

Project Overview - N.C. 12 Rodanthe Bridge

The main objective of the CEM capstone project is to simulate the competitive Design-Build (DB) process, where the Owner will select a DB partner based on evaluation of competitive bid proposals and final project interviews (Capstone Day presentations). In this simulation, student teams represent the construction side of the DB entity (i.e. the primary contractor) and MLSoC Industry Partners represent the Owner. Industry Partners will evaluate the performance of each team to select the first-, second-, and third-place teams.

The 2020-2021 CEM Capstone project is the N.C. 12 Rodanthe Bridge currently under construction in Dare County, NC by Flatiron Construction Corp. The MLSoC is grateful for Flatiron's engagement and mentorship throughout the 20-21 academic year. Teams worked collaboratively on each of the following milestones and delivered the results in a compiled report (bid proposal).

Milestone 1:

- thoroughly analyzed the provided project documents
- researched, summarized, and critiqued major components of the design
- created an organized breakdown of the design-build project

Milestone 2:

- researched potential construction means and methods
- performed a constructability analysis with design alternatives for Owner consideration
- established major project phasing
- began site logistics planning

Milestone 3:

- created a detailed project estimate
- performed a life cycle cost analysis
- identified value engineering opportunities

Milestone 4:

- created a detailed critical path method schedule
- created a risk management plan
- determined the impact of the project culturally, socially, and economically
- analyzed the project for ISI "Envision Award" potential

Milestone 5:

- created a comprehensive safety design

Development Projects – Online Showcase

Team A | Carolina Contractors

Nate Curl AJ Fromm
Cole Dillman Robbie Nye
Makala Flickinger Joe Rezash

Waterfront restaurant/retail space with public access to the Pamlico Sound

Team B | OBX Development

Chris Adipietro Tony Neuhoff
Sam Bohaty Tommy Trader
Nikki Criscuolo Cameron Wetzler

3-story mixed-use development consisting of retail and residential spaces with opportunities for outdoor gathering

Team C | CCC

Zach Barnes Josh Leary
Brian Chung Thomas Vinter
Taylor Lacroix Jake Wagner

State-of-the-art fishing pier with a gazebo bar

Team D | Maroon & Orange Design-Build Inc.

Cailin Donegan Patrick Vaughan
Robert Patchett Tyler West
Ryan Schaar Jacob Woody

Beachfront development with spaces for restaurant and retail tenants, a boardwalk and pier, and parking improvements

Team E | Forward Working Builders

Sydney Buck Jake Makosy
Mike Greene Chris Mitchell
Jake Hunter Kate Springsteen
Taylor Kulik

Boat storage facility, boat ramp, management building and parking lot

Team F | Premier Construction

Sagar Chinnappala Claire Morris
Robert Gagne Connor Noto
Martin Herman Linley Pierson
Ryan King

Urgent care center and pharmacy

Team G | LPD Construction, LLC

Yazan Al-Amad Gene Kastelberg
Enzo Chavez Turner Lee
Mason Hudson Grant Squyars

Commercial development with five (5) retail spaces and a beachfront restaurant

Team H | Aitch Construction

Vincent Borelli Zach McCall
Emily Causey Rico Redeemer
Ahmed Elshazly Matt Tassiello
Tristan Farinhas

Nature and Educational Center with a fishing pier, boardwalk, and underwater viewing area

Team I | Rodanthe Contracting

Nate Fender Tolly Larson
Matt Fichtner Logan Lavalette
Nefetari Heath Makenzi Moore

Liberty Gas Station and Island Convenience store renovation, with sustainability improvements such as solar and EV charging stations