Purpose

The overall purpose of this project is to address the deficiencies of the structure carrying County Road 619 (Ocean Drive) Bridge over Corson Inlet (Corson's Inlet Bridge) to provide a safer, and more efficient and reliable crossing for all users and modes of transportation.

Identified Needs

Bridge and Roadway Deficiencies

Structure #3100-002, located in Upper Township, Cape May County, at Milepost (MP) 15.49, carries County Route 619 (Ocean Drive) over Corson's Inlet. Built in 1948, Corson's Inlet Bridge is a steel bascule bridge with 38 fixed spans and one bascule span. The bascule span has not operated since December 2013 due to deterioration of the bascule trunnion support column. It is not anticipated to be operational in the future due to its condition. Due to its age, the bridge has deteriorated over time and routine maintenance can no longer address the deficiencies.

According to the most recent bridge inspection report (Bridge Re-Evaluation Survey Report, 18th Cycle, dated October 1, 2023):

- The **overall** condition of the Corson's Inlet Bridge is "serious" due to the condition of the substructure.
- The **substructure** is in "serious" condition, experiencing severe section loss of the web and flanges on the steel built-up section outside bearing column supporting the west girder at the trunnion.
- The **deck** is in "poor" condition due to the large area of spalls with exposed severely corroded reinforcing steel bars on the underside of all spans. The top of the deck also has cracks and small spalls with asphalt patching in numerous spans.
- The **superstructure** is in "poor" condition due to the arrested metal section loss, pitting, and holes in the steel girders, steel stringers, and bearing elements, and severe pack-rust between the steel sliding plate bearings and vertical bearing stiffeners on the girders. Several steel stringers in the 3 stringers spans have severe arrested metal losses to the bottom flanges and require supplemental steel angles due to section loss on the bottom flanges.
- The **approach roadways** are in satisfactory condition. Uneven asphalt patches, large spalls with exposed and wide map cracking were observed over the vault slab along the deck joint in the North Approach. Erosion was observed along the northeast approach embankment.
- The **channel/channel protection** is in good condition with no significant defects.
- The bridge is also classified as both **Scour Critical** and **Fracture Critical**.
- The bridge's **mechanical machinery** and **electrical system** are in poor to inoperable condition.

Substandard roadway controlling design elements were not identified due to Corson's Inlet Bridge and approach roadways Design Speed of 40 MPH or less. However, evaluation reveals that the following deficiencies exist:

- Lack of current standard MASH compliant roadside protections
- Lack of dedicated bicycle and pedestrian facilities
- Worn out pavement markings

System Linkage

Corson's Inlet Bridge provides an important multimodal link within the regional transportation network. Heavily utilized by cars, maritime vessels, and cyclists, its connectivity is vital to the local economies. The Corson's Inlet Bridge connects Strathmere with the southern end of Ocean City, serving as a north-south arterial roadway for both local and regional travel. Corson's Inlet Bridge is heavily traveled during the peak summer tourist season, providing an important connection for the tourism industry.

The connection provided by Corson's Inlet Bridge is economically important, linking customers with local businesses. Local residents and business owners rely on Corson's Inlet Bridge for their daily needs, travelling between Strathmere/Sea Isle City and Ocean City. Due to its local and regional importance, especially during the peak summer tourist season, bridge closures due to aging infrastructure would become highly burdensome to the community particularly because of the lack of convenient detour routes. Corson's Inlet Bridge requires a detour in excess of 18 miles when closed. Due to the age of the bridge, emergency repairs requiring a full closure of the bridge will become more frequent, leading to the use of this lengthy detour.

The rehabilitation or reconstruction of Corson's Inlet Bridge to provide more reliable conditions that can serve the community as a vital economic connection is paramount to this Local Concept Development Study.

Goals and Objectives

- Upgrade bridge and approach roadway conditions to meet AASHTO and NJDOT safety standards including new parapets and guide rail
- Reduce the frequency of major bridge maintenance activities that result in detours and/or dirution of traffic flow
- Correct the highway deficiencies
- Avoid or minimize long-term roadway closures during construction
- Provide ADA-compliant pedestrian and bicycle accommodations
- Avoid or minimize impacts to social, economic and environmental resources
- Provide accommodation for current and future users of Corson's Inlet in accordance with the completed Navigation Impact Report