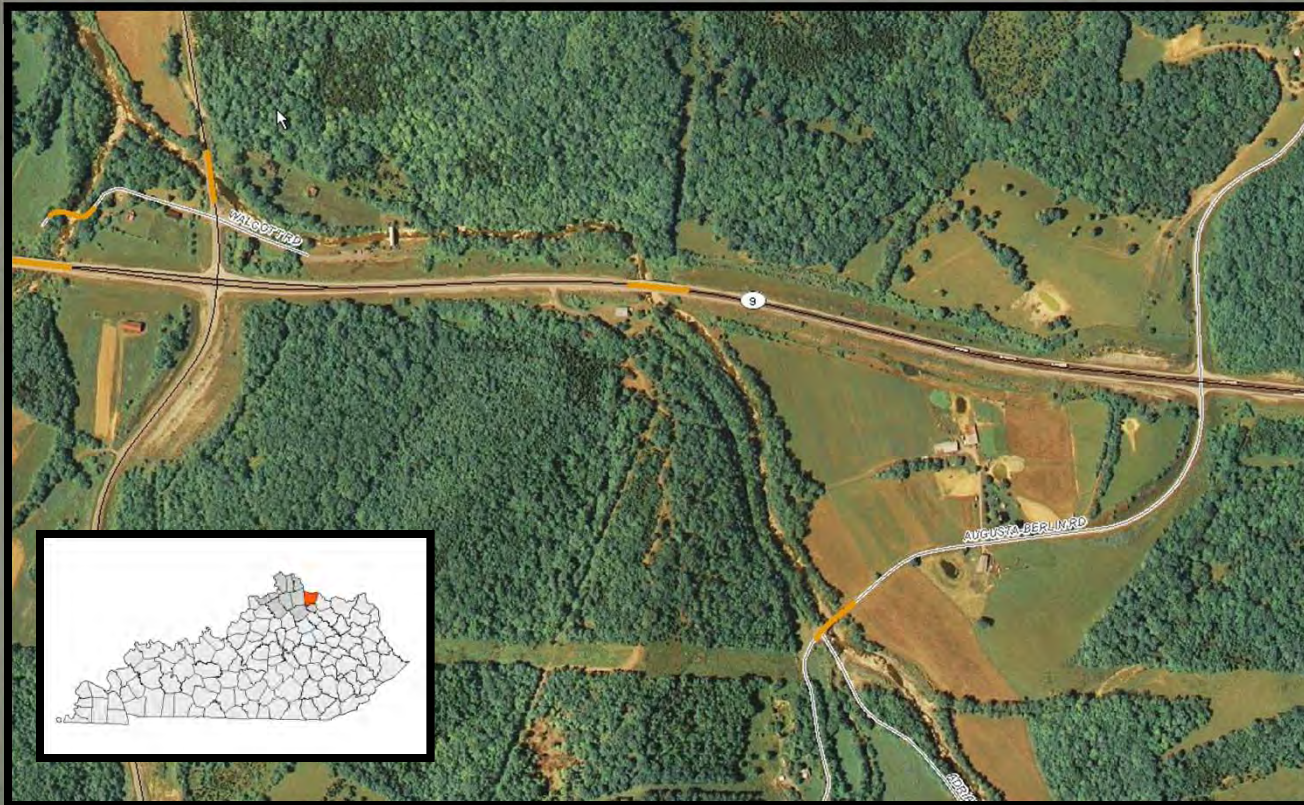


Kentucky Transportation Cabinet District 6 KY 9/AA Highway Over Locust Creek Bracken County, KY



Project Need



- Bridge built in 1989
- Pier not on piling
- Severe scour
- Substandard (12 m) inspection cycle
- 2009 Inspection:
 - Deck – 7
 - Super – 8
 - Sub – 4
 - Channel – 3
 - Waterway – 3



Environmental Concerns

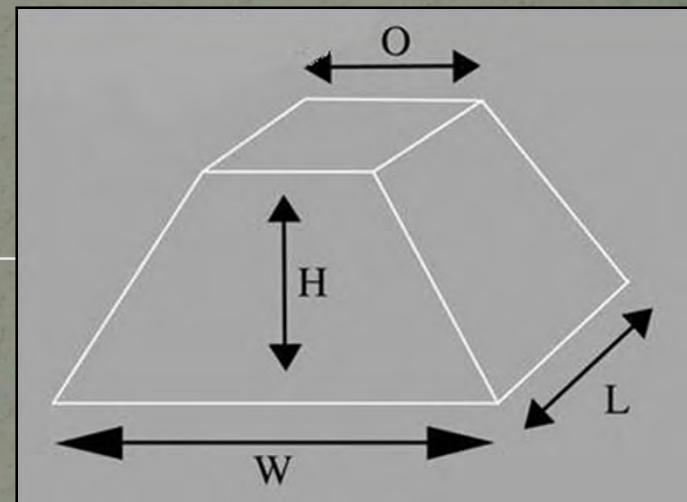






Barrier Design

- Trapezoid shape
- 4, 5 & 6 ft. heights
- Pyramiding
- Temporary
- Permanent
- Connectivity



O = Opening = 2'
H = Height = 4', 5', 6' (standard heights)
W = Width = H + 2'
Baffles every 2'
L = Length = Any desired length

Barrier Material Specifications

- Woven polypropylene fabric
- FDA approved
- 8oz fabric (ASTM D-1910)
- Burst Strength – PSI>600
- Puncture Strength - > 100 lbs.
- White and yellow/green

Master Agreement

- Price contract (MA 605 100000084 1)
- Expired July 31, 2010
- Alternative to gabion baskets
- Pricing - selected line items:
 - 4' barrier - \$42.04/lf (50ft sections)
 - 5' barrier - \$53.26/lf (50ft sections)
 - 6' barrier - \$64.47/lf (50ft sections)
 - Installation equipment - \$116.00/hour
 - Labor and mobilization fees
- Site evaluations





Final Product



Final Product



Final Product

- Project Costs
 - Contractor Fees (Bags, Labor, Consulting): \$58,000
 - Materials (Concrete, Rock): \$40,000
 - Rentals: \$5,000
 - KYTC Costs: \$25,000
 - **TOTAL: \$128,000**
- 2010 Inspection
- Bridge taken off of substandard cycle
 - Deck – 7
 - Super – 8
 - Sub – 7
 - Channel – 7
 - Waterway – 7

Project Highlights

- Protection of bridge piers utilizing an innovative product
- Project encompassed all three branches of KYTC at the District Level
- Majority of work completed with State Maintenance forces, providing considerable cost savings for the project.