ARMORTEC™
EROSION CONTROL SOLUTIONS

# MVP's

ARMORLOC ARMORFLEX A-JACKS

## *OVERVIEW: KYTC, Kentucky Transportation Cabinet Bridge Scour Countermeasure, Carter County*

Over 68,000 bridges or abutments across the U.S. are classified as scour critical by FHWA standards. In 1999 the KYTC through the efforts of Fuller, Mossbarger, Scott and Mat Engineers of Frankfort, Kentucky and funding from the FHWA proposed a series of bridge scour contacts to protect 17 scour critical bridges in 6 counties.

The scope of the projects required placing Armortec A-Jacks concrete armor units within engineered matrix along the abutment of Bridge #64 at Stinson Creek and downstream at both sides of the creek. A total of 900 A-Jacks units were placed in the dry after excavation of the affected area including removal of a failed poured concrete abutment scope. A-Jacks were placed in an engineered matrix (2 x 1 stack) along the toe of the slope reaching from the bridge abutment and downstream. The intent of protecting the toe meant stability to the slope which served to support the highway Route 60 servicing the county. Rock Riprap was used to backfill and stabilize the forces of erosion on each embankment.

The installation from the time entry to the stream began lasted two days. Four laborers and a track hoe were used to clear and make ready the A-Jacks as well as backfilling the units at the end of construction. A-Jacks are recognized as a permanent high performance and cost effective toe stabilization technology used with hard armor backfill or as a bioengineered system and are written in to HEC-23 as one of six acceptable scour countermeasures endorsed by the FHWA.

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| **PRODUCT:** | Armortec A-Jacks AJ-24 concrete armor units |
| **AMOUNT:** | 900 Units |
| **DATE:** | Summer 2003 |
| **OWNER:** | State of Kentucky, Carter County |
| **ENGINEER:** | KYTC, Frankfort Kentucky |
| **CONSULTING ENGINEER:** | Fuller, Mossbarger, Scott and May of Lexington, KY |
| **CONTRACTOR:** | Horne & Trammel Construction Co, LLC Van Lear, KY<br>Phone: 606-788-0450 |
| **SUBMITTED BY:** | David Kees |
| **DATE:** | March 2004 |