



### SR 5/US 1/Federal Highway at SR 838/Sunrise Boulevard

Project Development and Environment (PD&E) Study

Broward County, Florida
Financial Project Identification Number: 441955-1-22-02
Efficient Transportation Decision Making (ETDM) Number: 14499

First Alternatives Public Workshop 06.21.2023

### Agenda

- 01 Project Recap
- 02 Purpose & Need
- O3 Concepts and Alternatives Under Consideration
- **O4** Evaluation of Alternatives Under Consideration
- 05 Public Involvement
- **06** Questions & Answers
- 07 Next Steps



### Speakers













### **Partners**









We would like to recognize any federal, state, county, or city officials who may be present.

Please stand to be recognized.



### **Public Notice**





**Social Media** 



Email to Project Contacts List



Property Owner/ Tenant Letters



**Newspapers** 



Department/Project Webpage



### Non-Discrimination Policy Title VI Compliance

The Florida Department of Transportation is required to comply with various non-discrimination laws and regulations, including Title VI of the Civil Rights Act of 1964. 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:

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Stefan.Kulakowski@dot.state.fl.us



### Federal-State Partnership

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (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.



## Purpose of Tonight's Meeting

- Review Project Purpose & Need and Initial List of Concepts.
- 02 Introduce and Discuss Project Alternatives with the Public.
- 03 Receive Comments from the Public for Project's Public Record.
- O4 Join the PD&E Study Mailing List.



## OD Project Recap

Sunrise Key

Sunrise Blvd Project Limits

US-1 Project Limits

**Context Class** 

**Access Class** 

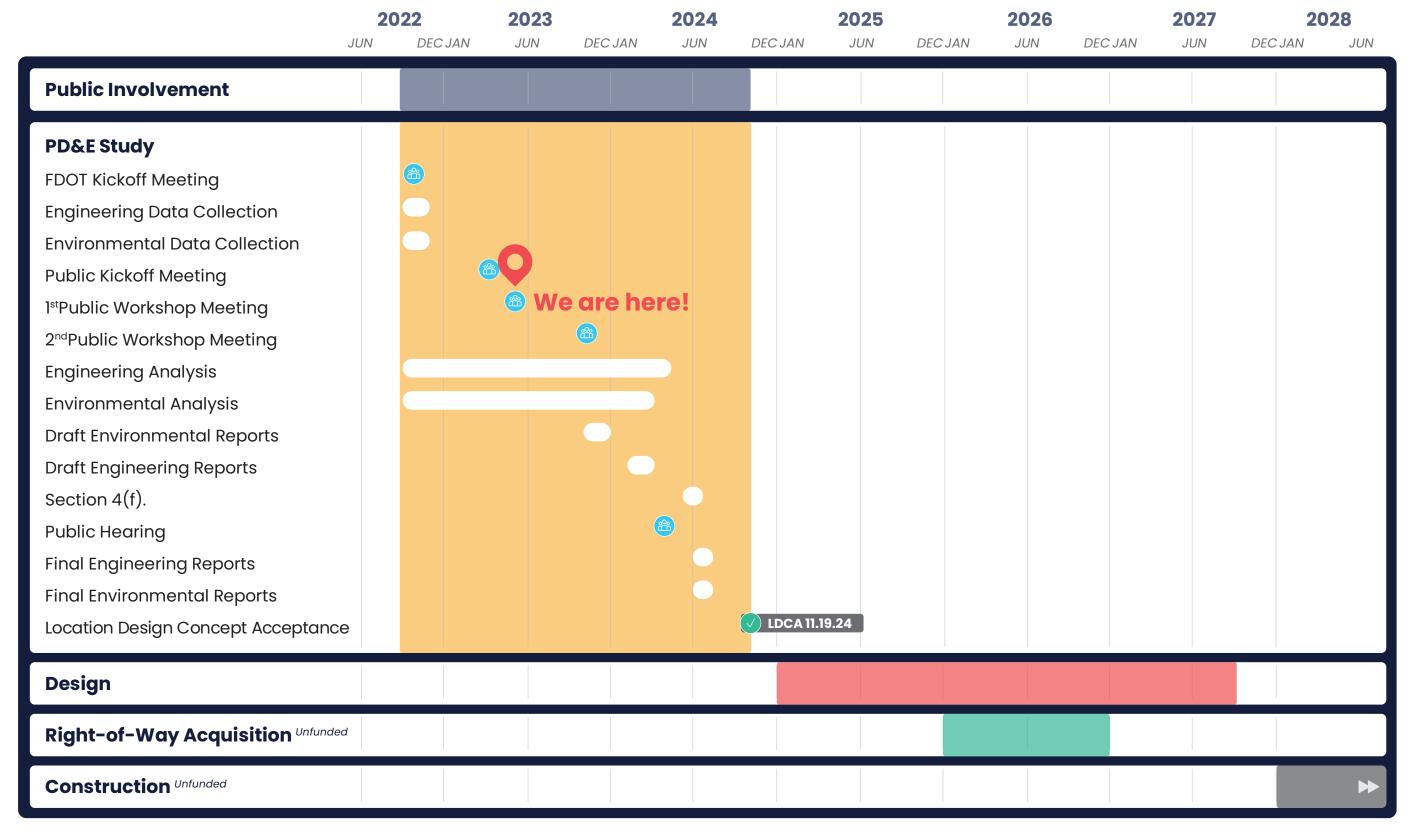
Traffic Intersections

Drawbridge Signal

4 & 5

5

### **Project Timeline**

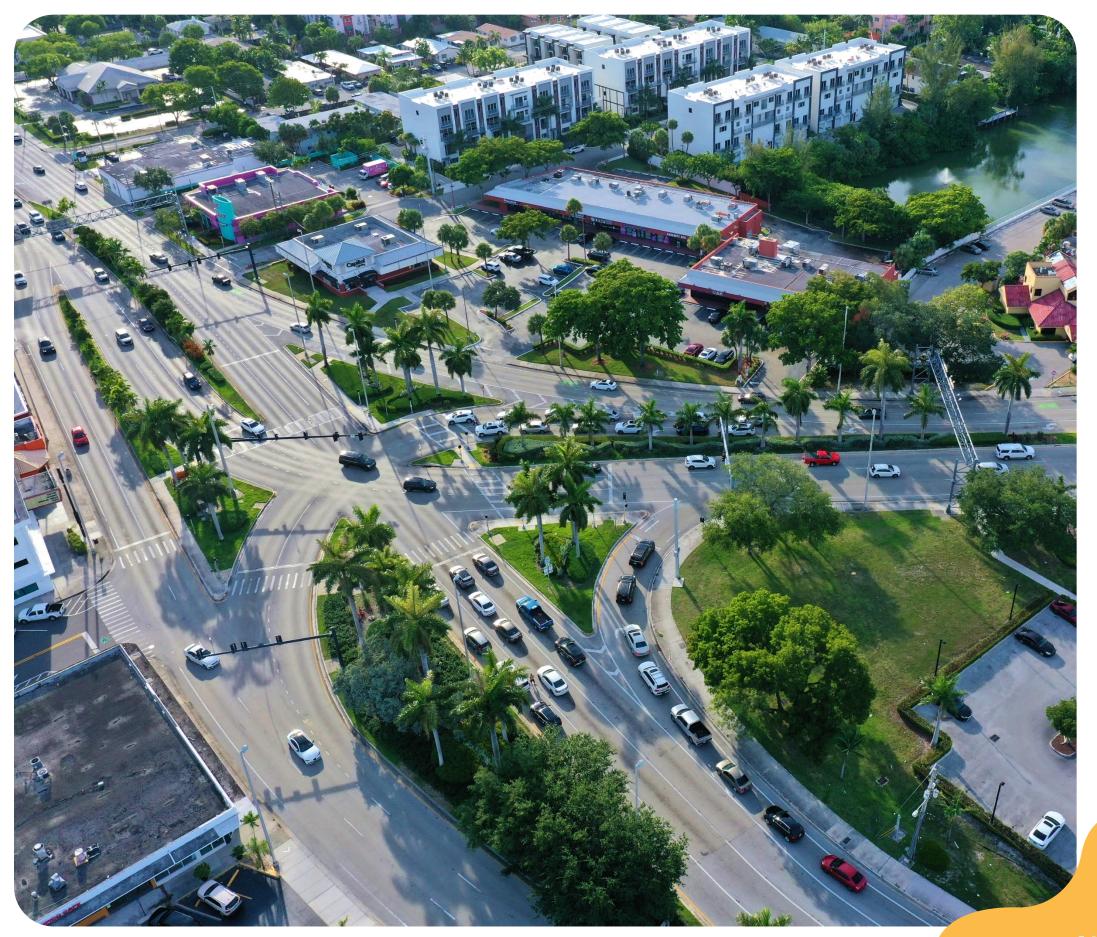




### 02) Purpose & Need

### **Purpose**

The primary purpose of the project is to increase **intersection** capacity and accommodate future multimodal travel demand and safety. This project will also increase system linkage, eliminate existing roadway deficiencies, improve multimodal interrelationships, and enhance safety for bicycles, pedestrians, and transit modes.





### **Intersection Needs**



Emergency Evacuation & Response



Modal Interrelationships



### Capacity

 Consider all movements all modes



Transportation Demand



Safety

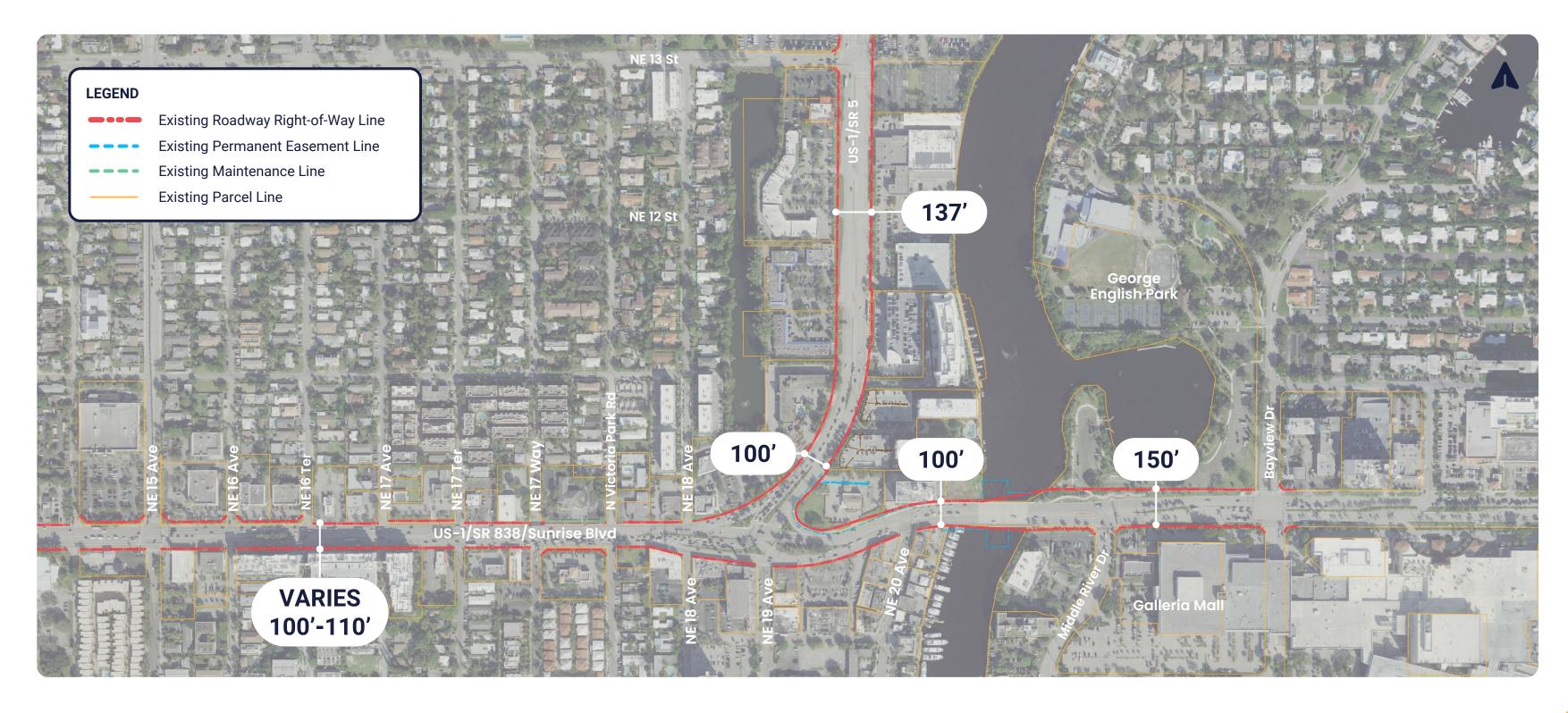


System Linkage



# Concepts & Alternatives Under Consideration

### Existing Intersection and Right-of-Way





### Initial Concepts - US-1 at SR 838/Sunrise Blvd Intersection

- Concept 1: No Build/No Action Signalized At-Grade T
- Concept 2: Transportation System Management and Operations (TSM&O) Signalized At-Grade T Expansion
- Concept 3: EB Triple Left Signalized At-Grade T
- Concept 4: EB Downstream Triple Left Signalized At-Grade T
- Concept 5: EB *Upstream* Triple Left Signalized At-Grade T with SB/NB *Crossover*
- Concept 6: EB Upstream Triple Left Signalized At-Grade T with SB Displaced Left
- Concept 7: Multilane 3-Leg Roundabout with EB Left Turn Compressed *Flyover* Overpass (overhead vertical separation)
- Concept 8: Multilane 3-leg Roundabout with EB Left Turn Compressed Underpass (underground vertical separation)
- Concept 9: Feasibility Study Multilane 3-Leg Roundabout with EB Left Turn *Flyover*/Overpass
- Concept 10: EB Single Left Signalized At-Grade T with EB Left Turn Compressed Flyover/Overpass (overhead vertical separation)
- Concept 11: EB Single Left Signalized At-Grade T with EB Left Turn Compressed Underpass (underground vertical separation)
- Concept 12: Elevated EB and SB Left Turn T (overhead vertical circulation)
- Concept 13: Depressed EB and SB Left Turn T (underground vertical separation)

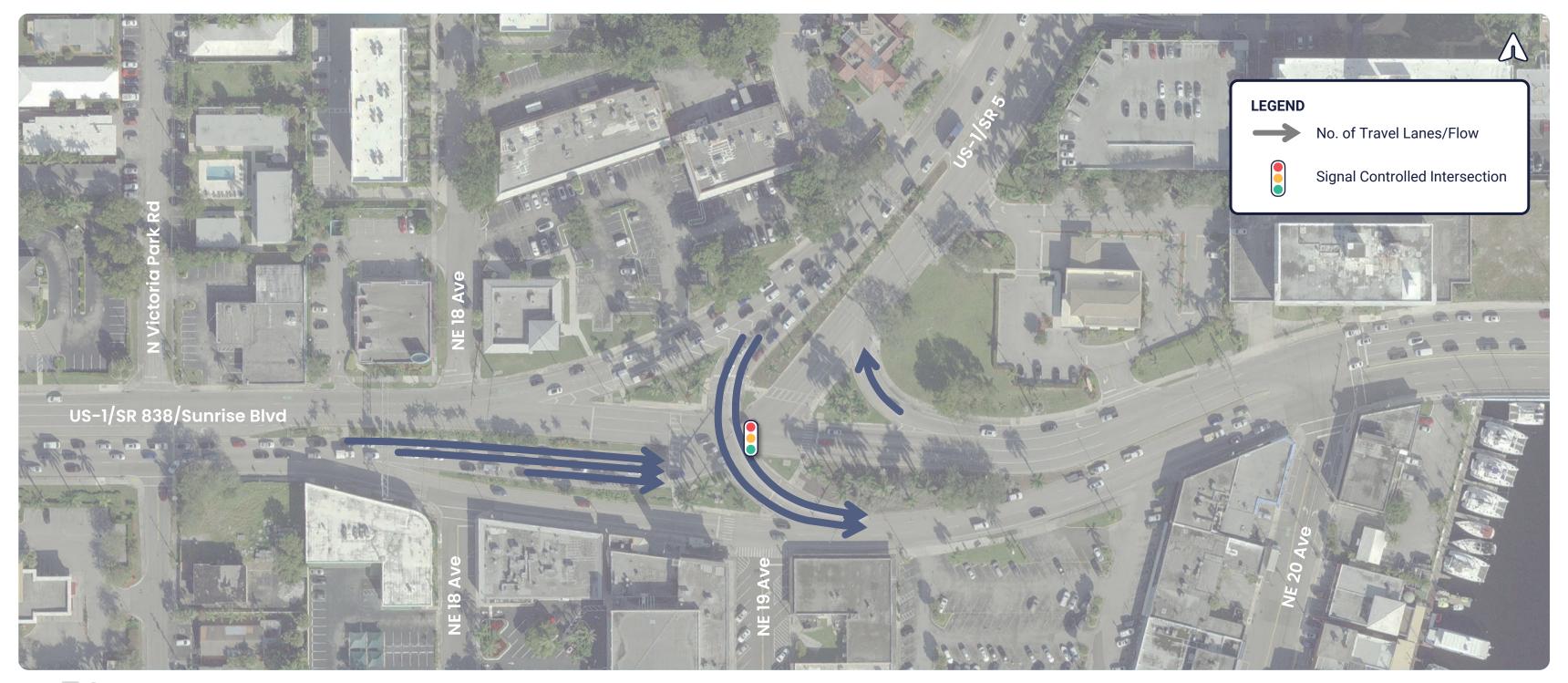


### Alternatives Moving Forward – US-1 at SR 838/Sunrise Blvd Intersection

- Alternative 1 (Formerly Concept 1)
   No Build/No Action Signalized At-Grade T
- Alternative 2 (Formerly Concept 2)
  Transportation System Management and Operations (TSM&O) Signalized At-Grade T Expansion
- Alternative 3 (Formerly Concept 3)
   EB Triple Left Signalized At-Grade T
- Alternative 4 (Formerly Concept 4)
   EB Downstream Triple Left Signalized At-Grade T
- Alternative 5 (Formerly Concept 5)
   EB Upstream Triple Left Signalized At-Grade T with SB/NB Crossover
- Alternative 6 (Formerly Concept 7)
  Multilane 3-Leg Roundabout with EB Left Turn Compressed Flyover Overpass (overhead vertical separation)
- Alternative 7 (Formerly Concept 8)
   Multilane 3-leg Roundabout with EB Left Turn Compressed Underpass (underground vertical separation)
- Alternative 8 (Formerly Concept 10)
  EB Single Left Signalized At-Grade T with EB Left Turn Compressed Flyover Overpass (overhead vertical separation)
- Alternative 9 (Formerly Concept 11)
  EB Single Left Signalized At-Grade T with EB Left Turn Compressed Underpass (underground vertical separation)



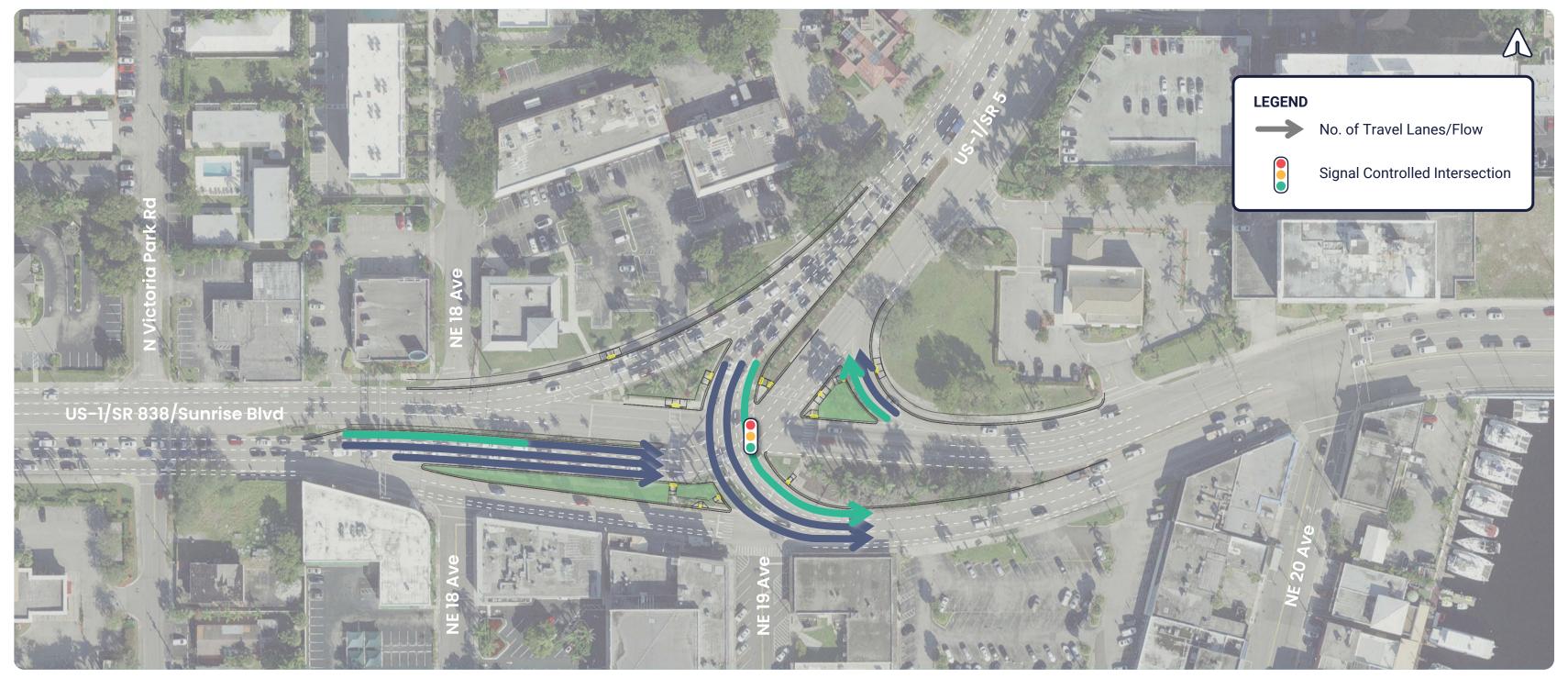
### Alternative 1. No-Build/No Action Signalized At-Grade T





#### Alternative 2.

### Transportation System Management and Operations (TSM&O) Signalized At-Grade T Expansion

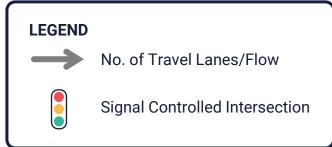




### Alternative 3.

### EB Triple Left Signalized At-Grade T



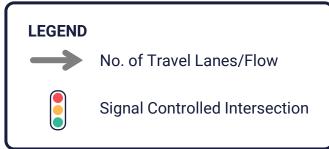




#### **Alternative 4.**

### EB Downstream Triple Left Signalized At-Grade T

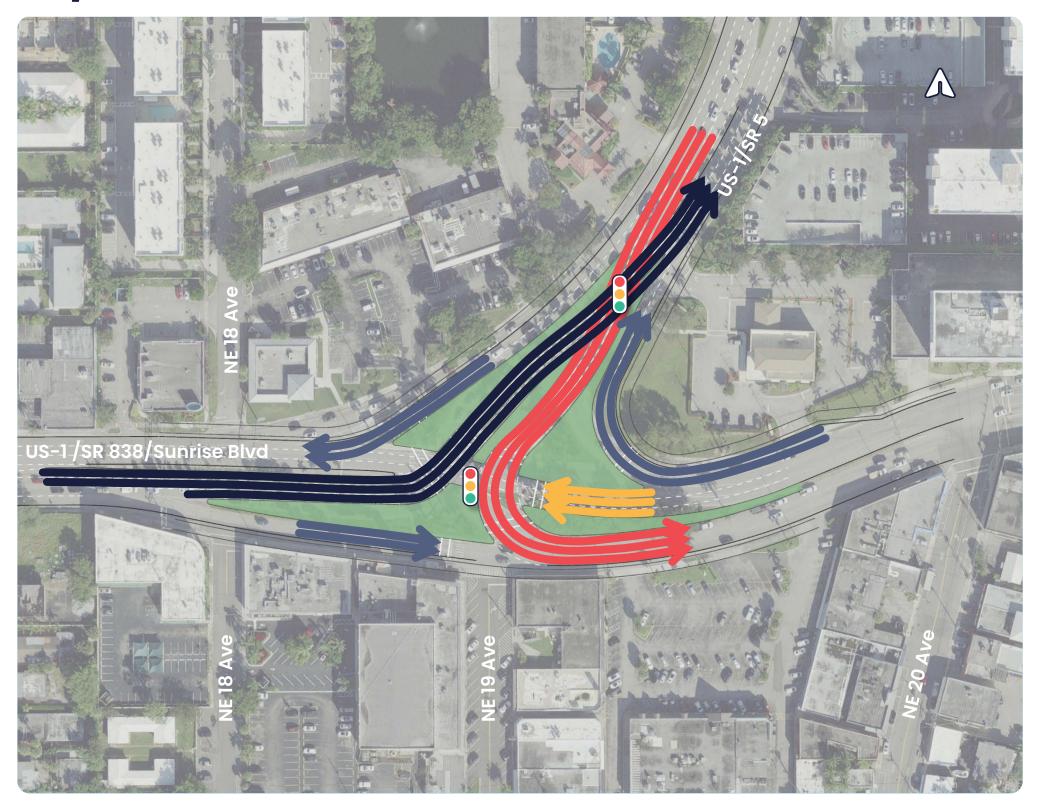






#### **Alternative 5.**

### EB Upstream Triple Left Signalized At-Grade T with SB/NB Crossover

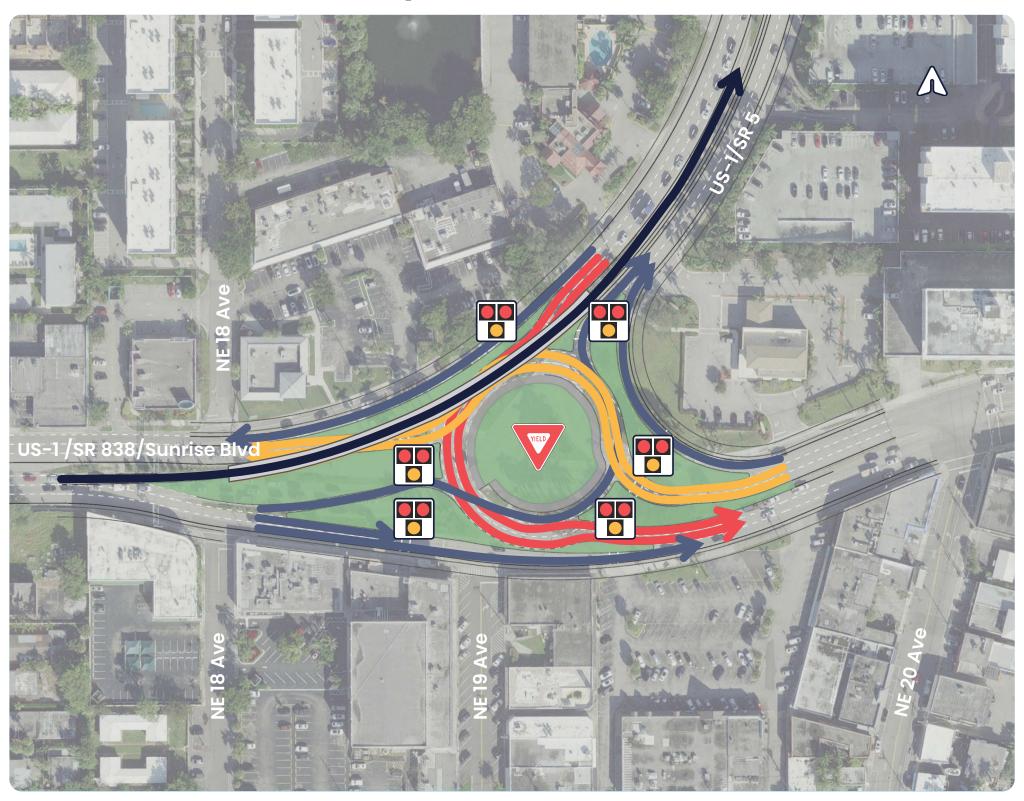






#### **Alternative 6.**

### Multilane 3-Leg Roundabout with EB Left Turn Compressed Flyover/Overpass (overhead vertical separation)







No. of Travel Lanes/Flow



Yield Controlled Intersection

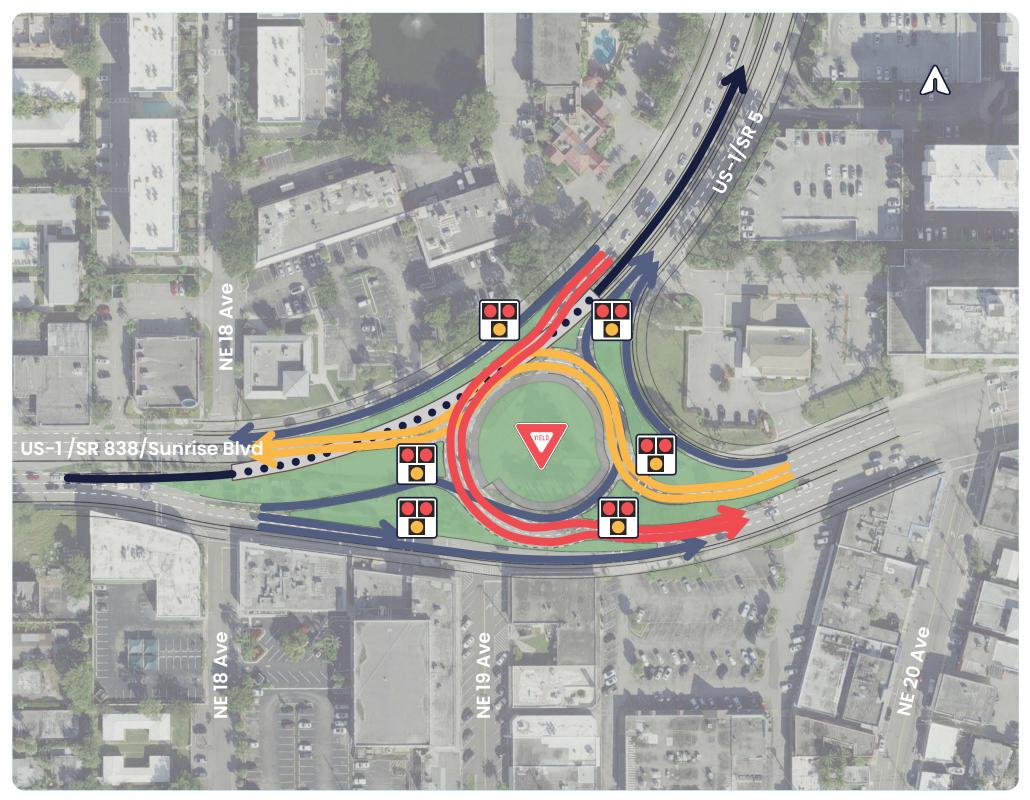


High-intensity Activated crossWalK (HAWK) pedestrian crossing beacon



#### Alternative 7.

### Multilane 3-leg Roundabout with EB Left Turn Compressed Underpass (underground vertical separation)







No. of Travel Lanes/Flow



Yield Controlled Intersection

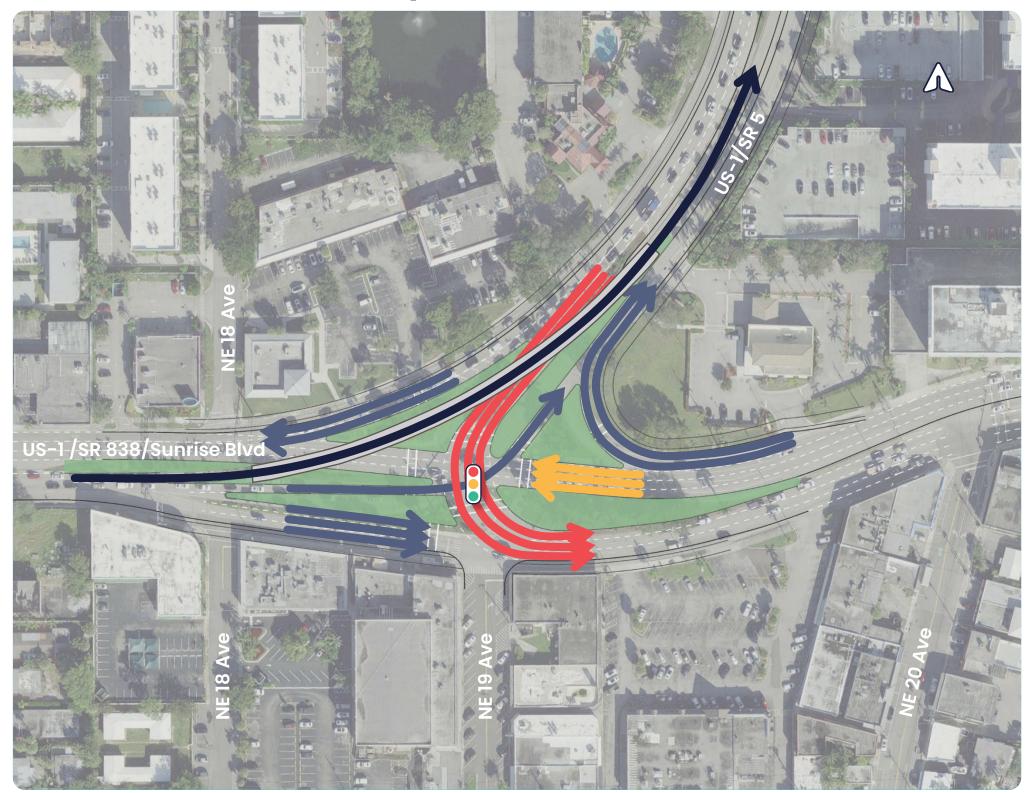


High-intensity Activated crossWalK (HAWK) pedestrian crossing beacon



#### **Alternative 8.**

### EB Single Left Signalized At-Grade T with EB Left Turn Compressed Flyover/Overpass (overhead vertical separation)

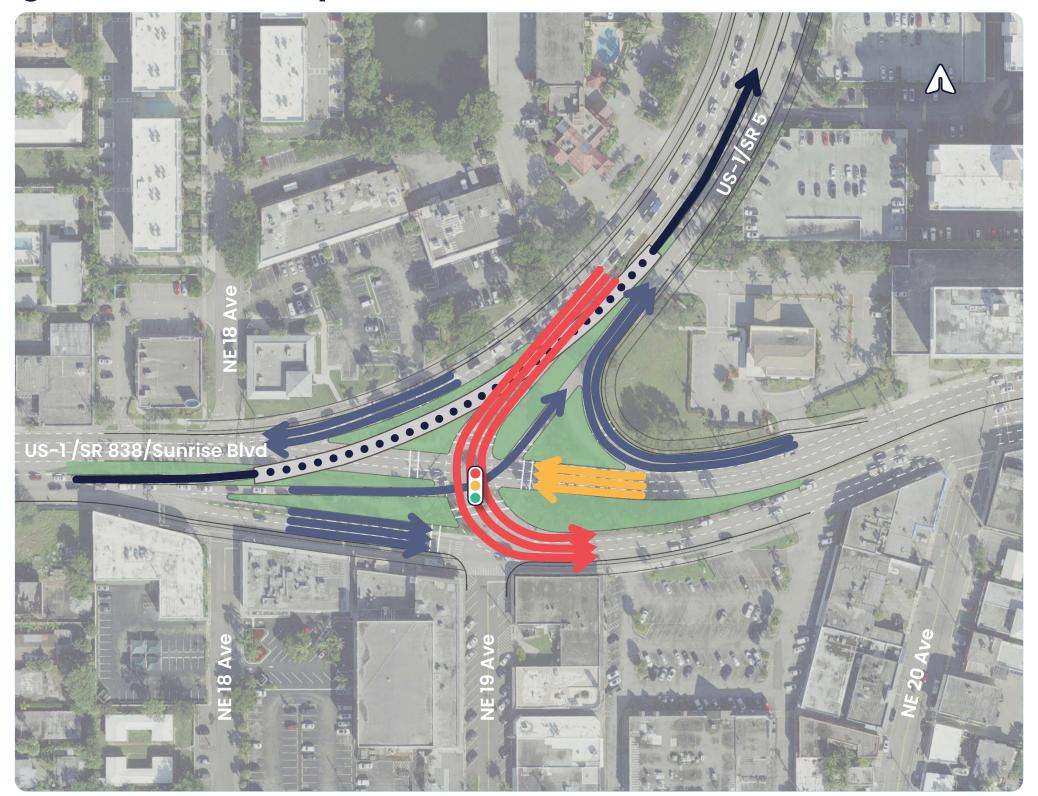






#### **Alternative 9.**

### EB Single Left Signalized At-Grade T with EB Left Turn Compressed Underpass (underground vertical separation)







### US-1 at SR-838/Sunrise Blvd Intersection Concepts Not Moving Forward for Further Analysis

#### CONCEPT 6.

EB Upstream Triple Left Signalized At-Grade T with SB Displaced Left

Very similar to Alternative 5 (Formerly Concept 5) and Alternative 5 has fewer Right-of-Way impacts.



#### CONCEPT 9.

Feasibility Study Multilane 3-Leg Roundabout with EB Left Turn Flyover/Overpass

Significant adverse physical and operational impacts along two legs, similar to Alternative 7 (Formerly Concept 8), and Alternative 7 has fewer adverse impacts.





### US-1 at SR-838/Sunrise Blvd Intersection Concepts Not Moving Forward for Further Analysis

#### CONCEPT 12.

Elevated EB and SB Left Turn T (overhead vertical circulation)

Significant and widespread adverse impacts along three legs and not conducive for pedestrian and cyclist travel.



#### CONCEPT 13.

Depressed EB and SB Left Turn T (underground vertical separation)

Significant and widespread adverse impacts to buried utilities and at the portals along three legs, high capital and O&M costs, and not conducive for pedestrian and cyclist travel.





### Initial Concepts – NE 20<sup>th</sup> Avenue Intersection

- 1. Existing Full Median Opening T To Remain As Is (Left in, Left out, Right in, Right out)

  Concept Pictured to the Left
- 2. Continuous Green Free Flow Westbound Through T (Left in, Left out, Right in, Right out)
- 3. Directional Median Opening T (Left in, Right in, Right out)
- 4. Closed Median Opening T (Right in, Right out)
- 5. New Eastbound Auxiliary Right Turn Lane

Note: Initial Concepts that are highlighted in RED have been eliminated from detailed study.





### NE 20th Avenue Intersection Concepts Not Moving Forward for Further Analysis

#### CONCEPT 2.

Continuous Green Free Flow Westbound Through T (Left in, Left out, Right in, Right out)

Short westbound weave segment with very large volumes is not operationally feasible.



#### CONCEPT 3.

Directional Median Opening T (Left in, Right in, Right out)

Eliminates critical left turn movement and would relocate vehicular traffic to other

local roadways.



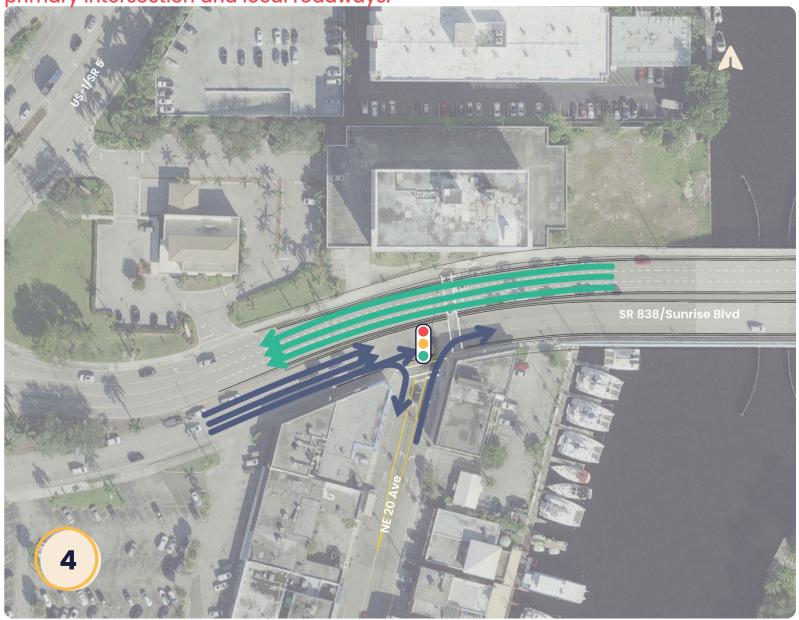


### NE 20th Avenue Intersection Concepts Not Moving Forward for Further Analysis

#### CONCEPT 4.

Closed Median Opening T (Right in, Right out)

Eliminates two critical left turn movements and would relocate vehicular traffic to primary intersection and local roadways.



#### CONCEPT 5.

New Eastbound Auxiliary Right Turn Lane

Would physically impact existing business with limited benefits to traffic operations and safety.





# Evaluation of Alternatives Under Consideration

### **Presentation of Alternatives**

#### **WORKSHOP FORMAT**

- Each alternative will be presented one at a time.
- Interactive feedback is encouraged for each alternative.
  - Please ask questions and make comments as you feel necessary.
  - At the conclusion of the presentation of alternatives we will show the comparative evaluation summary.
- Based on public feedback, the alternatives may be refined and enhanced.



### **Submitting Comments & Questions Today**

### Multiple ways to submit:

- O1) Verbally by filling out and handing in a "Speaker Card," and waiting to be called on.
- Online at project website <a href="https://www.fdot.gov/projects/US1GatewayPDE">www.fdot.gov/projects/US1GatewayPDE</a>
- O3 By email to Project Manager
  Adham.naiem@dot.state.fl.us
- By US mail to Project Manager

  Adham Naiem

  Florida Department of Transportation, District 4
  3400 West Commercial Boulevard

  Fort Lauderdale, Florida 33309

**Project Website** 





# Factors to be Considered when Evaluating Concepts

#### **Initial List of Evaluation Factors**

- Traffic Operations
- Pedestrian and Cyclist Connectivity and Operations
- Motorized Vehicle Safety
- Non-Motorized Traveler Safety
- Access Impacts
- Emergency Evacuation and Response
- Social and Community Impacts
- Cultural/Historic Resource Impacts
- Noise Impacts
- Drainage and Resiliency Impacts
- Utility Impacts
- Construction Costs
- Operations and Maintenance Costs
- Right-of-Way Impacts
- Constructability/MOT
- Environmental Impacts

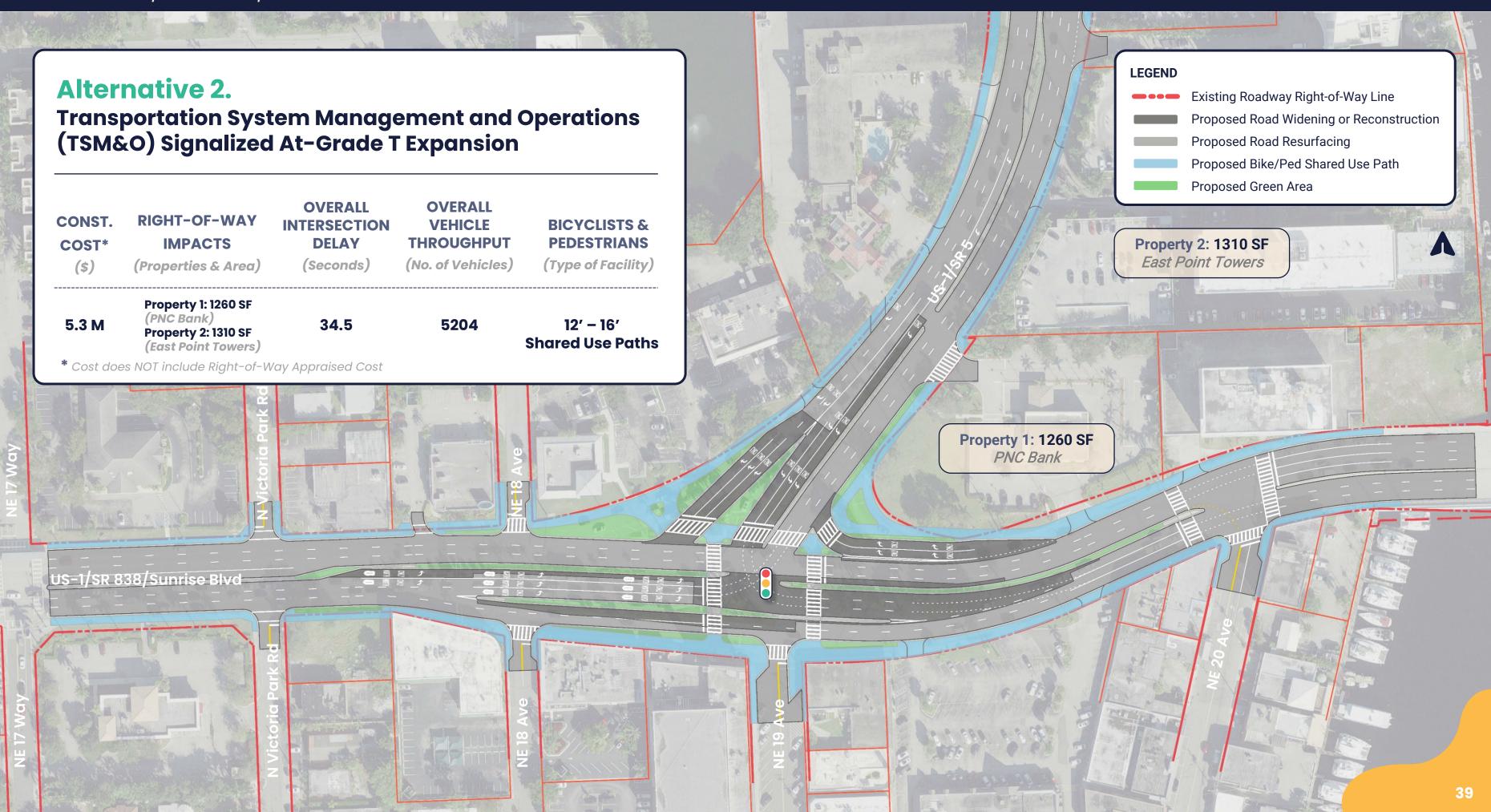
Which are most important?

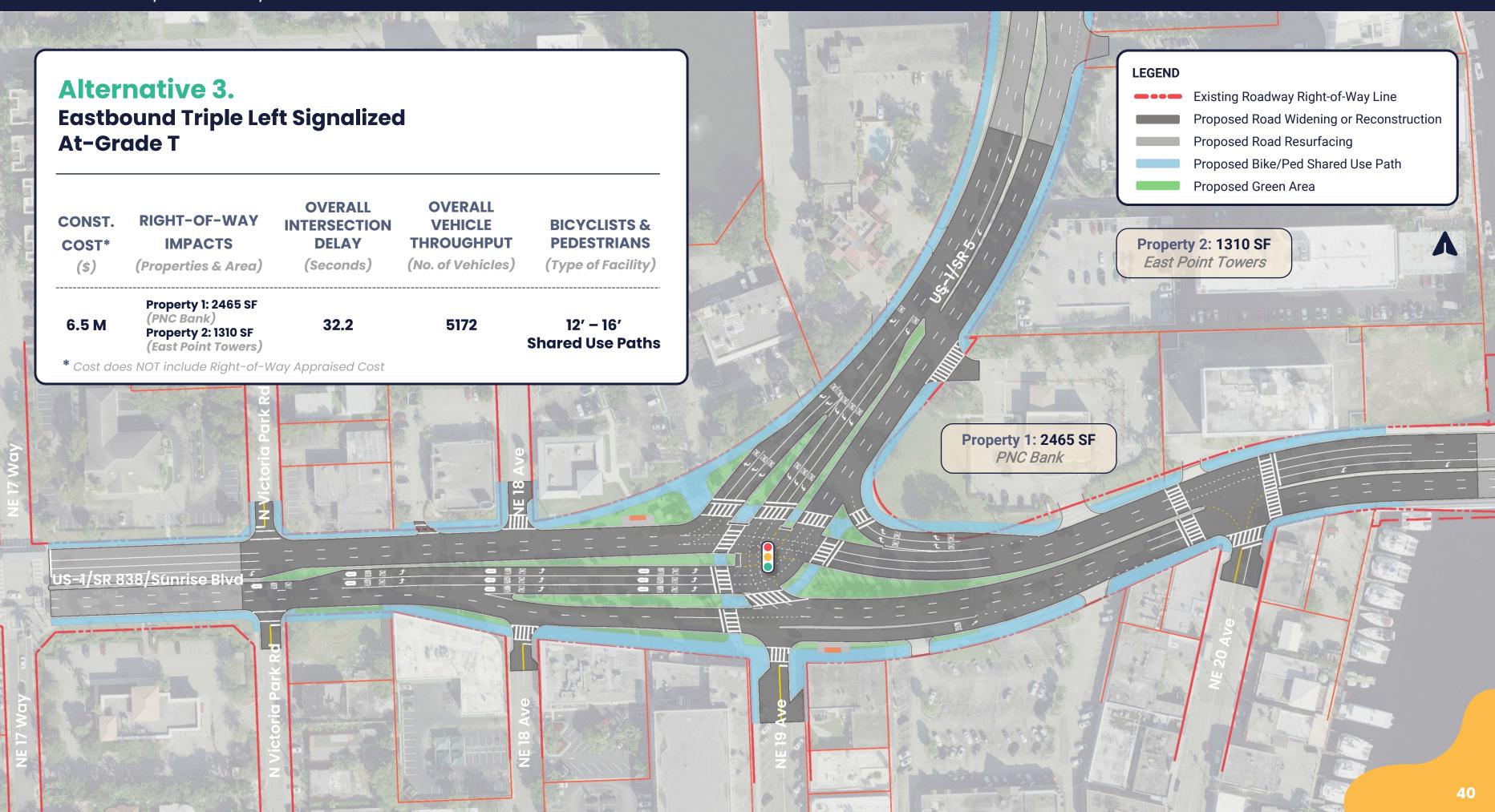
Which are least important?

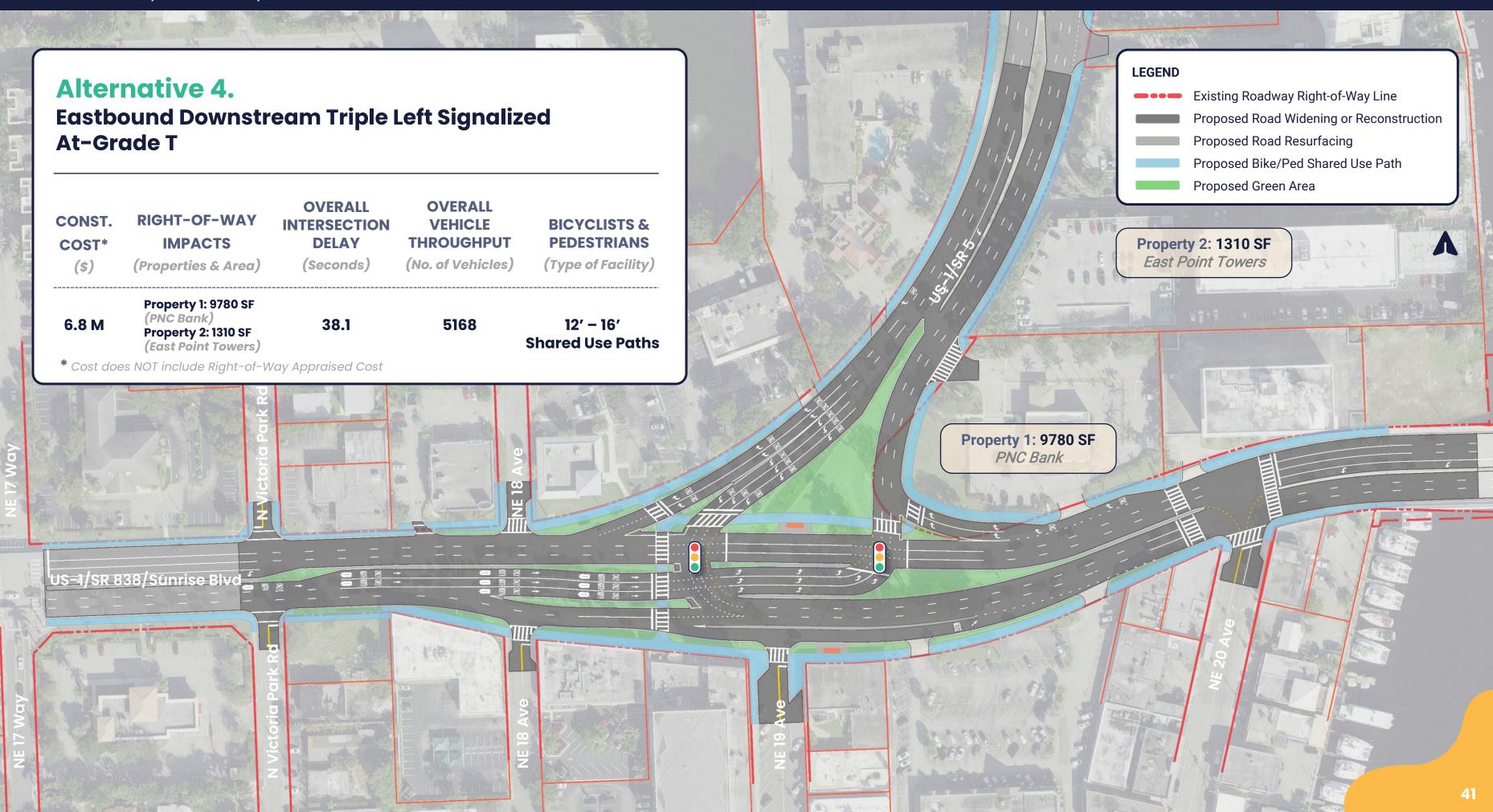
Should others be added?

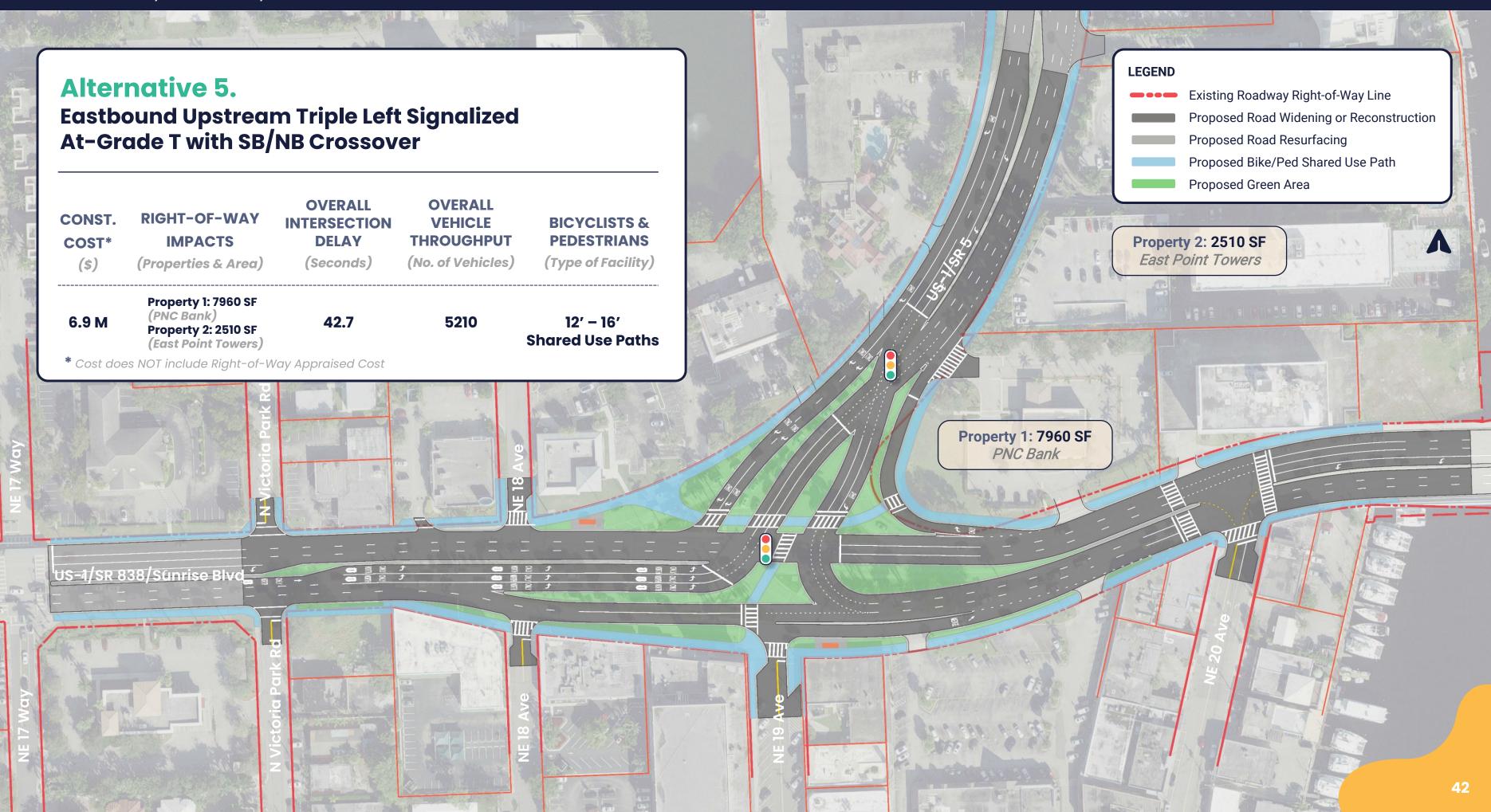


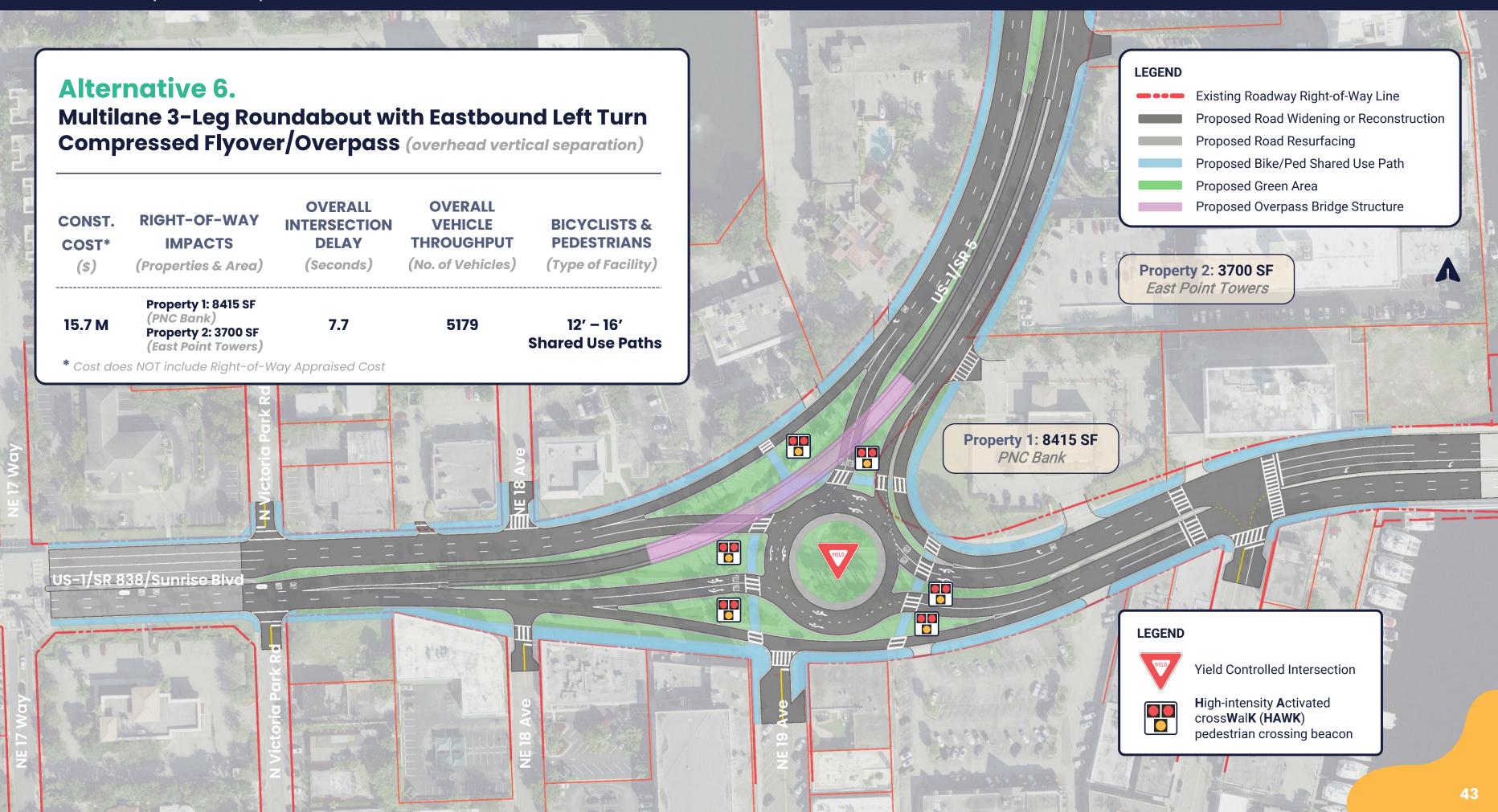


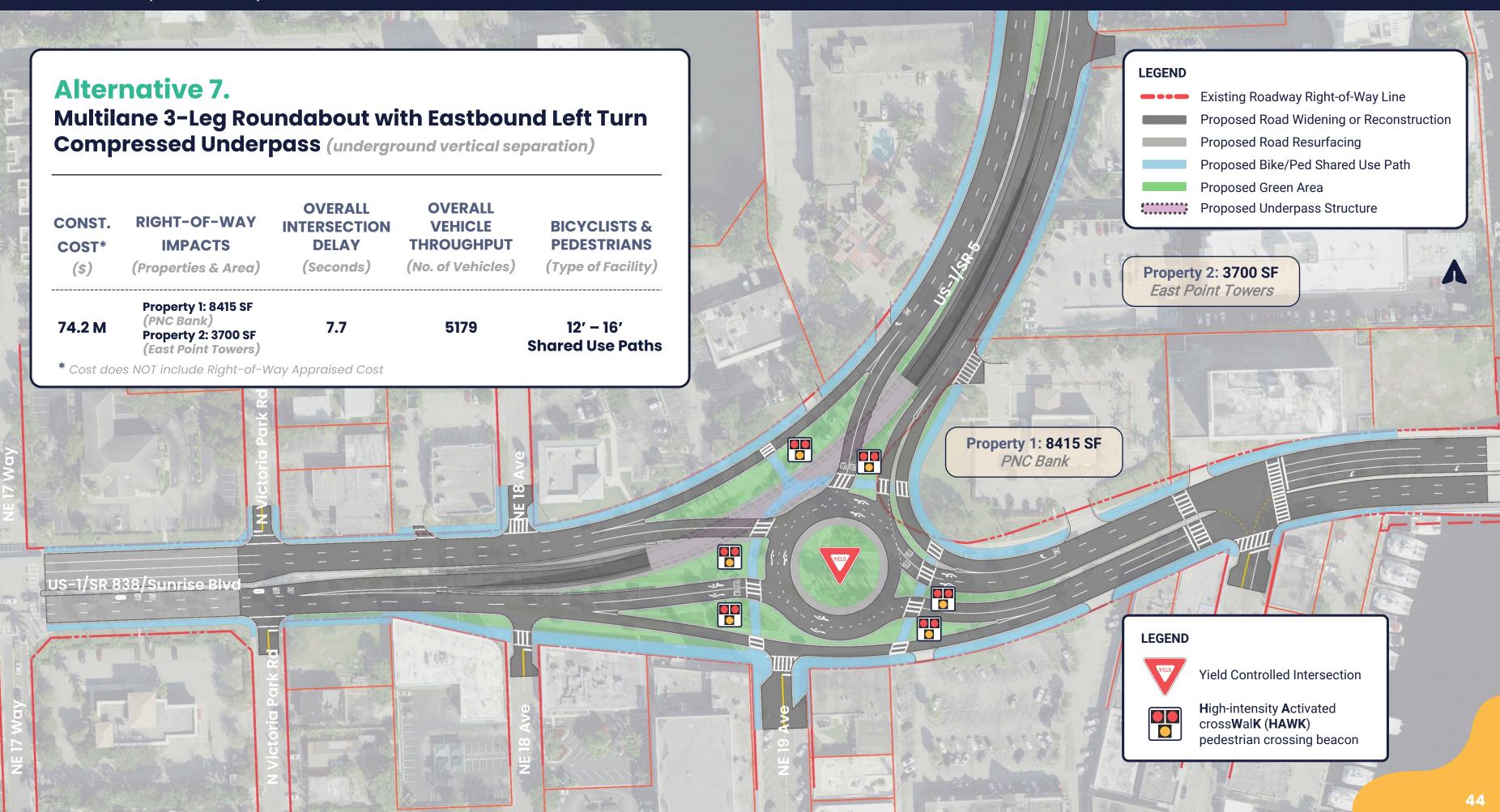


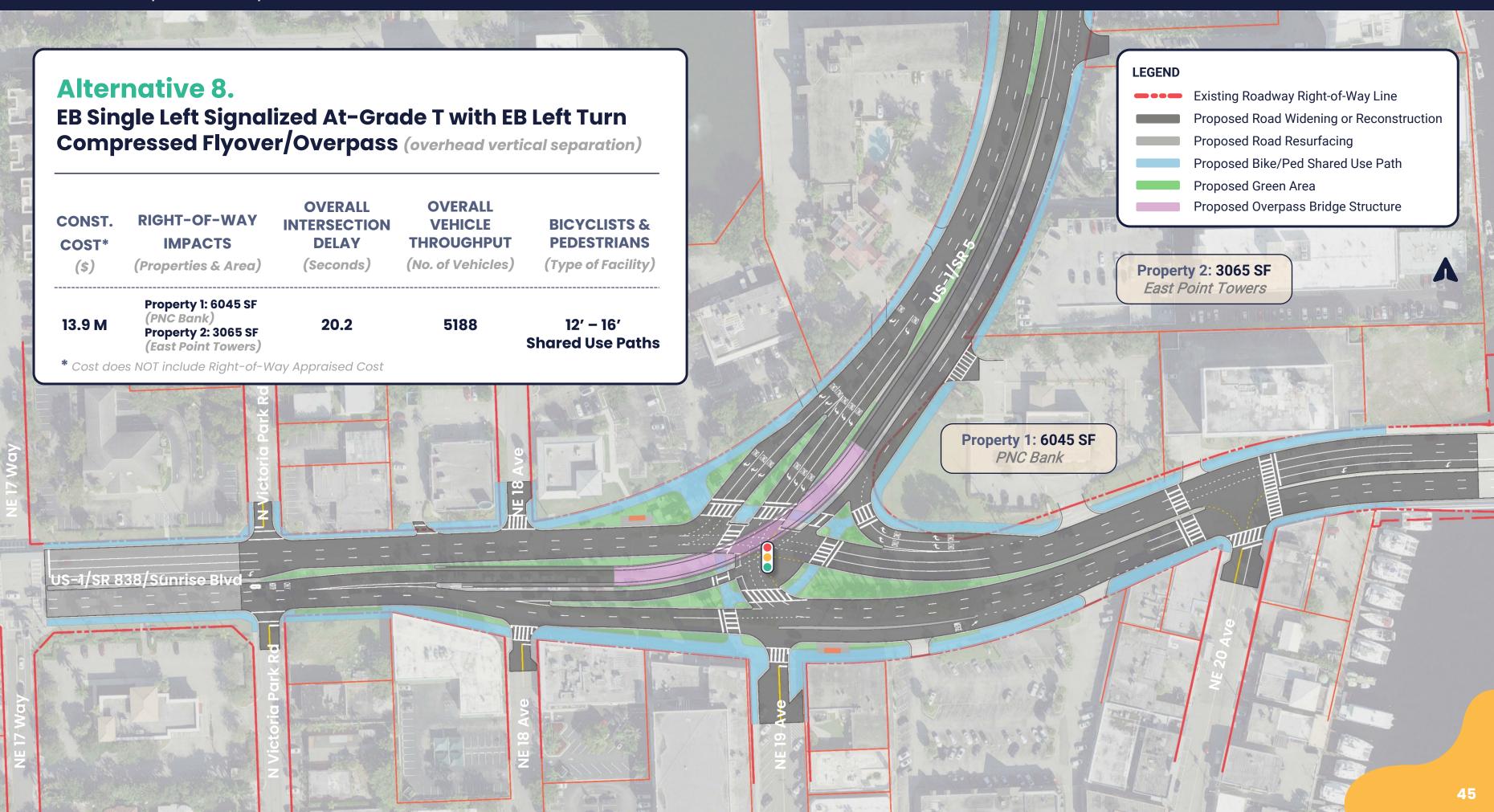


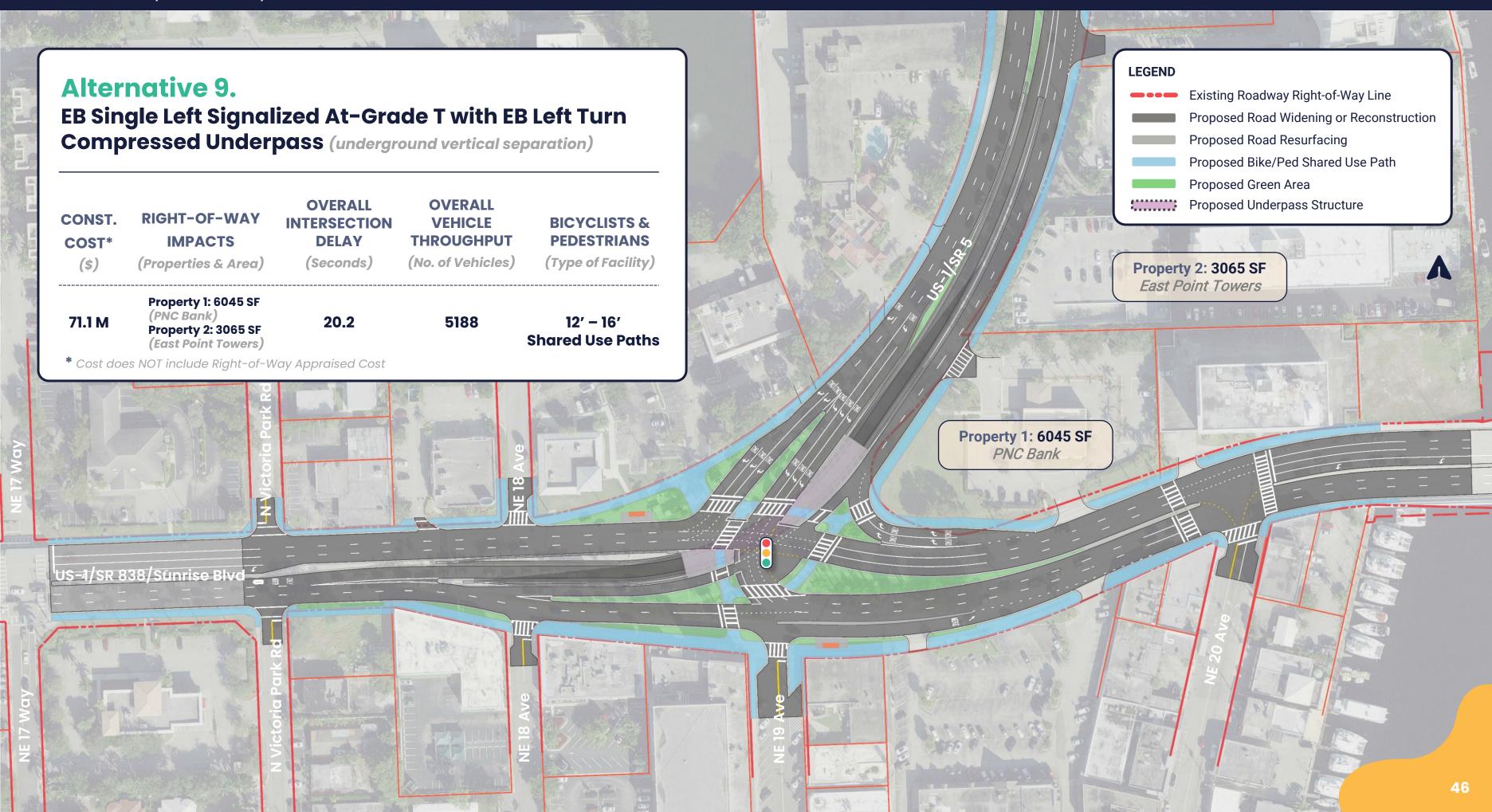








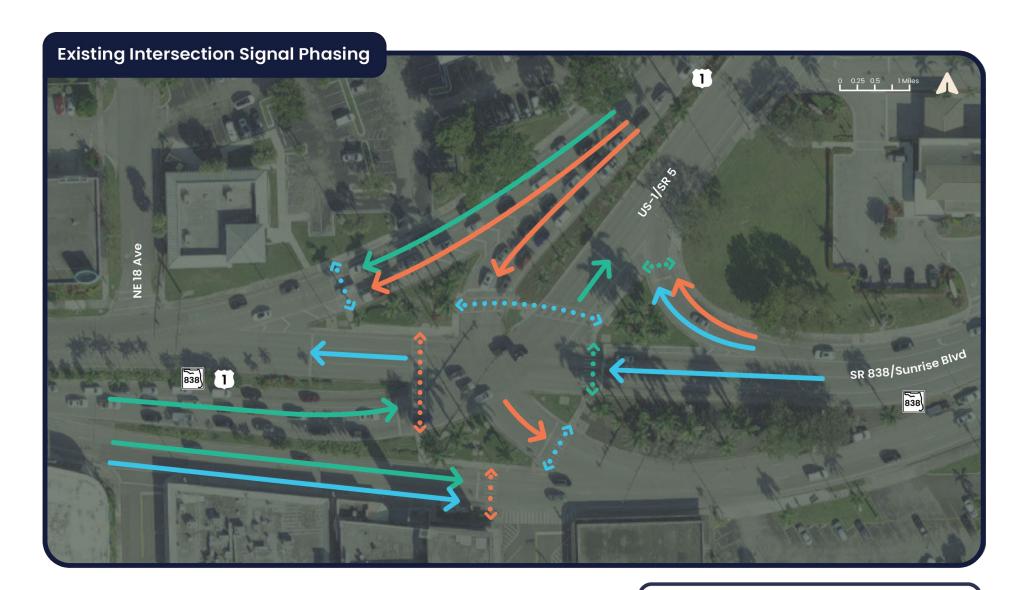




# **Traffic Operations Contributing Factors**

#### **Factors**

- Network Affects up and downstream signalized intersections affect vehicle flows at primary intersection, all flows must be balanced, and primary intersection improvements may result in improvements up and downstream
- Conflicting Traffic Flows each conflicting flow requires its own time to travel through
- Complimentary Traffic Flows can travel through at same time, and if remove a movement the others still each require their own time
- Single Lane Grade Separations require entry merge conflicts with multiple approach lanes and exit diverge conflicts with multiple departure lanes
- Roundabouts Vehicle Flows are yield controlled with near continuous flows around circle
- Multilane Roundabout Pedestrian Crossings per PROWAG, multilane pedestrian street crossings require a pedestrian activated signal which would disrupt exiting vehicle flows

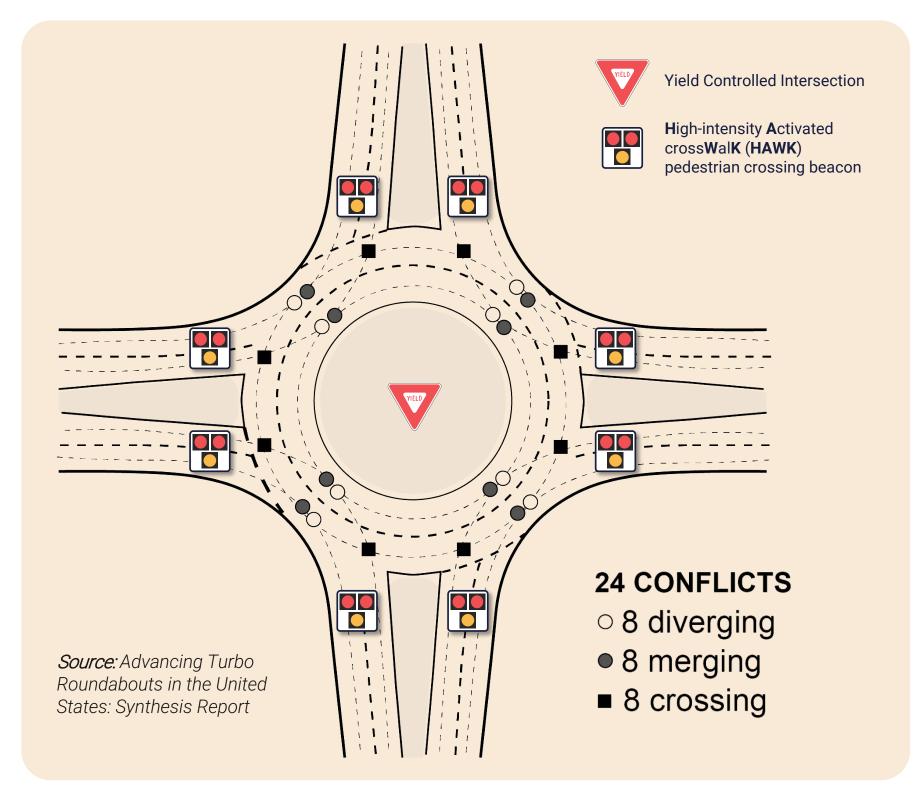




- Common Signal Phase 1
- Common Signal Phase 2
- Common Signal Phase 3
- → Motorized Vehicle Movements
- Pedestrian Crossing Movements



# **Traffic Operations Contributing Factors**



Public Rights-of-Way Accessibility Guidelines: CHAPTER R3: TECHNICAL REQUIREMENTS

R306.3 Roundabouts. Where pedestrian facilities are provided at roundabouts, they shall comply with R306.3.

Advisory R306.3 Roundabouts. Pedestrian street crossings at roundabouts can be difficult for pedestrians who are blind or have low vision to identify because the crossings are located off to the side of the pedestrian circulation path around the street or highway. The continuous traffic flow at roundabouts removes many of the audible cues that pedestrians who are blind use to navigate pedestrian street crossings. Water fountains and other features that produce background noise should not be placed in the middle island of a roundabout because pedestrians who are blind use auditory cues to help detect gaps in traffic. Multi-lane pedestrian street crossings at roundabouts involve an increased risk of pedestrian exposure to accident.

R306.3.1 Separation. Where sidewalks are flush against the curb and pedestrian street crossing is not intended, a continuous and detectable edge treatment shall be provided along the street side of the sidewalk. Detectable warning surfaces shall not be used for edge treatment. Where chains, fencing, or railings are used for edge treatment, they shall have a bottom edge 380 mm (15 in) maximum above the sidewalk.

Advisory R306.3.1 Separation. Carefully delineated pedestrian street crossing approaches with plantings or other defined edges provide effective non-visual cues for identifying pedestrian street crossings at roundabouts. European and Australian roundabouts provide a 610 mm (24 inch) width of tactile surface treatment from the centerline of the curb ramp or blended transition across the full width of the sidewalk to provide an underfoot cue for identifying pedestrian street crossings. Detectable warning surfaces should not be used to guide pedestrians who are blind or have low vision to pedestrian street crossings because detectable warning surfaces indicate the flush transition between the sidewalk and the street or highway. Schemes that remove cyclists from the street or highway by means of a ramp that angles from the curb lane to the sidewalk and then provide re-entry by means of a similar ramp beyond pedestrian street crossings can provide false cues to pedestrians who are using the edge of the sidewalk for wayfinding about the location of pedestrian street crossings.

R306.3.2 Pedestrian Activated Signals. At roundabouts with multi-lane pedestrian street crossings, a pedestrian activated signal complying with R209 shall be provided for each multi-lane segment of each pedestrian street crossing, including the splitter island. Signals shall clearly identify which pedestrian street crossing segment the signal serves.



## **Evaluation Matrix**

Criteria	Alternative 1 No-Build/No Action Signalized At- Grade T	Alternative 2 Transportation System Management and Operations (TSM&O) Signalized At-Grade T Expansion	Alternative 3 Eastbound Triple Left Signalized At-Grade T	Alternative 4 Eastbound Downstream Triple Left Signalized At-Grade T	Alternative 5 Eastbound Upstream Triple Left Signalized At-Grade T with SB/NB Crossover	Alternative 6  Multilane 3-Leg Roundabout with Eastbound Left Turn Compressed Flyover/Overpass (overhead vertical separation)	Alternative 7  Multilane 3-Leg Roundabout with Eastbound Left Turn Compressed Underpass (underground vertical separation)	Alternative 8  EB Single Left Signalized At- Grade T with EB Left Turn Compressed Flyover/Overpass (overhead vertical separation)	Alternative 9 EB Single Left Signalized At- Grade T with EB Left Turn Compressed Underpass (underground vertical separation)
Traffic Operations		•	•	<u> </u>	<u> </u>	*	*	<b>A</b>	
Bike/Ped Safety and Access/ Level of Stress									
Utility Impacts									
Access/Driveway/ Minor Streets/ Vehicular Flows	_								
Constructability/ MOT									
Drainage					<u> </u>			<u> </u>	
Historic/Community/ Urban Design									
<b>Construction Cost</b>				_	<u> </u>				
Right-of-Way Impacts					<u> </u>				

<sup>\*</sup> Alternative needs to include signalization for pedestrians and bicyclists.



Positive
 Neutral
 Negative

### **Poll Questions**



What type of alternative do you prefer?

- a) Above Grade
- b) At Grade
- c) Below Grade



Which alternative do you think is the best, second best and third best?

First \_\_\_\_\_

Second \_\_\_\_\_

Third \_\_\_\_\_



What is the primary reason you selected these as the three best alternatives?

- a) Cost
- b) Impacts
- c) Benefits
- d) Combination of factors



Would you like to modify, delete, or add anything to any of the alternatives you selected as the best?

- a) Yes
- b) No



If you answered yes to the previous question, what would you modify, delete, or add?

Fill in the blank \_\_\_\_\_



Due to limited available space, would you prefer buffer separated on-street bicycle lanes or wide curbside shared use paths for pedestrians and cyclists?

- a) On-street Bicycle lanes
- b) Off-street Shared use path



Do you agree with the NE 20<sup>th</sup> Avenue intersection remaining as is, without modification?

- a) Yes
- b) No



If you answered no to the previous question, what would you modify?

Fill in the blank



# Public Involvement

#### **Public Involvement**



#### **Public Meetings**

- Public Kick-Off Meeting
- Alternatives Public Workshops
- Public Hearing

#### **Coordination Meetings**

- Elected Officials
- Broward MPO Board
- City of Fort Lauderdale
- Broward County
- South Florida Water Management District (SFWMD)
- Florida Department of Environmental Protection (FDEP)

#### **Informal Meetings**

- Victoria Park
- Gateway Shopping Center
- Lake Ridge
- Laudergate Isles
- Coral Ridge
- Sunrise Intracoastal
- Other Interested Stakeholders



#### **Public Involvement**

**Get Involved!** 

#### **Attend Public Meetings**

- Agency and Public Kick-off Meetings
- Alternative Public Workshops
- Public Hearing
- Additional opportunities to be provided throughout the study

#### **Provide Your Input**

- Complete a comment form today
- Drop in a **comment box**
- Mail comment to the address listed on the form
- Provide comments on our website:
   www.fdot.gov/projects/US1GatewayPDE



Phone Number

#### COMMENT FORM

3400 West Commercial Boulevard

Fort Lauderdale, FL 33309

First Alternatives Public Workshop
State Road (SR) 5/US 1 at SR-838/Sunrise Boulevard
Project Development and Environment (PD&E) Study

Efficient Transportation Decision Making (ETDM) Number: 14499

ArtServe, 1350 East Sunrise Boulevard, Fort Lauderdale, FL 33304 Wednesday, June 21, 2023, 5:30 p.m.

Please provide your comments below. If more space is recomments in the "comment box" provided at the meeting below, or via email at <a href="mailto:adham.naiem@dot.state.fl.us">adham.naiem@dot.state.fl.us</a> .	needed, please use an additional sheet of paper. You may place your ng, or send to Adham Naiem, P.E., FDOT Project Manager, at the address lis
elow, or via emair at <u>admann.maiem@dot.state.m.us</u> .	
ame	
ddress	Mail to: Adham Naiem, P.E.
City, State, Zip	FDOT Project Manager Florida Department of Transportation

\* This document is subject to public record laws and may be released to the media or public upon request

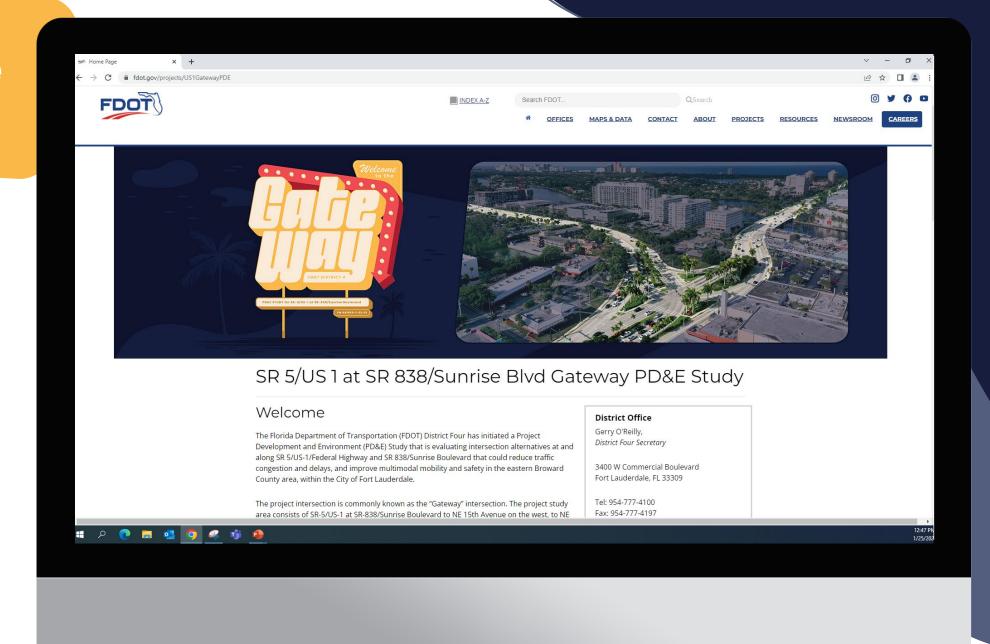


# Visit the Project Website

FDOT Website: <a href="https://www.fdot.gov/">https://www.fdot.gov/</a>

Project Website: <a href="https://www.fdot.gov/projects/US1GatewayPDE">www.fdot.gov/projects/US1GatewayPDE</a>







# Questions & Answers

# **Submitting Comments & Questions Today**

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- By US mail to Project Manager

  Adham Naiem

  Florida Department of Transportation, District 4
  3400 West Commercial Boulevard

  Fort Lauderdale, Florida 33309

**Project Website** 





# of Next Steps

# **Next Steps**



Review
comments from
public and
stakeholders

Develop and refine proposed alternatives into top 3 alternatives

Start evaluating top 3 alternatives



# **Safety Message**

National Vehicle Theft Prevention Month

July 1-31st, 2023









For more information on vehicle theft prevention and NHTSA, check out NHTSA.gov/Theft



**FOR MORE INFORMATION CONTACT US:** 

#### Adham Naiem, PE, PMP **Project Manager**

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Telephone: (954) 777-4440 Toll Free: (866)366-8435, ext. 4281

**Email:** Adham.naiem@dot.state.fl.us **Project Website:** www.fdot.gov/projects/US1GatewayPDE

