

"AB" AVENUE - AUGUSTA CREEK
SUMMARY OF WATER CROSSING IMPROVEMENT PROGRAM
Kalamazoo County Road Commission
February 2004

SITE NAME "AB" Avenue at Augusta Creek
SITE LOCATION Ross TWP, NW1/4, SE1/4, Sec 3, 0.1 mi west of 44th St. on "AB" Ave.
WATERSHED NAME Kalamazoo
SUB-WATERSHED NAME & SIZE Augusta Creek, approx. 17 sq mi.
WATER BODY NAME Augusta Creek
SITE DESCRIPTION: Two lane aggregate road at 1-6% grade crossing Augusta Creek by concrete bridge. Road was aggregate and contained excessive road bank slopes with eroding shoulders that resulted in sediment laden and heated storm water runoff directly entering Augusta Creek.

BMP IMPROVEMENTS:

A series of Structural BMPs were constructed by KCRC to provide appropriate management of storm water. The structural BMPs are as follows:

- 1 Asphalt paved 705 feet of "AB" Ave. westward from 44th St.
- 2 Constructed asphalt curbs to direct runoff through BMP chain.
- 3 Stabilized sub shoulders with appropriately sloped & graded gravel.
- 4 Constructed two low-sloping asphalt storm water spillways.
- 5 Stabilized toe of spillways with graded rip rap, geotextile and enhanced lowland vegetation.
- 6 Silt fencing and other sediment entrapment devices were installed during construction activities.

A series of Managerial BMPs instituted by KCRC will ensure the effectiveness of the overall BMP train.

- 1 Snow plow truck drivers are not to apply salt directly over crossing.
- 2 Pesticide application will not take place at crossing.
- 3 Biannual or more frequent sweeping and debris removal will be conducted.
- 4 Biannual or more frequent inspection of rip rap at spillways will be conducted. Stabilize problem areas as required and/or remove accumulated sediment/debris as required.

WATER QUALITY IMPROVEMENTS:

- 1 Paving "AB" Ave. road has essentially eliminated sediment generated from the former aggregate roadbed from entering Augusta Creek.
- 2 A paved & crowned road directs runoff along rolled curb to spillways, thereby eliminating scour and erosion at bridge slopes and stream banks.
- 3 Runoff entering spillway is filtered by naturally occurring and enhanced lowland vegetation.
- 4 Runoff directed away from crossing and stream bank promotes groundwater recharge and prevents the heating effects to Augusta Creek.
5. Specific sediment and nutrient reduction values: Sediment 0.0165 tons; Phosphorous 0.0109 lbs; and, Nitrogen 0.0281 lbs.

BMP COST SUMMARY

Original cost estimate = \$22,000. Considering the 80/20 split, \$17,600 grant/\$4,400 local match.

Actual cost with overhead = \$19,850. Considering the 80/20 split, \$15,880 grant/\$3,970 local match.

Local match comprised of direct dollars from Ross Township = \$3,970.

Grant dollars can be billed to the Kalamazoo Conservation District for \$15,880.



AB AVENUE LOOKING EAST PRIOR TO BMP CONSTRUCTION, JULY 2003



AB AVENUE LOOKING EAST AT FOLLOWING BMP CONSTRUCTION,
NOVEMBER 2003



AB AVENUE LOOKING WEST AT SOUTH CROSSING PRIOR TO BMP
CONSTRUCTION, JULY 2003



AB AVENUE LOOKING EAST AT SOUTH SPILLWAY, FOLLOWING
CONSTRUCTION, NOVEMBER 2003