N.C.D.O.T. GEOTECHNICAL UNIT
BORING LOG

SHEET 1 OF 1

PROJECT NO. 8.2353001	**ID.** B-3450	**COUNTY** Durham	**GEOLOGIST** D. Goodnight
SITE DESCRIPTION Bridge No. 122 Over Sandy Creek on SR 1116 (Garrett Road)			**GROUND WATER (ft)**
BORING NO. D-EB2	**BORING LOCATION** 4+16	**OFFSET** CL	**ALIGNMENT** -DET2-	**0 HR.** 4.6
COLLAR ELEV. 249.9 ft	**NORTHING** 803280.55	**EASTING** 2007648.54		**24 HR.** 4.6
TOTAL DEPTH 34.1 ft	**DRILL MACHINE** Mobile B-57	**DRILL METHOD** 3-7/8" Tricone Wash Rotary	**HAMMER TYPE** 140 lb. Manual
DATE STARTED 10/14/02	**COMPLETED** 10/14/02	**SURFACE WATER DEPTH** NA	

ELEV. (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 20 40 60 80 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
249.9									249.9 0.00
248.9	1.0								ALLUVIAL: Soft Brown Clayey Coarse to Fine Sandy SILT with a Trace of Organic Matter (Roots)
246.4	3.5	2	2	2	4	SS-21	23.8%		246.9 3.0
243.9	6.0	3	2	1	3				ALLUVIAL: Very Loose Tan Clayey Silty Coarse to Fine SAND with a Trace of Organic Matter (Decayed Plants and Rootlets)
241.4	8.5	2	1	2	3				241.9 8.0
236.4	13.5	2	5	9	14	SS-22	20.0%		ALLUVIAL: Stiff Grey Clayey Fine Sandy SILT with a Trace of Organic Matter (Rootlets and Decayed Plants)
231.4	18.5	2	2	3	5				237.9 12.0
226.4	23.5	2	3	3	6				ALLUVIAL: Loose Grey Clayey Silty Fine to Coarse SAND
221.4	28.5	25	75/0.2		100/0.7				226.4 23.5
216.4	33.5	60/0.1			60/0.1				WEATHERED ROCK: Grey Triassic Mudstone
		80	20/0.1		100/0.6				222.9 27.0
									NON-CRYSTALLINE ROCK: Grey Triassic Mudstone
									218.9 31.0
									WEATHERED ROCK: Grey Triassic Mudstone
									215.8 34.1
									Boring Terminated at Elevation 215.8 feet in Weathered Rock (Grey Triassic Mudstone)

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GEOTECHNICAL UNIT FIELD SCOUR REPORT

PROJECT: 8.2353001 ID: B-3450 COUNTY: Durham

DESCRIPTION(1): Bridge No. 122 over Sandy Creek on SR 1116 (Garrett Road)

INFORMATION ON EXISTING BRIDGES Information obtained from: X field inspection
__ microfilm(Reel: __ Pos: __)
X other Bridge Survey and Hydraulic Design Report dated 5/10/02

COUNTY BRIDGE NO. 122' BRIDGE LENGTH 75' NO. BENTS IN: CHANNEL 1 FLOOD PLAIN 1

FOUNDATION TYPE: Steel H-Piles and timber abutments, interior bent-2 H-piles have concrete bases

EVIDENCE OF SCOUR(2):

ABUTMENTS OR END BENT SLOPES: Deep ravines and drainages intersect main channel on downstream side. Wing walls and abutments appear to be rotting in places.

INTERIOR BENTS: Not evident

CHANNEL BED: Large scour deptression directly under the existing bridge

CHANNEL BANKS: Undercutting of banks directly under existing bridge; trees falling into the channel away from existing bridge.

EXISTING SCOUR PROTECTION:

TYPE(3): Boulders/rip rap under existing bridge; timber wing/retaining walls

EXTENT(4): Boulders and rip rap are only in the channel underneath the existing bridge

EFFECTIVENESS(5): minimal; large scour depression is evident underneath the existing bridge

OBSTRUCTIONS(6) (DAMS,DEBRIS,ETC.): Fallen trees are across channel at various points upstream and downstream of existing bridge; old timber piles from previous bridge under existing bridge; tires, mattress, and other debris under existing bridge and in channel.

DESIGN INFORMATION

CHANNEL BED MATERIAL(7) (SAMPLE RESULTS ATTACHED): Fine to coarse SAND (A-3 and A-1-b)

CHANNEL BANK MATERIAL(8) (SAMPLE RESULTS ATTACHED): Variably clayey and variably silty fine to coarse SAND (A-1-b and A-2-4), very clayey fine to coarse very sandy SILT (A-4), and silty coarse to fine very sandy CLAY (A-6)

FOUNDATION BEARING MATERIAL(9): weathered rock and non-crystalline rock (triassic mudstone and sandstone)

CHANNEL BANK COVER(10): hardwood trees, grass, brush, wood debris

FLOOD PLAIN WIDTH(11): Approximately 500 feet

FLOOD PLAIN COVER(12): hardwood trees, grass, brush, wood debris