

# REPLACEMENT OF BOWING TIMBER WALL MECHANICSVILLE, VA

ARMORMAX CASE STUDY

## INITIAL CONCERN

The client contacted ACF for assistance in finding a solution for a timber wall behind an office complex that was bowing out and causing an unsafe situation for anyone behind the building. As seen in the photos below, the wall was no longer considered stable needed to be fixed quickly and carefully.

**Goal:** The client desired a product that would permanently protect the hill from eroding and also provide a aesthetically pleasing result.

## INSTALLATION / SOLUTION

After careful consideration, Armormax was carefully chosen to replace the timber wall due to its lifespan (up to 75 years) and benefit of providing vegetation growth. The install required the timber wall be removed and surface of the slope to be smoothed out prior to the Armormax installation. In this specific install, it was discovered that a trench drain was required at the bottom of the slope due to water seepage. Following the installation of the high performance turf reinforcement mat, the system was secured in place with washer pins and Engineered Earth Anchors. The Engineered Earth Anchors were critical to the install as they help protect against hydraulic stresses and provide slope stabilization. Once the installation of the Armormax was complete, the product was covered with soil, seed and straw erosion control mats.



Prior to installation - bowing wall



Post-installation with 3 weeks of growth  
(additional vegetative growth to follow)

## RESULTS

The Armormax installation turned out wonderfully, with the vegetation quickly beginning to grow through the mats. A final installation picture showing 3 weeks of growth can be seen above. The client and surrounding tenants are thrilled with the result and are excited to see the final product when the vegetation has more opportunity to grow without the summer heat.

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### ADDITIONAL DETAILS

The below photos represent some of the additional details of the R-Tank installation.



Installation of Trench Drain using \_\_\_ and \_\_\_ geosynthetic fabric to protect from seepage



Beginning of Armormax install with Pyramat rolled down the hill and washer pins installed



Engineered Earth Anchors installation using a power driver



Complete Engineered Earth Anchors installation, with anchor flush against Pyramat



To promote vegetation, seed was placed beneath Armormax, beneath evenly spread soil coating and above soil coating



To protect the installation and new vegetation, a straw erosion control mat was installed