

ZONGZI

SEED BOMB

Tsz Tung



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OUR VISION

BY SHUAIQING & TSZ TUNG

The high levels of nitrogen and phosphorus in New York Harbor can trigger harmful algae blooms (a process of eutrophication), which will reduce dissolved oxygen levels in water, degrade water quality and threaten marine life. To address this issue, we propose designing a wetland that can effectively absorb excess nutrients, helping to control nutrient pollution and ultimately re-establish the aquatic ecosystem of New York.

The wetlands will be modules that are appropriately sized, easily replicable, and movable. This approach will facilitate the creation of a scalable system, making production simpler and more efficient. By adopting this straightforward method, we hope to make it easier for people to engage with and understand the concept of sustainability without feeling overwhelmed or stressed. This approach also serves as a form of outreach and education. If green sustainability can be conveyed through simple and engaging designs, it will reduce the time and effort required to learn about and act, encouraging more people to join.

UPLAND HABITAT

Herring Gull

Canada Goose

Cord Grass

SALT MARSH HABITAT

Splash or Spray Zone

High Tide Zone

Middle Intertidal Zone

Low Intertidal Zone

Subtidal Zone

Nitrogen

Phosphorus

Grass Shrimp

Crab

Bryozoa

Mussel

Sea Lettuce
Green Algae

Atlantic Herring

Atlantic Silverside

Bluefish

SUBTIDAL HABITAT

INTERTIDAL HABITAT

*The animal size has been exaggerated for better understanding

FLOATING PYRAMID



RECYCLING PROGRAMS
COLLABORATIONS WITH LOCAL STORES



EXHIBITIONS
& WORKSHOPS

FLOATING PYRAMID
DIY MANUAL SET

MATERIAL RECYCLING
AFTER 12M*

PRIMARY FORM
FLOATING PYRAMID

UPLAND HABITAT

Herring Gull

Canada Goose

SALT MARSH HABITAT

Splash or Spray Zone

High Tide Zone

Middle Intertidal Zone

Low Intertidal Zone

Subtidal Zone

Nitrogen

Phosphorus

Grass Shrimp

Oyster

Bryozoa

Sea Lettuce
Green Algae

Atlantic Herring

Atlantic Silverside

HEAVIER
AFTER 6M*

Bluefish

SUBTIDAL HABITAT

INTERTIDAL HABITAT

*The animal size has been exaggerated for better understanding
*M is month



Steps



Step 1. Drill Holes



Step 3. Connect with wires and form triangular forms



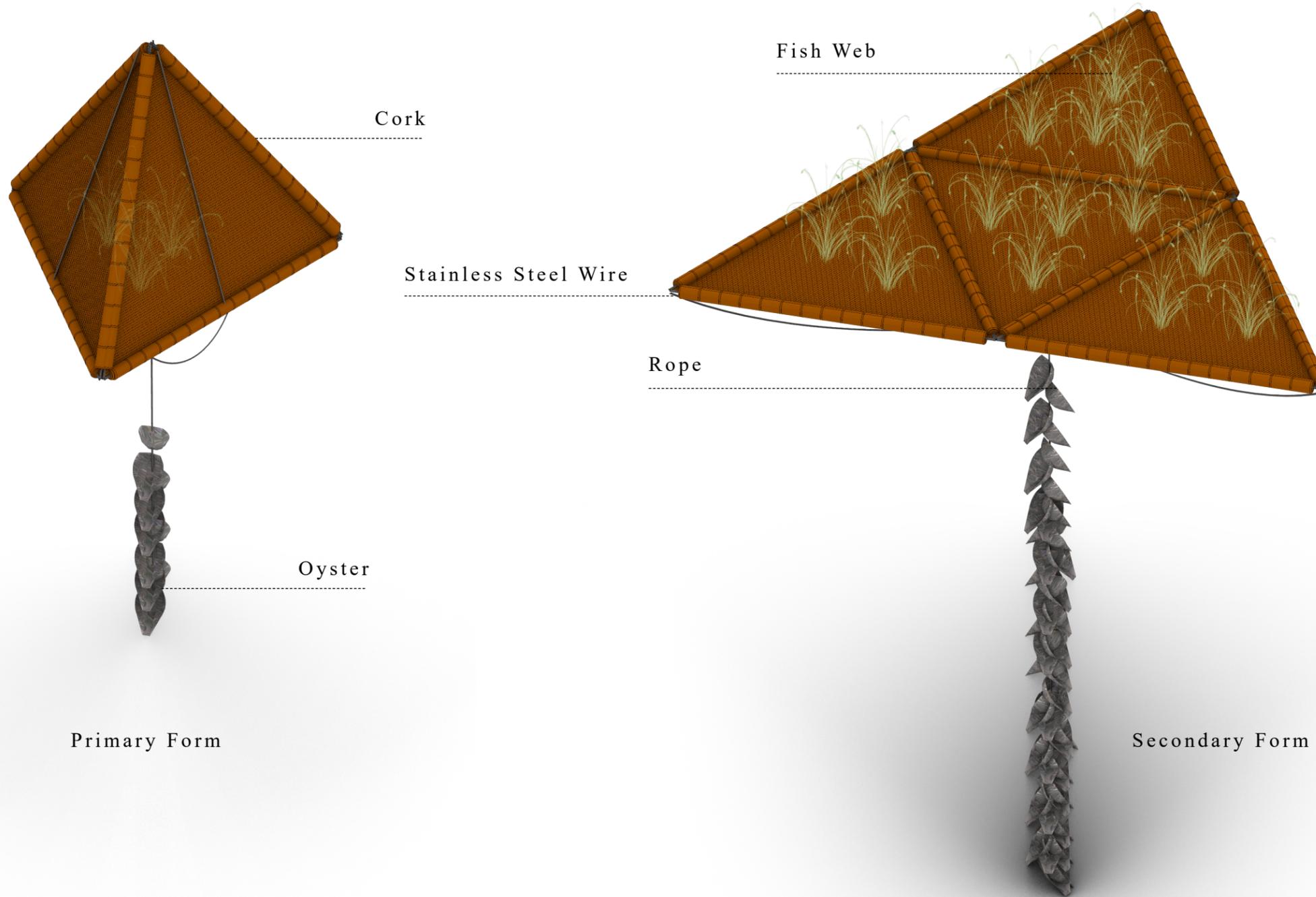
Step 5. Tie oysters and set up the triangular structure



Step 2. Thread the corks onto hollow pipes



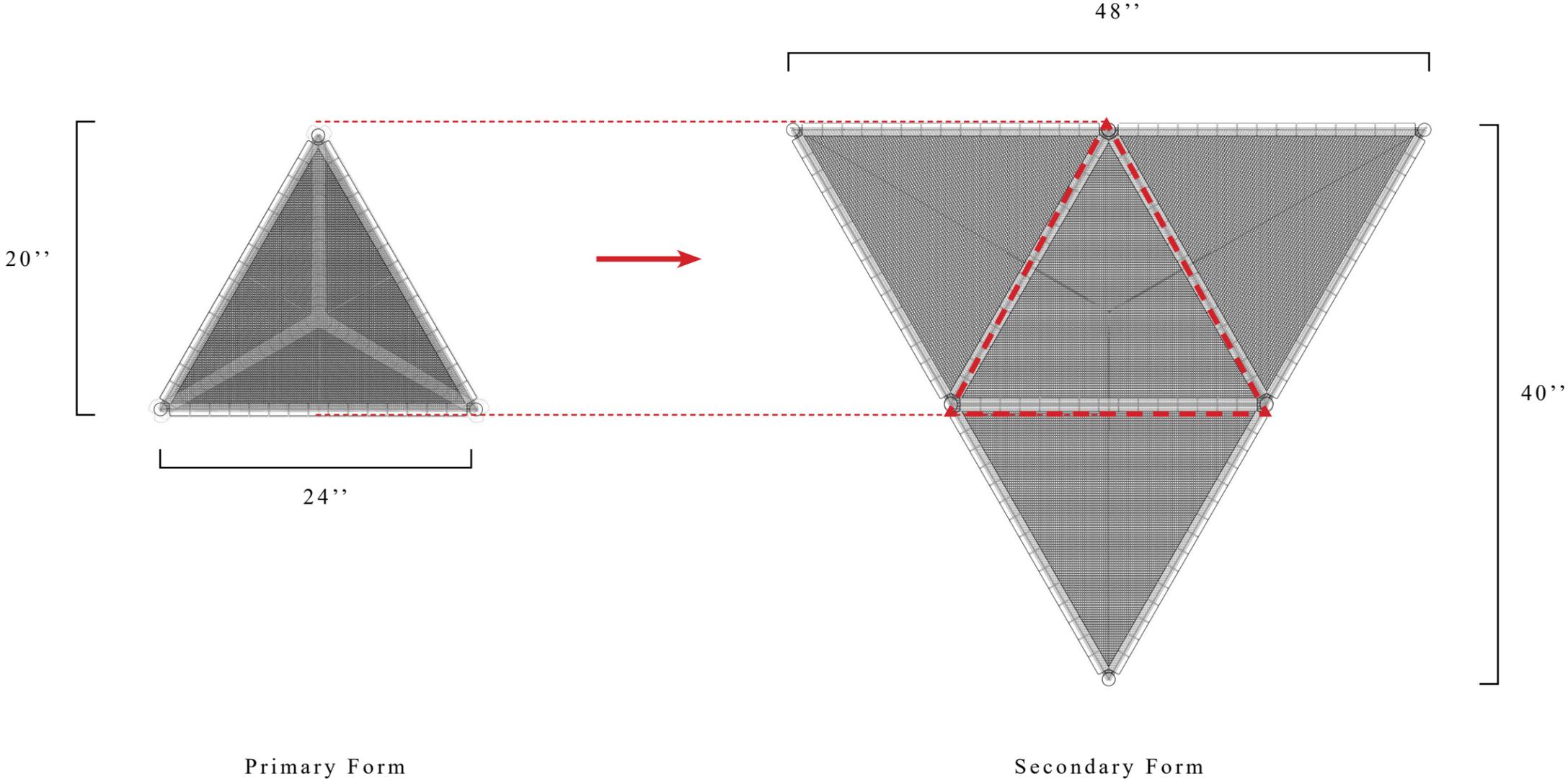
Step 4. Tie the web and insert corks



Salt Marsh Area: 250 sq in / 1.73 sq ft

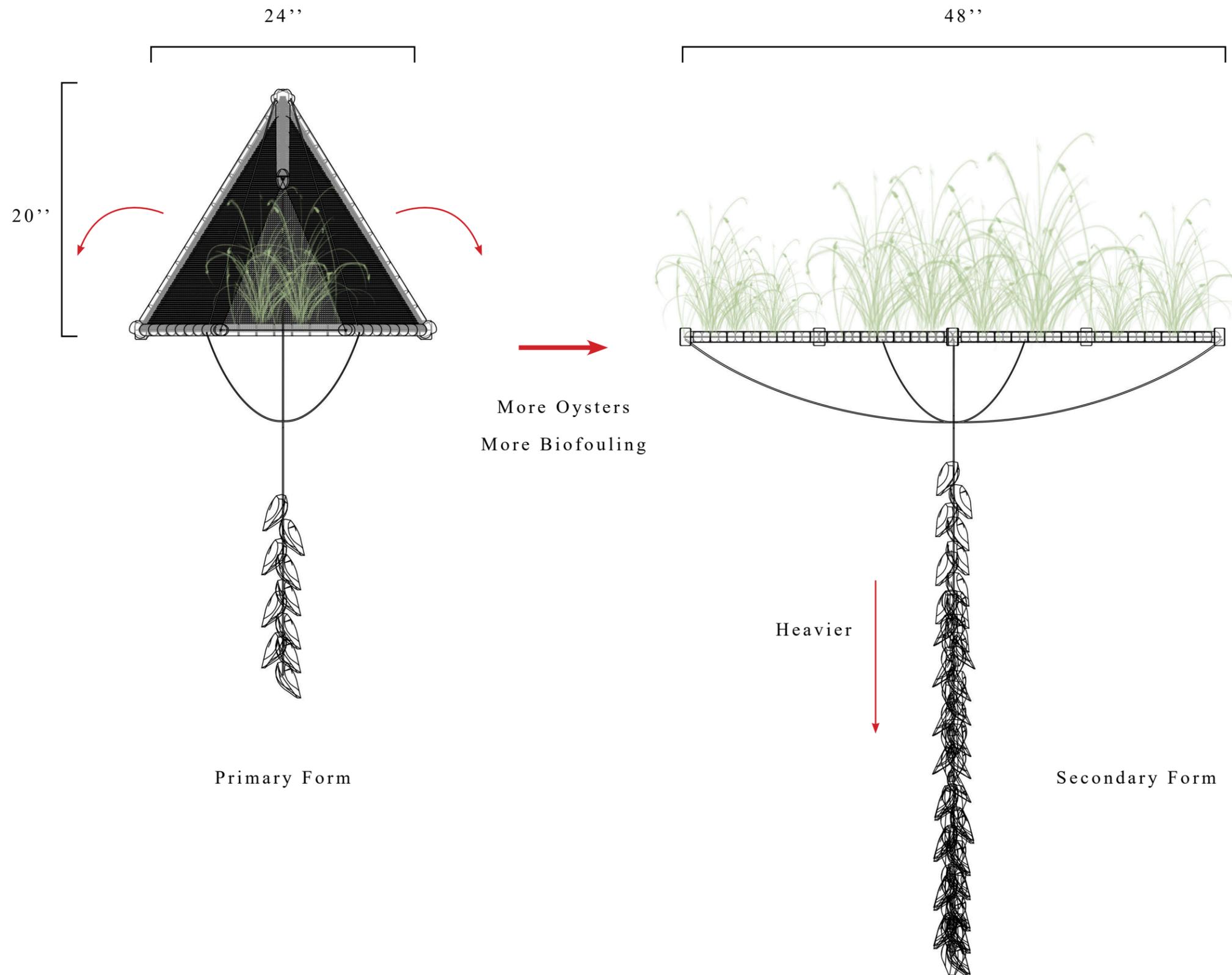
Salt Marsh Area: 998 sq in / 6.93 sq ft

Modular Plans



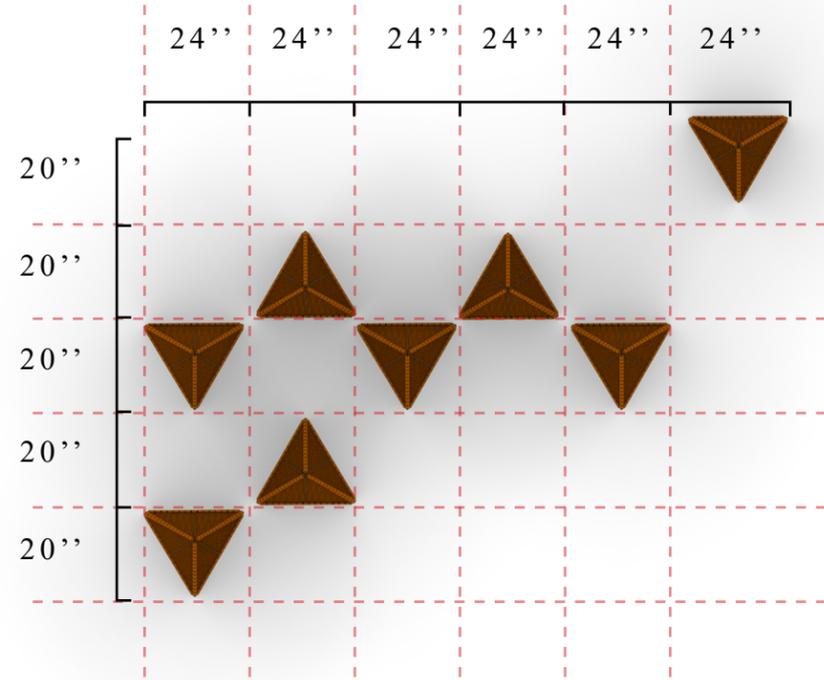
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Salt Marsh Area: 998 sq in / 6.93 sq ft

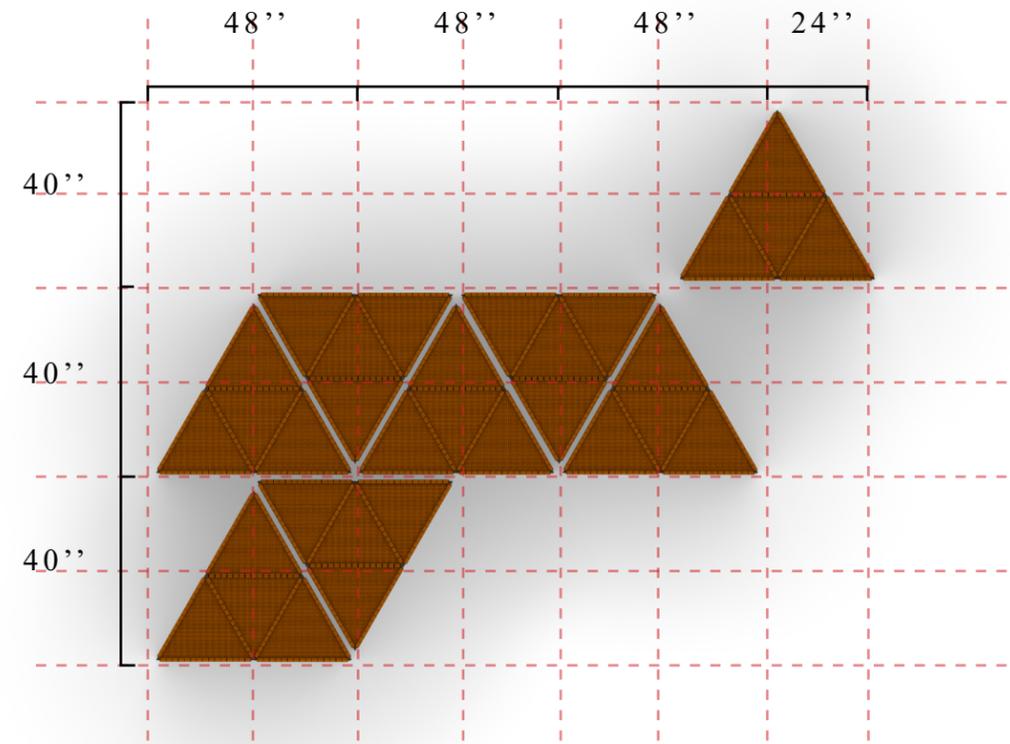


Modular Sections

Salt Marsh Area: 13.84 sq ft

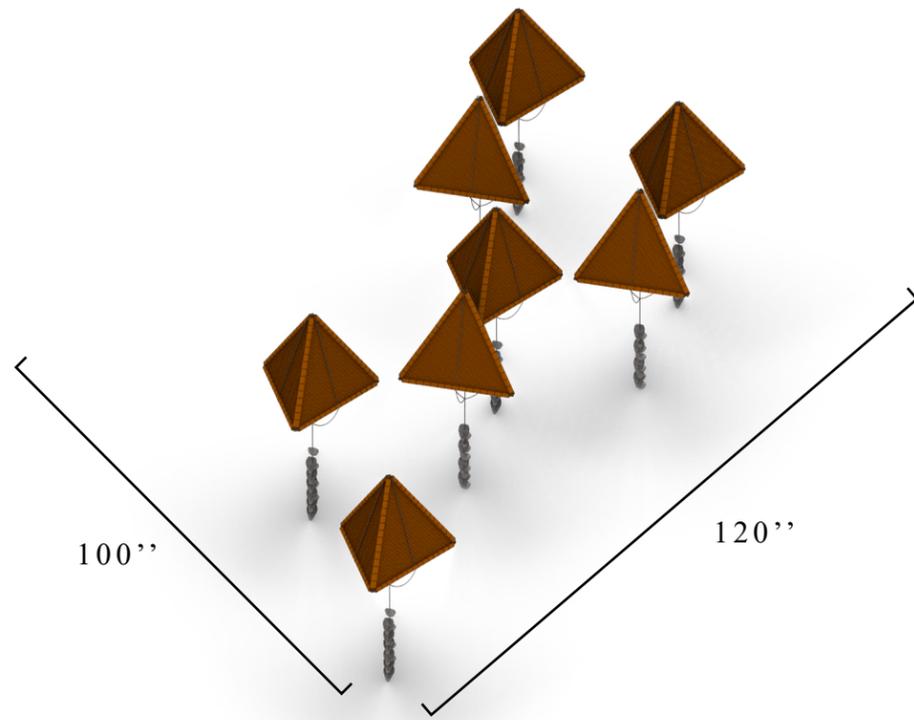


Salt Marsh Area: 55.44 sq ft

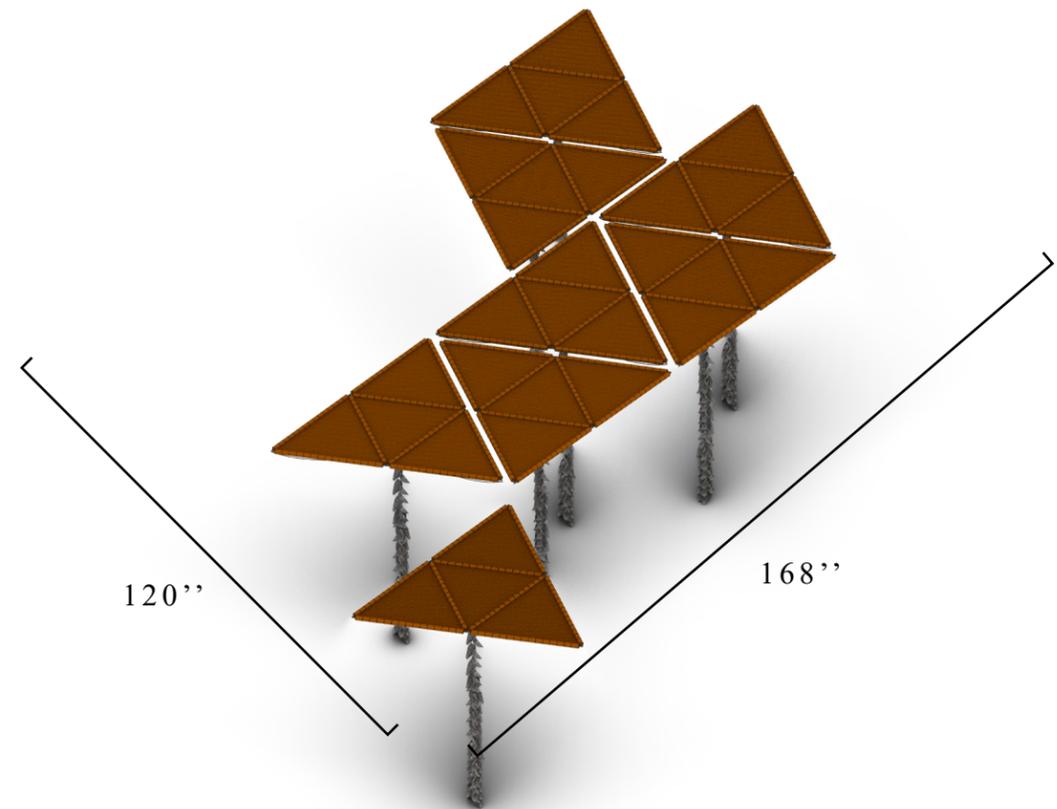


Scaling

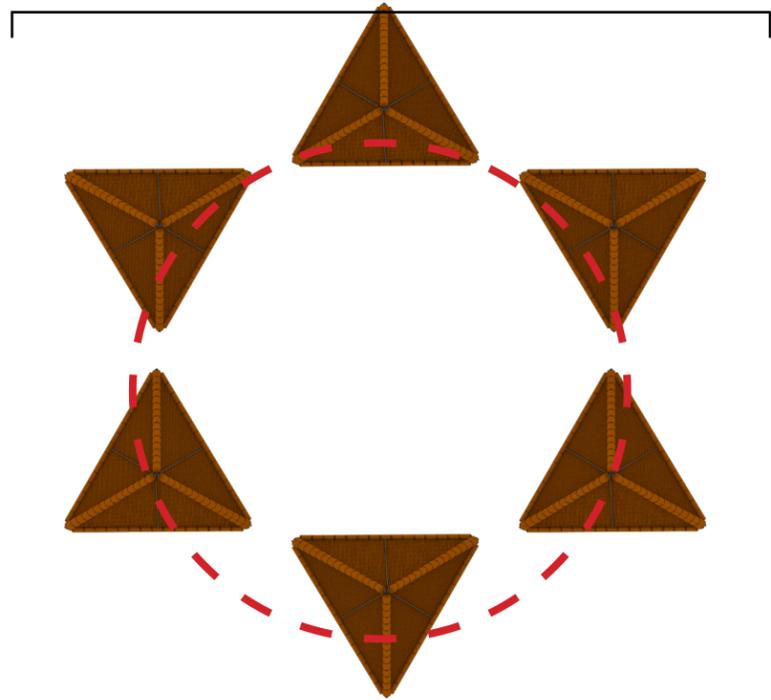
Primary Form



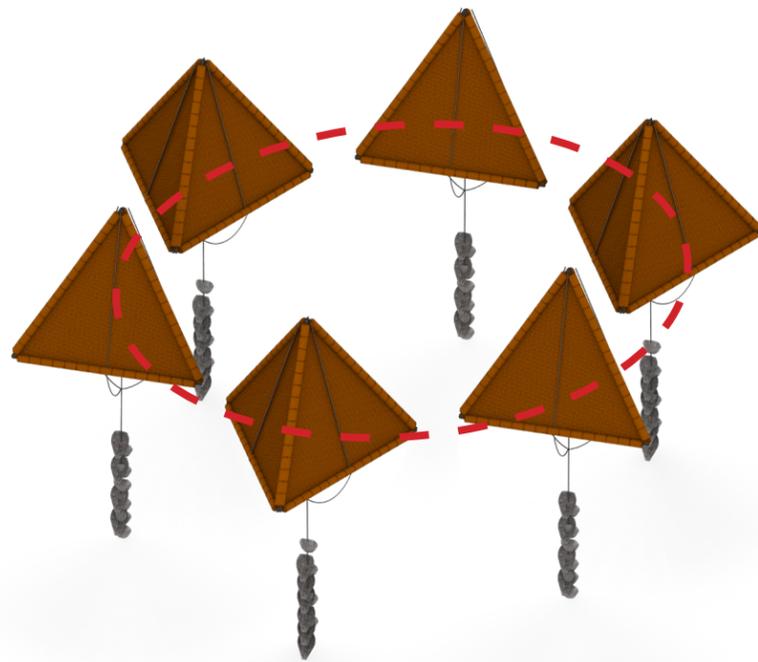
Secondary Form



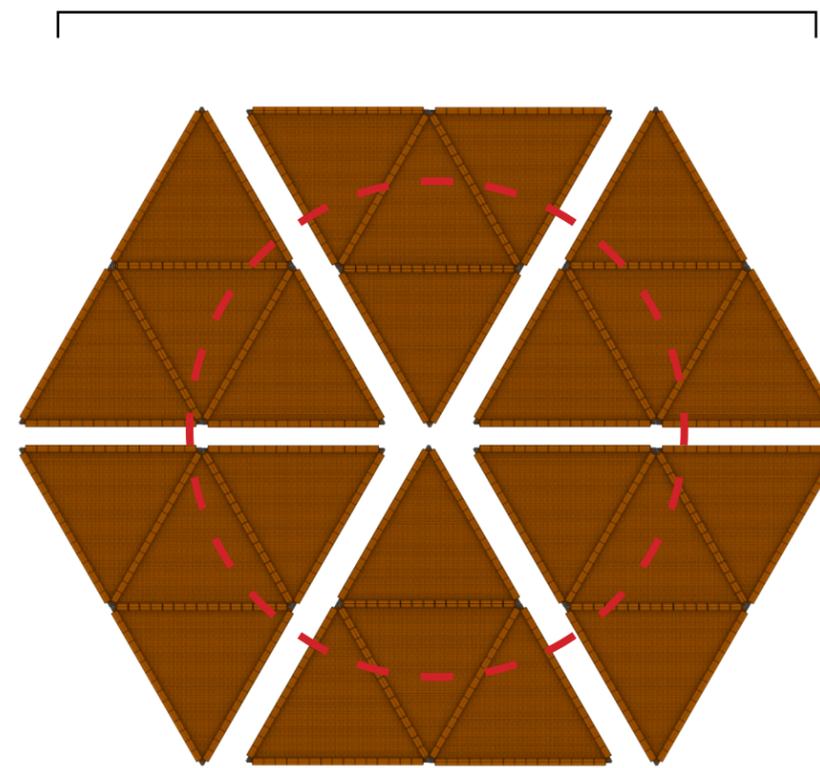
Salt Marsh Area: 10.38 sq ft
96''



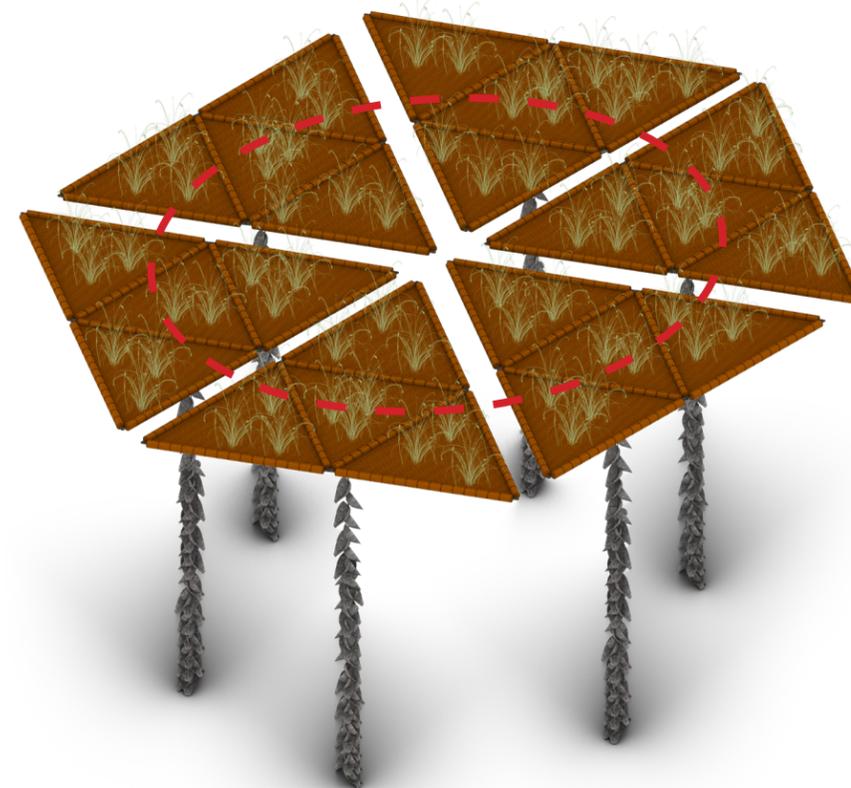
Primary Form



Salt Marsh Area: 41.58 sq ft
96''

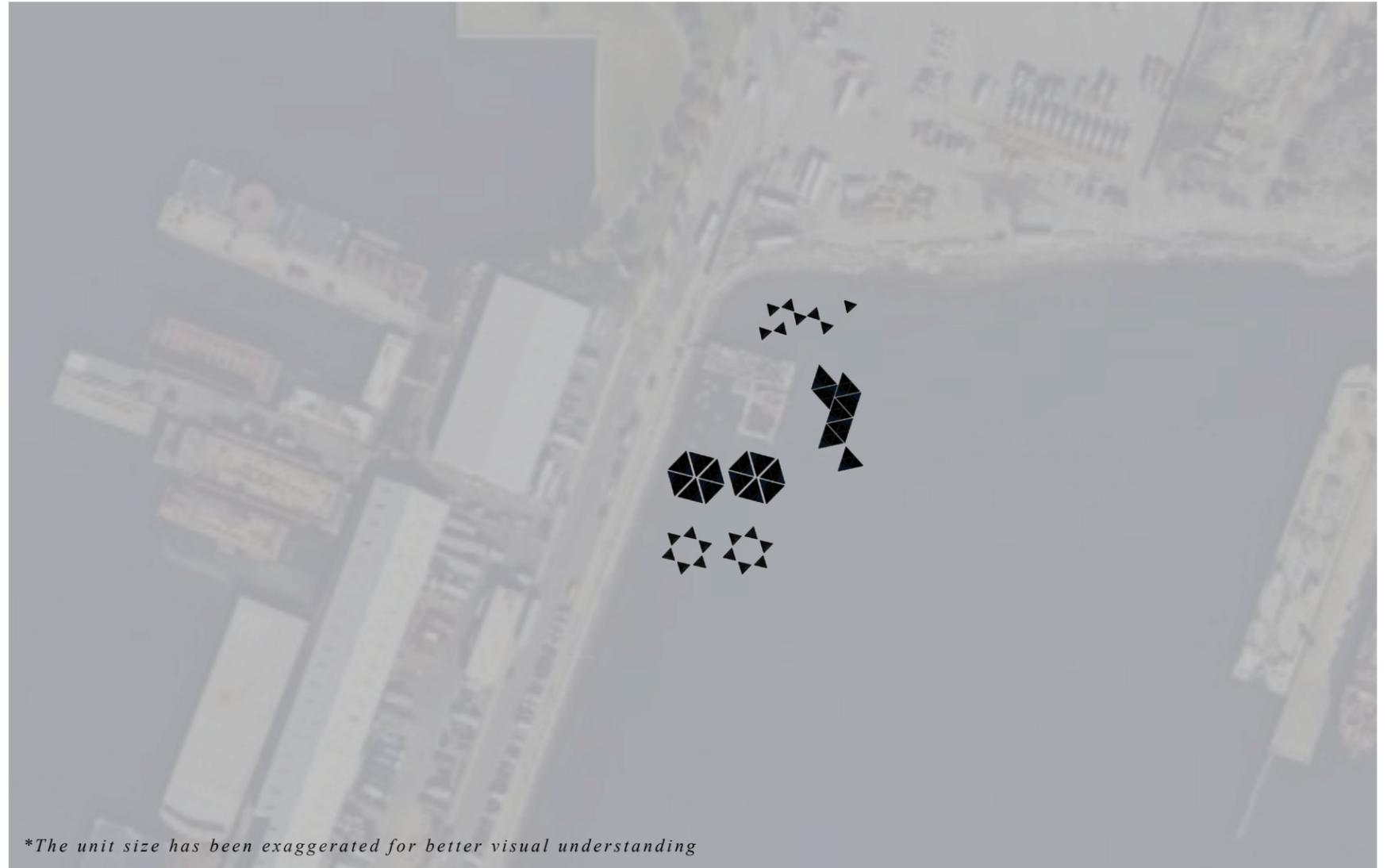


Secondary Form



Oyster Ring

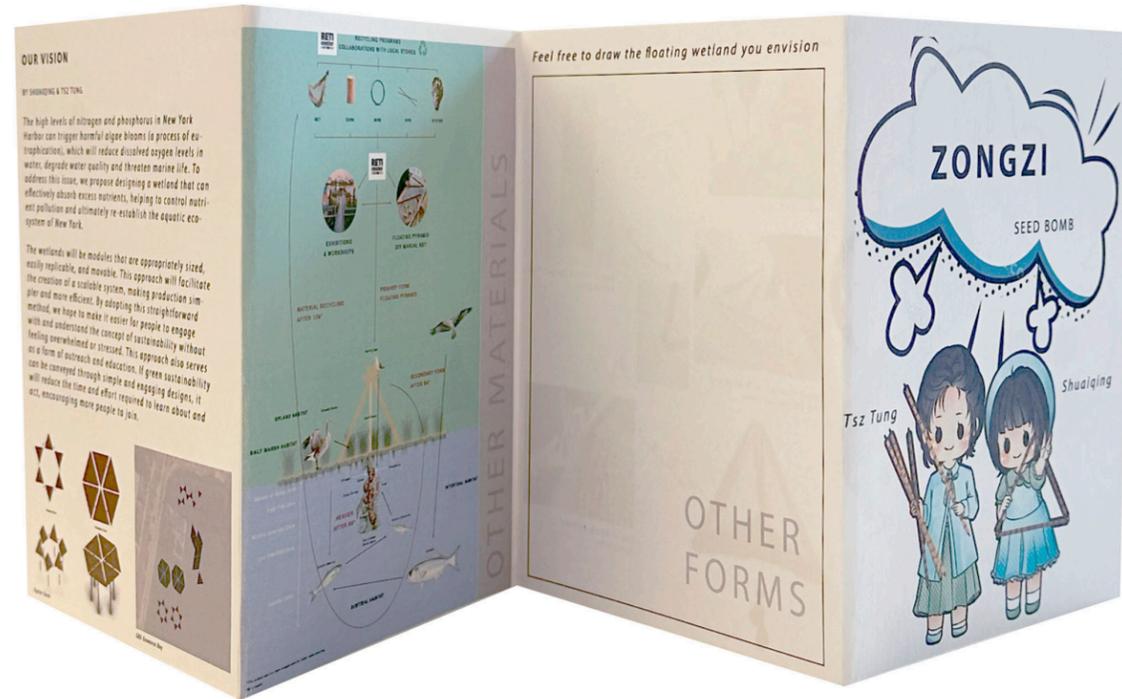
Plant Ring



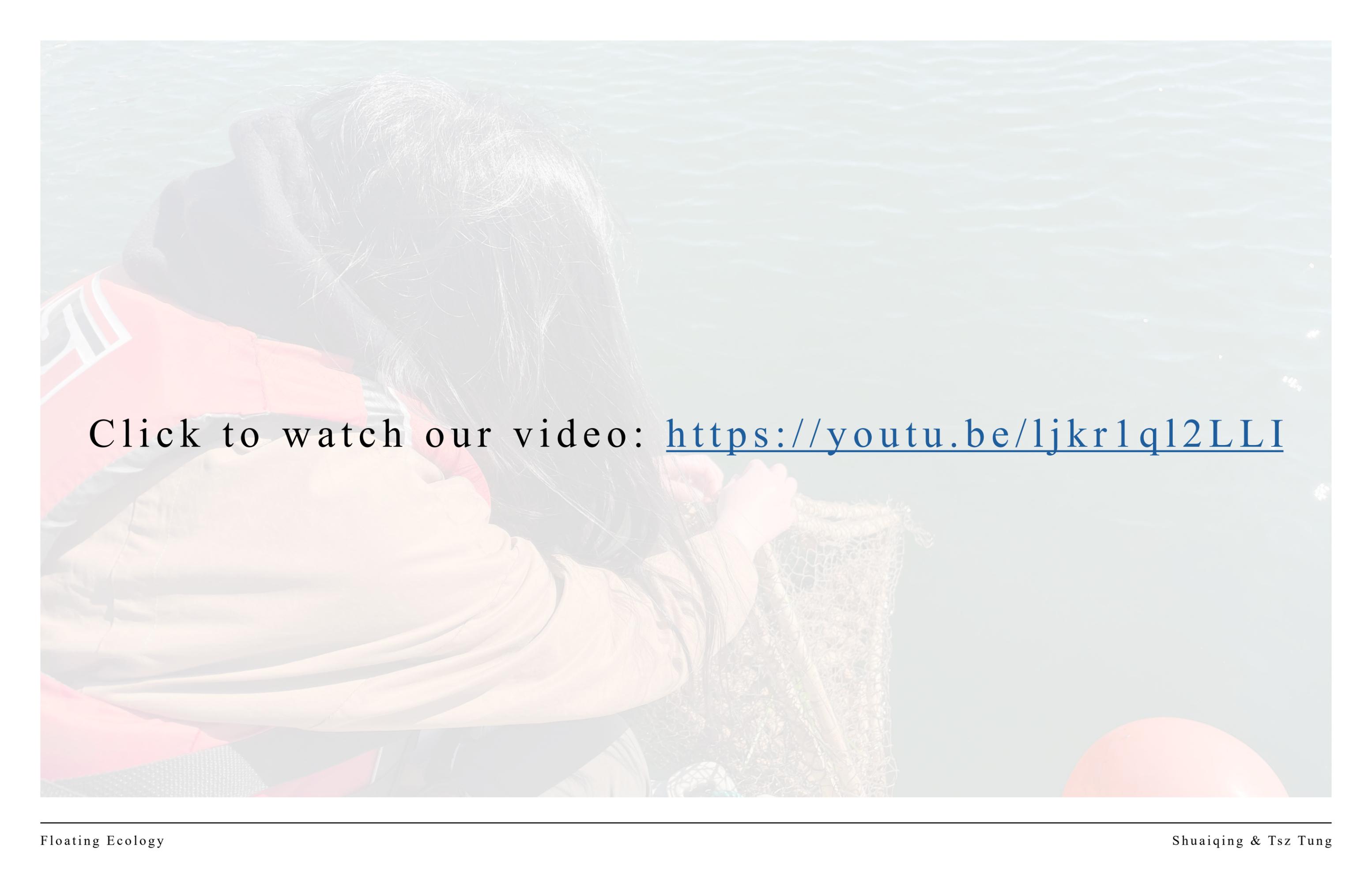
GBX Gowanus Bay

Based on online information, the wetland area in Baltimore’s Inner Harbor spans about 10,000 sq ft. Using our “Zongzi” wetland in their secondary form, where each salt marsh unit covers approximately 6.93 sq ft, about 1,443 units would be needed to reach this scale.

Initially, in their primary form, these 1,443 units would create a wetland area of about 2,496 sq ft. However, as oyster growth and biofouling on the ropes increase, transitioning the units to their secondary form, the wetland coverage would expand to the targeted 10,000 sq ft.







Click to watch our video: <https://youtu.be/ljkr1q12LLI>