I-4 Beyond the Ultimate Project Development & Environment (PD&E) Reevaluation Study

FROM WEST OF SR 528 (BEACHLINE EXPRESSWAY) TO WEST OF SR 435 (KIRKMAN ROAD)
ORANGE COUNTY, FLORIDA

Financial Project ID No: 432100-1-22-01 | Federal Aid Project No: 0041-227-I

PUBLIC HEARING | October 10, 2016
This public hearing is being held in accordance with:

- Moving Ahead for Progress in the 21st Century (MAP-21)
- Chapter 23 of the United States Code 128
- Title 40 of the Code of Federal Regulations, parts 1500 through 1508
- Title 23 of the Code of Federal Regulations part 771
- Florida Statute 120.525
- Florida Statute 286.011
- Florida Statute 335.199
- Florida Statute 339.155
- Americans with Disabilities Act of 1990 (ADA)
- Title VI of the Civil Rights Act of 1964, as amended
- 49 CFR Part 24, Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally Assisted Programs
- Executive Order 11988, Floodplain Management
- Executive Order 11990, Protection of Wetlands
Title VI Compliance

This hearing 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:

**District Five**
Florida Department of Transportation  
District Five Title VI Coordinator  
Jennifer Smith  
719 South Woodland Boulevard  
Deland, FL 32720-6834  
(386) 943 – 5367  
Jennifer.Smith2@dot.state.fl.us

**Central Office**
Florida Department of Transportation  
Statewide Title VI Coordinator  
Jacqueline Paramore  
605 Suwannee Street, MS 65  
Tallahassee, FL 32399-0450  
(850) 414 – 4753  
Jacqueline.Paramore@dot.state.fl.us

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

- Share information about the proposed improvements.
- Provide an opportunity for public input.
- All public comments will become part of the project’s public record.
What is a PD&E Study?

Project Development & Environment (PD&E) Study

• A process followed by FDOT to evaluate:
  - Social, cultural and economic impacts associated with a planned transportation project
  - Engineering alternatives

• Part of the project development process as mandated by the National Environmental Policy Act (NEPA) of 1969

• Required to secure federal approval and funding
Key PD&E Study Elements

1. Public Involvement
2. Engineering Analysis
3. Environmental and Socio-Economic Analysis
About the Project

SR 400 (Interstate 4), Segment 2 (W. of SR 528 to W. of SR 435)

- Approximately 4 miles in length
- Widen to ten lanes, 6 general use lanes + 4 express lanes
- Provision for a 44-foot rail corridor
- Bicycle and pedestrian facilities
- Urban Interstate, SIS corridor
- 2 interchanges; DDI proposed at SR 482 (Sand Lake Road) and a systems interchange at SR 528/Beachline Expressway
MetroPlan Orlando
Metropolitan Planning Organization (MPO)

- The MPO works with the Florida Department of Transportation and local governments to fund and implement projects identified through various plans developed by the MPO.
  - The I-4 BtU Segment 2 project was ranked No. 1 on the MetroPlan Orlando National Highway System (NHS) Prioritized Project List for funding, adopted September 14, 2016.
Planning Consistency


- Consistent with the State Transportation Improvement Program (STIP)
  http://www.dot.state.fl.us/OWPB/Federal/STIP/stip_dist_05.pdf

- Consistent with the Orange County Comprehensive Plan 2010-2030, Amended November 13, 2012
  http://www.orangecountyfl.net/PlanningDevelopment/ComprehensivePlanning.aspx#V_Px42dTGUk

- Consistent with the City of Orlando Comprehensive Plan Transportation Element, Approved August 12, 1991, Amended March 14, 2016
  http://www.cityoforlando.net/city-planning/comprehensive-plan/
Purpose and Need

• Changes proposed in the Modified Build scenario (current Reevaluation study) as compared to the previously approved Original Build scenario (SAMR - April, 2000)
  – Proposed change in the project typical sections: switch from two HOV (High Occupancy Vehicle) lanes (one in each direction) in the median, to four express lanes (two in each direction)
  – Proposed changes to interchange configurations: Interchange configurations have been modified to better accommodate traffic volumes and improve interstate and cross-street operations

• Accommodate future traffic needs based on anticipated population and employment growth
  – Certain roadway segments are nearing capacity
  – Meet capacity needs for design year 2040 project traffic

• Enhance safety and mobility
  – Reduction in congestion is expected to positively impact occurrences of rear end crashes
  – Improvement to the interchanges along the corridor resulting in fewer congestion bottleneck locations
  – Additional Advanced Signage – understanding that many in the corridor are visitors and are unfamiliar with the corridor
  – Gaps exist in sidewalks and bicycle lanes
  – Provide sidewalks and 7-foot buffered bicycle lanes on State crossroads within study limits
• This study is developing design alternatives that would efficiently accommodate traffic volumes that are projected to occur in year **2040**

• Goal is to maintain an acceptable level of service through year 2040
  
  ▪ Level of service measures to what extent cars are delayed when travelling through a given area
  
  ▪ As in grade school, “**F**” is failing (or highly congested) and “**A**” is the best (or free flowing)

• Traffic analysis is documented in the I-4 Beyond the Ultimate Systems Access Modification Report (SAMR) Re-Evaluation
Results of Traffic Analysis

- Drivers will experience level of service E and F in the “Original Build” scenario along the majority of Segment 2 and intersections along the cross streets.

- Drivers will experience level of service D or better in the “Modified Build” scenario along the majority of Segment 2 with improved average speeds and improved operations at the intersections along the cross streets.

- **4 additional travel lanes and interchange modifications** will be needed to accommodate projected 2040 traffic volumes.
• The existing right-of-way varies from 300 feet to 330 feet.

• Three 12-foot travel lanes in each direction.

• Outside and inside shoulders are 12 feet wide with 10 feet paved.

• Auxiliary lane in eastbound direction and some portions of the westbound direction.
Local Agency & Other Stakeholder Meetings

- Orange County
- MetroPlan Orlando
- Florida’s Turnpike Enterprise
- Utility companies (Florida Gas Transmission and Duke Energy)
- South Florida Water Management District (SFWMD)

*list is not all-inclusive*
Public Involvement

- Project website: www.i4express.com

- Alternatives Public Workshop
  - January 30, 2014
  - 20 citizens & 13 project team members attended
  - No written comments were received
Alternatives Considered

• **‘No-Build’ or ‘Do Nothing’** Alternative
  – No corridor/capacity improvements
  – Remains as an alternative throughout the PD&E study

• **‘Build’** Alternative
  – Widen road to ten lanes, 5 travel lanes in each direction (3 general use lanes + 2 express lanes)
  – 70 MPH Design Speed
  – Systems Interchange at SR 528 with Express Lane direct connections
  – Diverging diamond interchange at SR 482 (Sand Lake Road)
  – Provide 7-ft buffered bicycle lanes on SR 482 through the DDI
  – Locate potential pond sites
# Alternatives Evaluation Matrix

<table>
<thead>
<tr>
<th>Summary of Impacts</th>
<th>No Build</th>
<th>SR 482 (Sand Lake Road)</th>
<th>SR 528 (Boschline Expressway)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build</td>
<td>I-4 Mainline</td>
<td>I-4 Mainline</td>
<td>I-4 Mainline</td>
</tr>
<tr>
<td>Impact Type</td>
<td></td>
<td>Base Parco w/loop ramp in NW quadrant; some ramp modifications</td>
<td>DGI</td>
</tr>
<tr>
<td>roadway ROW</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Acquisition (Acres)</td>
<td>0.00</td>
<td>16.00</td>
<td>n/a</td>
</tr>
<tr>
<td>Impacted Noise Sensitive Starts</td>
<td>0</td>
<td>77</td>
<td>0</td>
</tr>
<tr>
<td>Wetland (NL &amp; Surface Water (SW) Impacts (acres))</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Floodplain Impacts (gpm)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Section 404 Properties</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Potential Historic Sites</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Potential Contamination (Sites)</td>
<td>0</td>
<td>10 Low Risk 3 Med. Risk*</td>
<td>8 Low 4 Med.</td>
</tr>
<tr>
<td>Potential to Improve Traffic Operations</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Pedestrian Accommodations</td>
<td>Yes</td>
<td>n/a</td>
<td>Yes</td>
</tr>
<tr>
<td>Bicycle Accommodations</td>
<td>No</td>
<td>n/a</td>
<td>Yes</td>
</tr>
<tr>
<td>Parcels Impacted</td>
<td>0</td>
<td>12</td>
<td>0</td>
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<tr>
<td>Relocations</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Constructability</td>
<td>N/A</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Bridges (Area, SF)</td>
<td>0</td>
<td>123,083</td>
<td>38,368</td>
</tr>
<tr>
<td>Construction Cost</td>
<td>$127,721</td>
<td>$194,917</td>
<td>$229,788</td>
</tr>
</tbody>
</table>

Notes: This document is a working draft; data provided is a work in progress and may be updated or replaced. This table illustrates impacts from the proposed improvements for the I-4 Mainline build alternative and comparatively shows any additional impacts from the various interchange alternative options. Alternative * designates the recommended alternative.

Abbreviations: Parco Partially Classified and DGI - Diverging Diamond Interchange, SPLU - Single Point Urban Interchange, ROW - Right of Way, ft - feet, SSU - Stormwater Storage Vault, SF - square feet.

*Based on preferred pond sites as determined in the Pond Sites Report (August 2018).

**Low Quality, SWMP criteria between 0 and 4.99.

*Site criteria constructed before 1971 with APA (Area of Potential Effect), which includes existing ROW along 1 and within 3M from proposed ROW and proposed pond locations plus 10% buffer.

*Based on those sites listed as recommended, except Parco (2004, 2009 and 2016) which are pond alternatives.

*Based on Level 2 CV, additional wetlands will require special handling, characterization and disposal provisions at Pond sites 2008 & 2002; Pond sites 2006, 2004A @ 2008 considered high risk based on potential groundwater impacts at the historical B-2126 facility located near pond site 206.

*Some alternatives were removed from further considerations due to roadway geometric design constraints, operational deficiencies, inter-agency consultation indicating other preferences and/or being non-compliant, and no further traffic analysis was completed.

*Construction costs are preliminary as determined by the Engineer's estimate included in Appendix C, shown in millions of dollars.
Proposed Roadway Typical Section

East of Central Florida Parkway to SR 528 (Design Speed = 70 MPH)
6 General Use Lanes + 4 Express Lanes with Rail Corridor

SR 528 to West of SR 435 (Design Speed = 70 MPH)
6 General Use Lanes + 4 Express Lanes
The proposed roadway typical section is recommended to follow the existing alignment of the Interstate.

Additional right-of-way required primarily for recommended stormwater and floodplain compensation pond sites.
Recommended Alternative:

- Systems Interchange which maintains freeway terminal junction design
- Provides direct connect access between I-4 express lanes and general use lanes and SR 528 express lanes and general use lanes
- Maintains the westbound Collector-Distributor roadway
- Realignment of Turkey Lake Road
- Additional right-of-way is required
**Recommended Alternative: SR 482 (Sand Lake Road) Interchange**

- **Diverging Diamond Interchange (DDI) with loop ramp in northwest quadrant**
- A new connection from the I-4 westbound off ramp will intersect Turkey Lake Road, eliminating the need for left turns at the SR 482 & Turkey Lake Road intersection
- Turkey Lake Road will be improved to include three northbound lanes
- Additional right-of-way is required
Drainage Analysis

• The existing drainage systems will be enhanced to accommodate stormwater runoff from roadway improvements
  – Modifying existing ponds
  – Constructing ponds (within FDOT right-of-way)
  – Constructing offsite ponds
  – Enhanced Water Quality (Treatment)
  – Enhanced Water Quantity (Attenuation)

• Modify several existing SFWMD Permits
### Pond Site Design Criteria

- Governed by the rules and criteria set forth by the South Florida Water Management District (SFWMD) and the FDOT.

### Water Quality and Pond Recovery
- Wet Detention
- Dry Retention

### Water Quantity
- Open Basin
- Closed Basin (with and without outfall)

### Pond Design
- Minimum horizontal clearance
- Rounded corner radii
- Minimum 1-foot of freeboard

### Pond Site Evaluation Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential, business, and unimproved properties</td>
</tr>
<tr>
<td>Community Facilities</td>
</tr>
<tr>
<td>Section 4(f) / Public Lands</td>
</tr>
<tr>
<td>Historic / Archaeological</td>
</tr>
<tr>
<td>Wetlands</td>
</tr>
<tr>
<td>Upland Areas</td>
</tr>
<tr>
<td>Aquatic Preserves / Outstanding Florida Waters</td>
</tr>
<tr>
<td>Wild and Scenic Rivers</td>
</tr>
<tr>
<td>Floodplains</td>
</tr>
<tr>
<td>Threatened and Endangered Species</td>
</tr>
<tr>
<td>Farmlands</td>
</tr>
<tr>
<td>Noise</td>
</tr>
<tr>
<td>Contamination</td>
</tr>
<tr>
<td>Utilities</td>
</tr>
<tr>
<td>Right-of-Way Acquisition and Cost</td>
</tr>
</tbody>
</table>
Recommended Pond Site Locations

There are a total of ten basins within the project limits which will require 21 existing or proposed ponds to achieve water quality treatment and attenuation of project runoff.
To comply with various Executive Orders and other federal and state requirements, engineering and environmental information was reviewed and evaluated to determine if there were any substantial impacts to social and economic, cultural, physical, and natural resources that may result from construction of the proposed improvements.

**Social & Economic Effects:**
- Land use changes
- Economic impacts
- Relocations of residences or businesses

**Cultural Effects:**
- Historic & archaeological sites

**Physical Effects:**
- Noise and air
- Contamination
- Utility Relocations

**Natural Effects:**
- Wetlands
- Threatened and endangered species
- Water quality
- Floodplains
• Improves mobility
• Relieves congestion
• Provides regional economic benefits
An Cultural Resource Assessment Survey was performed within the within the project Area of Potential Effect (APE).

The APE includes the existing ROW along I-4 and was extended to a distance of no more than 100 meters (330 feet) from the proposed ROW and includes the proposed pond footprints plus a 100-foot buffer.

Pedestrian surface inspection and excavation of 178 shovel tests.

No artifacts were recovered from any of the 135 shovel tests.

Two archaeological occurrences were identified; neither meet the criteria for significance required for inclusion in the National Register of Historic Places (NRHP).

Two historic resources constructed before 1971 located within the I-4 Segment 2 APE; neither are recommended eligible for NRHP inclusion.

No adverse effects to any cultural resources are anticipated.
In accordance with Executive Order 11990 “Protection of Wetlands”
- Estimated 4.43 Acres of Direct Wetland Impacts
- Estimated 9.32 Acres of Jurisdictional Other Surface Water Impacts
Threatened and Endangered Species

- In accordance with Title 50 Code of Federal Regulations Part 402 of the Endangered Species Act of 1973, as amended

- Field surveys were conducted to assess 52 animal species and 56 plant species that may potentially occur within Orange County

- Pedestrian and full cover board surveys were performed for the sand skink; no sand skinks were observed in the project survey areas

- The proposed I-4 Segment 2 project either has a “no effect” or “may affect, not likely to adversely affect” designation for federal or state listed species
Water Quality

• The proposed stormwater facilities will be designed to meet the current requirements of the South Florida Water Management District.

• Stormwater treatment will be provided by wet detention ponds which may be on-site or off-site.
Floodplains

• In accordance with Executive Order 11988 “Floodplain Management”

• No floodplain impacts are anticipated
• In accordance with the Code of Federal Regulation Part 772
• A 22-ft tall, 440-ft long ground-mounted noise barrier is reasonable and cost feasible on the east side of I-4, adjacent to the McKinley at Monterey Lakes Apartments.
Potential Contamination Sites

- 124 sites identified as potential contamination sites
- None rated high risk, 9 rated medium risk and 115 rated no or low risk
- Out of 20 proposed potential pond sites, four were rated medium risk and none were rated high risk
- 16 pond sites rated as low risk

115 sites are rated as No Risk or Low Risk for potential contamination
An air quality analysis, specifically an analysis of carbon monoxide (CO) concentrations, has been performed on the recommended alternative.

The analysis has been conducted using the established FDOT Air Quality Screening Model.

Air quality impacts are not expected to occur as a result of this project.
Right-of-Way Requirements

- Approximately nine (9) acres of additional right-of-way is anticipated for roadway improvements
- Approximately 16 acres of additional right-of-way is anticipated for off-site ponds
- 2 potential relocations (1 residential, 1 public facility) are anticipated

**Florida Statute 330.09**
Federal Uniform Relocation Assistance and Real Property Acquisition Act of 1970
(Public law 91-646 as amended by public law 100-17)
• You will be contacted by an appraiser who will inspect your property
• Be present and provide information about the value of your property
• Eligibility for relocation advisory services and payment benefits
• You may appeal relocation determination
• If you move before notification is received, benefits may be jeopardized
• Relocation specialists will answer any questions
## Project Cost Estimates

### Estimated Project Costs for I-4 Segment 2

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>LRE</td>
<td>$217,153,689.33</td>
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<tr>
<td>MOT (10%)</td>
<td>$21,715,368.93</td>
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<tr>
<td>Mobilization (10%)</td>
<td>$23,886,905.83</td>
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<tr>
<td>Project Unknowns (15%)</td>
<td>$39,413,394.61</td>
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<td>Project Non-Bid Subtotal</td>
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<td>Construction Subtotal</td>
<td>$302,319,358.70</td>
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<tr>
<td>Design (8%)</td>
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<td>CEI (8%)</td>
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<td>ROW</td>
<td>$43,371,686.00</td>
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<td>Utilities</td>
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<td>Permits</td>
<td>$1,000,000.00</td>
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<tr>
<td>Total</td>
<td>$401,262,142.10</td>
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*Subject to Change*
Schedule and Funding

- Obtain Environmental Impact Statement Update approval; Record of Decision from the FHWA
  - Anticipated end October 2016

- Design
  - Funded FY2016

- Right-of-Way Purchase
  - Funded FY2022-FY2026

- Utilities
  - Funded FY2025

- Construction
  - Funded FY2025

- Construction Engineering and Inspection (CEI)
  - Funded FY2025
• Draft documents were available for review starting September 19, 2016 and will remain on display until October 20, 2016 at:

- Orange County Public Library, Southwest Branch, located at 7255 Della Drive, Orlando, FL 32819

- Project website: www.i4express.com
Public Comments

• Make an oral statement
  – To the court reporter
  – During the public comment period, after completing a “Speaker Card”

• Submit written comments
  – During the Public Hearing
  – Mail to the FDOT Project Manager: Beata Stys-Palasz, P.E.
    ➢ Florida Department of Transportation
    719 South Woodland Boulevard
    Deland, FL 32720

Comment Period Ends on October 20, 2016
Public Comments

• Email or call
  – (386) 943-5418 or beata.stys-palasz@dot.state.fl.us

• Visit www.i4express.com
  – Click on the Contact Us link
  – Fill out the form and click submit

• All comments become public record
Thank you for attending!

PUBLIC HEARING

I-4 Beyond the Ultimate
PD&E Reevaluation Study

FDOT