

OVERVIEW: Kentucky River Bank Stabilization, Frankfort, Kentucky

In February of 2003 strong storms and record water levels were experienced on the Kentucky River in downtown Frankfort Kentucky. The result of the damage left from this event was the total dislocation of a large sycamore tree on the bank of the river. This 150 foot tall, five-foot trunk diameter tree weighted over 12 tons after being sawn 10 feet from the root ball. The cavity left by its removal produced certain future structural damage on an adjacent city-parking arcade.

Frankfort Public Works Director Bob Tillet chose A-Jacks to solve the future erosion of the 1:1, 90-foot long embankment from the river to the parking lot above. A local contractor was called and in turn hired a sub-contractor to do the installation. The tree was first removed from the affected area and a receiving trench in preparation for the 4-3-2-1 engineered matrixes of A-Jacks. Filter fabric was laid on a 12-inch bedding layer of #57 crushed stone and then the A-Jacks were placed. The entire project took three days of which the Jacks portion represented 7 hours including backfill of #2 stone behind the Jacks and 12 to 18-inch riprap up the entire slope. The receiving trench was manually backfilled with native soils from the trench excavation. The city was pleased to see how easily and efficiently the Jacks went in and are anxious to see how well they perform. Overall cost for this successful project was \$31,000 with the A-Jacks and stone representing approximately \$4,700.



PRODUCT: A-JACKS AJ-24
Concrete Armor Units

DATE: BEGIN DESIGN: 05-29-03
FINISH CONST: 10-20-03

OWNER: City of Frankfort, KY

ENGINEER: Bob Tillet, P.E. (Retired)
Public Works Division

CONTRACTOR: McGill Construction

SUB-CONTRATOR: Lance Gates Excavating

SUBMITTED BY: David Kees

DATE: November 2003

