Chincoteague Project Overview

Long Life Aspects

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Presentation Goals

• Project Overview
  • Site Conditions
  • Scope
  • Alignment
  • Constructability
  • Bascule Span Highlights
• Approach Substructure
  • Satisfied Aesthetic Requirements
  • Satisfied Subsurface Conditions
  • Details for Long Life
• Approach Superstructure
  • Satisfied Aesthetic Requirements
  • Details for Long Life
  • Innovation for Efficiency
  • Innovation for Long Life

Project Overview

• Bridge on Rte 175 Over Black Narrows and Lewis Creek Channel
• Accomack County and Town of Chincoteague, Virginia
  • 4035'-0" low level bridge
  • 123'-6" single leaf bascule span
  • 729'-0" low level connector bridge
• Owner: VDOT
• Designer: Hardesty & Hanover, LLP
• Contractor: American Bridge
• Contractor Bid: $68.7 million

Site Conditions

Town of Chincoteague & Marsh Island

Old Chincoteague Swing Bridge

Old Black Narrows Bridge

New Rte 175 Bridge

New Single Leaf Bascule

New Marsh Island Connector Bridge

Old Chincoteague Swing Bridge

Old Black Narrows Bridge

Marsh Island

Chincoteague Island

New Marsh Island Connector Bridge

Site Plan
**Alignment**

- New Rte 175 Bridge
- New Single Leaf Bascule
- Marsh Island Connector Bridge
- Channel

**Constructability**

- New Rte 175 Bridge
- New Single Leaf Bascule
- Marsh Island Connector Bridge

**Bascule Span**

- 92'-0" Span Length
- Closed Pk Pier
- 5" Half filled grating
- 1662 kip Leaf
- 26" Trunnion Diameter
- Gear Driven
- 75 HP, 900 RPM Primary

**Bascule Pier**
Bascule Pier Deck Removed

Bascule Pier Stringers Removed

Bascule Span Removed

Approach Substructure

Approach Substructure

Substructure Aesthetics
Substructure Aesthetics

Cylinder Pile Bent

Subsurface

Approach Substructure

Substructure Details

Bent Elevation

Approach Substructure

Substructure Details

Bent Elevation

Photo Courtesy of Jacobs Engineering Group Inc.
**Approach Superstructure**

“Baseline” Bridge Elevation

**Superstructure Aesthetics**

Addition of Cheekwalls

**Superstructure Aesthetics**

Addition of Arched Fascia Beams

**Superstructure Details**

Framing Plan

4 Span Continuous Unit

**Superstructure Details**

Cross Section

1'-8" 20'-0" 20'-0" 20'-0" 15'-8"

Prestr. Fascia Beam

9'-5" 9'-5" 9'-5" 9'-5"

45° Prestress Bulb-T

**Innovation for Efficiency**

Arched Prestressed Fascia Beam
Innovation for Efficiency
Arched Prestressed Fascia Beam

Innovation for Efficiency
Arched Prestressed Fascia Beam

Innovation for Efficiency
Arched Prestressed Fascia Beam

Innovation for Long Life
Intersection Framing

Innovation for Long Life
Intersection Framing

Innovation for Long Life
Intersection Framing
Innovation for Long Life

Intersection Framing

Dapped End

Arched Section

HARDESTY & HANOVER, LLP
ENGINEERING

Virginia Concrete Conference, Chincoteague Project Overview
Chincoteague Project

- Project Overview
- Bascule Span Highlights
- Met Aesthetic Requirements
- Satisfied Challenging Site Conditions
- Innovation for Efficiency
- Innovation for Long Life