



Public Information Meeting

Veterans Memorial Bridge

East Orange Avenue/ Silver Beach Avenue over the Halifax River



Today's Agenda:
Open House - (5:30-7PM)
Presentation- (5:45PM)



Technical Design Team

Volusia County

Jim White, P.E. - Project Manager

Parsons Brinckerhoff, Inc.

Tad Molas, P.E. - Design Project Manager

Adrian Moon - Bridge Aesthetics & Memorial Park Design

Ghyabi & Associates, Inc.

Justin Barton, P.E. - Roadway Project Manager

Rebecca Zawadski, E.I. - Public Involvement Coordinator



Technical Design Team

Avcon, Inc.

McKim & Creed, Inc.

Ardaman & Associates, Inc.

Lotspeich & Associates, Inc.

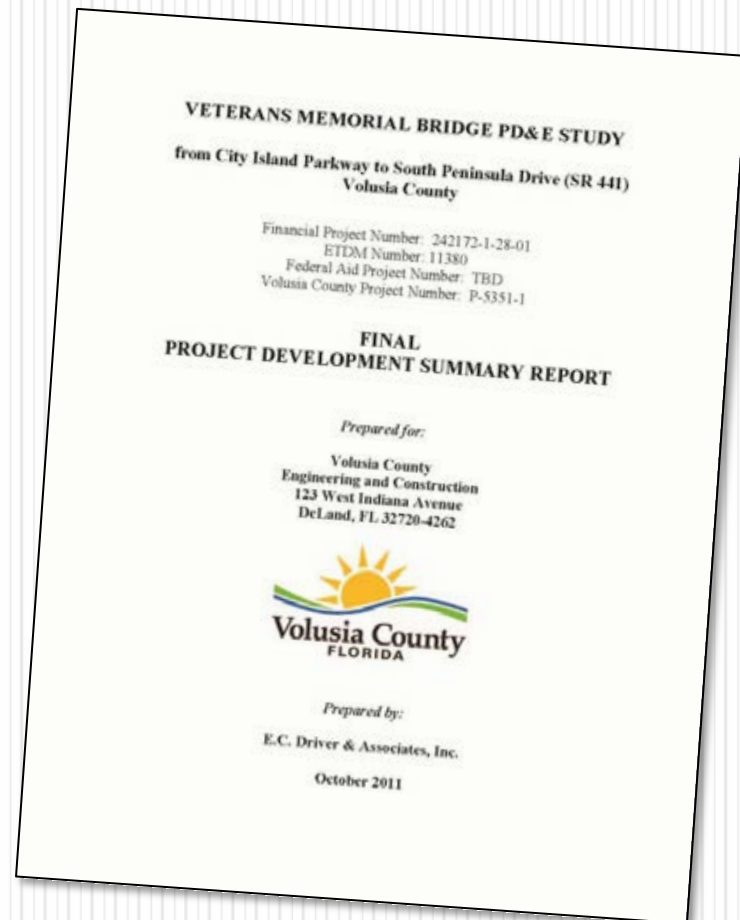
Ocean Engineering Associates, Inc. (INTERA)

Dredging & Marine Consultants, LLC

Zev Cohen & Associates, Inc.

Project History

- **Maintenance (Expensive)**
 - \$300k-\$400k annually
- **Safety (Poor Structure Condition)**
 - Bridge deterioration
- **Functionally Obsolete**
 - Minimum lane/shoulder widths
- **Channel Clearance**
 - USCG standards not met





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Public Involvement History

Alternatives Public Workshop	April 2010
County Council Selected High Level Bridge	January 2011
Public Hearing	June 2011
Final Project Development Summary Report	October 2011
Final Design Begins	February 2013
Project Advisory Committee Meeting # 1	May 2013
Project Advisory Committee Meeting # 2	June 2013
Project Advisory Committee Meeting # 3 & Subcommittee Meeting # 1	July 2013
Project Advisory Committee Meeting # 4	August 2013
Project Advisory Committee Meeting # 5 & Subcommittee Meeting # 2	September 2013
Project Advisory Committee Meeting # 6 & Subcommittee Meeting # 3	October 2013
Project Advisory Committee Meeting # 7 & Subcommittee Meeting # 4	November 2013
Project Advisory Committee Meeting # 8 & Subcommittee Meeting # 5 & 6	January 2013
Project Advisory Committee Meeting # 9	February 2013
Public Meeting #1	March 2013
Project Advisory Committee Meeting # 10	April 2013

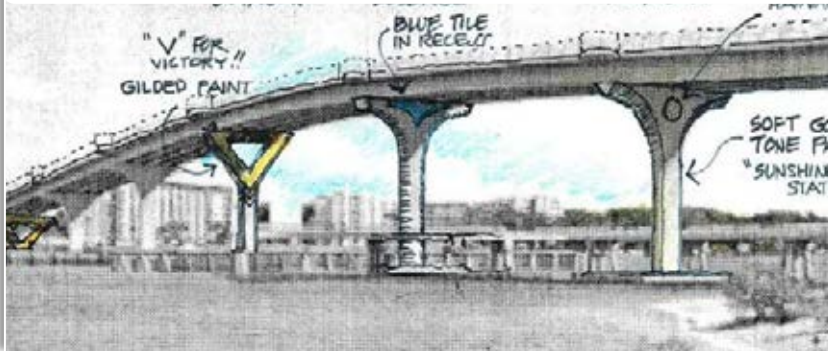
Project Advisory Committee (PAC)

- Established as a commitment during the PD&E phase
- Comprised of local residents, community and civic stakeholders
- Meet monthly to discuss bridge aesthetic features
- Meetings are open to the public
- Meeting summaries and materials posted on the website

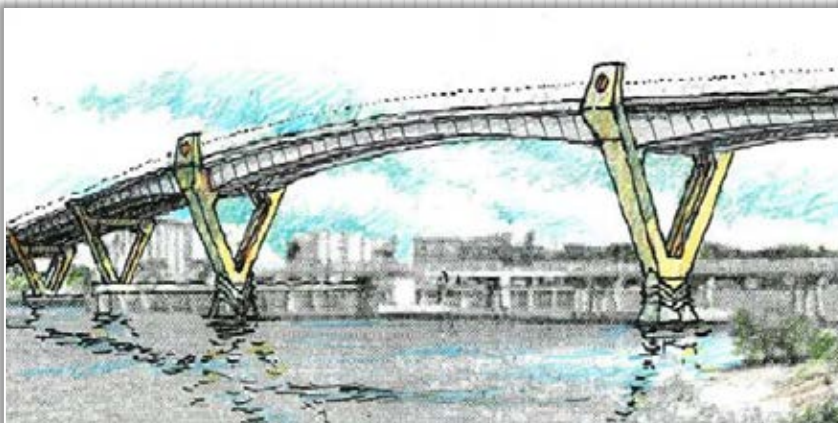
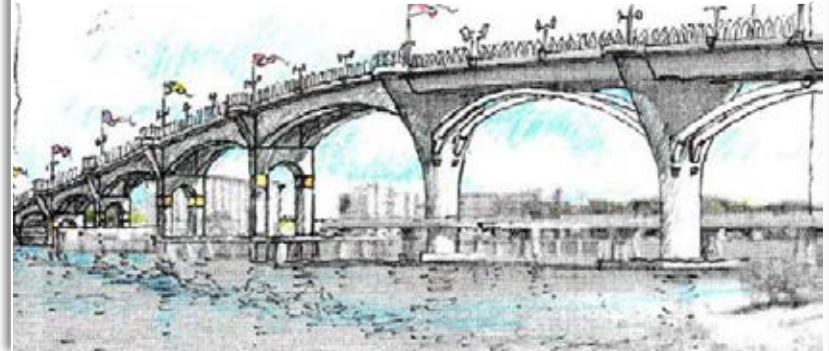


PAC #1: Bridge Types

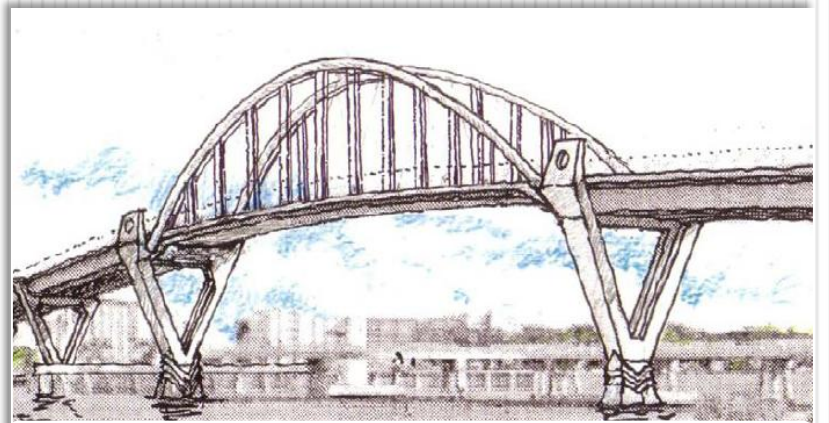
Option 1: Conventional Concrete Beams



Option 2: Enhanced Concrete Beam



Option 3: Segmental Concrete



Option 4: Concrete Arch

PAC #1: Committee Selection

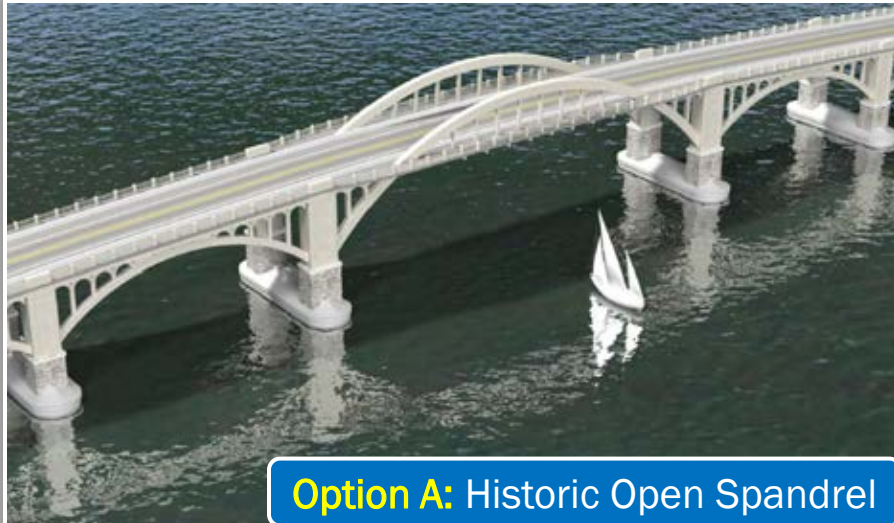


PAC #2: Veterans Memorial

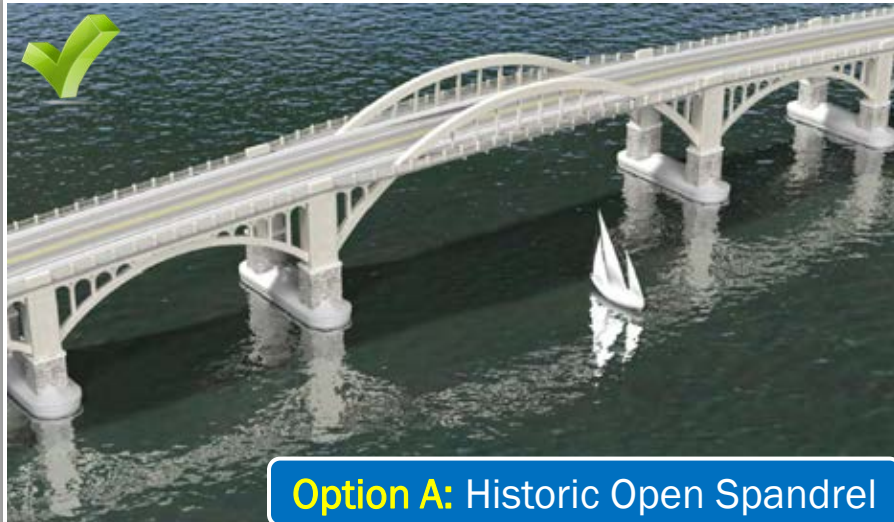
- Gateways
- Statuary
- Dedications
- Historical Information
- Flags & Banners
- 5 Military Branches
- Long Lasting Materials



PAC #3: Arch Bridge Options



PAC #3: Committee Recommendations

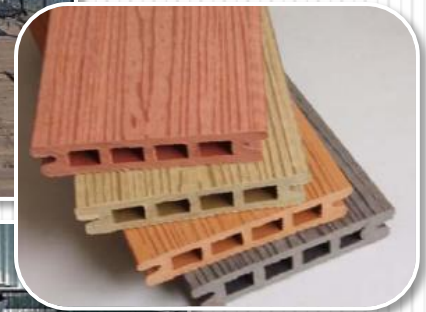


PAC #4: Fishing Piers

- **Materials:**

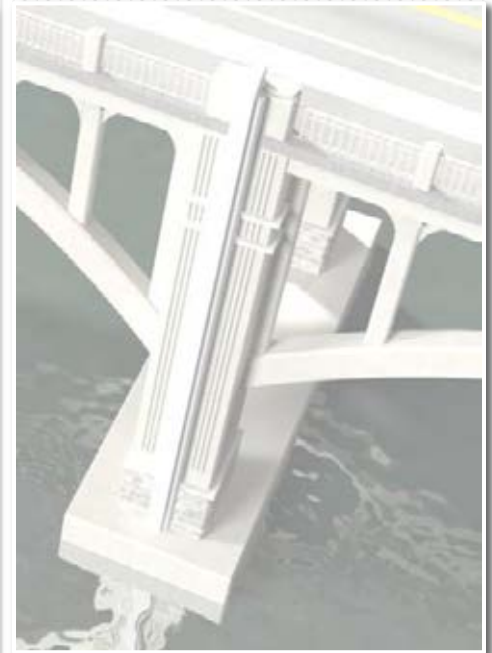
Wood, Composite Wood, Concrete

- **Possible Amenities:** Fish Cleaning Station, Rod Holders, Seating, Lighting, Shade Structures, Kayak Launch



PAC #5: Status Update

- Bridge Pier Styles
- Fishing Pier Alignments
- BDR Update



PAC #5: Status Update

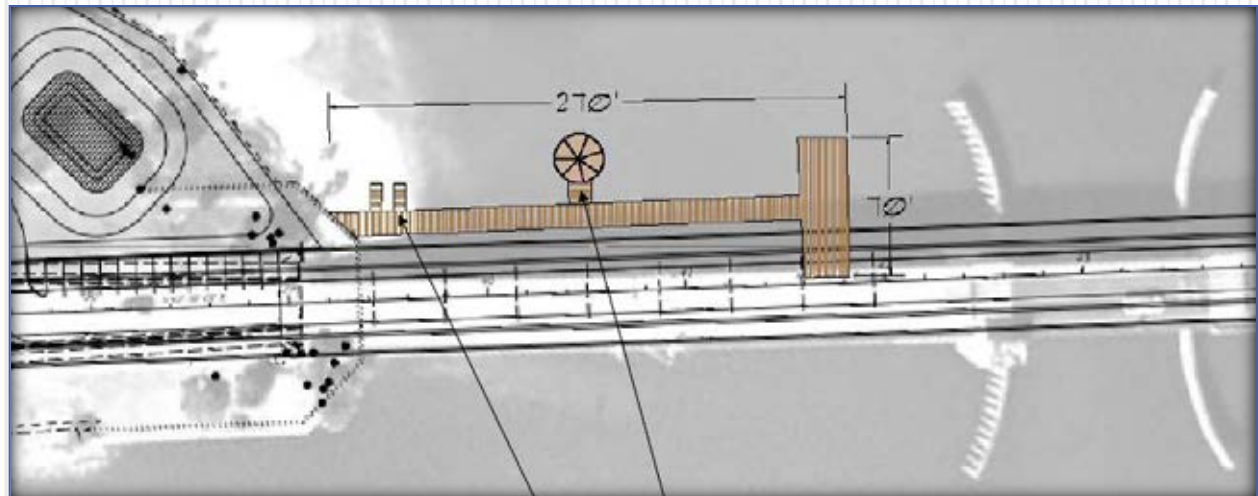
East Pier Layout

- Underpass over water
- Access from bridge
- Fishing area separate from walking area
- “T-Shape” to reach old channel



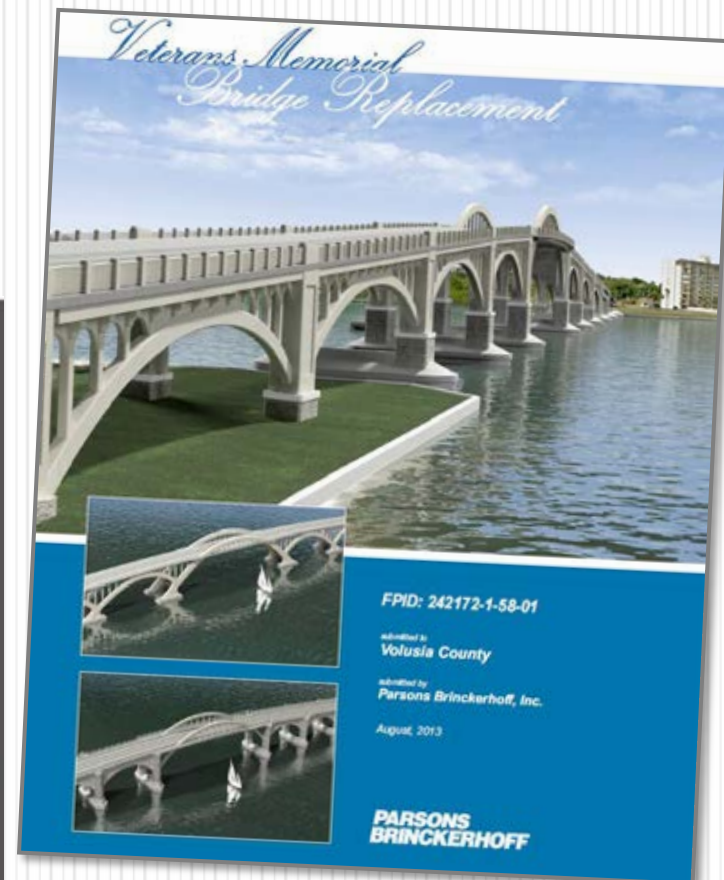
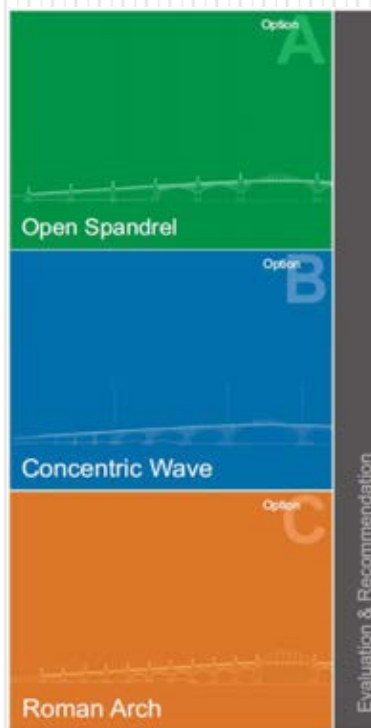
West Pier Layout

- Access from plaza
- Fishing area reaches to main channel
- Wide area to fish at end
- “L-Shape” under bridge



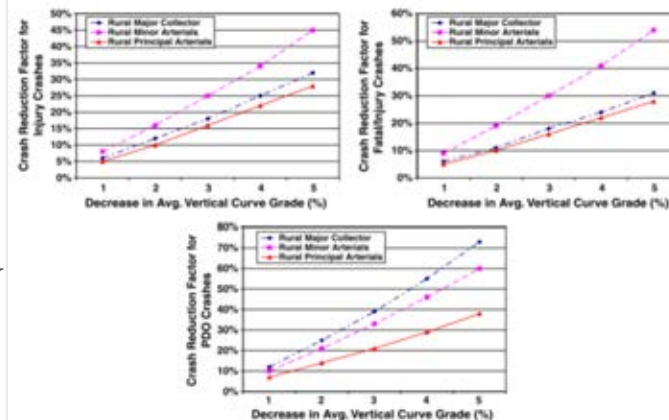
Bridge Development Report

- 1.0 Executive Summary
- 2.0 Introduction
- 3.0 Project Requirements
- 4.0 Structures Design
- 5.0 Alternatives
- 6.0 Evaluation

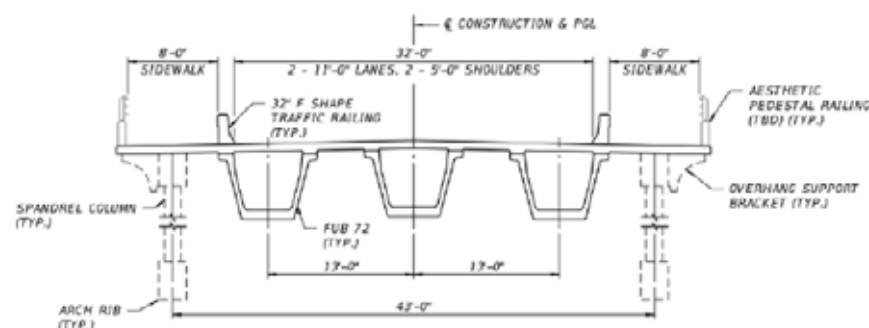
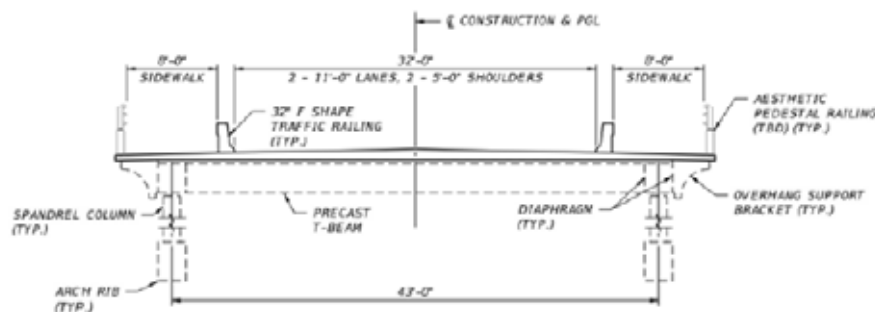


Bridge Development Report

- Costs (Construction & Maintenance)
- Aesthetics & Memorial Features
- Safety, ADA Compliance & Accessibility
- Constructability & Schedule
- Hydraulics & Environmental



Total Cost (for entire superstructure)	
Option	Estimated Cost
Alt. A – Structural Arch	\$11,579,812
Alt. A2 – Faux Arch	\$10,893,566
Δ Cost between alternatives →	\$686,246
Relative Difference (%) in total project cost →	Total Project Cost ~\$42.1M; 1.6% increase

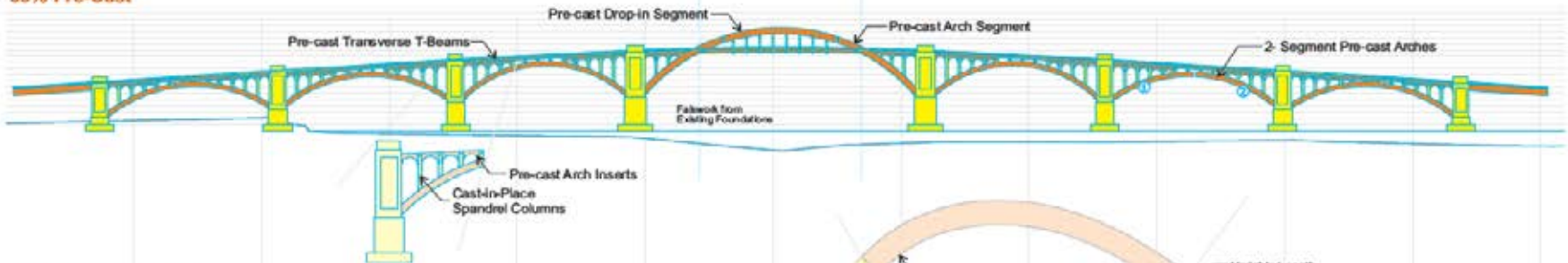


Utilization of Pre-Cast & Cast-in-place Concrete

Pre-cast Concrete
Cast-in-place Concrete

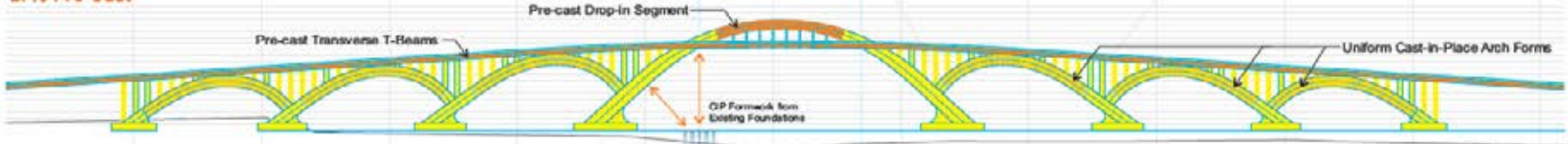
Alternative A

39% Pre-Cast



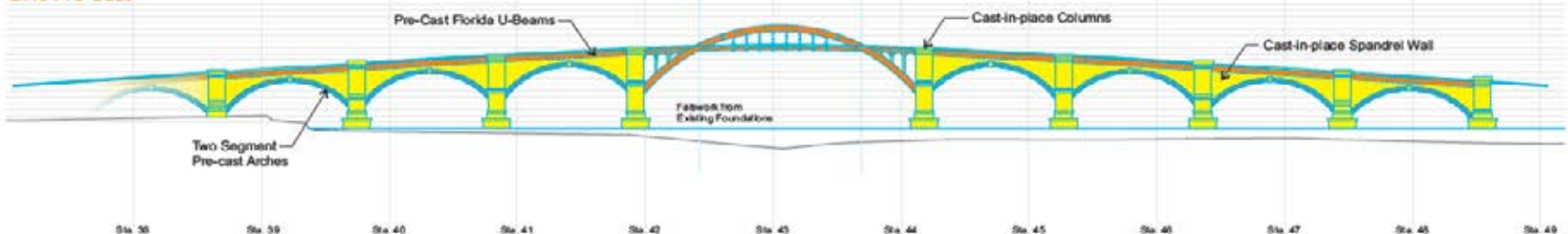
Alternative B

27% Pre-Cast



Alternative C

21% Pre-Cast



Sta. 38 Sta. 39 Sta. 40 Sta. 41 Sta. 42 Sta. 43 Sta. 44 Sta. 45 Sta. 46 Sta. 47 Sta. 48 Sta. 49



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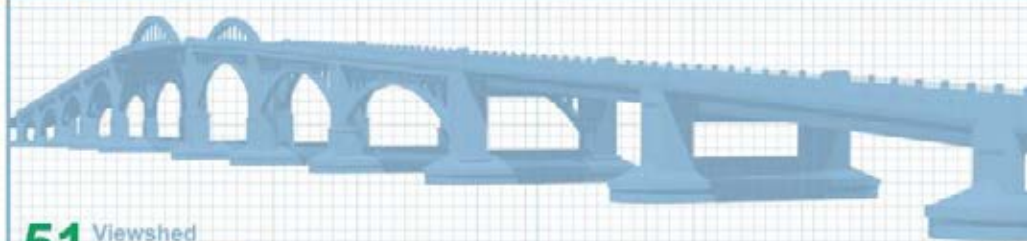
Veterans Memorial Bridge

Aesthetics Considerations



Viewshed Analysis

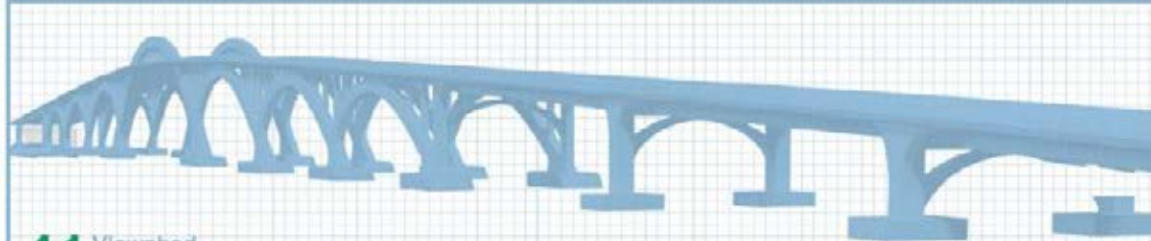
Alternative A



51 Viewshed
Coverage Ratio

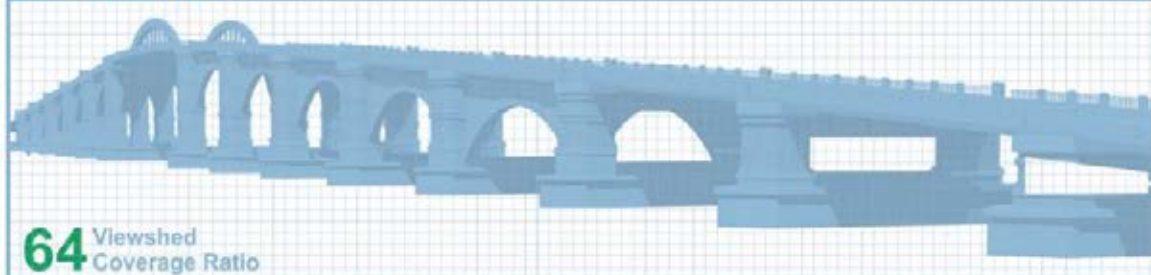


Alternative B



41 Viewshed
Coverage Ratio

Alternative C



64 Viewshed
Coverage Ratio







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Evaluation Matrix & Ranking

Evaluation Matrix

Alternative/Metric	Weight	Alt. A - Open Spandrel	Alt. B – Concentric Wave	Alt. C – Closed Spandrel
Cost	20%	1	3	2
Maintenance	20%	1	2	3
Aesthetics	20%	2	1	3
Constructability	15%	1	3	2
Construction Schedule	10%	1	3	2
Hydraulics	5%	2	3	1
View shed	5%	2	1	3
Environmental Impacts	5%	1	2	3
Aggregate Score	100%	1.3 ✓	2.25	2.45

BDR - Bridge Type Recommendation



PAC #6: Lighting

Roadway & Bridge Lighting Options



Roadstar



UrbanScape



Leonis



MetroScape



Domus



Renaissance

Historic
Environmental
Lower Cost

PAC #6: Lighting

Aesthetic Lighting Options



Light Color &
Temperature
Variations



Option 1: Enhanced Columns



Option 3: Enhanced Columns & Defined Edge



Option 2: Enhanced Columns & Arches



Option 4: Enhanced Columns & Defined Face

Aesthetic Lighting



PAC #7: Bridge Pier Styles



Option 1



Option 2



Option 3



Option 4



Option 5

- A- Coquina Texture: (a) at the bottom of the pier or (b) all the way to the top of the pier
B- Pier Panels: (a) flat or (b) pointed
C- Overlook Shape: (a) rectangular (b) circular or (c) triangle

PAC #7: Overlook Shapes



PAC #7: Committee Selection



PAC #8: Memorial Plaza

Options A & B - Split Decision



Option A: Amphitheater



Option B: Trench/Spine

PAC #9: Committee Selection

Option D



Option D: Amphitheater with Spine



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Summary of PAC Recommendations

Bridge Type	Concrete Arch
Bridge Style	Historic Open Spandrel
Fishing Pier Material	Wood
Fishing Pier Layout	T- Shape (East Bank), L- Shape (West Bank)
Bridge & Plaza Light Poles	Metroscape
Bridge Lighting Color & Temperature	Amber
Bridge Lighting Enhancements	Columns with Defined Face Arch
Bridge Pier Panel Shape	Flat
Bridge Pier Coquina Texture Location	Bottom Only
Overlook Shape	Rectangular
Memorial Plaza Layout	Amphitheater with Spine
Veteran Memorial Features	7 Flag Poles at the Back of Center Circle 5 Angled Plaques at Back of Center Circle Field Stones (Arlington Stones) Brick Pavers Located Around Center Circle Front Eastern Underpass and Western Underpass for Circuitous Memorial Route 12"x18" Windows at Every Overlook Location Gateway Pilasters Pier Insignias on All Piers, and Main Channel Piers have Inscription

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Expressed Public Concerns

- **Bus Routes**

- During Construction: VOTRAN coordination on-going
- After Construction: Continue normal routes. Bus Stops on west side will be relocated, but not removed.

- **Charging Stations for Motorized Wheelchairs**

- Will be provided on ramps across bridge and on underpasses if the design permits

Expressed Public Concerns

- **Bicycle & Pedestrian Accommodations**

- 8 foot wide sidewalks across the bridge on both the north and south side
- Bicyclists also have a 5 foot wide shoulder on both sides of the bridge to use

- **Parking**

- County courthouse parking lot is available for people utilizing the amenities of the bridge

- **Right-of-Way**

- All work is being done within existing right-of-way. The only property affected is the Daytona Regional Chamber of Commerce.



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Design Schedule

Design Begins	February 2013
Phase I Submittal – 30% Civil Plans	August 2013
Phase II Submittal – 60% Civil Plans & 30% Bridge Plans	February 2014
Aesthetic Elements Submittal – 30% Plans	April 2014
Phase II Submittal – 90% All Disciplines	June 2014
Phase IV Submittal – 100% All Disciplines	August 2014
Final Plans & Specifications	September 2014
Production Date	10/30/14
Construction Begins	Early 2015



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Project Resources

- County Project Manager: Jim White 386.736.5967, ext 12511 or Jwhite@Volusia.org
- Volusia County's Website: www.volusia.org/services/public-works/engineering-and-construction
- Project Website: www.VeteransMemorialBridge.com
- Information Center (Kiosk): Located at the Daytona Regional Chamber of Commerce
- Facebook: Tom Staed Veterans Memorial Bridge
- Twitter: Veterans Bridge (@VMemorialBridge)



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Thank You For Attending!



www.VeteransMemorialBridge.com