

GEOTECHNICAL UNIT FIELD SCOUR REPORT

PROJECT: 33212.1.1 ID: B-3667 COUNTY: Jackson

DESCRIPTION(1): Bridge No. 47 on SR-1131 over Trout Creek

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

COUNTY BRIDGE NO. 47 BRIDGE LENGTH 30.5' NO. BENTS IN: CHANNEL 0 FLOOD PLAIN 2

FOUNDATION TYPE: Timber Pile encased in concrete footing.

EVIDENCE OF SCOUR(2):

ABUTMENTS OR END BENT SLOPES: Both end bents have evidence of scour.

INTERIOR BENTS: N/A

CHANNEL BED: None noted.

CHANNEL BANKS: End Bent One bank has been undermined and collapsed.

EXISTING SCOUR PROTECTION:

TYPE(3): Rip-Rap has been placed behind both end bents due to previous scour.

EXTENT(4): See above.

EFFECTIVENESS(5): Poor: Rip-Rap has been dry stacked - not cemented.

OBSTRUCTIONS(6) (DAMS, DEBRIS, ETC.): Large boulders in channel bed.

DESIGN INFORMATION

CHANNEL BED MATERIAL(7) (SAMPLE RESULTS ATTACHED): Sand, gravel, cobbles, large boulders.

CHANNEL BANK MATERIAL(8) (SAMPLE RESULTS ATTACHED): Colluvium: sand, gravel, boulders.

FOUNDATION BEARING MATERIAL(9):

CHANNEL BANK COVER(10): Dry stacked rock at EB1. Trees and brush at End Bent Two.

FLOOD PLAIN WIDTH(11): Approximately 800 ft.

FLOOD PLAIN COVER(12): Trees, grass.

DESIGN INFORMATION CONT.

STREAM IS X DEGRADING AGGRADING (13)

OTHER OBSERVATIONS AND COMMENTS:

CHANNEL MIGRATION TENDENCY (14): Toward End Bent One.

GEOTECHNICALLY ADJUSTED SCOUR ELEVATION (15): 2715 ft.

REPORTED BY: J. W. Mann, Project Engineering Geologist DATE: 2/4/2004

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.