Green Sea Walls
Offer Natural Aesthetics; Perform as Dike with Saltwater Estuary

Project Scope
The soil surrounding a saltwater estuary adjacent to a new office complex development in South Florida contained high moisture content and low shear strength. A retention structure was required to hold back the weak soils and support the surcharge loads imposed by the planned development.

The developer preferred a naturally vegetated wall that would work under the soft soil and water conditions.

Design Considerations
Several criteria were considered to ensure the solution would be feasible for the unique site conditions:

- Provides long-term protection from negative effects of erosion.
- Resists corrosion caused by the saltwater.
- Accommodates differential settlement caused by highly saturated and compressible banks and subgrades.
- Natural solution with minimal environmental impact.

3D HDPE GEOWEB Solution
The GEOWEB® 3D retaining wall system was chosen for its natural aesthetics and structural properties similar to a MSE wall.
Geosynthetic Details
- GEOWEB GW20V Green Fascia.
- Geotextile Separation Layer
- Front Face Batter: 0.5h:1.0v
- Wall Dimensions: 620 ft long x 6 ft high

GEOWEB® Environmental Benefits
GEOWEB® retaining walls are ideal for areas exposed to soft subgrades and water.
- Allows reclamation of land areas with less-than-desirable soil properties.
- Flexible system tolerates reasonable differential settlement while maintaining structural integrity.
- Resists corrosion and detrimental effects caused by saltwater.
- Open front fascia offers natural environment for vegetation.
- Horizontal terraces maximize rainwater collection, minimize runoff and erosion.
- The impervious cell face eliminates evaporation of soil moisture through the vertical profile of the wall.

The retaining wall is stable and fully established with dense vegetation.
Project information and material supplied by RH Moore & Associates