SR 9 (I-95) Interchange Master Plan | Palm Beach County

- Completed in December 2014
- Evaluated 17 interchanges
  - From Linton Boulevard to Northlake Boulevard
- Analyzed interchanges to determine existing and potential future deficiencies
- Coordinated with Local Agencies and MPO
- Identified operational and safety needs
  - Developed short-term improvements
  - Developed long-term conceptual design alternatives
- Facilitated programming of future interchange studies and projects through the SIS program
Strategic Intermodal System (SIS)

• Established by the Florida Legislature in 2003 (F.S. 339.61)
• State Funded Program
• Focuses state resources on transportation facilities most critical to statewide travel, including:
  ✓ Interstates
  ✓ Interchanges
  ✓ Airports
  ✓ Seaports
  ✓ Spaceports
  ✓ Rail
  ✓ Highways of Interregional Significance
  ✓ “Last Mile” Connectors

• SIS Planning Documents:
  ✓ First 5 Year Plan – projects funded in 5 Year work program
  ✓ Second 5 Year Plan – planned projects years 6-10
  ✓ SIS Cost feasible Plan – projects projected for years 11-25
  ✓ SIS Multi Modal Unfunded Needs Plan
Project Development Process Flow Chart

1. Planning
   - Time Varies
   - *2 Years

2. PD&E
   - 2-3 Years
   - We are currently here

3. Design
   - 2-3 Years

4. Right of Way
   - 2-4 Years
   - *Categorical Exclusion Type II

5. Construction
   - *Categorical Exclusion Type II
Project Study Area

LIMITS:
SR 9/I-95: from S of 45th Street to N of 45th Street
45th Street: From Village Boulevard to Congress Avenue
Palm Beach County, Florida

MUNICIPALITIES:
City of West Palm Beach
Town of Mangonia Park
City of Riviera Beach
Purpose and Need

Project Purpose:

- Identify short-term and long-term needs within the study area;
- Develop design concepts to address traffic spillback onto I-95;
- Improve interchange operations, reduce congestion, and increase safety at the study interchange.

Project Need:

- Alleviate existing and future traffic congestion thereby improving safety at the interchange.
Existing Year Conditions - Lane Configuration, Delay and LOS

AM Delay / LOS
- Northpoint Blvd: 24.0 C, 30.5 C
- 45th Street: 26.8 C, 22.2 C
- Corporate Way: 34.9 C, 30.1 C
- Congress Ave: 33.8 C, 41.3 D

PM Delay / LOS
- Northpoint Blvd: 14.3 B, 10.2 B
No-Build 2040 Year Conditions - Lane Configuration, Delay and LOS

<table>
<thead>
<tr>
<th>Lane Configuration, Delay and LOS</th>
<th>AM Delay</th>
<th>PM Delay</th>
<th>Level Of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Northpoint Blvd</td>
<td>48.5 D</td>
<td>50.3 D</td>
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<tr>
<td>2 45th Street SB Off Ramp</td>
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<tr>
<td>3 Corporate Way</td>
<td>83.1 F</td>
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<tr>
<td>4 Congress Ave</td>
<td>62.9 E</td>
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<tr>
<td>5 Corporate Way</td>
<td>22.0 C</td>
<td>13.4 B</td>
<td>C</td>
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</table>

Legend:
- Existing Lane
- Change in pavement marking
- Proposed additional lane
- LOS F Movements
Alternatives Analysis

• **No-Build**
  
  • **Transportation System Management & Operations (TSM&O)**
    - Short Term
    - Open to Traffic in 3-5 Years
    - No Right-of-Way Impacts
    - Lower Cost
  
  • **Build Alternatives**
    - Long Term
    - Open to Traffic in 8-10 Years
    - Ultimate Improvements

Alternatives Evaluation Process

- No-Build (NB)
- TSM&O (A)
- Build Alternatives 1, 2, 3, 4

**ALTERNATIVES SCREENING**
- Traffic Operations
- Safety
- Freight
- ITS Connectivity
- Access Management
- Utilities
- Constructability
- MOT
- Historic & Archeological
- Wetlands
- Canal Impacts
- Noise Impacts
- Permitting
- R/W Impacts
- Aesthetic Features
- Community Services

**EVALUATION MATRIX**

Alternatives
- Public Workshop

Recommended Alternative
Alternatives Analysis | TSM&O

- Add additional right and left turn lane at the ramp intersections
- Add directional signage on NB off-ramp to North Congress Avenue
- Add one EB and one NB left turn lane at Congress Avenue
- Provide travel information system
- Develop signal system strategies
### TSM&O 2040 Year Conditions - Lane Configuration, Delay and LOS

#### Existing Lane
- Change in pavement marking
- Proposed additional lane
- LOS F Movements

<table>
<thead>
<tr>
<th></th>
<th>Lane Configuration</th>
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<th>LOS</th>
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<td>2</td>
<td>45th Street</td>
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<td>45th Street</td>
<td>40.1 D</td>
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Alternatives Analysis | Alternative 1 – 45th Street Widening
Alternatives Analysis | Alternative 2 – Diverging Diamond Interchange
Alternatives Analysis | Alternative 2 – Diverging Diamond Interchange
Alternatives Analysis | Alternative 3 – SR 710 Ramps
Alternatives Analysis | Alternative 4 – Cumberland Drive Extension
Alternative 1 – 2040 Year Conditions

Lane Configuration, Delay and LOS

1. 45th Street
   - 29.5 C
   - 46.7 D

2. 49th Street
   - 26.0 C
   - 23.3 C

3. 45th Street
   - 31.8 C
   - 30.6 C

4. Corporate Way
   - 20.7 C
   - 18.2 B

5. Corvette Ave
   - 54.0 D
   - 53.7 D

Legend:
- Existing Lane
- Change in pavement marking
- Proposed additional lane

Level Of Service:
- A
- B
- C
- D
- E
- F

AM Delay / LOS
PM Delay / LOS
Alternative 2 – 2040 Year Conditions
Lane Configuration, Delay and LOS
Alternative 3 – 2040 Year Conditions

Lane Configuration, Delay and LOS
Alternative 4 – 2040 Year Conditions

Lane Configuration, Delay and LOS
### Alternative Evaluation Matrix

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<thead>
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<th>PARAMETERS</th>
<th>NO BUILD</th>
<th>TSM&amp;O</th>
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**SCORE**                                     | 58      | 65    | 84    | 87    | 51    | 57    |

*FPID No.: 436519-1-22-01 | FAP No.: 0951-682-1 | ETDM No.: 14225*
### Preliminary Cost Estimate

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>TSM&amp;O</th>
<th>ALTERNATIVE 1</th>
<th>ALTERNATIVE 2</th>
<th>ALTERNATIVE 3</th>
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<td><strong>$14,484,000</strong></td>
<td><strong>$13,880,000</strong></td>
<td><strong>$72,340,000</strong></td>
<td><strong>$34,952,000</strong></td>
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Public Involvement

• Agency & Public Kick-Off Meetings – September 13, 2016

• Elected Officials/Agencies Briefings
  o Palm Beach County Engineering
  o Palm Beach County MPO
  o City of West Palm Beach
  o Town of Mangonia Park
  o City of Riviera Beach

• Alternatives Public Workshop – March 28, 2017

• Other Meetings
  o Coordination with City of West Palm Beach & Town of Mangonia Park
  o 45th Street Corridor Summit – Multiagency Discussion

• Public Hearing – November 2, 2017
## Summary Schedule

<table>
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<tr>
<th>ACTIVITY</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
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<td>Notice to Proceed</td>
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<td>Fact Sheet/Newsletter</td>
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<td>Location and Design Concept Acceptance (LDCA)</td>
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<td>Continuous Public Involvement</td>
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TODAY

### Summary Schedule

- **Notice to Proceed:**
  - 2016: Month J
  - 2017: Month J
  - 2018: Month J

- **Fact Sheet/Newsletter:**
  - 2016: Month F
  - 2017: Month M
  - 2018: Month A

- **Elected Officials/Agency Kick-Off Meeting:**
  - 2016: Month J
  - 2017: Month A
  - 2018: Month M

- **Public Kick-Off Meeting:**
  - 2016: Month J
  - 2017: Month A
  - 2018: Month M

- **Engineering Data Collection:**
  - 2016: Month M
  - 2017: Month A
  - 2018: Month J

- **Engineering Analysis:**
  - 2016: Month M
  - 2017: Month A
  - 2018: Month J

- **Environmental Data Collection:**
  - 2016: Month M
  - 2017: Month A
  - 2018: Month J

- **Environmental Analysis:**
  - 2016: Month M
  - 2017: Month A
  - 2018: Month J

- **Develop and Evaluate Alternatives:**
  - 2016: Month M
  - 2017: Month A
  - 2018: Month J

- **Alternatives Public Workshop:**
  - 2016: Month M
  - 2017: Month A
  - 2018: Month J

- **Engineering Reports:**
  - 2016: Month M
  - 2017: Month A
  - 2018: Month J

- **Environmental Reports:**
  - 2016: Month M
  - 2017: Month A
  - 2018: Month J

- **Public Hearing:**
  - 2016: Month M
  - 2017: Month A
  - 2018: Month J

- **Final Project Documentation:**
  - 2016: Month M
  - 2017: Month A
  - 2018: Month J

- **Location and Design Concept Acceptance (LDCA):**
  - 2016: Month M
  - 2017: Month A
  - 2018: Month J

- **Continuous Public Involvement:**
  - 2016: Month J
  - 2017: Month J
  - 2018: Month J