



SR 5 / US 1 at Aviation Boulevard

Project Development and Environment (PD&E) Study

Indian River County, Florida

Financial Project ID: 441693-1-22-02

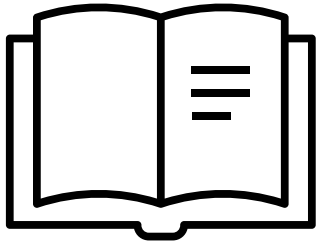
Efficient Transportation Decision Making (ETDM) Number: 14475

Florida Department of Transportation

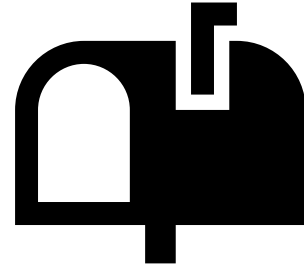
Alternatives Public Workshop Video

October 11, 2023 (In-person)

Public Notice



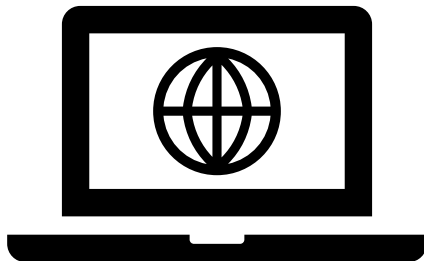
Florida Administrative Register



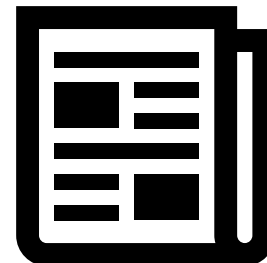
Property owner/tenant letters



Email to project contacts list



Department/project webpage



Newspapers




Social media


Non-Discrimination Policy


Title VI Compliance

Public participation is solicited without regard to race, color, national origin, age, sex, religion, disability, or family status. Persons wishing to express concerns relative to FDOT compliance with Title VI may do so by contacting:

Sharon Singh Hagyan
District Four Title VI Coordinator


 3400 West Commercial Boulevard
 Fort Lauderdale, FL 33309


 (954) 777-4190

 (866) 336-8435, ext. 4190 (Toll Free)

 Sharon.SinghHagyan@dot.state.fl.us

Stefan Kulakowski
State Title VI Coordinator

 605 Suwanee Street, MS 65
 Tallahassee, FL 32399

 (850) 414-4742

 Stefan.Kulakowski@dot.state.fl.us

Federal-State Partnership

The environmental review, consultation and other actions required by applicable federal environmental laws for these projects are being, or have been, carried out by the FDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated May 26, 2022, and executed by the Federal Highway Administration and FDOT.

Transportation Development Process

1 PLANNING

2 PROJECT DEVELOPMENT
AND ENVIRONMENT
(PD&E) STUDY

3 DESIGN

4 RIGHT OF WAY
ACQUISITION
(IF NEEDED)

5 CONSTRUCTION

6 MAINTENANCE

Why is a PD&E Study performed?

- To determine the best alternative to address the purpose and need
- To evaluate the potential environmental and social effects
- To include public participation to help shape the project
- To comply with federal, state, and local laws

During the PD&E Study:

- The community will have several opportunities for input on the project
- Project effects to the environment will be avoided or minimized
- Coordination with federal, state and local agencies will occur
- Project reports and plans will be available for public view

Project Location

- **Project Location:**
 - Within the City of Vero Beach and Indian River County

- **Project Study Area:**
 - Along SR 5/US 1 from 21st Street to 41st Street
 - Along Aviation Boulevard from 27th Avenue to 13th Avenue

 **Project Focus is at SR 5/US 1 at Aviation Boulevard**



Project Location Map

Purpose and Need

The purpose of this project is to evaluate intersection improvements at SR 5/US 1 and Aviation Boulevard to:

- Improve safety;
- Address existing and projected traffic demand; and
- Enhance the multi-modal features for the pedestrian, bicycle and transit users

The need for the project:

- Existing intersection operates at the maximum capacity
- Existing vehicle delays exceed 1.5 minutes per vehicle during peak traffic hours
- Forecasted vehicle delays will reach 3.5 minutes per vehicle by year 2045 without improvements
- The existing project area needs pedestrian and bicycle improvements
- Aviation Boulevard improvements are needed to serve regional mobility and airport needs

Daily Traffic Volumes, Growth and Comparison

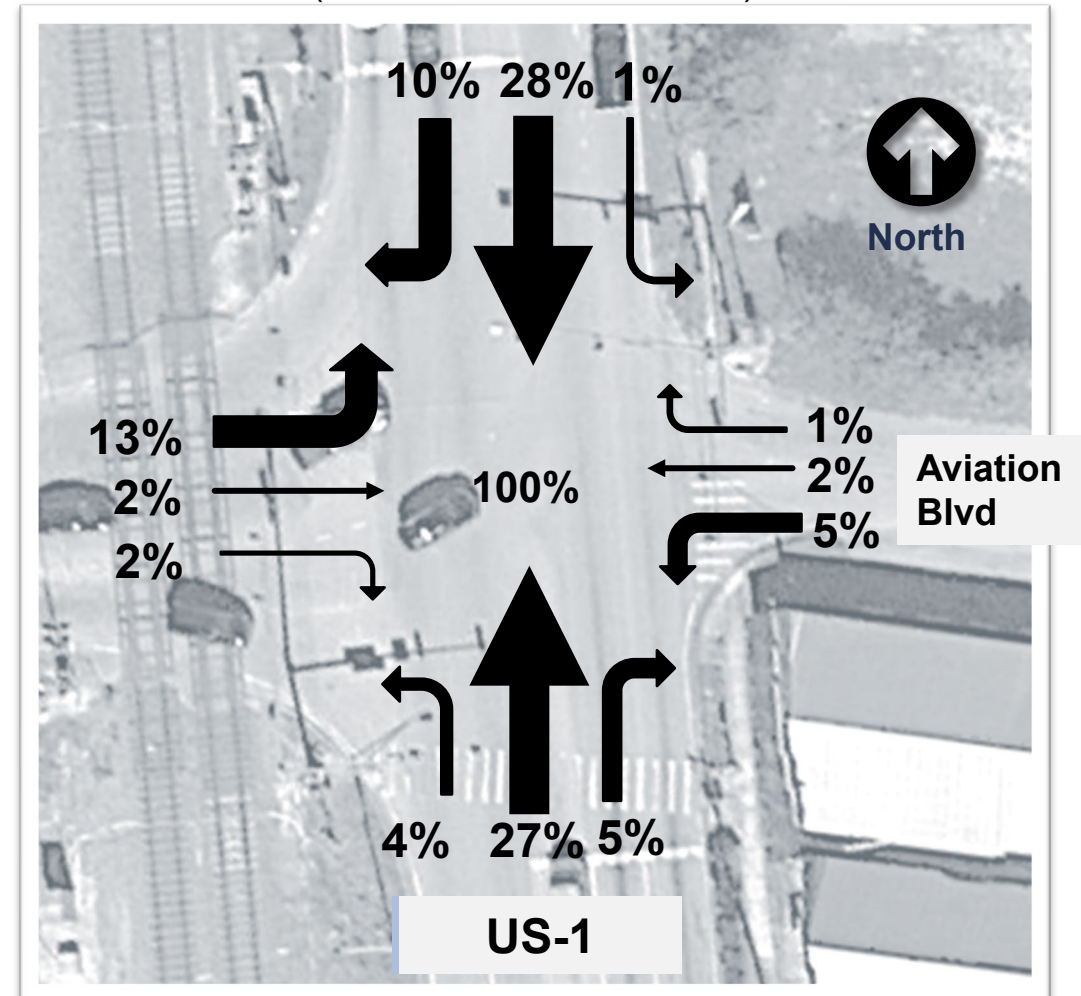
Daily Traffic Volume

	Year 2021	Year 2045	Total Growth
SR 5 US 1	34,200	55,000	61%
Aviation Boulevard	12,000	19,300	61%

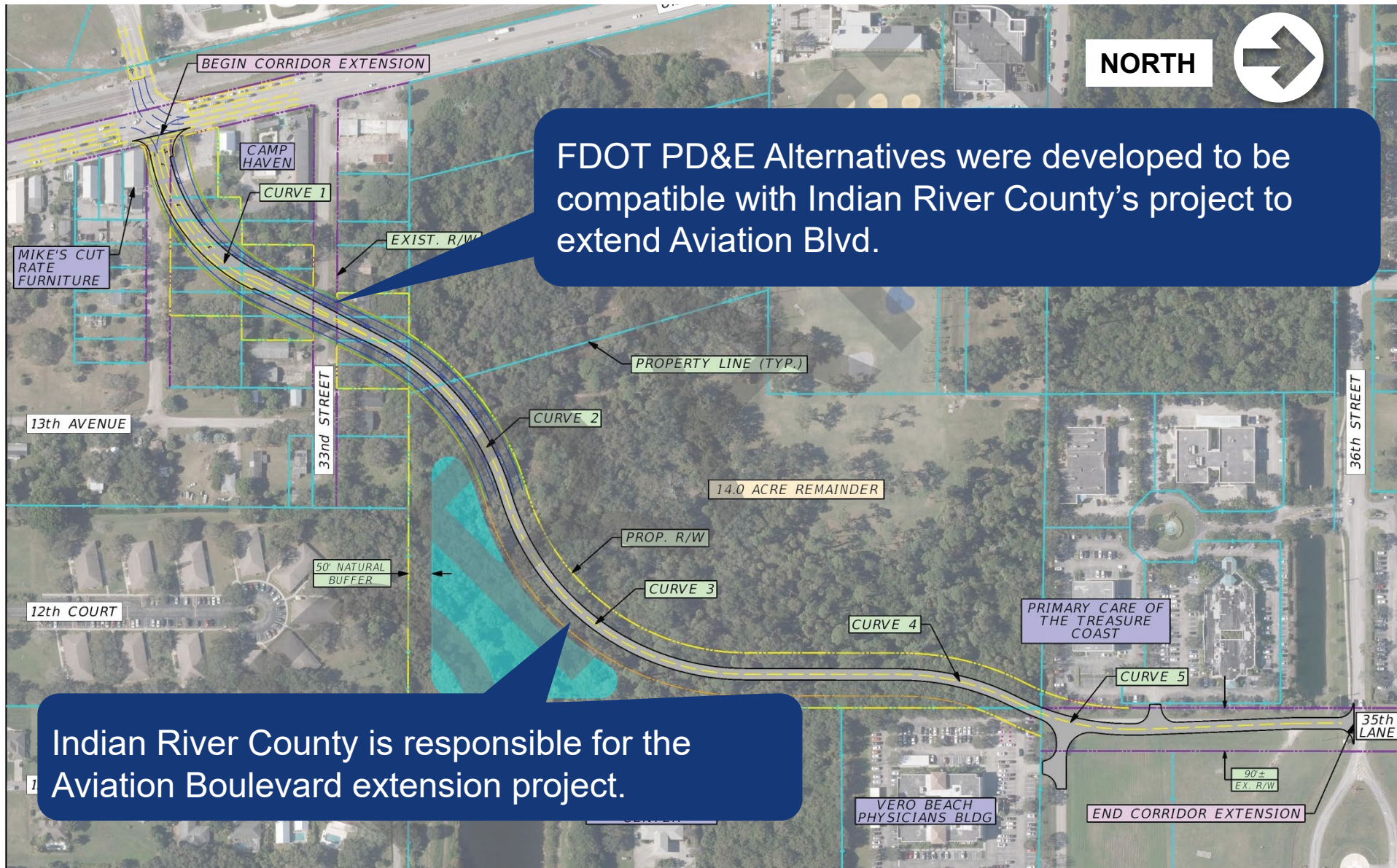
Traffic volumes will grow 61% and the Level of Service (LOS) will drop below the target LOS D.

Traffic Movement Volume Comparison

(Year 2045 AM Peak Hour)



Indian River County's Aviation Blvd Extension Project



Alternatives Considered, Coordination, and Screening

Alternatives Considered

- Alternative 1 – Conventional Intersection
- Alternative 2 – One-Way Pair
- Alternative 3 – US 1 Overpass
- Alternative 4 – Aviation Blvd Overpass
- Alternative 5 – Aviation Blvd Underpass
- Alternative 6 – Aviation Blvd Overpass (w/ railroad crossing)
- Alternative 7 – Displaced Left Turn
- Alternative 8 – Median U-Turn with Roundabout

Coordination Meetings

- Property Owners
- IRC Public Works
- IRC Metropolitan Planning Organization (MPO)
- City of Vero Beach Public Works and Airport
- IR Farms Water Control District (IRFWCD)
- Florida East Coast Railroad (FEC RR)
- Federal Aviation Administration (FAA)


Alternatives Screening Process

A multi-discipline screening analysis was conducted to determine the best alternatives to advance into the detailed analysis phase. Factors considered include:

- Ability to meet the project’s purpose and need
- Mobility for pedestrians and bicyclists
- Property impacts and access
- Environmental impacts
- Construction cost and complexity
- Compatibility with the county’s extension project
- FAA aviation regulations and railroad requirements

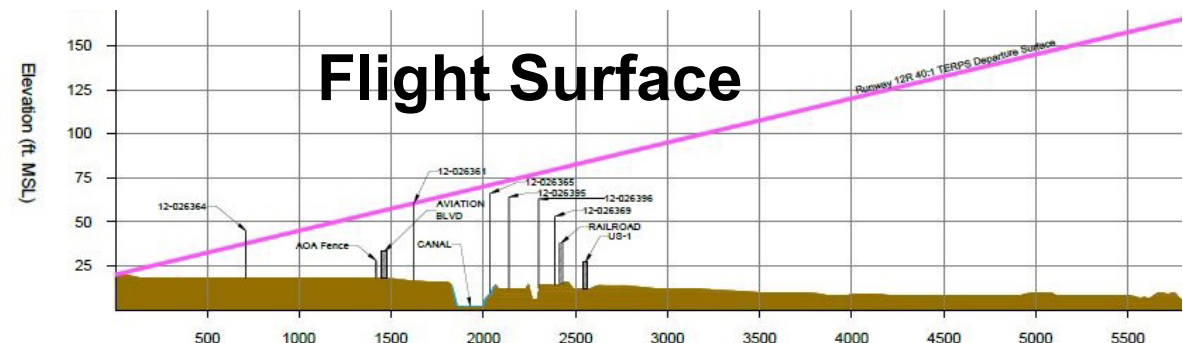
Federal Aviation Administration (FAA) Runway and Aviation Regulations

Runway 30L and the land within the airport property is controlled by the Federal Aviation Administration (FAA) and Vero Beach Airport regulations. A runway protection zone analysis was conducted.

The **Runway Protection Zone (RPZ)**, shown as , controls the ground surface to minimize ground hazards to aircraft.

The **Flight Surface** controls the airspace to keep the aircraft flight space clear.

The FAA concurred with the Runway Protection Zone analysis that concluded the at-grade roadway alternative was the best solution for improvements within the Vero Beach Airport (VRB) Runway 30L RPZ.



Alternatives Eliminated from the Study

Based on the FAA conclusion, screening evaluation, public input, and coordination with the city, county, airport, and agencies, the four (4) overpass or underpass alternatives were eliminated from further consideration.

The overpass/underpass alternatives were dropped from further investigation based on factors related to airport runway regulations, bicycle and pedestrian mobility, and property impacts and access.

Alternatives eliminated from the study:

- **Alternative 3** – US 1 Overpass
- **Alternative 4** – Aviation Blvd Overpass
- **Alternative 5** – Aviation Blvd Underpass
- **Alternative 6** – Aviation Blvd Overpass (with railroad crossing)

FEC Railroad Crossing Closure at 14th Avenue



14th Avenue Railroad Crossing ID 272190F
The railroad crossing at 14th Avenue operates as a single lane, southbound right turn and is under consideration for closure due to the roadway crossing geometry and as a safety countermeasure to the widening of Aviation Blvd.

Crossing ID 272191M
Full signalized intersection

Crossing ID 272189L
Full signalized intersection

Alternatives Identified for Further Study

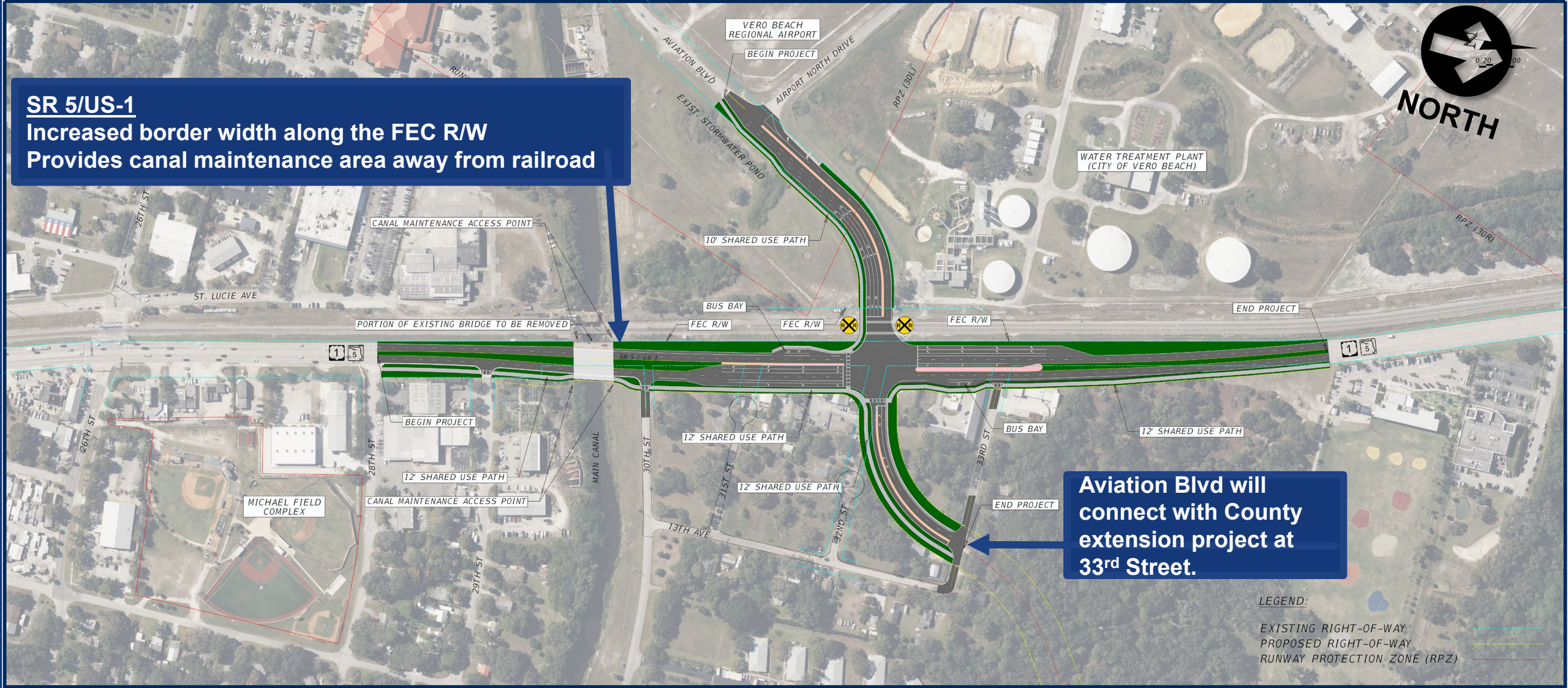
Based on a screening evaluation, public input, and coordination with the city, county, airport and agencies, the four (4) alternatives without an overpass or underpass are best alternatives for further study that will benefit the community, enhance safety, enhance multi-modal features, and improve existing and future traffic operations.

Alternatives identified for further study are:

- **Alternative 1** – Conventional Intersection
- **Alternative 2** – One-Way Pair
- **Alternative 7** – Displaced Left Turn
- **Alternative 8** – Median U-turn with Roundabout

ALTERNATIVE 1 - Conventional Intersection

SR 5/US-1
 Increased border width along the FEC R/W
 Provides canal maintenance area away from railroad

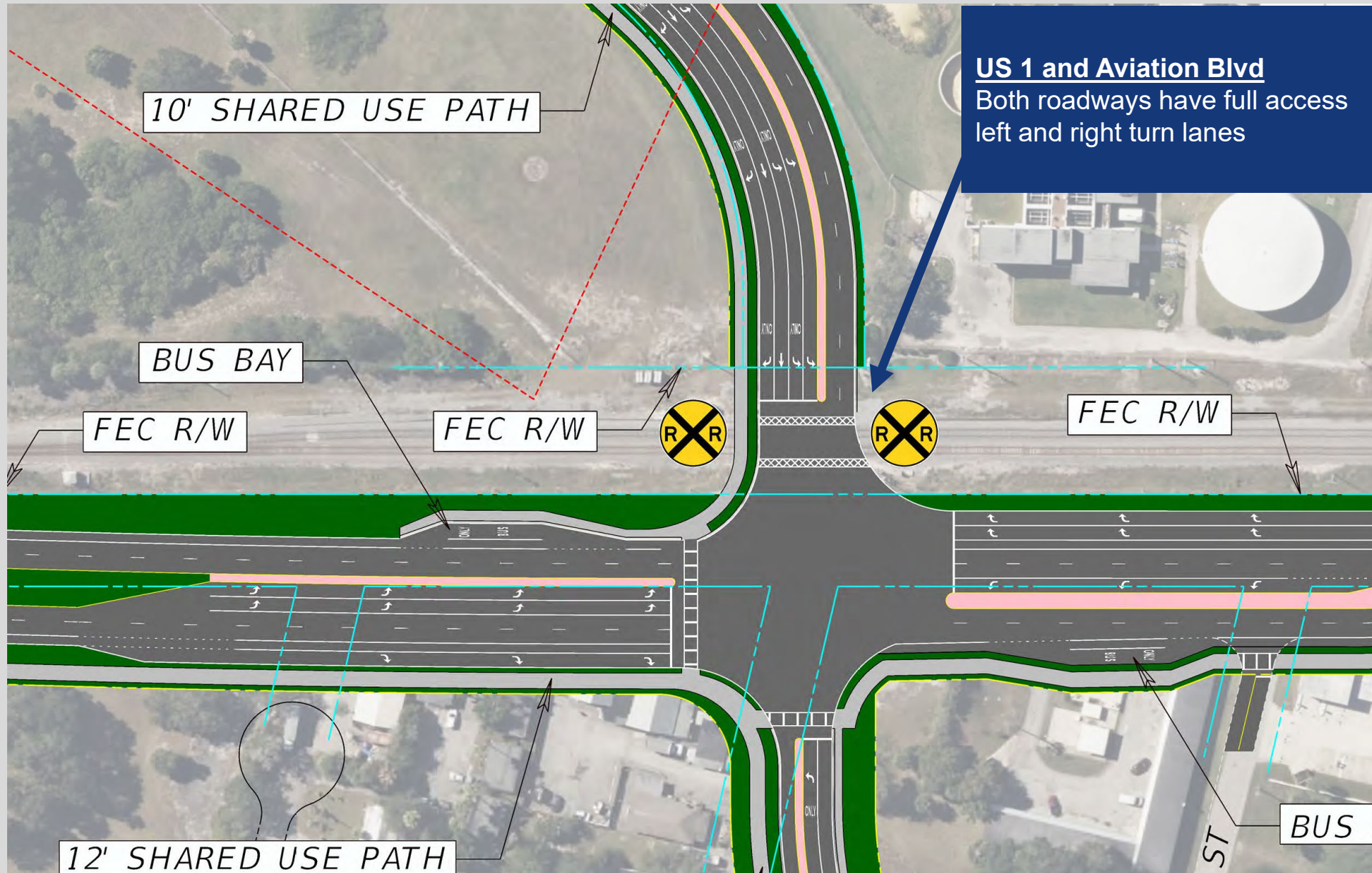


Aviation Blvd will connect with County extension project at 33rd Street.

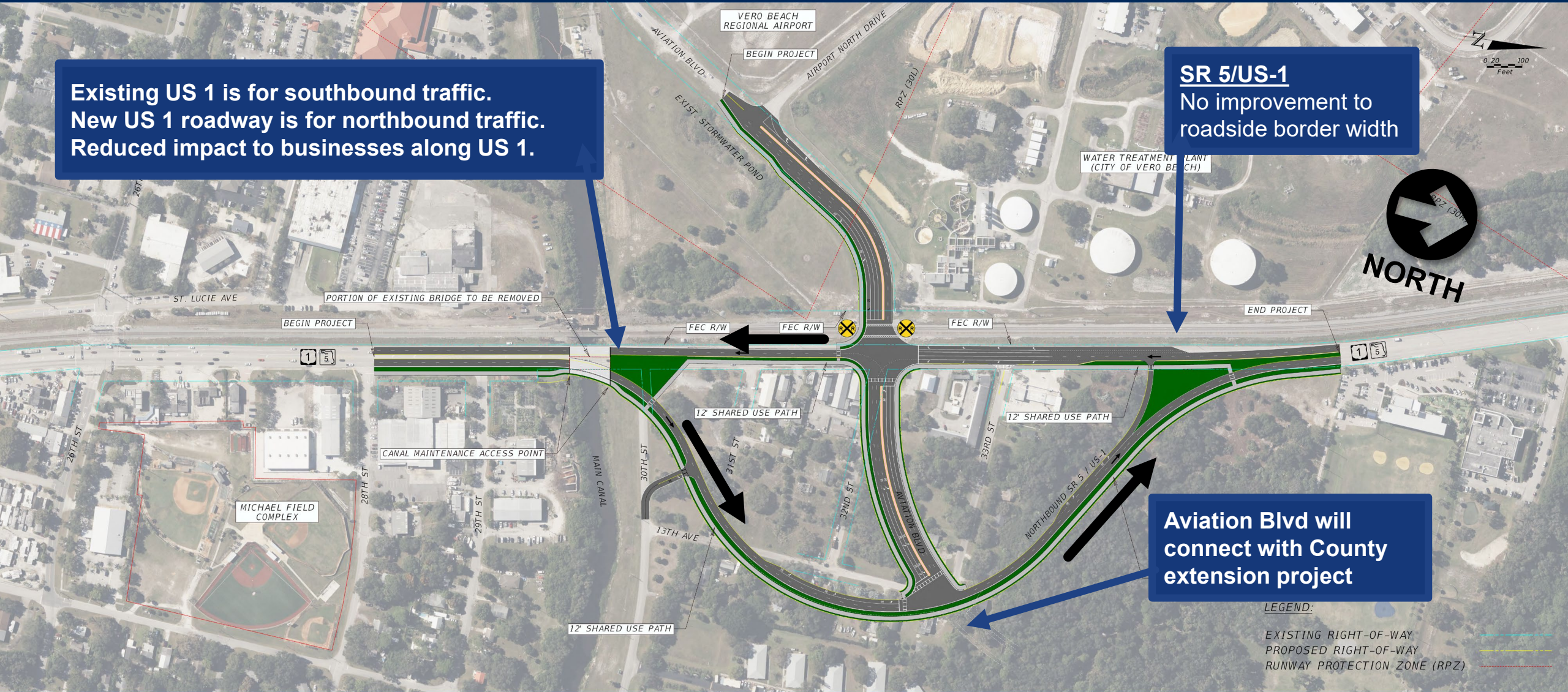
LEGEND:
 EXISTING RIGHT-OF-WAY
 PROPOSED RIGHT-OF-WAY
 RUNWAY PROTECTION ZONE (RPZ)



ALTERNATIVE 1 - Conventional Intersection



ALTERNATIVE 2 – One-Way Pair



**Existing US 1 is for southbound traffic.
New US 1 roadway is for northbound traffic.
Reduced impact to businesses along US 1.**

**SR 5/US-1
No improvement to
roadside border width**

**Aviation Blvd will
connect with County
extension project**

LEGEND:
EXISTING RIGHT-OF-WAY
PROPOSED RIGHT-OF-WAY
RUNWAY PROTECTION ZONE (RPZ)

**Alternative 2 - One-Way Pair
SR 5 at Aviation Boulevard**

State Road (SR) 5/US 1 at Aviation Boulevard

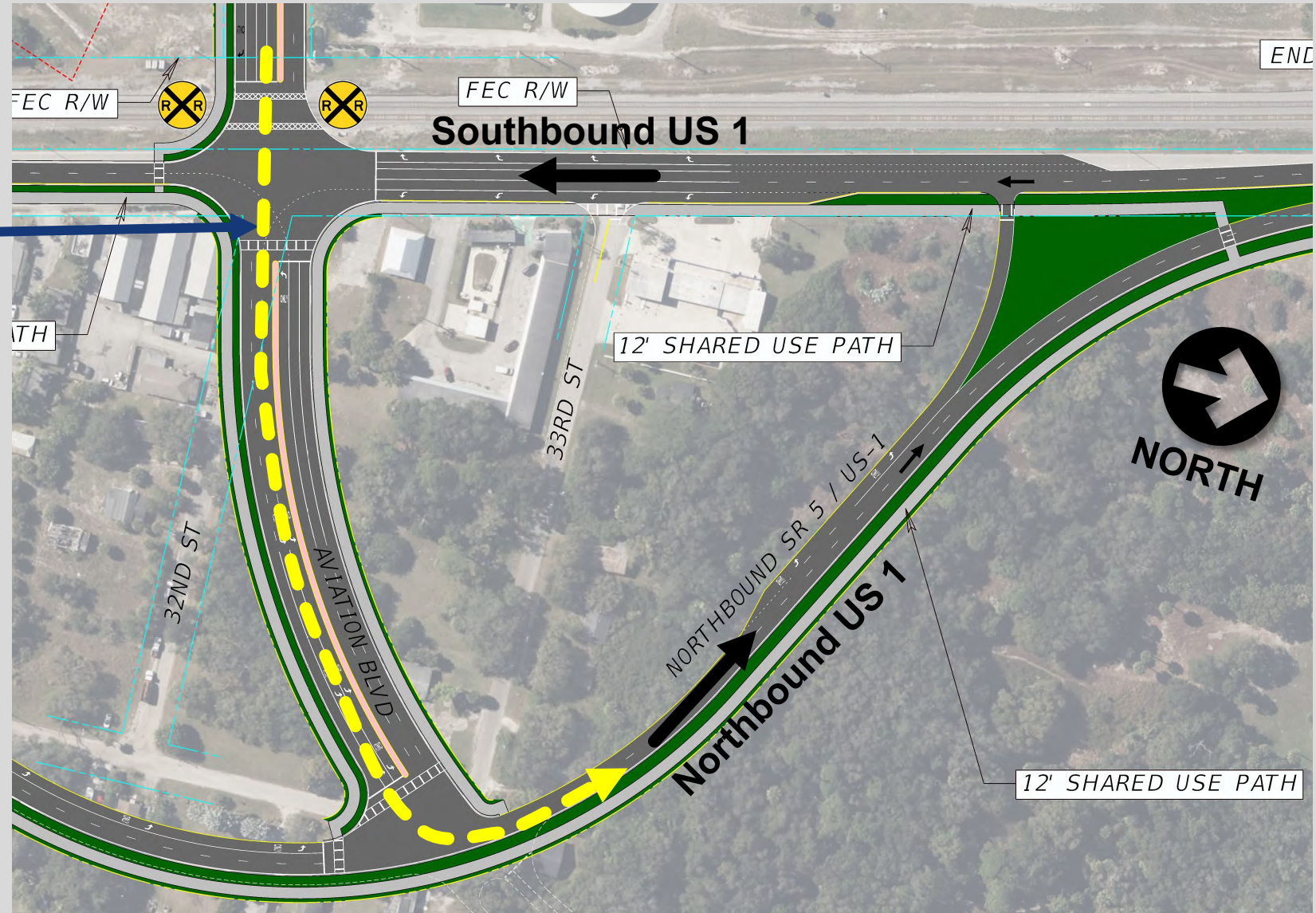
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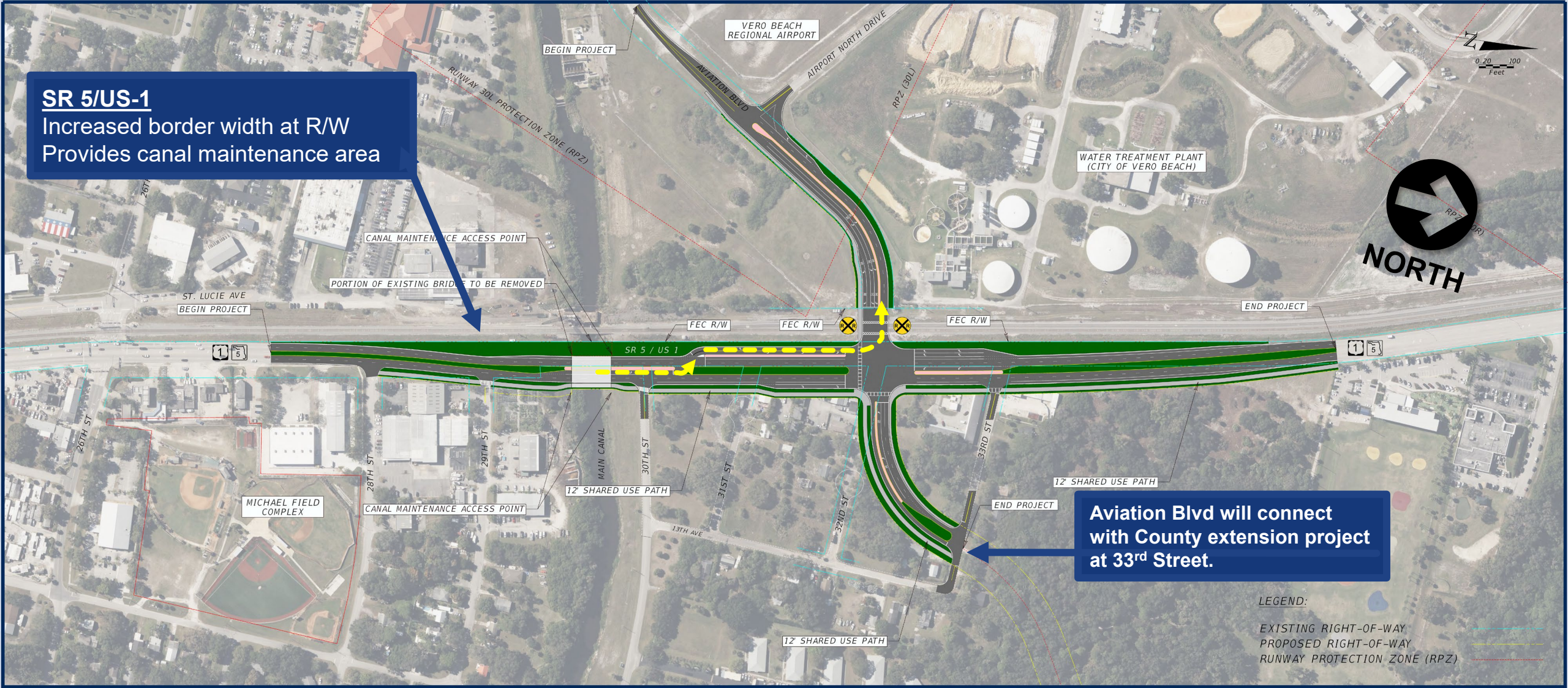
Draft Alternative

ALTERNATIVE 2 – One-Way Pair

Aviation Blvd
Eastbound left turn occurs at
the new US 1 intersection to



ALTERNATIVE 7 – Displaced Left Turn



**Alternative 7 - Displaced Left Turn
Intersection
SR 5 at Aviation Boulevard**

State Road (SR) 5/US 1 at Aviation Boulevard

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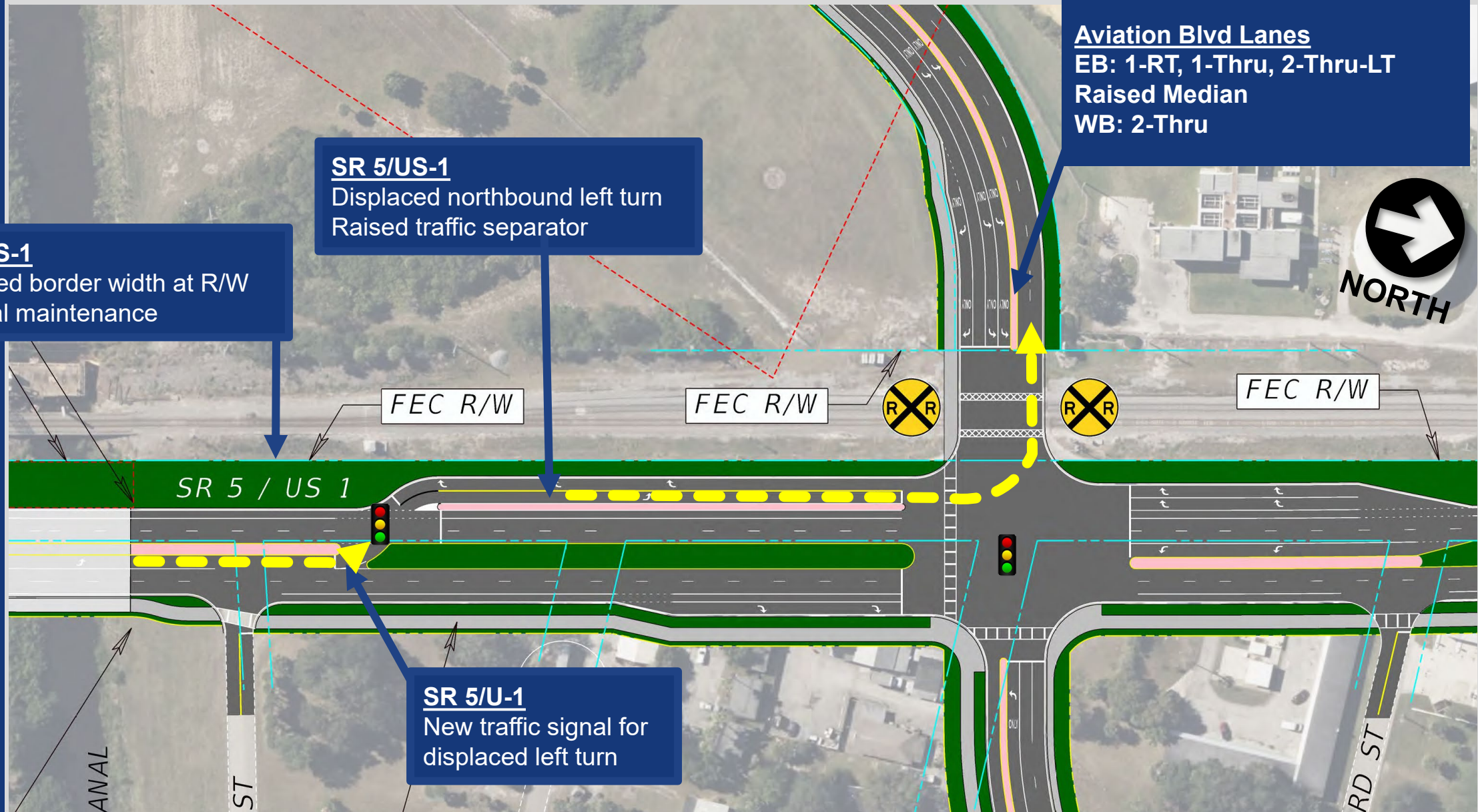
Draft Alternative

ALTERNATIVE 7 – Displaced Left Turn

SR 5/US-1
Increased border width at R/W for canal maintenance

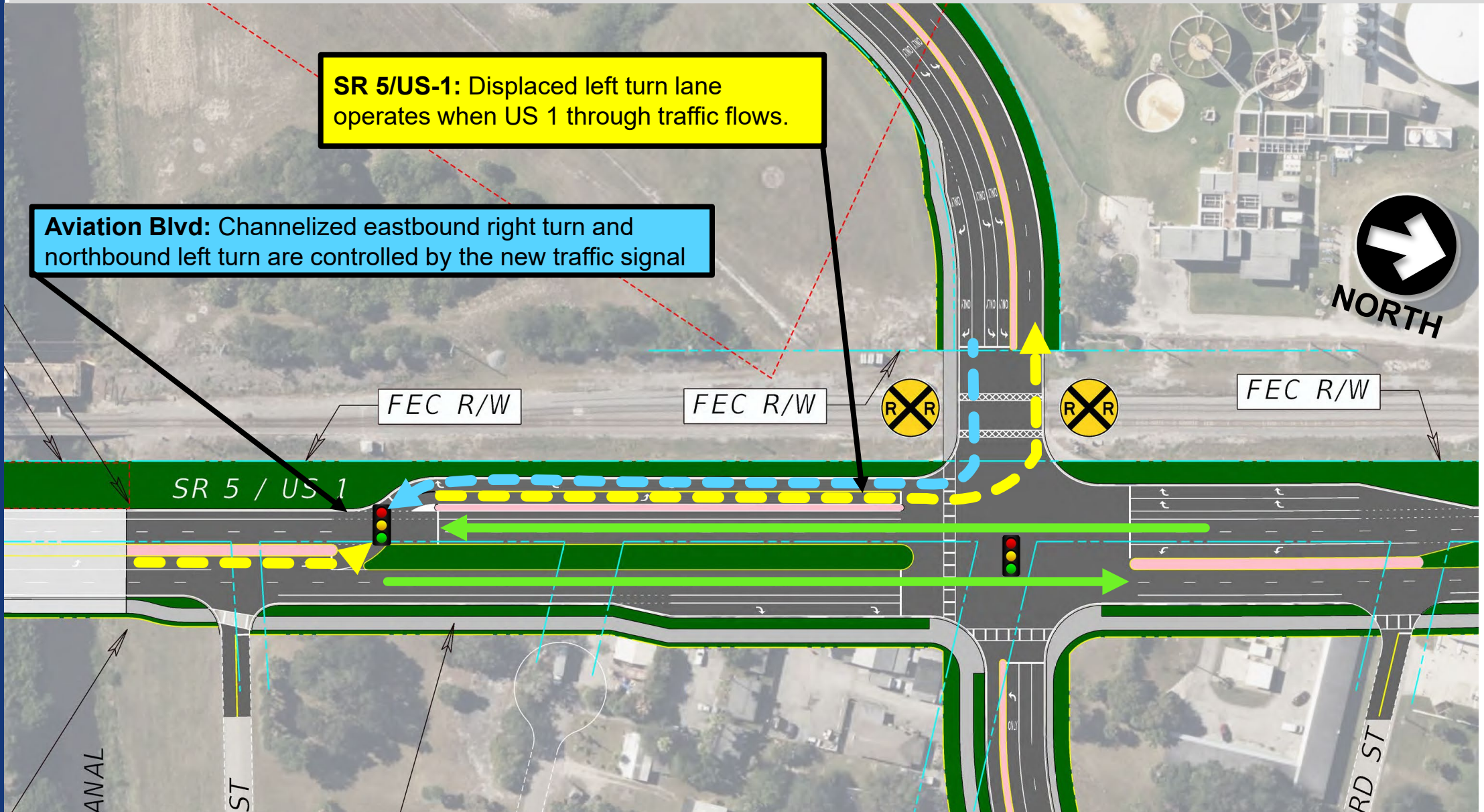
SR 5/US-1
Displaced northbound left turn
Raised traffic separator

Aviation Blvd Lanes
EB: 1-RT, 1-Thru, 2-Thru-LT
Raised Median
WB: 2-Thru

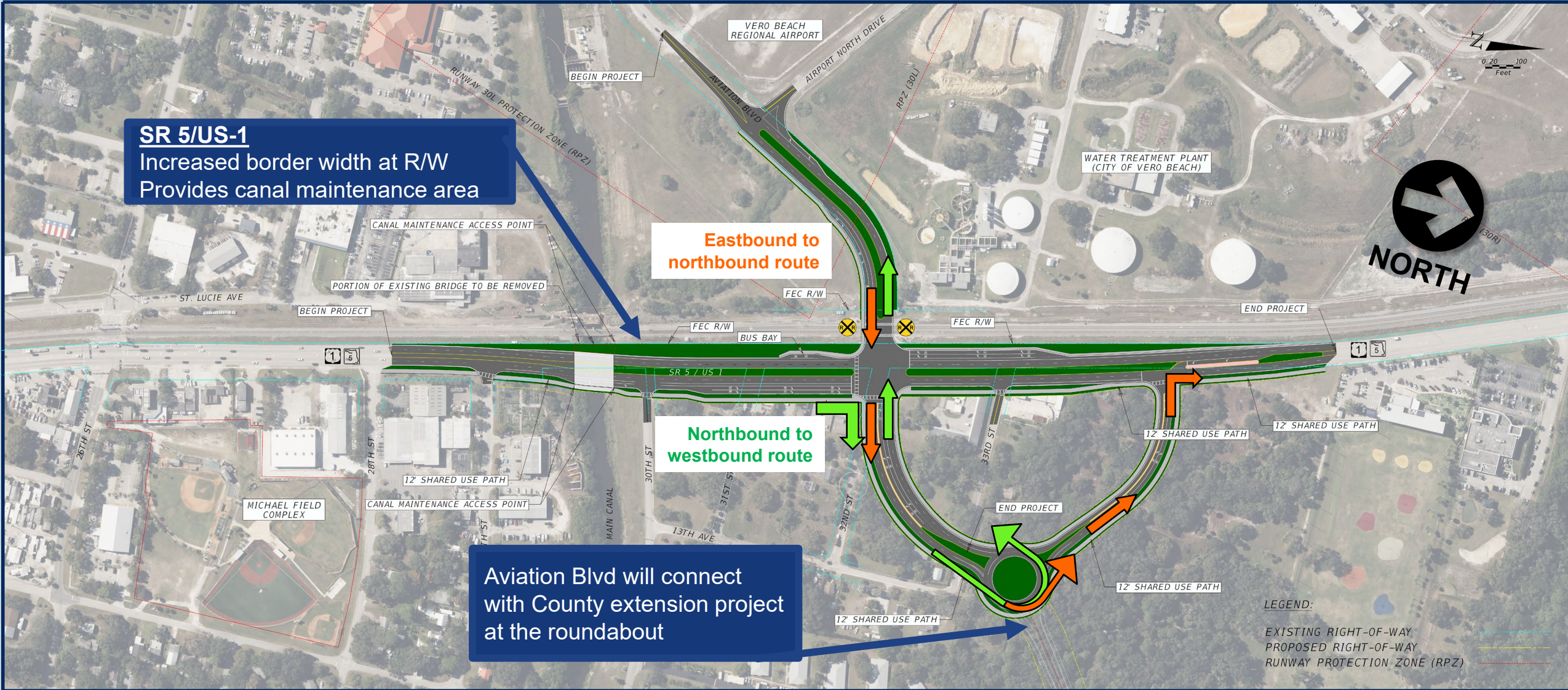


SR 5/U-1
New traffic signal for displaced left turn

ALTERNATIVE 7 – Displaced Left Turn



ALTERNATIVE 8 – Median U-turn with Roundabout



SR 5/US-1
Increased border width at R/W
Provides canal maintenance area

Eastbound to northbound route

Northbound to westbound route

Aviation Blvd will connect with County extension project at the roundabout

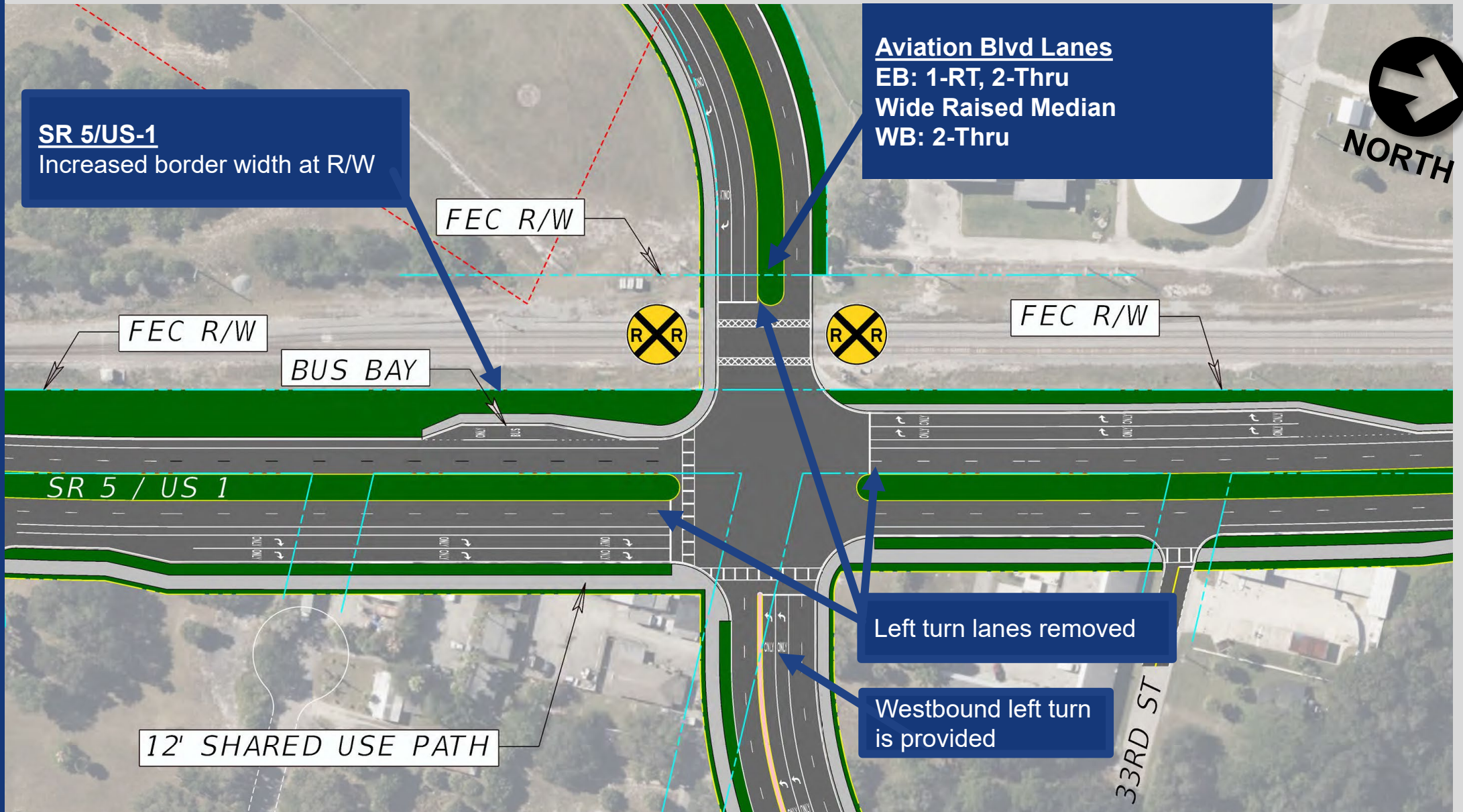
**Alternative 8 - Median U-Turn with Roundabout
SR 5 at Aviation Boulevard**

State Road (SR) 5/US 1 at Aviation Boulevard
Project Development and Environment (PD&E) Study
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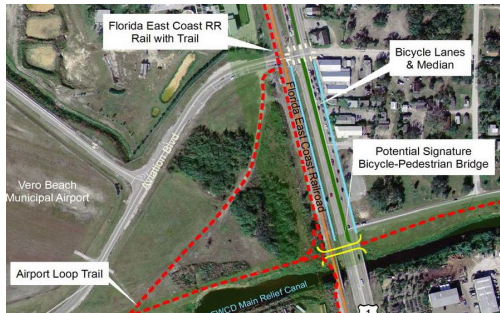
Draft Alternative

ALTERNATIVE 8 – Median U-Turn with Roundabout



Environmental Analysis

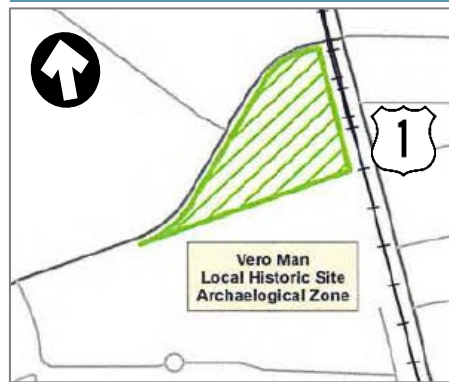
- Social
- Section 4(f)



- Cultural
- Historic, Archeological
- Section 106



1920's Homes

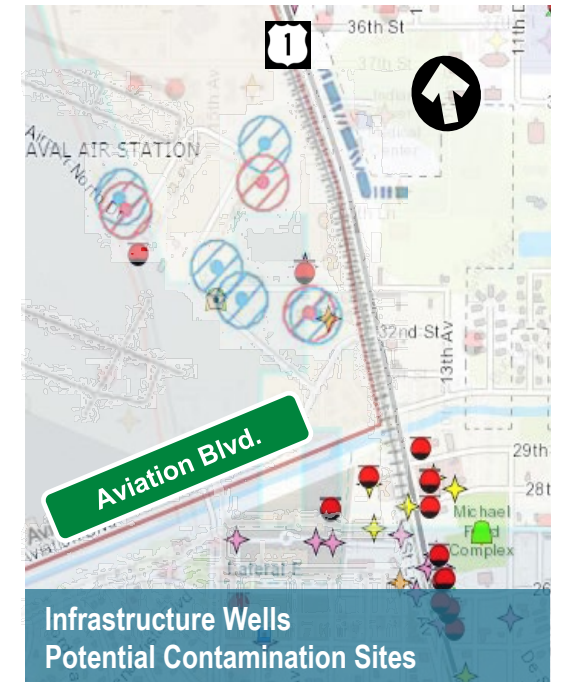


Potential Archeological Zone

- Natural
- Wetlands and species



- Physical
- Traffic noise
- Contamination
- Infrastructure



Alternatives Comparison

Item	Alternative 1 Conventional	Alternative 2 One-Way Pair	Alternative 7 Displaced Left Turn	Alternative 8 Median U-Turn & Roundabout
Meets Purpose and Need	Yes	Yes	Yes	Yes
Safety: Reduction in Crashes	72%	72%	64%	80%
Level of Service	US 1 at Aviation Blvd LOS D (AM) LOS D (PM)	US 1 at Aviation Blvd LOS D (AM & PM) (Both Intersections)	US 1 at Aviation Blvd LOS D (AM) LOS C (PM)	US 1 at Aviation Blvd – LOS D (AM) US 1 at Access Rd – LOS C (AM) US 1 at Aviation Blvd – LOS C (PM) US 1 at Access Rd – LOS B (PM)
Mobility (Transit, Bicycle, Pedestrian)	Shared use path for bicyclists and pedestrians. Bus bay provided for transit.	Shared use path for bicyclists and pedestrians. Transit stops provided.	Shared use path for bicyclists and pedestrians. Does not provide for transit stops on southbound US 1.	Shared use path for bicyclists and pedestrians. Bus bay provided for transit.
Environmental Impacts	Minor	Minor	Minor	Minor
Right of Way Properties Impacted	27 parcels, 5.33 acres	42 parcels, 7.61 acres	29 parcels, 6.03 acres	35 parcels, 8.89 acres
Total Cost Engineering, R/W, Construction	\$37,114,000	\$39,832,000	\$39,810,000	\$45,776,000

Project Schedule



SR 5 / US 1 at Aviation Boulevard PD&E Study

PUBLIC INVOLVEMENT SCHEDULE

ACTIVITY	2022									2023									2024																				
	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec							
Begin Study	★																																						
Public Kick-off Meeting						★																																	
MPO Meetings																★	★																						
Alternatives Public Workshop																		★																					
Public Hearing (tentative)																										★													
Location and Design Concept Acceptance (LCDA)																																						★	
PD&E Study Completed																																							★
Public Involvement	←—————→																																						

Public Involvement

Attend Public Meetings

Alternatives Public Workshop:

- October 10, 2023 at 5:30 PM (webinar online)
- October 11, 2023 at 5:30 PM (in-person)

Vero Beach Community Center

2266 14th Avenue, Vero Beach, FL 32960

Public Hearing: May/June 2024 (tentative)

Project Website

- <https://www.fdot.gov/projects/SR5AviationBlvdPDE>

Stay Informed!

Social Media

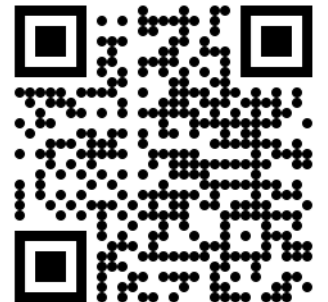


Facebook: [MyFDOTSEFL](#)

Instagram: [myfdot_sefl](#)

Twitter: [@MyFDOT_SEFL](#)

Use
telephone
camera to
scan image

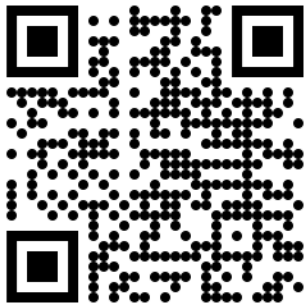


Public comments and questions are always welcome!

Submitting Comments and Questions

Multiple ways to submit:

1. Submit a comment form at the meeting
2. Online at project website
3. By email to Project Manager
4. By U.S. mail to Project Manager



Website

Project Manager Contact Information

Vandana Nagole, P.E.
 FDOT
 3400 West Commercial Blvd
 Fort Lauderdale, FL 33309

Email: vandana.nagole@dot.state.fl.us
 Telephone: 954-777-4281

<https://www.fdot.gov/projects/SR5AviationBlvdPDE>

See Tracks?

Think Train!

Text Message
Hi

DISTRACTIONS ARE DEADLY!

STAY ALERT WHENEVER YOU ARE NEAR TRAIN TRACKS!

★ ★ ★ **See Tracks? Think Train!**

SeeTracksThinkTrain.org





Thank You

for attending the Public Alternatives Workshop for the
SR 5 / US 1 at Aviation Boulevard
Project Development and Environment (PD&E) Study