

Board of County Commissioners

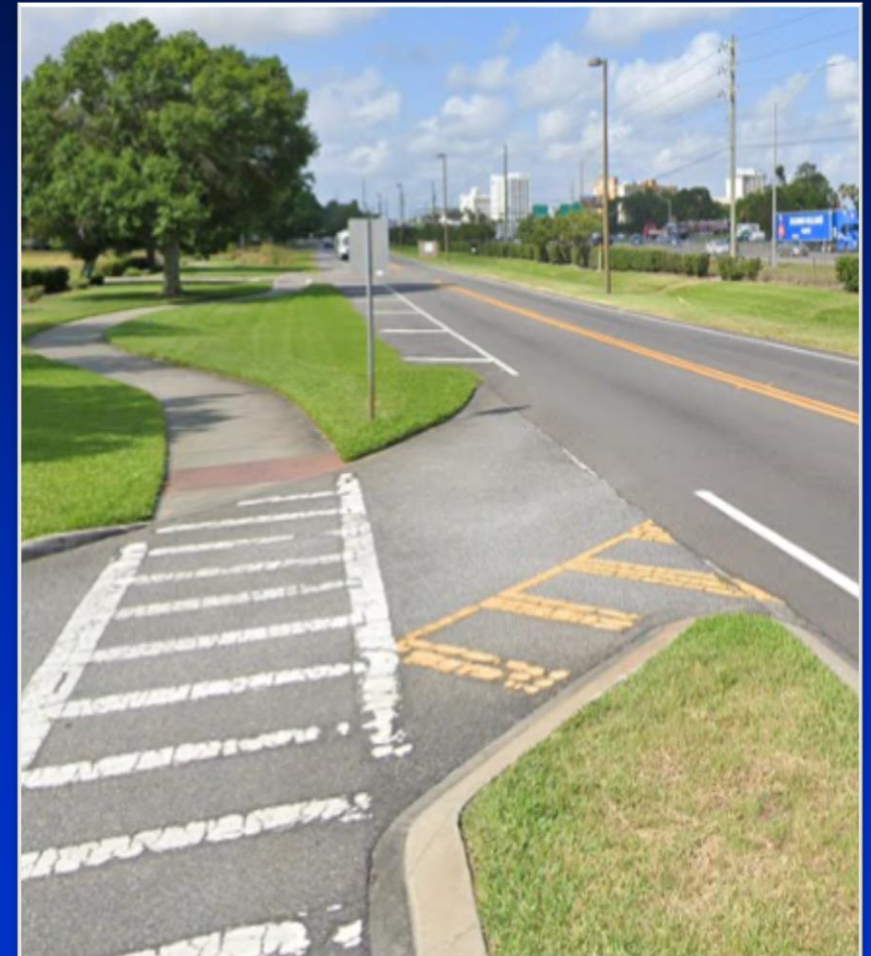
Vineland Avenue Preliminary Design Study

March 24, 2020



Presentation Outline

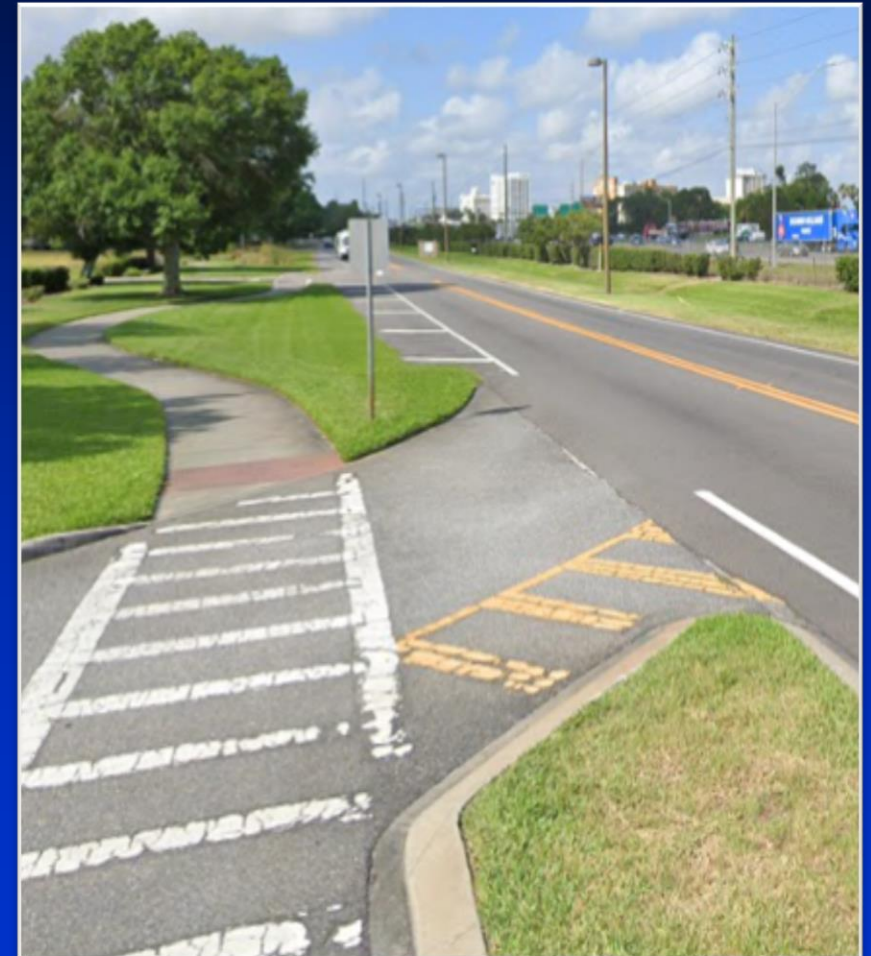
- Study Overview
- Existing Conditions
- Development of Alternatives
- Preferred Alternative
- Public Involvement
- Action Requested





Presentation Outline

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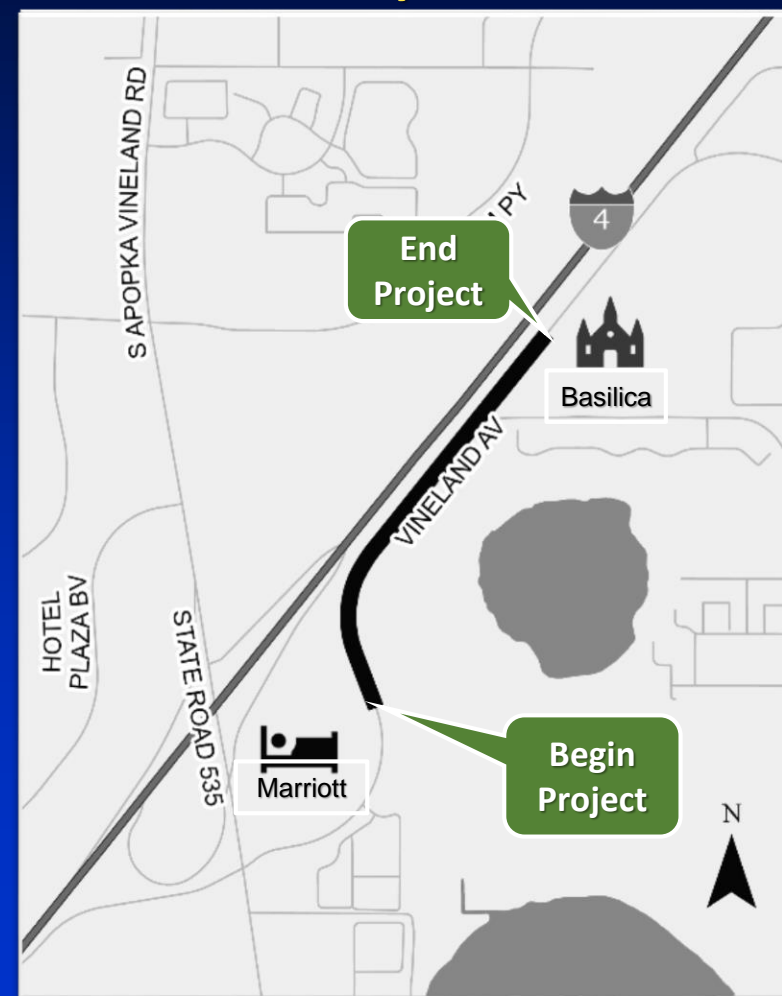




Study Overview

- **Vineland Avenue project limits**
 - Marriott Village at Lake Buena Vista to the Basilica of the National Shrine of Mary, Queen of the Universe
 - 0.65 miles
- **Study area**
 - State Road 535
 - Daryl Carter Parkway
 - Interstate 4
 - International Drive

Study Area





Study Overview

Future Area Road Network

- Daryl Carter Parkway West Extension
- New Daryl Carter Parkway / I-4 Interchange
- Modified SR535/Interstate 4 Interchange
- New Vineland Ave. / SR535 partial flyover

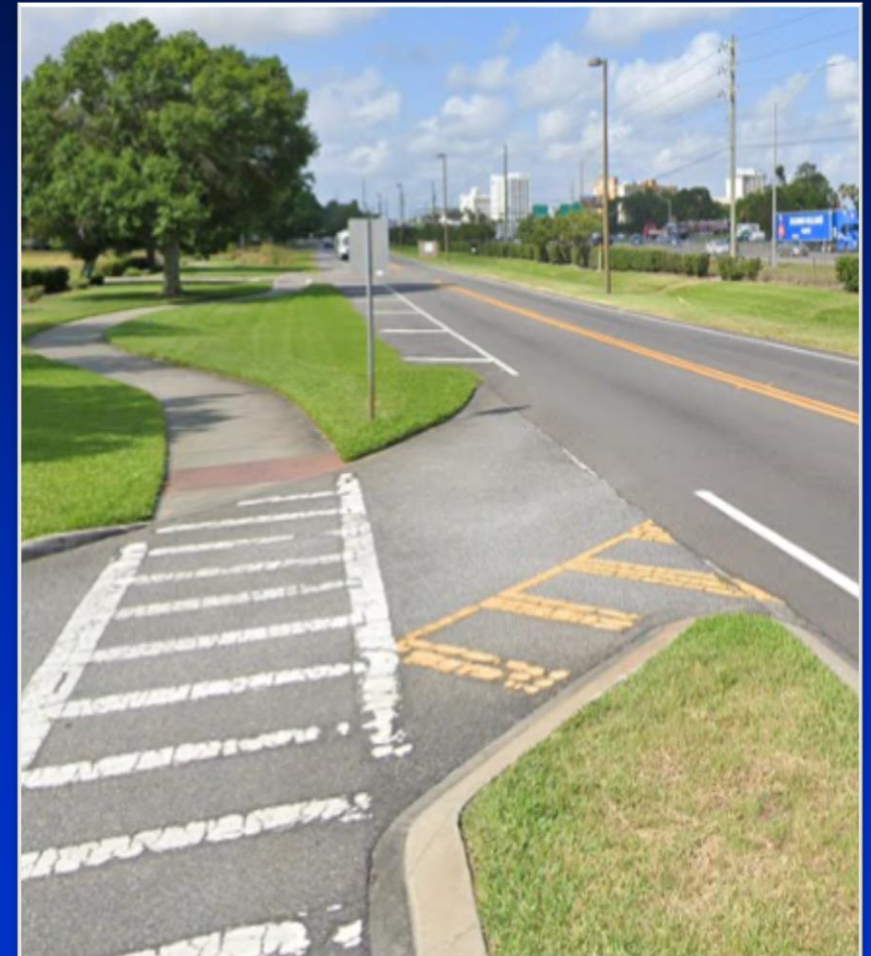
I-4 Beyond the Ultimate Projects





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Existing Conditions

▪ Roadway Features

- Two-lane segment within four-Lane Major Collector
- Either no median or painted
- Roadside swale drainage
- Incomplete sidewalks
- S-curve geometry
- 35 mph speed limit

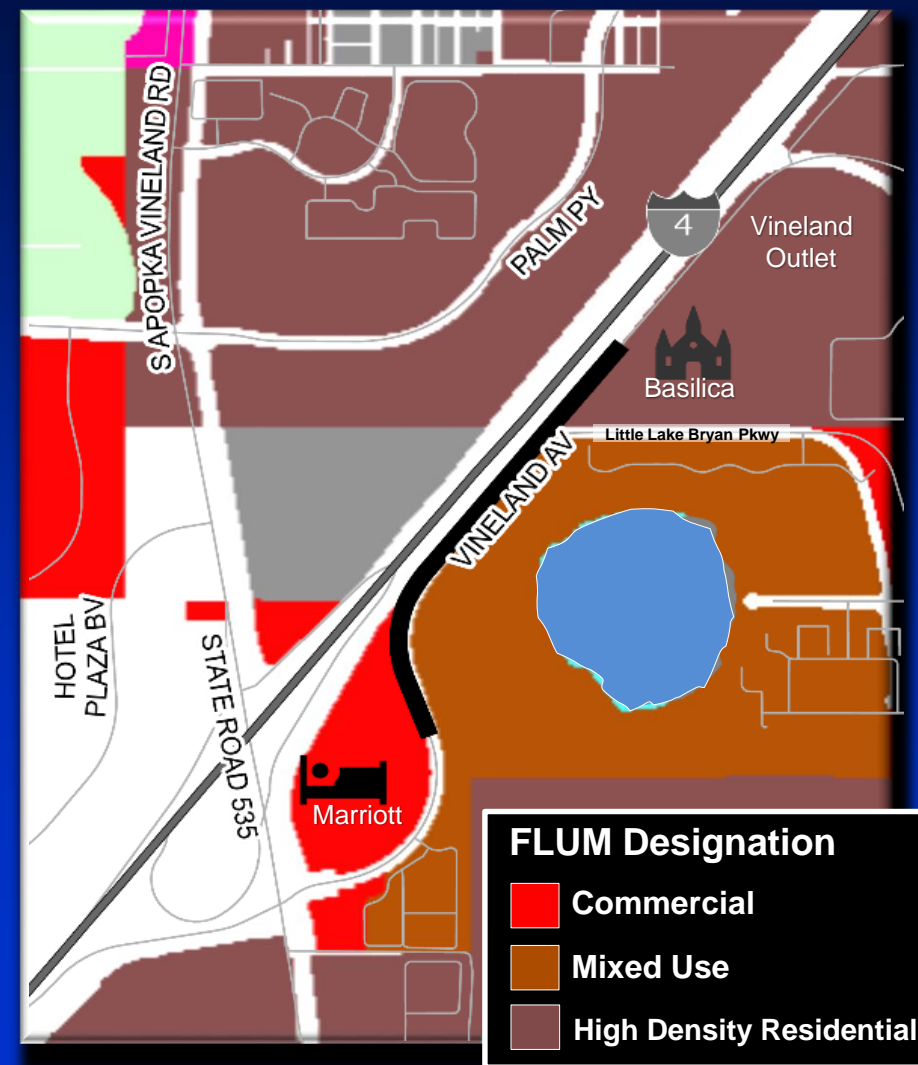




Existing Conditions

▪ Land Use Characteristics

- Developing area
- Within I-Drive Activity Center
- Land uses
 - Retail
 - Restaurants
 - Lodging
 - Multi-family





Existing Conditions

- Average Annual Daily Traffic (AADT) of 23,000 vehicles

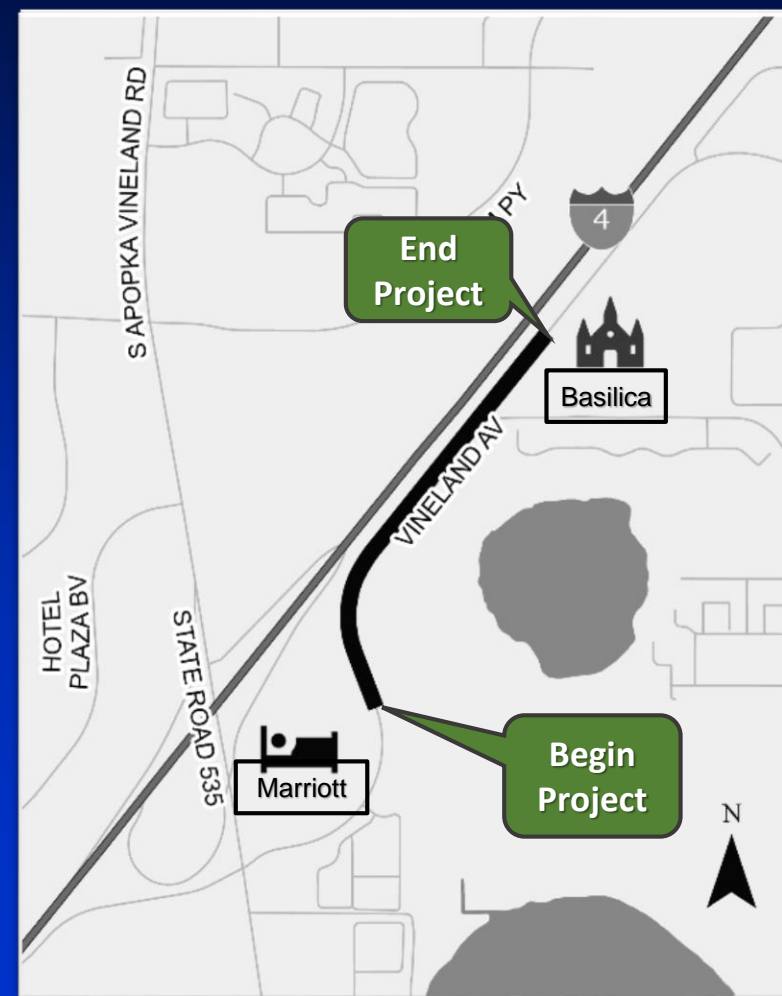
Existing Level of Service (LOS)

Study Segment Peak Hour

LOS F

Little Lake Bryan Pkwy and Vineland Avenue Intersection

LOS F



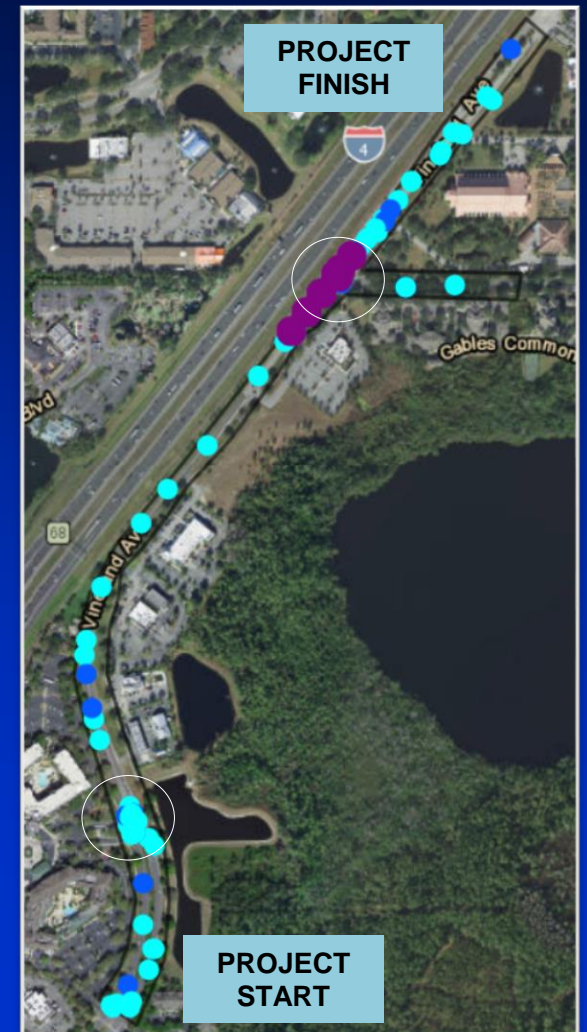
Note: LOS shown is for worse scenario based on stop control approach



Existing Conditions

- 123 crashes on 2-lane segment Vineland Avenue
- 70% of crashes near Little Lake Bryan Parkway
- 20% near 'Lane Drop' at Marriott Village
- Three pedestrian injuries

5-Year Crash Analysis





Existing Conditions

▪ Environmental Analysis

– Conservation/wetland area next to Little Lake Bryan

– Potential protected species:

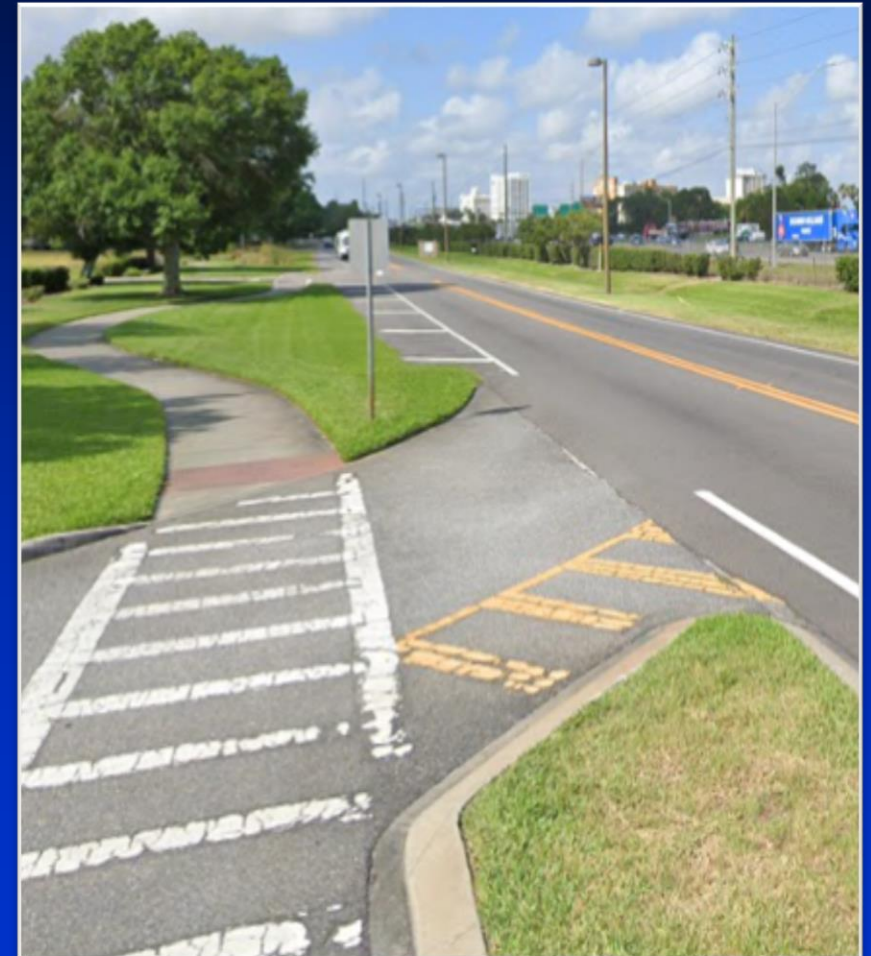
- Gopher Tortoise
- Sand Skink
- Wood Stork





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Development of Alternatives

Build Characteristics

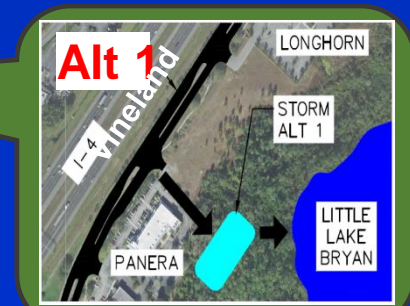
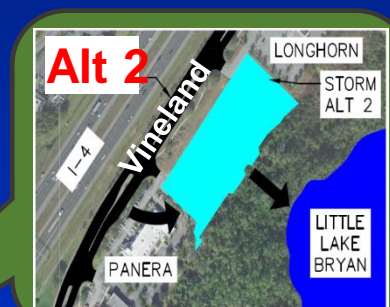
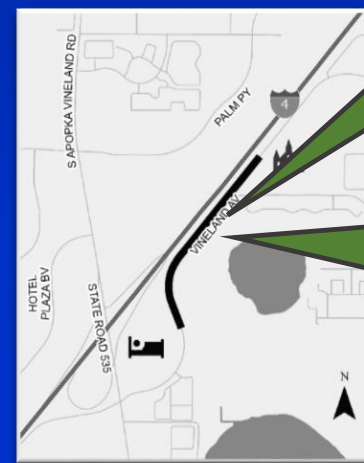
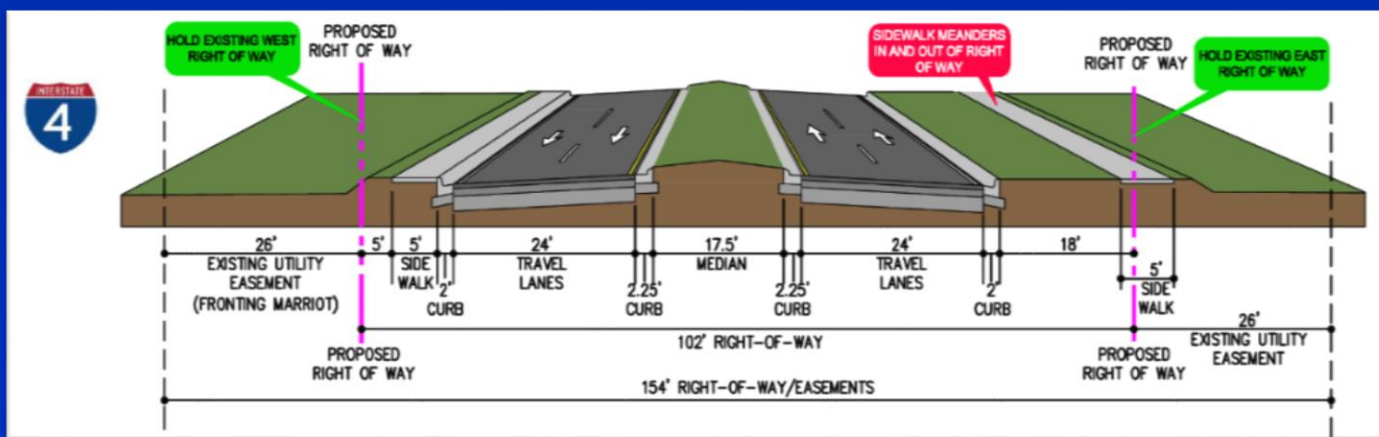
- Four lane divided urban
- Raised median & curb/gutter
- Sidewalks
- Enhanced lighting
- New signal at Little Lake Bryan

Alignments

- Western shift
- Eastern shift
- Narrowed median/
East shift

Ponds

- Conservation area
- Development area





Development of Alternatives

- Future traffic conditions
 - Increase by 7,000 to 30,000 vehicles AADT

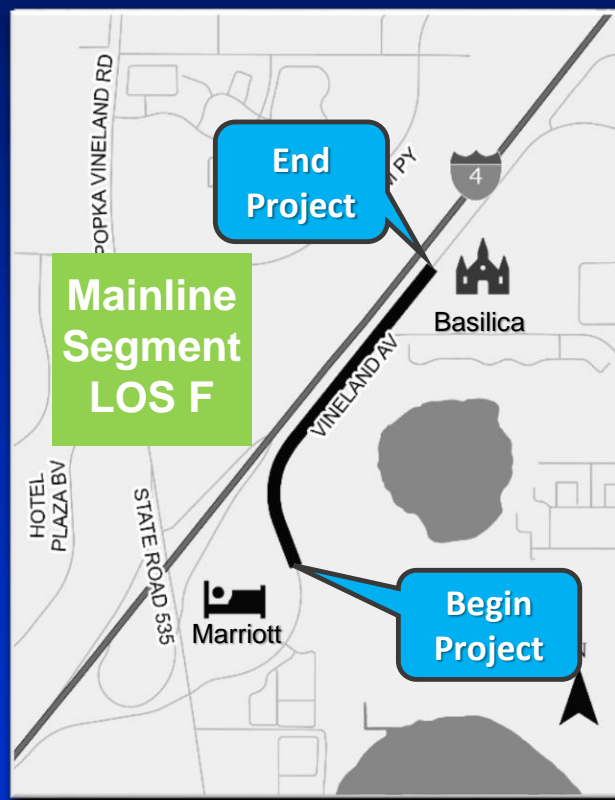
2045 No Build Level of Service

| | |
|---------------|-------|
| Study Segment | LOS F |
| Intersection | LOS F |

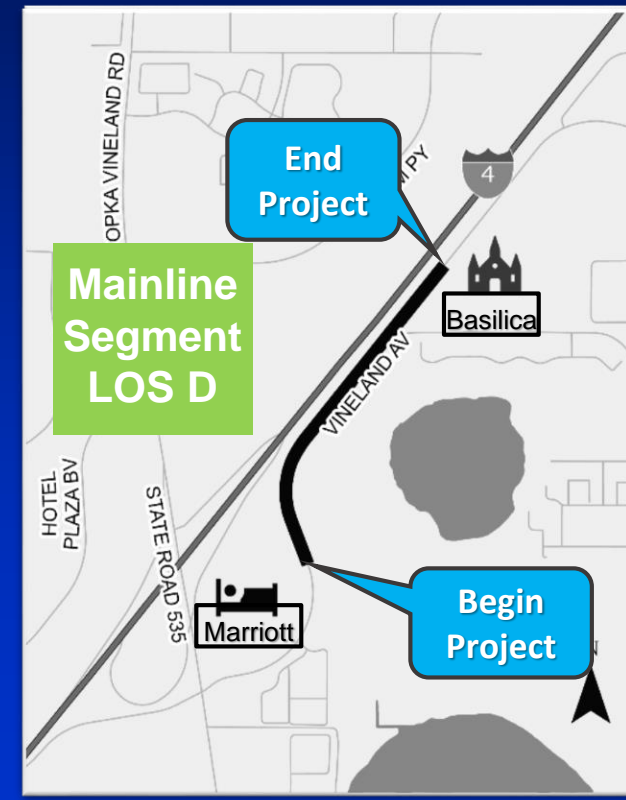
2045 Build Level of Service

| | |
|---------------|-------|
| Study Segment | LOS D |
| Intersection | LOS F |

No-Build 2045



Build 2045



Note: LOS shown is for worse scenario



Development of Alternatives

| EVALUATION MEASURE | ROADWAY ALTERNATIVES (ONLY) | | | PREFERRED ALTERNATIVES | | | DRAINAGE ALTERNATIVES (ONLY) | | |
|---------------------------------------|-----------------------------|------------------------|------------------------|------------------------|--|---------------------------------|--------------------------------|---------------------|--|
| | No Build | Alt 1 Western Shift | Alt 2 Eastern Shift | Alt 3 | | Alt 1 Conservation Area Pond | Alt 2 Development Area Pond | | |
| | | | | Narrowed Median/East | | | | | |
| COMMUNITY IMPACTS | | | | | | | | | |
| Right-of-Way Impacts | | | | | | | | | |
| Acres of Right-of-way/Acquisition | 0 | 0.14 | 0.06 | 0 | | 1.52 | | 0 | |
| Acres of Easement | 0 | 1.43 | 1.68 | 1.2 | | 0.13 | | 4.83 | |
| Total Acres | 0 | 1.57 | 1.74 | 1.2 | | 1.65 | | 4.83 | |
| Properties | | | | | | | | | |
| Total Number of Relocations (Each) | 0 | 0 | 0 | 0 | | 0 | | 0 | |
| Business Parcels Impacted (Each) | 0 | 9 | 9 | 9 | | 1 | | 0 | |
| Residences Impacted (Each) | 0 | 0 | 0 | 0 | | 0 | | 0 | |
| Vacant Parcels Impacted (Each) | 0 | 3 | 3 | 3 | | 3 | | 4 | |
| ENVIRONMENTAL IMPACTS | | | | | | | | | |
| Wetlands (Acres) | 0 | 0 | 0 | 0 | | 1.5 | | 0 | |
| Surface Water (Acres) | 0 | 0 | 0 | 0 | | 0 | | 0 | |
| Flood Plains (Acres) | 0 | 0 | 0 | 0 | | 0 | | 0 | |
| Potential Contamination Sites (each) | 0 | 1 | 1 | 1 | | 0 | | 0 | |
| Threatened and Endangered Species | low | low | low | low | | low | | low | |
| TRANSPORTATION IMPACTS | | | | | | | | | |
| Traffic Signals Added | 0 | 1 | 1 | 1 | | N/A | | N/A | |
| Design Year Level of Service | F | D | D | D | | N/A | | N/A | |
| New access restrictions | 0 | 2 | 2 | 2 | | N/A | | N/A | |
| Sidewalk Added (Miles) | 0 | 0.5 | 0.5 | 0.5 | | N/A | | N/A | |
| PROJECT COSTS (in \$) | | | | | | | | | |
| Design Estimate | \$0 | \$865,000 | \$865,000 | \$865,000 | | \$75,000 | | \$75,000 | |
| Rights-of-Way & Easements | \$0 | \$2,874,564 | \$3,196,012 | \$2,164,468 | | \$1,596,962 | | \$9,901,112 | |
| Wetland Mitigation Banking | \$0 | \$0 | \$0 | \$0 | | \$217,500 | | \$0 | |
| Construction | \$0 | \$3,342,425 | \$3,342,425 | \$3,342,425 | | \$142,000 | | \$71,500 | |
| Reimbursable Utility Relocation | \$0 | \$115,000 | \$115,000 | \$115,000 | | \$0 | | \$0 | |
| Construction Engineering & Inspection | \$0 | \$518,614 | \$518,614 | \$518,614 | | \$21,300 | | \$10,725 | |
| Total Costs | \$0 | \$7,715,603 | \$8,037,051 | \$7,005,507 | | \$2,052,762 | | \$10,058,337 | |

| | |
|---------------------------------|--------------------|
| Design | \$940,000 |
| Right-of-Way Acquisition | \$3,761,430 |
| Construction | \$4,024,339 |
| Wetland Mitigation | \$217,500 |
| Total Cost | \$8,708,269 |

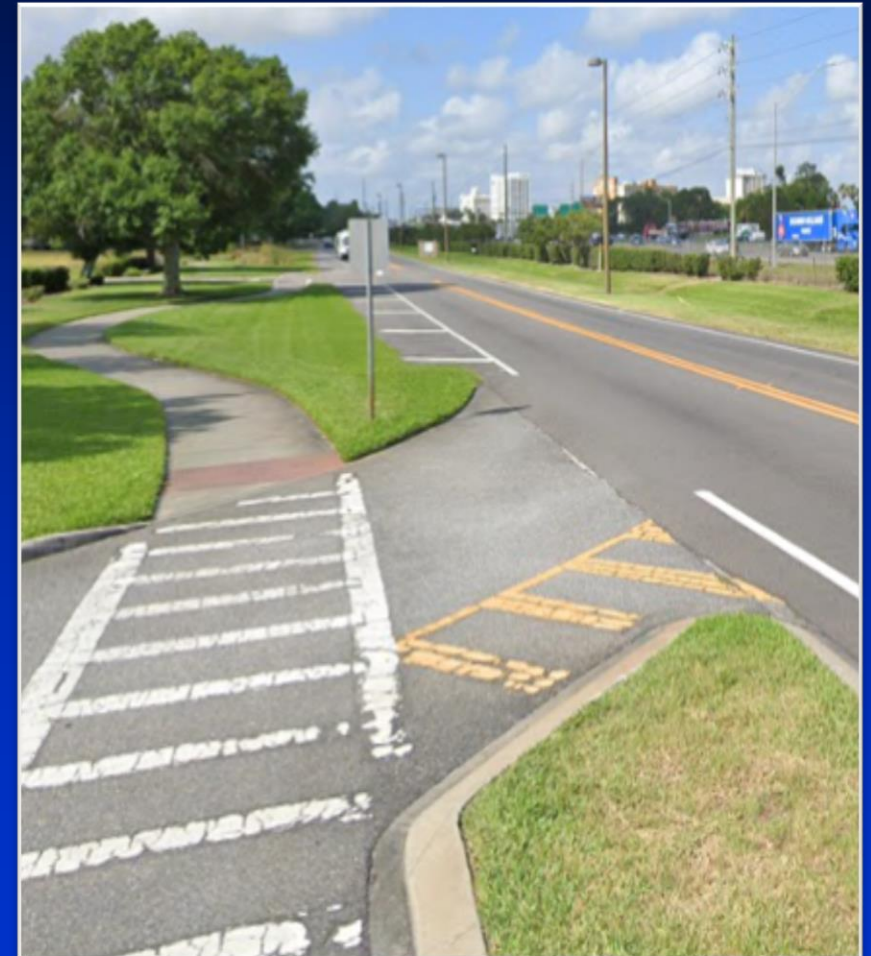
Preliminary Cost Estimate

Evaluation Matrix



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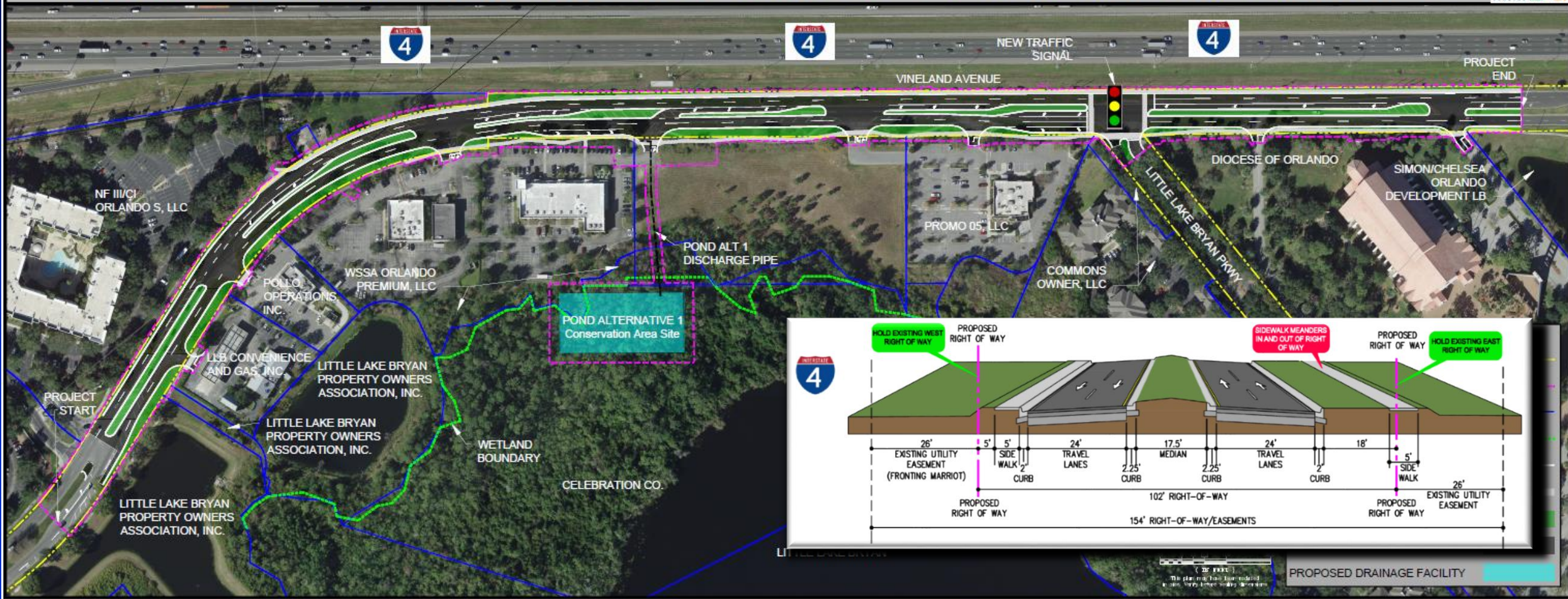




Preferred Alternative

Eastern Shift/Narrowed Median with Conservation Area Pond Site

VINELAND AVENUE - ROADWAY ALTERNATIVE 3 - PREFERRED ALTERNATIVE





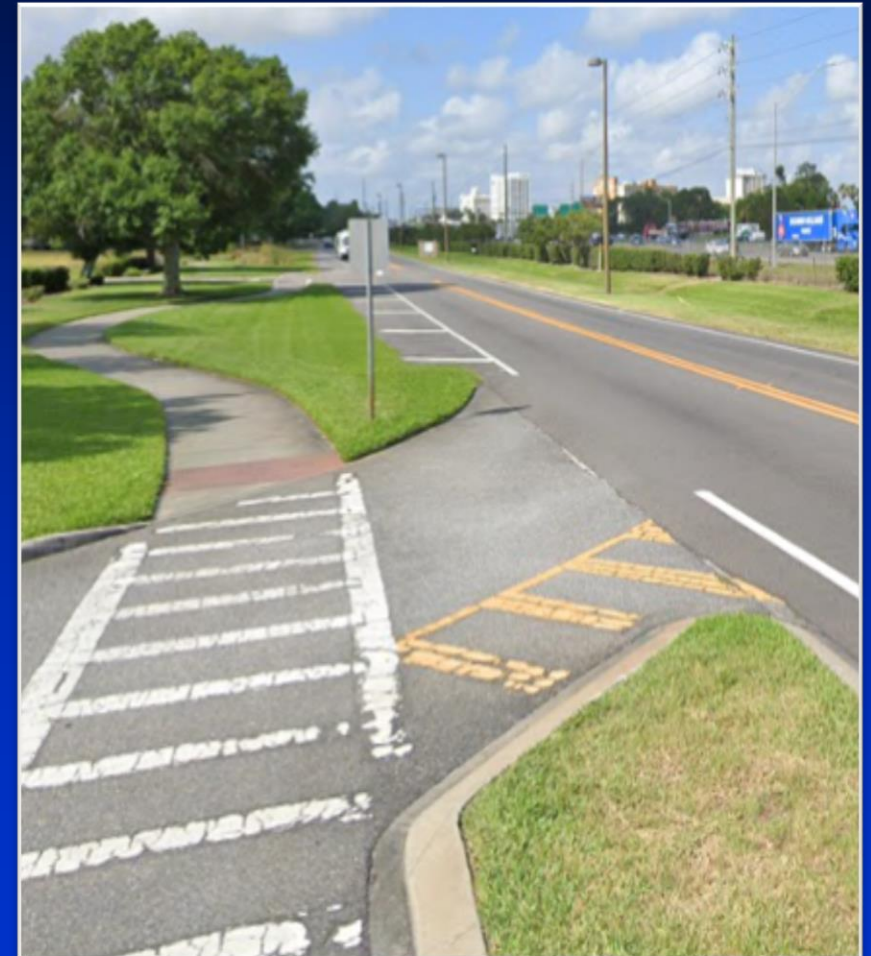
Preferred Alternative

- Adds lanes to reduce congestion
- Manages access for crash reduction
- Adds signalized intersection for crash reduction
- Provides sidewalk improving pedestrian comfort/safety
- Improves lighting for safety, security, and comfort
- Adds curb/gutter and pond to improve runoff quality



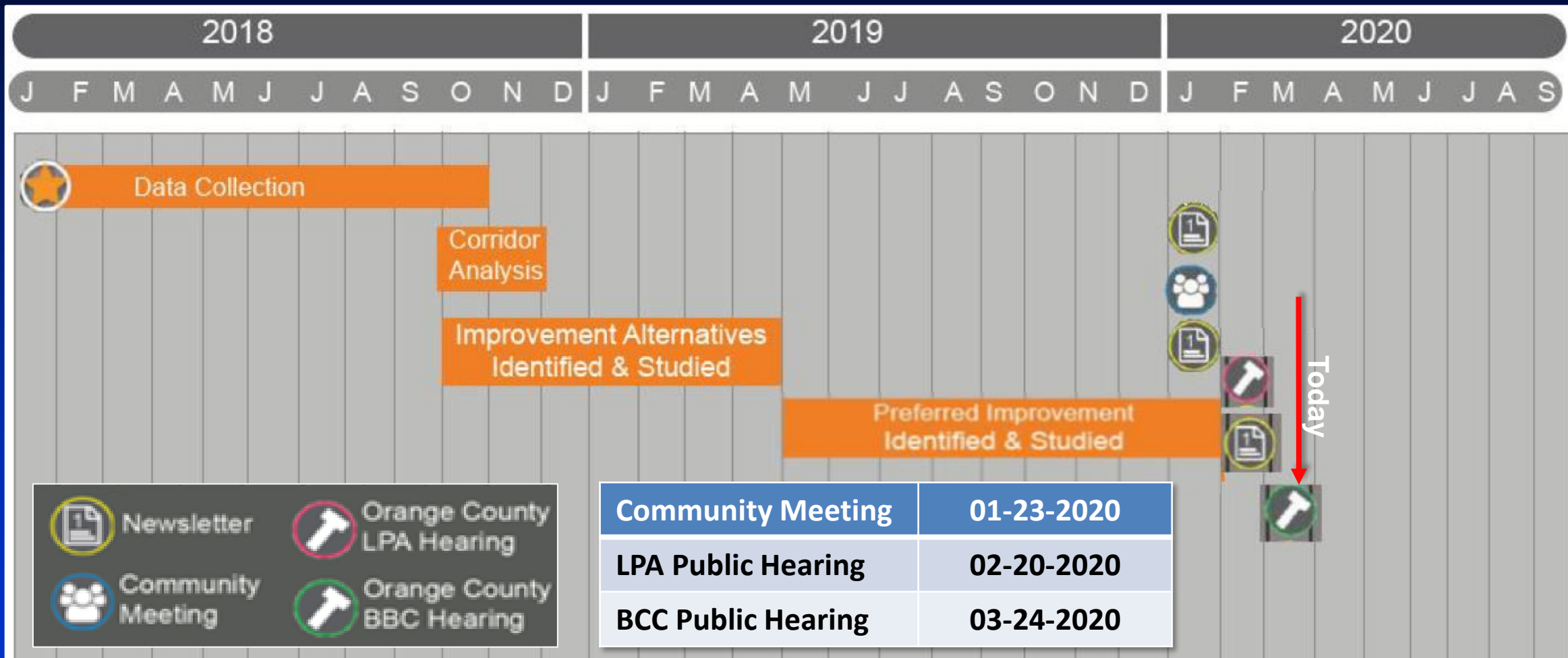
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Public Involvement






Preferred Alternative

- Implement Long Range Transportation Plan (Obj. T1.1)
- Implement financially-feasible multimodal transportation system (Obj. T1.3)
- Ensure LOS standards are met on County roads within unincorporated Orange County (Obj. T1.3)

Comprehensive Plan Consistency



**ORANGE COUNTY
FLORIDA**

**COMPREHENSIVE PLAN
2010 - 2030
GOALS, OBJECTIVES & POLICIES**

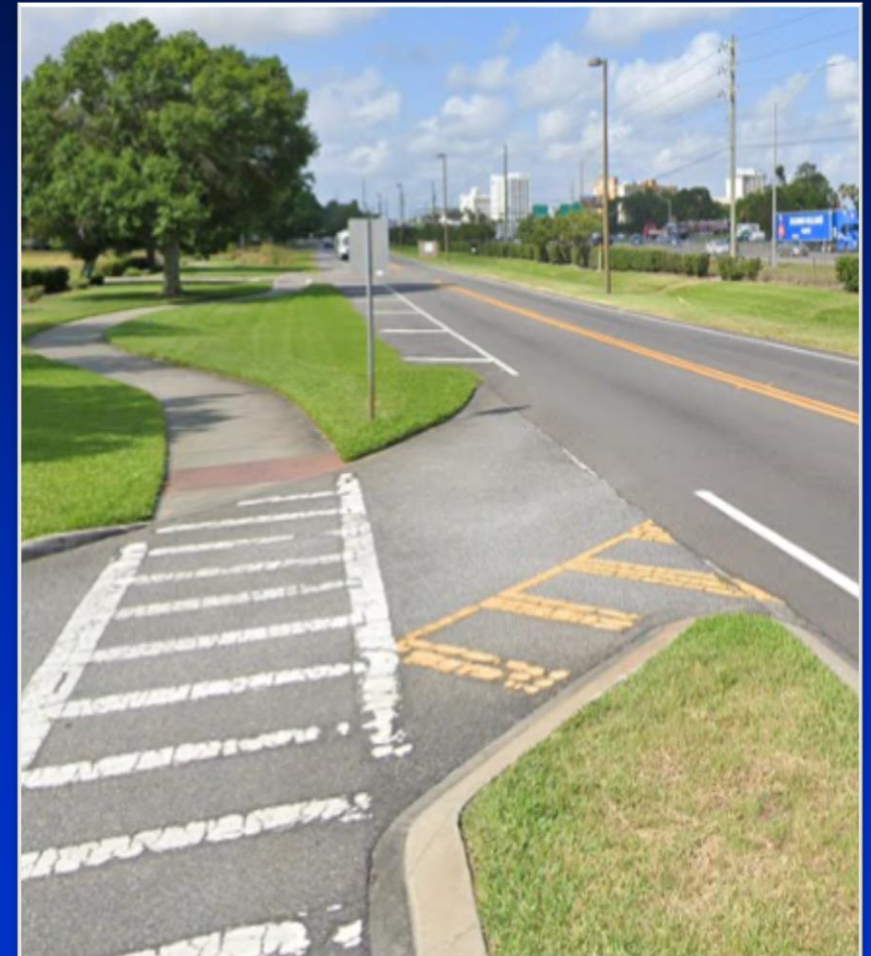
ADOPTED: MAY 19, 2009
AMENDED: August 1, 2017,
THROUGH ORDINANCE 2017-15
EFFECTIVE: September 1, 2017

PREPARED BY:
ORANGE COUNTY COMMUNITY, ENVIRONMENTAL
AND DEVELOPMENT SERVICES DEPARTMENT
ORANGE COUNTY PLANNING DIVISION



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Action Requested

- Find the Vineland Avenue Preliminary Design Study consistent with the Comprehensive Plan
- Recommendation for approval of the Study and to proceed with design, right-of-way acquisition and construction