

City of Plantation Multimodal Master Transportation Plan

Short-term Improvements



City Council Meeting
August 24, 2022



Agenda



Introduction & Methodology



Focus Roadways & Locations



Short-term Recommendations



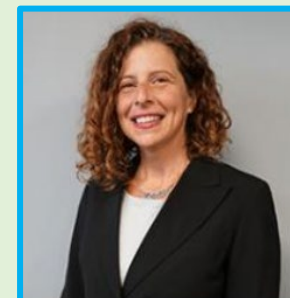
“MMTP” Next Steps



Q&A

Broward MPO - Overview

- Broward Metropolitan Planning Organization aka *Broward MPO*
- Federally mandated Policy Board, whose mandate is to carry out the transportation planning process for Broward County.
- Broward MPO's City Services collaborates with local governments to assist them in their efforts to plan and prioritize multimodal transportation projects.
- Currently assisting the City of Plantation with the development of a Multimodal Master Transportation Plan.
- For more info on the Broward MPO visit BrowardMPO.org



Karen Friedman
Senior Transportation Planner



Andrew Riddle
City Services Manager

Multimodal Master Transportation Plan



Goal: Identify short-term and long-term solutions to improve transportation for all roadway users.

Plan Kick-Off

Aug. 21

Current Status

High-Level Needs Assessment



Short-term Improvements



Technical Memo #1



Here!!

Needs Assessment

Mid- and Long-term Improvements

Technical Memo #2

City of Plantation Multimodal Master Transportation Plan Technical Memo #1

Chapter 1: Introduction



The City of Plantation, like much of Southeast Florida, faces a growing population and opportunities for redevelopment in the coming decades. A strong multimodal transportation plan, which plans for improvements for all roadway users including pedestrians, bicyclists, transit riders, and automobiles, is needed to support growth, while managing access and safety.

The City of Plantation's Multimodal Master Transportation Plan ("MMTP") identifies recommendations to improve overall roadway safety, as well as specific improvements for pedestrians, bicyclists, and transit users. The development of the MMTP was informed by the Plan Themes: Midtown Connectivity, Safety, and Traffic Calming.

Purpose:

The Multimodal Master Transportation Plan will address the City's current and future multimodal transportation needs by developing strategies to comprehensively improve safety, and increase multimodal connectivity. The MMTP is consistent with City of Plantation priorities of reducing congestion, fostering economic vibrancy, while addressing environmental concerns and sustainability. Notably, the MMTP is intended to guide and prioritize effective transportation investments to serve a growing, multimodal city, while maintaining the "homestown" feel of the City of Plantation.

Multimodal Transportation

The availability of transportation options using different methods within a system or corridor. Examples of these methods include biking, walking, and public transit.



Strategy:

The MMTP planning effort consists of two separate assessments, each with its own technical memo.

1. High-Level Multimodal Needs Assessment and Identification of Short-term Improvements
2. Needs Assessment & Identification of Mid- and Long-Term Improvements

High-Level Multimodal Needs Assessment

Analysis of existing plans, city data, crash statistics, and field visits in order to develop a list of current needs for the multimodal transportation system.

Technical Memorandum #1: Short-term Improvements

This Technical Memorandum presents the results of the high-level multimodal needs assessment and the recommended improvements that can be accomplished in the short-term (up to five years). The Technical Memorandum is organized as follows:

- Chapter 2: Project Approach
- Chapter 3: Methodology
- Chapter 4: Focus Roadways
- Chapter 5: Recommendations
- Chapter 6: Cost Estimates and Funding Opportunities





Guiding Themes

- Safety
- Midtown Connectivity
- Traffic Calming



Planning Objectives

- Address High-Level / Current Needs
- Data driven
- Identify Short-term improvements



Data Analyzed



Reports, Field Observations, and Public Engagement



City of Plantation @PlantationFLA · Jan 30

This survey is only open until Jan. 31st! It's time to get your voice heard & tell us what improvements YOU want to Plantation's transportation system. [SurveyMonkey.com/r/PlantationMo...](https://www.surveymonkey.com/r/PlantationMo...)

*Comments on this post will not be entered in the survey. Click the link above to submit any feedback.

TELL US WHAT YOU THINK

PLANTATION TRANSPORTATION SURVEY



[SURVEYMONKEY.COM/R/PLANTATIONMOBILITY](https://www.surveymonkey.com/r/PlantationMobility)



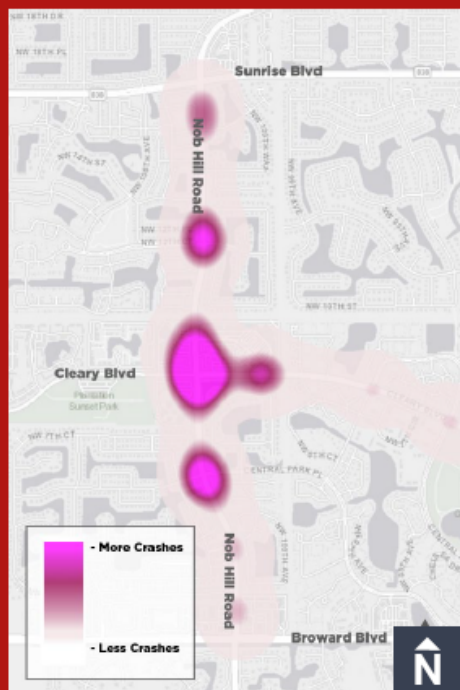
Data Analyzed

Crash Trends

Heat Map of Crashes
(2015 thru 2021)

Map Description:

Crashes from 1/1/2015 to 12/15/2021
(Source: Signal 4 Analytics)



324 Crashes** Between 1/1/2015 and 12/15/2021

29%
of crashes resulted
in injuries

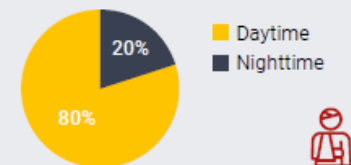
6%
of crashes resulted
in serious injuries



30%
of injury crashes
occurred at 4-way
intersections



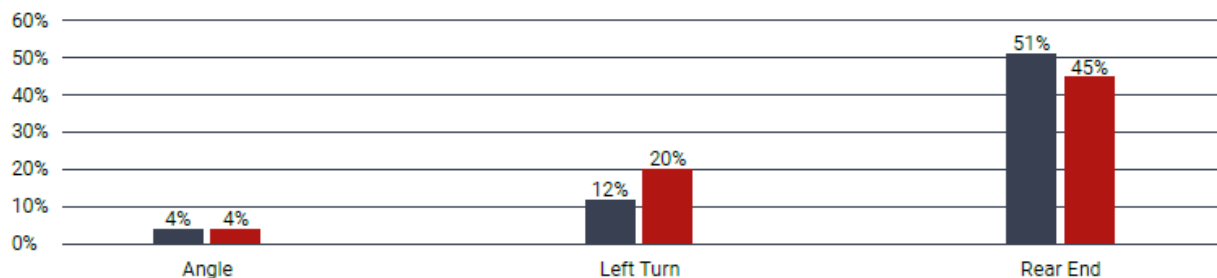
Injury crashes: Daytime vs Nighttime



6 crashes involving pedestrians (2) & bicyclists (4)



Common Crash Type (All Crash & Injury Crash)



**excluding intersections of Broward Blvd or Sunrise Blvd.

Unless otherwise noted, references to "Injury" crashes includes Injury, Serious Injury, and Fatality (as applicable).

Methodology



Agenda



Introduction & Methodology



Focus Roadways & Locations



Short-term Recommendations

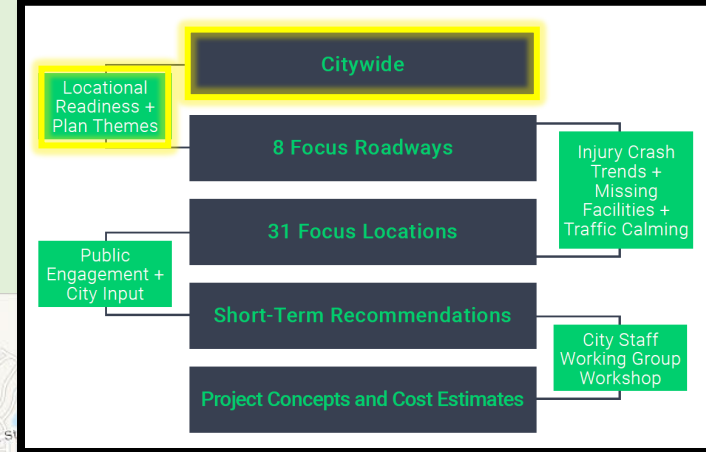


“MMTP” Next Steps



Q&A

City-Owned Roadways



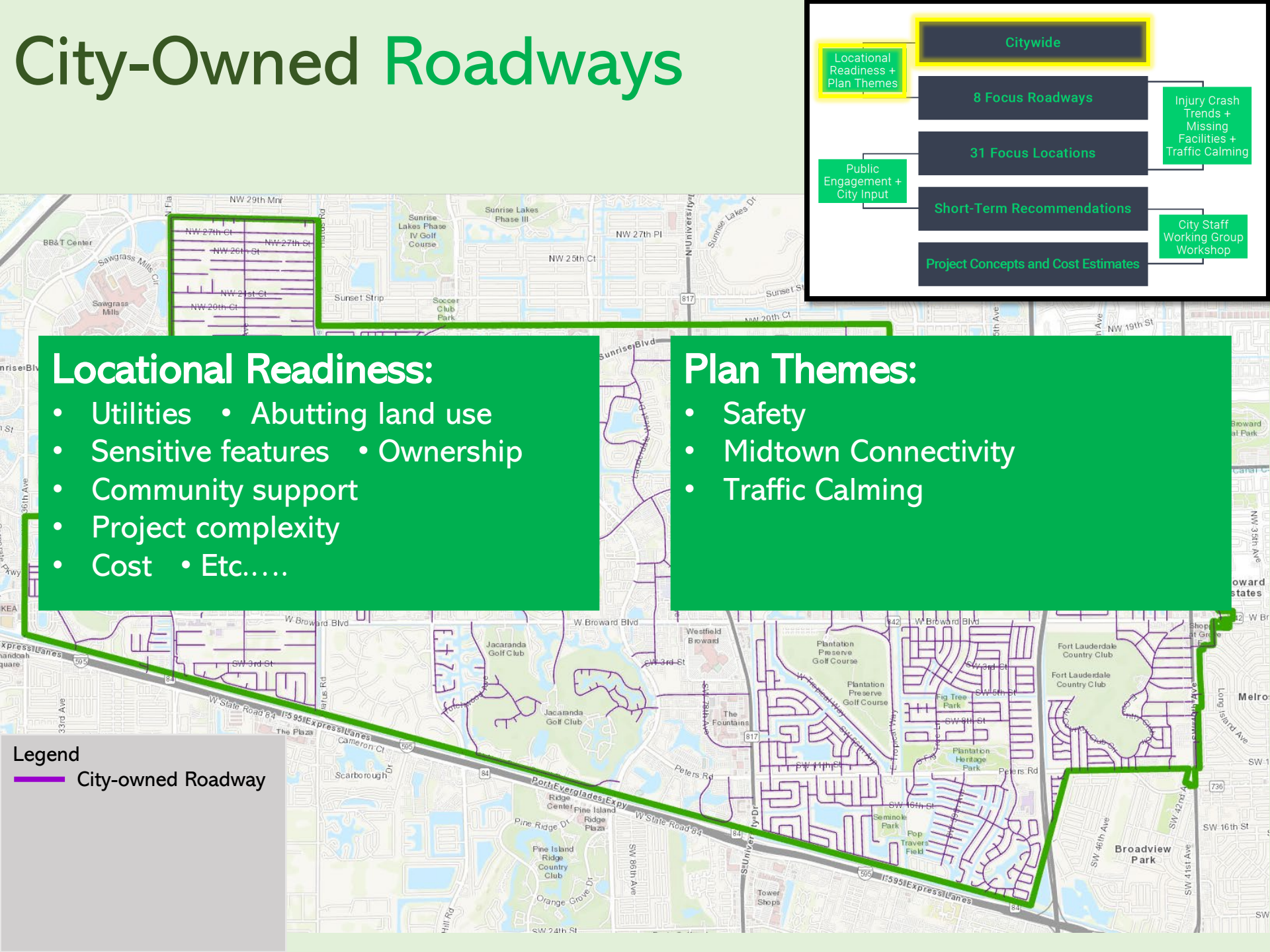
Locational Readiness:

- Utilities
- Abutting land use
- Sensitive features
- Ownership
- Community support
- Project complexity
- Cost
- Etc.....

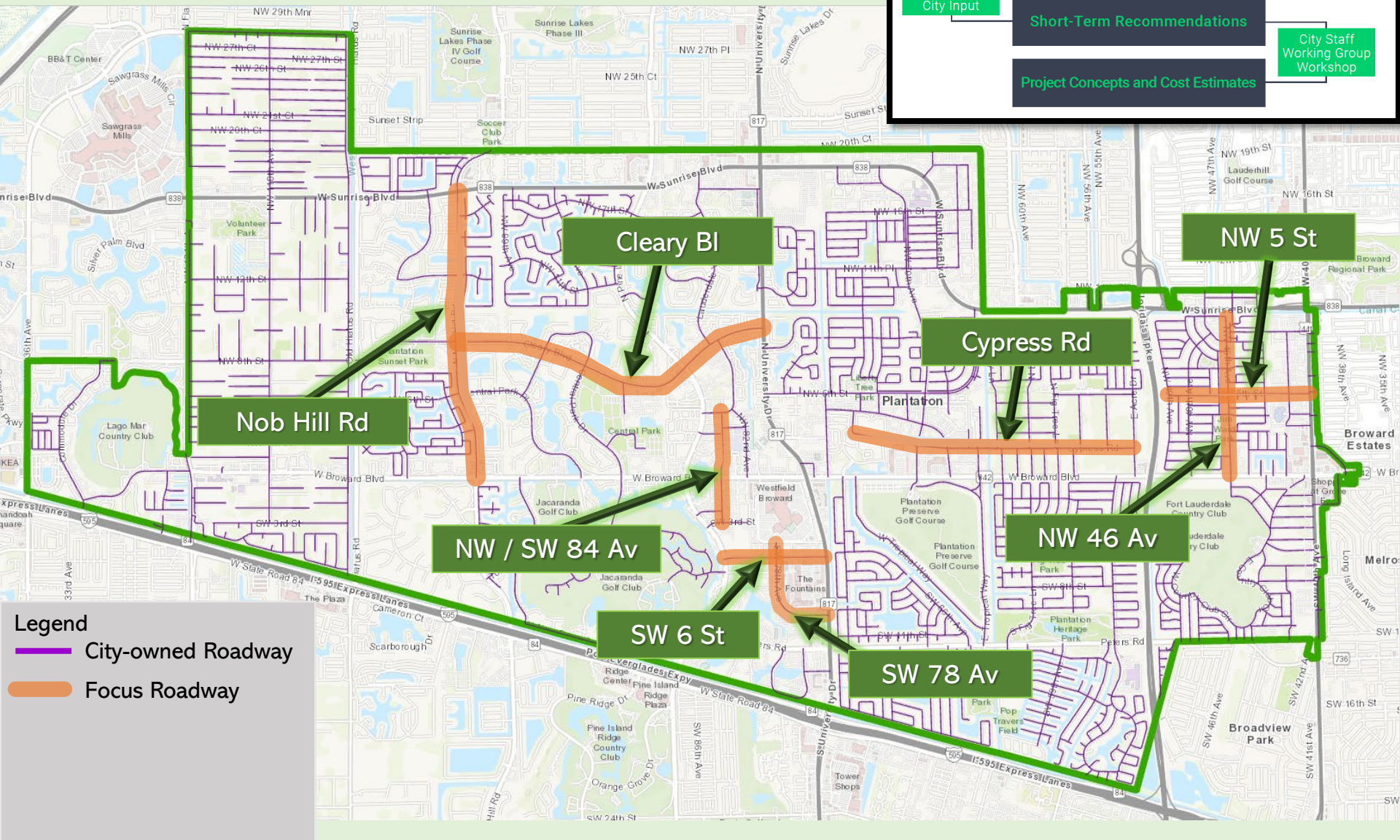
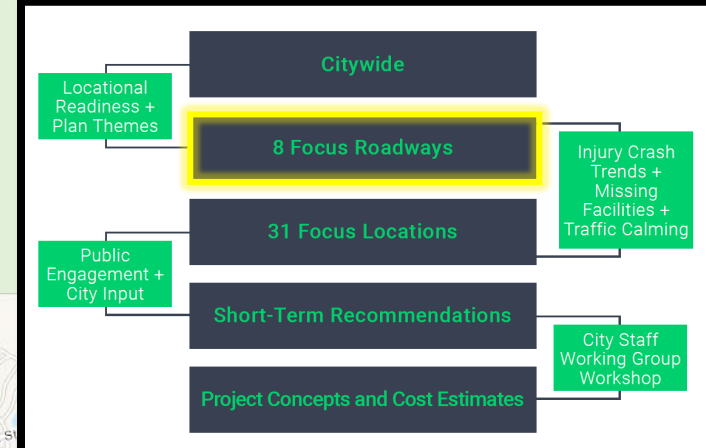
Plan Themes:

- Safety
- Midtown Connectivity
- Traffic Calming

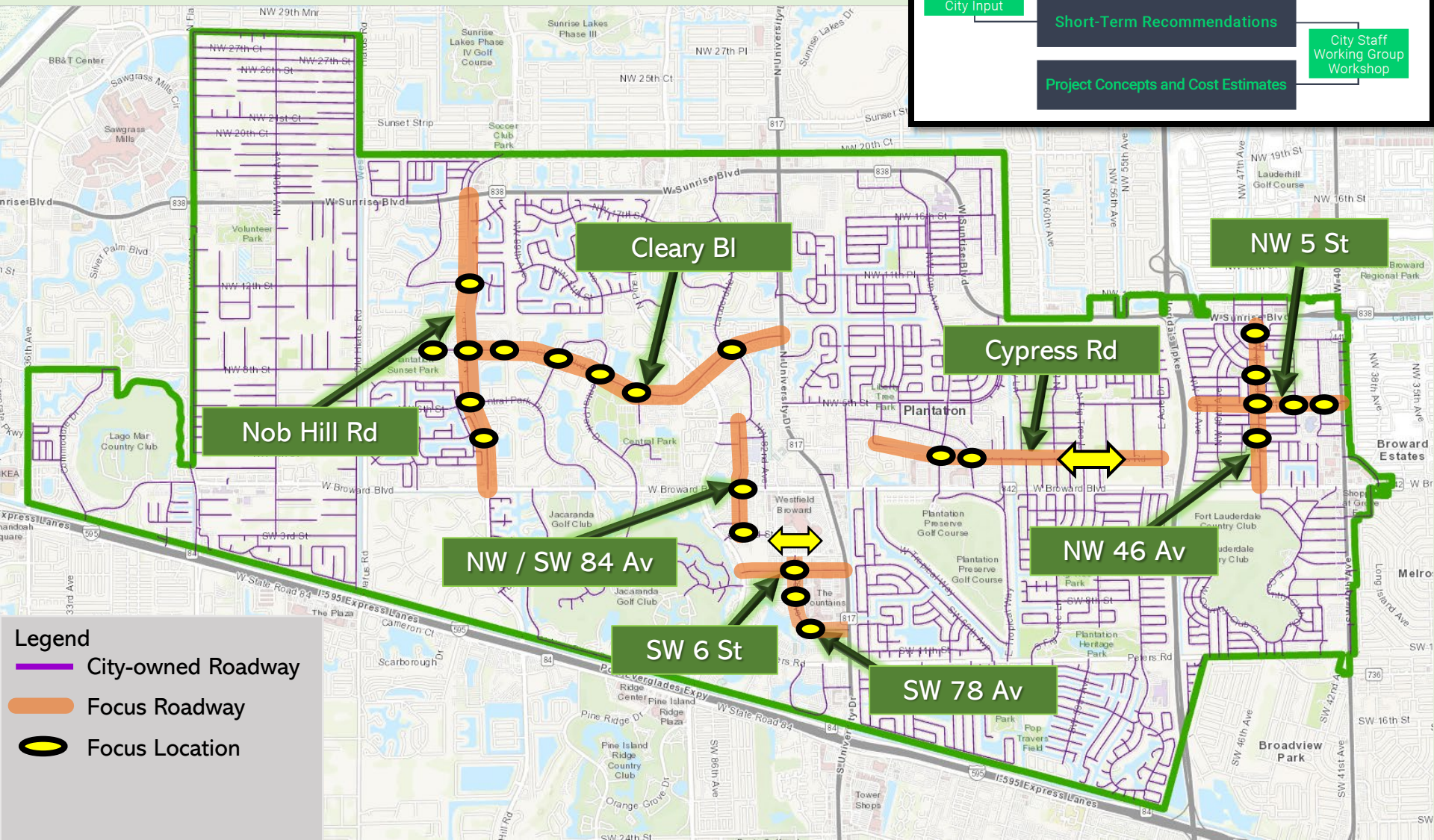
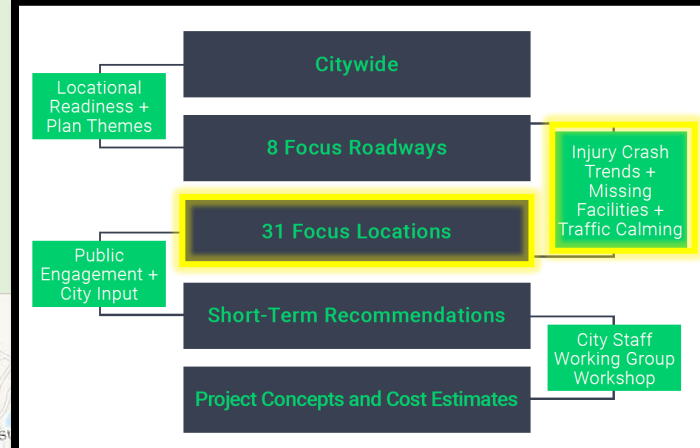
Legend
City-owned Roadway



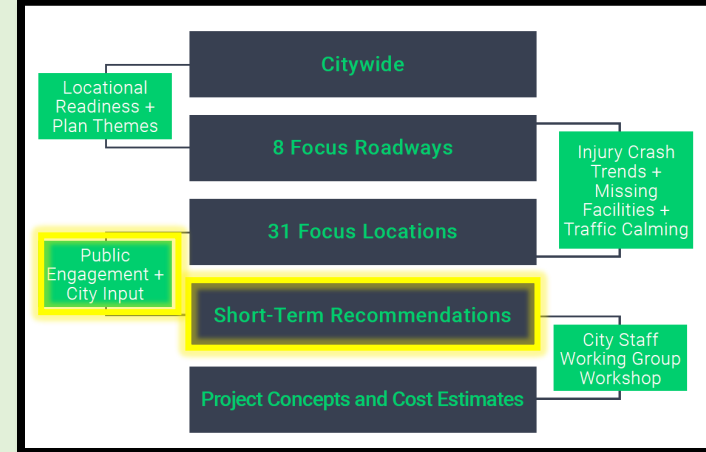
Focus Roadways



Focus Locations



Recommendation Groups



Group #1

- Focus Locations analyzed for safety treatments and mobility improvements
- List of low-impact, but proven safety countermeasures and mobility infrastructure

Group #2

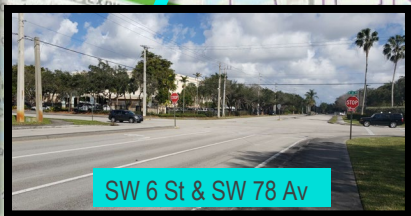
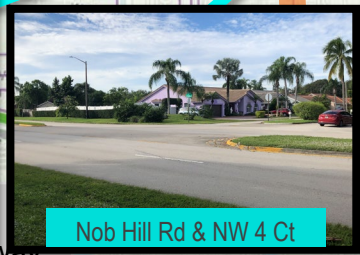
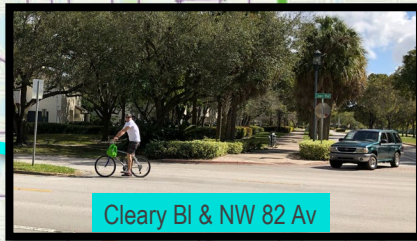
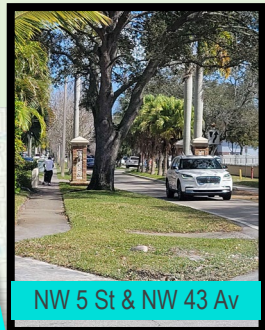
- Focus Locations analyzed for more intensive recommendations such as intersection and/or roadway realignments
- Individual planning concepts were developed
- Planning-level cost estimates were calculated

Locations: Group #1



Locations: Group

#2



- Group #1
- Group #2

Agenda



Introduction & Methodology



Focus Roadways & Locations



Short-term Recommendations



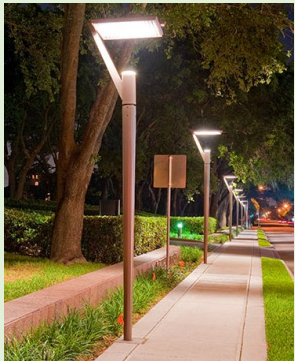
“MMTP” Next Steps



Q&A

Recommendations: Group #1

- ✓ Pedestrian-Scale Lighting
- ✓ High Visibility Pavement Markings
- ✓ Crosswalk Signage
- ✓ Detectable Warning Surfaces
- ✓ Rectangular Rapid Flashing Beacons (RRFB)
- ✓ Mast Arm Conversion
- ✓ Leading Pedestrian Intervals (LPI)
- ✓ Left Turn Signals
- ✓ Radar Speed Limit Signs
- ✓ Remove sidewalk obstructions
- ✓ Pedestrian-only park entrances
- ✓ Quick build mini roundabouts
- ✓ Shared Lane Markings
- ✓ Modular Speed Cushions



Group #1

Example: NW / SW 84th Av

City of Plantation Multimodal Master Transportation Plan Technical Memo #1

Chapter 5: Recommendations: Roadway 3 NW / SW 84th Avenue



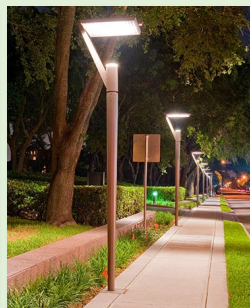
Recommendations Group #1: Safety Treatments and Mobility Improvements

Location	Intersection at Broward Blvd	SW 84th Av (from Greenway to SW 3rd St)	Intersection at SW 3rd St
High Visibility Pavement Markings	Yes	Yes, at new/designated Greenway Crossing	Yes, over SW 3rd St
Ped-Scale Lighting	Yes	Yes, at/along Greenway	Yes, over SW 3rd St
Crosswalk Signage: Advanced	Yes	Yes, at new/designated Greenway Crossing	Yes
Crosswalk Signage: In-Street			Yes
Detectable Warning Surface		Yes, at new/designated Greenway Crossing	Yes
RRFB		Yes, at new/designated Greenway Crossing	Yes, over SW 3rd St
Mast Arm Conversion	Yes		
LPI	Yes		
Left Turn Signal	Yes (84th Av)		
Other	<ul style="list-style-type: none"> • Accessible Pedestrian Signals • Realign eastern crosswalk / pavement markings to allow for pedestrian refuge in the median 	<ul style="list-style-type: none"> • Create Greenway crosswalk over SW 84th Av through the landscaped median (similar to SW 82nd Av) • Signage for designated Greenway path over SW 84th Av • Add Shared Use Path signage for sidewalks • Install ADA required landing pad at bus stops • Orient bus benches to face roadway 	<ul style="list-style-type: none"> • Create pedestrian-only entrance to Pine Island Park in close proximity to SW 84th Av • Quick Build Mini-Roundabout

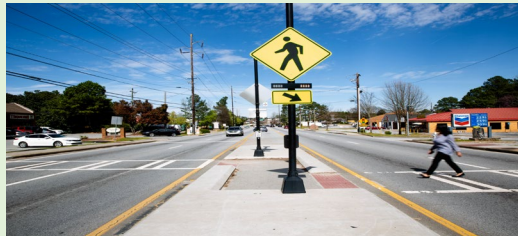
Group #1

Example: NW / SW 84th Av

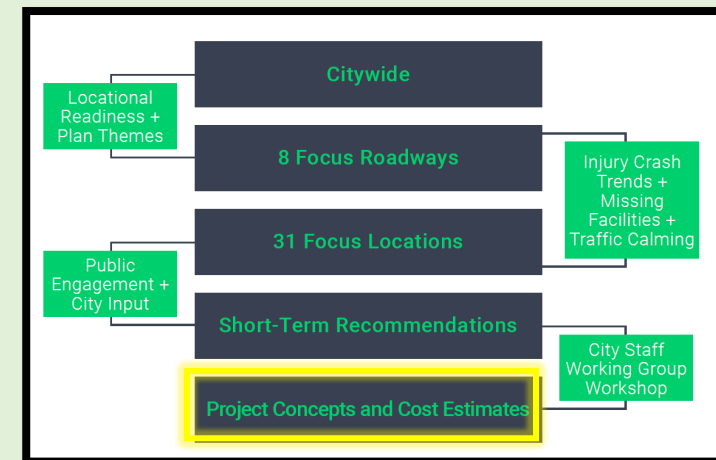
Location	Intersection at SW 3rd St
High Visibility Pavement Markings	Yes, over SW 3rd St
Ped-Scale Lighting	Yes, over SW 3rd St
Crosswalk Signage: Advanced	Yes
Crosswalk Signage: In-Street	Yes
Detectable Warning Surface	Yes
RRFB	Yes, over SW 3rd St
Mast Arm Conversion	
LPI	
Left Turn Signal	
Other	Create pedestrian-only entrance to Pine Island Park in close proximity to SW 84th Av • Quick Build Mini-Roundabout



Recommendations: Group #2



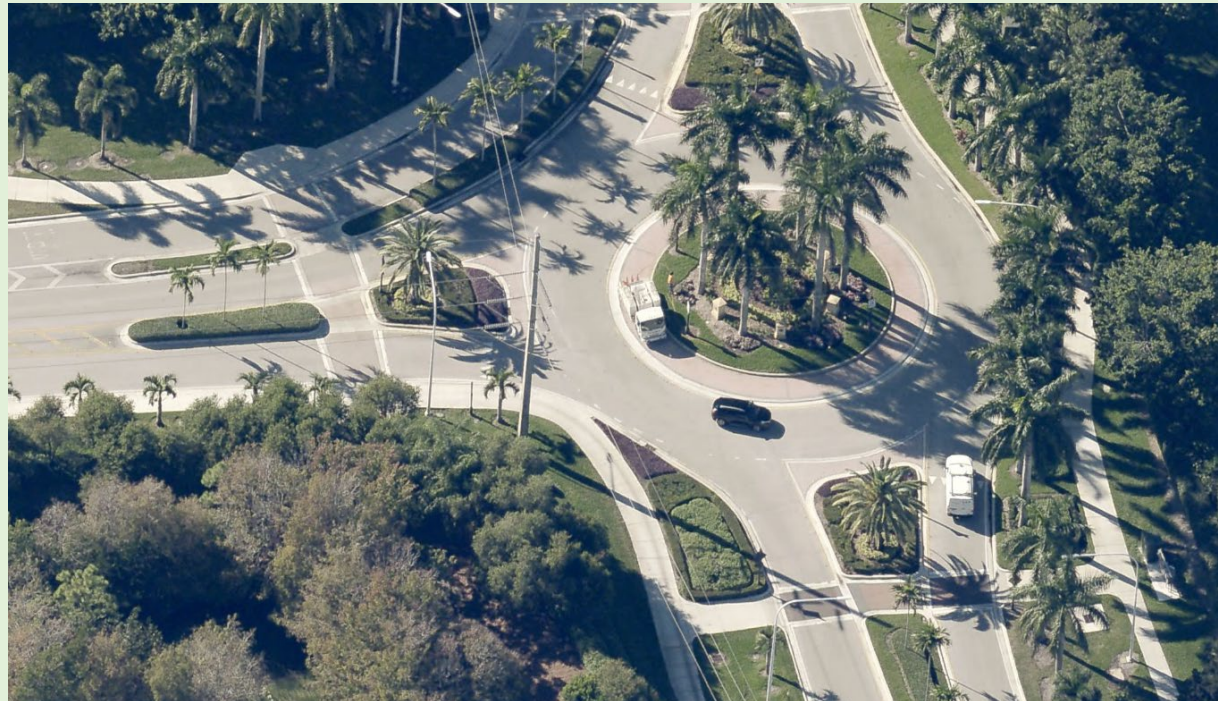
- ✓ Roundabouts
- ✓ Mini-roundabouts
- ✓ Raised crosswalks
- ✓ Roadway realignments
- ✓ Expanded sidewalks
- ✓ Mid-block crosswalks
- ✓ Median refuges
- ✓ Crosswalk signalization
- ✓ Chicanes
- ✓ Directional medians
- ✓ Enhanced lighting



Why Roundabouts?!

Saddle Club Rd, Weston

- ✓ Safety
- ✓ Improve traffic flow
- ✓ Environmentally friendly
- ✓ Traffic calming
- ✓ Cost savings
- ✓ Emergency Management
- ✓ Wayfinding & Placemaking



Why Roundabouts?!

Nova Dr, Davie

- ✓ Safety
- ✓ Improve traffic flow
- ✓ Environmentally friendly
- ✓ Traffic calming
- ✓ Cost savings
- ✓ Emergency Management
- ✓ Wayfinding & Placemaking



Why Roundabouts?!

NW 39th Ave, Ft Lauderdale

- ✓ Safety
- ✓ Improve traffic flow
- ✓ Environmentally friendly
- ✓ Traffic calming
- ✓ Cost savings
- ✓ Emergency Management
- ✓ Wayfinding & Placemaking



Why Roundabouts?!

Dixie Hy, Ft Lauderdale

- ✓ Safety
- ✓ Improve traffic flow
- ✓ Environmentally friendly
- ✓ Traffic calming
- ✓ Cost savings
- ✓ Emergency Management
- ✓ Wayfinding & Placemaking



Why Roundabouts?!

Benefits of a Roundabout

Saves lives

- Up to a 90% reduction in fatalities
- 76% reduction in injury crashes
- 30-40% reduction in pedestrian crashes
- 75% fewer conflict points than four-way intersections

Slower vehicle speeds (generally under 25 mph)

- Motorists have more time to judge and react to other cars or pedestrians
- Advantageous to older and novice motorists
- Reduces the severity of crashes
- Keeps pedestrians safer

Efficient traffic flow

- 30-50% increase in traffic capacity

Reduction in pollution and fuel use

- Improved traffic flow for intersections that handle a high number of left turns
- Reduced need for storage lanes

Potential money saved

- No signal equipment to install and repair
- Savings estimated at an average of \$5,000 per year in electricity and maintenance costs
- Service life of a roundabout is 25 years (vs. the 10-year service life of signal equipment)

Community benefits

- Traffic calming
- Aesthetic landscaping

Source: Federal Highway Administration

What is a Roundabout?

A roundabout is a circular intersection without traffic signal equipment in which traffic flows around a center island.



Why Modern Roundabouts?

In Florida, over 44% of all traffic fatalities and serious injuries occur at conventional (stop & signal-controlled) intersections. Roundabouts have been proven to reduce the number of fatal and severe injury crashes by 82% over a stop-controlled intersection, and 78% over a signalized intersection.

Conventional intersections have 32 vehicle and 16 pedestrian conflict points, while roundabouts have only 8 vehicle and 8 pedestrian conflict points. Because there are no crossing movements in a roundabout, left-turn and right-angle crashes are eliminated.

For safety tips and more information, please visit:
www.AlertTodayFlorida.com



A Guide To Modern Roundabouts



Informational Guide for:
MOTORISTS • PEDESTRIANS • BICYCLISTS



Funded by FDOT



Chapter 5: Recommendations: Roadway 1 **Nob Hill Road**



Location: Intersection at NW 4th Court

Observations / Missing Facilities:

- Unsignalized T-Intersection
- All turn movements allowed
- No southbound U-turn storage area
- No pedestrian facilities or lighting
- No sidewalk in western ROW
- No crosswalk from western neighborhood over Nob Hill Rd to sidewalk in eastern ROW
- Observed Speeding

Objectives

- ✓ Improve intersection safety
- ✓ Reduce collisions to / from NW 4th Court
- ✓ Create pedestrian access to sidewalk on east side of Nob Hill Rd

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Crashes from Jan 2015 to Dec 2021

Injury Crash Data / Trends

40%

of injury crashes were caused by rear end collisions



42%

of crashes resulted in injuries



50%

of injury crashes occurred on wet roads



Improvements

Near Term (0 – 2 years):

- Extend sidewalks on NW 4th Court to Nob Hill Road's right-of-way
- Create a crosswalk over NW 4th Court including:
 - Detectable warning surfaces
 - High-visibility pavement markings

Short Term (2 – 5 years):

1. Install directional median on Nob Hill Rd prohibiting left turns from NW 4th Ct
 - NW 4th Court to allow right-turns out only
2. Create crosswalk over Nob Hill Road including:
 - Detectable warning surfaces
 - High-visibility pavement markings
 - Pedestrian Refuge Island • Lighting • Signage
 - Pedestrian Crosswalk Signal / Beacon

Rendering



City of Plantation Multimodal Master Transportation Plan Technical Memo #1

Chapter 5: Recommendations: Roadway 2 Cleary Boulevard



Location: East entrance to Plantation Promenade Shopping Center 2

Observations / Missing Facilities:

- Speeding
- Unsignalized T-Intersection / driveway
- U-turns prohibited
- Sidewalks missing detectable warning pads
- No crosswalks from southern ROW sidewalk
- No pedestrian-scaled lighting
- Parents park in shopping center for morning drop-off to Central Park Elementary School

Objectives

- ✓ Improve safety of intersection
- ✓ Reduce left-turn collisions to / from shopping center
- ✓ Reduce vehicle speeds / traffic calming on Cleary Blvd
- ✓ Improve pedestrian facilities
- ✓ Create pedestrian access from Cleary Blvd southern sidewalk

34

Crashes from Jan 2015 to Dec 2021

Injury Crash Data / Trends

56%

of injury crashes were caused by left turn collisions



47%

of crashes resulted in injuries



19%

of injury crashes occurred during nighttime



Improvements

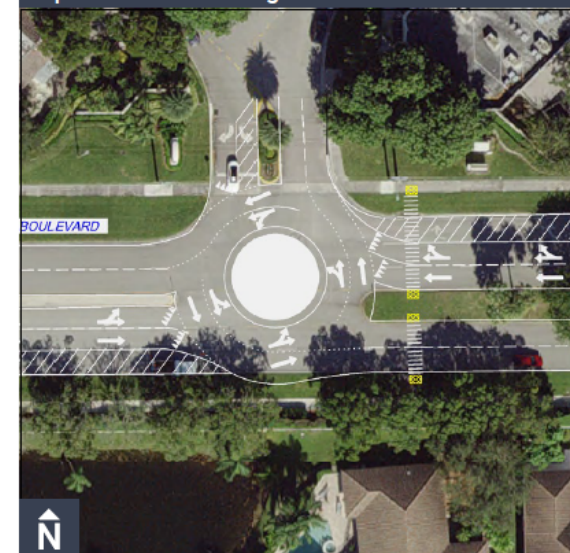
Near Term (0 – 2 years):

- Install Speed Radar Feedback Signs east / west of intersection
- Create advanced stop bar for southbound vehicles
- Install detectable warning surfaces at sidewalk connections to shopping center's driveway

Option #2 Short Term (2 – 5 years):

1. Reduce Cleary Blvd Speed limit to 30 MPH
2. Convert intersection to Mini-Roundabout
3. Create crosswalk over Cleary Blvd including:
 - Detectable warning surfaces
 - High-visibility pavement markings
 - Pedestrian Refuge Island
 - Lighting
 - Signage

Option #2 Rendering



Chapter 5: Recommendations: Roadways 4 & 5 SW 6th Street & SW 78th Avenue



Location: SW 6th Street, from Pine Island Rd to University Dr

Observations / Missing Facilities:

- Sidewalks located directly at curb line or minimally set back
- No pedestrian-scale lighting, crosswalks, detectable warning pads
- No pedestrian entry to Pine Island Park (all entrances are via parking lots)
- Cut through traffic
- Excess capacity
- New residential development under construction

Objectives

- ✓ Improve pedestrian facilities
- ✓ Encourage multimodal transportation
- ✓ Traffic calming
- ✓ Minimize potential impacts from additional traffic from Midtown Plantation development

45

Crashes from Jan 2015 to Dec 2021

Injury Crash Data / Trends

78%

of injury crashes were caused by left turn collisions



31%

of crashes resulted in injuries



1

Injury Crash involved a bicyclist



Improvements

Near Term (0 – 2 years):

- Install detectable warning surfaces at all sidewalk / driveway connections
- Improve existing mid-block crosswalk over SW 6th St including:
 - Lighting
 - Signage
- New mid-block crosswalk over SW 6th St adjacent to Pine Island Park:
 - Curb Ramps
 - Detectable warning surfaces
 - High-visibility pavement markings
 - Pedestrian Refuge Island
 - Lighting
 - Signage
- Create pedestrian-only entrance to Pine Island Park

Short Term (2 – 5 years):

- Roadway reconfiguration from 4-lane to 2-lanes:
 - 10 ft wide sidewalks
 - 4 ft wide furnishing / pedestrian lighting zones
 - 5 ft wide bicycle paths separated from roadway by 4 ft wide barrier / raised curb
 - Two 11 ft wide travel lanes
 - 12 ft wide center turn lane
- Install RRFBs at midblock crosswalks

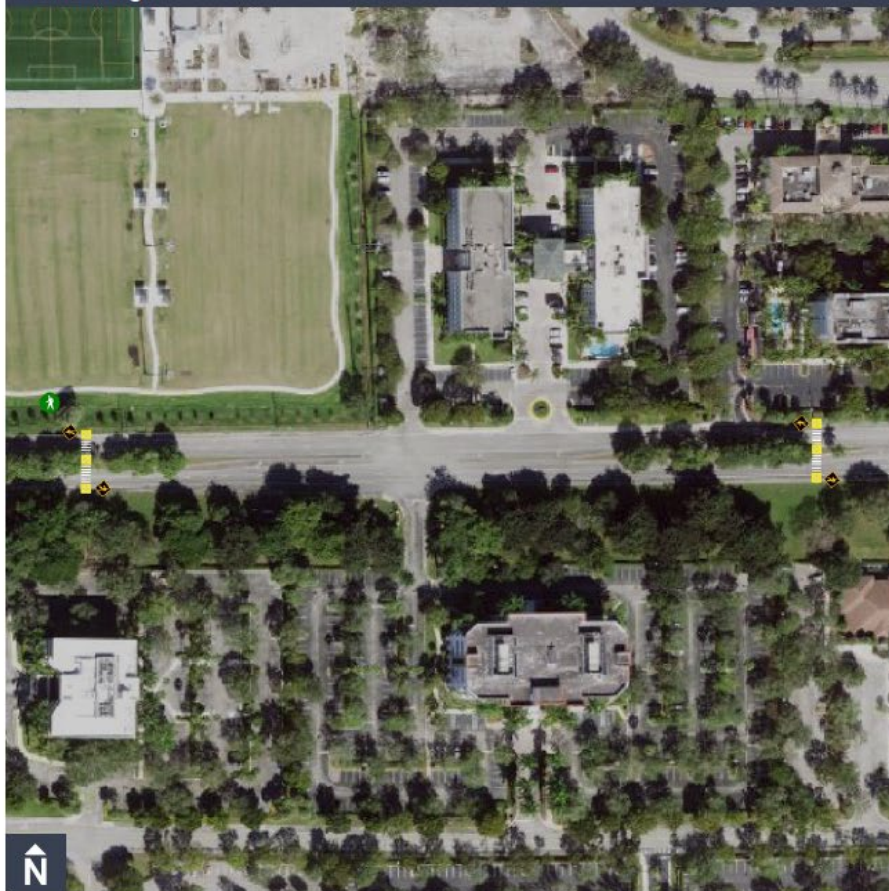
(Rendering is on the next page)

City of Plantation Multimodal Master Transportation Plan Technical Memo #1

Chapter 5: Recommendations: Roadways 4 & 5 SW 6th Street & SW 78th Avenue



Rendering



Existing Roadway Layout



Roadway Reconfiguration



Chapter 5: Recommendations: Roadway 7 NW 5th Street



Location: Multiblock area from NW 45th Te to NW 43rd Ave

Observations / Missing Facilities:

- Traffic calming just east of NW 43rd Av is not effective
- No additional traffic calming
- Wide openings to side streets
- Heavy westbound traffic (leading to intersection at NW 46th Avenue)
- No wayfinding at NW 43rd Ave to indicate proximity to elementary school or nearby parks
- Bicyclists riding on sidewalks

Objectives

- ✓ Reduce collisions at side streets entrances
- ✓ Reduce vehicle speeds on NW 5th St
- ✓ Reduce cut-through traffic on NW 5th St
- ✓ Increase area lighting
- ✓ Improve pedestrian facilities
- ✓ Enhance awareness of walk-to-school
- ✓ Encourage bicycle riding in roadway

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Crashes from Jan 2015 to Dec 2021

Injury Crash Data / Trends

44%

of injury crashes were caused by left turn / angle collisions



36%

of crashes resulted in injuries



22%

of injury crashes occurred during nighttime



Improvements

Near Term (0 – 2 years):

- Install Speed Radar Feedback Signs
- Install modular speed cushions at mid-block locations
- Quick build chicane in general location of NW 45th Te
- **At side street entrances:**
 - Refurbish pavement markings
 - Tighten intersection radii
- **At NW 43rd Avenue intersection**
 - Refurbish crosswalk pavement markings to high-visibility pattern
 - Install pedestrian-scale lighting at corners
 - Quick Build Mini-Roundabout

Short Term (2 – 5 years):

1. Roadway reconfiguration to chicane at location of quick-build chicane
2. Replace quick-build mini-roundabout with permanent mini roundabout.

Rendering



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Plan Kick-Off

Aug. 21

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High-Level Needs Assessment



Short-term Improvements



Technical Memo #1



Here!!



Needs Assessment



Mid- and Long-term
Improvements



Technical Memo #2



MMTP Task 4 Mid / Long-term Improvements

Kick-Off Meeting

July 21, 2022

City of Plantation Multimodal Master Transportation Plan

Short-term Improvements



City Council Meeting
August 24, 2022

