City’s Relocation and Floodplain Management Project Included Embankment Protection at Culvert Outflows

Appleton, Wisconsin -- The GEORUNNER® flow protection mats, manufactured by local Appleton company, Presto Geosystems, was employed as additional embankment stability on the channel alignment project.

The Apple Creek Relocation and Floodplain Management Project includes re-aligning approximately 5,000 feet of channel, creation of wetland depressional areas and a floodplain storage area, and the placement of three waterway crossing structures and one bridge. The disturbed lands will be re-vegetated, and the new channel embankments protected with a TRM and GEORUNNER® mat system at high impact locations and planted with native vegetation.

AECOM Technical Services, Inc. designed the re-aligned channel to create a meandering, naturalized water feature. The modifications included an eight-foot bottom flow line width for low-flows along the new alignment. The low-flow channel includes riffle-pool complexes installed at appropriate locations for a more naturalized channel. The upper portion of the corridor was excavated to create floodplain storage at the bank-full elevation.

Project information: Project Engineer Kelly Mattfield, AECOM Madison, WI

Photo 1. A pneumatic driver speeds the driving of anchors; reduces worker fatigue.

Photo 2. Completed GeoRunner embankment prior to trimming of anchor wires & vegetation growth.

Individual GEORUNNER units are secured together with side-to-side and end-to-end connections over a TRM, forming a continuous, fully-integrated protection system.

Early vegetation. The GEORUNNER system’s open design allows for growth of dense and stabilizing vegetation.

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