



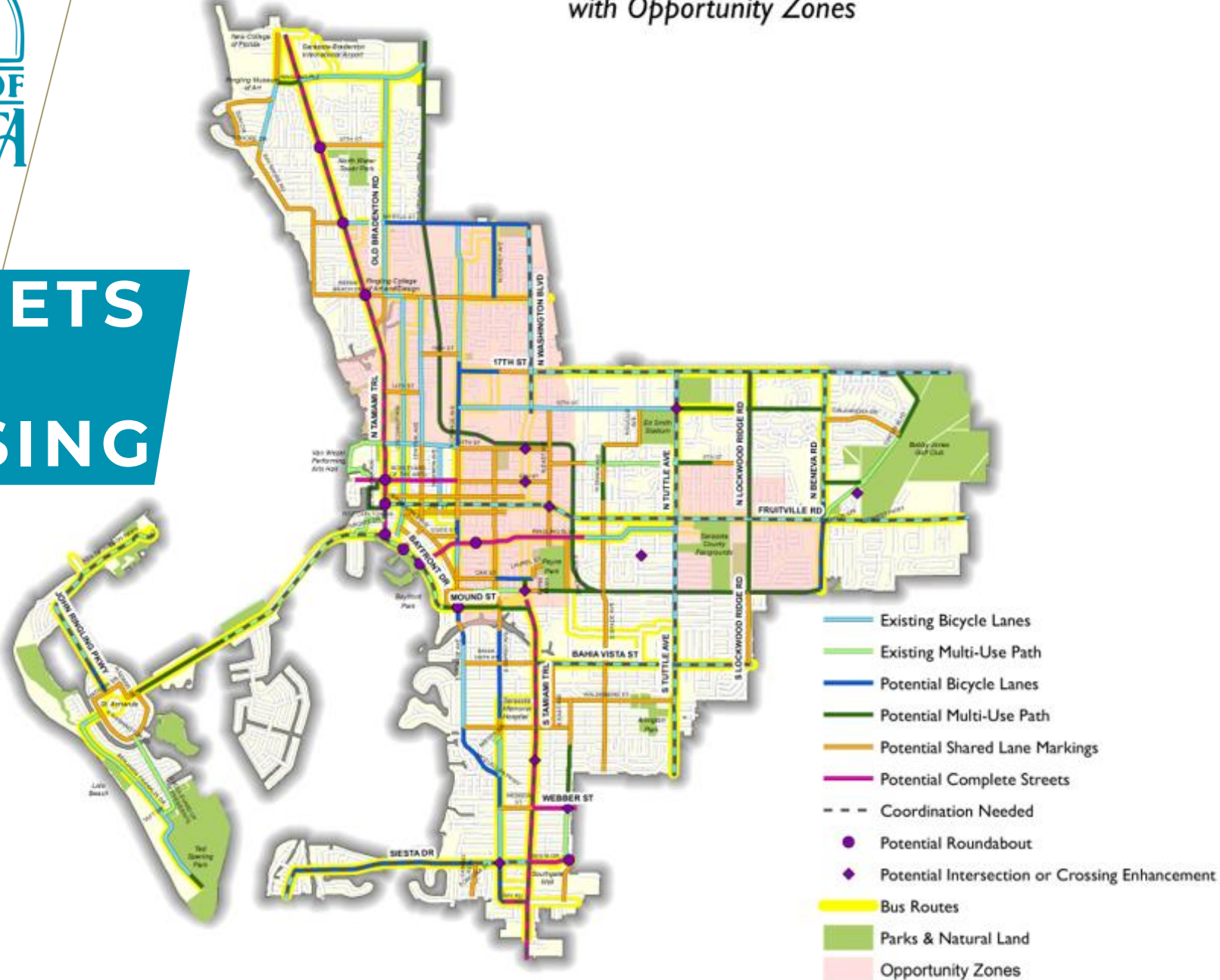
# COMPLETE STREETS & LANE REPURPOSING

**Nikesh Patel**

City Engineer

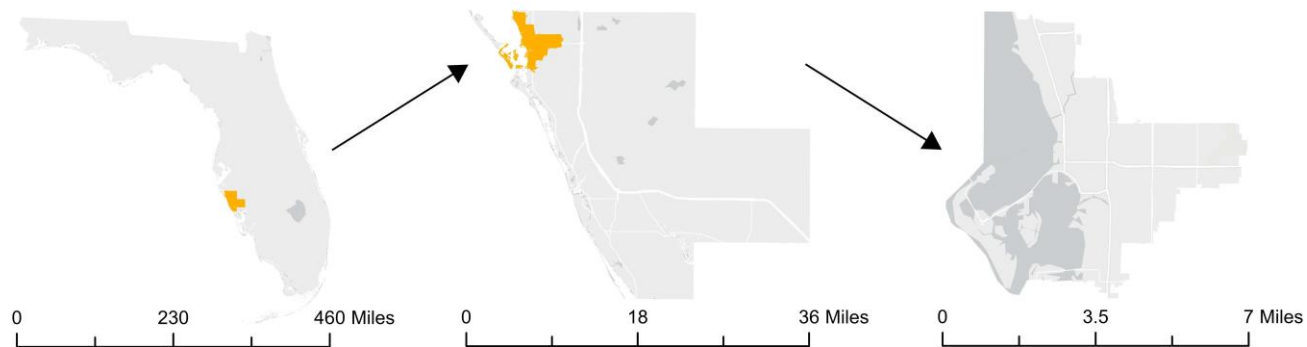
PE, PTOE, CPM, CGC, AICP

## Multimodal Connections Plan *with Opportunity Zones*





# CITY OF SARASOTA

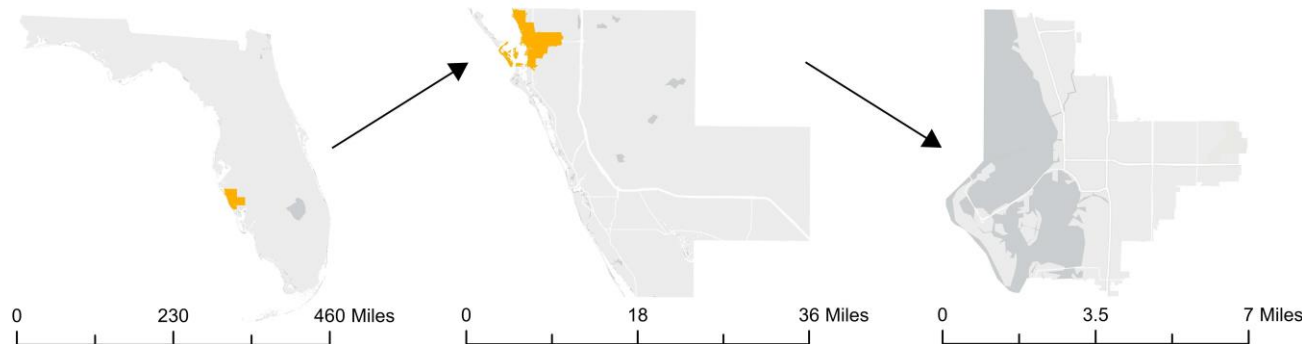




# CITY OF SARASOTA



- Population: ~ 60,000
- Roundabout: 13
- Traffic Signals: 93
- City Streets: 232 miles
- Street Lights: 4,535
- No. 1 in Florida & Top 10 places to live in the U.S.







# RINGLING TRAIL COMPLETE STREET

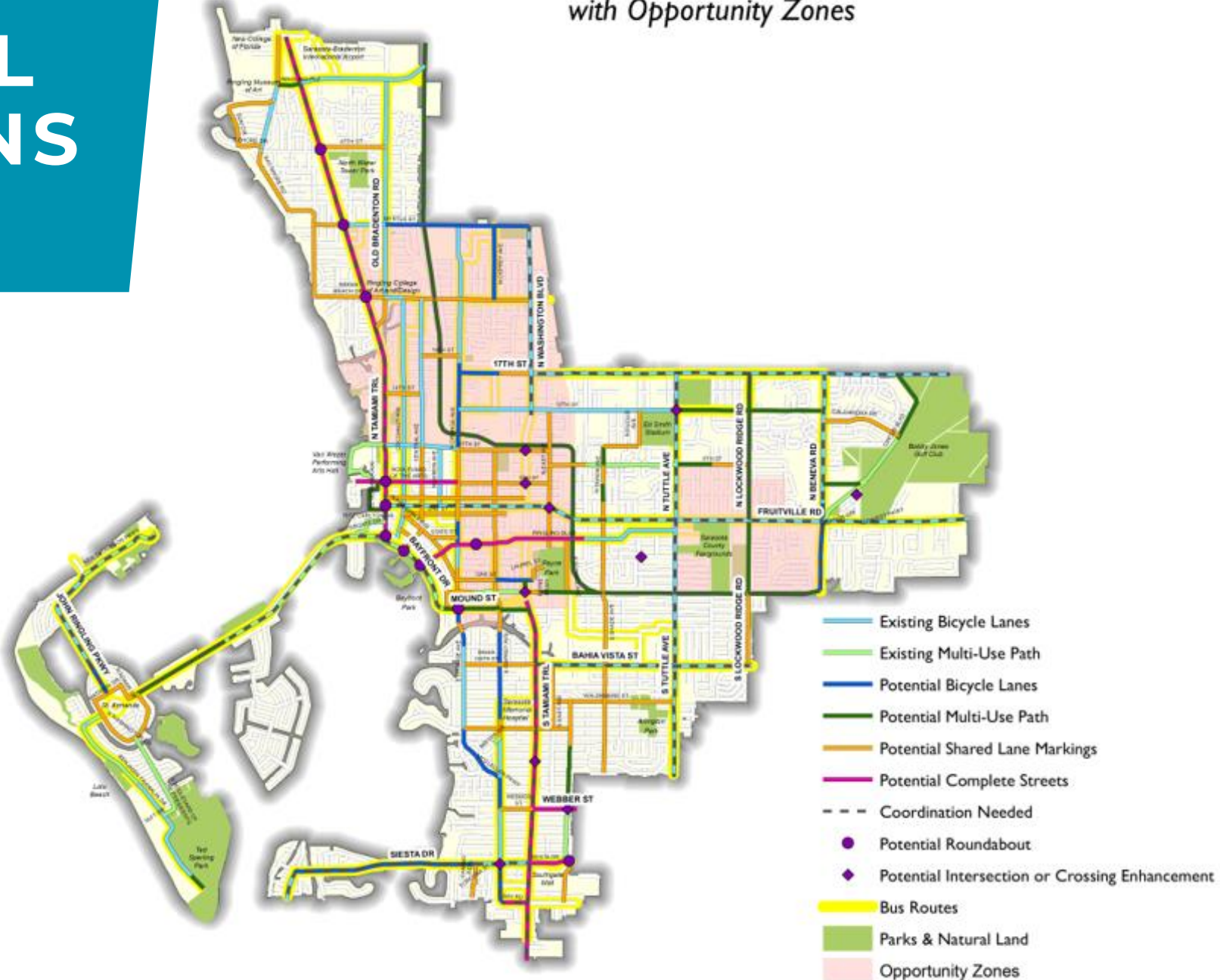
- Case Study for lane repurposing project to reassign roadway space to achieve other purposes such as safety, economic development, and mobility for all users.



# MULTIMODAL CONNECTIONS PLAN

- City Commission adopted the plan in 2019
- Ringling Trail Complete Streets

## Multimodal Connections Plan with Opportunity Zones





# RINGLING TRAIL COMPLETE STREETS



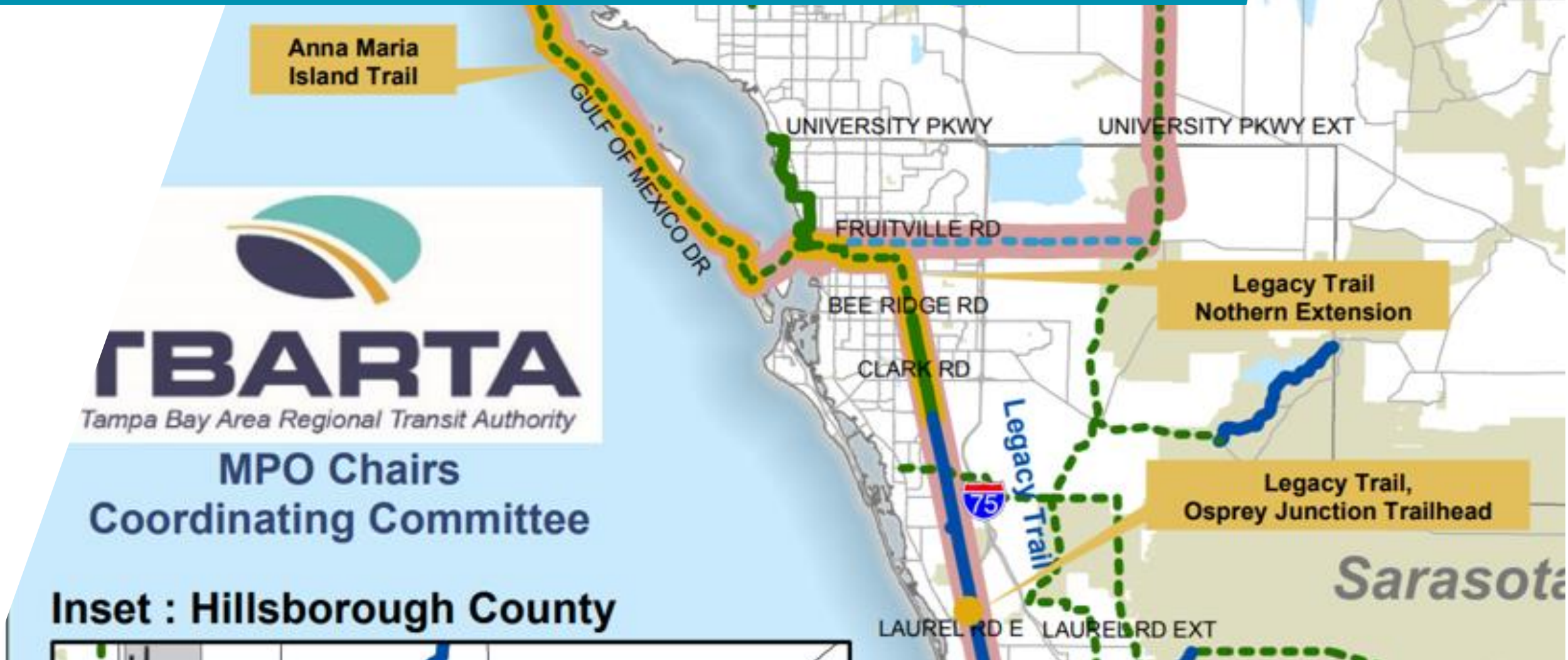


# PROJECT CORRIDOR



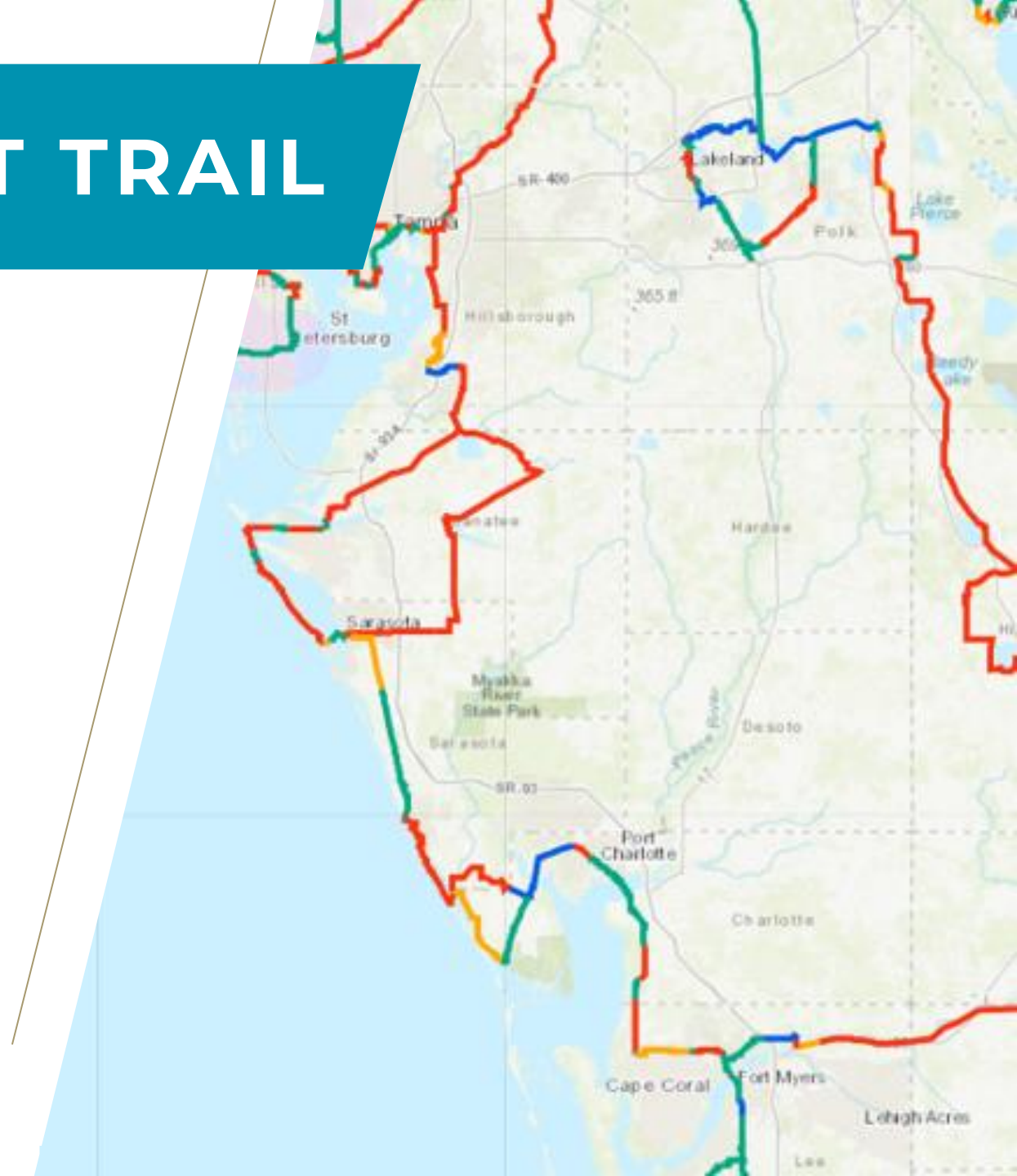


# REGARDING THE ALIGNMENT PLANNING CONSISTENCY OF THE MPO-SUN TRAIL



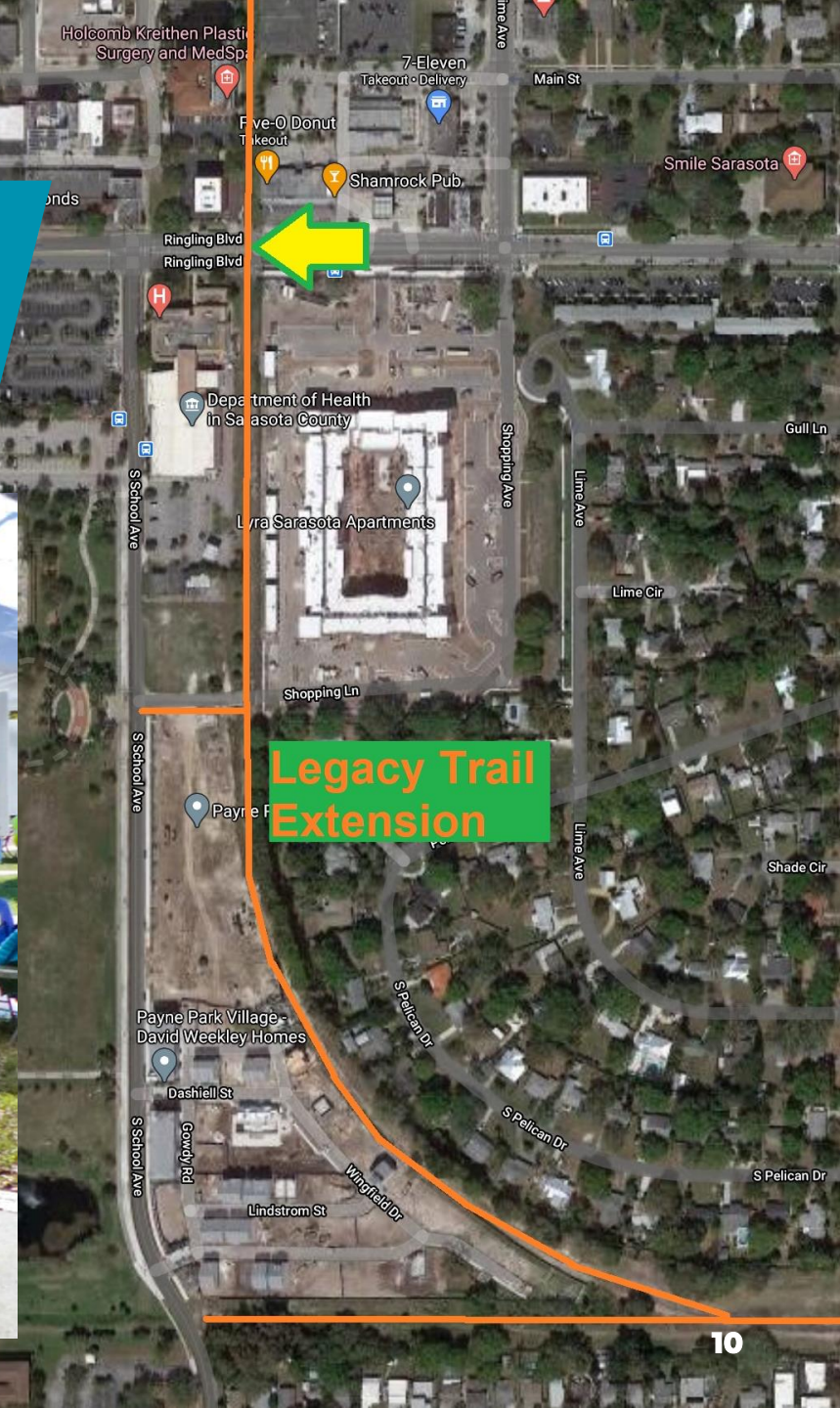
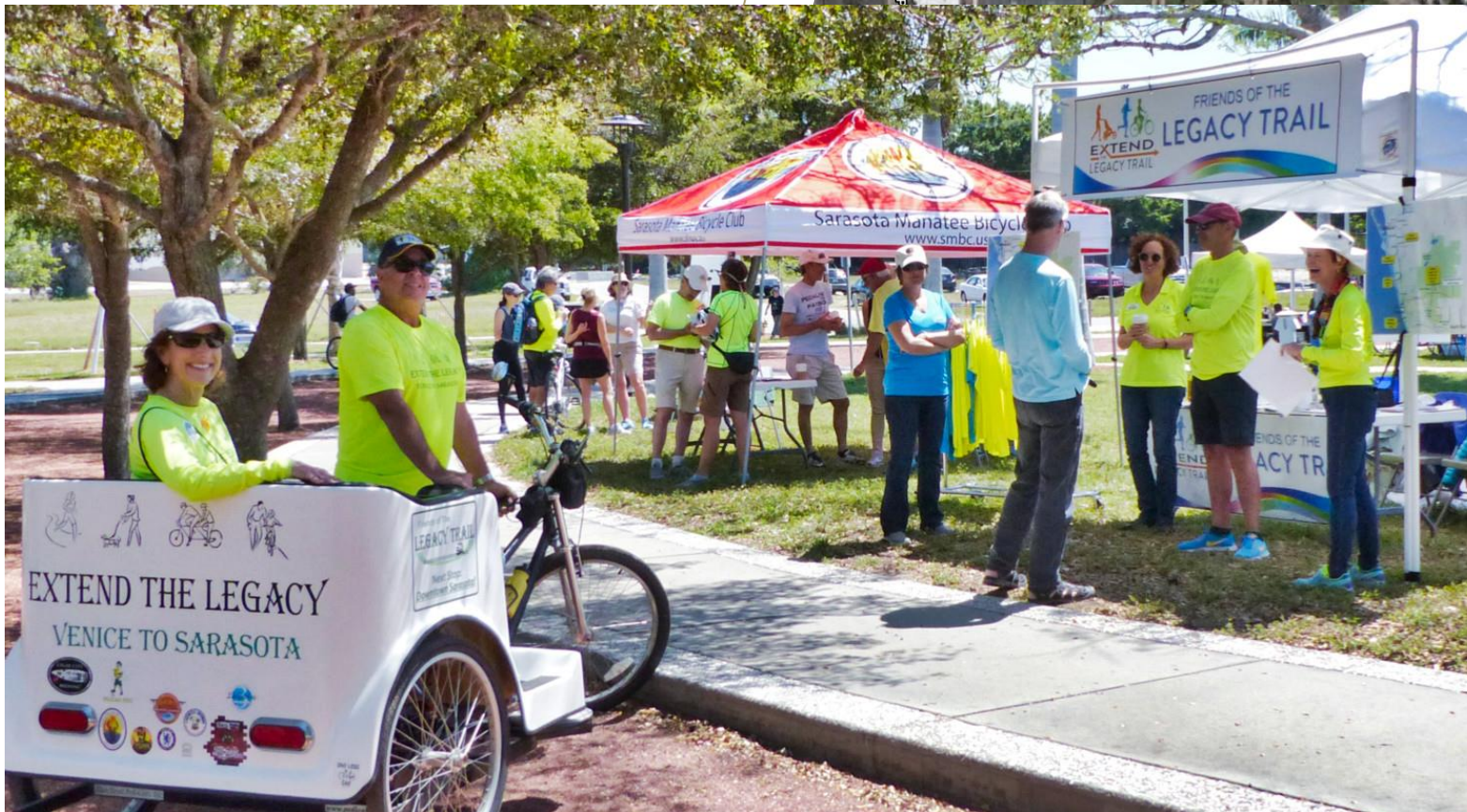
# FLORIDA GULF COAST TRAIL

- Completing the path Collier County to Pinellas County
- Statewide Sun TRAIL Network





# ENTERING DOWNTOWN





# LEGACY TRAIL EXTENSION

- 500,000 Users Per Year





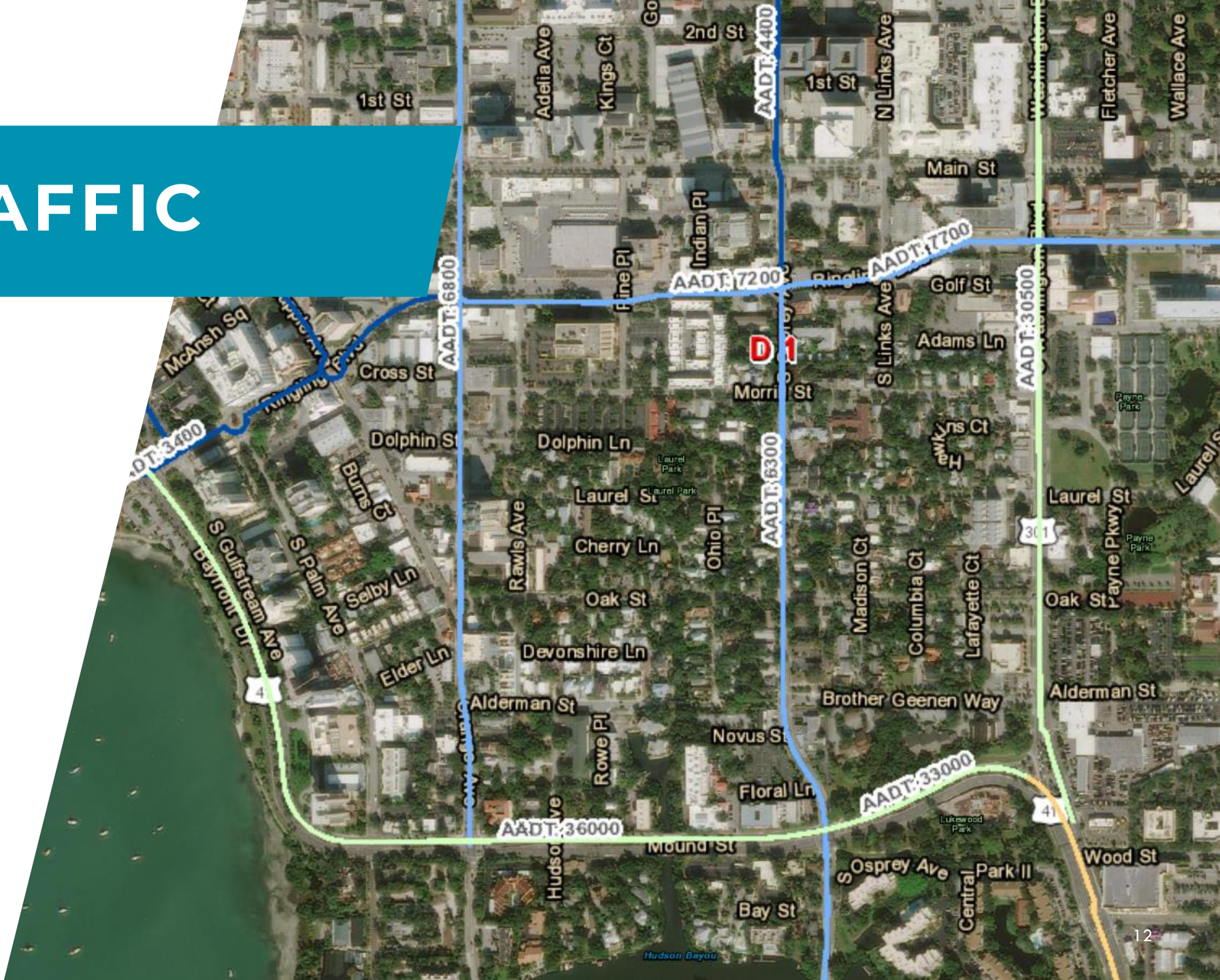
# LIGHT TRAFFIC

Approaching US 41,  
traffic goes down.

Less than 10,000  
AADT: Great  
candidate. Capacity  
will most likely not  
be affected.

10,000-20,000: Good  
candidate. Review  
signal timing.

More than 20,000:  
Capacity may be  
affected.





# TWO-LANE AT ENDS







# CONCEPT PLAN KEY DECISION

- Two-way or one-way separated bike lanes?
- Simpler and safer to have one-way lanes.
- Don't have to cross bicyclists back over at the ends.  
Save more parking and wouldn't have vehicles on the wrong side of the median.



# LANE REPURPOSING

Ringling Blvd. is not an evacuation route.

Great range for reimagining as a Complete Street.





# TRAFFIC STUDY – KEY FINDINGS

- Pre-COVID traffic counts were used.
- Traffic has been decreasing overall the past 5 years and is lower than it was in 2002.  
14,920 cars in 2002 down to 7,900 in 2019.
- Assuming 1%/yr traffic growth through 2040, repurposing the outside lanes will generally result in good traffic flow and will remain within the City's adopted LOS.
- Four (4) right-turn movements to monitor.
- Left turn to be added at Ringling Blvd. and East Ave.





## Public Survey

- Get a sense of preferences

- Get overall feedback

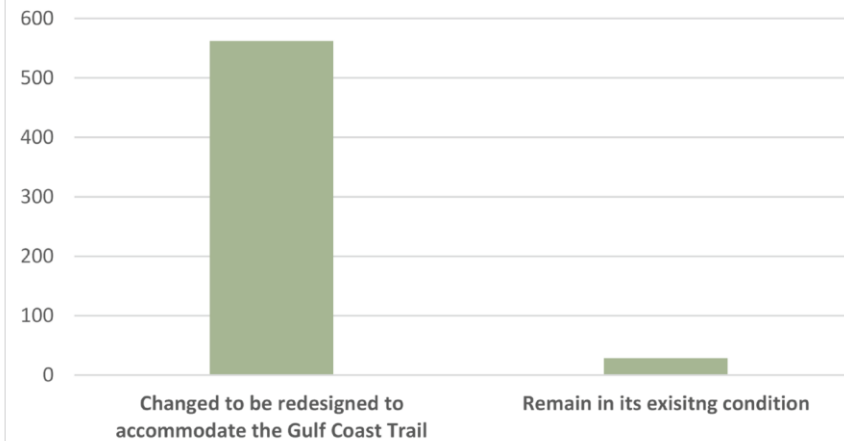
- Note comments

Mailers sent out to adjacent parcels

Neighborhoods and other stakeholder groups contacted to participate

## OUTREACH – OVERWHELMINGLY POSITIVE RESULTS

What is your overall vision for Ringling Blvd?





# DESIGN APPROACH

Give a whole-hearted invitation for bicyclists to get out and bike.



Imagine a relative bicycling it.


Would you want to bike it?






# STAKEHOLDER ENDORSEMENTS




**DID OPERATIONS MANAGER eREPORT DECEMBER 1, 2020**  
Distributed to DID Taxpayers, City Commissioners, City Manager, Deputy City Manager, City Staff, Downtown Organization Leaders, Media, DID Consultants & Contractors and Visitors and distributed throughout the report. The effort is generally distributed the week before each monthly board meeting.


**ACTIONS & AGENDAS**  
**October 29 Board Action Headlines**



**W.A.N.E. Tree Support System Maintenance Approved**  
 To keep our street and park trees looking like this.




**More Holiday Décor Funded By The DID**



**Unanimously Endorsed**  
 Ringling Trail endeavors to make it easy and safe for trail users to get from the Legacy Trail at Payne Park over to Downtown's shops, offices, homes and parks.

**December 1, 2020 Agenda Items**  
 10:00 a.m. City Commission Chamber, City Hall, 1565 First Street, Sarasota, Florida 34236  
 Citizens wishing to provide public input in person during the meeting should report to room 112 to be escorted to the Chamber when prompted by the staff member in attendance. Citizens may view and listen to the proceedings via live streaming through the City's website



DATE: January 9, 2021

TO: Mayor Hagen Brody, Vice Mayor Eric Arroyo, Commissioners Jen Ahearn-Koch, Liz Alpert and Kylie Battie

CC: Director of Planning Steven Cover, Transportation Planner Colleen McGue and Deputy City Engineer Dan Ohrenstein

FROM: Eileen Normile, President, Downtown Sarasota Condo Assoc.  
 Roger Barry, Chair of DSCA Transportation Committee

RE: Ringling Bicycle Trail

The Board of Directors of the Downtown Sarasota Condominium Association (DSCA) has enthusiastically endorsed the construction of the Ringling Bicycle Trail from the Legacy Trail to Pineapple Avenue in downtown Sarasota. Thousands of people are currently using the Legacy Trail and with its completion to Fruitville Road significant additional numbers of people will have access to the trail.

We endorse the construction of the Ringling Trail because:

Many downtown condominium residents have bicycles and seek a safe place to ride. The Ringling Bicycle Trail would provide easy and safe access to the Legacy Trail.

The bicyclist using the Legacy Trail would find downtown Sarasota as a safe and interesting destination enhancing downtown businesses.

The Ringling Bicycle Trail would help connect the Legacy Trail to the Bay Front and to the MURI which leads to St. Armand's and the barrier Islands.

A safe downtown bicycling trail will encourage the use of bicycles for citizen health and recreation in addition to reducing the number of vehicles on the road. The major complaint about not using our bicycles is there are few places bicyclists feel safe. A safe connection from downtown to the Legacy Trail will enthusiastically be received.

From: marcari@srqmortgages.com <marcari@srqmortgages.com>  
 Sent: Thursday, December 17, 2020 2:08 PM  
 To: Nancy Kelly <Nancy.Kelly@sarasotaFL.gov>  
 Cc: Laurie Hall (laurelkhall@gmail.com) <laurelkhall@gmail.com>  
 Subject: LPNA Board

The Laurel Park Neighborhood Association Board has voted to endorse the construction of the Ringling Trail, a new project to connect the Legacy Trail to downtown Sarasota and the surrounding neighborhoods.

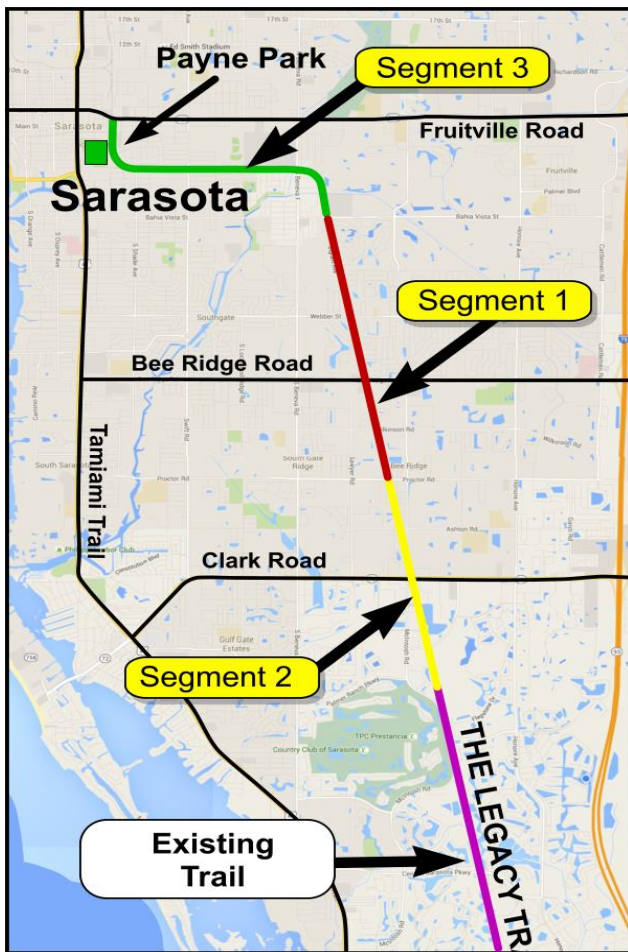
Yours truly,  
**Matthew J. Arcari**  
**VP Branch Manager-Retail Division**  
 SRQ Branch Northpointe Bank  
 1800 Second Street, Ste. 855  
 Sarasota, FL 34236  
**941.780.0429 Direct**  
**888.780.0429 Fax**  
**NMLS - 244710**



**FRIENDS OF THE LEGACY TRAIL**



# THE LEGACY TRAIL EXTENSION IN SARASOTA COUNTY WAS COMPLETED IN MARCH 2022.





# RINGLING TRAIL TYPICAL SECTION

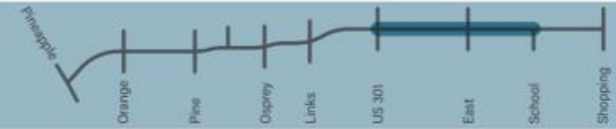
## SEGMENT 2

US 301 to School Ave

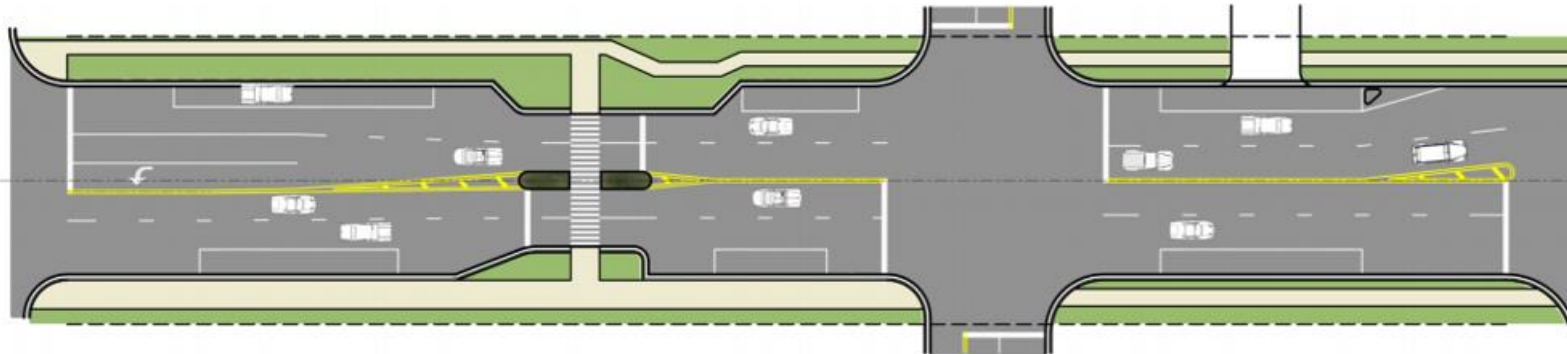
ROW Width: 100'  
Curb to Curb Width: 68'  
Parking Spaces: 57  
Speed Limit: 25 mph

Characteristics:

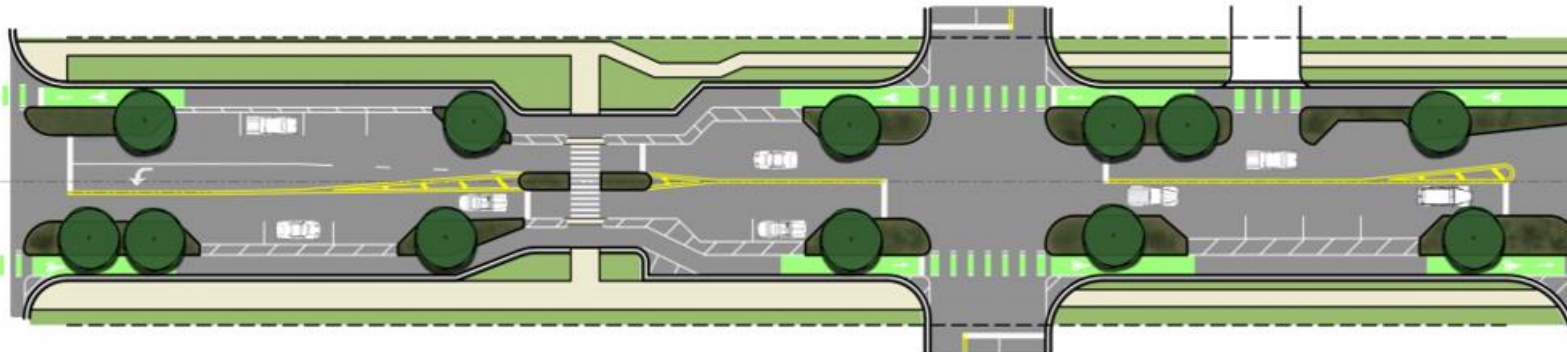
- Parallel parking both sides of street
- Municipal/Law Enforcement buildings adjacent
- High traffic mid-block pedestrian crossing



### EXISTING CONDITIONS

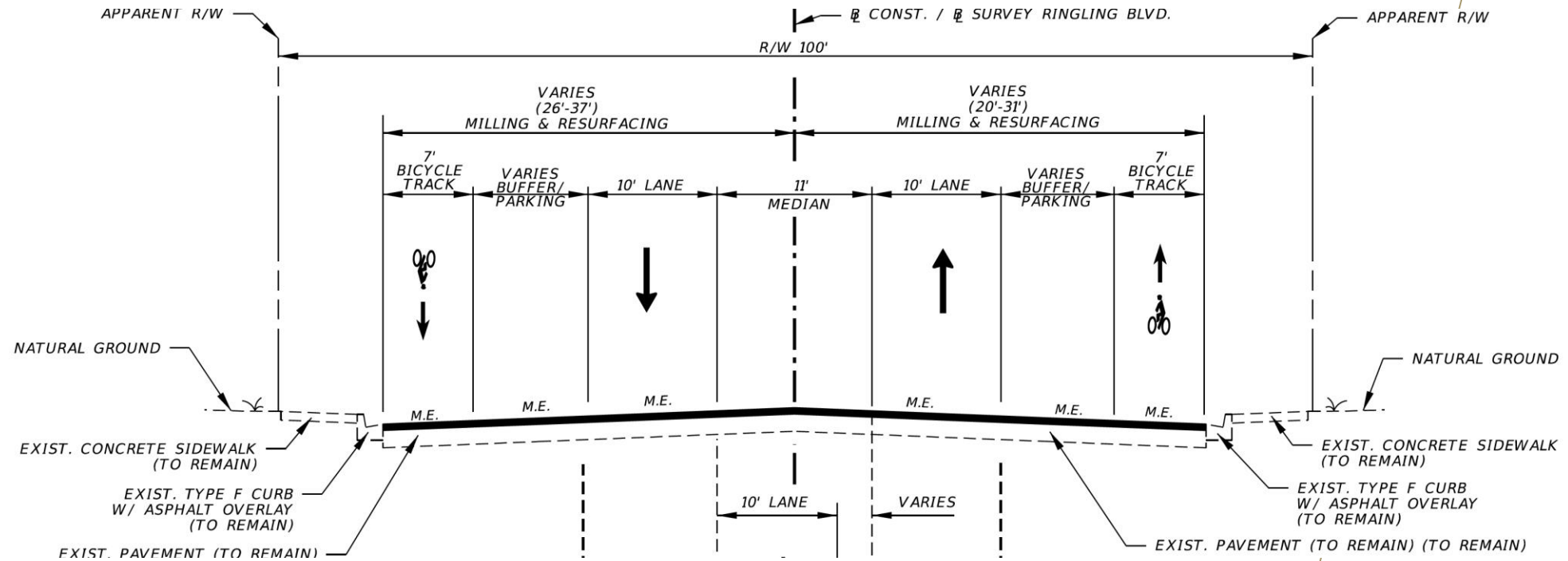


### PROTECTED BIKE LANE





# CROSS-SECTION – EAST OF US 301





# DESIGN/BUILD

Ajax Paving of Florida, LLC was selected as the contractor

Burgess & Niple Civil Engineering

DWJA Landscape Architecture

Total cost for 1-mile corridor:  
\$2,758,477.40.

Design

Milling & Resurfacing

Striping, Signage, Marking, & Signals

Landscape Islands & Irrigation

ADA Ramps & Bus Landing Islands



**dwja**  
LANDSCAPE ARCHITECTS  
DAVID W. JOHNSTON  
ASSOCIATES



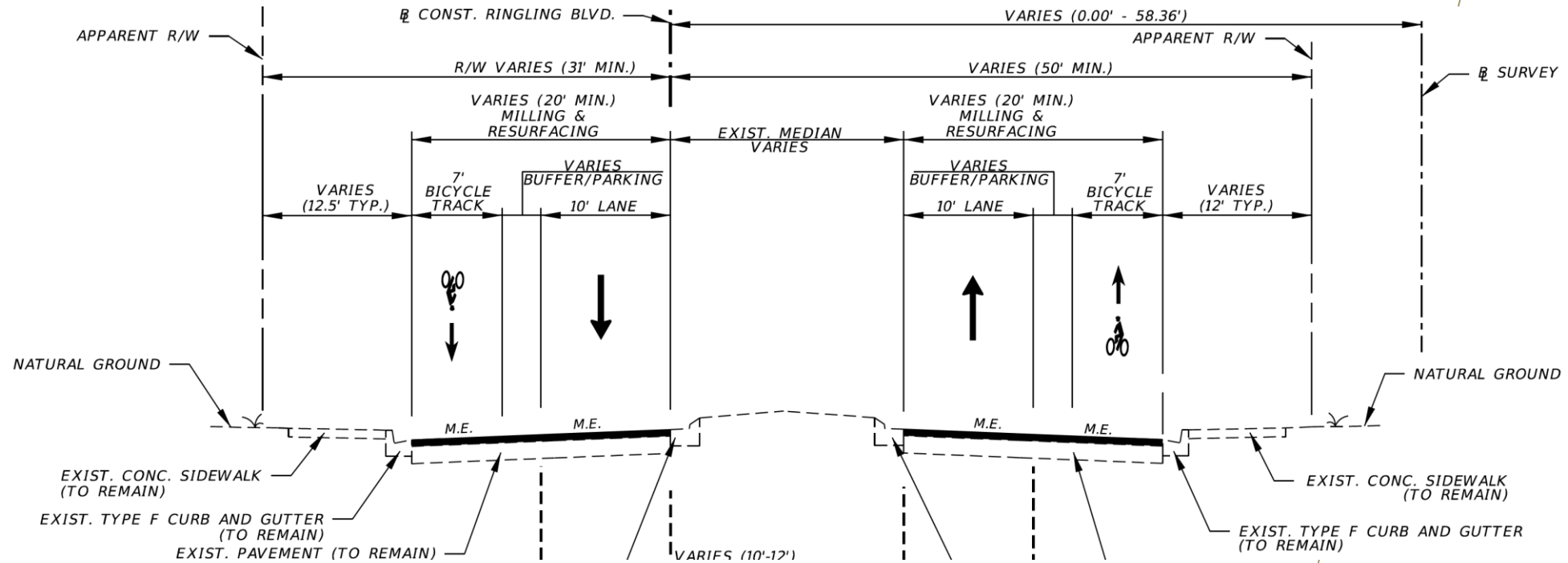


# BEFORE & AFTER





# CROSS-SECTION – WEST OF US 301



# BUS LANDINGS

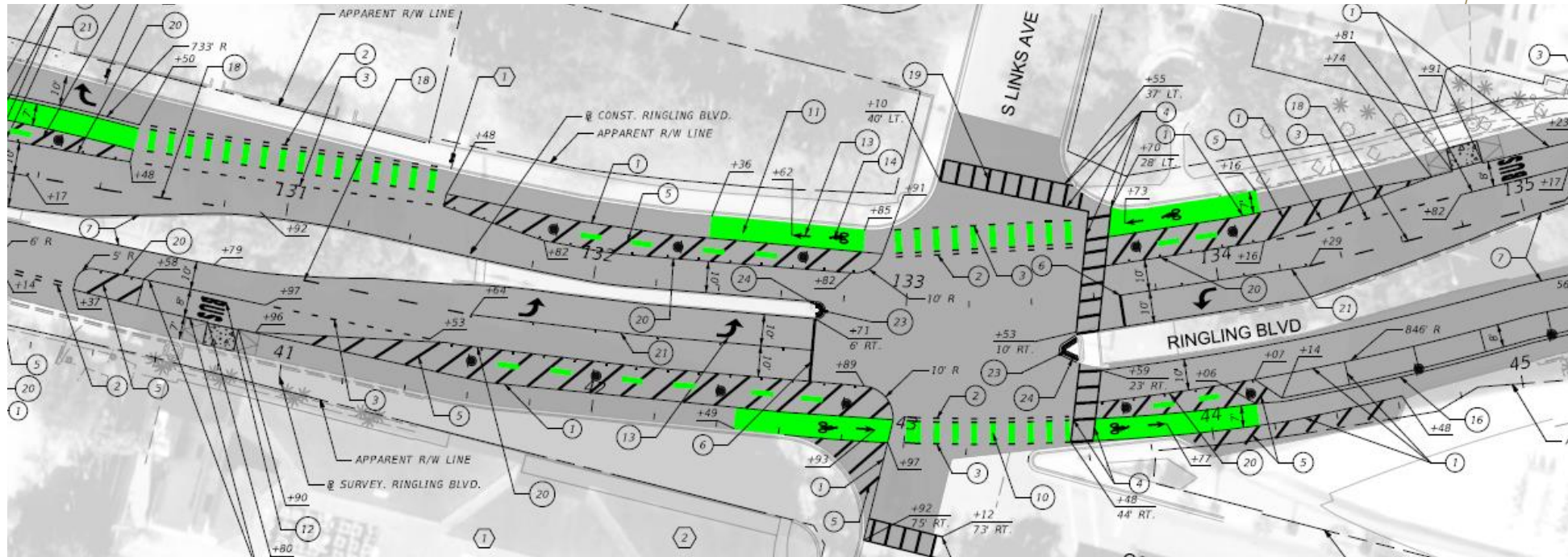




# LANDSCAPE ISLANDS



# GREEN PARKING STOPS







## GREEN PARKING BUMPERS

- ITE and other states utilize parking bumpers
- Low speeds 25 mph or less



# BEFORE & AFTER

- Parking Bumper





# BIKE RAMPS AT ROUNDBABOUTS





# LEGACY TRAIL CONNECTION





# RINGLING TRAIL COMPLETE STREETS







# CONSTRUCTION

Innovative MOT & Construction  
Phasing

Obstacles:

- 2 declared natural disasters
- Unforeseen conditions

Stakeholder Coordination

Communication Outreach





# CONSTRUCTION

May 2022 – December 2022

Mill & resurface entire mile

Skipped areas to be redone in the near future

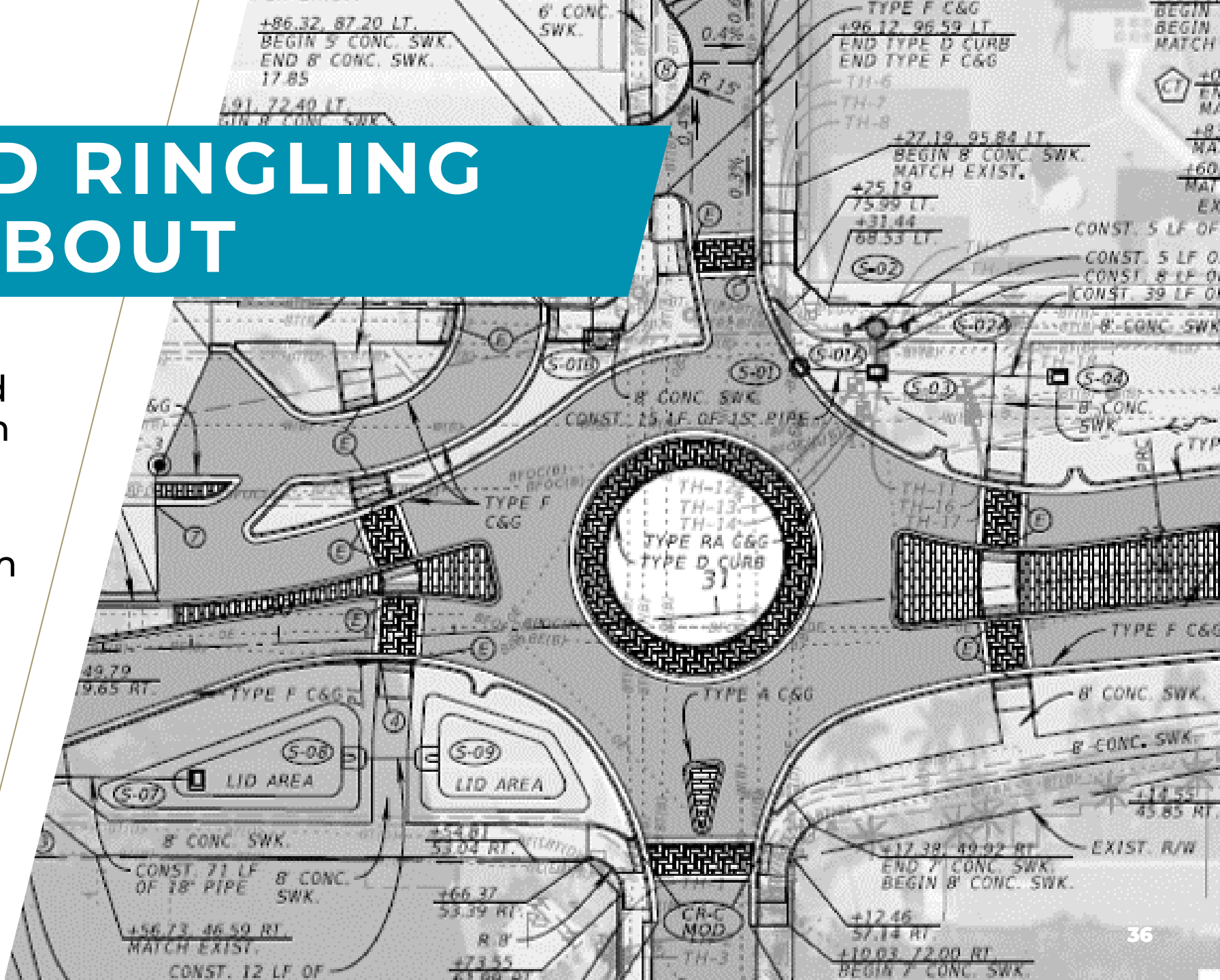
US 301 intersection done at night

Irrigation lines installed by directional bore

Getting-used-to phase for drivers and delivery vehicles

# PINE AND RINGLING ROUNDAABOUT

- Invitation to Bid for Construction May 2023
- FDOT Local Agency Program (LAP) Project







# CONSTRUCTION

Innovative MOT & Construction  
Phasing

Obstacles:

- 2 declared natural disasters
- Unforeseen conditions

Stakeholder Coordination

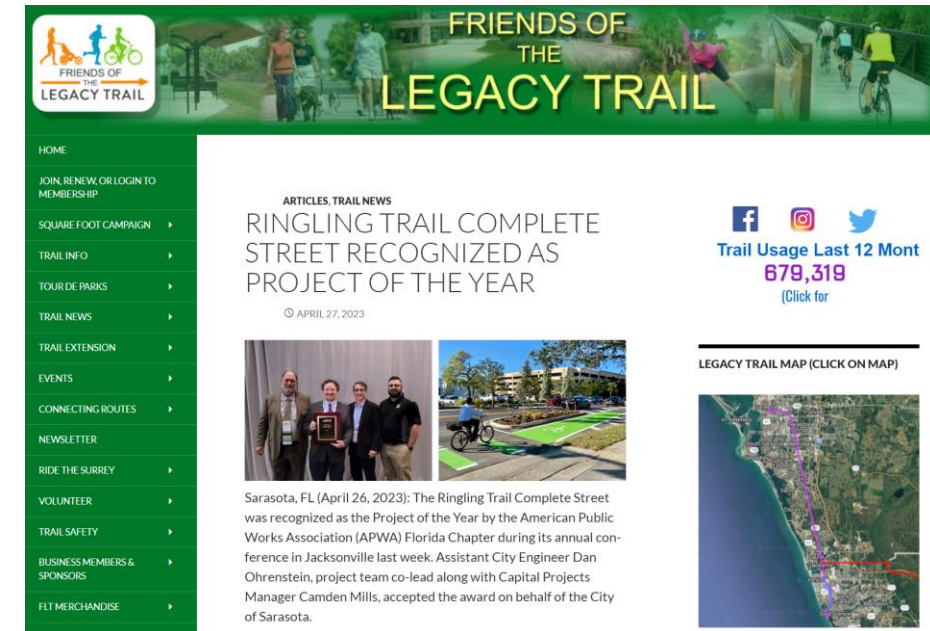
Communication Outreach



# RINGLING TRAIL COMPLETE STREETS RIBBON CUTTING







# RINGLING TRAIL APWA FLORIDA CHAPTER PROJECT OF THE YEAR 2023

# RINGLING ROUND 2

SARASOTA/SIESTA KEY  
**Observer**  
YOU. YOUR NEIGHBORS. YOUR NEIGHBORHOOD.



The design recently implemented on Ringling Boulevard in Sarasota will be mimicked on Gulf of Mexico Drive.

## Coming soon: More beach parking

Parking will be added along the state road's bike lane for the entire 10-mile stretch.

LAUREN TRONSTAD  
STAFF WRITER

**G**ulf of Mexico Drive is slated to look much different than residents have become accustomed to, and it's all to ensure the safety of pedestrians and bicyclists and to attract more tourists.

The new road design will mimic that of Ringling Boulevard in Sarasota, with parking spots acting as buffers between the bicycle lane and moving vehicles.

The new plans will replace previous plans for a multiuse trail along the east side of Gulf of Mexico Drive.

"This extra protection is going to mean a lot to those of us that bike along Gulf of Mexico Drive regularly," resident Daisy Spins said. "No one drives the speed limit, and I'm often in fear of getting flattened."

Spins is among the dozens who use the bike lanes along the main road through the island as a source of exercise.

"I am surely not going to try pick-leball," she said. "There is nowhere to park (at Bayfront Park), and biking is more of an independent activity, which I prefer."

Although such a change is seen to benefit groups that are most vulnerable on GMD, as with any issue, there are quite a few people upset about the choice.

"The town isn't thinking about everyday drivers on this road and their safety," resident Bob Fields said. "Not only is this going to be an unsightly addition, but if cyclists don't fear for their lives, more people will come to the island. And no one wants that."

The addition of parking spots beside the bike lane for the entire 10-mile stretch of the barrier island will widen the road about 12 feet and create the need for a new sidewalk. Plans for the new sidewalk include sections of moving walkways, similar

to those found in major airports, in order to further improve accessibility for off-island tourists interested in more leisurely walking trails.

Typically, beach parking is hard to come by on Longboat Key unless you live on the island or are staying at a vacation home.

"It might increase the amount of people that come out to these beautiful beaches," said tourist Sandy Shores. "But even if visitation reaches the point of Siesta Key or Coquina Beach, I'm looking forward to having an easier time finding parking for the beach or anything else that brings me to the island."

The town views the design change as a way to increase annual tourism revenue, which could be put back into maintaining the beaches.

"The town is trying to turn away from the image of being anti-tourist," town public information officer Ashley Info said. "These additional parking spaces will not only draw visitors to our beaches but will also protect residents who enjoy spending their time walking and biking along Gulf of Mexico Drive."

Design is still in the early stages, but the expectation is the project will exceed the cost of the 12-foot multi-use trail previously planned for the state road.

Resident Seymour Miles, who presented the idea to town staff, has pledged to pay at least half of the cost of construction if the plans are approved. Such a project is likely to cost around \$100 million, including materials, labor, equipment and lobster-roll lunches for work crews, according to Roadbotics.

No timeline has been provided for when work will start or be completed. It first will have to go before the commission several times for various approvals.

*No timeline has been provided for when work will start or be completed.*



An aerial photograph of a coastal city. In the foreground, a large body of water (likely a bay or harbor) is visible, with several sailboats anchored. A curved road with a green median and palm trees runs along the water's edge. In the background, a dense cluster of high-rise apartment buildings and commercial structures is situated along the waterfront. A large blue rectangular box is overlaid on the center of the image, containing the text "Completed Projects" in white.

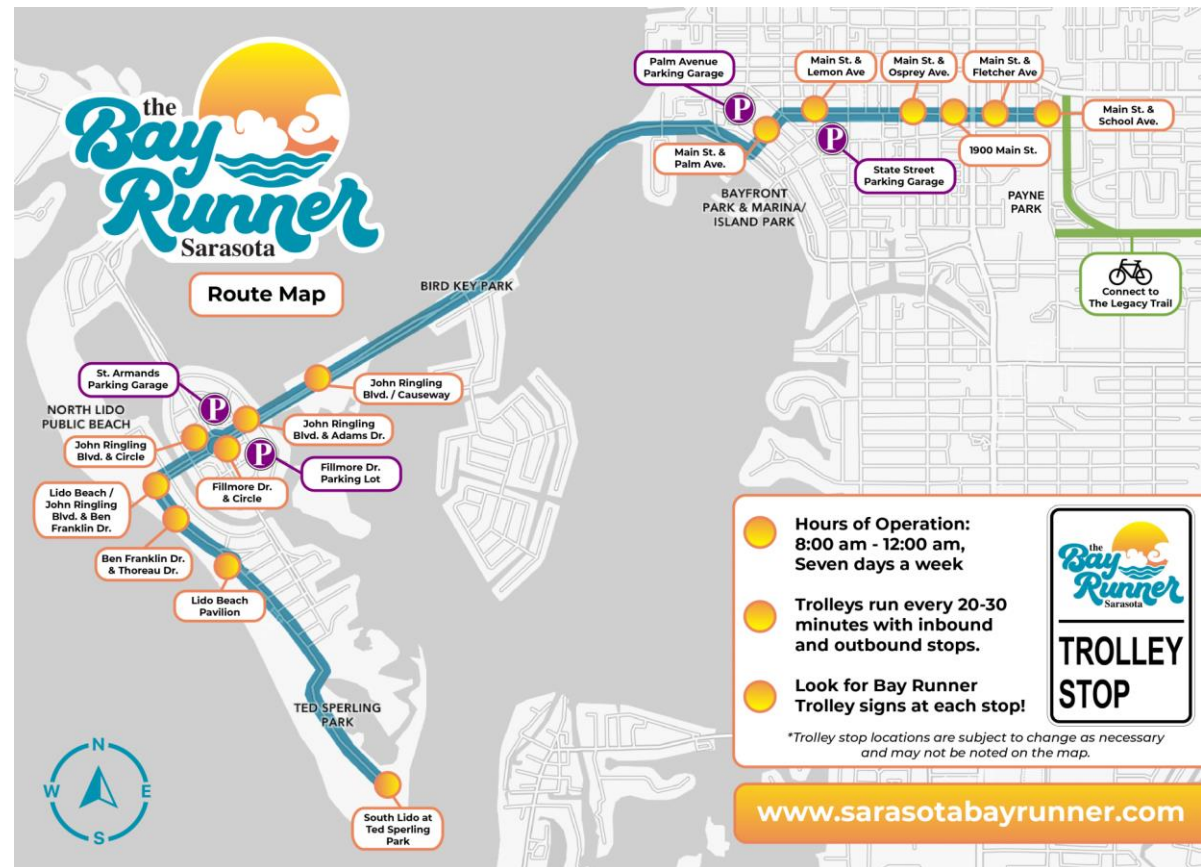
# Completed Projects



# BAY RUNNER TROLLEY



- 13 Months in Service
- Over 150,800 passengers in first 12 months





# BEN FRANKLIN SOLAR LIGHTING

- ST Series Solar Street Lights
- 1.6 miles of Sea Turtle Nesting Zone



# BEN FRANKLIN SOLAR LIGHTING

- ST Series Solar Street Lights
- 1.6 miles of Sea Turtle Nesting Zone





# THE BAY RUNNER

The Bay Runner is a free trolley service connecting the best Sarasota keys and Downtown for an ultimate outdoor Florida experience. The goal of the Bay Runner is to provide an enjoyable experience that reduces travel time, congestion and makes getting around easier for visitors, residents, and employees.

13 Months in Service

Over 150,000 Rides

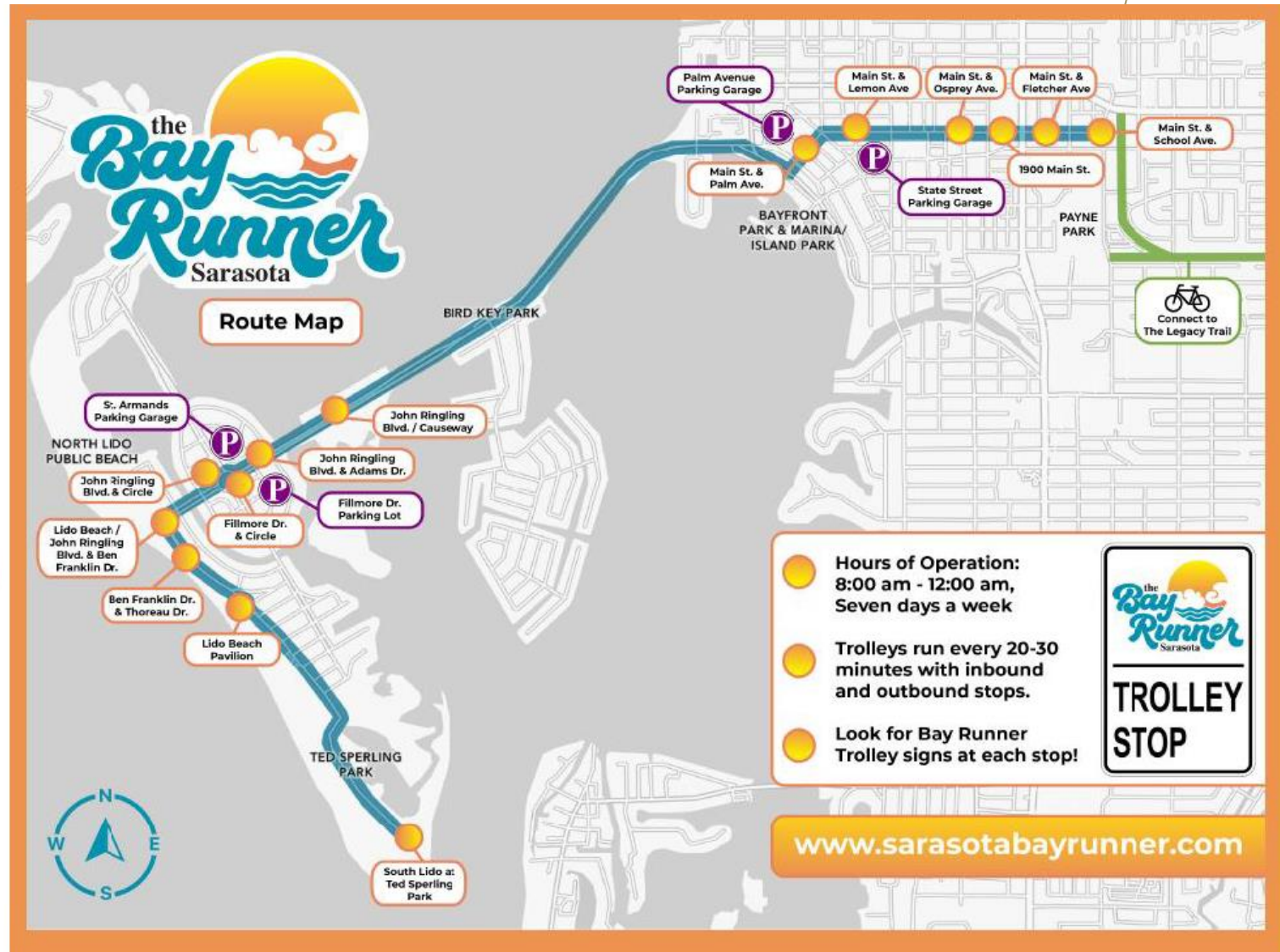
2021 **IPM** AWARDS OF EXCELLENCE<sup>®</sup>





# Bay Runner

- Started service: March 2022
- 8:00 AM – midnight, 7 days/week
- Operating as a circulator –
  - No timed stops
  - Average headway: 30 min





# VEO MICROMOBILITY

- 13 Months in Service
- Over 150,000 Rides
- 150 new vehicles, total fleet of 550 vehicles





# SIDE WALK CAFÉS

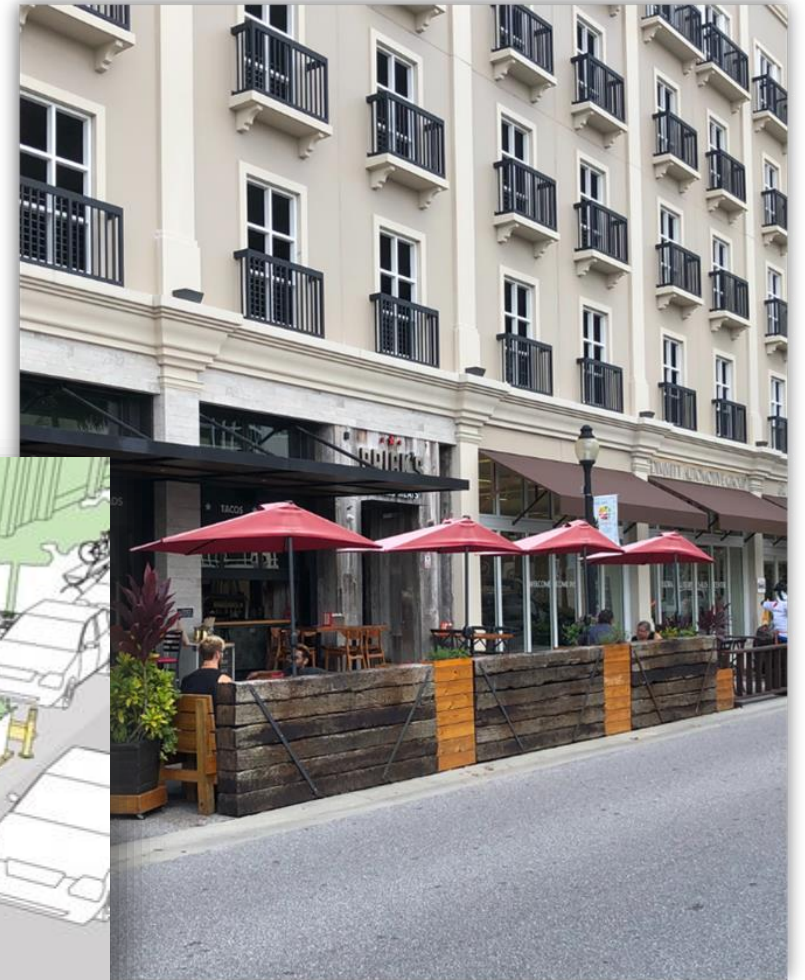
- 85 permitted sidewalk cafés in Sarasota for 2022
- Updated ordinance





# PARKLETS

- 11 permitted parklets in downtown Sarasota for 2022
- 21 parking spaces are being utilized
- Each parking space costs \$25/day





An aerial photograph of a coastal city. In the foreground, a large body of water (likely a bay or harbor) is visible, with several sailboats anchored. A curved road with palm trees and greenery runs along the water's edge. In the background, a dense cluster of high-rise apartment buildings and commercial structures is situated along the waterfront. The sky is clear and blue.

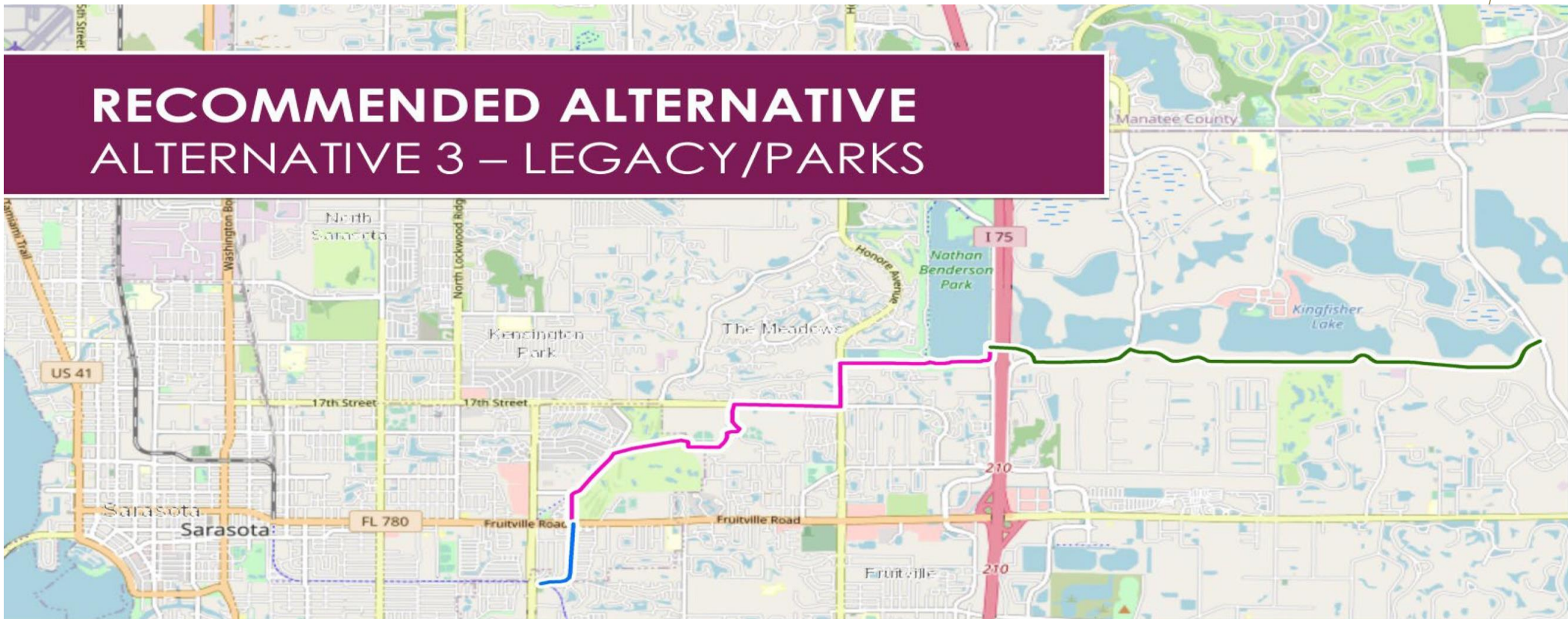
# Upcoming Projects

## 2023 Onwards



# SARASOTA SUN TRAIL ALIGNMENT

## RECOMMENDED ALTERNATIVE ALTERNATIVE 3 – LEGACY/PARKS



# BOBBY JONES GOLF COURSE AND NATURE PARK

- 261-Acre Conservation Nature Park
- Conservation Easement (Conservation Foundation Fundraising Agreement)





# BOBBY JONES TRAIL

- Upcoming Project
- Connection to Legacy Trail
- Connection to Future Sarasota County Park



## Bobby Jones Map

The City of Sarasota is considering the replacement of Section B with an alternative route through Bobby Jones.

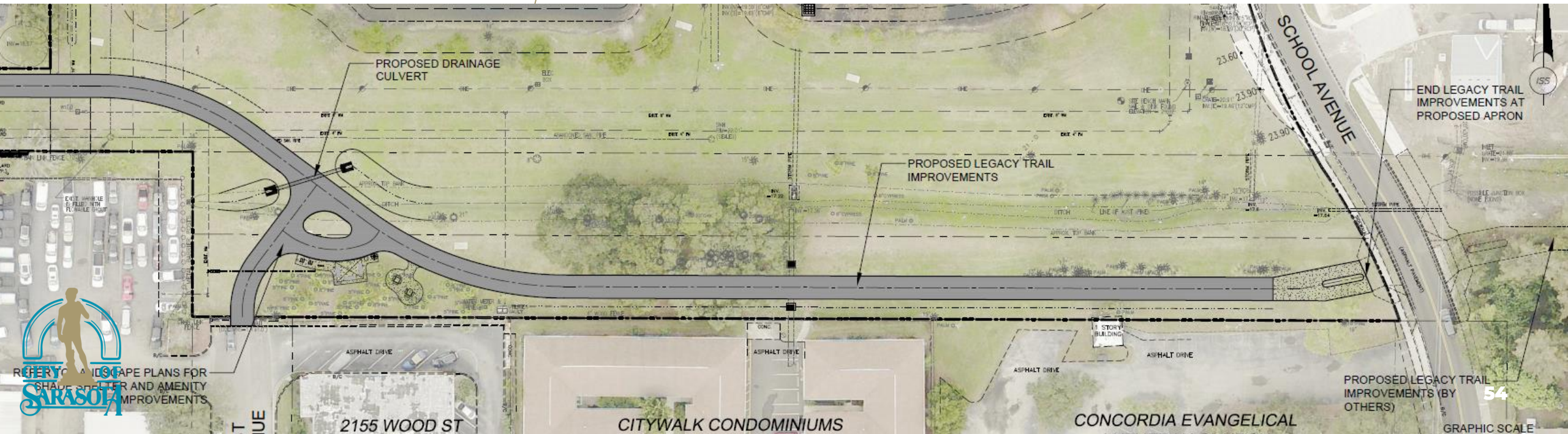
12/8/2022





# THE LEGACY TRAIL – ALDERMAN MURT

- Construct multi-use path that extends The Legacy Trail through S Payne Park to connect to East Ave and Alderman St.
- FDEP Recreational Trails Program grant candidate





# BOULEVARD OF THE ARTS STREETScape

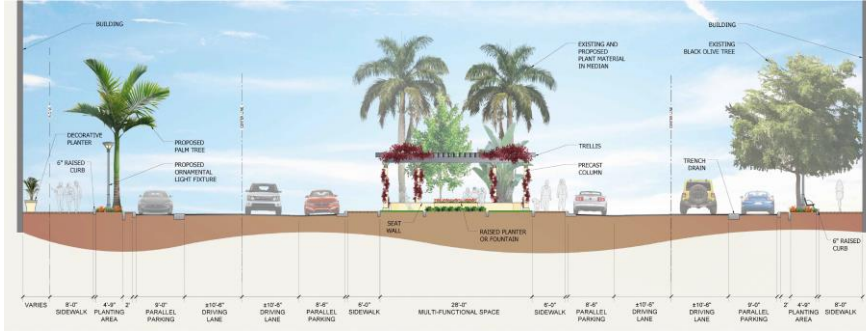
- 30% Design
- Pedestrian improvements
- Undergrounding Utilities
- Modify Stormwater





# ST. ARMANDS COMPLETE STREETS

- Project Evaluation underway
- Community Input underway





# Engineering Design Criteria Manual Update

## PROJECT SCHEDULE

**Public Meeting 1**  
Issues & Opportunities  
*November 2022*



**Public Meetings 2**  
Potential Changes  
*May 2023*



**Public Meeting 3**  
Draft EDCM  
*August 2023*



**Public Hearing & City  
Commission  
Meetings**

*September & October 2023*

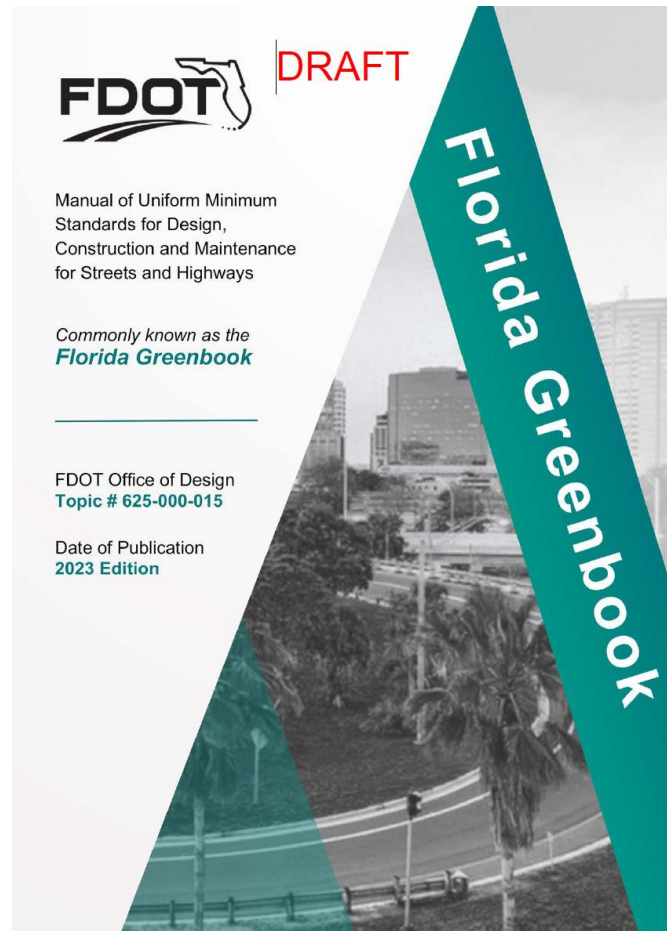


**2022**

**2023**



# FLORIDA GREENBOOK



DRAFT

Topic # 625-000-015  
Manual of Uniform Minimum Standards  
for Design, Construction and Maintenance  
for Streets and Highways

2023~~2018~~

## CHAPTER 1

### PLANNING AND LAND DEVELOPMENT

A	CONTEXT-BASED PLANNING AND DESIGN .....	1-1
B	CLASSIFICATION .....	1-2
B.1	Functional Classification .....	1-2
B.2	Context Classification .....	1-4
B.3	Design Speed .....	1-7
C	CONSIDERATIONS FOR DESIGN .....	1-7
C.1	Safety .....	1-7
C.2	Economic Constraints .....	1-7
C.3	Access Requirements .....	1-8
C.4	Measures of Level of Service .....	1-8
C.5	Maintenance Capabilities .....	1-8
C.6	Utility and Transit Operations .....	1-8
C.7	Emergency Response .....	1-9
C.8	Environmental Impact .....	1-9
C.9	Community and Social Impact .....	1-10
D	LANE REPURPOSING .....	1-10
D.1	Data Needs .....	1-11
D.1.a	Multidisciplinary Review Team .....	1-12
D.1.b	Concept Reports .....	1-12
D.1.c	Project Description .....	1-13
D.1.d	Proposed Modifications .....	1-13
D.1.e	Traffic Analysis .....	1-14
D.1.f	Safety Analysis .....	1-15
D.1.g	Public Involvement .....	1-15
E	LAND DEVELOPMENT .....	1-15
E.1	Development Types and Guidelines .....	1-16
E.1.a	Conventional Suburban Design .....	1-16
E.1.b	Traditional Neighborhood Design (TND) .....	1-17

Planning and Land Development

1-1



# Engineering Design Criteria Manual Update

## PROJECT SCHEDULE

**Public Meeting 1**  
Issues & Opportunities  
*November 2022*



**Public Meetings 2**  
Potential Changes  
*May 2023*



**Public Meeting 3**  
Draft EDCM  
*August 2023*



**Public Hearing & City  
Commission  
Meetings**

*September & October 2023*

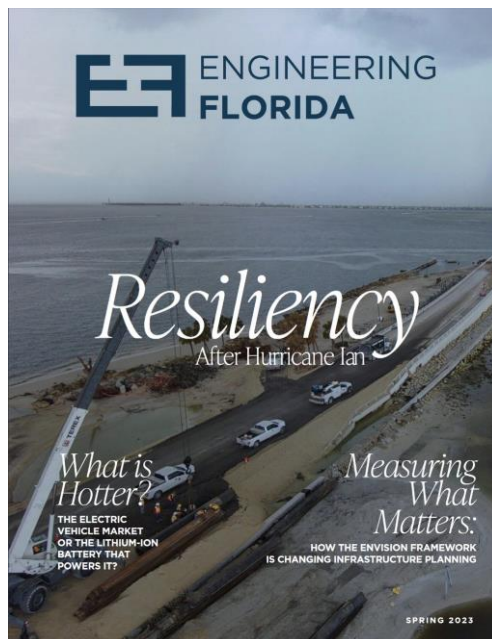


**2022**

**2023**



# ENGINEERING FLORIDA



## Market Spotlight Sarasota

### RESILIENT INFRASTRUCTURE INVESTMENTS PAY OFF

BY NIKESH PATEL  
PE, CPM, PTOE, CGC, AICP  
City Engineer, City of Sarasota

According to the U.S. Census Bureau's Vintage 2022, Florida is the fastest-growing state in the nation. The Florida Office of Economic and Demographic Research predicts Sarasota County alone will see a 27-percent increase in population by 2045.

Investing in sustainable, resilient infrastructure is essential to protect Sarasota's growing population from natural disasters. The City of Sarasota is proactively achieving resiliency by safeguarding Florida's natural resources and infrastructure. Through multimillion-dollar projects and strategic partnerships, the city is leveraging innovative technology to improve quality of life.

#### STRENGTHENING SHORELINES

Fortunately, Lido Beach suffered no significant erosion when Hurricanes Ian and Nicole passed through Florida, a testament to the efficacy of the City's partnership with the U.S. Army Corps (USACE) of Engineers and the Florida Department of Environmental Protection (FDEP) for the recent renourishment project on Lido Beach.

The \$12.9 million endeavor dredged Big Pass and pumped roughly 700,000 cubic yards of sand onto a 1.56-mile stretch of Lido Key, extending the beach's width by an average of about 300 feet. Two groins of nearly 5,000 tons of armor stone have also been installed along south Lido Beach to reduce erosion effects further.

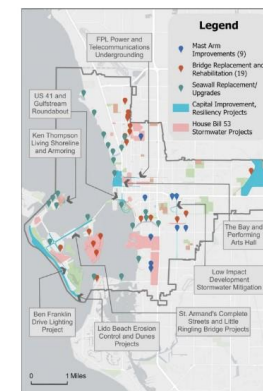
LIDO BEACH  
SARASOTA, FL  
Photos courtesy of the city of Sarasota

The City will continue reinforcing Lido Beach by partnering with the FDEP and Sarasota County to construct a vegetated dune. The primary goal of this project is to buffer potential flooding impacts on Benjamin Franklin Drive, upland private property and critical infrastructure. Other benefits include reducing the effects of wave run-up, enhancing the coastal ecosystem, improving storm protection, reducing wind speed, and retaining sand volume. Construction will begin this spring.

On Lido Key, Ken Thompson Park requires a different approach. Years of coastal erosion caused by sea level rise and storms have reduced the shoreline. The City will minimize erosion by overlaying mangroves, grasses, and oyster beds to form a "living shoreline." This approach outperforms traditional seawalls by restoring the ecosystem for native species, resulting in a biodiverse environment that improves water quality.

Sarasota's first live seawall arrived in 2018 along Bayfront Park. The first phase installed 250 feet of "Eco-Rap" modules, creating an artificial concrete reef attractive to marine life. Another 1,500 feet of seawall will be rehabilitated at Bayfront Park thanks to the new Resilient Florida Grant Program. Over \$275 million will be awarded through FDEP, with the City receiving \$2.5 million with a City match of a project cost of over \$5 million for the Sarasota Bay resiliency projects.

The Bay Park Conservancy has also deployed living shorelines, a partnership project to implement a long-term master plan for 53 acres of city-owned land along Sarasota Bay. This park establishes the region's cultural and economic legacy by prioritizing sustainability and resiliency in its master plan.



CITY OF SARASOTA IMPROVEMENTS MAP

Gov. Ron DeSantis awarded over \$10.4 million to the City of Sarasota to enhance water quality and protect it from erosion, storms, and flooding in Bay Park.

Phase one of construction restored wetlands and enlivened the park's landscaping. Bioswales were created to filter runoff and rainwater into native root systems and drainage infrastructure for treatment before reaching the bay. Bank stabilization and erosion control were achieved by strategically placed rock revetment walls, living shorelines, vegetated flood barriers and retaining walls.





# QUESTIONS

# THANK YOU

Nikesh Patel

[Nikesh.Patel@SarasotaFL.gov](mailto:Nikesh.Patel@SarasotaFL.gov)



*Images courtesy of [www.VisitSarasota.com](http://www.VisitSarasota.com)*