Interchange Operational Analysis Report

INTERSTATE 10 AT SR 61 AND US 319, TALLAHASSEE, FL

PD&E GROUP 22-01

November 17, 2014
Project Location
Transportation Project Delivery Process

- Planning
- Project Development & Environment Study
- Preliminary Design
- Final Design
- Right-of-Way/ Acquisition
- Construction
Interchange Studies

- **IJR - Interchange Justification Report**
  - New access to a limited facility

- **IMR - Interchange Modification Report**
  - Modifying geometry
  - Relocation of ramp terminal
  - Adding lanes at the gore point

- **IOAR - Interchange Operational Analysis Report**
  - Documents traffic/safety analysis
  - Minor modifications

Flowchart:
- Start IOAR
- MLOU
- Operational Analysis
- FDOT / FHWA Review
- Approval Decision
### Purpose and Need

#### Table 3-20: 2040 Signalized Intersection LOS Analysis Results – AM Peak Period

<table>
<thead>
<tr>
<th>I-10 Exit Number</th>
<th>Intersection Description</th>
<th>LOS Standard</th>
<th>ED</th>
<th>WB</th>
<th>NB</th>
<th>SD</th>
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#### Table 3-22: 2040 Signalized Intersection LOS Analysis Results – PM Peak Period

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<th>LOS Standard</th>
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CCNW Alternative #1

Legend
- ● Signalized Intersection
- < 2 Number of Continuous Lanes
- ← Existing Lane Configuration
- → Proposed Lane Configuration

Not to Scale

Commonwealth Blvd

Figure 7-4

I-10 & SR 263
Interchange Operational Analysis Report

Build Alternative #1
Lane Configuration
CCNW Alternative #3

Legend
XXX (YYY)  AM (PM) Volume
X (Y)  AM (PM) Signalized Intersection Level of Service
X (Y)  AM (PM) Ramp Merge Level of Service
X (Y)  AM (PM) Ramp Diverge Level of Service
OC (UC)  AM (PM) Over Capacity/Under Capacity
Signalized Intersection
Proposed Off-Ramp

I-10 & SR 263
Interchange Operational Analysis Report

Build Alternative #3
2040 Peak Hour Volumes and Level of Service

Figure 7-12
CCNE - Area of Influence
CCNE Issues

- 3 major roadways
- Traffic volume
- Signals
- Driveways
CCNE Network

- 2013 AM Peak Hour Operational Analysis
- Failing Intersections
  - SR 61 @ Timberlane

LOS A / B / C
LOS D
LOS E / F
CCNE Network

- 2013 PM Peak Hour Operational Analysis
- Failing Intersections
  - SR 261 at Raymond Diehl
  - SR 61 @ Timberlane
  - SR 61 @ Market St.
  - US 319 @ Village Sq.
  - US 319 @ Maclay Rd.

LOS A / B / C
LOS D
LOS E / F
Alternatives Considered

- No-Build
- TSMO – Transportation System Management & Operations
  - Geometric Constraints
    - Extensive ROW impacts
  - Limited Level of Service Improvements
    - 1. Basic Improvements – add turn lanes, etc.
    - 2. CCNE Flyover from N. of I-10 to N. of Killarney Way
    - 3. Existing flyover modified for reversible operations
    - 4. SB SR 263 flyover to I-10 WB On Ramp
    - 5. I-10 EB Off Ramp Flyover to SR 61
    - 6. Reversible SR 61 Flyover
    - 7. Bi-directional SR 61 Flyover
    - 8. Diverging Diamond Interchange
Proposed Interchange at Meridian Road

Volume Decrease
No Change
Volume Increase
Proposed Interchange at Welaunee

- Market Street
- Village Square
- Muddy Road
- Timberlane Rd
- Raymond Diehl
- Thomasville Road
- Welaunee Interchange 3.5 mi

Volume changes:
- Volume Decrease
- No Change
- Volume Increase
Alternative 6 – Reversible Flyover
Alternative 7 – Two-way Flyover
Alternative 7 – Two-way Flyover
Straddle Bent Example
Alternative 8 – Diverging Diamond Interchange (DDI)
Alternative 8 - DDI

- https://www.youtube.com/watch?v=24jMVZszPTY&feature=share
## 2040 Alternative MOEs

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<th>Alternative</th>
<th>Network Delay (hours)</th>
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<td>Alternative</td>
<td>Roadway Cost</td>
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<td>Alternative 6 – Reversible Flyover</td>
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<td>Alternative 7 – Bi-directional Flyover</td>
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<td>Alternative 8 – Diverging Diamond Interchange</td>
<td>$34,279,000</td>
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*Right-of-way cost were not available
Next Steps

- Include in CRTPA LRTP
- Include in FDOT Work Program
- Exercise Optional Service (PD&E and/or IMR)
Extended Project Schedule

- IOAR: November 2013 – October 2014
- PD&E: November 2014 – August 2017
- Design: September 2017 – March 2019
- ROW: April 2019 – November 2019
- Construction: December 2019 – January 2023