Lane Elimination Before and After Study
  - Phase 2 of the Study will further analyze the completed lane elimination projects



# FDOT STEP Program



Lane Elimination Projects - Non-State Roads



- Constructed
- Active
- Potential
- Inactive
- Removed

	Road	Limits
1	NE 13 St.	NE 4 Ave. – NE 9 Ave. (Fort Lauderdale)
2	Las Olas Blvd.	SE 11 Ave. – SE 15 Ave. (Fort Lauderdale)
3	Sunset Strip	University Dr. – Sunrise Blvd. (Sunrise)
4	Sunset Strip	Nob Hill Rd. - University Dr. (Sunrise)
5	NW 27 Ave.	Davie Blvd. – Broward Blvd. (Fort Lauderdale)
6	NW 27 Ave.	Broward Blvd. – Sunrise Blvd. (Fort Lauderdale)
7	Prospect Rd.	Powerline Rd. – Dixie Hwy. (Oakland Park)
8	Sunset Strip	NW 109 Ave. – Nob Hill Rd. (Sunrise)
9	Dixie Hwy.	Sheridan St. – Miami-Dade C.L. (Hollywood/Hallandale)
10	Cypress Creek Rd.	Powerline Rd. – Andrews Ave. (Fort Lauderdale)
11	Cordova Rd.	SE 15 St. – SE 17 St. (Fort Lauderdale)
12	Birch Rd.	Bayshore Dr. – Vista Mar Dr. (Fort Lauderdale)
13	NE 15 Ave.	NE 11 St. – NE 13 St. (Fort Lauderdale)
14	N Dixie Hwy.	Pembroke Rd. – Sheridan St. (Hollywood)
15	N 21 Ave.	Pembroke Rd. – Sheridan St. (Hollywood)
16	Josh Lee Blvd	Oakland Park Blvd. – Nob Hill Rd. (Sunrise)
17	New River Circle	Weston Rd. – Weston Rd. (Sunrise)
18	NW 94 Ave.	Oakland Park Blvd. – Commercial Blvd. (Sunrise)
19	Springtree Dr.	NW 44 St. – University Dr. (Sunrise)
20	Springtree Lakes Dr.	Nob Hill Rd. – Pine Island Rd. (Sunrise)
21	Sunrise Lakes Blvd.	NW 105 Ln. – University Dr. (Sunrise)
22	SW MLK Jr. Ave.	SW 9 St. – SW 1 St. (Deerfield Beach)
23	Saddle Club Rd.	Lakeview Dr. – Weston Rd. (Weston)
24	Pompano Park Place	Cypress Rd. – Powerline Rd. (Pompano Beach)
25	NW 19 St.	SR 7 – Powerline Rd. (Fort Lauderdale)
26	Parker Ave.	Southern Blvd. – Okeechobee Blvd. (West Palm Beach)
27	Barack Obama Hwy.	45 St. – Blue Heron Blvd. (Rivera Beach)
28	Congress Ave.	Atlantic Ave. – C-15 Canal (Delray Beach)
29	SE 3 Ave.	SE 17 St. – SE 6 St. (Fort Lauderdale)



## Lane Elimination – State Roads

- Hillsboro Boulevard
  - Deerfield Beach
  - Added scope into FDOT Resurfacing Project
  - Shared funding
  - Installed bike lane and landscaping

*Before Conditions (2016)*



*After Conditions (2018)*



## Lane Elimination – State Roads

- A1A
  - Fort Lauderdale
  - Part of Hurricane Sandy Repair project
  - Shared funding
  - Installed bike lane, median, and decorative improvements

*Before Conditions (2014)*



*After Conditions (2017)*





## Lane Elimination – Non-State Roads

- NE 13<sup>th</sup> Street
  - Fort Lauderdale
  - Designed and constructed by the City
  - Added bike lane and median

*Before Conditions (2015)*



*After Conditions (2019)*



## Lane Elimination – Non-State Roads

- Sunset Strip
  - Sunrise
  - Designed and constructed by FDOT
  - Added bike lane

*Before Conditions (2015)*



*After Conditions (2019)*



## Hollywood Boulevard

- Project improvements include striping and surface drainage configuration, colored concrete walks, bike lanes with buffer zone, pedestrian lighting, (ADA) parking spaces, accessible ways, and landscaping.
- **Enhanced pedestrian cross walks with median refuge and walkway.**

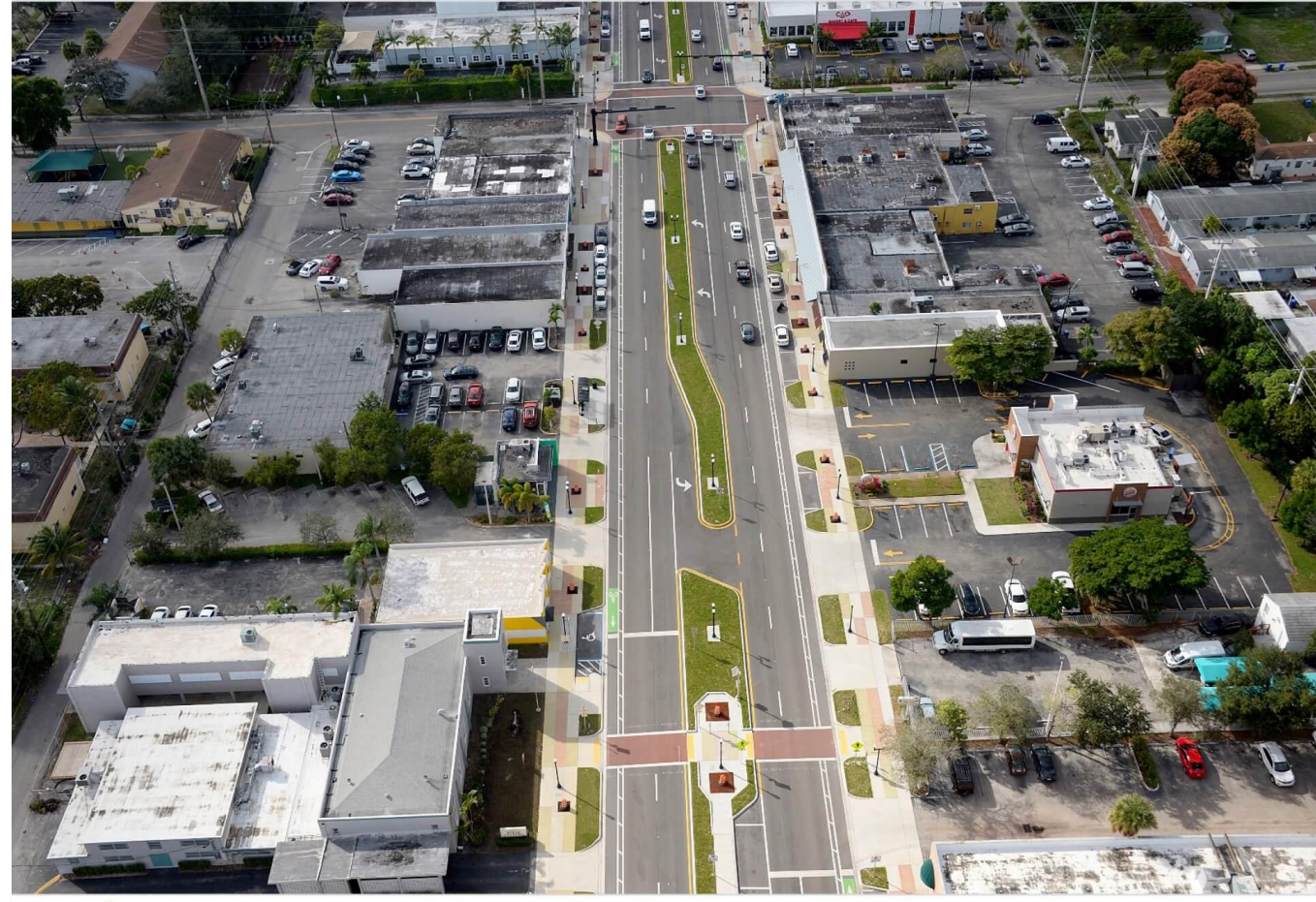


Hollywood Blvd., City of Hollywood

# Hollywood Blvd

The project located in downtown Hollywood was selected as the “urban” Complete Streets Demonstration project.

Destinations along this corridor include retail, office space and various restaurants. The corridor also provides direct access to the City Hall.



Complete Streets Champions Award.

# MEASURING SUCCESS

## Metrics

- Crash Data
- Speed Studies
- AADT
- Bicycle and Pedestrian counts



Sunset Strip Boulevard, City of Sunrise, Fl.

# PLANS

- ✓ Bicycle & Pedestrian Safety Action Plan
- ✓ Complete Streets Master Plan



# Bicycle & Pedestrian Safety Action Plan



# Data-driven Approach

## Crash hot spots areas analysis:

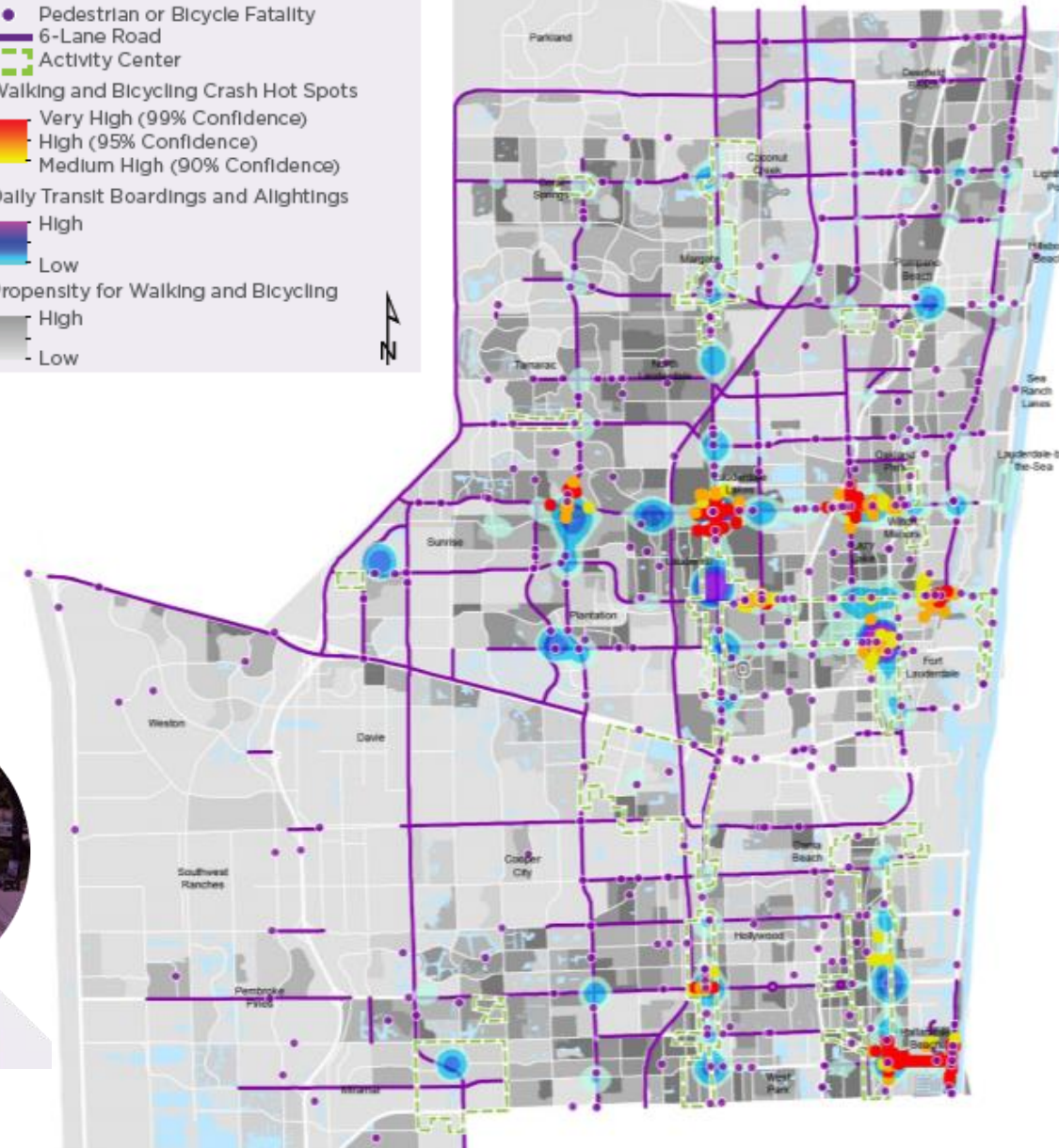
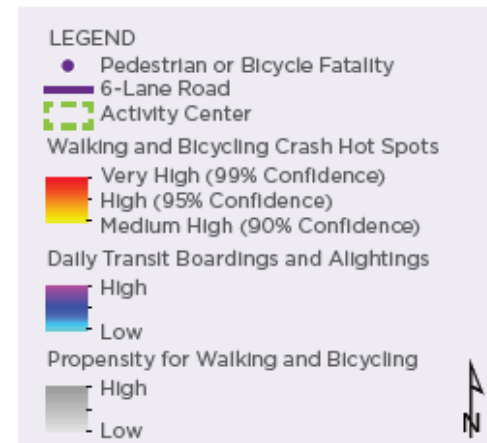
- The Roads are Wide & Don't Match the Land Use Context.

**56%**  
of deadly crashes occurred  
on **4%** of the network  
(made up of  
6-lane roads)

- Wide roads pose significant barriers for pedestrians to safely cross roadways.
- Higher posted speeds (40+ MPH)
- There is an Incomplete Network!



**40 MPH**





# Advocacy Team

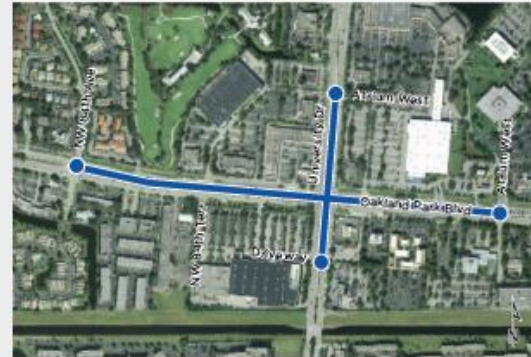


The A-Team consisted of representatives of different agencies in Broward and responsibilities included:

- Field reviews demonstration areas and analysis.
- Countermeasure identification
- Champion!

## SUBURBAN CORRIDOR DEMONSTRATION SITE Oakland Park Boulevard from NW 84th Avenue to Atrium West

### STUDY AREA | 1 Mile

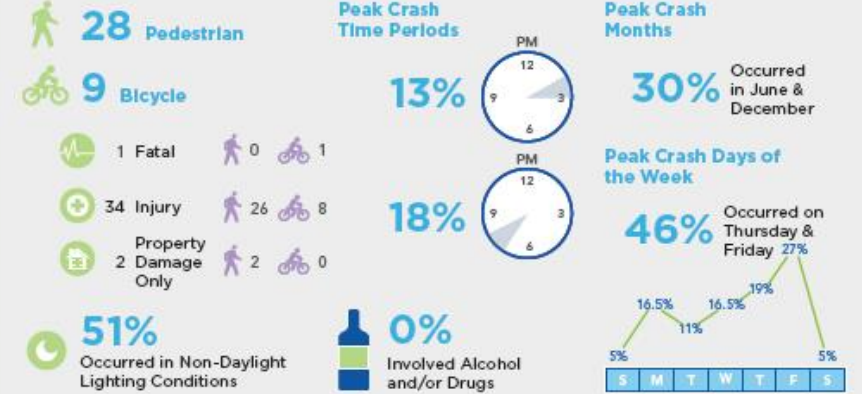


### ROADWAY CHARACTERISTICS



Oakland Park Boulevard Looking East  
The corridor has a three lanes in each direction. It has intermittent right- and left-turn lanes. There are access roads in some areas as well. It also has median with intermittent landscaping. The corridor has 5' - 6' sidewalks separated from the roadway; and while there are no marked bike lanes, it does have paved shoulders that could potentially be widened and converted into bike lanes in the future. The posted speed is 45 MPH. The land uses generally consist of auto-oriented shopping centers and big box retail set behind large surface parking lots.

### CRASH DATA - 2010 TO 2015



### FIELD REVIEW OBSERVATIONS

- Illegal Mid-Block Crossings
- Inattentive Drivers (Especially at Driveways and Intersections)
- Vehicles Blocking Crosswalks
- Speeding/Aggressive Driving
- ADA Noncompliant Sidewalks and Ramps
- No Bike Lanes
- Missing/Faded Crosswalks
- Lack of Crossing Opportunities
- Objects Blocking Sidewalks
- Broken/Out of Date Pedestrian Signage and Signals
- Frequent Driveways
- Poorly Marked Driveway Crossings
- Wide Intersection/Excessive Pavement
- Lack of Bicycle Markings at Conflict Areas
- Long Signal Times
- Poor lighting



# Bicycle & Pedestrian Call to actions!

## Advocacy Team



- There is an “identity crisis” between the road design and user needs
- The roads are not primarily designed to provide for a comfortable and convenient walking or bicycling experience
- Many users of the system are not following walking, bicycling, and driving laws
- Strategic partnerships are needed to see change



CALLS TO ACTION	PRIORITY ACTION ITEMS
Set the Stage	Identify areas throughout the County where bicyclists and pedestrians are the priority movement
Create Safe Streets	Implement “quick build” temporary projects that showcase innovative bicycle and pedestrian infrastructure
Prevent Aggressive Behavior	Align design standards with the bicycle and pedestrian safety goals for the region
All Hands on Deck	Institute a district-wide bicycle and pedestrian safety school education program
	Create an educational program with law enforcement that focuses on bicycle and pedestrian laws

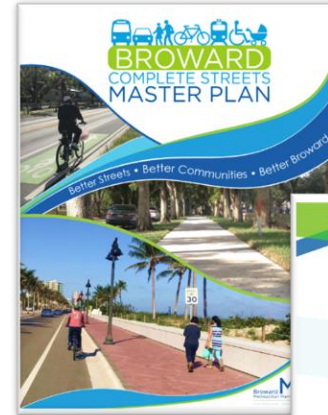
# Implementation

## CALLS TO ACTION

Set the Stage

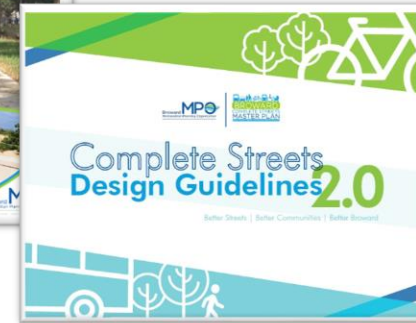


Complete Streets  
Master Plan



FDOT TransPlex Award 2020

Create Safe Streets



Prevent Aggressive  
Behavior



Complete Streets Design Guidelines  
& Vision Zero Action Plan

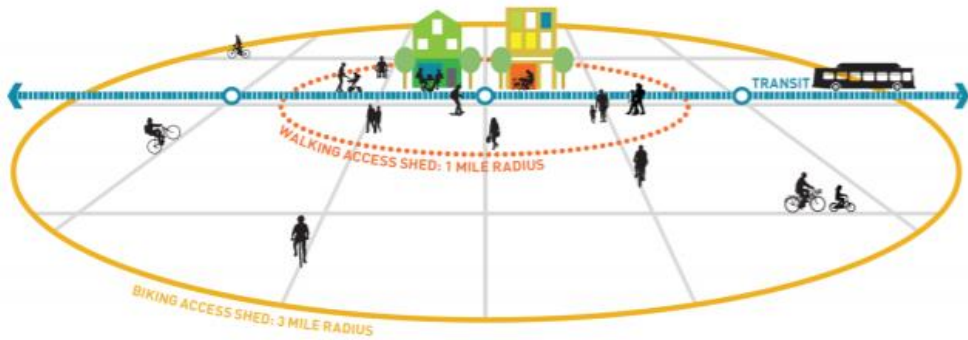


All Hands on Deck



# Complete Streets Master Plan

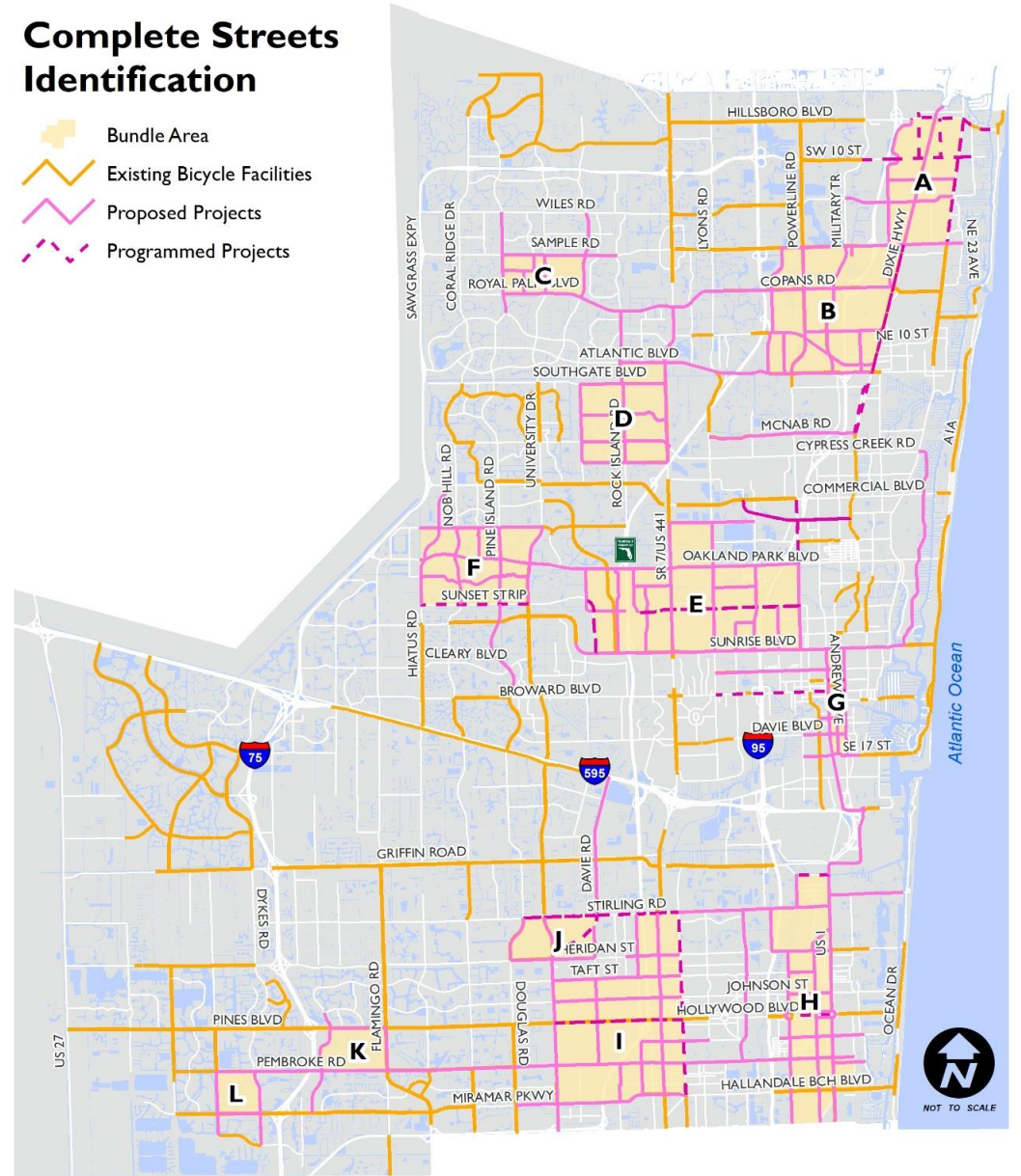
## Transportation Network Analysis



INCOME	EDUCATIONAL ATTAINMENT	AGE	ENGLISH PROFICIENCY	RACE	VEHICLE ACCESS

### Complete Streets Identification

- Bundle Area
- Existing Bicycle Facilities
- Proposed Projects
- Programmed Projects



# Complete Streets Master Plan

## Community Outreach

Over 1,300 Broward residents and stakeholders participated in the Complete Streets Master Plan public involvement efforts.

Incomplete network & existing facilities aren't comfortable for all users of the road.

Pedestrian lighting

Traffic calming measures

Better bus stops and signage

Shade!



# CS Master Plan & Design Guidelines

The CSMP was formally adopted by the Broward MPO Board on February 14, 2019.

200 miles

**Proposed Bike Box**



**Proposed Conventional Bicycle Lane and Crosswalk**



**Proposed Buffered Bicycle Lane**



**Proposed Raised Bicycle Lane and Crosswalk**



**We Heard You!**

Broward residents rated the traffic on roads and lack of protected places to bike as the two most critical barriers to bicycling. The Complete Streets Master Plan proposes improved bicycle facilities.

**Broward MPO**  
 Metropolitan Planning Organization  
Move People & Goods | Create Jobs | Strengthen Communities

Broward Complete Streets Master Plan Public Involvement 2017 [BrowardMPO.org](http://BrowardMPO.org)



- A** Increased Width of the Pedestrian Zone
- C** Forced-Turn Islands also called right-turn islands or pork chops
- B** Raised Separated Bicycle Lane
- D** Continuous Furnishing Zone
- E** Pedestrian Crossing

# WALKING AUDITS

Highlight corridors and areas that could benefit from a street assessment to better promote all modes of transportation.

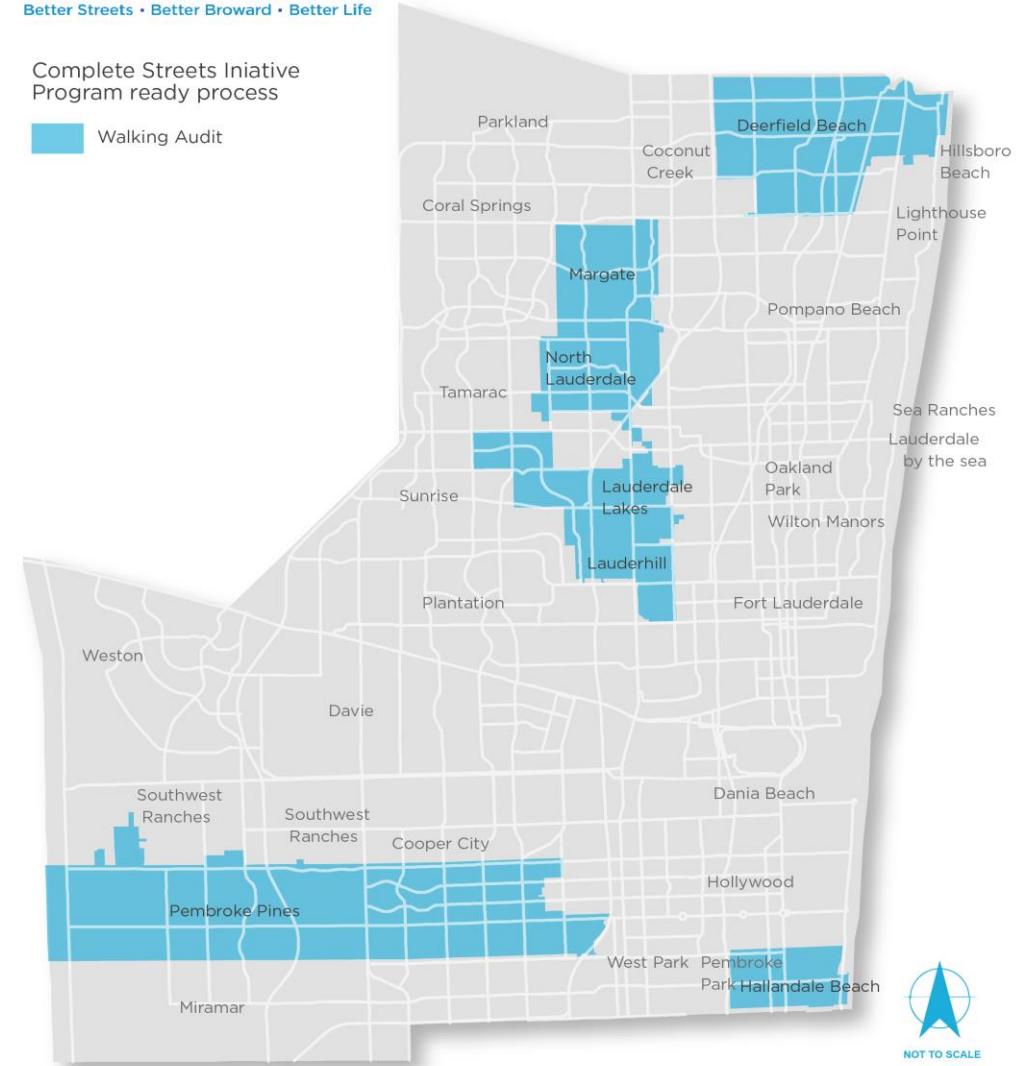
# PURPOSE

- Identify potential alternatives or solutions such as engineering treatments, policy changes, or education and enforcement measures
- **Aims to engage stakeholders, technical staff, elected officials and representatives of non-traditional transportation partners, such as the AARP, Health agencies, YMCA.**



Complete Streets Initiative  
Program ready process

 Walking Audit

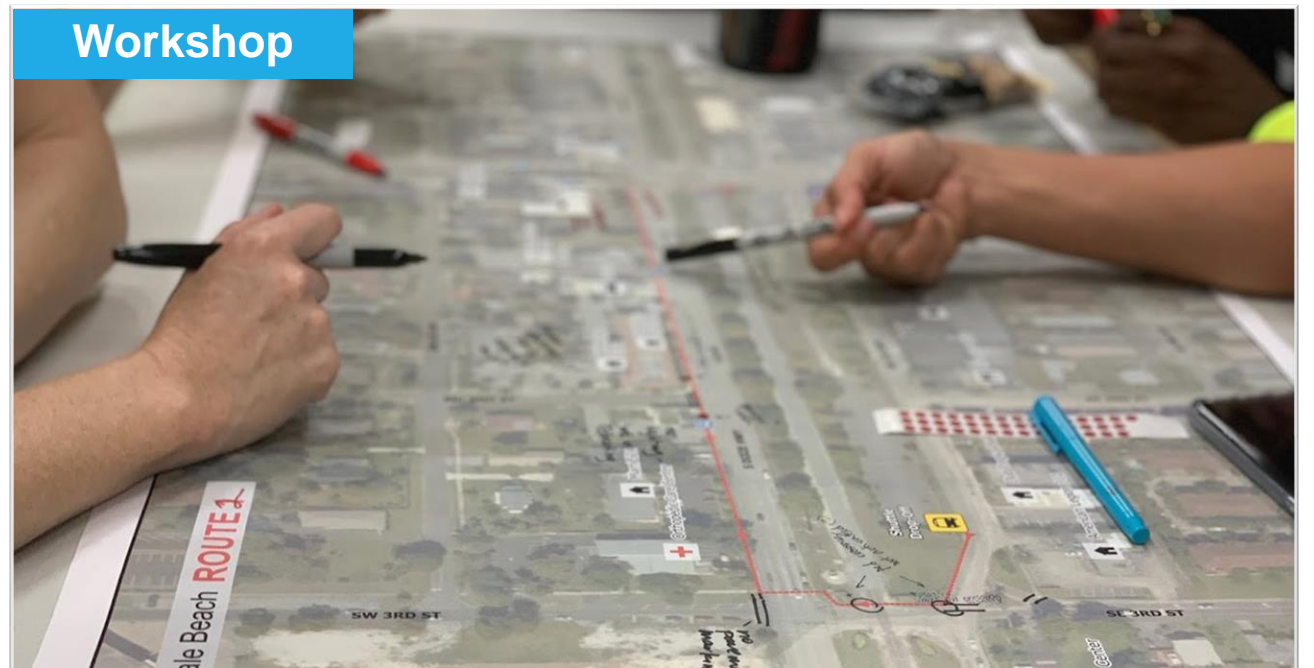




# Presentation



# Workshop





Better Streets | Better Communities | Better Broward

# Walking Audit Report

**City of Pembroke Pines**

SR 817/University Drive  
from County Line Road  
to Tait Street

August 2019

**BROWARD COMPLETE STREETS**  
Better Streets • Better Broward • Better Life

Complete Streets Initiative  
Program ready process

- Walking Audit
- CS Project Programmed on TIP
- CS Project



Sidewalk gap on the east side of NW 31<sup>st</sup> Avenue from NW 39<sup>th</sup> Street to NW 43<sup>rd</sup> Street.

## FDOT Implementation

- Comments are forwarded to FDOT or Local Agency
  - If feasible, incorporate comments into an upcoming or current project
- Separate Improvement Categories:
  - Short Term
    - Immediate Implementation
    - Example: Signing and Pavement Marking
  - Intermediate Term
    - Follow-up study or project needed
    - Example: Additional crosswalk
  - Long Term
    - Substantial improvement necessary
    - Example: Right-of-Way Acquisition for Bike Lanes

## Recently Installed Short-Term Improvements

Pembroke Pines



Deerfield Beach



# In the pipeline...



# Mobility Program

“Program Ready”



77 miles

Under Construction



\$37 M  
24 Miles

Programmed



\$95 M  
55 miles

Completed!



\$68 M  
46 Miles

In Design



\$102 M  
70 miles

Demonstration Projects



Existing Facilities

CSLIP

TIGER

Mobility Projects

CSMP

**301 Facility miles**



0 2 4 8 Miles

# LESSONS LEARNED

- Establish Champions
- Process
  - Public Outreach - early and often
  - Political support
  - Inter-agency and intra-agency coordination
  - Establish roles and responsibilities (Partnerships)
  - 3<sup>rd</sup> year check
- Messaging
  - Emphasis on People!
  - Not an overnight solution

# THANK YOU!





# Discussion

⇒ **Send us your questions**

⇒ **Follow up with us:**

⇒ **Ricardo Gutierrez [gutierrezr@browardmpo.org](mailto:gutierrezr@browardmpo.org)**

⇒ **Brad Salisbury [brad.salisbury@dot.state.fl.us](mailto:brad.salisbury@dot.state.fl.us)**

⇒ **Stephanie Garcia [garcias@browardmpo.org](mailto:garcias@browardmpo.org)**

⇒ **General Inquiries [pbic@pedbikeinfo.org](mailto:pbic@pedbikeinfo.org)**

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