

## Mid Island Bridge over Bogue Sound

From NC 24 to NC 58

Local ID: **CART40021-H**

Purpose: **Congestion**

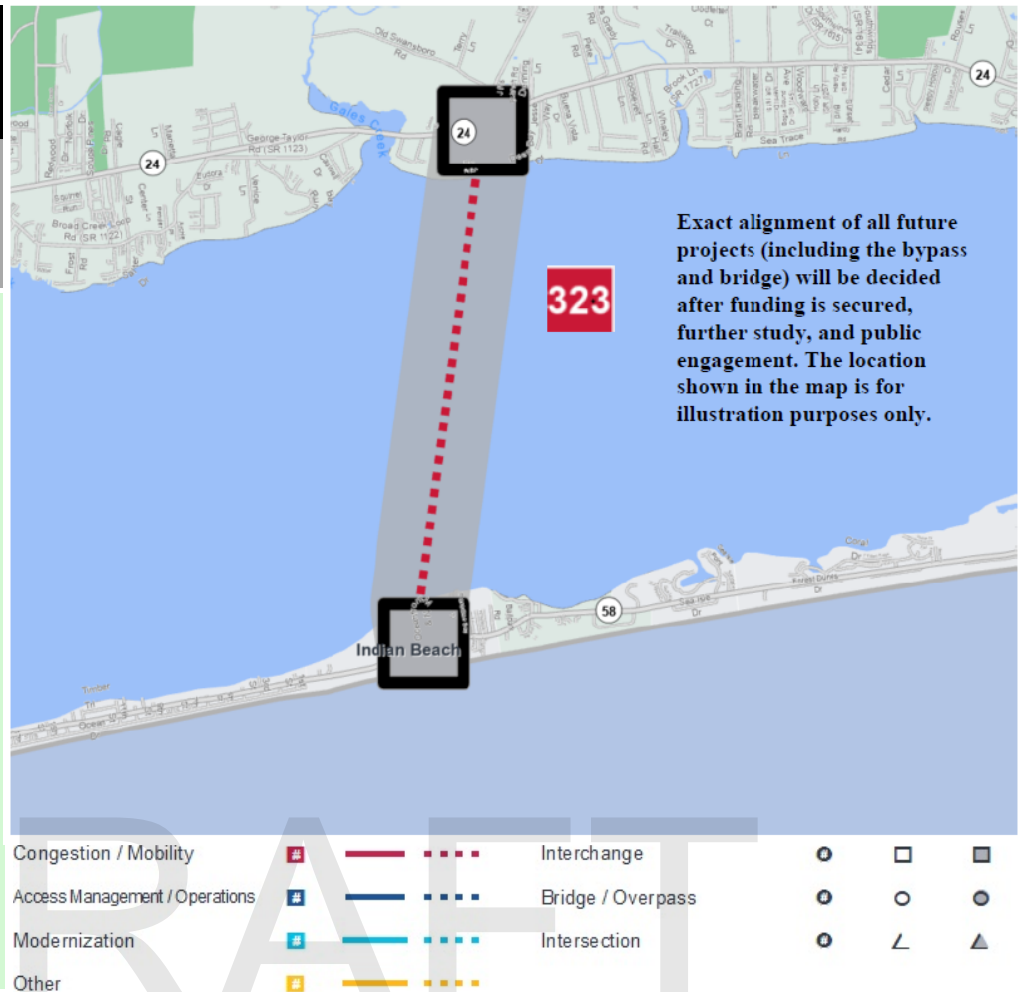
Improvement: **New Location**

### Identified Need

Currently, there are two bridges that operate over or near capacity that cross the Bogue Sound connecting NC 24 and NC 58. There is a need to relieve congestion on the existing bridges as well a need for an additional emergency evacuation route.

### Recommendation

This project recommendation (after a detailed study and public outreach) is to construct a 2-lane bridge with and one bike and ped lane that can be used by vehicles in emergency situations, including hurricane evacuation. The steering committee suggested to model after the Surf City Bridge.



### Proposal At A Glance

|                     |                           |
|---------------------|---------------------------|
| Highway Class       | Congestion & Mobility     |
| Facility Type       | Major Thoroughfare 2-lane |
| Typical Section     | 02 D                      |
| Section Options     | -                         |
| Length (miles)      | 3.00                      |
| Existing ROW (feet) | -                         |
| Safety Risk Score   | -                         |

### Proposal Data: 2019 Base Year 2050 Future Year

| New Location   | Existing | Without Proposal | With Proposal             |
|----------------|----------|------------------|---------------------------|
| Facility Type  | -        | -                | Major Thoroughfare 2-lane |
| Travel Lanes   | -        | -                | 2                         |
| Volume (vpd)   | -        | -                | 12700                     |
| Capacity (vpd) | -        | -                | 12600                     |

### Project sheet CART30027-H (project number 319, Emerald Isle Bridge):

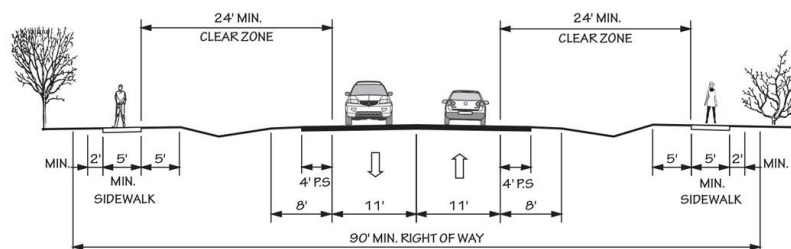
| Proposal Data:        | 2019 Base Year               | 2050 Future Year             |                                  |
|-----------------------|------------------------------|------------------------------|----------------------------------|
| Improved Route        | <u>Existing</u>              | <u>Without Proposal</u>      | <u>With Proposal</u>             |
| <i>Facility Type</i>  | Major Thoroughfare<br>2-lane | Major Thoroughfare<br>2-lane | Major Thoroughfare<br>Multi-lane |
| <i>Travel Lanes</i>   | 2                            | 2                            | 4                                |
| <i>Volume (vpd)</i>   | 21000                        | 28000                        | 29500                            |
| <i>Capacity (vpd)</i> | 13200                        | 13200                        | 38100                            |

### Project sheet CART40028-H (project number 329, Atlantic Beach Bridge):

| Proposal Data:        | 2019 Base Year                   | 2050 Future Year                 |                      |
|-----------------------|----------------------------------|----------------------------------|----------------------|
| Improved Route        | <u>Existing</u>                  | <u>Without Proposal</u>          | <u>With Proposal</u> |
| <i>Facility Type</i>  | Major Thoroughfare<br>Multi-lane | Major Thoroughfare<br>Multi-lane | Boulevard            |
| <i>Travel Lanes</i>   | 4                                | 4                                | 4                    |
| <i>Volume (vpd)</i>   | 21500                            | 34200                            | 22700                |
| <i>Capacity (vpd)</i> | 26700                            | 26700                            | 38100                |

**Typical Section Options:**

None

**TYPICAL SECTION No. 2D****2 LANE UNDIVIDED WITH PAVED SHOULDERS AND SIDEWALKS**

POSTED SPEED 25-45 MPH

**Project History/Linkage to Other Plans****Project History**

The potential third bridge, along with the Atlantic Beach Bridge (CART40028-H) and Emerald Isle Bridge (CART30027-H), were studied and discussed during the steering committee meetings.

It is important to note that in this Comprehensive Transportation Plan (CTP), everything is at a high level. The plan looks at the longterm needs of the community. The cross sections and recommendations here are not set in stone - they seek to address the traffic deficiencies and needs of the area so in the future it is easier to apply for funding and be studied in more detail.

The Emerald Isle Bridge is projected to be over capacity in 2050, and the Atlantic Beach Bridge is projected to be near capacity in 2050. A solution is needed for these areas connecting the mainland to the beach island area.

After many CTP steering committee meetings, one on one meetings with the towns of Carteret County, and model runs, the team and communities determined that the best CTP recommendation would be a 4-lane boulevard upgrade for the Emerald Isle Bridge, a 4-lane boulevard upgrade for the Atlantic Beach Bridge, and a 2-lane potential third bridge. This CTP is meant to address the needs of the area, and an exact location of this third bridge is not determined at this point in time.

These three recommendations provide a solution for the traffic concerns for Carteret County, and give an opportunity to apply for different kinds of funding and further study in the future.

**CTP Goal Analysis****Goals and Objectives Survey**

The vision for Carteret County is to have a safe, diverse, efficient, integrated, and environmentally sensitive and sustainable multi-modal transportation system for its

residents, visitors, and businesses. The Carteret County CTP goals include: promoting a safer and more secure transportation network, creating a more efficient transportation system, providing an integrated and multimodal transportation network, supporting regional growth in the transportation network, preserving the social and environmental character of the region, extending the life of the transportation system by developing sustainable transportation solutions, and anticipating future needs of the area in terms of resiliency and flooding. This proposal seeks to address congestion concerns along NC 24 and getting to the beach areas. This aligns with the goal of creating a more efficient transportation system in Carteret County.

**Public Comments**

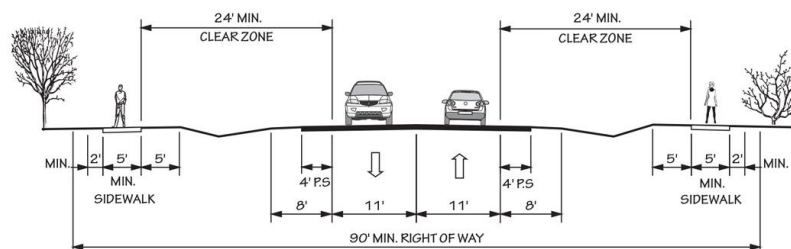
This Carteret County CTP survey was open from March 1st, 2023 to April 30th, 2023 and there was an English and Spanish version of the survey. There were a total of 439 participants and 1,387 comments as pins on the map were received. The two other bridges received many comments expressing concerns with congestion, as well as better bike and pedestrian access. During the public input sessions, the public were supportive of this project proposal. There was one written comment against this proposal.

**Other Information****Linkage to Other Plans**

In 2020, the NCDOT Corridor Development Unit completed a traffic estimate for a potential third bridge (H190093). This document assumed that the new Bogue Sound bridge will not cause additional trips to be generated or attracted on Emerald Isle. It is also assumed that total traffic crossing Bogue Sound in 2045 will not change if an additional bridge is constructed. In 2021, the NCDOT Feasibility Unit/Central Corridor Development Unit completed an express design for a potential third bridge (H190093). The steering committee recommended to model this bridge after the Surf City

**Typical Section Options:**

None

**TYPICAL SECTION No. 2D****2 LANE UNDIVIDED WITH PAVED SHOULDERS AND SIDEWALKS**

POSTED SPEED 25-45 MPH

Bridge.

Environmental Data

All environmental data in the database was considered.  
This Project is within 150 feet of:

- 10 Benthic Habitat Feature(s)
- 9 Flood Hazard Area Feature(s)
- 2 High Quality And Outstanding Resource Water Feature(s)
- 1 Impaired Waters Line Feature(s)
- 1 Impaired Waters Polygon Feature(s)
- 3 Major River Feature(s)
- 8 Natural Heritage Element Occurrence Feature(s)
- 4 Wetland Feature(s)
- 2 River And Stream Feature(s)
- 1 Lake And Pond Feature(s)
- 2 Quality Monitored River And Stream Feature(s)
- 7 Submerged Aquatic Vegetation Feature(s)
- 1 Target Local Watershed Feature(s)

This recommendation passes through one or more  
Census Blocks with the following characteristics:

- Between 25% and 50% identify as 65+
- Between 0% and 25% identify as African American
- Between 5% and 15% identify as Asian
- 0% identify as Over 18 with Limited English Proficiency (LEP) - Asian and Pacific Islander
- 0% identify as Over 18 with Limited English Proficiency (LEP) - Indo-European

- 0% identify as Over 18 with Limited English Proficiency (LEP) - Other
- 0% identify as Over 18 with Limited English Proficiency (LEP) - Spanish
- 0% identify as Native American
- Between 5% and 15% identify as Below Poverty Line
- Between 0% and 15% identify as Households with No Car