

CREATIVE USE OF PRECAST AWARD

SECOND PLACE UNDERGROUND CAPE FEAR PRECAST

WATERSHED MOMENT FOR STORMWATER TREATMENT

Precast Concrete Stormwater Wetland Unique in Both Scope and Size

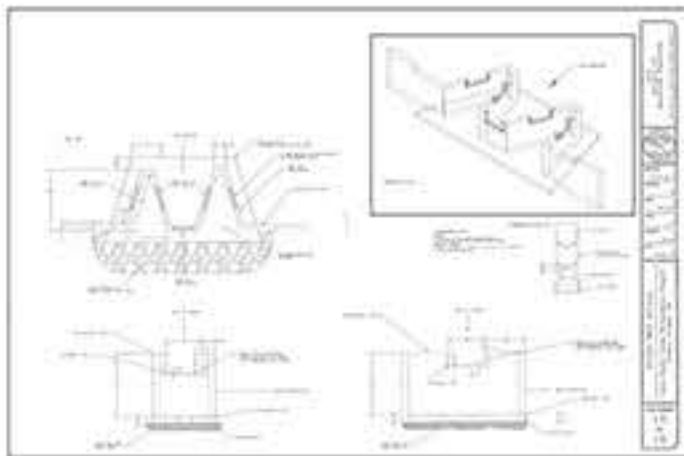
Precaster: Cape Fear Precast LLC

Project Location: New Bern, North Carolina

In the city of New Bern, N.C., a proposed wetland initiative with the NC Ecosystem Enhancement Program (EEP) and the NC Clean Water Management Trust Fund was realized thanks to precast concrete from Cape Fear Precast. The precast stormwater wetland captures and treats runoff from a large watershed and has the ability to treat runoff from more than 1,000 acres of residential and commercial property. The project is unique in both its size and scope, and is one of the largest stormwater retrofits built to date in the state.



The outlet weir for the project is modelled after a labyrinth weir design concept. The "W" shape creates more flow length in a smaller width than traditional spillways. The design also incorporates flashboard risers that provide flexibility for controlling water levels in the wetland.



The contractor was limited on the size of equipment that could get on site, which required that the precast be produced in smaller sections. Cape Fear Precast produced and shipped the base slab in two sections that were bolted together after installation. A week later, it shipped the individual wall pieces. The vertical wall consisted of nine separate units. The legs to the "W" were preassembled at the plant and shipped with a custom spreader bar for handling. Installation took about four hours, and all seams were sealed with elastomeric sealant and bolted together with galvanized hardware.

This design and precast construction approach maximized control over critical features and created an efficient and economical installation in a challenging setting. "It is our hope that this project will set a new standard for treating stormwater at a watershed scale and be an education center for design and construction of best management practices in a coastal environment," said the owner.

Company Profile

Cape Fear Precast LLC
Jacksonville, North Carolina
www.capefearprecast.com