



Shoreline Erosion Control Solutions

Your Onshore & Offshore Erosion Solution!

Why SECS®



Our marine engineered, patented, eco-friendly technology prevents and reverses the effects of erosion by diffusing and deflecting wave energy. Traditional rock, vinyl, wood, concrete bulkheads, jetties, and groins, are designed to take the full force of a wave. This old technology is not eco-friendly, does not provide erosion control, and is less durable and more costly than our proprietary (concrete) SECS® units.

SECS® Units are built in-house. We control quality and availability, enabling us to provide a superior product at a competitive price.

The combination of our customizable interlocking designs and the physical weight of our SECS® Units allows them to securely “sit” on the sea floor. Removing the need for tieback, costly engineering drawings, and more, further reduces installation costs.

Why Traditional Bulkheads Fail:

- Rock (Bulkhead & Groin): Erosion
- Toe and Berm: Wave action (blunting)
- Waterline Failures: Horizontal weakness / collapse
- Slab Joint / Seam Separation: Uneven hydrostatic pressure due to tidal changes
- Tieback Rod Failures: Oxidizing, corroding and weakening
- Sinkholes: From failed drainage
- Cap Failure: Aging and uneven hydrostatic pressure



SECS® – Your Turn-Key Solution:

We are 3rd generation experts in the marine and environmental realms:

- Manufacturing: We scale manufacturing to stay ahead of your permitting and installation timelines.
- Design & Engineering: We have in-house marine and structural engineering experts.
- Construction & Installation: We have large-scale construction teams with the capacity to service your project timelines across multiple cities, counties, and states, simultaneously.
- Financially Strong: We are equally as strong financially as our SECS® Units are structurally.



SECS® –

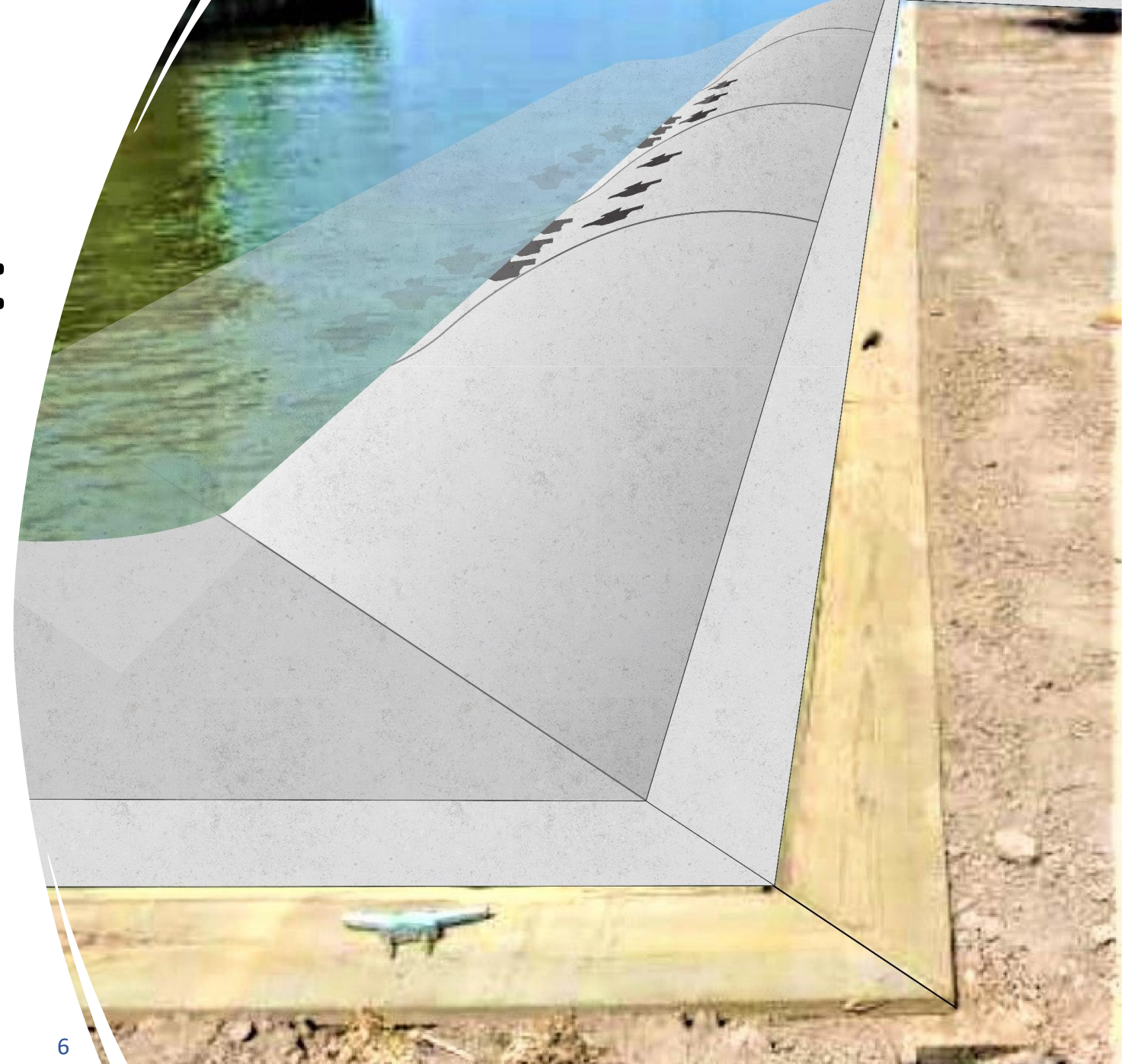
Your Erosion Solution:

- Significantly Longer Life than Vinyl, Wood, and Concrete
- Creates a Beach Building / Erosion Reversing Environment
- Internal Structure Promotes the Growth of Healthy Eco-Systems
- Less Expensive than Rock (Shoreline & Groins) Vinyl, Wood, and Concrete
- Versatile and Customizable Designs



SECS[®] Advanced Erosion Protection:

- Protects the vertical barrier and shoreline by attenuating the wave's energy
- Removes the need for tiebacks, preventing erosion behind the bulkhead (the primary reason for failure)
- Promotes and replenishes sea bottom growth



Without SECS



With SECS



Comparison of Shorelines: With or Without SECS® – You Choose!

Without SECS



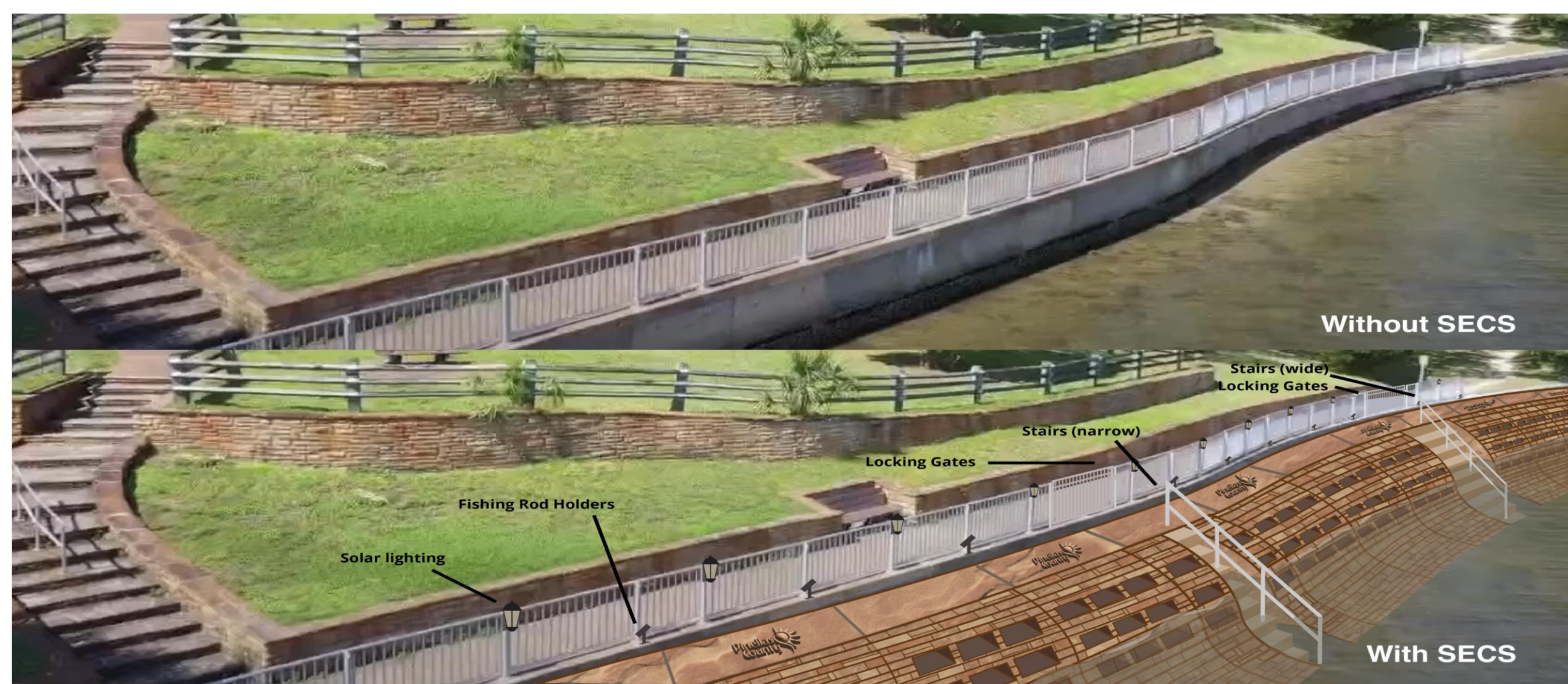
With SECS



**Comparison of Shorelines:
With or Without SECS® – You Choose!**



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Comparison of Shorelines: With or Without SECS® – You Choose!

SECS[®] is Eco-Friendly:

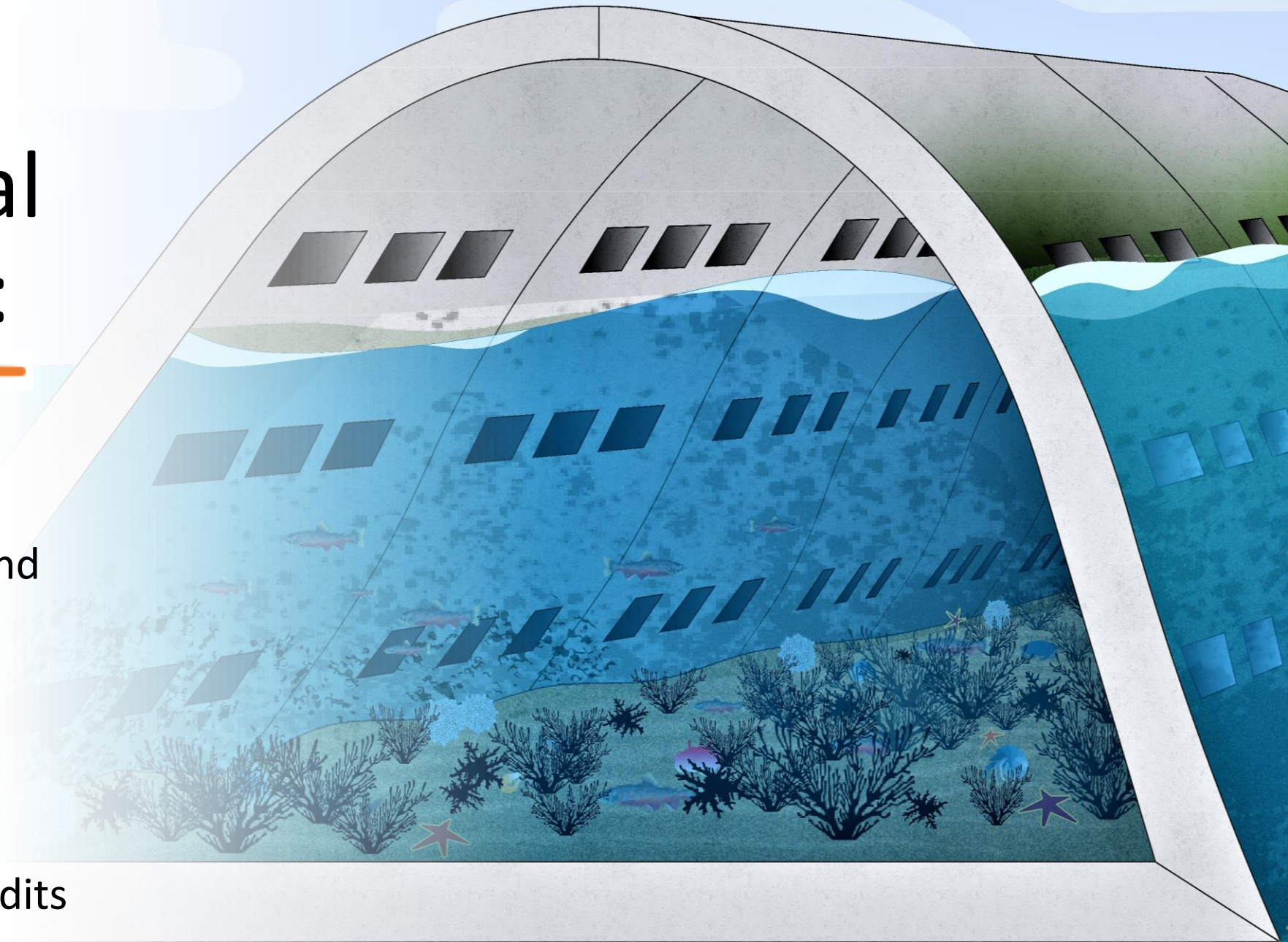
- Reverses the effects of erosion
- Builds beach onto the shoreline
- Develops flora and natural fisheries (sea grass, oysters, sea life, etc.)
- Promotes the growth of healthy eco-systems



SECS®

Environmental Applications:

- Oyster Reef Restoration (Onshore & Offshore)
- Barrier Island and Headland Restoration
- Sediment Diversion
- Ridge Restoration
- Marsh Creation
- Carbon Sequestration Credits

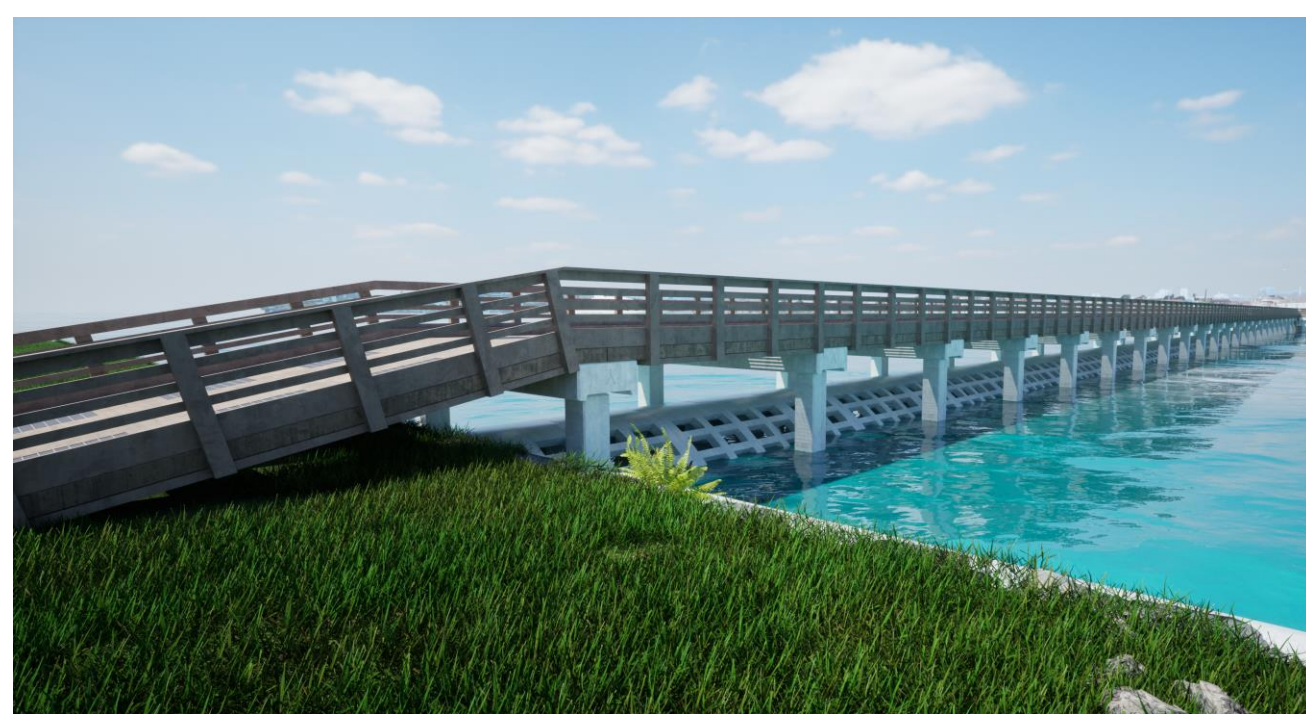


SECS® Environmental Applications:

CUSTOM LIVING REEF MODULE PIER

We are a turn-key company with in-house:

- Design
- Marine & Structural Engineering
- Manufacturing
- Multi-State / Large-Scale Construction Teams
- ...and more!





SECS®

Customizable Solutions:

- Alternate Use Cases:
 - Calms Waters on Windward Areas
 - “Shark Proof” Swimming Lagoons
 - Deck Entertainment Areas
 - Deck Lighting w/ Handrails
 - Natural Waterfalls on Boardwalk



SECS®

Customizable Solutions:

- Aperture (Baffle) Logos
 - Design, Size, Shape
 - *See “State of Texas” Baffles via Slide #6
- Concrete Coloration
- Safety Rails w/ Lighting
- Fishing Pole Rod Holders



SECS[®] is Cost Effective:

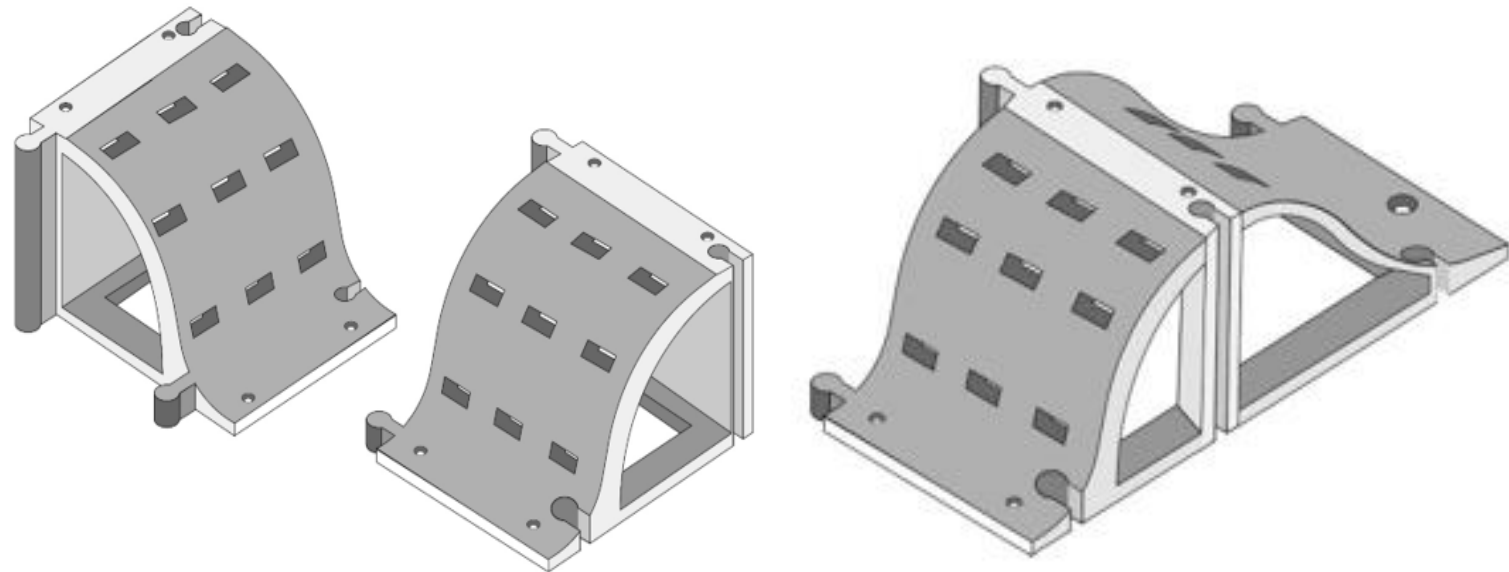
- Material Costs:
 - Significantly less than traditional bulkheads
- Installation Costs:
 - Reduced from days to hours
 - Does not require:
 - Engineered Drawings
 - Removal of (failed) bulkhead
 - Tiebacks
 - Driving bulkhead into the earth



SECS® Durability:



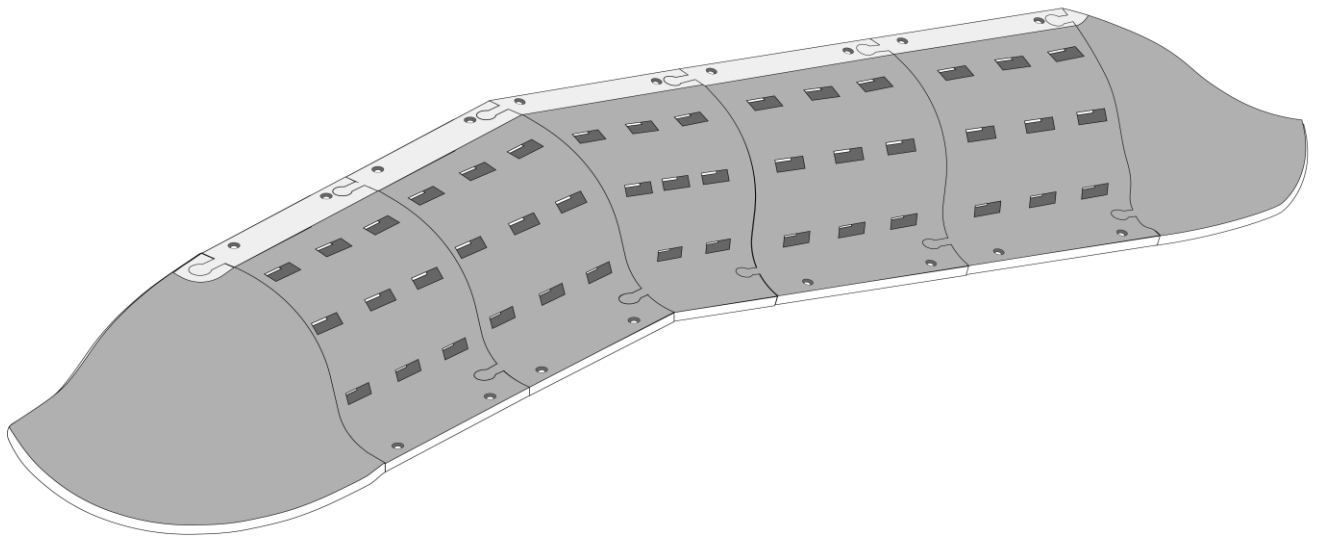
- 8' Linear Units Weigh:
 - ~ 6,500 lb. (3' vertical height)
 - ~ 10,000 lb. (6' vertical height)
- SECS® Units Are:
 - Connected via interlocking designs (application specific)
 - Can be secured into the earth with 12-14 ft. deep pins



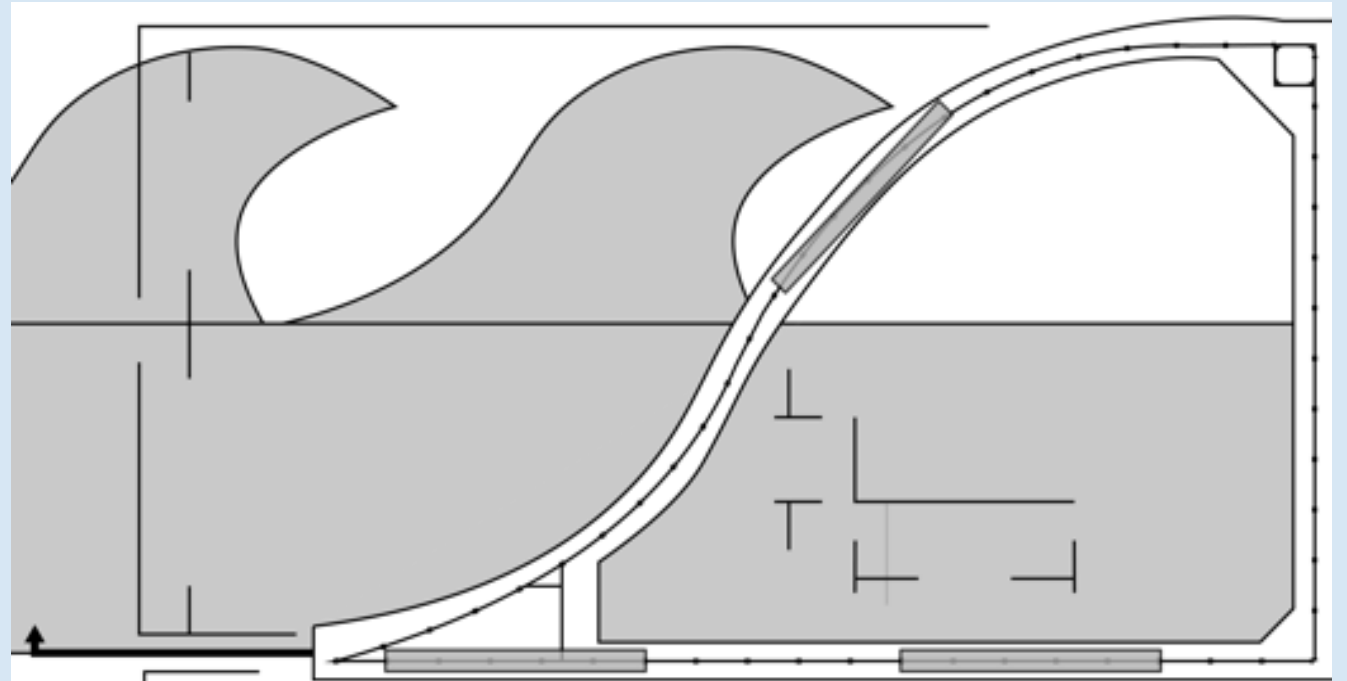
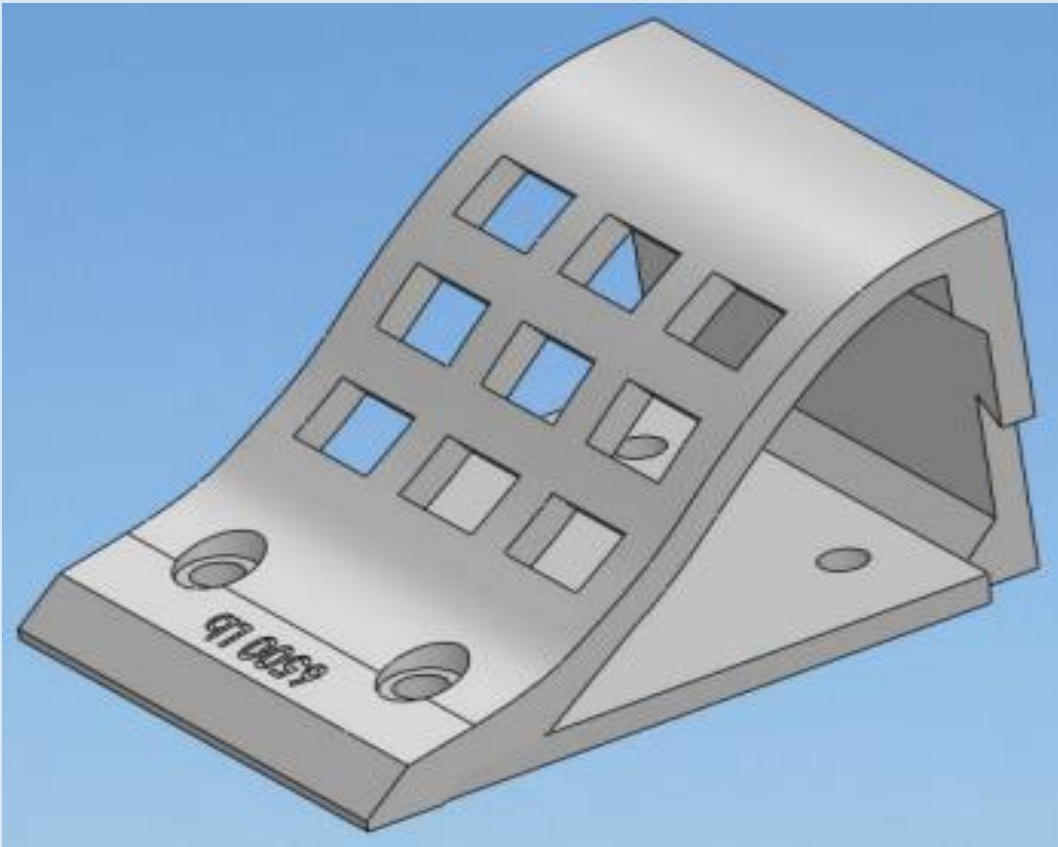
SECS® Durability:



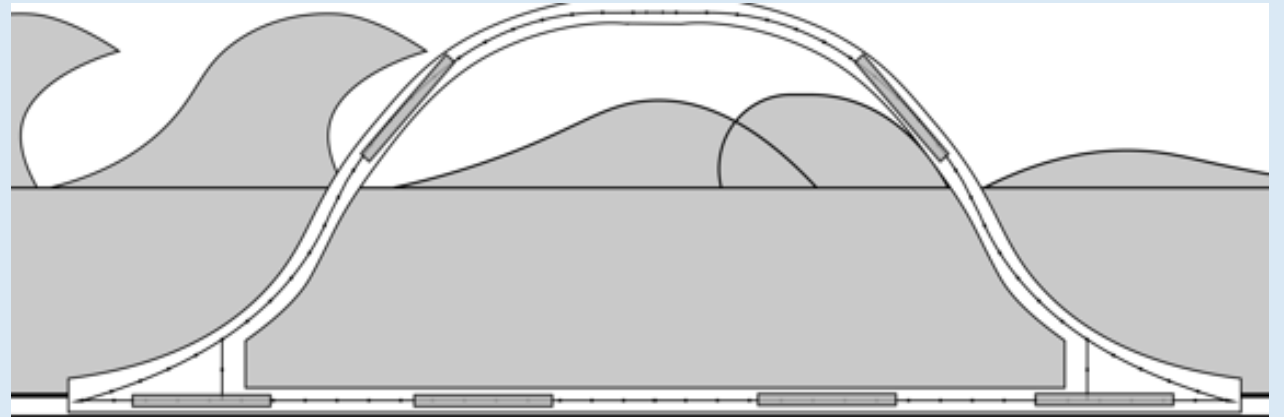
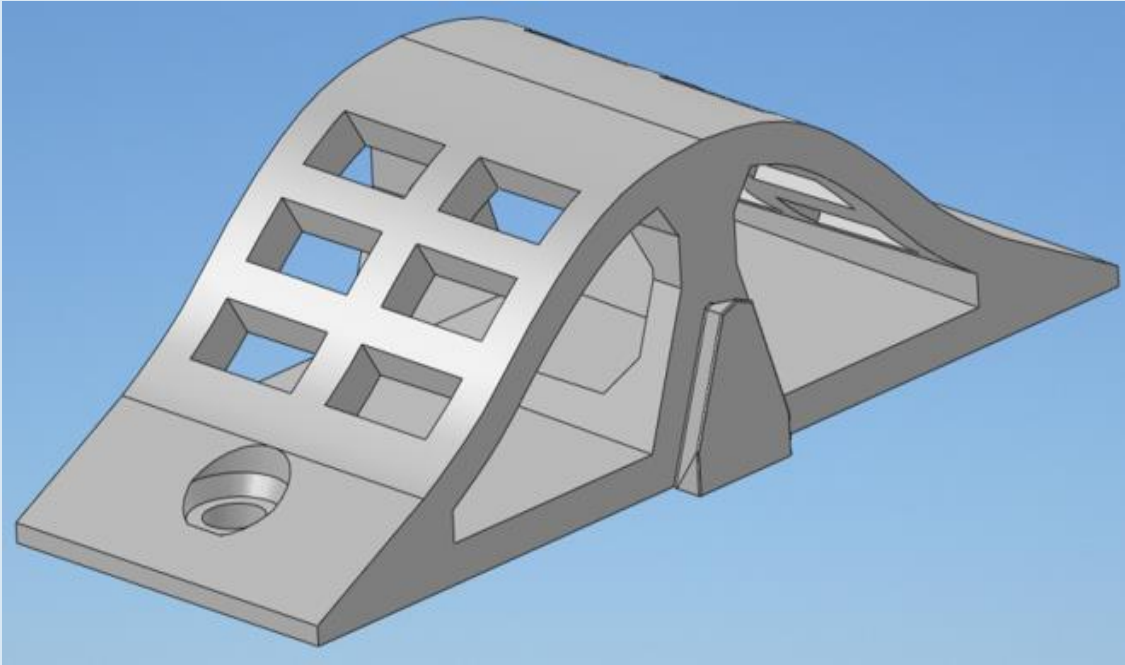
- SECS® Units diffuse and deflect the wave energy
- Traditional Bulkheads (rock groins, vinyl, wood & concrete) take the full force of the wave energy
- Longevity:
 - Lasts significantly longer than all traditional bulkhead designs



SECS® “Onshore / Shoreline Bulkhead” Version



SECS® “Offshore Breakwater / Jetty” Version



***Restored
(added back)
Land Areas:**



Oyster Growth & Sequestration:

- Units installed approximately seven (7) months prior to this photo.
- Natural occurring oyster growth (~ 2 ½" Diameter).
- Growth was not incubated or stimulated in any manner.



References:

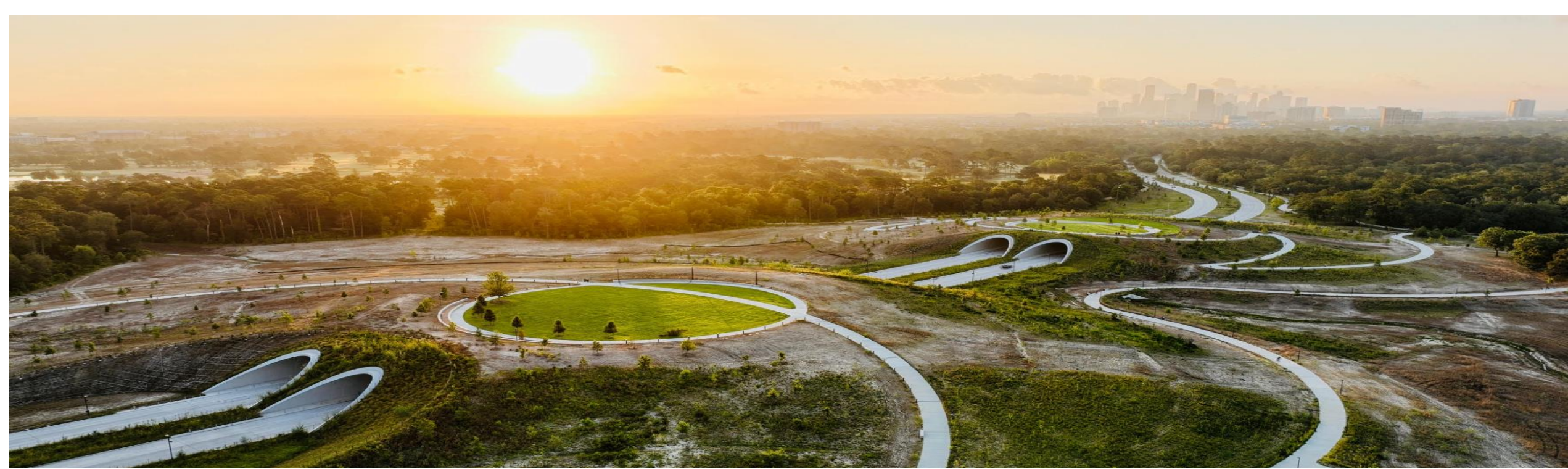
Industry Leaders in Design, Manufacturing, & Installation

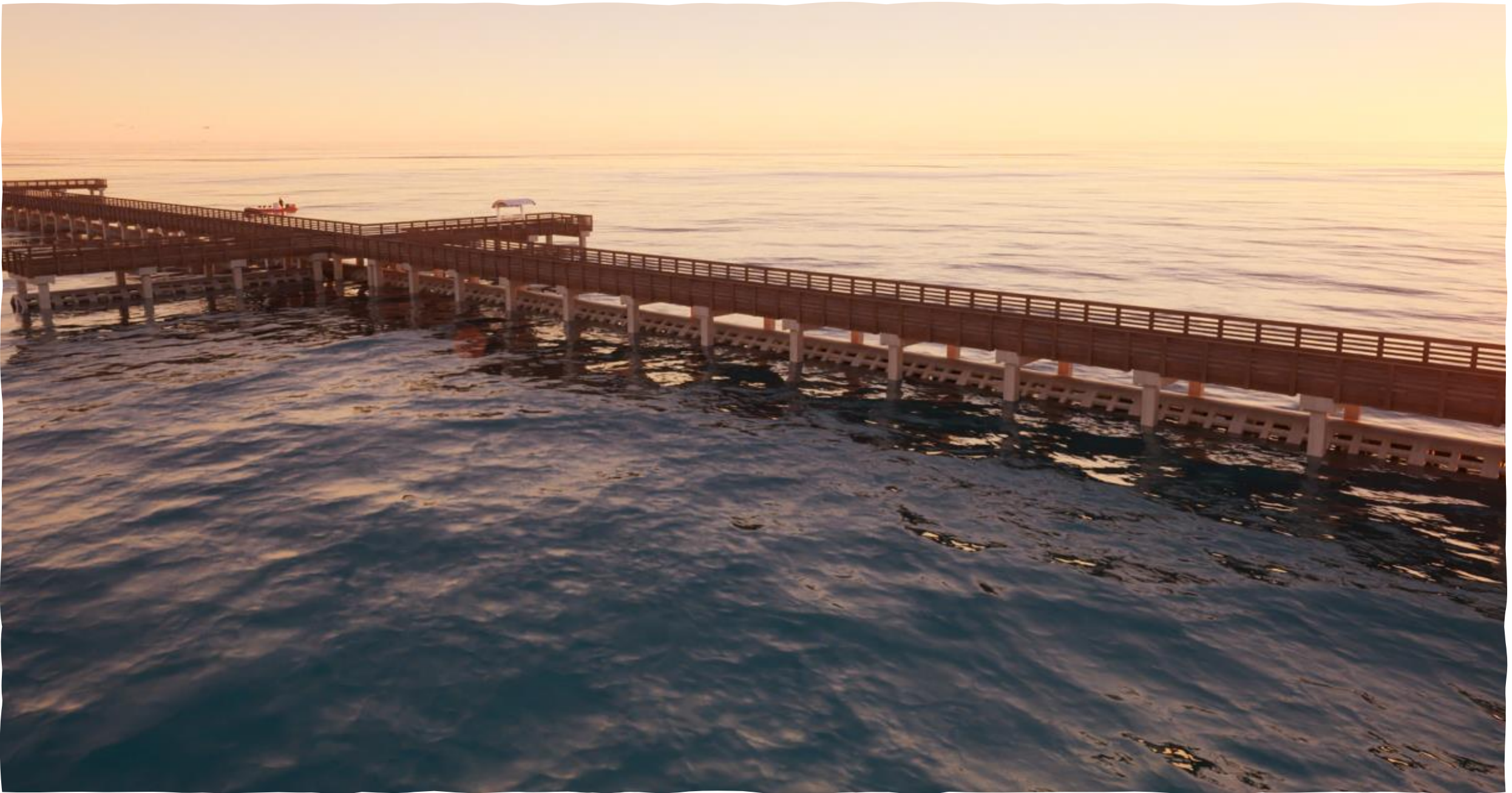


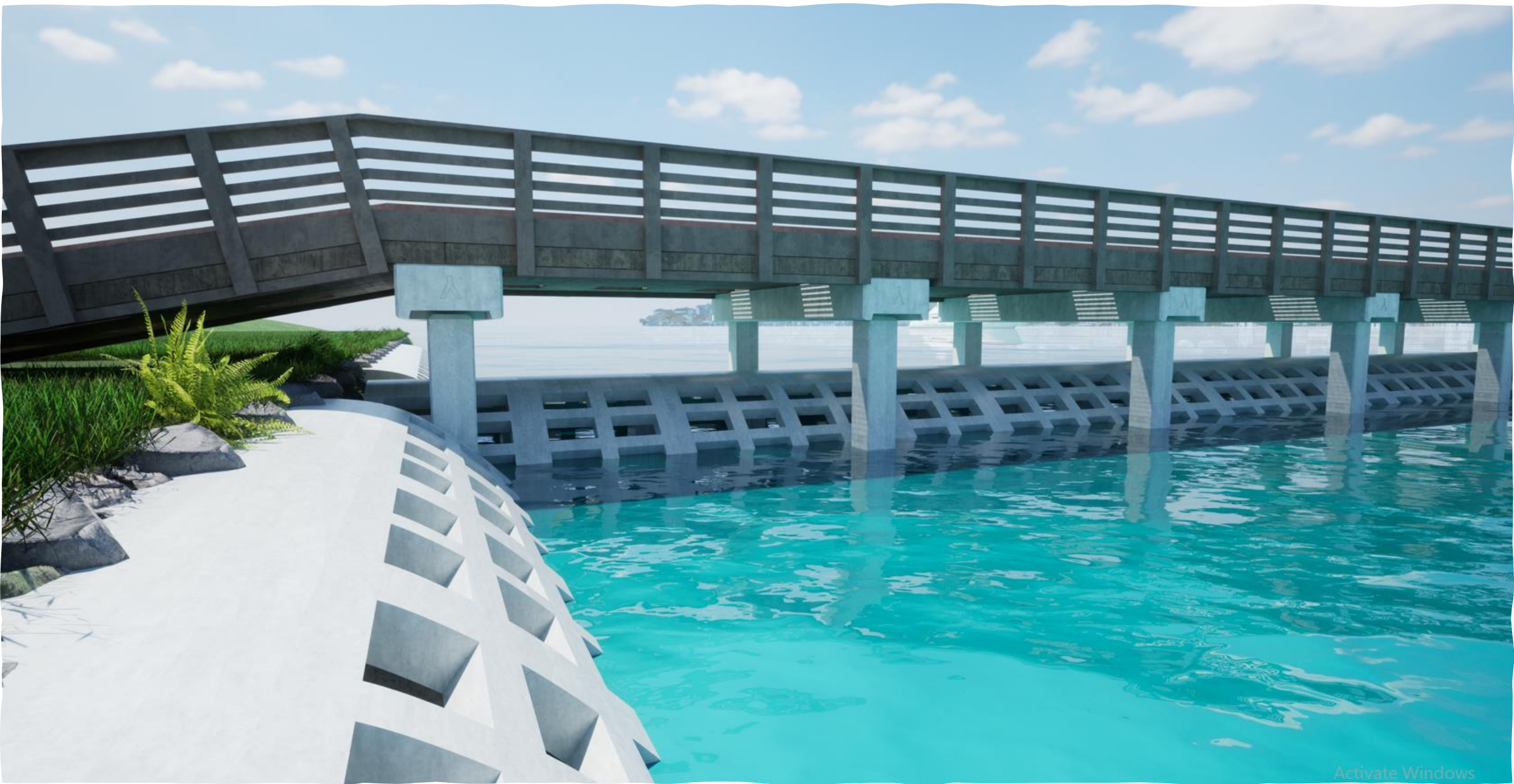
We are not simply designers of a new cutting-edge patented product. We are multi-generational industry experts in design, manufacturing, and construction installation. An example of our capabilities is shown above and on the following page. This specific tunnel was designed and manufactured for the City of Houston's Memorial Park (Land, Bridge and Prairie Project), by our in-house precast partners: Tricon Precast, located in Houston and San Antonio TX, and HHI (Heavy Highway Infrastructure), located in Sanford, FL.

Our industry expertise and exacting laser-cut manufacturing technologies, coupled with our proprietary interlocking unit designs, exceeded the City of Houston Engineer's tolerance expectations (by literally two feet). We delivered a superior product that was stronger, more durable, and interlocked in a manner that bound tighter tolerances than the engineers believed possible.

** Our expertise is demonstrated in every aspect of our business, including most recently our patented, marine engineered SECS® Living Reef Module Units.*







Activate Windows

