

An Underwater Approach

Can a city built solely on the fishing industry survive into the future with

a diminishing water ccosystem?



Perspective of Sailboat Knoll and Crab Shack



Perspective of Educational Fountain



Phase 1 of the design will consist of the removal of many of the existing parking lots and broken sidewalks and in turn reuse the material to help build the new pathways. Both concrete and asphalt will be used. Along the paths, new trees will be installed along with smaller shrub plantings. Also, the three educational water features will be placed.



The newly design Crisfield site is not only functional to the fishermen who live here but also a wonderful all around experience for visitors. With one of the largest man-made biofilters ever made, Crisfield, MD, will see new growth in both tourist visitors as well as a much higher yield production in blue crabbing efforts. This is truly a design founded on both form and function.

Phase 2

Phase 2 of the design will consist of installation of the greenroof areas on top of the four water edged hotels as well as replanting of all grass and open greenspace areas. During this phase building facades will be updated and abandoned buildings will be discared or relocated.

# Analysis

Using GIS design tools and analysis tools I was able to determine many onsite design interventions and proper placement. Calculating proper slope, drainage areas, viewsheds and crabbing habitat areas with GIS helped me properly position the new pier design as well as proper biofilter layout.

Precision elevation calculations and viewsheds came about using GIS overlay onto the site making the site flow and function extremely effectively.

**Recycled Lumber** 

Tall Grasses

Primary

Matcrials

#### Recycled Asphalt

## Phase 3

Phase 3 of the design will consist of laying and installation of the oyster bay paths as well as Recycled Concrete adding new fishing docks, boardwalk along the water's edge and tying them into the rest of the city. Greenspace boardwalks will be installed and educational signage will be placed at this time.

Submerged aquatic plants lined along the biofilter can affect the water quality of Chesapeake Bay by using dissolved nitrogen a phosphorus for their growth. By withdrawing the nutrients from the water, they make them unavailable for use by algae, which often reach pea-soup concentrations in summer in rivers that flow into the bay. The grasses then convert these nutrients into plant tissue, which eventually is incorporated into Chesapeake Bay food webs by animals that consume live plants or detritus such as blue crabs. The grasses thus act as a 'nutrient pump,' recycling nitrogen and phosphorus from the sediments to the bay and the animals in it.

Biofilter Gouls

> Large & Medium Deciduous Trees Recycled Lumer for Box Material

Chesapeake Bay

#### Section cut looking south at entrance entering on rounte 413

Railings-

Cross \_ \_ \_ \_ \_ Supports

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Support Planks

Main Header

- Main Pillars

Header

Surface

Section cut looking N.east along Oyster Bay

**Overall Results** 

effect on the city of Crisfield, its

residents, visitors and the overall

ecosystem, Crisfield will now be

future as the "Crab Capital of the

World."

capable of succeeding well into the

The overall design will have a profound

economy. With a new opportunity for

blue crab production and an improved

a

Parking space :tors Ce

### Streetscape

Welcome Crisfield, MD

Improved wa

The overall streetscape design is primarily to attract and educate visitors to the site and lead them to the pier. With the path design the mimicking of waves in

order to create an open-close effect will create a sense

of wonder and shifting throughout the site.

Marina



Moveable Forklift Inner Liner & Planter Base

## Phase 4

Phase 4 of the design will consist of the construction of a multipurpose pier. The pier will consist of a 1500' biofilter that will clean and promote growth of both SAV vegetation, draw in visitors to the site, educate and promote blue crab growth. The biofilter will consist of anchored stainless steel cables intertwined with underwater vegetation that acts as membranous filter and will second as blue crab habitat.

Observation Platform for viewing Janes Island Wildlife reservation and waterman at bay.

Pier Elements include large and medium sized veable planter boxes lighting

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and aqua

Sketchup, Indesign, Photoshop, Autocad Civil 3d, ArcGIS