Fiske Boulevard (SR 519)
Concept Development and Evaluation

FM Number: 437241-1-12-01

Project Visioning Team Meeting #1
March 26, 2018

Title VI of the Civil Rights Act of 1964

This meeting, and the subject study is being conducted without regard to race, color, national origin, age, sex, religion, disability or family status. Persons wishing to express their concerns relative to FDOT compliance with Title VI may do so by contacting:

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All inquiries or complaints will be handled according to FDOT procedure and in a prompt and courteous manner.

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Meeting Agenda

1. Introductions
2. Project Objective
3. Project Overview
4. Existing Conditions Update Overview
5. Future Conditions Update Overview
6. Identified Alternatives
7. Preferred Alternative Discussion
8. Next Steps

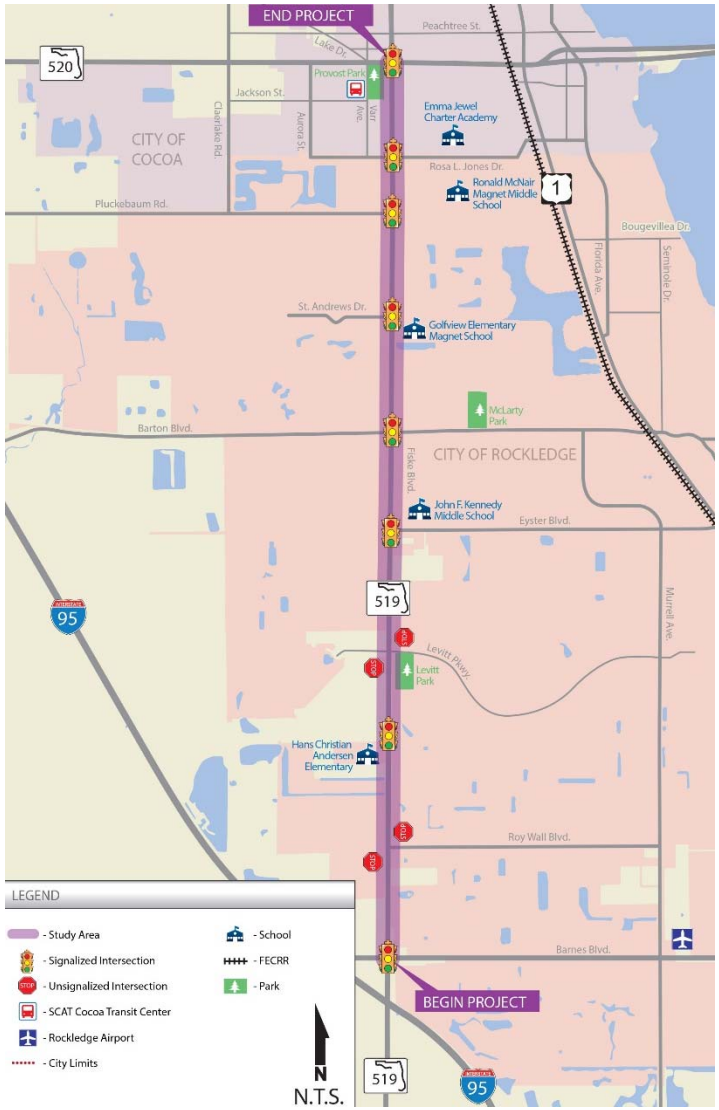
Welcome

Project Objective

- The purpose of this project is to provide an **enhanced multimodal transportation network** that promotes the creation of a more **walkable** community, improves **access to employment**, supports **economic development** goals and provides **safe and convenient** access to users of **all ages and physical abilities**.

Project Overview

- Limits: from Barnes Boulevard/I-95 NB Ramps to SR 520
- Length: 4.2 miles
- Transitional character, varying cross sections
- Primary north-south route between I-95 and SR 520
- Viera connection to the south



Project Overview

Concept Development and Evaluation Study

Corridor Planning Study

Completed

Existing and Future Conditions Update

Jul'17 – Mar'18

Identify and Develop Alternatives

Feb'18 – May'18

Select and Refine Preferred Alternative

Mar'18 – Aug'18

We are Here

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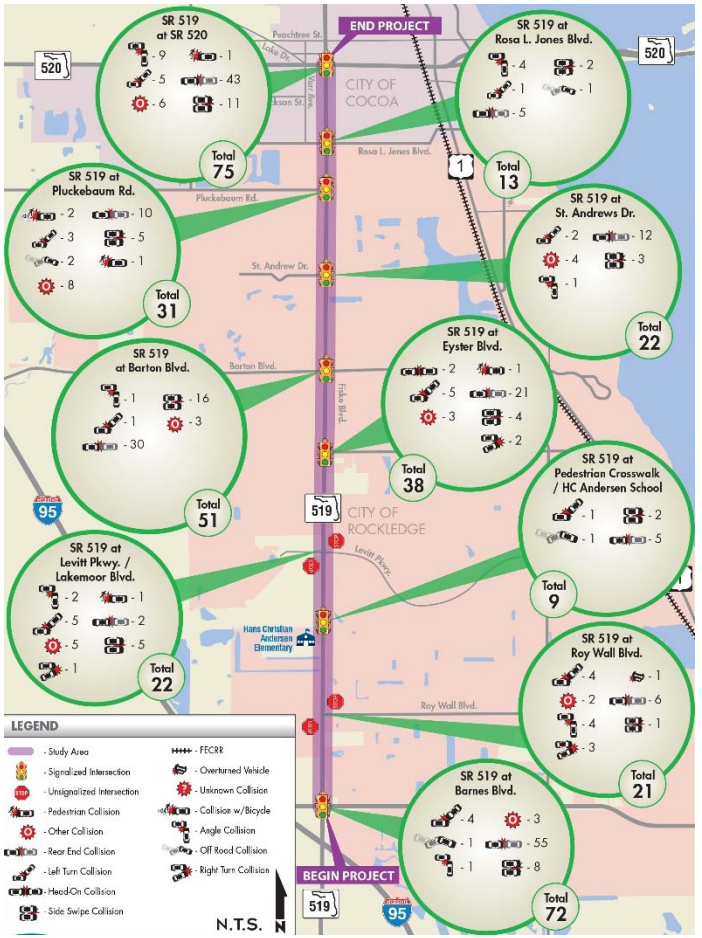
Existing Conditions Update Overview

- In general similar conditions to Planning Study
- Main Differences with Planning Study:
  - Higher traffic volumes:
    - North: 2%
    - South: 15%
  - Safety (previous vs. current studies):
    - Average/year: from 74.2 to 184.3
    - Injury Crashes/year: from 39.2 to 37.4
    - Fatalities: from 4 to 1
    - Rear End Crashes/year: from 30.0 to 51.0



Existing Conditions Update Overview

- 2017 Existing Intersection Level of Service (LOS):

Intersection	Control	AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]
SR 519 (Fiske Boulevard) at I-95 NB Ramps	Signalized	112.7	F	97.4	F
SR 519 (Fiske Boulevard) at Roy Wall Boulevard	Un-Signalized[3]	11.0/66.9	B/F	12.3/385.4	B/F
SR 519 (Fiske Boulevard) at Levitt Parkway/Lakemoor Boulevard	Un-Signalized[3]	11.0/58.9	B/F	11.9/108.5	B/F
SR 519 (Fiske Boulevard) at Eyster Boulevard	Signalized	9.6	A	15.5	B
SR 519 (Fiske Boulevard) at Barton Boulevard	Signalized	42.3	D	62.6	E
SR 519 (Fiske Boulevard) at St. Andrews Drive	Signalized	8.0	A	8.1	A
SR 519 (Fiske Boulevard) at Pluckebaum Road	Signalized	18.2	B	27.8	C
SR 519 (Fiske Boulevard) at Rosa L. Jones Drive	Signalized	9.7	A	10.7	B
SR 519 (Fiske Boulevard) at SR 520 (King Street)	Signalized	61.8	E	65.2	E

Source: VHB using Synchro 9 software.

1 Overall intersection average delay in seconds per vehicle

2 Overall intersection level of service

3 Mainline/side street delay and level of service (worst operating movements reported)

Existing Conditions Update Overview

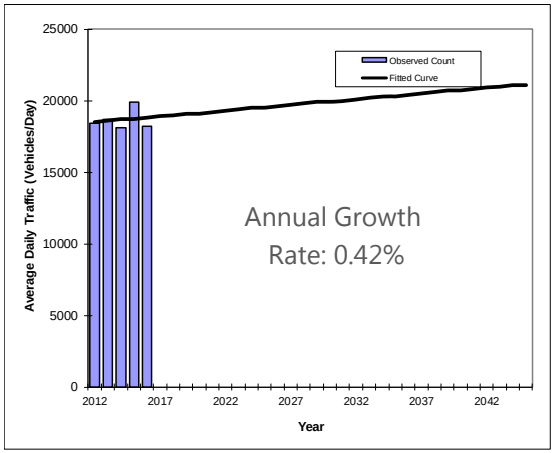
Main Issues:

- Safety:
  - Number of crashes
  - Head-on collisions
- Traffic operations along the corridor:
  - SR 520 intersection
  - Levitt Parkway intersection
  - Hans Christian Anderson School – Dismissal time
  - Roy Wall Boulevard intersection
  - Barnes Boulevard intersection
- Lack of bicycle facilities
- Sidewalk gaps
- Transit stop accessibility / lack of amenities
- Lighting from Barnes Boulevard to Roy Wall Boulevard

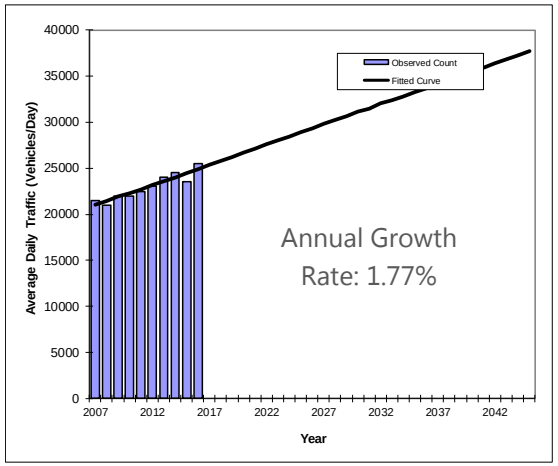
Future Conditions Update Overview

Annual Growth Rates:

- Short Term: from 0.80% to 1.00%
- Long Term: from 0.80% to 1.68%
- Reasons:
  - Recent growth in traffic volumes
  - Updated version of the travel demand forecasting model (CFRMP 6.1)
  - Changes in Viera's Development program and schedule



Fiske Blvd. north of Pluckebaum Rd.



Fiske Blvd. north of Barnes Blvd.

Future Conditions Update Overview

- 2023 Intersection Level of Service:

Intersection	Control	AM Peak		PM Peak	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]
Fiske Boulevard at I-95 NB Ramps	Signalized	57.7	E	49.3	D
Fiske Boulevard at Roy Wall Boulevard[3]	Un-signalized	11.9/714.6	B/F	12.5/3360.6	B/F
Fiske Boulevard at Levitt Parkway/ Lakemoor Boulevard[3]	Un-Signalized	10.4/294.9	B/F	12.3/620.5	B/F
Fiske Boulevard at Eyster Boulevard	Signalized	10	A	16.2	B
Fiske Boulevard at Barton Boulevard	Signalized	35.2	D	82	F
Fiske Boulevard at St Andrews Drive	Signalized	8.3	A	8.3	A
Fiske Boulevard at Pluckebaum Road	Signalized	18.3	B	28	C
Fiske Boulevard at Rosa L. Jones Boulevard	Signalized	10.6	B	11.7	B
Fiske Boulevard at SR 520	Signalized	55.4	E	71.6	E

Source: Compiled by VHB using Synchro 9 software.

1 Overall intersection average delay in seconds per vehicle

2 Overall intersection level of service

3 Unsignalized Intersections: Worst Mainline Movement/Worst Minor Street Movement

Future Conditions Update Overview

- 2040 Intersection Level of Service:

Intersection	Control	AM Peak		PM Peak	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]
Fiske Boulevard at I-95 NB Ramps	Signalized	115.8	F	93.9	F
Fiske Boulevard at Roy Wall Boulevard[3]	Un-signalized	14.9/N/A	B/F	17.8/N/A	C/F
Fiske Boulevard at Levitt Parkway/ Lakemoor Boulevard[3]	Un-Signalized	12.1/1760.3	B/F	16.6/N/A	C/F
Fiske Boulevard at Eyster Boulevard	Signalized	12.9	B	22.4	C
Fiske Boulevard at Barton Boulevard	Signalized	48	D	157.8	F
Fiske Boulevard at St Andrews Drive	Signalized	10.7	B	11.7	B
Fiske Boulevard at Pluckebaum Road	Signalized	29.2	C	66.8	E
Fiske Boulevard at Rosa L. Jones Boulevard	Signalized	11.7	B	15.6	B
Fiske Boulevard at SR 520	Signalized	71.2	E	104	F

Source: Compiled by VHB using Synchro 9 software.

1 Overall intersection average delay in seconds per vehicle

2 Overall intersection level of service

3 Unsignalized Intersections: Worst Mainline Movement/Worst Minor Street Movement

Future Conditions Update Overview

Scheduled Improvements:

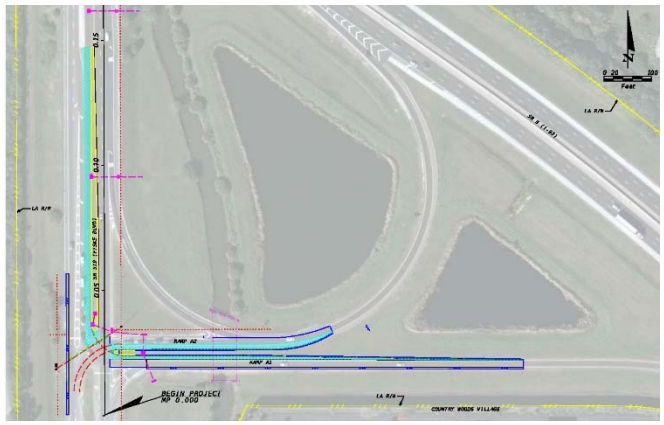
- FDOT: Resurfacing, Restoration, and Rehabilitation (3R) Project (from Barnes Blvd. to SR 520):
  - Pavement resurfacing
  - Add bicycle lanes
  - Close sidewalk gaps
- FDOT: SR 519 at Barnes Blvd. intersection:
  - To be included in next Work Program update
  - Improvements:
  - Add a second NB-to-WB left turn lane
  - Add a second WB receiving lane
  - Add a second EB-to-NB left turn lane

Project Summary

Transportation System: INTRASTATE STATE HIGHWAY — District 05 - Brevard County
Description: SR 519 FROM I-95 TO SR 520
Type of Work: RESURFACING — View Scheduled Activities
Item Number: 441020-1
Length: 4.604 — View Map of Item

Project Detail

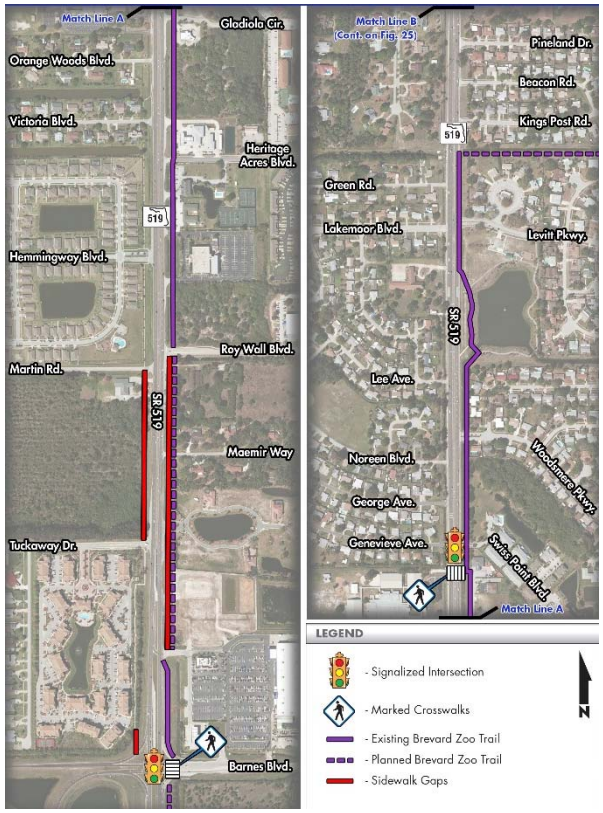
Fiscal Year:	2018	2019	2020	2021	2022	2023
Highways/Preliminary Engineering						
Amount:		$1,610,000				
Highways/Construction						
Amount:				$8,680,098		
Item Total:		$1,610,000		$8,680,098		

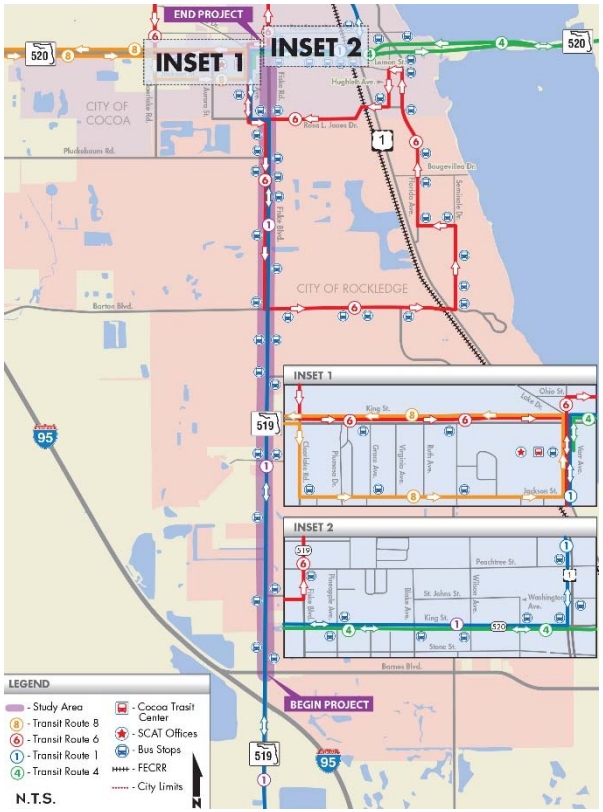


Future Conditions Update Overview

Planned Improvements:

- Space Coast TPO LRTP: Brevard Zoo Trail (unfunded)
- Space Coast Area Transit: improvements included in Transit Development Plan (unfunded)





Future Conditions Update Overview

Signal Warrants- Levitt Parkway Intersection:

- **Warrant 1 – Eight-Hour Vehicular Volume: Not Satisfied**
- **Warrant 2 – Four-Hour Vehicular Volume: Satisfied**
- **Warrant 3 – Peak-Hour Vehicular Volume: Satisfied**
- Warrant 4 – Pedestrian Volumes: Not Satisfied
- Warrant 5 – School Crossing: Not Applicable
- Warrant 6 – Coordinated Signal System: Not Applicable
- Warrant 7 – Crash Experience: Not Satisfied
- Warrant 8 – Roadway Network: Not Satisfied
- Warrant 9 – Intersection Near at Grade Crossing: Not Satisfied

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Future Conditions Update Overview

Signal Warrants- Roy Wall Boulevard Intersection :

Warrant 1 – Eight-Hour Vehicular Volume:	**Not Satisfied**
Warrant 2 – Four-Hour Vehicular Volume:	**Satisfied**
Warrant 3 – Peak-Hour Vehicular Volume:	**Satisfied**
Warrant 4 – Pedestrian Volumes:	Not Satisfied
Warrant 5 – School Crossing:	Not Applicable
Warrant 6 – Coordinated Signal System:	Not Applicable
Warrant 7 – Crash Experience:	Not Satisfied
Warrant 8 – Roadway Network:	Not Satisfied
Warrant 9 – Intersection Near at Grade Crossing:	Not Satisfied

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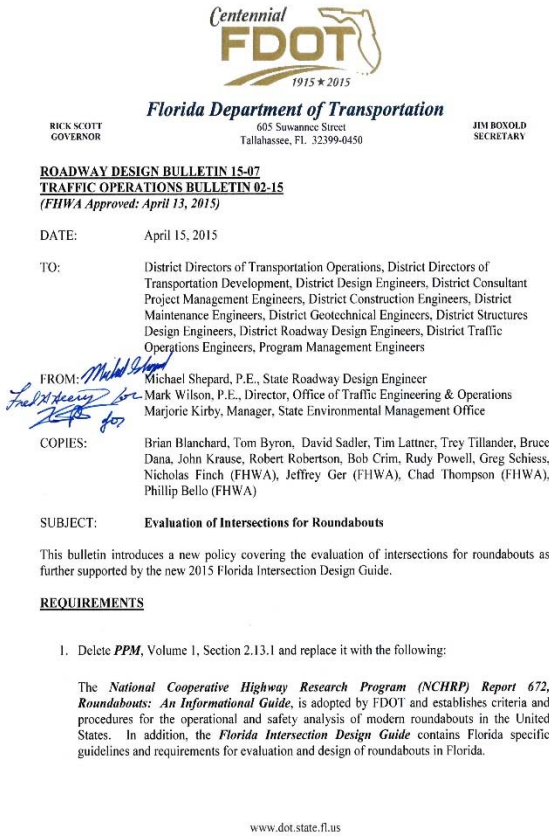
Identified Alternatives

FDOT Design Bulleting 15-07:



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Florida Department of Transportation

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JIM BOXOLD
SECRETARY

ROADWAY DESIGN BULLETIN 15-07
TRAFFIC OPERATIONS BULLETIN 02-15
(FHWA Approved: April 13, 2015)

DATE: April 15, 2015

TO: District Directors of Transportation Operations, District Directors of Transportation Development, District Design Engineers, District Consultant Project Management Engineers, District Construction Engineers, District Maintenance Engineers, District Geotechnical Engineers, District Structures Design Engineers, District Roadway Design Engineers, District Traffic Operations Engineers, Program Management Engineers

FROM: Michael Shepard, P.E., State Roadway Design Engineer
Mark Wilson, P.E., Director, Office of Traffic Engineering & Operations
Marjorie Kirby, Manager, State Environmental Management Office

COPIES: Brian Blanchard, Tom Byron, David Sadler, Tim Lattner, Trey Tillander, Bruce Dana, John Krause, Robert Robertson, Bob Crim, Rudy Powell, Greg Schiess, Nicholas Finch (FHWA), Jeffrey Ger (FHWA), Chad Thompson (FHWA), Phillip Bello (FHWA)

SUBJECT: **Evaluation of Intersections for Roundabouts**

This bulletin introduces a new policy covering the evaluation of intersections for roundabouts as further supported by the new 2015 Florida Intersection Design Guide.

REQUIREMENTS

1. Delete ***PPM***, Volume 1, Section 2.13.1 and replace it with the following:

   The ***National Cooperative Highway Research Program (NCHRP) Report 672, Roundabouts: An Informational Guide***, is adopted by FDOT and establishes criteria and procedures for the operational and safety analysis of modern roundabouts in the United States. In addition, the ***Florida Intersection Design Guide*** contains Florida specific guidelines and requirements for evaluation and design of roundabouts in Florida.

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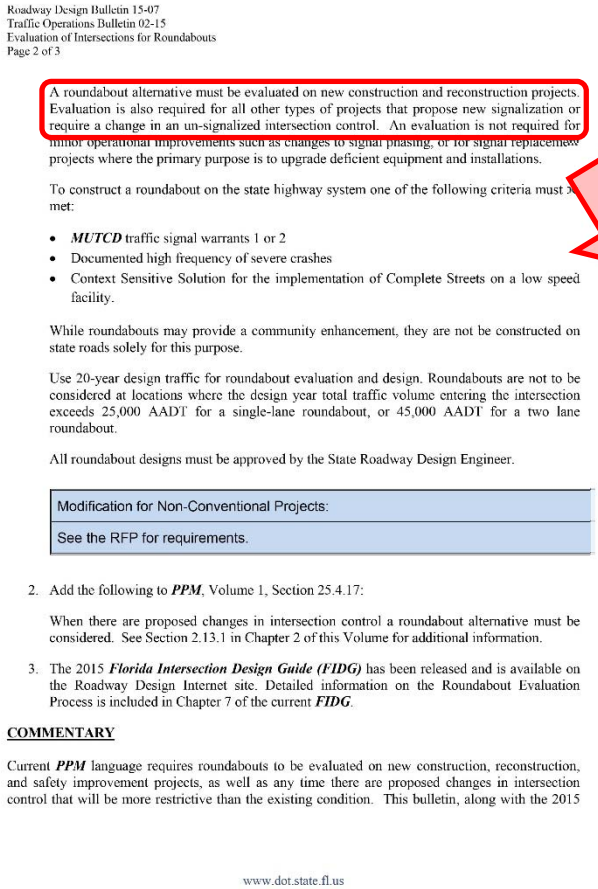

A roundabout alternative must be evaluated on new construction and reconstruction projects. Evaluation is also required for all other types of projects that propose new signalization or require a change in an un-signalized intersection control. An evaluation is not required for minor operational improvements such as changes to signal phasing, or for signal replacement projects where the primary purpose is to upgrade deficient equipment and installations.

To construct a roundabout on the state highway system one of the following criteria must be met:

- ***MUTCD*** traffic signal warrants 1 or 2
- Documented high frequency of severe crashes
- Context Sensitive Solution for the implementation of Complete Streets on a low speed facility.

While roundabouts may provide a community enhancement, they are not be constructed on state roads solely for this purpose.

Use 20-year design traffic for roundabout evaluation and design. Roundabouts are not to be considered at locations where the design year total traffic volume entering the intersection exceeds 25,000 AADT for a single-lane roundabout, or 45,000 AADT for a two lane roundabout.

All roundabout designs must be approved by the State Roadway Design Engineer.

Modification for Non-Conventional Projects:
See the RFP for requirements.

2. Add the following to ***PPM***, Volume 1, Section 25.4.17:

   When there are proposed changes in intersection control a roundabout alternative must be considered. See Section 2.13.1 in Chapter 2 of this Volume for additional information.

3. The 2015 ***Florida Intersection Design Guide (FIDG)*** has been released and is available on the Roadway Design Internet site. Detailed information on the Roundabout Evaluation Process is included in Chapter 7 of the current ***FIDG***.

COMMENTARY

Current ***PPM*** language requires roundabouts to be evaluated on new construction, reconstruction, and safety improvement projects, as well as any time there are proposed changes in intersection control that will be more restrictive than the existing condition. This bulletin, along with the 2015

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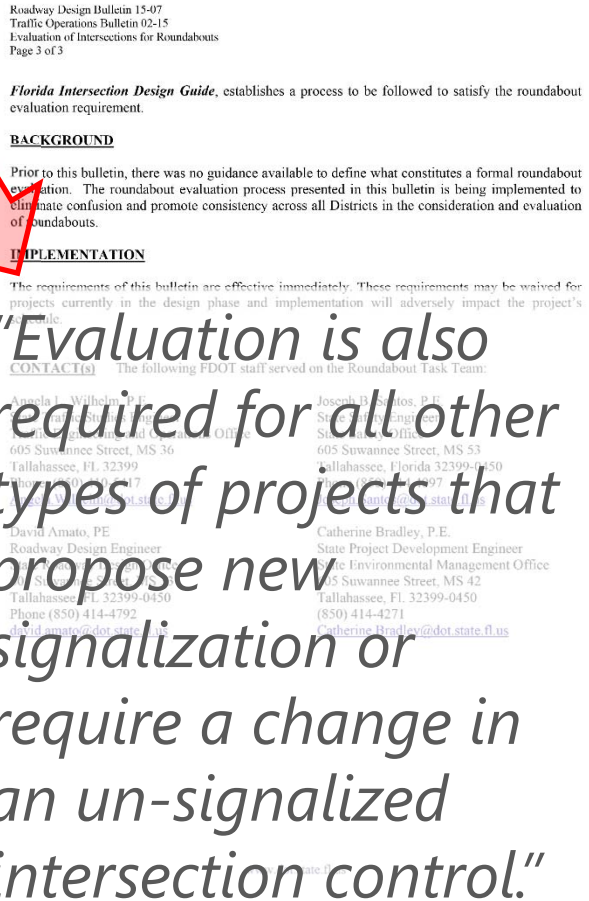

Florida Intersection Design Guide, establishes a process to be followed to satisfy the roundabout evaluation requirement.

BACKGROUND

Prior to this bulletin, there was no guidance available to define what constitutes a formal roundabout evaluation. The roundabout evaluation process presented in this bulletin is being implemented to eliminate confusion and promote consistency across all Districts in the consideration and evaluation of roundabouts.

IMPLEMENTATION

The requirements of this bulletin are effective immediately. These requirements may be waived for projects currently in the design phase and implementation will adversely impact the project's schedule.

CONTACT(S) The following FDOT staff served on the Roundabout Task Team:

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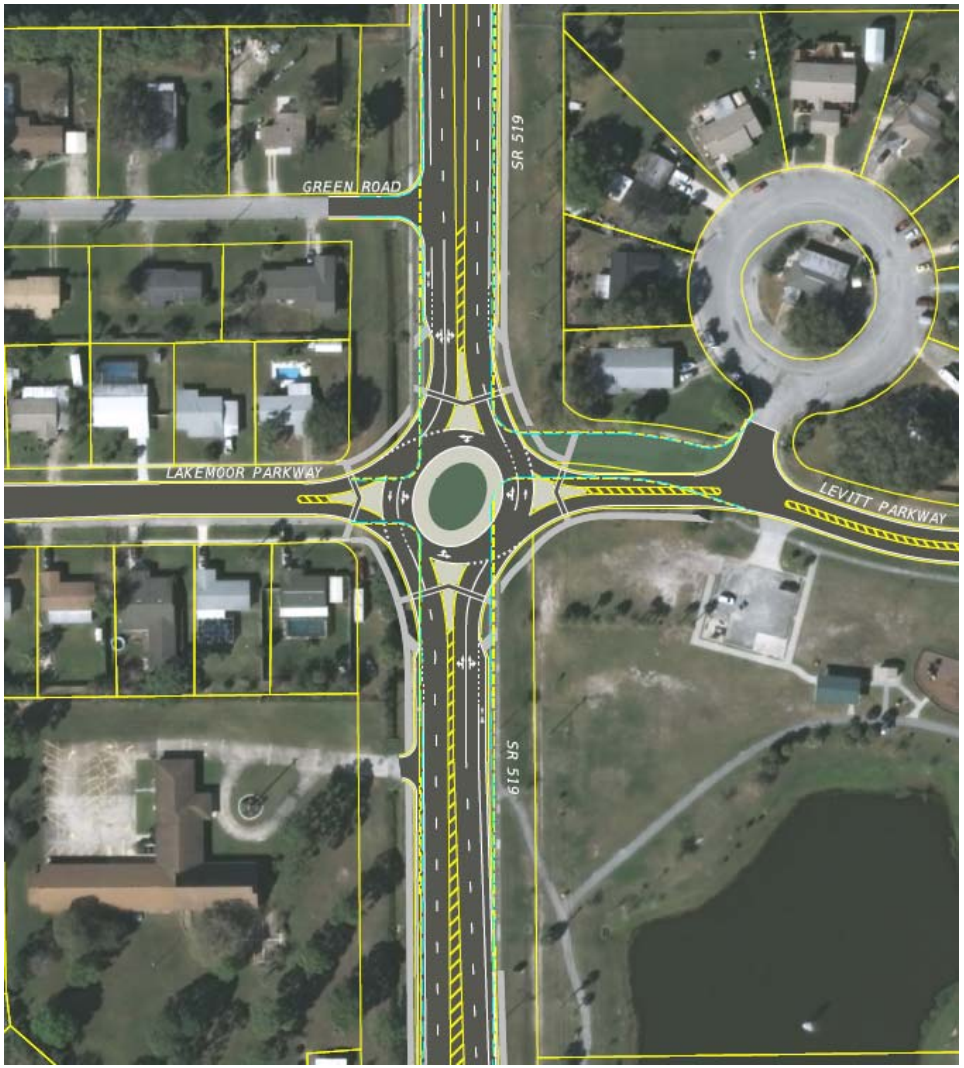
"Evaluation is also required for all other types of projects that propose new signalization or require a change in an un-signalized intersection control."

Identified Alternatives

Levitt Parkway Intersection Roundabout Screening:

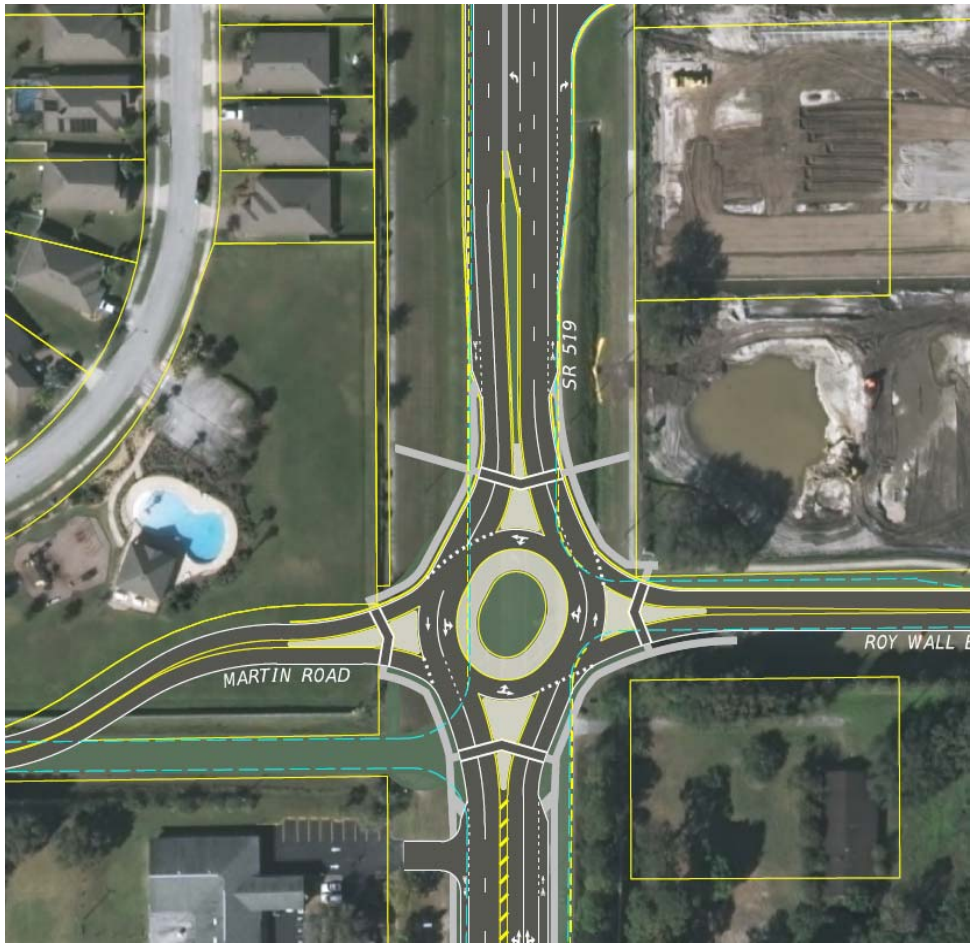
- **Step 1: Satisfied**
- **Step 2: Satisfied**



Identified Alternatives

Roy Wall Boulevard Intersection Roundabout Screening:

- **Step 1: Satisfied**
- **Step 2: Satisfied**



Identified Alternatives

Common to both Alternatives:

- Close sidewalk gaps
- Add Bicycle lanes
- Improve transit accessibility
- Levitt Parkway intersection
- Roy Wall Boulevard intersection
- Barnes Blvd. intersection
- Brevard Zoo Trail from Barnes Boulevard to Kings Post Road
- Add curb and gutter north of Rosa Jones Drive
- Pedestrian refuge north of Barbara Jenkins Street

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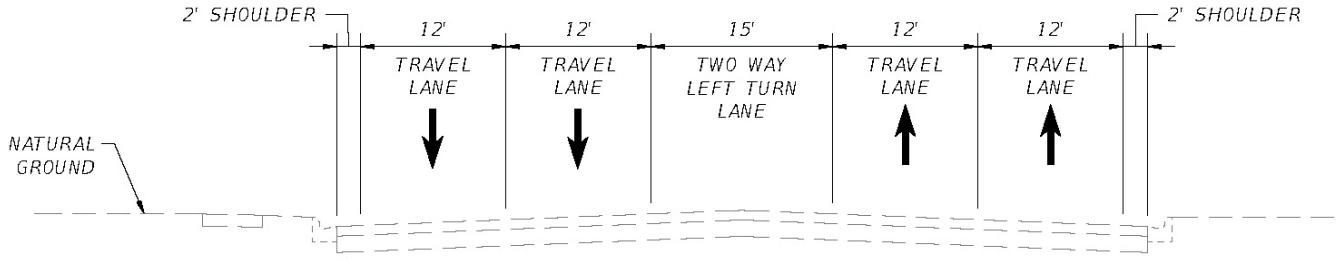
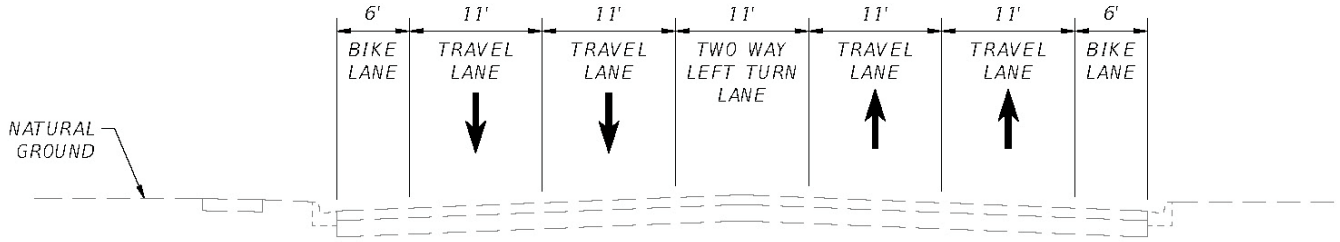
Identified Alternatives

Alternative 1 – Maintain 5-lane Cross Section:



EXIST. TYPICAL SECTION

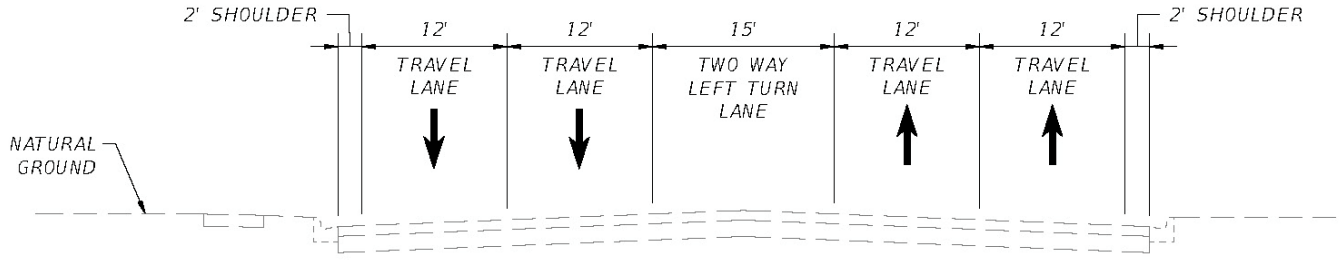


PROPOSED TYPICAL SECTION

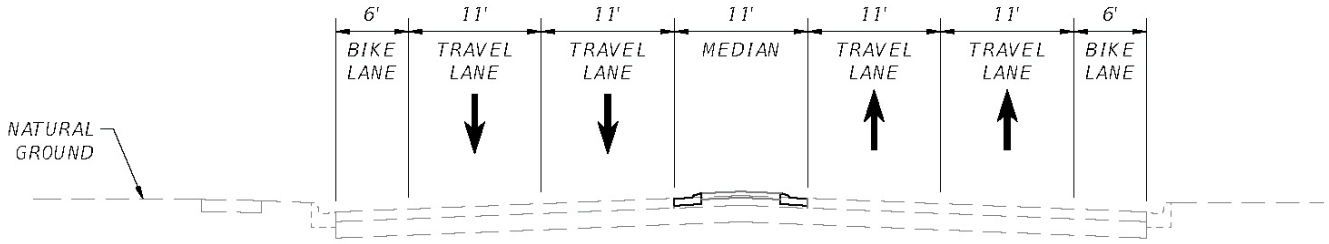
Note: typical sections can potentially change at signalized intersections.

Identified Alternatives

Alternative 2 – Add Raised Median



EXIST. TYPICAL SECTION



PROPOSED TYPICAL SECTION
W/ MEDIAN

Note: typical sections can potentially change at signalized intersections.

Preferred Alternative Discussion

Next Steps

- Meet with FDOT D5 Units to discuss Preferred Alternative
- Refine Preferred Alternative
- Meet with FDOT D5 Management to discuss Preferred Alternative
- Conduct Public Meeting to Present Preferred Alternative
- Conduct PVT Meeting #2 to Present Preferred Alternative
- Finalize Study
- Present to Local Government / TPO Boards

FDOT

Questions/Comments?

Contact Us!

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Project information will be posted on:

http://www.cflroads.com/project/437241-1/SR_519_Fiske_Boulevard_Corridor_Planning_Study