

# Lake Worth Beach Mobility Plan

## Commission Workshop

August 19<sup>th</sup>, 2024

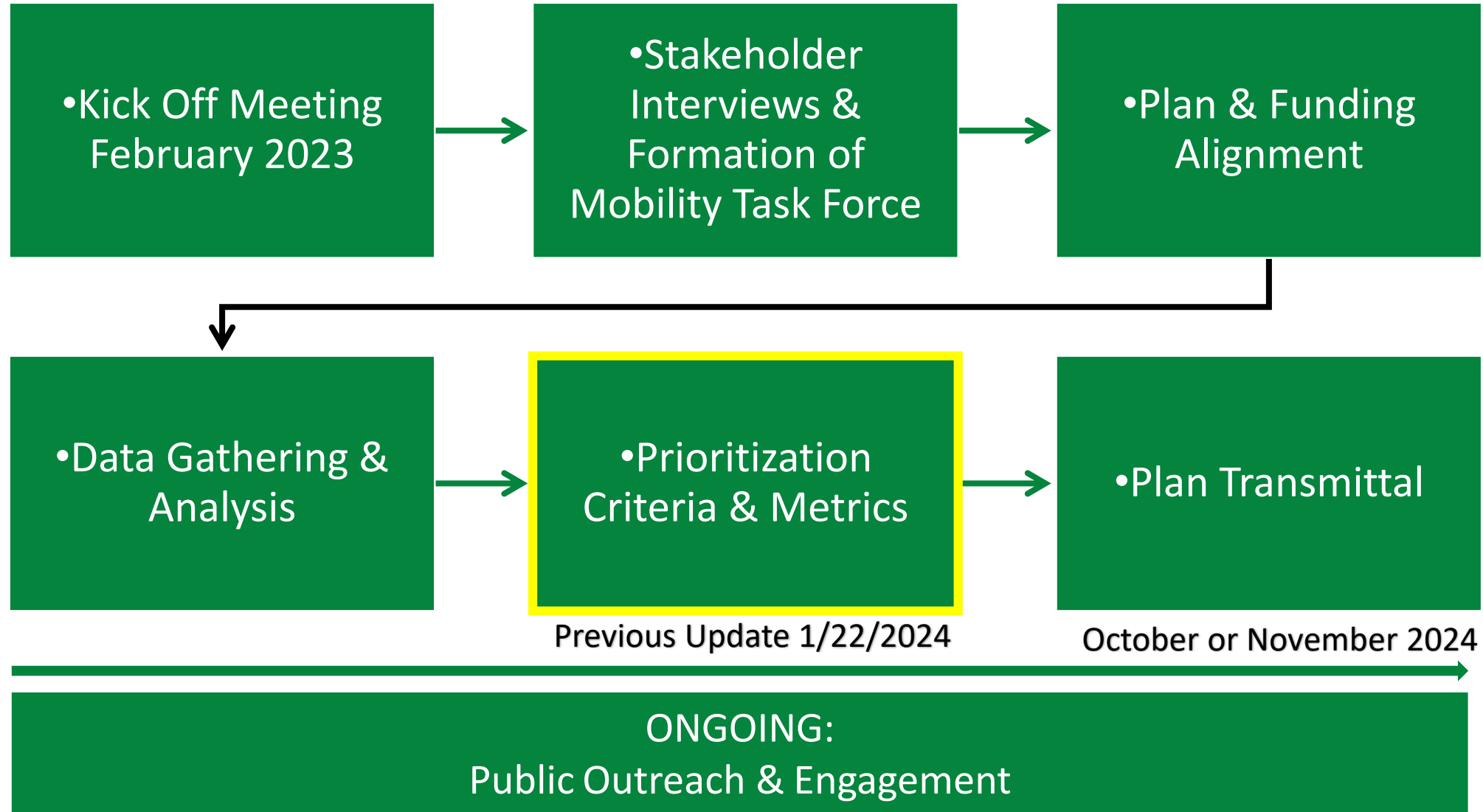


Lake Worth Beach

**Mobility Plan**



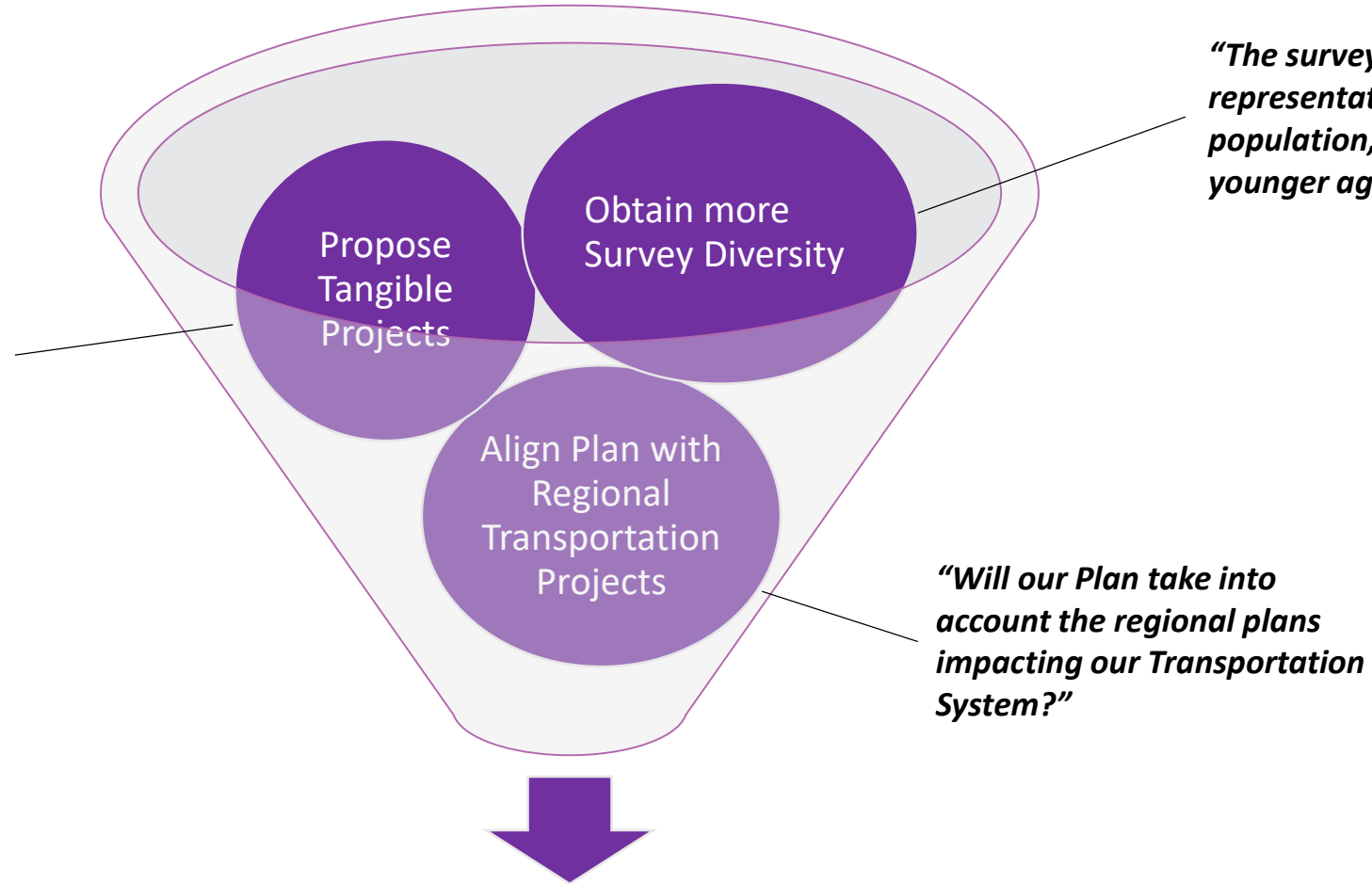
# Status Update





# Status Update – What We Heard...

*“We need real, tangible projects that the City can realistically pursue for improvements.”*



*“The survey results are not representative of the population, especially the younger age groups.”*

*“Will our Plan take into account the regional plans impacting our Transportation System?”*

Major Takeaways from  
1/22/2024 Commission Meeting



# Status Update – What We Did...

Obtain More  
Survey Diversity



- 81 new respondents, 20% of which were under 18 to 29 years old.
- Original survey collected only 6% in this age bracket.

Propose  
Tangible  
Projects



- The Plan identifies 25 intersections and 10 corridors for improvements within the City.
- FHWA Countermeasures utilized to provide scalable projects (very big to very small).

Align Plan with  
Regional  
Transportation  
Projects



- The Plan compiled existing plans from multiple agencies for alignment.
- The Plan included references to future plans and current plans in progress.



# Status Update – Potential Comp. Plan Revisions

Additions to Comprehensive Plan	Edits to Comprehensive Plan
<p><b>Policy 2.1.1.20:</b> The City shall continue to examine best practices and methods for the safe and context sensitive implementation of shared mobility and micromobility solutions, such as microtransit, dockless bicycle share, dockless scooters, and e-bikes.</p>	<p><b>Policy 2.1.4.5:</b> The City shall support the provision of safe vehicular <u>and bicycle</u> parking to support new land development. Public parking shall continue to be provided to serve the downtown mixed-use area, major attractions (such as Lake Worth Beach) and mass transit access points. The City shall develop a Parking Master Plan to identify short- and long-range parking strategies, including a reassessment of parking demand for mixed-use and infill developments, and including the implementation of <u>demand-responsive parking programming</u> incentives.</p>
<p><b>Policy 2.1.3.8:</b> The City shall promote the development of “Complete Streets” that are designed, built, and maintained in a context-sensitive manner that accommodates motorized and nonmotorized modes of travel for people walking, bicycling, riding micromobility devices, microtransit and transit vehicles and driving motor vehicles.</p>	

Note: These are **potential** Comprehensive Plan additions and edits being recommended by the Mobility Plan.



# Status Update – Potential Code Revisions

Additions to Code of Ordinances	Edits to Code of Ordinances
<p><b>Chapter 19, Article VI, Sec. 19-75:</b> Add the definition of “mobility hub” and description: “A location where mobility options are intentionally linked to one another through amenities and infrastructure design.”</p>	<p><b>Multi Modal Transportation Chapter 8 – BICYCLES</b></p> <p>Expand definitions to include cargo bikes, pedal assist/electric bikes, assistive mobility devices and electric scooters.</p>
	<p><b>Parking ARTICLE II. - PARKING, STOPPING AND STANDING</b></p> <p>Current code restricts on-street parking within twenty (20) feet of a street intersection – current practice has increased to 25 feet (also referred to as “daylighting.”)</p>

Note: These are **potential** code additions and edits being recommended by the Mobility Plan.



# Project Identification

## Project Selection Criteria

Aligns with other plans

Implementability

Matches funding criteria

Palm Beach TPA

LWB-Owned ROW

Can be bundled

CIP

Quick  
Implementation

Effective

Comprehensive Plan

Low/no match

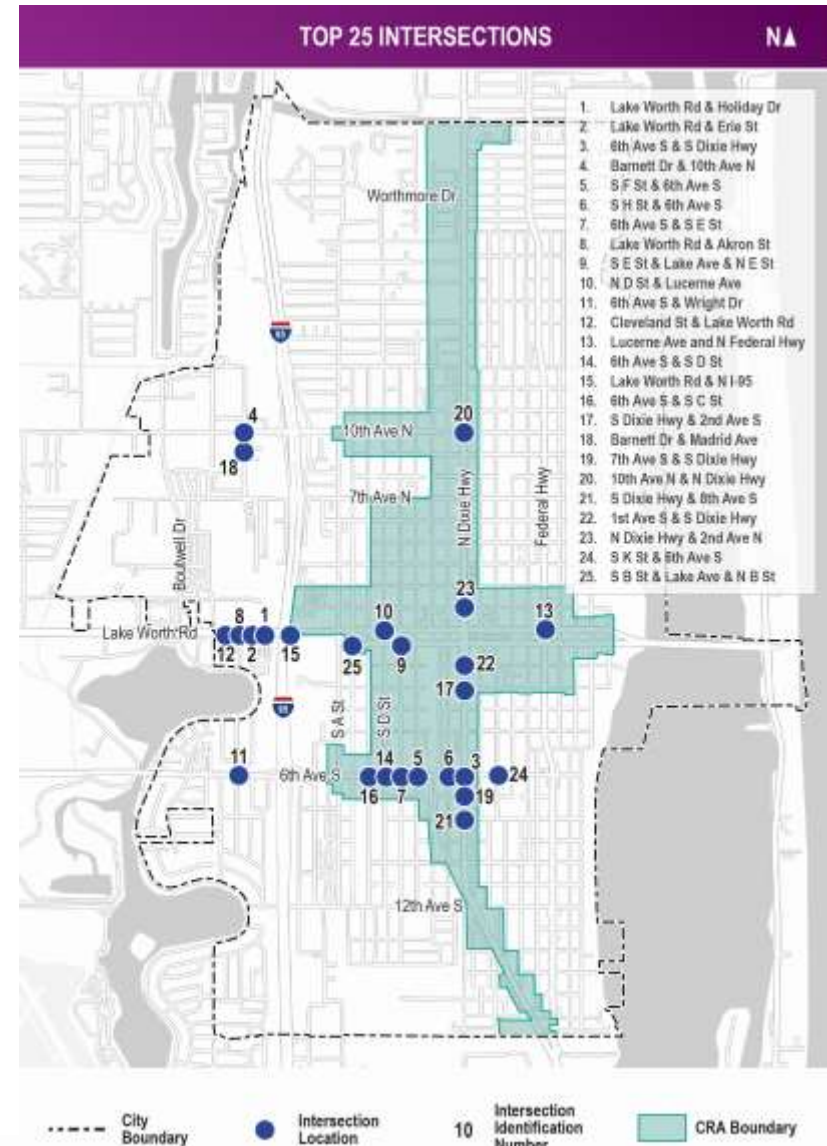
Comments



# Status Update – The Plan

PROJECT OVERVIEW: TOP 25 INTERSECTIONS

#	Intersection	Speed Safety Cameras	Bicycle Lanes	Crosswalk Visibility Enhancements	Leading Pedestrian Interval	Medians and Pedestrian Refuge Islands	Pedestrian Hybrid Beacons	Road Diets (Roadway Reconfiguration)	Walkways	Longitudinal Rumble Strips and Stripes	Median Barriers	Backplates with Retroreflective Borders	Corridor Access Management	Dedicated Left- and Right-Turn Lanes at	Reduced Left-Turn Conflict Intersections	Systemic Application of Multiple Low-Cost	Yellow Change Intervals	Lighting	Local Road Safety Plans	Pavement Friction Management	Road Safety Audit
		3	3	14	7	11	7	0	5	2	2	5	21	3	8	6	3	17	15	1	7
1	Lake Worth Rd & Holiday Dr			X		X	X									X			X	X	X
2	Lake Worth Rd & Erie St					X							X		X	X			X		X
3	6th Ave S & S Dixie Hwy		X	X	X	X						X		X			X	X	X	X	X
4	Barnett Dr & 10th Ave N	X	X	X	X	X		X	X				X						X		X
5	S F St & 6th Ave S			X		X	X			X				X	X			X	X		
6	S H St & 6th Ave S			X		X	X	X	X				X	X	X			X	X		
7	6th Ave S & S E St												X					X			X
8	Lake Worth Rd & Akron St			X	X	X					X	X						X			
9	S E St & Lake Ave & N E St			X			X	X				X			X			X	X		
10	N D St & Lucerne Ave			X			X	X				X			X			X	X		
11	6th Ave S & Wright Dr											X	X					X			
12	Cleveland St & Lake Worth Rd											X						X			
13	Lucerne Ave and N Federal Hwy	X		X								X				X	X	X			
14	6th Ave S & S D St											X	X					X	X		X
15	Lake Worth Rd & N I-95	X	X	X							X					X	X				
16	6th Ave S & S C St					X						X	X					X	X		X
17	S Dixie Hwy & 2nd Ave S			X								X									
18	Barnett Dr & Madrid Ave					X		X													
19	7th Ave S & S Dixie Hwy											X	X					X			
20	10th Ave N & N Dixie Hwy			X	X							X	X	X							
21	S Dixie Hwy & 8th Ave S	X				X						X	X	X				X	X		
22	1st Ave S & S Dixie Hwy					X	X	X				X						X			
23	N Dixie Hwy & 2nd Ave N			X	X							X	X								
24	S K St & 6th Ave S			X														X	X		
25	S B St & Lake Ave & N B St			X		X						X						X	X		



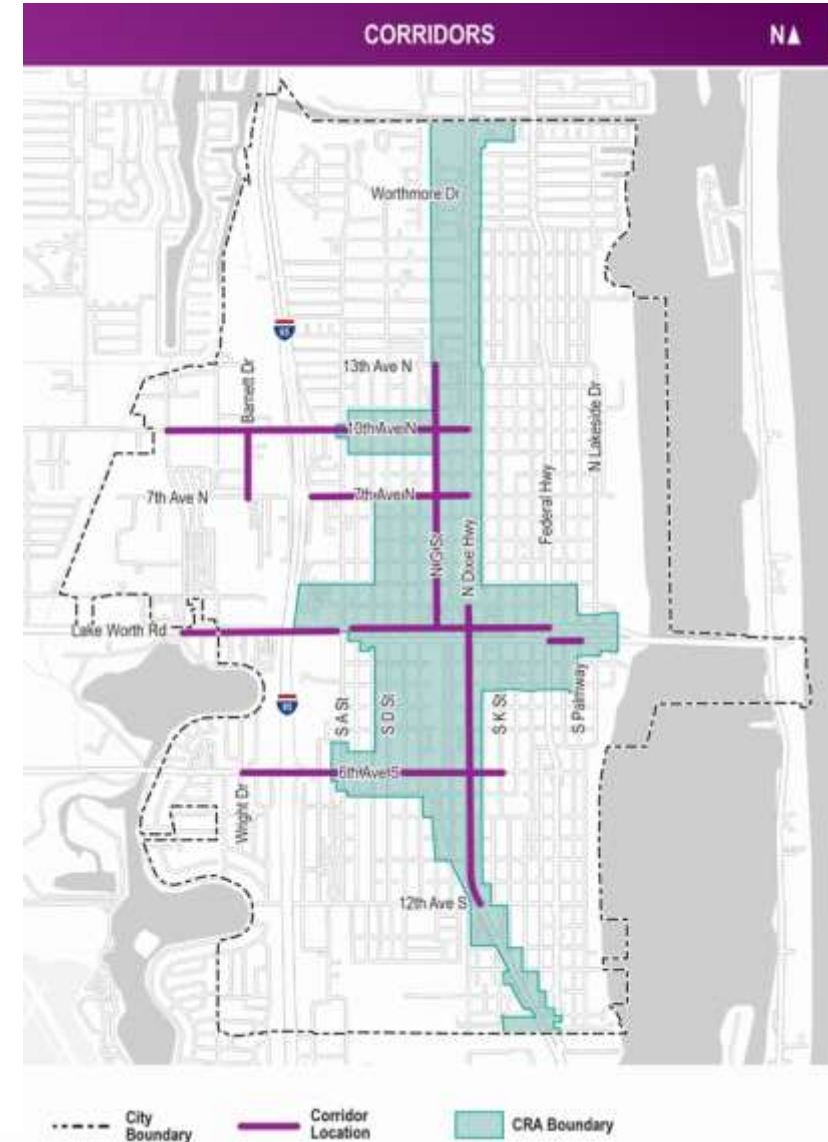




# Status Update – The Plan

## PROJECT OVERVIEW: CORRIDORS

	Speed Safety Cameras	Bicycle Lanes	Crosswalk Visibility Enhancements	Leading Pedestrian Interval	Medians and Pedestrian Refuge Islands	Pedestrian Hybrid Beacons	Road Diets (Roadway Reconfiguration)	Walkways	Longitudinal Rumble Strips and Stripes	Median Barriers	Backplates with Retroreflective Borders	Corridor Access Management	Dedicated Left- and Right-Turn Lanes at	Reduced Left-Turn Conflict Intersections	Systemic Application of Multiple Low-Cost	Yellow Change Intervals	Lighting	Local Road Safety Plans	Pavement Friction Management	Road Safety Audit
Corridor	0	1	0	0	0	0	2	4	1	1	0	0	0	0	0	0	5	10	0	10
<b>Dixie Highway</b> (2nd Ave N - 12th Ave S)										X							X	X		X
<b>6th Ave S</b> (Wright Dr - S K St)							X	X									X	X		X
<b>Lucerne Ave</b> (S A St Roundabout - N Federal Hwy)								X									X	X		X
<b>10th Ave N</b> (Boutwell Rd - N Dixie Hwy)								X										X		X
<b>Lake Worth Rd</b> (Lake Osborne Dr - I-95)							X										X	X		X
<b>Barnett Dr</b> (7th Ave N - 10th Ave N)								X	X									X		X
<b>Lake Ave</b> (S Federal Hwy - S Palmway)																	X	X		X
<b>N G St</b> (Lake Ave - 13th Ave N)		X																X		X
<b>7th Ave N</b> (N A St - N Dixie Hwy)																		X		X
<b>Lake Worth Rd</b> (I-95 to S A St Roundabout)																		X		X





# Summary – Recommended Strategies

Strategy Category	Action or Project
Tactical Urbanism	<ul style="list-style-type: none"> <li>• Create a list of demonstration, quick build and tactical urbanism projects</li> </ul>
Identifying Funding	<ul style="list-style-type: none"> <li>• Identify projects that meet multiple grant funding criteria</li> </ul>
Project Alignment	<ul style="list-style-type: none"> <li>• Align project list with Lake Worth Beach’s traffic calming program</li> </ul>
Comprehensive Plan Changes	<ul style="list-style-type: none"> <li>• For safety and mobility, add new policies and adjust outdated policies</li> </ul>
Mobility Management	<ul style="list-style-type: none"> <li>• Promote Transportation Demand Management</li> <li>• Work with the Palm Beach TPA on developing projects for the TIP/LOPP</li> <li>• Establish metrics and monitoring for assessing mobility equity</li> </ul>
Strategies for Vehicles	<ul style="list-style-type: none"> <li>• Prepare for vehicle electrification</li> <li>• Install speed safety cameras around school zones</li> <li>• Integrate parking study and mobility study strategies</li> </ul>
Strategies for Circulators	<ul style="list-style-type: none"> <li>• Park and Ride lots for Circuit</li> <li>• Pick up and drop off locations for Circuit</li> <li>• Conduct rider surveys</li> <li>• Assess and adjust circulator services</li> </ul>
Strategies for Pedestrians	<ul style="list-style-type: none"> <li>• Create a citywide shade study and action plan</li> <li>• Leverage Safe Routes to Schools</li> <li>• Alleyway improvements</li> </ul>
Strategies for Cyclist	<ul style="list-style-type: none"> <li>• Adopt the low-stress bicycling network</li> <li>• E-bike route demonstration projects</li> <li>• E-bike incentives</li> <li>• Additional bike racks</li> </ul>
Strategies for Transit	<ul style="list-style-type: none"> <li>• Facilitate transit oriented development (TOD)</li> </ul>

# Near Term Funding Schedule

USDOT SS4A  
Demonstration  
8/29/24

USDOT  
Reconnecting  
Communities  
9/30/24

FDOT Safety  
Grant Concept  
Paper  
February 2025

USDOT RAISE  
February 2025

USDOT SS4A  
Construction &  
Demonstration  
May 2025

Summer 2024

Fall 2024

Winter  
2024/25

Spring 2025

Summer 2025

PB TPA  
Local Initiatives  
Workshop  
November 2024

PB TPA  
Local Initiatives  
Pre-app Meetings  
Nov 24 – Jan 25

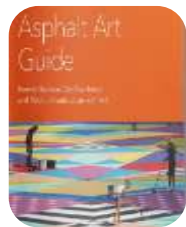
PB TPA  
Local Initiatives  
Application Due  
February 2024

PB TPA  
LOPP  
List adopted  
July 2025

PB TPA  
Transportation  
Alternatives  
Workshop  
November 2024

PB TPA  
Transportation  
Alternatives  
Pre-app Meetings  
Nov 24 – Jan 25

PB TPA  
Transportation  
Alternatives  
Pre-app Meetings  
Nov 24 – Jan 25





# Status Update – What is next?

## Commission Workshop



1. Commission to provide any final direction on content of Plan to staff and the WGI team.

## Public Comment

1. The Plan will be made available, in coordination with staff and through the City's website, for public comment.
2. Comments will be reviewed and incorporated with input from staff.

## Plan Transmittal

October 2024

1. The plan will be formally added to the City's Transportation Element of the Comprehensive Plan via Transmittal at the City Commission Meeting.



# Status Update – The Plan

## MOBILITY PLAN ALIGNMENT

Organization	Plan Name	Relationship to the Mobility Plan	Adoption
LWB Planning	Parking Plan	Changes to the parking program (e.g., pricing, time limits) could affect driver decisions and mode choice.	
LWB	Capital Improvements Plan	Includes projects for FY 2024/2025	October 2024
LWB	Open Space & Recreation Master Plan	Access to Parks	Underway as of Summer 2024
LWB	Carbon Neutral Initiative	Creating a Carbon Neutral element within the Comprehensive Plan that would include GHG reductions from transportation	January 2024
LWB / CRA	Envision Lake Worth Beach	Brochure with three alternative TOD projects and the Sustainability Bonus Incentive program	2019
LWB / CRA	Arts & Culture Master Plan	References to mobility: walking/jogging/cycling tours; consider cycling festival; build the downtown loop	Complete 2018
CRA	Bicycle Network Plan	Develop list of adopted recommendations and compare 2009 map to low-stress network	Adopted 2009; Adopted 2010
CRA	Wiener Museum of Decorative Arts P3	Potential parking structure to replace surface lot at 19 S K St	Fall 2024 agreement
CRA	Master Comp. Bicycle Transportation Plan	Recommendations for Lake Worth Rd from Military Trl to Ocean Blvd (note, the striping on Lake and Lucerne + Boutwell is underway; also, improvements along Lake Osbourne). Recommendation to add racks	March 2011
Palm Tran	Transit Development Plan (Accelerate 2031)	Palm Tran undertaking study of all bus stops, transit signal priority, 561 plan, TOD	2022-2031
Palm Beach TPA	US-1 Multimodal Corridor Study	Increased transit service	Approved May 2018
Palm Beach TPA	561 Plan	Includes Lake Worth Rd	On-going
Palm Beach TPA	Unified Work Plan (FY 2025/2026)	Includes targets for working with municipalities on grants, project prioritization, and outreach	Adopted May 16, 2024, in effect July 1



# Status Update – The Plan

## MOBILITY PLAN ALIGNMENT

Organization	Plan Name	Relationship to the Mobility Plan	Adoption
Palm Beach TPA	Transportation Improvement Plan (5-year TIP)	Included in the <a href="#">List of Priority Projects</a> (LOPP). 1. Design funding for lane repurposing project in Lake Worth Beach (priority #17-1g US-1: Dixie/Federal Junction to Gregory Rd) 2. Transit Signal Prioritization on Lake Worth Rd 3. Lake Worth Rd from Erie St to A St – Roundabout 4. Lake Ave/Luceme resurfacing project	Approved 2024 1. Application Underway (FDOT) 2. Process is On-going 3. Construction Underway 4. Construction Underway
Palm Beach TPA	Local Initiatives	Call for Projects	July -Oct 2024
Palm Beach TPA	L RTP	Vision 2050 will include project for the 20-year time horizon	Estimated adoption in Dec. 2024
Treasure Coast Regional Planning Council	Placemaking	Proposed projects for the I-95 Underpass on Lake Worth Rd that would serve as improved E-W link	TBA
South Florida Regional Transportation Authority (SFRTA)	Parking Lot Sale	SFRTA is considering selling its second parking lot on Lake Worth Rd. This could open land for TOD	TBA
Florida Department of Transportation	Lake Ave/Luceme resurfacing project	Included in the <a href="#">List of Priority Projects</a> (LOPP). 1. Design funding for lane repurposing project in Lake Worth Beach (priority #17-1g US-1: Dixie/Federal Junction to Gregory Rd) 2. Transit Signal Prioritization on Lake Worth Rd 3. Lake Worth Rd from Erie St to A St – Roundabout 4. Lake Ave/Luceme resurfacing project	Construction Underway
Florida Department of Transportation	Dixie Highway lane repurposing	Included in the <a href="#">List of Priority Projects</a> (LOPP). 1. Design funding for lane repurposing project in Lake Worth Beach (priority #17-1g US-1: Dixie/Federal Junction to Gregory Rd) 2. Transit Signal Prioritization on Lake Worth Rd 3. Lake Worth Rd from Erie St to A St – Roundabout 4. Lake Ave/Luceme resurfacing project	Application Underway (FDOT)
Florida Department of Transportation	Lake Osbourne Drive	Pedestrian improvements	Complete
Coastal Resilience Partnership	Multi-Jurisdictional Climate Change Vulnerability Assessment	Mobility-related recommendations: shade, safe biking, and walking connections in socially vulnerable areas; integrating compact development, sustainable transport, blue and green infrastructure, and equity; Identify grant opportunities to fund adaptation strategies	July 2021



# Status Update – The Plan

Safety Countermeasure	Associated Benefit	Phasing	Funding Opportunities
Appropriate Speed Limits for all Road Users	Reduces risk of serious and fatal crashes when combined with speed management strategies	Near Term	SS4A, TPA TA,
Speed Safety Cameras	Effective and reliable technology to supplement more traditional methods of enforcement, engineering and education.	Near to Mid	SS4A (I)
Bicycle Lanes	Align with Safe System Approach principle of separating VRUs and enhance safety and comfort for cyclists.	Quick Build / Near Term	SS4A (D). AIITP, FDOT Restriping, TPA LI*, TPA TA, Non-Profit
Crosswalk Visibility Enhancements	Provide guidance to VRUs on deciding where to cross. Advance signage and pavement markings sets driver and pedestrian expectations minimizing the surprise element.	Mid to Long	SS4A (I & D), RAISE, AIITP, TPA LI*, TPA TA,
Leading Pedestrian Interval	Provides increased visibility of crossing pedestrians, reduces conflict between pedestrians and vehicles.	Quick Build	SS4A (I & D), FDOT Safety Subgrant, TPA TA, Non-Profit
Medians and Pedestrian Refuge Islands in Urban and Suburban Areas	Allows pedestrians to cross one direction of traffic at a time and reduces dilemma zones while crossing multi-lane roadways.	Near to Mid	SS4A (I & D), FDOT Safety Subgrant, TPA TA**
Pedestrian Hybrid Beacons	Effective at locations where there are not sufficient gaps in traffic, $\geq 3$ lanes, $> 9,000$ AADT or speed limits $> 35$ mph	Mid Term	SS4A (I & D), RAISE, TPA TA,
Rectangular Rapid Flashing Beacons (RRFB)	Enhance pedestrian visibility, increase driver awareness at uncontrolled marked crossings	Near Term	SS4A (I & D), FDOT Safety Subgrant, TPA TA,



# Status Update – The Plan

Safety Countermeasure	Associated Benefit	Phasing	Funding Opportunities
Road Diets (Roadway Reconfiguration)	Provide better mobility and access for all road users, improve safety, provide traffic calming	Near Term	SS4A (I & D), FDOT Safety Subgrant, TPA TA,
Walkways	Direct and connected network of walking routes to community hubs thus promoting walking as an equitable, accessible and a safe mode choice.	Mid to Long	SS4A (I & D), RAISE, FDOT Safety Subgrant
Median Barriers	To reduce cross-median crashes and to limit turning movements	Ongoing	SS4A (I & D), TPA TA, Non-Profit
Backplates with Retroreflective Borders	Enhance visibility of traffic signal head both during daytime and at night.	Quick Build	SS4A (I & D), RAISE, TPA TA,
Corridor Access Management	Strategic corridor access management balances mobility and safety by balancing land use management and driveway consolidation, closure.	Near to Mid	SS4A (I & D), TPA TA,
Dedicated Left- and Right-Turn Lanes at Intersections	Dedicated turn lanes reduce the risk of serious and fatal injury crashes especially with left turn lanes	Mid to Long	
Reduced Left-Turn Conflict Intersections	Displace left turns reducing higher severity crash types such as head-on and angle.	Near to Mid	SS4A (I & D), RAISE
Roundabouts	Efficient at moving people, slow speeds reduce risk of severe crashes considerably, provide a more suitable environment for walking and cycling	Mid to Long	SS4A (I & D)
Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections	Advanced signage and enhanced pavement markings, removal of obstructions result in increased driver awareness and recognition of potential conflicts with sufficient time to react.	Long Term	SS4A (I), RAISE, TPA TA,
Yellow Change Intervals	Reduced red-light running which often leads to severe crashes.	Quick Build	SS4A (I & D), FDOT Restriping, FDOT Safety Subgrant, TPA TA,
Lighting	Provide personal security and the obvious benefit of visibility for all road users, especially for those that are disadvantaged.	Near to Mid	TPA TA**
Pavement Friction Management	Reduces risk of friction related crashes.	Mid to Long	SS4A (I), TPA TA,





# Status Update – The Plan

## COST ESTIMATES: INTERSECTIONS

#	Name	CRA	# of Projects	Rough Cost Estimate
1	Lake Worth Rd & Holiday Dr	Outside	8	\$200,760 - \$363,227
2	Lake Worth Rd & Erie St	Outside	6	\$1,768,500
3	6th Ave S & S Dixie Hwy	Inside	10	\$779,900
4	Barnett Dr & 10th Ave N	Outside	10	\$46,134 - \$47,886
5	S F St & 6th Ave S	Inside	9	1,870,760 - \$2,033,227
6	S H St & 6th Ave S	Inside	10	\$1,870,760 - \$2,033,227
7	6th Ave S & S E St	Inside	3	\$0
8	Lake Worth Rd & Akron St	Outside	6	\$29,900
9	S E St & Lake Ave & N E St	Inside	7	\$117,260 - \$279,727
10	N D St & Lucerne Ave	Inside	7	\$117,260 - \$279,727
11	6th Ave S & Wright Dr	Outside	3	\$1,740,000
12	Cleveland St & Lake Worth Rd	Outside	2	\$0
13	Lucerne Ave and N Federal Hwy	Inside	6	\$0
14	6th Ave S & S D St	Inside	5	\$1,740,000
15	Lake Worth Rd & N I-95	Inside	6	\$30,219 - \$31,971
16	6th Ave S & S C St	Inside	6	\$1,753,500
17	S Dixie Hwy & 2nd Ave S	Inside	2	\$16,400
18	Barnett Dr & Madrid Ave	Outside	2	\$15,915
19	7th Ave S & S Dixie Hwy	Inside	4	\$750,000
20	10th Ave N & N Dixie Hwy	Inside	5	\$1,756,400
21	S Dixie Hwy & 8th Ave S	Inside	6	\$2,517,319 - \$2,519,071
22	1st Ave S & S Dixie Hwy	Inside	5	\$99,360 - \$261,827
23	N Dixie Hwy & 2nd Ave N	Inside	4	\$16,400
24	S K St & 6th Ave S	Outside	3	\$16,400
25	S B St & Lake Ave & N B St	Inside	5	\$102,260 - \$264,727

## COST ESTIMATES: CORRIDORS

Roadway	Boundary	CRA	# of Projects	Rough Cost Estimate
Dixie Highway	2nd Ave N - 12th Ave S	Inside	4	\$1,923,802 - \$2,283,821
6th Ave S	Wright Dr - S K St	Partial	5	\$1,381,514 - \$1,960,997
Lucerne Ave	Roundabout – N Federal Hwy	Inside	4	\$755,736 - \$1,141,626
10th Ave N	Boutwell Rd - N Dixie Hwy	Partial	3	\$432,476 - \$648,714
Lake Worth Rd	Lake Osborne Dr - I-95	Outside	4	\$403,057 - \$560,080
Barnett Dr	7th Ave N - 10th Ave N	Outside	4	\$95,126 - \$142,386
Lake Ave	S Federal Hwy - S Palmway	Inside	3	\$73,938 - \$112,179
N G St	Lake Ave - 13th Ave N	Inside	3	\$8,407 - \$20,425
7th Ave N	N A St - N Dixie Hwy	Partial	2	\$0
Lake Worth Rd	I-95 to S A St Roundabout	Inside	2	\$0



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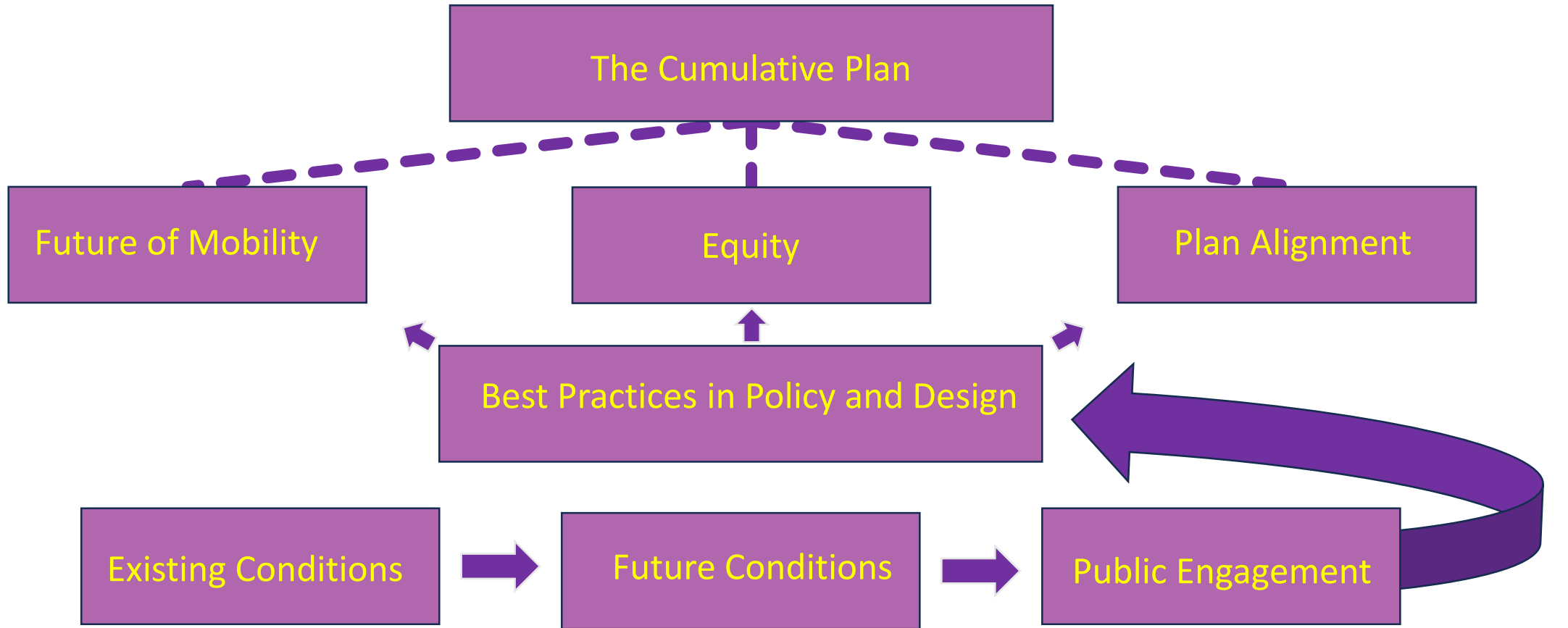


# Status Update – The Plan





# Status Update – The Plan



Safety



Access



Funding



Equity



Sustainability

