

Modular Gabion Systems

Project

Location:

New Jersey Intercoastal Waterway,
Cape May Canal, New Jersey USA
Project Phase V

Specifier:

Army Corps of Engineers,
Philadelphia District

Contractor:

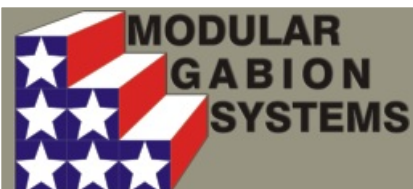
Trevcon Construction Company

The Intercoastal Waterway, a major shipping route along the eastern seaboard of the United States, is subject to severe erosion as a result of continual prop-induced wake action. Bank stabilization, necessitated by the canal's relatively narrow width, steep banks and the proximity of bridges and other structures, began with construction of Phase I in 1985. PVC coated twisted mesh gabions were installed along 549 lm of bank. The success of this initial project inspired three additional phases of construction totaling an additional 4,289 lm of twisted mesh gabions between 1987 and 1991.

When Phase V went to bid in 1996, the ACOE seized the unique opportunity for a side-by-side comparison of traditional twisted mesh gabions and the newer welded wire mesh gabions. The scope of the project involved installation of twisted mesh gabions to the halfway point and then installation of welded wire mesh gabions for the remainder of the 720 lm structure.

Trevcon Construction Company cleared and rebuilt the banks. Workers then installed a geotextile filter fabric and a bedding layer of crushed stone. Toe baskets 1 m x 1 m were dug into the slope and 3 m x 3 m gabion mattresses were then laid up the slope. The structure was topped with an additional tier of 1 m x 1 m baskets.

When construction was complete in June, 1997 project data indicated comparable material costs, performance and appearance. The difference between Modular Gabion Systems and the twisted mesh gabions, however, was clear. Megan Coll, the COE Project Manager, reported, "There was a definite installation time advantage to the welded wire gabions." According to project logs, it took Trevcon approximately 55 working days to install 350 lm of twisted gabion revetment but only 34 working days to install 370 lm of the Modular Gabion Systems welded wire gabion revetment - a substantial 71% increase in installation speed.



MODULAR GABION SYSTEMS

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