



▲ Galestown Road & Millpond Dam | Dorchester County, MD | August 2009

Project Partners:

Contractor: George & Lynch

Engineer: Andrews Miller and Associates

Owner: Dorchester County

Max Depth:

22 ft 6.7 m

Products:

ShoreGuard® SG-650



Background

The Galestown Road and Millpond Dam needed to be reconstructed entirely. The decayed pressure treated wood retaining wall failed when a strong storm in 2006 washed it away. The release of dam water from the 600 ft wide Gales Creek quickly caused Galestown Road to collapse. The reconstruction project was funded by Dorchester County with significant support from FEMA and MEMA. The design and construction phases were closely scrutinized and approved by the MDE's Dam Safety Division, DNR's Environmental Review Division, and the U.S. Fish and Wildlife Service.

Water Control



Why CMI

Engineers and project managers compared ShoreGuard® with traditional materials and methods used for dam stabilization, including standard earth embankments, concrete retaining walls, and steel sheet pile walls. ShoreGuard® was determined to be economically, structurally, aesthetically and environmentally the best system to support this roadway as a dam. The selection process involved meetings with the regulatory agencies and the residents of the Town of Galestown and Dorchester County at large. All involved chose ShoreGuard® because of its high performance, long-life cycle, environmentally friendliness and cost effectiveness.



Performance

Andrews Miller and Associates (AMA) provided the design of the 22 ft deep ShoreGuard® synthetic sheet piling on both sides of the road with compacted select fill and a unique tie-back system to support the dual lane roadway. ShoreGuard®'s patented I-Beam Lock™ feature ensured a strong and durable connection to prevent seepage through the wall. This structure doubled as a dam for the 10 ft deep, 40-acre Galestown Mill Pond. A concrete box culvert was built into the design of the wall to allow control of the pond height.



Installation

CMI's sheets were driven 12 - 14 ft through clayey sands to medium plasticity gravelly clays using a 5000 lb APE vibratory hammer. Over 1100 linear feet were installed in only 14 days. The project also included the roadway pavement for the standard HS-25 loading, a 5 ft wide pedestrian walkway with handrail and an observation deck along the pond side; and a 75-LF aluminum fish ladder through the inlet weir and culvert system which was designed in collaboration with the U.S. Fish & Wildlife Service. The construction of the road itself was completed and opened to traffic and pedestrian use in August 2009. All components of the road have been functioning according to plans. The Delaware Contractors Association awarded George & Lynch with an achievement award for the Galestown Road and Milford Dam Project.