

GEOTECHNICAL UNIT FIELD SCOUR REPORT

PROJECT: 8.2572301 ID: B-3504 COUNTY: RANDOLPH

DESCRIPTION(1): BRIDGE 363 OVER CARAWAY CREEK ON SR 1331

INFORMATION ON EXISTING BRIDGES Information obtained from: field inspection
 microfilm(Reel: Pos:)
 other

COUNTY BRIDGE NO. 363 BRIDGE LENGTH 75' NO. BENTS IN: CHANNEL 0 FLOOD PLAIN 4

FOUNDATION TYPE: END BENTS : TIMBER PILES, INTERIOR BENTS: SPREAD FOOTINGS

EVIDENCE OF SCOUR(2):

ABUTMENTS OR END BENT SLOPES: NONE

INTERIOR BENTS: NONE

CHANNEL BED: NONE

CHANNEL BANKS: NONE

EXISTING SCOUR PROTECTION:

TYPE(3): RIP RAP AT WEST END BENT AND BOTH INTERIOR BENTS

EXTENT(4): WIDTH OF BRIDGE

EFFECTIVENESS(5): GOOD

OBSTRUCTIONS(6) (DAMS, DEBRIS, ETC.): NONE

DESIGN INFORMATION

CHANNEL BED MATERIAL(7) (SAMPLE RESULTS ATTACHED): Silty Cse to Fine SAND (A-2-4), Silty Cse
to F SAND w/ Gravel (A-1-a)

CHANNEL BANK MATERIAL(8) (SAMPLE RESULTS ATTACHED): Fine Sandy SILT (A-4); Some w/ Rock Frags

CHANNEL BANK COVER(9): GRASS, UNDERBRUSH, TREES

FLOOD PLAIN WIDTH(10): 300'

FLOOD PLAIN COVER(11): GRASS, UNDERBRUSH, TREES

DESIGN INFORMATION CONT.

STREAM IS DEGRADING X AGGRADING (12)

OTHER OBSERVATIONS AND COMMENTS: NONE

CHANNEL MIGRATION TENDENCY (13): EAST

REPORTED BY: *D. H. Hall* DATE: 12/30/03
 GEOSCIENCE GROUP, INC.

GEOTECHNICALLY ADJUSTED SCOUR ELEVATION (14):

Boring	Elevation
B1-A	427.2 FT
B1-B	425.8 FT
B2-A	430.5 FT
B2-B	427.7 FT

REPORTED BY: *Chad m. Wally* DATE: 1-30-04
 NCDOT GEOTECHNICAL UNIT

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 BANK COVERING (GRASS, TREES, RIP RAP, NONE, ETC.)
- (10) GIVE THE APPROXIMATE FLOOD PLAIN WIDTH (ESTIMATE).
- (11) DESCRIBE THE FLOOD PLAIN COVERING (GRASS, TREES, CROPS, ETC.)
- (12) CHECK THE APPROPRIATE SPACE AS TO WHETHER THE STREAM IS DEGRADING OR AGGRADING
- (13) DESCRIBE THE POTENTIAL OF THE BODY OF WATER TO MIGRATE LATERALLY DURING THE LIFE OF THE BRIDGE (APPROXIMATELY 100 YEARS).
- (14) 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.