

REFERENCE: SF-080202

PROJECT: 15406.1009013

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	SF-080202	1	5

CONTENTS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	LEGEND (SOIL & ROCK)
3	SITE PLAN
4	PROFILE
5	BORE LOGS

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY BLADEN
PROJECT DESCRIPTION BRIDGE NO. 202 ON -L- (NC 210)
OVER SMITH MILL POND RUN

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE ENCOUNTERED ON THE PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

- NOTES:
1. THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS ACCURATE NOR IS IT CONSIDERED PART OF THE PLANS, SPECIFICATIONS OR CONTRACT FOR THE PROJECT.
 2. BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

PERSONNEL

C.J. CORNETTE

S.N. ZIMARINO

R.E. SMITH

J.M. EDMONDSON

INVESTIGATED BY T.C. BOTTOMS

DRAWN BY C.J. CORNETTE

CHECKED BY D.N. ARGENBRIGHT

SUBMITTED BY D.N. ARGENBRIGHT

DATE OCTOBER 2018



DocuSigned by:
CJ Cornette 10/11/2018

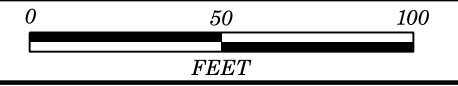
5D86E7F73B61448... SIGNATURE DATE

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT
SUBSURFACE INVESTIGATION
SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

Table with 4 main columns: SOIL DESCRIPTION, GRADATION, ROCK DESCRIPTION, and TERMS AND DEFINITIONS. It contains detailed technical specifications, classification charts, and symbols for soil and rock analysis.

SITE PLAN



SKEW = UNKNOWN

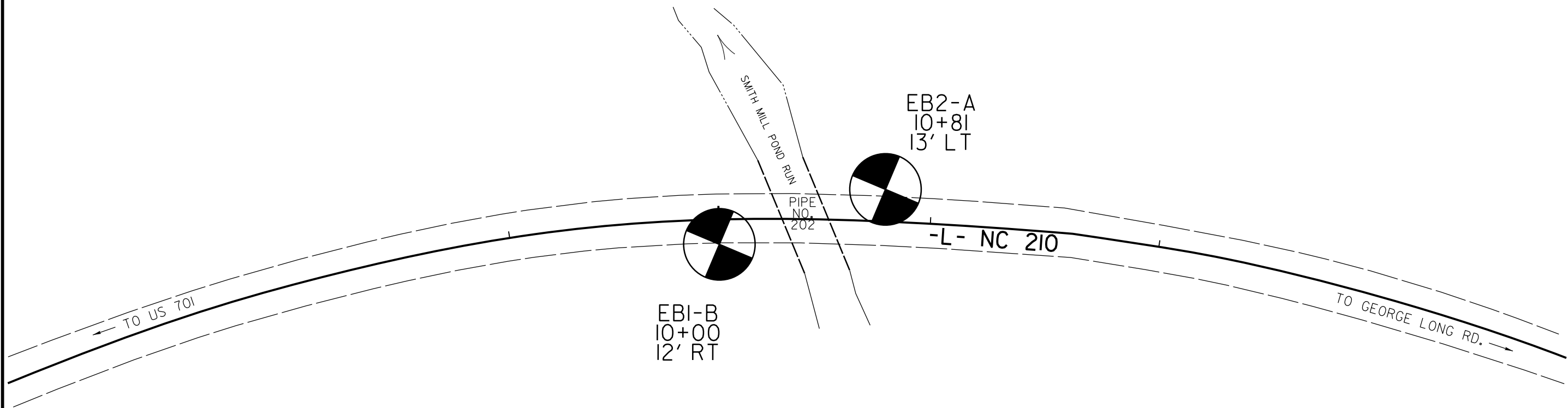


9

10

11

12



5/14/99

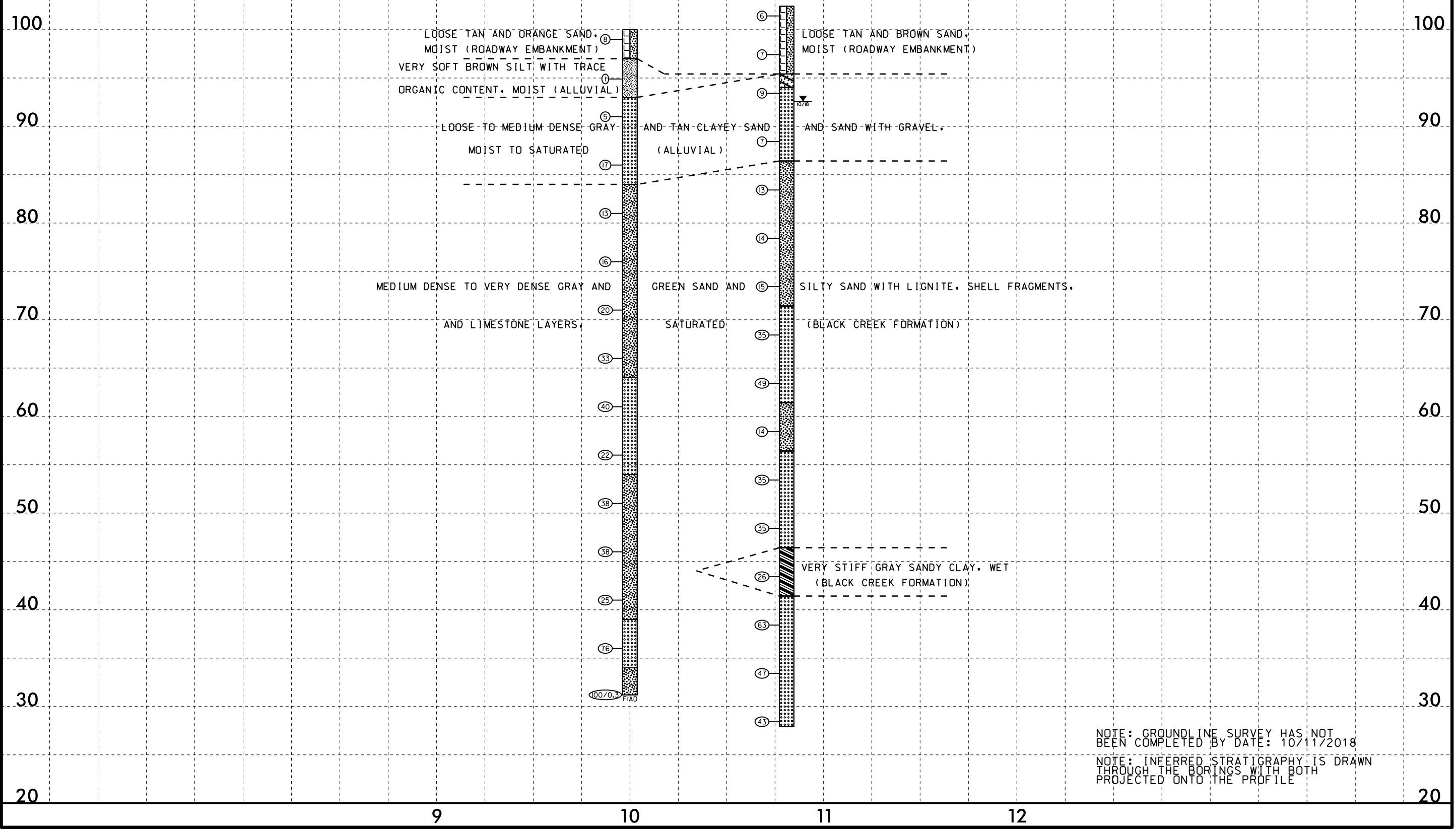
PROJECT REFERENCE NO. SF-080202	SHEET NO. 4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PROFILE THROUGH BORINGS PROJECTED ALONG -L-

EB1-B
10+00
12' RT

EB2-A
10+81
13' LT

V.E. = 5



IL-OCT-2008 15:52
S:\ERC\Projects\11e_Investigation\TIP_SF080202.GEO_BRDG\CADD_GEO\TECH\PlanProf_SF080202.GEO_BRDG_PFL.dgn
\$\$\$\$\$

GEOTECHNICAL BORING REPORT

BORE LOG

WBS 15406.1009013		TIP SF-080202		COUNTY BLADEN		GEOLOGIST Zimarino, S. N.										
SITE DESCRIPTION BRIDGE NUMBER 202 ON -L- (NC 210) OVER SMITH MILL POND RUN							GROUND WTR (ft)									
BORING NO. EB1-B		STATION 10+00		OFFSET 12 ft RT		ALIGNMENT -L-										
COLLAR ELEV. 100.0 ft		TOTAL DEPTH 68.8 ft		NORTHING 362,134		EASTING 2,177,823										
DRILL RIG/HAMMER EFF./DATE GFO0075 CME-45C 89% 08/13/2018				DRILL METHOD Mud Rotary		HAMMER TYPE Automatic										
DRILLER Smith, R. E.		START DATE 10/09/18		COMP. DATE 10/10/18		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
100	100.0	0.0	2	4	4									100.0	GROUND SURFACE	0.0
														97.0	ROADWAY EMBANKMENT TAN AND ORANGE SAND, MOIST	3.0
95	95.9	4.1	1	0	1									93.0	ALLUVIAL BROWN SANDY SILT WITH TRACE ORGANIC CONTENT, MOIST	7.0
														84.0	ALLUVIAL TAN AND GRAY SAND, MOIST TO SATURATED	16.0
90	92.0	8.0	2	3	2									84.0	COASTAL PLAIN GRAY SILTY SAND WITH LIGNITE, SHELL FRAGMENTS, AND LIMESTONE FRAGMENTS, SATURATED (BLACK CREEK FORMATION)	16.0
														64.0		36.0
85	87.0	13.0	1	7	10									54.0		46.0
														39.0		61.0
80	82.0	18.0	7	5	8									34.0		66.0
														31.2		68.8
75	77.0	23.0	5	7	9											
70	72.0	28.0	7	8	12											
65	67.0	33.0	12	16	17											
60	62.0	38.0	12	17	23											
55	57.0	43.0	6	9	13											
50	52.0	48.0	12	15	23											
45	47.0	53.0	10	14	24											
40	42.0	58.0	8	12	13											
35	37.0	63.0	16	30	46											
	32.0	68.0	9	100/0.3												

WBS 15406.1009013		TIP SF-080202		COUNTY BLADEN		GEOLOGIST Zimarino, S. N.										
SITE DESCRIPTION BRIDGE NUMBER 202 ON -L- (NC 210) OVER SMITH MILL POND RUN							GROUND WTR (ft)									
BORING NO. EB2-A		STATION 10+81		OFFSET 13 ft LT		ALIGNMENT -L-										
COLLAR ELEV. 102.4 ft		TOTAL DEPTH 74.5 ft		NORTHING 362,089		EASTING 2,177,894										
DRILL RIG/HAMMER EFF./DATE GFO0075 CME-45C 89% 08/13/2018				DRILL METHOD Mud Rotary		HAMMER TYPE Automatic										
DRILLER Smith, R. E.		START DATE 10/09/18		COMP. DATE 10/09/18		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
105	102.4	0.0	2	2	4									102.4	GROUND SURFACE	0.0
														95.4	ROADWAY EMBANKMENT TAN AND BROWN SAND, MOIST	7.0
100	98.4	4.0	5	4	3									94.0	ALLUVIAL GRAY CLAYEY SAND, MOIST	8.4
														86.4	ALLUVIAL GRAY AND TAN SAND WITH GRAVEL, MOIST TO SATURATED	16.0
95	94.4	8.0	WOH	4	5									86.4	COASTAL PLAIN GRAY AND GREEN SILTY SAND AND SAND WITH LIGNITE AND SHELL FRAGMENTS, SATURATED (BLACK CREEK FORMATION)	16.0
														71.4		31.0
90	89.4	13.0	4	3	4									61.4		41.0
														56.4		46.0
85	84.4	18.0	5	6	7									46.4	COASTAL PLAIN GRAY SANDY CLAY, WET (BLACK CREEK FORMATION)	56.0
														41.4	COASTAL PLAIN GRAY AND GREEN SAND WITH SHELL FRAGMENTS AND LIMESTONE LAYERS, SATURATED (BLACK CREEK FORMATION)	61.0
80	79.4	23.0	5	6	8											
75	74.4	28.0	4	7	8											
70	69.4	33.0	12	15	20											
65	64.4	38.0	8	22	27											
60	59.4	43.0	5	6	8											
55	54.4	48.0	8	16	19											
50	49.4	53.0	13	16	19											
45	44.4	58.0	7	11	15											
40	39.4	63.0	9	27	36											
35	34.4	68.0	17	21	26											
30	29.4	73.0	68	26	17											

NCDOT BORE DOUBLE_SF080202_BRDG.GPJ NC_DOT.GDT 10/11/18

Boring Terminated at Elevation 31.2 ft in Hard Sand

Boring Terminated at Elevation 27.9 ft in Dense Sand