Veterans Memorial Bridge
(Orange Avenue) PD&E Study
From City Island Parkway to South Peninsula Drive

FDOT FPID# 242172-128-01
Volusia County Project# P-5351-1
Project Limits

Begin Project

Veterans Memorial Bridge

End Project
Structurally Deficient

FDOT Sufficiency Rating – 31.1

Scale 1 - 100
Structurally Deficient

Concrete Deterioration
Movable Span
Functionally Obsolete

- No Shoulder
- No Barrier Separating Sidewalks from traffic
US Coast Guard Regulates Opening Schedule

Existing Bridge Opens 6 – 17 times per day
PD&E Study

- Meet Transportation Needs
- Minimize/Avoid Impacts
- Required by NEPA
- Required for Federal Funding
PD&E Process

- Engineering, Social & Environmental Studies
- Community Involvement
- Develop and Evaluate Alternatives
- Select Preferred Alternative
- Obtain FHWA Approval
Community Input

- Alternatives Workshop
- Meet with Stakeholder Groups
- Coordinate with Local Government
- Public Hearing
- Project Website
Alternatives

- No Build
- No Build/Removal of Existing Bridge
- Rehabilitation
- Replacement

Movable Bridge - 28’ Vertical Clearance
High-Level Fixed Bridge – 65’ Vertical Clearance
No Build Alternative

- Existing Bridge Remains
- Routine Maintenance Only
- No Major Improvements

10 Years Remaining Service Life
No Build Alternative
Removal of Existing Bridge

- Routine Maintenance Only
- No Major Changes
- Existing Bridge Demolished After 10 Years
Rehabilitation

15 Years Remaining Service Life

No Barrier Separating Sidewalks from Traffic

No Shoulder

16' Vertical

21' Vertical

90' Horizontal

125' Horizontal
Replacement Alternatives

New High Level or Movable Bridge in Same Location
Two Year Detour

2.25 Mile Detour

Veterans Memorial Bridge
Two Year Detour

International Speedway Bridge

Veterans Memorial Bridge

11.0 Mile Detour

Dunlawton Bridge
Proposed Typical Section
Movable Bridge

- 28 feet Vertical Clearance
- 125 feet Horizontal Clearance
- Reduce Openings by 30 percent

Rendering – Not Actual Design
High-Level Fixed Bridge

- 65’ Vertical Clearance
- 125’ Horizontal Clearance

Rendering – Not Actual Design
East Side

High Level Alternative

Rendering – Not Actual Design

High Level and Movable
No Impacts to Driveways
West Side

View from Chamber of Commerce

High Level Alternative

Rendering – Not Actual Design
West Side of Bridge

Driveway Closed
City Island Parkway
Intersection Changes
High Level Bridge
West Side of Bridge

Proposed Storm Water Pond

Rendering – Not Actual Design
Memorial to Veterans
Wetland Impacts

Movable and High-Level Alternatives

0.04 Acre Impacted
Wildlife

Minimal Impacts to Protected Species
Historic Resources

No Direct or Indirect Impacts

City Island Resource Group

South Peninsula Historic District
Historic Resources

Existing Bridge – Not Eligible for Listing in National Register of Historic Places
Noise

New Bridge

No Noticeable Change in Noise Levels
Simulations of Alternatives
View from Riverplace 100 Condominiums

Photo Location and View Direction
View from Riverplace 100

Existing Bridge
View from Riverplace 100

Proposed Movable Bridge

Rendering – Not Actual Design
View from Riverplace 100

Proposed High-Level Bridge

Rendering – Not Actual Design
View from Shore South of Bridge
East Side at Pendleton Condominiums

Existing Bridge
View from Shore South of Bridge
East Side at Pendleton Condominiums

Proposed Movable Bridge

Rendering – Not Actual Design
View from Shore South of Bridge
East Side at Pendleton Condominiums

Proposed High-Level Bridge

Rendering – Not Actual Design
View from Boat Dock North of Bridge
East Side at Pier 43 Condominiums

Photo Location and View Direction
View from Boat Dock North of Bridge
East Side at Pier 43 Condominiums

Existing Bridge
View from Boat Dock North of Bridge
East Side at Pier 43 Condominiums

Proposed Movable Bridge

Rendering – Not Actual Design
View from Boat Dock North of Bridge
East Side at Pier 43 Condominiums

Proposed High-Level Bridge

Rendering – Not Actual Design
View from Chamber Of Commerce

Photo Location and View Direction
View from Chamber Of Commerce

Existing Bridge
View from Chamber Of Commerce

Proposed Movable Bridge

Rendering – Not Actual Design
View from Halifax Harbor Marina
South of Bridge – West Side

Photo Location and View Direction
View from Halifax Harbor Marina
South of Bridge – West Side

Existing Bridge
View from Halifax Harbor Marina
South of Bridge – West Side

Proposed Movable Bridge

Rendering – Not Actual Design
View from Volusia County Courthouse Parking Lot

Photo Location and View Direction
View from Volusia County Courthouse Parking Lot

Existing Bridge
View from Volusia County Courthouse Parking Lot

Proposed Movable Bridge

Rendering – Not Actual Design
View from Volusia County Courthouse Parking Lot

Proposed High-Level Bridge

Rendering - Not Actual Design
Cost Estimates

Rehabilitation $20.2 M
New Movable Bridge $40.7 M
New High Level Bridge $24.4 M
No Build with Removal of Existing Bridge $3.2 M
## Evaluation Matrix

<table>
<thead>
<tr>
<th>IMPACT EVALUATION CRITERIA</th>
<th>REHABILITATION</th>
<th>NEW MOVABLE BRIDGE</th>
<th>NEW HIGH-LEVEL FIXED BRIDGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadway/Bridge Issues</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane/Shoulder Widths</td>
<td>12’/none</td>
<td>11’/5’</td>
<td>11’/5’</td>
</tr>
<tr>
<td>Sidewalks (both sides)</td>
<td>5’</td>
<td>5’</td>
<td>5’</td>
</tr>
<tr>
<td>Vertical/Horizontal Channel Clearance</td>
<td>16’/90’</td>
<td>28’/125’</td>
<td>65’/125’</td>
</tr>
<tr>
<td>Bridge Openings</td>
<td>No Change</td>
<td>Reduced by 30%</td>
<td>None</td>
</tr>
<tr>
<td>Right of Way Issues</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Width</td>
<td>36’6”</td>
<td>47’</td>
<td>47’</td>
</tr>
<tr>
<td>Access to Chamber of Commerce Parking Lot</td>
<td>No Impacts</td>
<td>No Impacts</td>
<td>One Driveway Closed</td>
</tr>
<tr>
<td>Environmental Impacts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetlands</td>
<td>None</td>
<td>0.04 acre</td>
<td>0.04 acre</td>
</tr>
<tr>
<td>Visual Impacts</td>
<td>Low</td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Noise Impacts</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction Costs</td>
<td>$20.2 M</td>
<td>$40.7 M</td>
<td>$24.4 M</td>
</tr>
<tr>
<td>Operation/Maintenance Costs</td>
<td>$420,000</td>
<td>$420,000</td>
<td>$39,000</td>
</tr>
<tr>
<td>Construction Impacts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detour Duration</td>
<td>6 mo</td>
<td>2 yrs</td>
<td>2 yrs</td>
</tr>
<tr>
<td>Total Construction Time</td>
<td>1 yr</td>
<td>2 yrs</td>
<td>2 yrs</td>
</tr>
<tr>
<td>Anticipated Service Life (Years from 2010)</td>
<td>15 yrs</td>
<td>75 yrs¹</td>
<td>75 yrs</td>
</tr>
</tbody>
</table>

¹ Movable Bridge - Rehab of electrical and mechanical components at 25 and 50 years, clean and paint steel every 10 years.
Next Steps

• County Council recommends preferred alternative

• Advertise availability of draft report & conduct formal public hearing identifying preferred alternative

• Distribute final draft report to FDOT & Federal Highway Administration (FHWA) for comment

• Prepare & submit final report to FHWA for approval
Staff Recommendation

Select high-level fixed bridge as preferred alternative because....

- **More cost effective** - $24.4M vs $40.7M (movable) ; $20.2M (rehab)

- **Lower operation/maintenance costs** - $39K/yr vs $420K/yr (movable & rehab)

- **Better service life** - 75 yrs vs 75 yrs with elec/mech rehabs at 25 & 50 yrs (movable) ; 15 yrs (rehab)

- **Eliminates vehicle & boat traffic delays** -
Council discussion/action &
public comments