

BROWARD COUNTY

Low Stress Multimodal Mobility Network Master Plan Additional Information

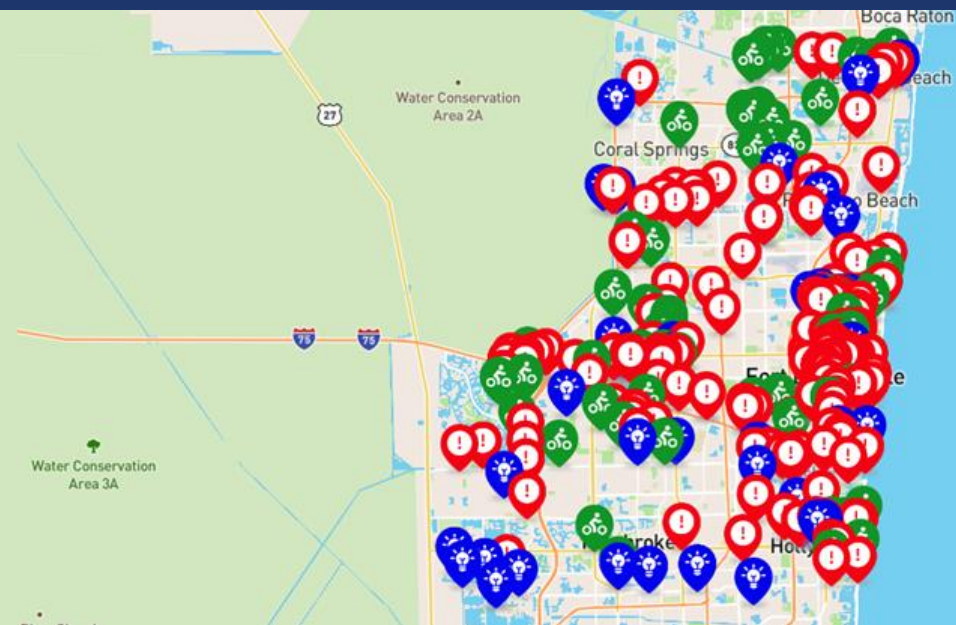


MAP Broward
Mobility Advancement Program
Brought to you by the
Penny For Transportation



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1. Crowdsource Map



Crowdsource Map - Main Takeaways

The Social Pinpoint site provided an online map of existing bicycle facilities, key destinations in the county including **schools, bus stops, parks and activity centers, and the proposed spine network of the Low Stress Network** and allowed users to leave comments.

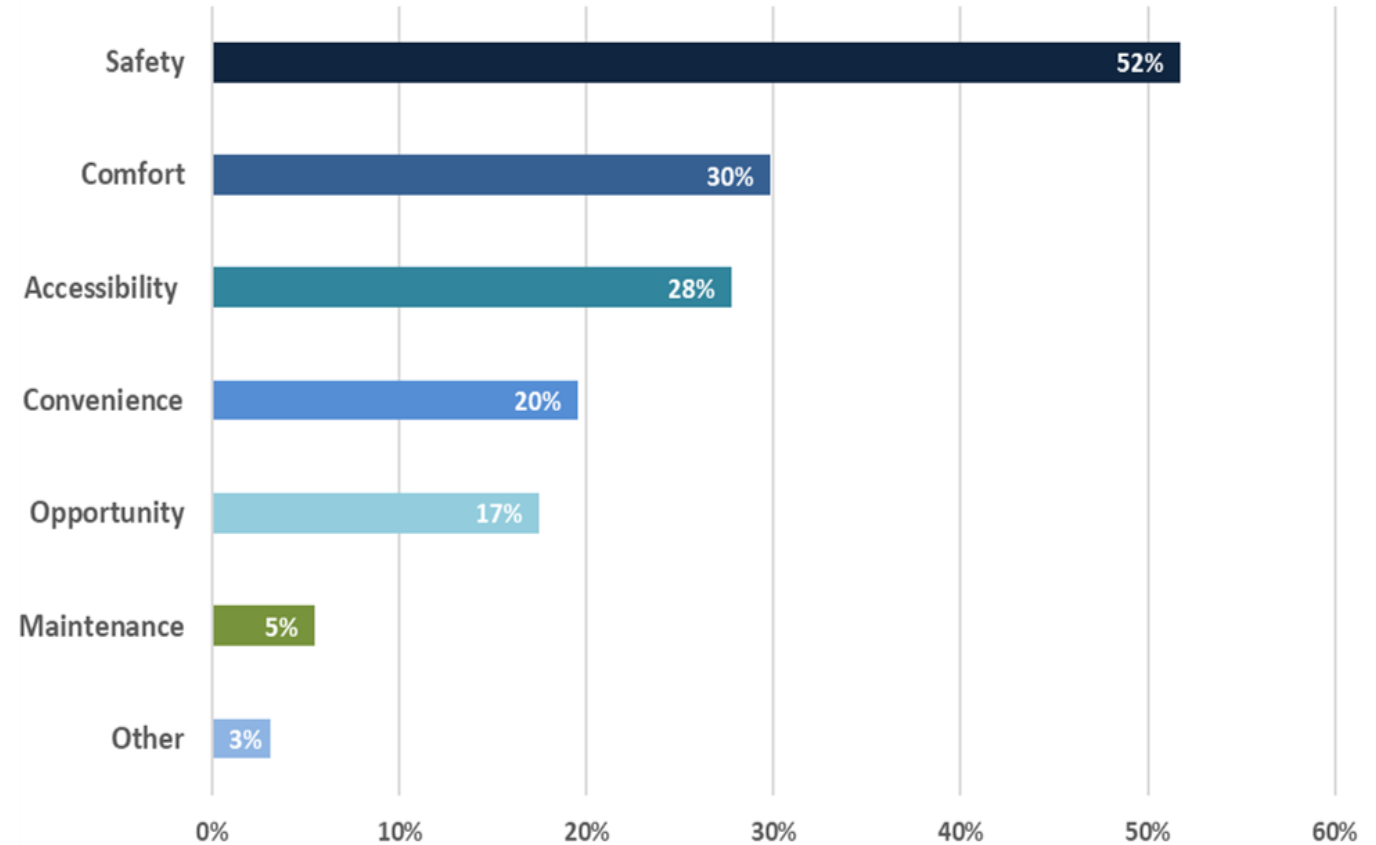
Comments were georeferenced to specific locations within the County, with most locations found:

23% in Fort Lauderdale

12% in Plantation

10% in Hollywood

Categories of Identified Improvements



Crowdsource Map - Main Takeaways

Main Challenges found at selected locations

- Uncomfortable, Unsafe Crossings
- Vehicle Speed
- Condition of Facility
- Lack of Connectivity
- Bike Lane Ends/Transition Concerns
- Lack of Signage
- Not Enough Time to Cross Street
- Other Challenges

Of the comments provided, **22%** noted a location in the county that the respondent thought was bike/ped friendly, **61%** were related to a specific facility needing improvement, and the remaining **17%** noted a suggestion for improvement.



Gaps & Opportunities Analysis



Data Inputs

- Existing Data Inputs:
 - Roadway Network and Classification
 - Existing and Planned Sidewalk and Bicycle Network
 - High Injury Network (HIN)
 - Canals without Trail features
 - Florida Power & Light (FPL) right-of-way
 - Roadways with a Posted Speed Limit greater than 35 miles per hour and LTS of 3 or 4
 - Planned roadway improvements, including Surtax, TIP and FDOT projects
 - Super Connector (MPO) Designation
 - Crash Data
- Pedestrian LTS Analysis of Existing Network
 - Sidewalk Presence
 - Posted Speed Limit
 - AADT
- Bicycle LTS Analysis of Existing Network
 - Type of Facility
 - Number of Lanes
 - Posted Speed Limit
 - AADT
- PLTS and BLTS Destination Accessibility Analysis of:
 - Public Schools
 - Shopping
 - Parks
 - Jobs
 - Transit Stops
 - Medical Center
 - Activity Center



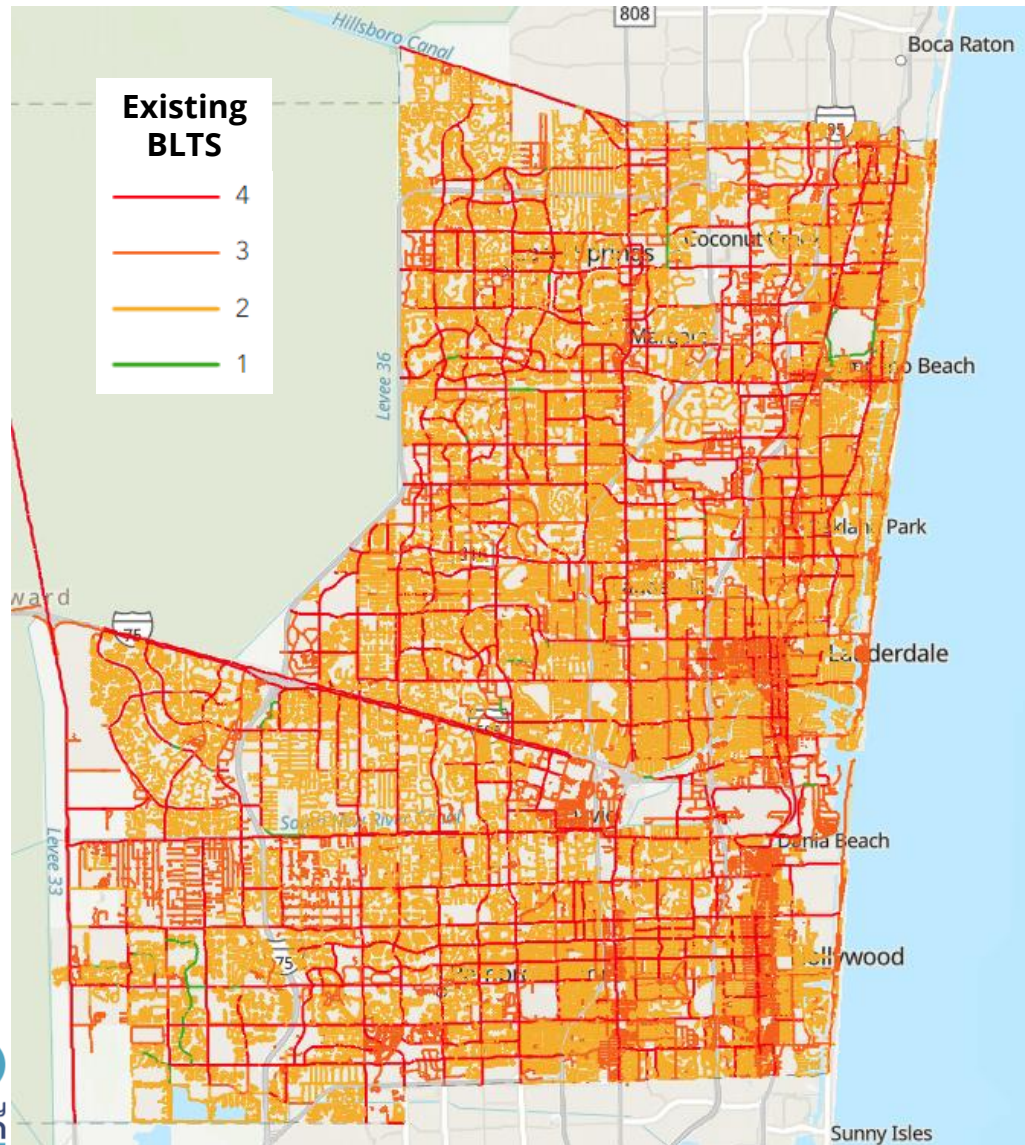
Existing & Future PLTS Summary

Existing PLTS Score	Off-Street Trail	Arterial	Collector	Local Street
LTS 1	91	11	36	10
LTS 2	0	71	225	79
LTS 3	0	186	91	14
LTS 4	0	223	11	1
Future PLTS Score	Off-Street Trail	Arterial	Collector	Local Street
LTS 1	415	152	113	33
LTS 2	0	47	177	71
LTS 3	0	137	74	14
LTS 4	0	159	9	1

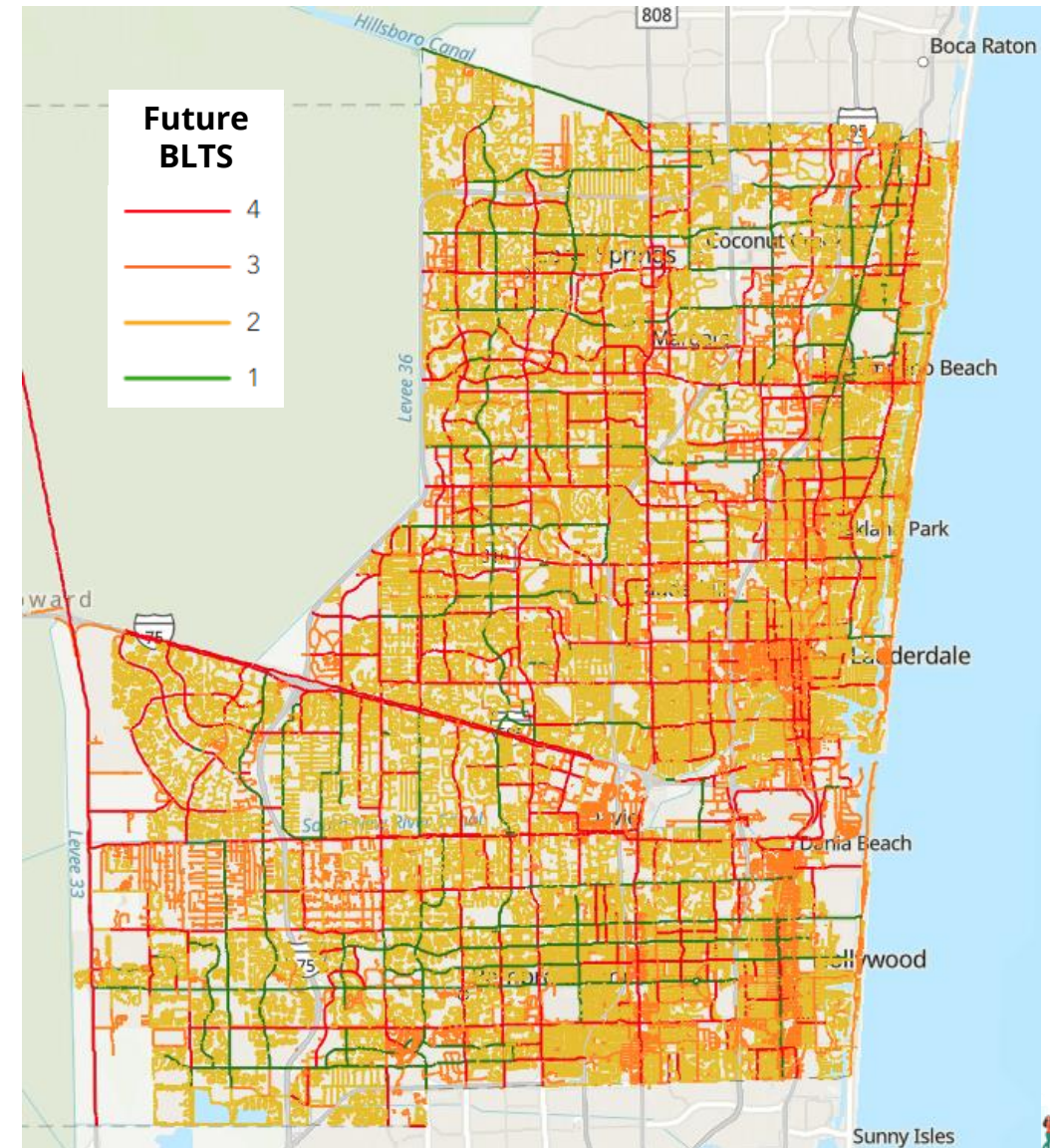
Source: Based on Data from FDOT and Broward County



Existing BLTS Map



Future BLTS Map



Existing & Future BLTS Summary

Existing BLTS Score	Off-Street Trail	Arterial	Collector	Local Street
LTS 1	91	5	13	5
LTS 2	0	13	39	4,071
LTS 3	0	87	87	946
LTS 4	0	452	270	45
Future Potential BLTS Score	Off-Street Trail	Arterial	Collector	Local Street
LTS 1	415	148	101	28
LTS 2	0	18	37	4,055
LTS 3	0	59	76	944
LTS 4	0	331	195	40

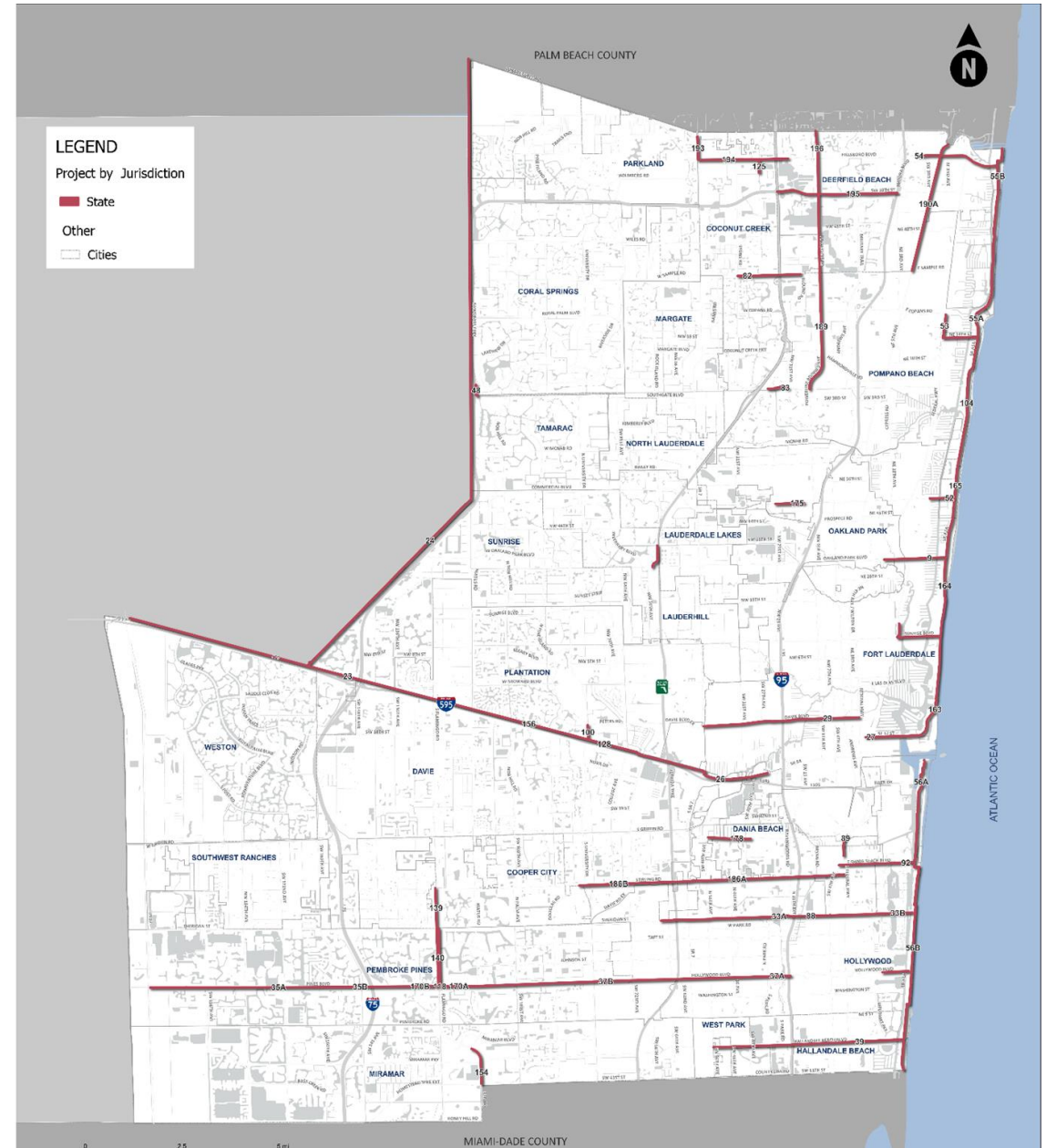
Source: Based on Data from FDOT and Broward County



State Roads

56 Projects

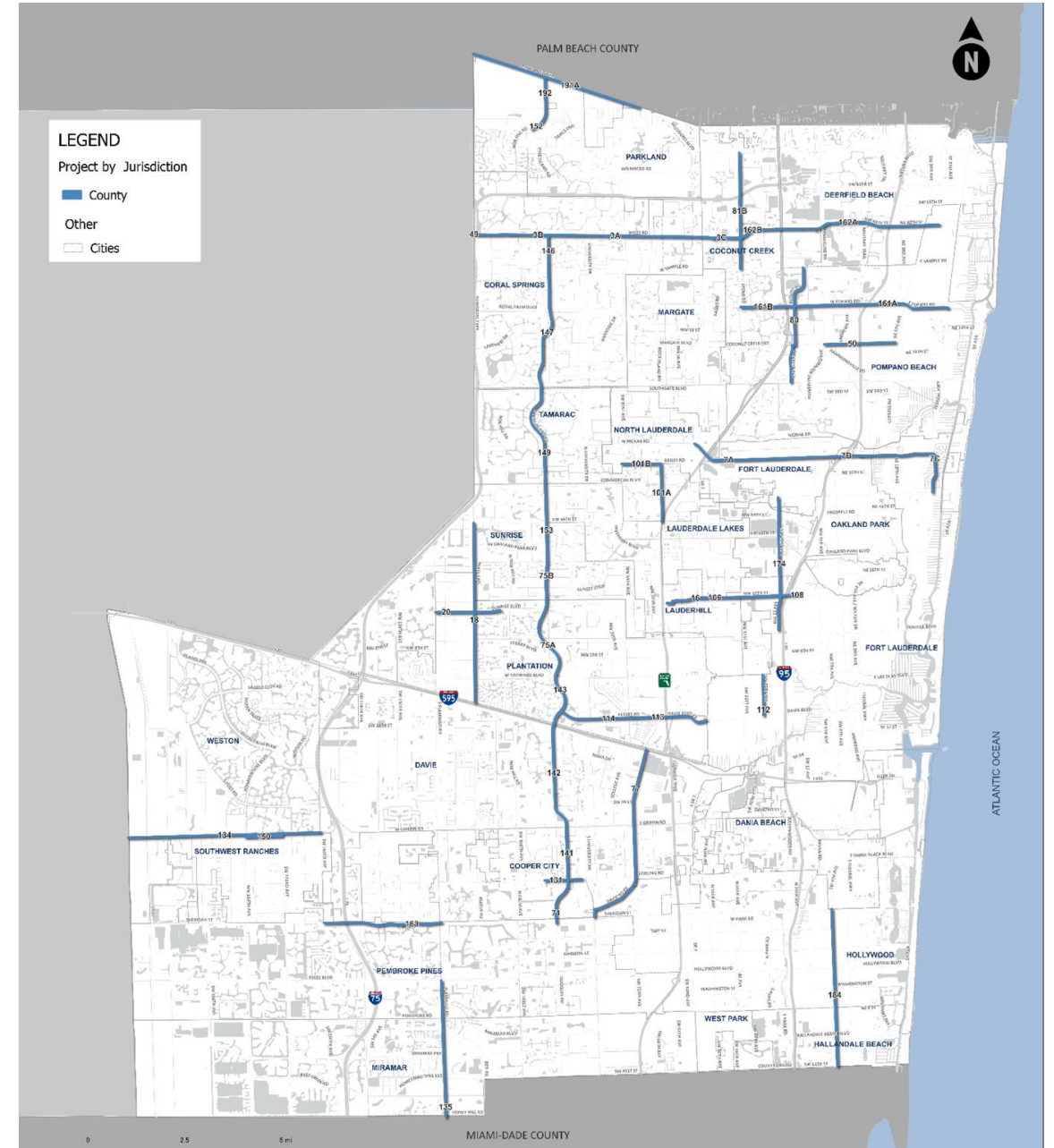
- A1A
- Atlantic Boulevard
- Commercial Boulevard
- Davie Boulevard
- Dixie Highway
- Federal Highway
- Flamingo Road
- Griffin Road
- Hollywood/Pines Boulevard
- Hillsboro Boulevard
- Miramar Parkway
- Oakland Park Boulevard
- Powerline Road
- Red Road
- Sample Road
- Sheridan Street
- Stirling Road



County Roads

51 Projects

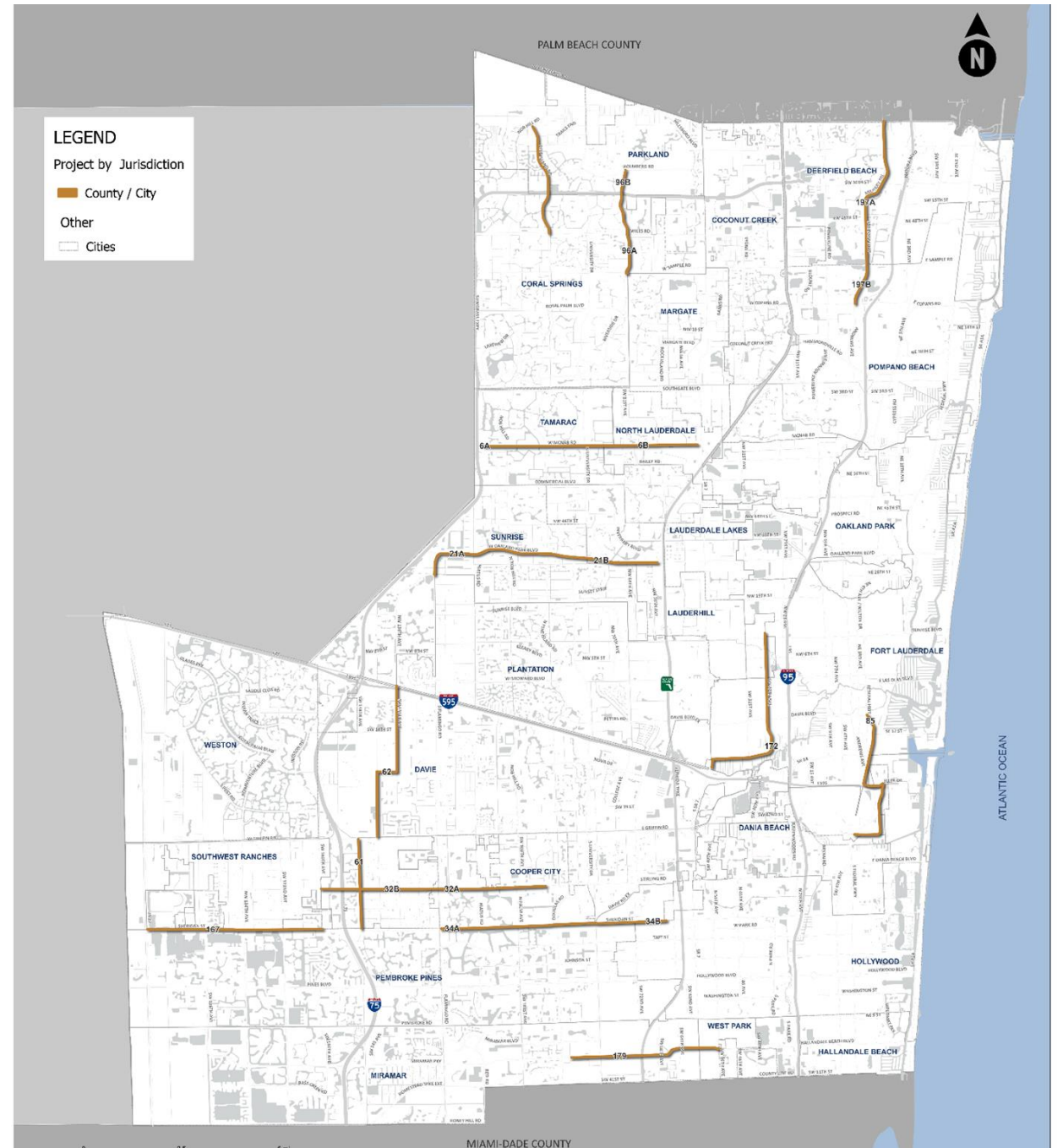
- 12th Street
- 15th Street
- 19th Street
- NW 136th Avenue
- Coral Springs Drive
- Coral Ridge Drive
- Davie Road Extension
- Dixie Highway
- Flamingo Road
- Griffin Road
- Lyons Road
- McNab Road
- Peters Road
- Pine Island Road
- Rock Island Road
- Royal Palm Blvd
- Sheridan Street
- Wiles Road



City/County Roads

20 Projects

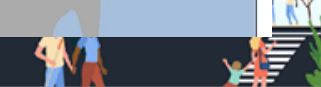
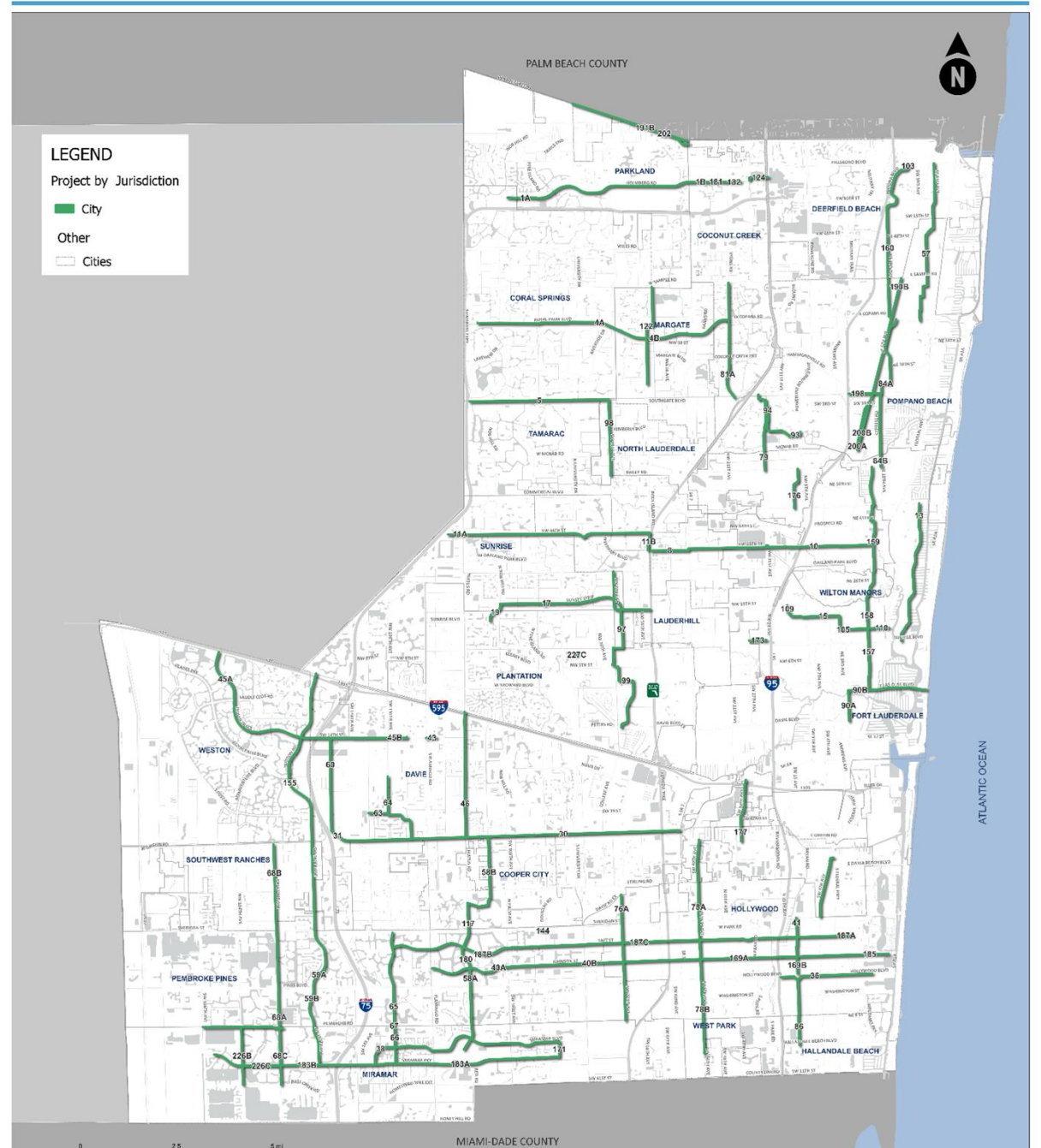
- 136th Avenue
- 148th Avenue
- Coral Springs Drive
- Flamingo Road
- McNab Road
- Miami Road
- Military Trail
- Miramar Parkway
- NW 27 Avenue
- Oakland Park Boulevard
- Pine Island Road
- Riverside Drive
- Sheridan Street
- Stirling Road



City Projects

103 Projects

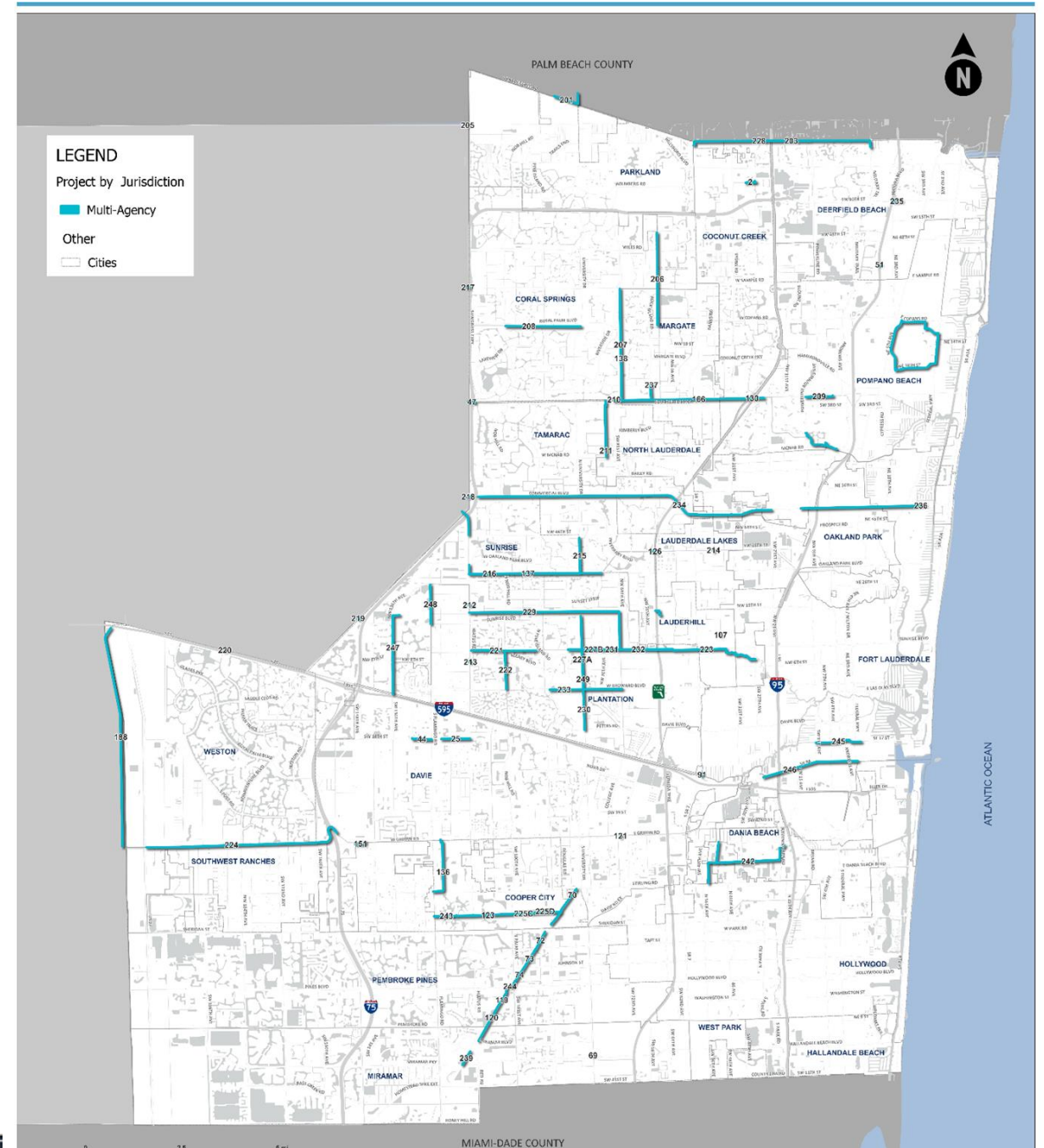
- Coconut Creek
- Cooper City
- Coral Springs
- Davie
- Dania Beach
- Deerfield Beach
- Fort Lauderdale
- Hollywood
- Lauderdale Lakes
- Margate
- Miramar
- Oakland Park
- Parkland
- Pembroke Pines
- Plantation
- Pompano Beach
- Sun rise
- Weston
- Wilton Manors



Multi Agency Projects

71 Projects

- Bridges
- Trails
- Conservation Levee
- Trail Connections
- Utility Easements
- Private Property
- Canals



Survey Analysis Key Findings - 576 RESPONSES

1 84% of respondents **own a bicycle.**

2 **Feeling safe** is a **key influence** to walking or biking

3 Most parents feel **uncomfortable** allowing their children to walk, roll, or skate to school

4 Over **90% of respondents** feel comfortable walking on a buffered sidewalk on local streets.

5 Almost 60% of respondents walk to a destination & over 85% walk for recreation **at least once per week**

6 Most respondents **agree we need improved facilities** for walking and biking.

7 89% of respondents **ride their bikes on neighborhood streets**

8 75% **ride or are interested in riding** a bicycle

9 More protected bike facilities and dedicated paths were the top factors for respondents to ride their bikes more often

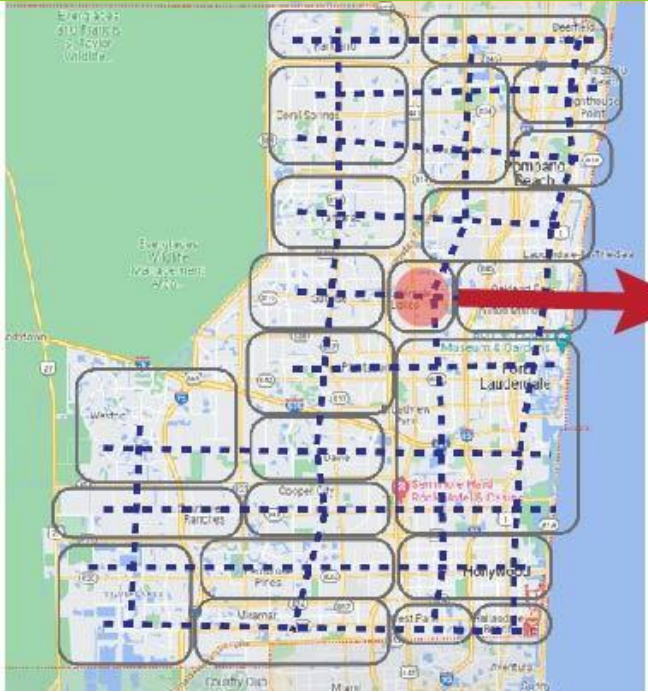
10 At least 80% want **separation from vehicular traffic** on collector and arterial roads



Comprehensive Planning & Design Approach

Progression of Regional Network Plan to Facility Design

Principal Regional Network Plan



Sub Area Plan



Facility Design

Insert Typical Section



Insert Intersection



Design Manual Structure

1 Introduction

2 Principles and Priorities

- Quality of service/LTS
- The low-stress realm
- Buffering between vulnerable users and motor vehicles
- Priorities
- Street design
- Network

3 Street Design Criteria

- C1 - C2
- C3R - C3C
- C4
- C5 - C6
- Residential Streets
- Greenways

4 At grade Junctions

- Protected Intersections
- Narrow crossings
- Innovative Intersection
- Roundabouts
- Mid-block crossings

5 Grade Separated Crossings

6 Comfort Elements (Amenities)

7 Other Design Elements

8 Technologies & Signalization

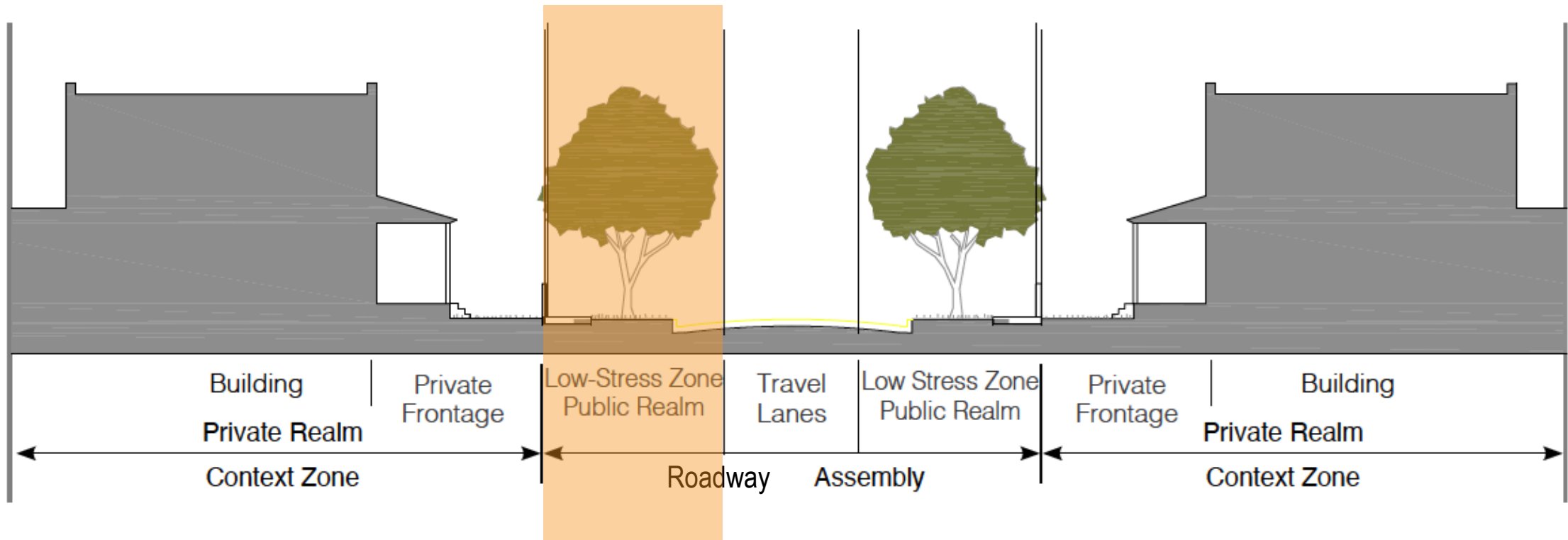
9 Operations & Maintenance

10 Placemaking

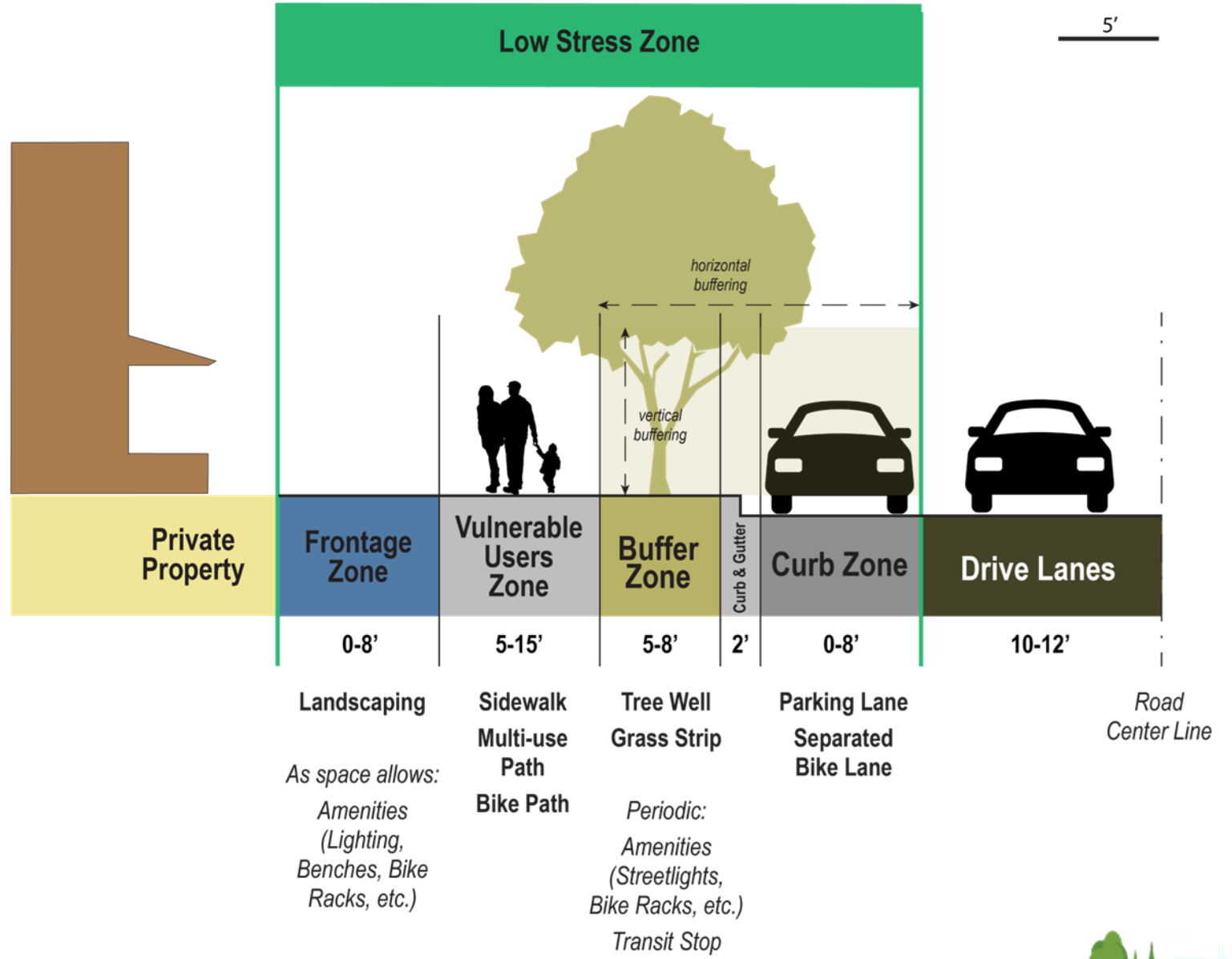


Every Street has these Realms

Low-Stress Design Focus

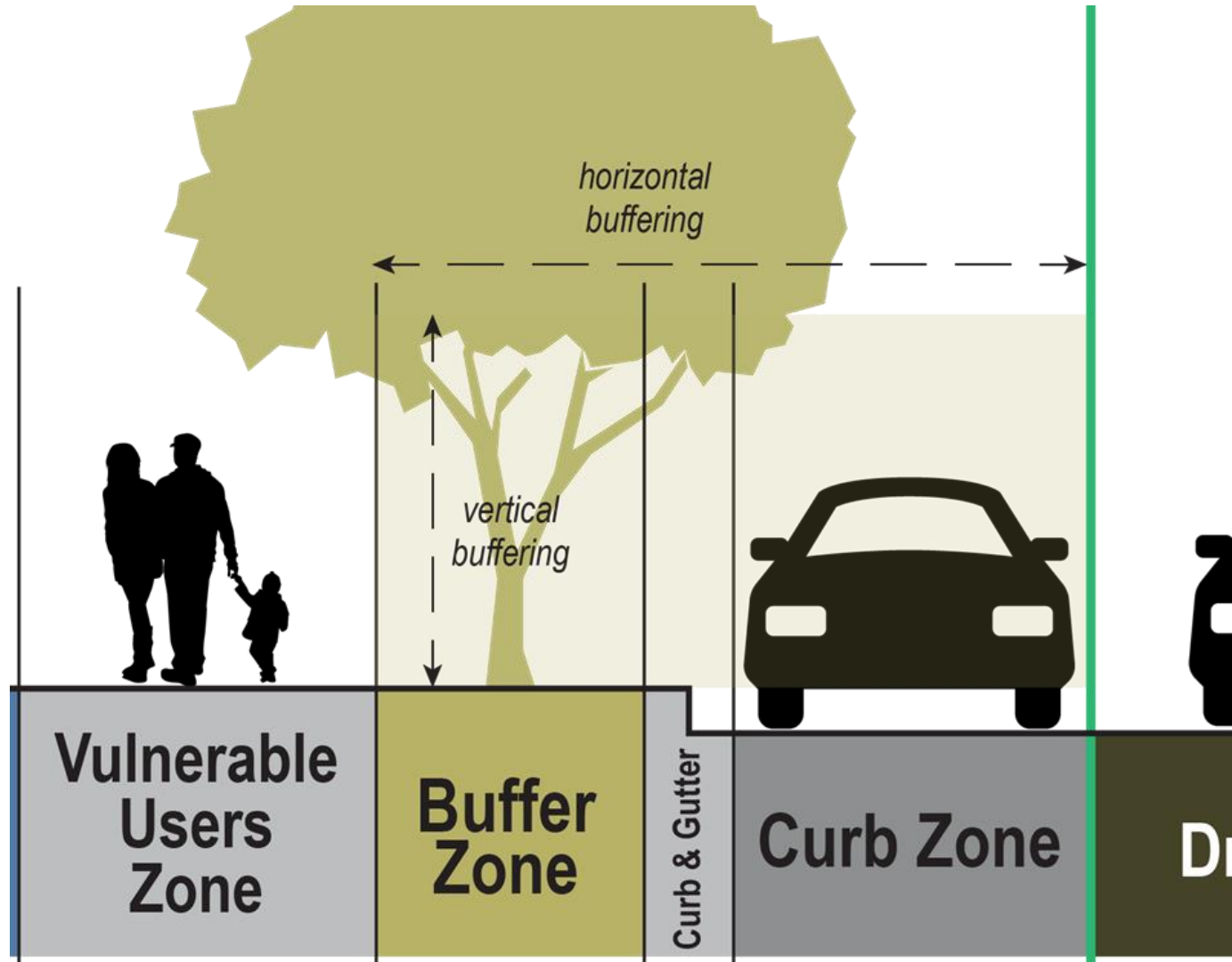


Low-Stress Design Realm



Buffering Space

Horizontal Buffering
+
Vertical Buffering
=
Desired Buffered



Key Design Criteria

ELEMENT	FLORIDA GREENBOOK	LOW-STRESS DESIGN ≤ 35 mph	LOW-STRESS DESIGN ≥ 40 mph
Bike Lane (on street)	5 Feet	7 feet, including buffer	8 feet, including buffer
One-way Bike Path (off -street)	N/A	7 feet minimum	7 feet minimum
Multi-Use Path	10 Feet	12 feet minimum	12 feet minimum
Sidewalk	5 Feet	6 feet minimum	6 feet minimum
Grass Buffer	0 Feet Minimum	10 feet combination Vertical + horizontal	15 feet combination Vertical + horizontal



Chapter 3 Outline

Context Class

- a. Overview
- b. Cross-section
- c. Intersections
- d. Comfort elements
- e. Conflict resolutions
- f. Examples

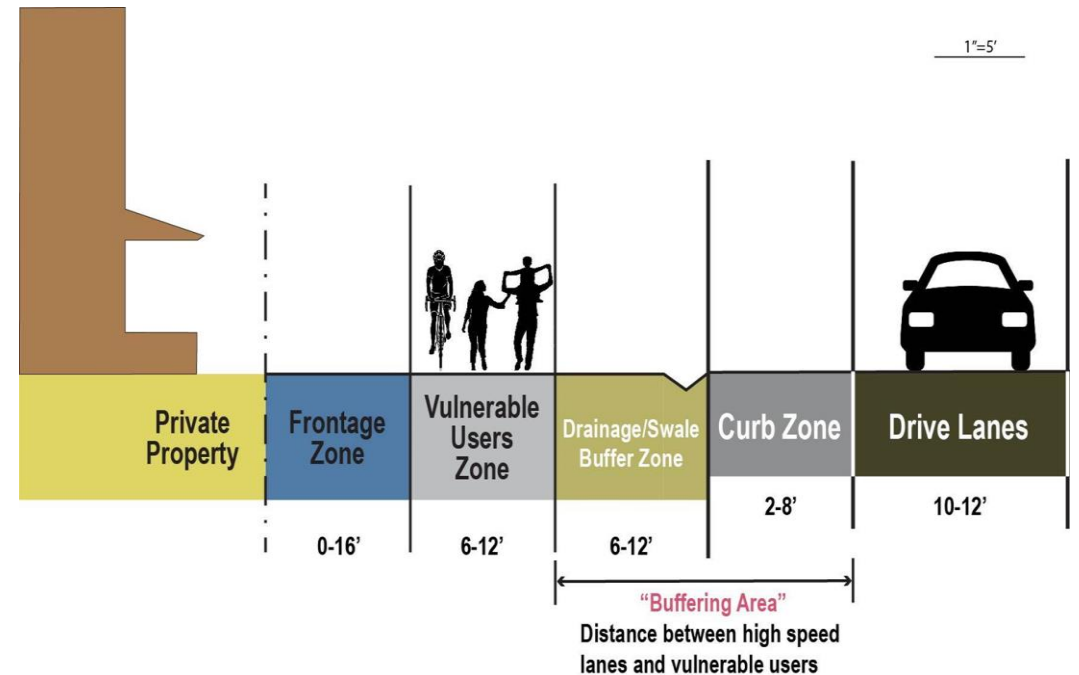
Chapter 3 Sections

1. C1 - C2
2. C3R - C3C
3. C4
4. C5 - C6
5. Greenways
6. Residential



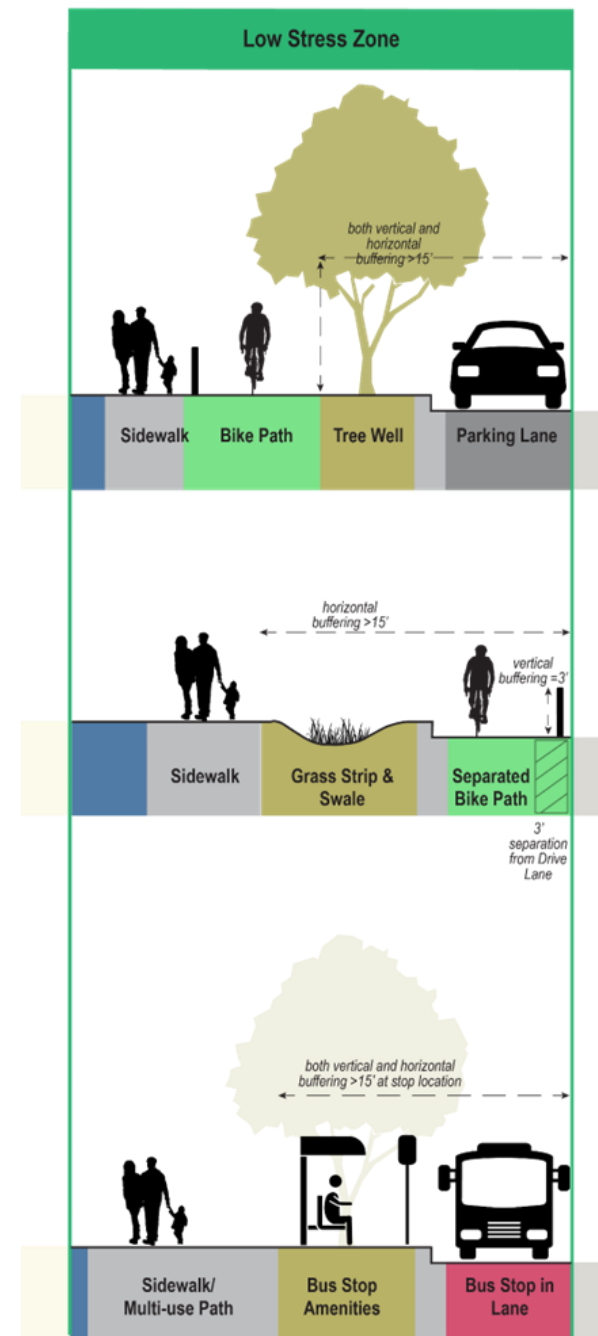
Chapter 3 Overview

- Narrative of context class prevailing conditions in Broward
- Identify the range of:
 - Speeds
 - ROW
 - Available frontage
- Provide “typicals” of existing conditions



Chapter 3 Cross Section

- Criteria by Speed
 - Low speed
 - High speed
- Cross Section Type
 - Speed
 - ROW
 - Available frontage
- Provide “typicals” of existing conditions



Prioritization of Low-Stress Treatments

- Highest Priority
- Second Priority
- Lowest Priority

VULNERABLE USERS ZONE	BUFFER ZONE	CURB ZONE
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Street has on-street parking.

Minimum ROW beyond Drive Lanes: 25'

Separated bike path with flex posts or bollards (7' min.)	Planted strip with trees (5' min.)	Parking (8')
Sidewalk (5' min.)		

Trees and/or on-street parking are not suitable.

Minimum ROW beyond Drive Lanes: 23'

Sidewalk (5' min.)	Grass Strip (10' min.)	Separated at-grade bike path with bollards (preferred), a curb (standard), or flex posts (less ideal). (7' min.)
Multi-use path (12' min.)		
• if bike path or bike lane does not fit in any Zone		

Transit must be accommodated.

Minimum ROW beyond Drive Lanes: 21'

Sidewalk (5' min.)	Benches, signage, lighting, and shelters designed to BCT standards. (8' min.)	Bus Island and Bike Lane (not shown at right; see page XXX for details)
Multi-use path (12' min.)		Bus dropoff and pickup in Curb Zone (8' min.)
• if bike path or bike lane does not fit in any Zone		

