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THE Charles W. Cullen Bridge

AT THE INDIAN RIVER INLET



Delaware Department
of Transportation



Dedication Ceremony • May 6, 2012

OFFICIAL PROGRAM

Charles W. Cullen Bridge

AT THE INDIAN RIVER INLET

BRIDGE FACTS

Construction Began 2008
Construction Completed 2012

MATERIALS

Concrete – 28,000 Cubic Yards
Cable Stay Strand – 1,821,000 Feet
Rebar – 8,850,000 Pounds
Concrete Pilings - 288

DIMENSIONS

Length – 2,600 Feet
Clear Span Over the Inlet – 950 Feet
Clearance for Boats – 45 Feet Above Mean High Water
Pylon Height – 247.5 Feet Above Sea Level

BRIDGES OF THE PAST

1934 – Creosote Timber Bridge
1938 – Concrete and Steel Swing Bridge
1952 – Concrete and Steel Swing Bridge
1965 – Steel Girder Bridge
Widened in 1976

Charles W. Cullen Bridge

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DEDICATION CEREMONY

Sunday, May 6, 2012

Welcome & Recognition of Distinguished Guests with Remarks

The Honorable Shailen Bhatt
Secretary of Transportation

The Honorable Thomas R. Carper
United States Senator

The Honorable Jack Markell
Governor of Delaware

The Honorable George Bunting
State Senator

The Honorable Gerald Hocker
State Representative

TIME CAPSULE PRESENTATION

WITH THE DIRECTOR OF THE DELAWARE PUBLIC ARCHIVES

BRIDGE HISTORY

Since the initial dredging of the Indian River Inlet by the United States Army Corps of Engineers in the early 20th century, engineers have struggled to build structures that can withstand the violent forces of wind, water, and shifting sands that can be found along this section of Delaware's coastline

The first bridge across the Indian River Inlet was built in 1934, followed by a succession of spans that were constructed in 1938, 1952, and 1965. All were eventually undermined by the relentless power of the sea. The design of the current bridge, which was begun in 2008, takes into account the lessons of past Indian River Inlet spans, as well as the latest engineering innovations, to create a structure of strength, endurance, and beauty that will last for years to come.

The growing popularity of Delaware's beach-resort towns in the first half of the 20th century coincided with a significant increase in personal automobile ownership. As more people sought the tranquil coastline and beaches, Delaware responded with the construction of the Ocean Highway (State Route 1) between Rehoboth Beach and Bethany Beach. This roadway was completed in 1933. In order to complete the link, a bridge was built across the Indian River Inlet.

In 1934, the first bridge to cross the inlet was built with timber from a plant in Newport, Delaware. The wood materials quickly deteriorated in the marine environment.

In 1938, construction began on a new concrete and steel swing bridge that was officially named for Charles W. Cullen, the Chairman of the State Highway Commission. That bridge was later damaged by ice flow and replaced with another steel swing bridge in 1952. That structure also suffered the same fate as its earlier counterpart.

In 1965, a steel-girder bridge was built and then widened in 1976. Concrete piers supported by steel pilings in the inlet endured decades of harsh weather and heavy tidal currents. Over the years, these currents severely scoured the inlet channel-bed creating massive holes 100 feet deep. This ultimately threatened the future stability of the bridge.

In 2008, design and construction began on the new bridge. Weather remained a significant factor during this time as historic storms impacted construction with icy conditions, extreme cold, blizzards, heavy rains, floods, dune breaches, and constant winds. Despite these challenges, workers persevered and the bridge was opened to traffic in 2012.

The bridge is 2,600 feet long, and is supported by four 249-foot-tall pylon towers. The bridge roadway in each direction consists of two 12-foot-wide travel lanes, a 10-foot-wide outside shoulder, and a 4-foot-wide inside shoulder. Additionally, a 12-foot-wide sidewalk can be accessed from the ocean side of the bridge.



CONSTRUCTION PHOTOGRAPHS 1938-1940

DELAWARE STATE HIGHWAY COMMISSION Meeting Minutes from April 6, 1938

Mr. Fader Offered the Following Resolution:

“WHEREAS our Chairman, Charles W. Cullen, Esq., has for many years ardently advocated the proper opening of the Inlet and the internal development of the Indian River, and

WHEREAS, This Department is about to construct a bridge over said River on the Rehoboth-Bethany Beach Road, and

WHEREAS This Department deems it fitting that said Bridge be named and known as “The Charles W. Cullen Bridge”,

THEREFORE, BE IT RESOLVED, that the said Bridge be named “The Charles W. Cullen Bridge” and it shall be so designated in all the records of this Department and that the bridge be so marked with a suitable marker.” and

On motion of Mr. Fader, seconded by Mr. DuPont the said resolution was carried, with Mr. Cullen not voting.

