GEOTECHNICAL UNIT FIELD SCOUR REPORT

PROJECT: 8.2843601 ID: B-3310 COUNTY: Buncombe

DESCRIPTION(1): Bridge No.145 on SR-2173 over Dillingham Creek

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

COUNTY BRIDGE NO. 145 BRIDGE LENGTH 70.0' NO. BENTS IN: CHANNEL 1 FLOOD PLAIN 2

FOUNDATION TYPE: Footings

EVIDENCE OF SCOUR(2):

ABUTMENTS OR END BENT SLOPES: None noted.

INTERIOR BENTS: Deep channel located against interior bent, created by scour.

CHANNEL BED: None noted.

CHANNEL BANKS: Approx. 10.0' cliff upstream of EB1; minor amounts on downstream banks.

EXISTING SCOUR PROTECTION:

TYPE(3): Endbent walls with wingwalls.

EXTENT(4): Wingwalls extend 10.0' either side of endbent walls.

EFFECTIVENESS(5): Good.

OBSTRUCTIONS(6) (DAMS,DEBRIS,ETC.): ____

DESIGN INFORMATION

CHANNEL BED MATERIAL(7) (SAMPLE RESULTS ATTACHED): Rock with gravel, cobbles and boulders.

CHANNEL BANK MATERIAL(8) (SAMPLE RESULTS ATTACHED): Sand with gravel and cobbles.

FOUNDATION BEARING MATERIAL(9): Rock.

CHANNEL BANK COVER(10): Shrubs.

FLOOD PLAIN WIDTH(11): >100 feet.

FLOOD PLAIN COVER(12): Trees.

DESIGN INFORMATION CONT.

STREAM IS x DEGRADING ____ AGGRADING (13)

OTHER OBSERVATIONS AND COMMENTS: ____

CHANNEL MIGRATION TENDENCY (14): North

GEOTECHNICALLY ADJUSTED SCOUR ELEVATION (15): ____

REPORTED BY: C A Dunnagan DATE: 9/15/2003

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 ELEVEVATION 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.