



# WELCOME

TO THE ALTERNATIVES PUBLIC MEETING FOR THE BLACKBURN POINT BRIDGE REPLACEMENT STUDY

# NORTH ALIGNMENT





# **EXISTING ALIGNMENT**





PROJECT NUMBER: SR 2515

# **EVALUATION MATRIX**



EVALUATION CRITERIA		NO BUILD	BRIDGE REPLACEMENT ALTERNATIVE												
			WEST PIVOT SWING SPAN			EAST PIVOT SWING SPAN			BASCULE SPAN						
			NORTH ALIGNMENT		EXISTING ALIGNMENT			RTH IMENT	EXISTING ALIGNMENT		NORTH ALIGNMENT		EXISTING ALIGNMENT		
					F	Roadway/Bri	dge Issues								
Width of Vehicular Travel Lanes		10 feet	11 feet												
Shoulders		None	1.3 ft at curb minimum / 2.5' at traffic railing minimum												
Sidewalks		2'-2"	6' – South Side (Single-Lane and Single Sidewalk Options / 6' - Both Sides Two-Sidewalk Option)												
Meets Current Design Standards		No	Yes												
Structural Defici	iencies Corrected	No	Yes												
Vertical/Horizon Clearance	ntal Channel	9.5 feet / 51 feet	Vertical 14 to 16 ft / Horizontal 90 ft												
Bridge Opening	s	No Change	Estimated 40% to 60% Reduction in Bridge Openings												
						Right of Wa	ay Issues								
Area Impacted Permanent	Area Impacted Temporary	None	0.3 acre	0.1 acre	0.0 acre	0.1 acre	0.3 acre	0.1acre	0.0 acre	0.1 acre	0.2 acre	0.1 acre	0.0 acre	0.1 acre	
Relocations		None	None None			None None			None		None				
Overall Bridge Width 28 feet			33'-8" (Single-Lane Bridge) / 39'-2" (Two-Lane Bridge, Single Sidewalk) / 44'-8" (Two-Lane Bridge, Two Sidewalks)												
					I	Environmen	ital Issues		I		1				
Impacts to Histo	_	No	Υ	es	Ye	es	Y	es	Ye	<u>es</u>	Y	es	Ye	es	
Wetlands Permanent	Wetlands Temporary	None	0.8 acre	0.0 acre	0.2 acre	0.6 acre	0.8 acre	0.0 acre	0.2 acre	0.6 acre	0.8 acre	0.0 acre	0.2 acre	0.6 acre	
Parks/Recreation Permanent	Temporary	None	0.13 acre	0.00 acre	0.01 acre	0.08 acre	0.08 acre	0.00 acre	0.0 acre	0.08 acre	0.08 acre	0.00 acre	0.00 acre	0.08 acre	
Protected Specie Involvement	es and Habitat	None	High High		High		High		High		High				
Visual Impacts -	Permanent	None	Low Low		Low		Low		Low		Low				
Noise Impacts (F	Permanent)	None	Lo	ow	Lo	Low		Low		Low		Low		Low	
	I=				I	Cos	ts		l		ı				
	Two Sidewalk Typical Section	See Structural	\$41 M		\$56 M		\$43 M		\$57 M		\$42 M		\$45 M		
	Single Sidewalk Typical Section	Deficiencies Board for Details	\$39 M		\$54 M		\$40 M		\$54 M		\$39 M		\$40 M		
	Single-Lane Bridge		\$36 M		\$50 M		\$37 M		\$51 M		\$36 M		\$37 M		
Construction Impacts															
Detour Duration		N/A	1 week		2 weeks		1 week		2 weeks		1 week		2 weeks		
Noise Impacts (Construction)		None	Medium		Medium		Low		Low		Low		Low		
Total Construction Time		N/A	30 months		40 months		30 months		40 months		30 months		34 months		
Anticipated Service Life		10 years or less	75 years		75 years		75 years		75 years		75 years		75 years		

<sup>&</sup>lt;sup>1</sup>Costs include demolition, roadway and bridge construction, mobilization, maintenance of traffic, aesthetic enhancements, engineering design, construction engineering inspection (CEI) and contingency. Costs do not include right-of-way.

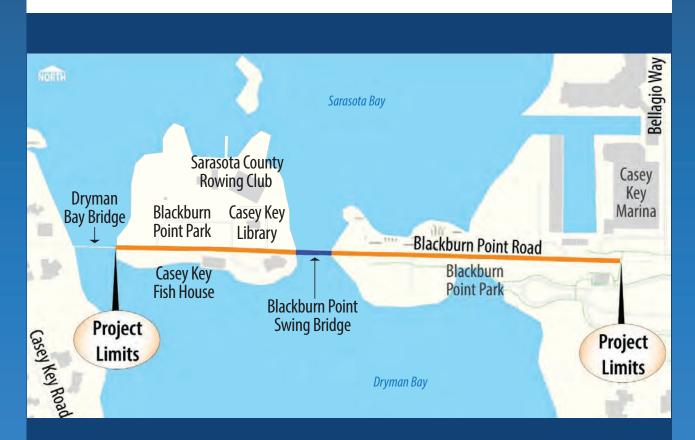
PROJECT NUMBER: SR 2515

# **PROJECT LOCATION MAP**





# **Project Location Map**



# **Project Limits Map**

#### **HISTORIC RESOURCE PROCESS**



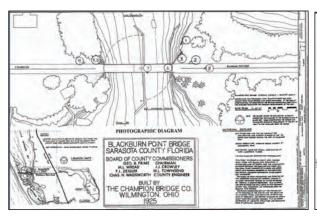
#### PD&E Process for Historic Resources:

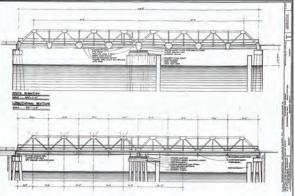
- The Project Development & Environment Study (PD&E)
  includes a Cultural Resource Assessment Survey (CRAS) to
  identify other cultural resources within the project limits to
  evaluate if other resources could be eligible for listing in the
  NRHP.
- The CRAS will be submitted to the State Historic Preservation Officer (SHPO) for concurrence.
- Because the bridge is listed in the National Register of Historic Places (NRHP) and is expected to be replaced, a Section 106 Case Study Report may be required depending on funding and permitting.
- Following the Case Study Report, a Memorandum of Agreement (MOA) will be prepared to outline mitigation measures; these measures will vary and will involve continued coordination and input from SHPO and local interested parties.
- If the bridge is replaced by the proposed project, Article IV of Chapter 66, Sarasota Code of Ordinances will be applied to ensure the bridge undergoes the proper procedures and mitigation.
- Under Section 66-117 of the Sarasota Code of Ordinances, a Certificate of Appropriateness (COA) application will be prepared and presented before the Historic Preservation Board (HPB) and eventually the Historical Commission by Public Works.
- HPB meeting will determine if the project is approved to move forward and will likely provide stipulations for mitigation.
- HPB and Historical Commission meetings are open to the public.



#### **Bridge History:**

- Constructed between 1925 and 1926 by the Champion Bridge Company.
- Listed in the National Register of Historic Places (NRHP) February 2001.
- Approved for local historic designation by the Board of County Commissioners, August 29, 2018, which placed the bridge on the Sarasota County Register of Historic Places.
- Bridge is significant under Criterion A in the areas of Transportation and Engineering and is significant under Criterion C as an example of a Warren pony truss swing span bridge.







#### **HISTORIC RESOURCE PROCESS**



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#### **HONORING THE EXISTING BRIDGE**



Potential mitigation measures to offset the bridge replacement and preserve aspects of the historic bridge for which it is considered eligible for being listed include:

- Erection of a county historical marker. A historical marker application will be prepared and submitted to the Historical Commission for review and approval.
- Salvaging parts of the bridge (specifically the truss) and locating them adjacent to a Historical Marker publicly accessible within the Blackburn Point Park area.



View From Blackburn Point Road



View from Sidewalk on Park Side

# **BRIDGE TYPE RENDERINGS - BASCULE**



# **Bridge Types & Configurations Under Consideration**



**Single-leaf bascule on Existing Alignment** 



**Single-leaf bascule on North Alignment** 

# Bridge Type Renderings – Swing Span



# **Bridge Types & Configurations Under Consideration**



Bob-tailed swing span, pivot located east of channel - Existing Alignment



Bob-tailed swing span, pivot located west of channel - Existing Alignment

# PD&E STUDY (NEPA) PROCESS



# The Project Development & Environment (PD&E) Study is

conducted in accordance with the National Environmental Policy Act (NEPA) and includes:

- Purpose and Need
- Environmental Studies
- Alternatives Analysis
- Technical Reports
- Public Involvement
- Environmental Document Approval

**Purpose and Need:** The purpose of the project is to review alternatives to replace the Blackburn Point Bridge (Bridge No. 170064) on Blackburn Point Road (County Road (CR) 789) over the Gulf Intracoastal Waterway in Osprey, Sarasota County, Florida. The need for the project is based on the following criteria:

- Bridge Deficiencies
- Safety
- Modal Interrelationships



# **EXISTING CONDITIONS – STRUCTURAL DEFICIENCIES**



#### Structural conditions

- Steel truss corrosion
- Piling deterioration
- Fender system deterioration & impact damage

#### Mechanical conditions

- Substandard design
- Component wear and deterioration
- •Outdated equipment well beyond service life

#### **Electrical conditions**

•Outdated equipment well beyond service life







Photographs representative of existing conditions of the swing bridge's main upper truss members



Bent Main Pinion Gear Shaft



Failing Timber Retaining Wall







Photographs representative of existing conditions of the swing bridge's main lower truss members

#### **EXISTING CONDITIONS – STRUCTURAL DEFICIENCIES**



#### **Prior Major Repairs:**

1981 – Major Repairs (hit by barge)

1987 - Major Repairs

1995 – Major Repairs

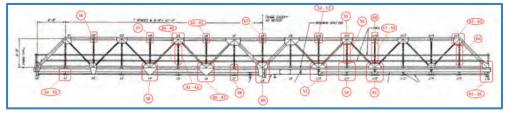
# **Ongoing Repairs:**

- Pinion shaft was replaced three (3) times in the past four (4) years
- Fender system repairs
- Structural repairs



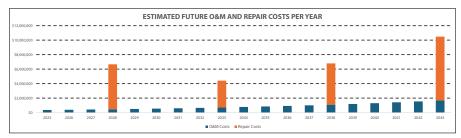


Prior truss repairs exhibiting corrosive section loss



Note: Deteriorated truss members subjected to cyclical tension under truck loading are susceptible to fracture

HISTORY OF RECENT REPAIRS						
YEAR	DESCRIPTION					
1997	Replaced manually-operated end toggles with electrically-operative actuator toggles					
2006	Riprap and piling rehab					
2009	New pivot bearing, new spider assembly, new upper and lower tracks, new rack, new pinion and shaft, new wheels, new elevator wheel assembly, new drive train assembly					
2010	Placed 20 CY flowable fill behind SW timber wingwall					
2011	Motor replaced					
2012	Gusset plates replaced					
2012	Pinion shaft replacement emergency repair					
2014	End toggle replacements; live load shoes; pivot bearing shim					
2016	Drive gear; Gusset plate and truss member retrofits					
2019	Gusset plate retrofits ("cheese plates")					
2019	Replace drag cables for center pivot					
2019	Clean, paint and repair section loss in top chord gusset plates; replace deteriorated rivets					
2019	NW quadrant slope protection					
2019	Fender repairs					
2020	Machinery stringer crack retrofitted					
2020	Center bearing cover plate replaced					
2020	Fender repair due to boat impact					
2020	Stringer at rest pier 1 trimmed to avoid hitting steel nose plate on approach pavement					
2021	Replace conduit system on fender					
2021	Riprap at NW Wingwall					
2022	Center bearing rehabilitated, new pinion shaft, floorbeam retrofits					
2023	Repair grid deck welds					
2024	Pinion shaft emergency replacement (again) due to deformation. New limit switches.					
2025	Pinion shaft emergency replacement (again) due to deformation					



Estimated Cost to Keep Bridge Operational Over the Next 20 years



#### **Marine Vulnerabilities:**

Existing swing bridge and abutments are not capable of sustaining a direct vessel collision

The existing bridge low members are within the splash zone, subject to accelerated corrosion due to saltwater and salt laden air

#### **Substandard Navigational Clearances:**

The U.S. Coast Guard (USCG) has determined that the existing navigational clearances are an unreasonable obstruction to navigation for the Gulf Intracoastal Waterway.

**Existing Navigation Clearances:** 

- Horizontal 51 feet
- Vertical 9.3 feet
   USCG Guide Clearances
   (Gulf Intracoastal Waterway):
- Horizontal 90 feet
- Vertical 21 feet



#### Opportunity for Reduction in Bridge Openings with New Bridge





Effect of Increased Vertical Clearance on Bridge Openings							
Bridge Clearance	12 Feet	12 Feet 14 Feet		21 Feet			
% Reduction in Openings	31%	48%	62%	78%			

#### **SAFETY**



#### **Bridge Width Deficiencies:**

Substandard clear roadway width of only one, 16-foot-wide travel lane

The bridge does not feature shoulders, sidewalks or bicycle lanes

Minimum required lane and shoulder widths prescribed by the American Association of State Highway and Transportation Officials (AASHTO) are not met.

#### **Evacuation:**

Existing bridge is important for evacuation during a storm event.

Blackburn Point Road between Casey Key and US 41 is a designated emergency evacuation route.

There is insufficient room available to pass a stalled vehicle on the bridge during an emergency.

Proposed improvements will increase bridge width to provide sufficient room for vehicles to pass a stalled vehicle on the bridge.

#### **Bridge Railings:**

Existing bridge railings do not meet current standards for pedestrians or bicyclists.

Existing bridge railings do not meet current geometric and crash testing safety standards for vehicles.

Proposed improvements will provide bridge railings and traffic gates that meet current safety standards for pedestrians, bicyclists, and vehicles.



**Existing Swing Span Section** 



Trucks Crossing the Bridge



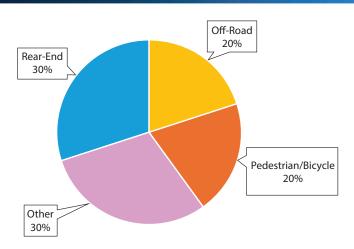
Cyclists Crossing the Bridge



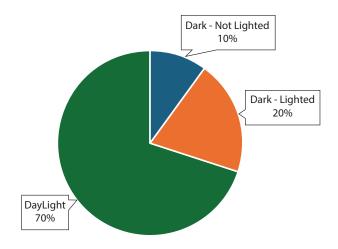
**Existing Railing** 

# CRASH LOCATIONS (2019-2024)

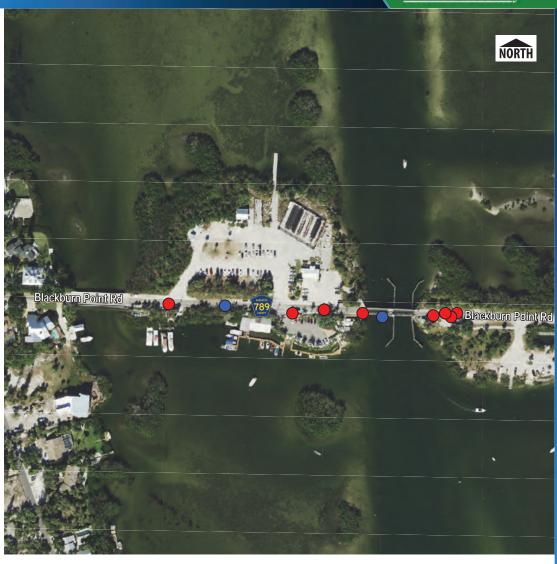




# **Crash Summary by Crash Types**



**Crash Summary by Lighting Conditions** 



Pedestrian/Bicyclist Involved

Vehicular Crash



# **Vehicular Traffic**

Traffic Count Location	Count Date	Raw Traffic Counts	
	3/11/2025	3087	
Blackburn Point Road at Swing Bridge	3/12/2025	3120	
	3/13/2025	3272	
Blackburn Point Road - east of Casey Key Road	3/11/2025	2451	
Blackburn Point Road - west of Woods Point Road	3/11/2025	4364	



# **Bicycle & Pedestrian Counts**

Bicycle / Pedestrian Count Location	Count	Bicycle	Pedestrian
(7:00 am to 7:00 pm)	Date	Counts	Counts
Blackburn Point Road Crosswalk at Blackburn Point Park (west of swing bridge)	3/11/2025	26	602
Blackburn Point Road Swing Bridge (crossing over the bridge)	3/11/2025	148	122
Blackburn Point Road Crosswalk at Casey Key Marina	3/11/2025	4	53



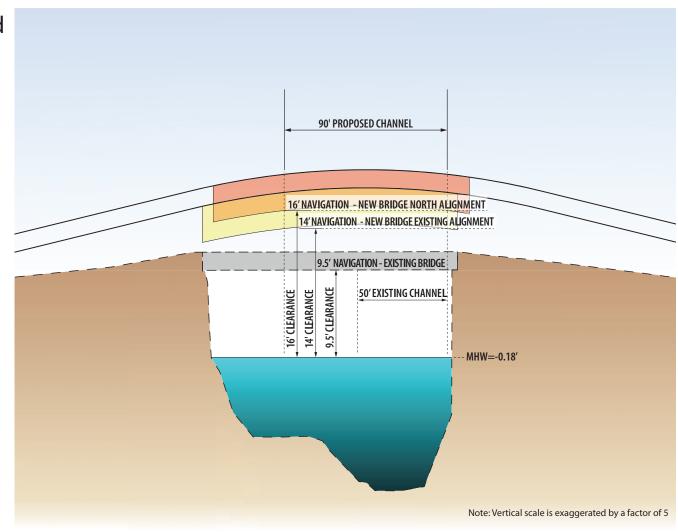


BLACKBURN POINT BRIDGE REPLACEMENT STUDY PROJECT NUMBER: SR 2515

# **PROFILES**



- Profiles options are limited by adjacent driveways
- Potential Clearances:
- 16 feet navigation clearance on North Alignment
- 14 feet navigation clearance on Existing Alignment



# **BRIDGE TYPES – BASCULE BRIDGE**

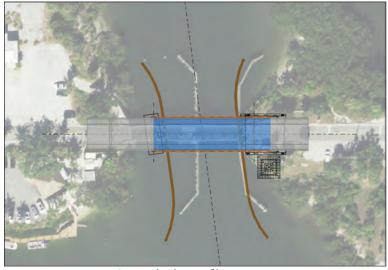


#### **Bascule Bridge**

- Rotates about a horizontal axis and translates at the same time
  - Smallest movable span length
- Rolling Lift Type with Overhead Counterweight
  - Maximum clearance above the water
  - Resiliency:
    - Most durable with operating machinery located above the splash zone
    - Machinery is easily accessible without going below deck
- Counterweight and machinery located on the east abutment
  - Minimizes impacts to Blackburn Park
  - Requires rest pier in the waterway
- Can be constructed to the north then slid to the existing alignment after existing bridge is removed
  - this avoids a temporary bridge



**Span Motion Diagram** 



**On Existing Alignment** 



On New Alignment to the North

# **BRIDGE TYPES – SWING BRIDGE (PIVOT ON THE EAST)**

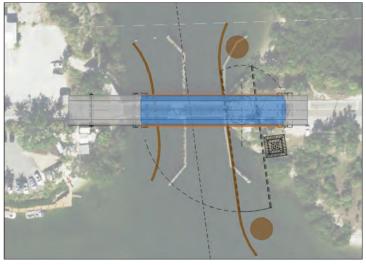


#### **Swing Bridge with Pivot Located East of the Channel**

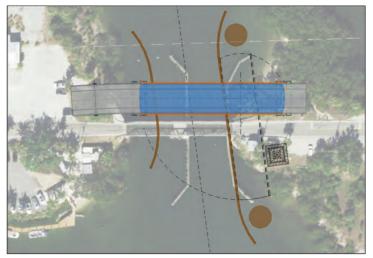
- Bob-tailed configuration (long span over channel, shorter back span) reduces movable span length
- East pivot minimizes impacts to Blackburn Pt. Park
- · East pivot results in swing span over land
  - Pushes control house back from channel restricting bridge operator's view off the channel
- Resiliency:
  - Pivot machinery is below deck level
    - Close to splash zone exposed to salt air
    - Difficult to access for maintenance
- Requires large fender system to protect swing span from vessel impact when open
- Construction challenges:
  - Requires a temporary bridge to construct on the existing alignment



**Span Motion Diagram** 



Pivot east of channel, existing alignment



Pivot east of channel, north alignment

# **BRIDGE TYPES – SWING BRIDGE (PIVOT ON THE WEST)**

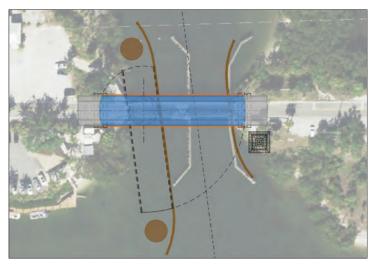


#### **Swing Bridge with the Pivot Located West of the Channel**

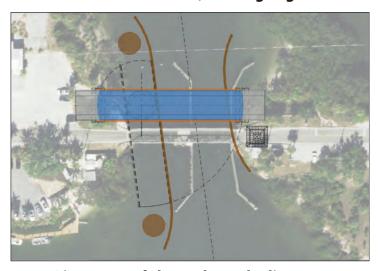
- Bob-tailed configuration (long span over channel, shorter back span) reduces movable span length
- West pivot increases impacts to Blackburn Pt. Park
- Resiliency:
  - Pivot machinery is below deck level
    - Close to splash zone exposed to salt air
    - Difficult to access for maintenance
- Requires large fender system to protect swing span from vessel impact when open
- Construction challenges:
  - Requires a temporary bridge to construct on the existing alignment



**Span Motion Diagram** 



Pivot west of channel, existing alignment



Pivot west of channel, north alignment





PD&E Study Project Schedule

#### **NOTES:**

- Local residents and stakeholders will receive an invitation to attend public meetings
- Final design will follow selection of a preferred alternative at the Public Hearing



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OR

Visit the project website at:

www.BlackburnBridgeProject.com



# Please provide your comments by September 2, 2025



Send comments by mail, phone or email to:

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