Project Basics

Project Name: C41a Channel, Segments 2 & 3
Agency: South Florida Water Management District (SFWMD)  
USACE Jacksonville District Office
Installation Date: September, 2011
Product Type: Western Excelsior Xtreme Armor System™ (XAS) utilizing PP5-Xtreme with Percussion Driven Anchors (PDAs)

Project Overview

SFWMD, in cooperation with the U.S. Army Corp of Engineers (USACE), designed and constructed a flood relief channel utilizing specially constructed panels of Anchor Reinforced Vegetated System (ARVS). The Xtreme Armor System was selected to reinforce the channel slopes during the construction of segments 2 and 3. The original design used during stage 1 was modified to include the advantageous properties of the XAS.

Installation

Once the material was delivered to the jobsite, the High-Performance Turf Reinforcement Mat (H PTRM) was cut into 45 ft long segments. A non-woven geotextile was sewn to the back of the H PTRM panel. The panel was placed along the channel bank, extending into the channel flow and anchored beneath the waterline in a rock-ballast filled trench. Underwater work was performed by scuba divers. The panel was then extended up the bank and secured by PDAs, terminating in an anchor trench at the top of the bank. Once in place, sod was placed atop the ARVS and secured. The complete system was then irrigated.

Performance

The Xtreme Armor System has met or exceeded all expectation for the system. The contractors performing the installation were impressed with the ease of installation and the handling of the H PTRM. Vegetating the system with sod provided an immediate high level of protection from erosion and maximized the potential for quality long-term cover.

The C41a channel prepared for installation with the Xtreme Armor System (top), sod installation atop the PP5-Xtreme (middle), and the finished vegetated channel (bottom).