



# Enhancing The Road Most Traveled:

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## The Evolution of Interstate 4

John Tyler, P.E. FDOT Secretary District 5

A.C.L. Depot, Orlando



RCB 520.





*The new Expressway leading through Downtown Orlando, Florida*



# BUILT FOR A DIFFERENT ERA

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Metro Orlando was home to 200,000 people in the 1960s

I-4 was designed to different standards and for vehicles of that time

Now 2.5 million residents between Sanford and Kissimmee



**LIFE**

# Disney World Opens

1,500 Disney employees  
in front of  
Cinderella Castle



OCTOBER 15 • 1971 • 50¢

## 1970'S



SEE THE STARS. RIDE THE MOVIES.



UNIVERSAL STUDIOS FLORIDA PRESENTS • KING KONG • E.T. • EARTHQUAKE •  
MURDER SHE WROTE • ALFRED HITCHCOCK • HANNA-BARBERA •  
THE HORROR MAKE-UP SHOW • BACK TO THE FUTURE • JAWS • GHOSTBUSTERS •  
ANIMAL ACTORS • SCREEN TEST ADVENTURE • NICKELODEON

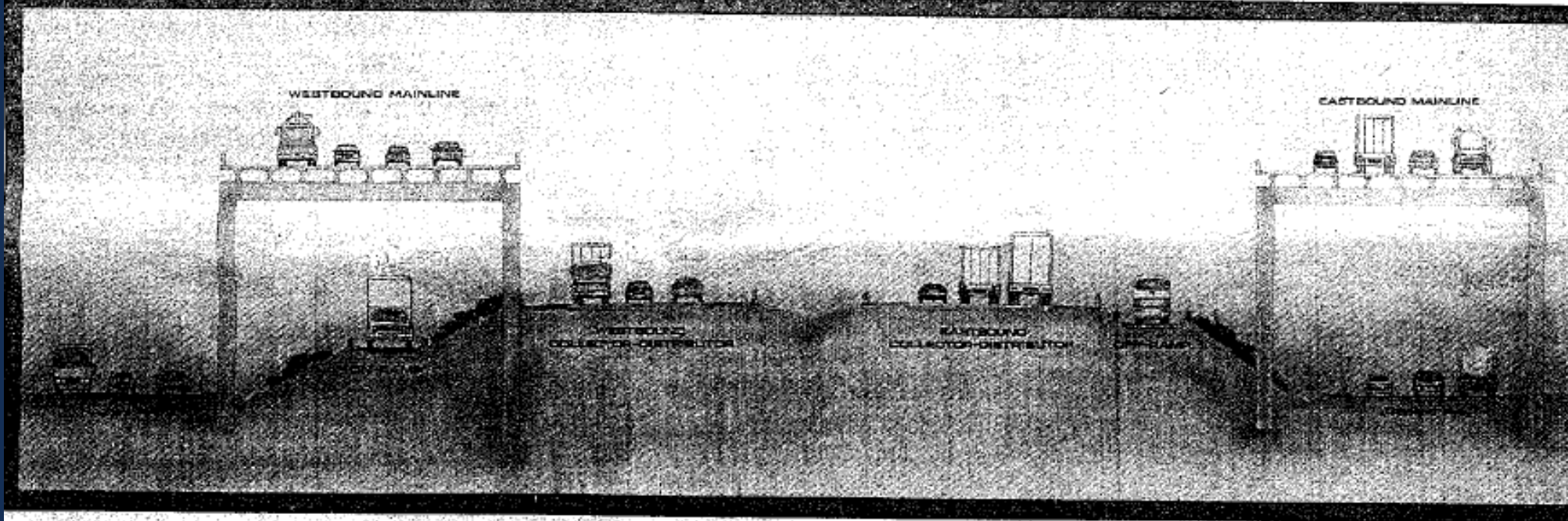
OPENING IN ORLANDO MAY 1990.

## 1990'S INTO TODAY





## Stacking up traffic through Orlando



RENDERING/GREINER, INC.

Artist's rendering shows proposed layout for mainline, collector-distributor and frontage roads through downtown Orlando section of Interstate 4.

## Study hangs a \$1.25 billion price tag on cure for I-4 problems

By Dan Tracy

OF THE SENTINEL STAFF

Interstate 4 must have at least 14 lanes through downtown Orlando by the turn of the century or motorists will face daylong gridlock, a traffic consultant said Friday.

"You laugh. . . . But it's not funny," Mark Callahan of Greiner Engineering said during a break in a committee meeting of the Metropolitan Planning Organization.

Callahan presented the preliminary recommendations of a yearlong \$800,000 study to determine what improvements should be made to parts of I-4, Central Florida's major east-west artery.

To fit all the pavement into downtown, Callahan said, eastbound and westbound decks 50-feet high would have to be built next to the existing six lanes.

Local and through traffic also would have to be segregated by retaining walls to cut down on weaving, he said.

The cost for the downtown work, plus other changes to I-4 from the Polk-Osceola county line to the St. Johns River, is an estimated \$1.25 billion, Callahan said.

Money, he said, would probably have to come from all levels of government, plus developers who build stores and communities that funnel additional traffic onto I-4.

The MPO, a 15-person panel that sets transportation policy in Orange, Seminole

**“**  
*You laugh. . . . But it's not funny.*  
**— traffic consultant Mark Callahan**

and Osceola counties, must adopt Greiner's plan before any work can be done. The group meets Thursday.

If the plan were accepted, it likely would be tackled in segments, with the most congested areas done first, Callahan said.

Technical committee members were impressed by Greiner's proposal but were not

enthused by the price tag.

"Where are we going to come up with the money? Certainly not in my lifetime," said Dave Grovdahl, chief transportation planner of the East Central Florida Regional Planning Council.

Frances Chandler, Seminole County's principal planner, shook her head, saying, "Seminole doesn't have the money to finish their own roads."

Finance, however, is not the only problem that might confront Greiner's scenario.

The 50-foot-high decks, each of which would hold four lanes, would obscure the Orlando skyline, causing some businesses

Please see **STUDY, A-15**

# EARLY PLANNING

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- 1989: Master Plan completed
- 1996: I-4 Multi-Modal Master Plan
- 2002: Project Development and Environment (PD&E) Study
- 2005: PD&E Study Re-evaluation
- 2008: Interim I-4/State Road 408 interchange improvements

Project Completion



June 14, 2012

### Public-private partnerships key to financing FDOT projects

by *Fernando C. Alonso and Uriel A. Mendieta*

Florida transportation officials and the private sector have fine-tuned a financing structure that allows the state to use private-sector financing to advance projects to build roads and bridges and fulfill other essential infrastructure needs.

The timing is right. The infrastructure of Florida, like the rest of America, is in critical need of maintenance and overhaul. Facilitating financing for projects by the Florida Department of Transportation is a wise move that will encourage important funding sources.

According to the American Society of Civil Engineers, about 18 percent of Florida's bridges are structurally deficient or functionally obsolete, 13 percent of the state's major roads are in poor or mediocre condition and 47 percent of its major urban highways are congested.

The society calculates more than 16 million residents, 75 million visitors and 850,000 tons of freight travel on Florida's highways, roads and streets every year. Drivers in Miami, Orlando and Jacksonville combined waste more than 200 million hours and nearly 150 million gallons of fuel sitting in traffic — at a cost of more than \$3.8 billion to the state's economy.

Only a portion of the funding needed to fix these problems is available. According to a 2012 report from the FDOT, the "total estimated unfunded ... capacity needs for all modes through 2040 is approximately \$131.2 billion in 2010 dollars." Roughly \$83 billion of that sum is for highway needs.

To address these challenges, Florida has increasingly looked to public-private partnerships, so-called P3 or PPP projects. These projects, involving contractual agreements between government agencies and private-sector entities, allow for greater private-sector participation in the delivery of public infrastructure projects by shifting some construction and maintenance risk to the private sector. Also, they provide the public sector with access to private-sector financing and capital.

#### Gap Financing

Florida has been among the states most active in seeking P3 projects for transportation infrastructure. The Legislature enacted its P3 statute (Fla. Stat. 334.30) in 1991, giving the FDOT the authority to "enter into agreements with private entities ... for the building, operation, ownership or financing of transportation facilities."

# PUBLIC-PRIVATE PARTNERSHIP

## State Statute 334.30

- Gave FDOT the authority to "enter into agreements with private entities ... for the building, operation, ownership or financing of transportation facilities."
- Followed I-595 and Port of Miami Tunnel P3 contracts





# PROJECT OVERVIEW

21 miles in Orange and Seminole counties, from Kirkman Road to S.R. 434

Complete reconstruction of:

- Existing General Use lanes
- 15 major interchanges
- More than 140 bridges

Each Direction has:

3 General Use Lanes

2 Managed Lanes – I-4 Express

Auxiliary Lanes vary throughout





# ***KEEPING I-4 ON THE GO***

Concessionaire team selected – 40 years

Construction Cost \$2.3 billion (year of expenditure)

Design, build and finance construction - 6.5 years

Operate and maintain – 33 years after construction

Design began October 2014

Construction began February 2015

Substantial completion February 2022



Barrier Wall



General Use Lanes  
(non-tolled)



I-4 EXPRESS  
(tolled)



General Use Lanes  
(non-tolled)

Pre-Construction

Kirkman Road Interchange



Kirkman Road



May 2022

Kirkman Road Interchange



Kirkman Road



**Pre - Construction**

**S.R. 408 Interchange**



May 2022

S.R. 408 Interchange



Pre - Construction

S.R. 50 Interchange



May 2022

S.R. 50 Interchange





Pre-Construction

Maitland Blvd. Interchange

Maitland Blvd.





Maitland Blvd.

May 2022

Maitland Blvd. Interchange



# PEDESTRIAN AND BICYCLE IMPROVEMENTS





# I-4 EXPRESS

## Managed Lanes on Interstate 4



Florida Department of  
TRANSPORTATION



# THE GOAL OF I-4 EXPRESS IS TO

- Deliver a long-term congestion management solution
- Ensure efficient usage of remaining new capacity
- Provide travel alternatives
- Offer drivers a travel choice
  - Reduces number of vehicles in GULs
- Reduce congestion and improve traffic flow



# COLLABORATION WITH FIRST RESPONDERS

- Before opening the I-4 Express Lanes:
  - 5 express lane emergency access gate trainings
  - 10 responder express lane tours
  - 8 express lane mock incidents
- With following agencies:
  - FHP
  - Seminole County Fire Dept.
  - Seminole County Sheriff's Office
  - Orlando Fire Department
  - Orlando Police Department
  - Orange County Sheriff's Office
  - Orange County Fire Rescue
  - Altamonte Springs Police Dept.
  - Maitland Police Department



# HOW HAS IT BEEN GOING?

- Positive public response
- Average of 17,400 customers per day per gantry
- Forecast vs Actual



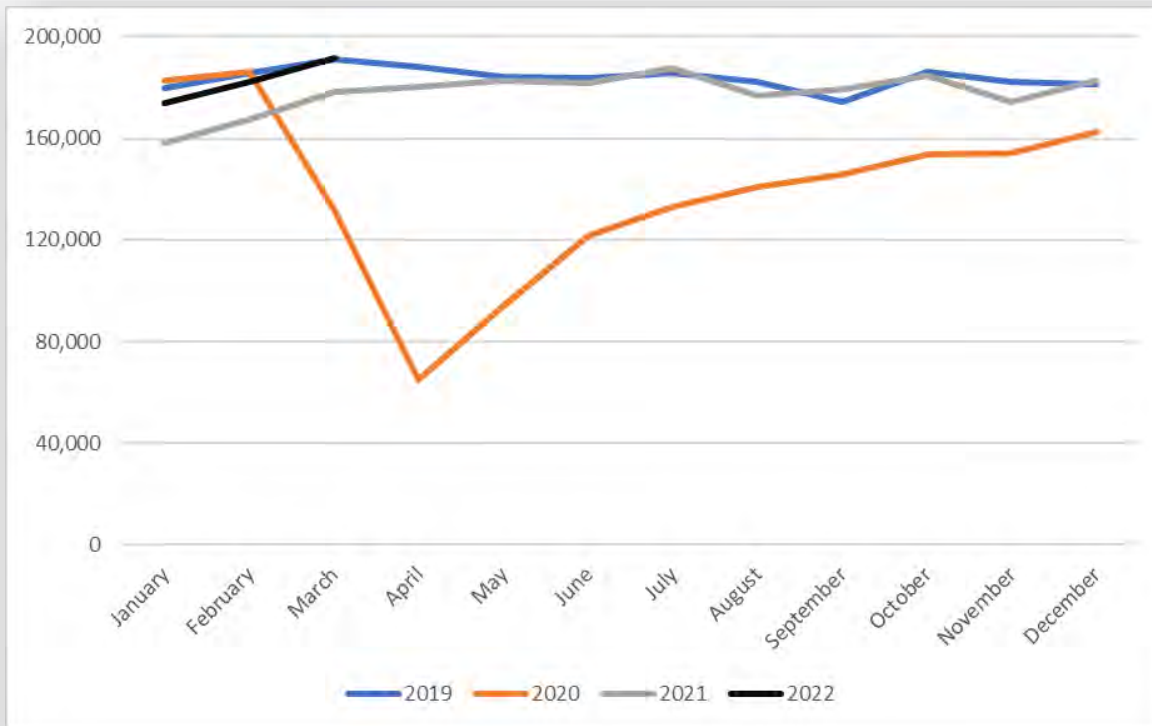
# CONGESTION RELIEF

- Demand continues to grow along the corridor
- Goal is to provide consistent reliability
  - 50 cents per toll segment currently achieving targeted goals
  - Prepared for Dynamic pricing transition



# I-4 TRAFFIC RETURNING TO PRE-COVID LEVELS

## Orange County



- Potential growth of 3 to 8 percent in 2022
- Anticipate increased demand for I-4 Express by +20%

# I-4 SPEED ENFORCEMENT

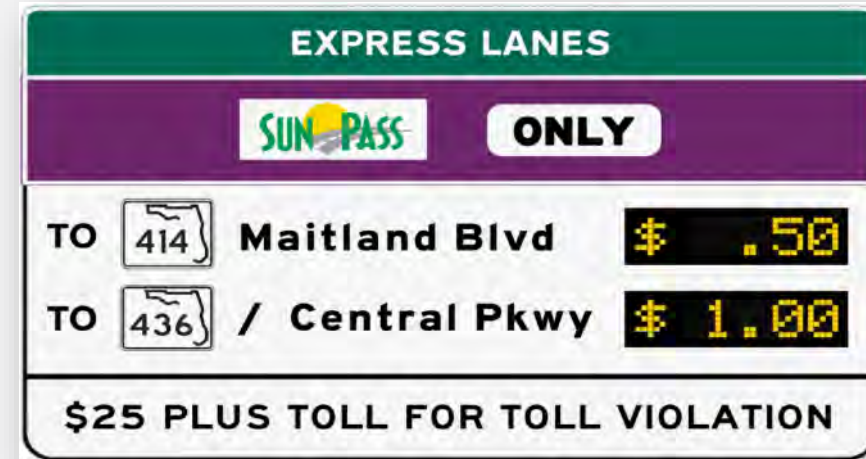
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- Florida Highway Patrol
  - Opening Months (Mar-May) 2022 of I-4 Express Lanes
    - 147 citations along all lanes of 21-mile corridor
    - 592 speeding citations total between Sanford and Kissimmee (beyond I-4 Express Lanes limits)
  - Currently patrolling all lanes along the corridor for speed management



# WHAT DRIVERS NEED TO KNOW

- Keep an eye on the signs.
- Drivers should make the choice that is right for their trip.
- Introductory toll rate pricing.
- In future, toll rate will change to adjustable rate based on traffic in I-4 Express to manage congestion.



- Use the I-4 Express Trip Planner to review options before your trip.
- Learn the lanes with videos and more.
- Ensure your transponder is compatible.
- Motorists can submit questions online, calling 833-i4XPRES (833-449-7737) or via email [info@i4express.com](mailto:info@i4express.com).



I-4 at S.R. 408 Interchange, looking north



Copyright Trey Cambern,  
Courtesy of HNTB



# I-4 BEYOND THE ULTIMATE

- Two 20-mile sections on either end of I-4 Ultimate

## I-4 Beyond the Ultimate North:

East of State Road (S.R.) 434 to east of S.R. 472

## I-4 Beyond the Ultimate South:

West of U.S. 27 to west of S.R. 435/  
Kirkman Road

- Designing and building a better I-4 through Central Florida
- Phased approach to meet operational needs with available funding





# I-4 BEYOND THE ULTIMATE

- Maintain Purpose and Need from I-4 BtU Project Development & Environment (PD&E) Study
- Stay within ROW defined by I-4 BtU PD&E
- Provide similar traffic operations
- Identify cost saving opportunities
- Recognize need for re-evaluations
- Engage stakeholders

## EVALUATION



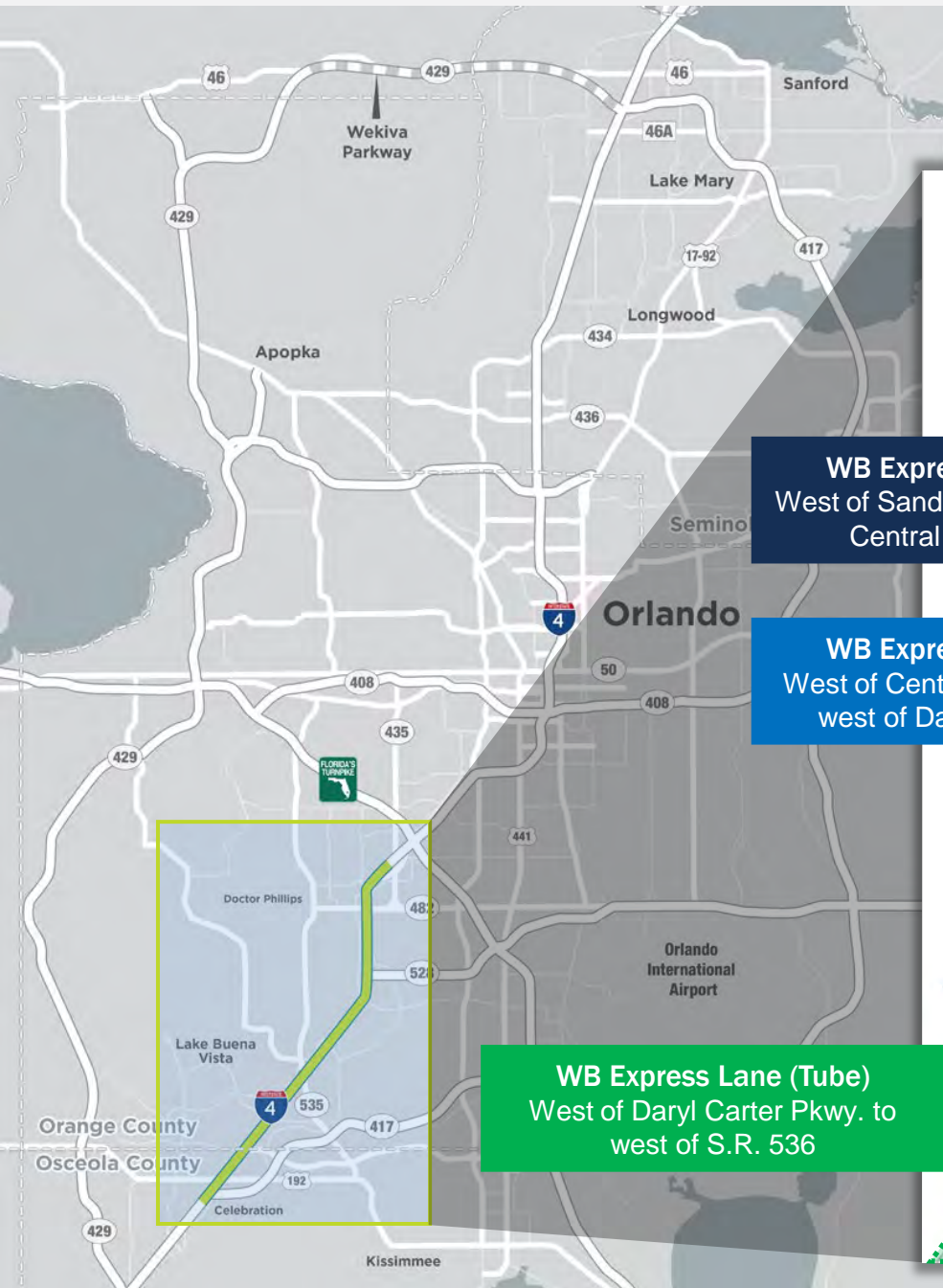


# I-4 BTU SOUTH – OSCEOLA COUNTY

- Several Interim Improvements
  - Currently Under Construction (1-3)
- Evaluating Alternatives for Ultimate Buildout
- Coordinating with Brightline
- Coordinating with District 1 and Florida's Turnpike Enterprise Projects
  - US 27 Interchange
  - Poinciana Pkwy Extension PD&E



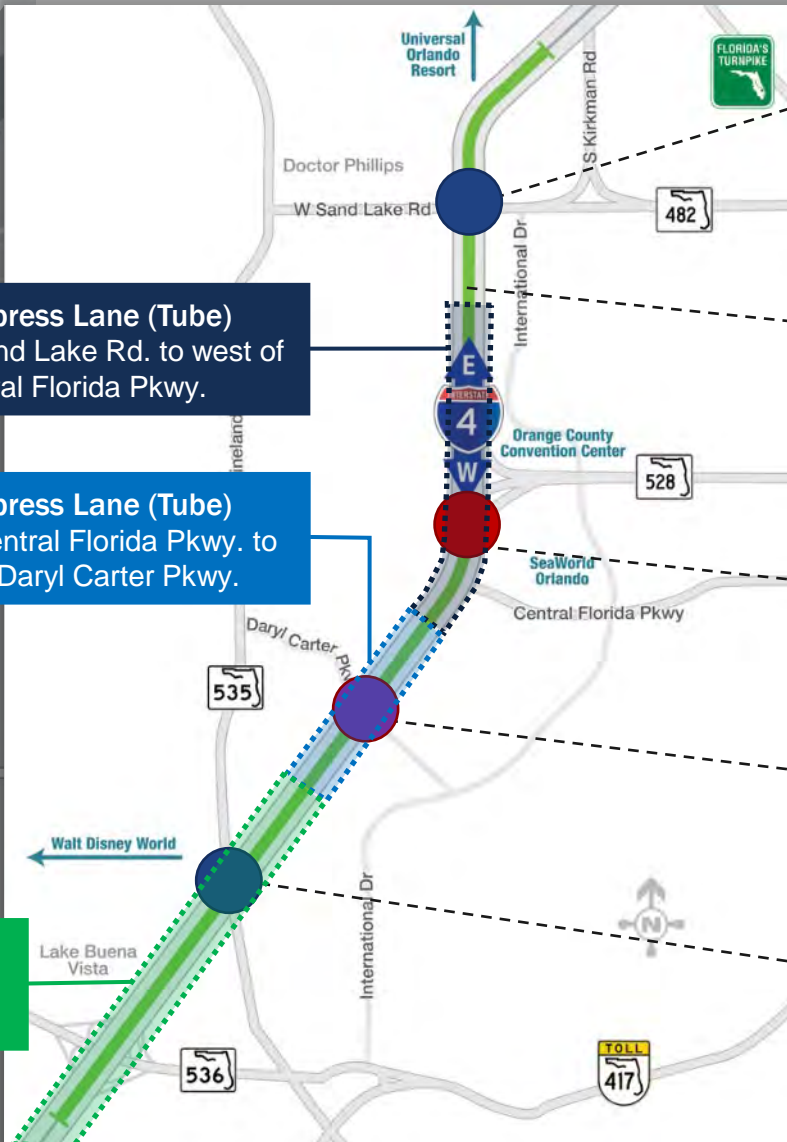
# I-4 BTU SOUTH – ORANGE CO.



WB Express Lane (Tube)  
West of Sand Lake Rd. to west of  
Central Florida Pkwy.

WB Express Lane (Tube)  
West of Central Florida Pkwy. to  
west of Daryl Carter Pkwy.

WB Express Lane (Tube)  
West of Daryl Carter Pkwy. to  
west of S.R. 536



I-4 at Sand Lake Rd.  
(S.R. 482) Interchange

WB Express Lane from W.  
of S.R. 482 to W. of S.R.  
536 (To be constructed  
under multiple projects)

S.R. 528 (Beachline Expy.)  
Ramp Widening

I-4 at Daryl Carter Pkwy.  
Interchange

I-4 at Apopka-Vineland Rd.  
(S.R. 535) Interchange



# I-4 AND SAND LAKE ROAD

## Improvements at Sand Lake Rd. Interchange Include:

- Diverging Diamond Interchange
- Elimination of Left turn WB Sand Lake Rd. to SB Turkey Lake Rd.
- Access to Turkey Lake Rd. from I-4
- Pedestrian and Bicycle Facilities
- Enhanced Aesthetics
- Anticipated Construction Summer 2023 – Duration 3.5 years





# I-4 AND DARYL CARTER PKWY

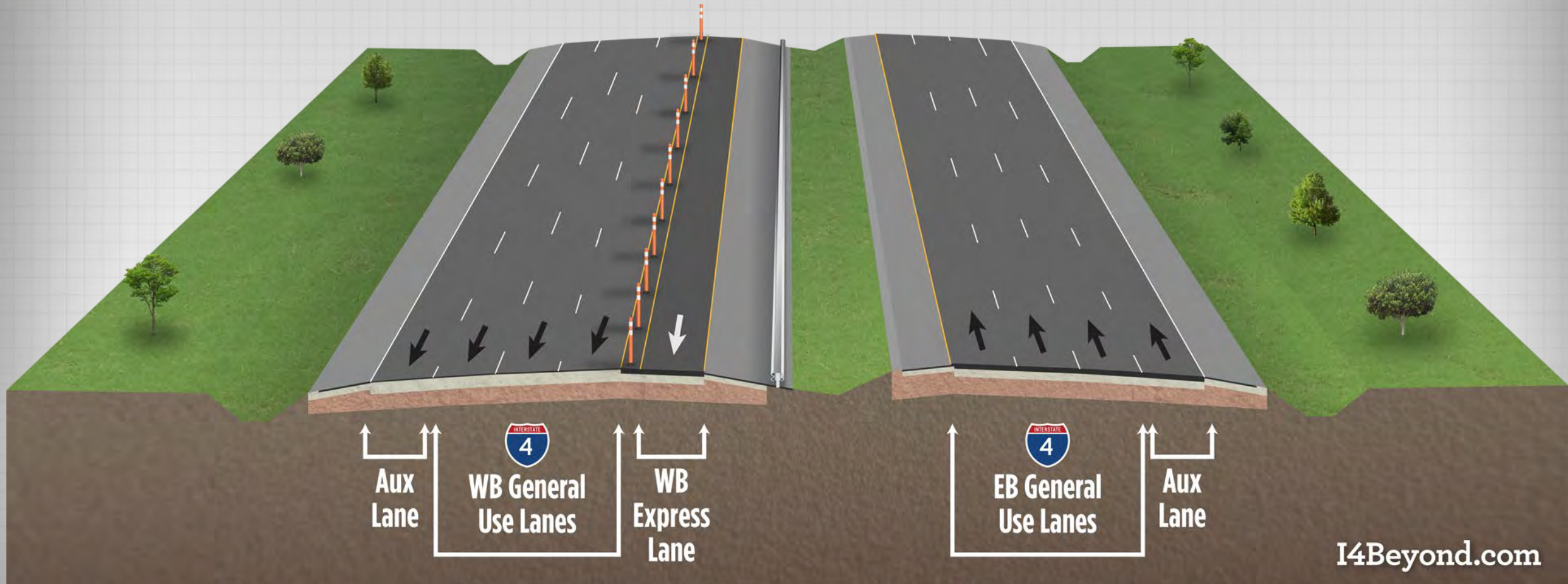
- Partial Diverging Diamond Interchange
- WB on-ramp will be built with I-4 BtU project in the future
- EB on-ramp braids over a future CD system
- Ponds built for ultimate capacity
- Anticipated Construction Fall 2022  
– Duration 2 years





# I-4 BtU Interim Single WB Express Lane

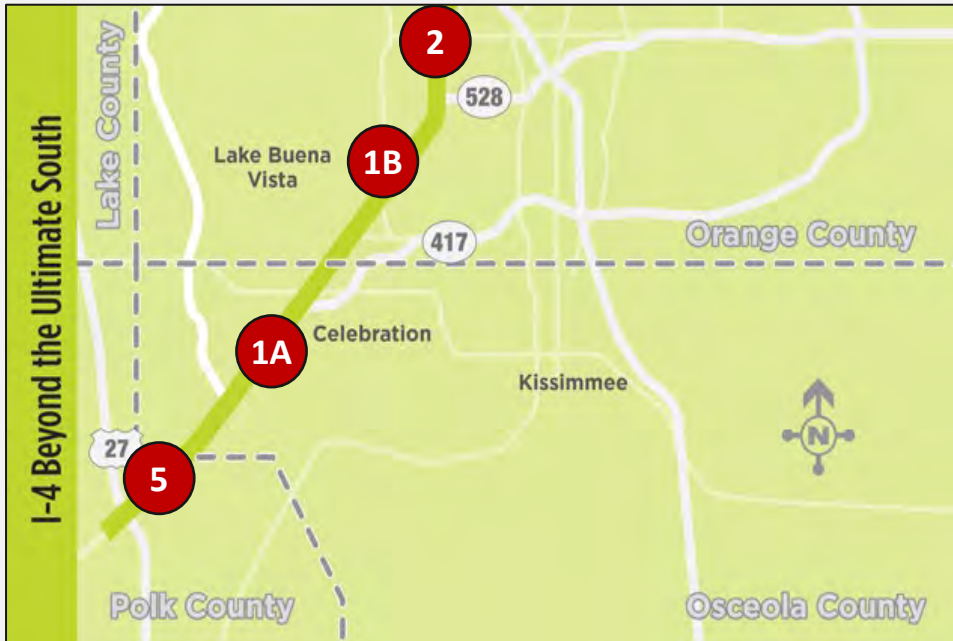
Typical section: Interim Express Lane in the WB direction  
from W. of Sand Lake Road To W. of S.R. 536





# I-4 BTU SOUTH SEGMENTS

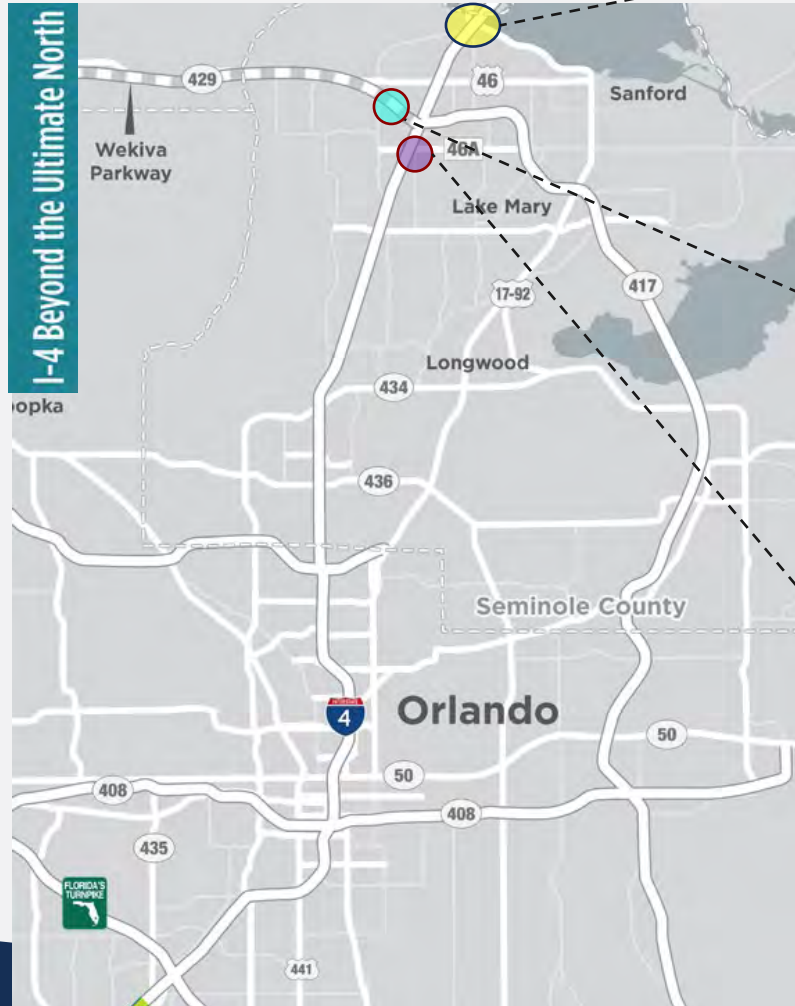
## I-4 BtU *South* Segments Funding Status



I-4 BtU Segment	Construction Cost	Right of Way
FPN: 242484-7 Segment 2	\$765M (FY 32)	\$54M (FY 18-22)
FPN: 242484-8 Segment 1B	\$1.23B (unfunded)	\$708 M (FY 20-24) (partially funded)
FPN: 431456-1 Segment 1A	\$995M (unfunded)	\$68M (unfunded)
FPN: 201210-3 Segment 5	\$318 M (unfunded)	\$49M (unfunded)
	<b>Approx. Total \$3.3B</b>	



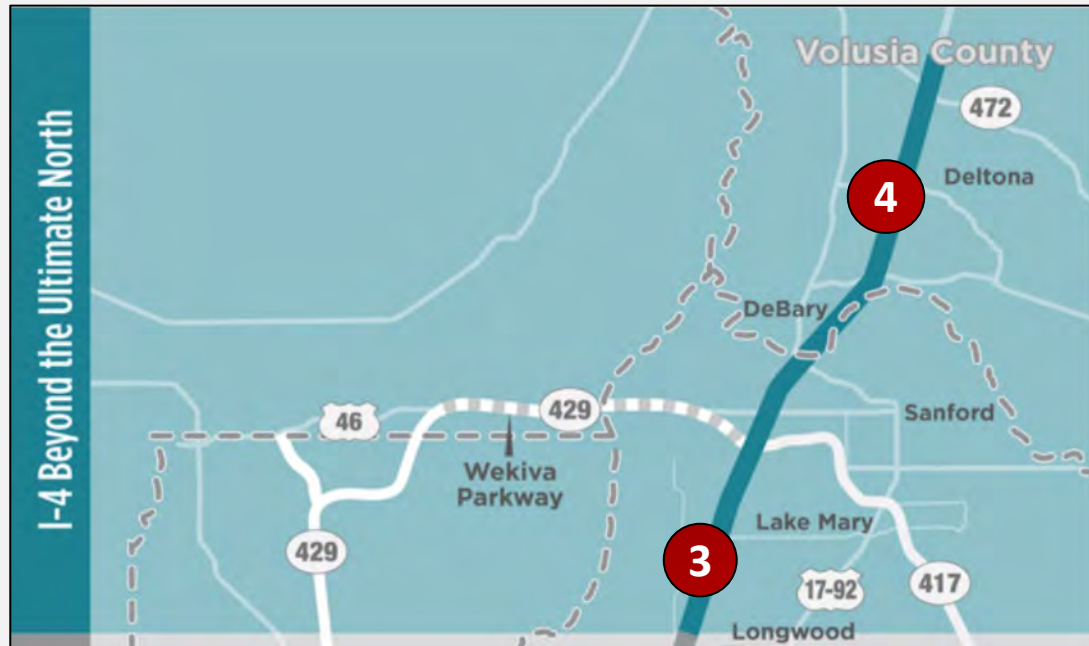
# I-4 BTU NORTH – SEMINOLE COUNTY



- **I-4 at US 17-92 Interchange Improvements (FPID: 242592-8)**
  - Design-Bid-Build (FY 23)
  - Estimated Construction Cost \$ 3 Million
  - Improve safety and operations for motorists and pedestrians
  - Upgrade Signalization and ITS technology
- **Wekiva 8**
  - Design-Build (Started construction October 2018)
  - Construction Cost \$ 255 Million
  - Anticipated to Open Early 2023
  - Connects at S.R. 417 and I-4, completing the beltway around Central Florida
- **CR 46A and Rinehart Rd Intersection Improvements (FPID: 242592-6)**
  - Design-Bid-Build (FY 23)
  - Estimated Construction Cost \$ 5.4 Million
  - Improve safety and traffic flow at the intersection



# I-4 BTU NORTH SEGMENTS



## I-4 BtU *North* Segments Funding Status

I-4 BtU Segment	Construction Cost	Right of Way
FPN: 242592-4 Segment 3	\$621M (FY 32)	\$37M (FY 22-26)
FPN: 408464-2 Segment 4	\$572M (unfunded)	\$52M (unfunded)
	Approx. Total \$1.2B	

# WEKIIVA PARKWAY

## Section 6

Opened: May 16, 2022

## Section 7B

All lanes open:  
Late June-July 2022

## Section 7A

Partial opening: Late summer -  
fall 2022

## Section 8

Projected opening:  
All lanes open – Early 2023

## KEY



District 5



Section 4A



Section 4B



Section 5



Section 6



Section 7A



Section 7B



Section 8



Rock Springs  
Run State  
Reserve

Seminole State  
Forest

Lake County  
Seminole County

Black Bear  
Wilderness Area



# WEKIVA PARKWAY OVERVIEW

- \$1.6 billion completion of Central Florida's beltway
- 25-mile toll road (nearly 20 miles open)
- Environmental Protections:
  - Purchased 3,400 acres of land for conservation
  - 1.5 miles of wildlife crossing bridges
  - Special fencing, wildlife "jump-outs", bat houses
- \$500 million non-tolled road improvements:
  - Upgraded State Road (S.R.) 46 in Lake and Seminole Counties
  - Moved part of County Road 46A (C.R. 46A) out of the Seminole State Forest
  - Built parallel service roads for local trips in Lake and Seminole Counties
- 10 miles of multi-use trails
- All electronic tolling

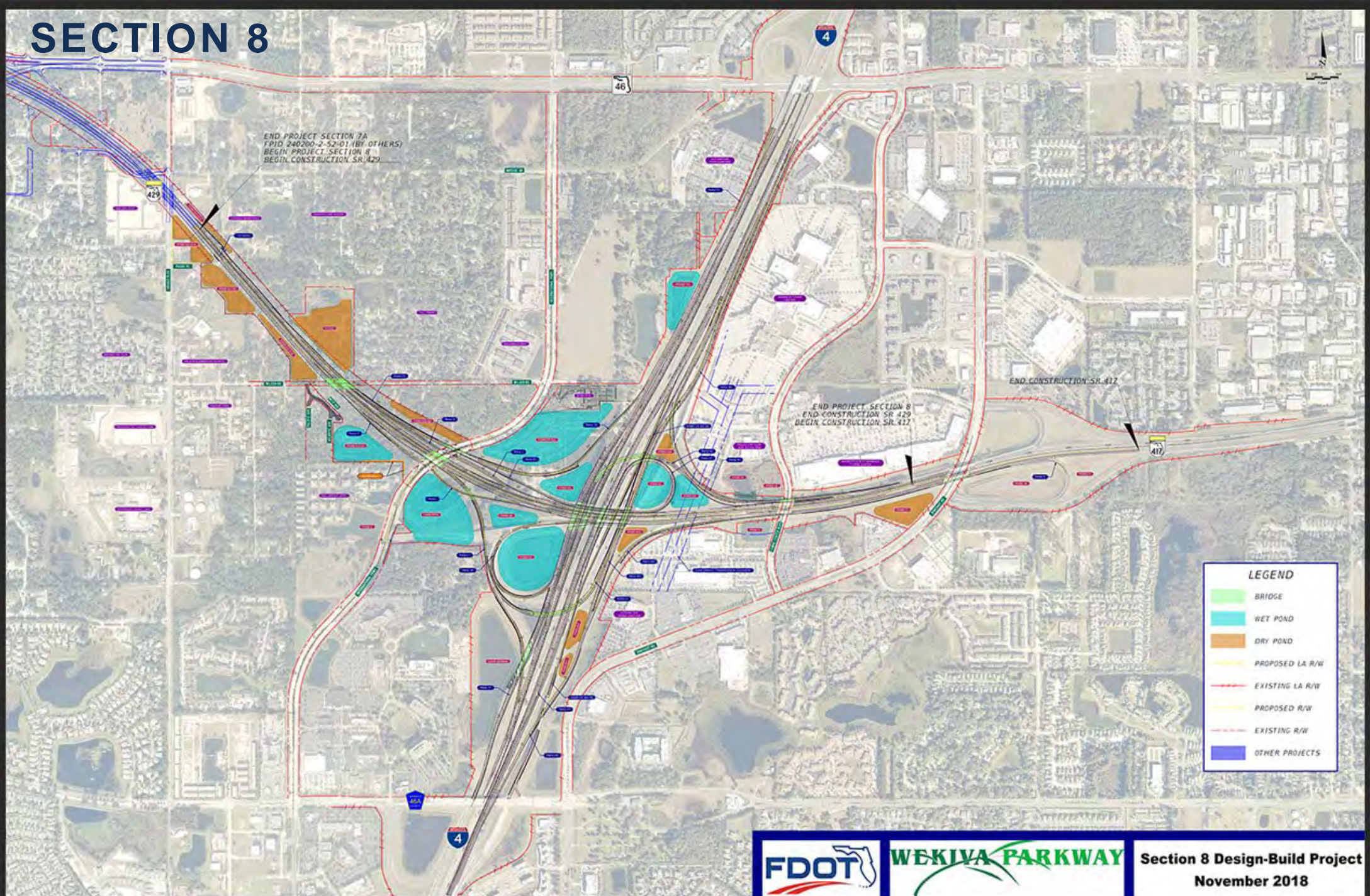




# SECTION 6 OPENING – MAY 2022



# SECTION 8



# SECTION 8

Wekiva Parkway tie-in to I-4 at S.R. 417  
Seminole County





# EXPANSION NORTH TO DELAND

- Phase 2 North adds 12-miles of service from DeBary to DeLand
- Anticipated opening late 2023
- 2022 Ridership ↑ 40% over YTD
- Projected transition from FDOT to Central Florida Commuter Rail Commission Summer 2024



From a May 25<sup>th</sup> media story...

"The children on the bus were all wearing seatbelts?" WESH 2 asked.

"Yes," Florida Highway Patrol said.

"And you think that's the reason they're alive?" WESH 2 asked.

"Absolutely!" FHP said



# Questions?

John Tyler P.E.  
District Five Secretary  
Florida Department of Transportation