

GEOTECHNICAL UNIT FIELD SCOUR REPORT

PROJECT: 8.2970601 ID: B-3485 COUNTY: Macon

DESCRIPTION(1): Bridge No. 16 on SR-1309 Over Cartoogechaye Creek

INFORMATION ON EXISTING BRIDGES Information obtained from:  field inspection  
 microfilm(Reel: \_\_\_\_\_ Pos: \_\_\_\_\_)  
 other Hydraulic Design Report

COUNTY BRIDGE NO. 16 BRIDGE LENGTH 120 Ft. NO. BENTS IN: CHANNEL 2 FLOOD PLAIN 2

FOUNDATION TYPE: Concrete footings.

**EVIDENCE OF SCOUR(2):**

ABUTMENTS OR END BENT SLOPES: Minor amount at EB1.

INTERIOR BENTS: Minor amount at B1-A.

CHANNEL BED: None noted.

CHANNEL BANKS: Minor (< 2.0 ft.) amount on downstream banks.

**EXISTING SCOUR PROTECTION:**

TYPE(3): Pile and Panel end bent walls with wingwalls.

EXTENT(4) 15 feet either side of end bent wall.

EFFECTIVENESS(5): Good

OBSTRUCTIONS(6) (DAMS, DEBRIS, ETC.): Boulders and debris on upstream side; island on downstream side.

**DESIGN INFORMATION**

CHANNEL BED MATERIAL(7) (SAMPLE RESULTS ATTACHED): Gravel and cobbles with sand and occasional boulders.

CHANNEL BANK MATERIAL(8) (SAMPLE RESULTS ATTACHED): Silty sand with gravel and boulders.

FOUNDATION BEARING MATERIAL(9):

CHANNEL BANK COVER(10): Grass

FLOOD PLAIN WIDTH(11): EB1 > 100 feet EB2 = 35 feet

FLOOD PLAIN COVER(12): Grass and trees.

**DESIGN INFORMATION CONT.**

STREAM IS  DEGRADING  AGGRADING (13)

OTHER OBSERVATIONS AND COMMENTS:

CHANNEL MIGRATION TENDENCY (14): West

GEOTECHNICALLY ADJUSTED SCOUR ELEVATION (15):

EB1-A: 2130.5 Ft.	B2-A: 2123.0 Ft.
EB1-B: 2128.0 Ft.	B2-B: 2130.0 Ft.
B1-A: 2121.5 Ft.	EB2-A: 2138.0 Ft.
B1-B: 2129.5 Ft.	EB2-B: 2134.0 Ft.

REPORTED BY: C. A. Dunnagan, TEG-III DATE: 05/09/02

**INSTRUCTIONS**

- (1) GIVE THE DESCRIPTION OF THE SPECIFIC SITE GIVING ROUTE NUMBER AND BODY OF WATER CROSSED.
- (2) NOTE ANY EVIDENCE OF SCOUR AT THE EXISTING END BENTS OR ABUTMENTS (UNDERMINING, SLOUGHING, SCOUR LOCATIONS, DEGRADATIONS, ETC.)
- (3) NOTE ANY EXISTING SCOUR PROTECTION (RIP RAP, ETC.)
- (4) DESCRIBE THE EXTENT OF ANY EXISTING SCOUR PROTECTION.
- (5) DESCRIBE WHETHER OR NOT THE SCOUR PROTECTION APPEARS TO BE WORKING.
- (6) NOTE ANY DAMS, FALLEN TREES, DEBRIS AT BENTS, ETC.
- (7) DESCRIBE THE CHANNEL BED MATERIAL: A SAMPLE SHOULD BE TAKEN FOR GRAIN SIZE DISTRIBUTION, ATTACH LAB RESULTS.
- (8) DESCRIBE THE CHANNEL BANK MATERIAL: A SAMPLE SHOULD BE TAKEN FOR GRAIN SIZE DISTRIBUTION, ATTACH LAB RESULTS.
- (9) DESCRIBE THE FOUNDATION BEARING MATERIAL.
- (10) DESCRIBE THE BANK COVERING (GRASS, TREES, RIP RAP, NONE, ETC.)
- (11) GIVE THE APPROXIMATE FLOOD PLAIN WIDTH (ESTIMATE).
- (12) DESCRIBE THE FLOOD PLAIN COVERING (GRASS, TREES, CROPS, ETC.)
- (13) CHECK THE APPROPRIATE SPACE AS TO WHETHER THE STREAM IS DEGRADING OR AGGRADING
- (14) DESCRIBE THE POTENTIAL OF THE BODY OF WATER TO MIGRATE Laterally DURING THE LIFE OF THE BRIDGE (APPROXIMATELY 100 YEARS).
- (15) GIVE THE GEOTECHNICALLY ADJUSTED SCOUR ELEVATION EXPECTED OVER THE LIFE OF THE BRIDGE (APPROXIMATELY 100 YEARS). THIS CAN BE GIVEN AS AN ELEVATION RANGE ACROSS THE SITE, OR ON A BENT BY BENT BASIS WHERE VARIATIONS EXIST. DISCUSS RELATIONSHIP BETWEEN THE HYDRAULICS THEORETICAL SCOUR AND THE GEOTECHNICALLY ADJUSTED SCOUR ELEVATION. THE GEOTECHNICALLY ADJUSTED SCOUR ELEVATION IS BASED ON THE ERODABILITY OF MATERIALS WITH CONSIDERATION FOR JOINTING, FOLIATION, BEDDING ORIENTATION AND FREQUENCY; CORE RECOVERY PERCENTAGE; PERCENTAGE RQD; DIFFERENTIAL WEATHERING, SHEAR STRENGTH; OBSERVATIONS AT EXISTING STRUCTURES; OTHER TESTS DEEMED APPROPRIATE; AND OVERALL GEOLOGIC CONDITIONS AT THE SITE.