



Project Highlights

CETCO CONTRACTING SERVICES



PROJECT: **PADOT I-99 – Design Build Slope Remediation**
LOCATION: Centre County, PA
PRODUCT: Bentomat®

CETCO Contracting provided original concept design through final design, permit assistance, construction drawings, material supply, installation and consulting services for protection of immovable material.

The I-99 project involves the construction of a four-lane limited access highway with 4 interchanges and approximately 18 miles of roadway. During construction, large volumes of pyrite-bearing sandstone were exposed to air and precipitation, creating the potential for acidic runoff containing elevated concentrations of heavy metals and sulfates. The runoff from these areas threatened the quality of two adjacent exceptional value trout streams and local residential water wells.

Challenges

PADOT requested turnkey design through installation solutions for the protection of immovable materials. The slopes to be protected varied from 2:1 to 1:1 inclinations and were from 100 feet to 350 feet in length.

The design had to meet the requirements of both PADOT and PADEP.

Solution

The final design consisted of a 40-mil textured geomembrane sandwiched between two 16 oz/sy nonwoven geotextiles. Due to the steepness of all slopes Geoweb was used to support all cover soils placed over the impermeable liner system. The Geoweb was supported with stainless steel cables tied into an upgradient, perimeter anchor trench which eliminated the need for penetrations in the liner.

