

Rev. 5/91

GEOTECHNICAL UNIT FIELD SCOUR REPORT

PROJECT: 8.2090201 ID: B-3871 COUNTY: Martin Co.

DESCRIPTION (1): Bridge #64 on SR 1001 over Dog Branch

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

COUNTY BRIDGE NO. 64 BRIDGE LENGTH 35' NO. BENTS 3 NO. BENTS IN CHANNEL 1 FLOOD PLAIN 2

FOUNDATION TYPE: Timber piles

EVIDENCE OF SCOUR (2):

ABUTMENTS OR END BENT SLOPES: None noted

INTERIOR BENTS: None noted

CHANNEL BED: None noted

CHANNEL BANKS: None noted

EXISTING SCOUR PROTECTION:

TYPE (3): Abutments and wingwalls

EXTENT (4): extends approximately 10 feet to either side of the bridge

EFFECTIVENESS (5): Very effective

OBSTRUCTIONS (6) (DAMS, DEBRIS, ETC.): No obstructions

DESIGN INFORMATION

CHANNEL BED MATERIAL (7) (SAMPLE RESULTS ATTACHED): Very loose to loose silty sand with wood

CHANNEL BANK MATERIAL (8) (SAMPLE RESULTS ATTACHED): Very loose silty fine sand (SS-42)

CHANNEL BANK COVER (10): grasses, shrubs and trees

DESIGN INFORMATION CONT.

FLOOD PLAIN WIDTH (11): approximately 430 feet

FLOOD PLAIN COVER (12): Trees and shrubs

STREAM IS X DEGRADING AGGRADING EQUILIBRIUM (13)

OTHER OBSERVATIONS AND COMMENTS: Stream appears to be degrading very slowly.

CHANNEL MIGRATION TENDENCY (14): Low

GEOTECHNICALLY ADJUSTED SCOUR ELEVATION (15):

Based on findings during the investigation, the Geotechnically Adjusted Scour Elevation should

match the maximum theoretical scour elevation of 24.9 feet provided by the Hydraulics Unit.

REPORTED BY: J. R. McCoy DATE: 4/11/03

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, AGGRADING, OR EQUILIBRIUM. (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.