

REFERENCE: SF-530038

PROJECT: 17BP.2.R.83

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

**STRUCTURE**  
**SUBSURFACE INVESTIGATION**

COUNTY LENOIR  
PROJECT DESCRIPTION BRIDGE NO. 38 ON -L- (SR 1113)  
OVER TUCKAHOE SWAMP

**CONTENTS**

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET
2	LEGEND (SOIL & ROCK)
3	SITE PLAN
4	PROFILE
5-6	BORE LOGS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	SF-530038	1	6

**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

J.K. CRENSHAW  
R.E. SMITH  
J.M. EDMONDSON

INVESTIGATED BY T.C. BOTTOMS  
DRAWN BY T.C. BOTTOMS  
CHECKED BY D.N. ARGENBRIGHT  
SUBMITTED BY D.N. ARGENBRIGHT  
DATE JUNE 2017



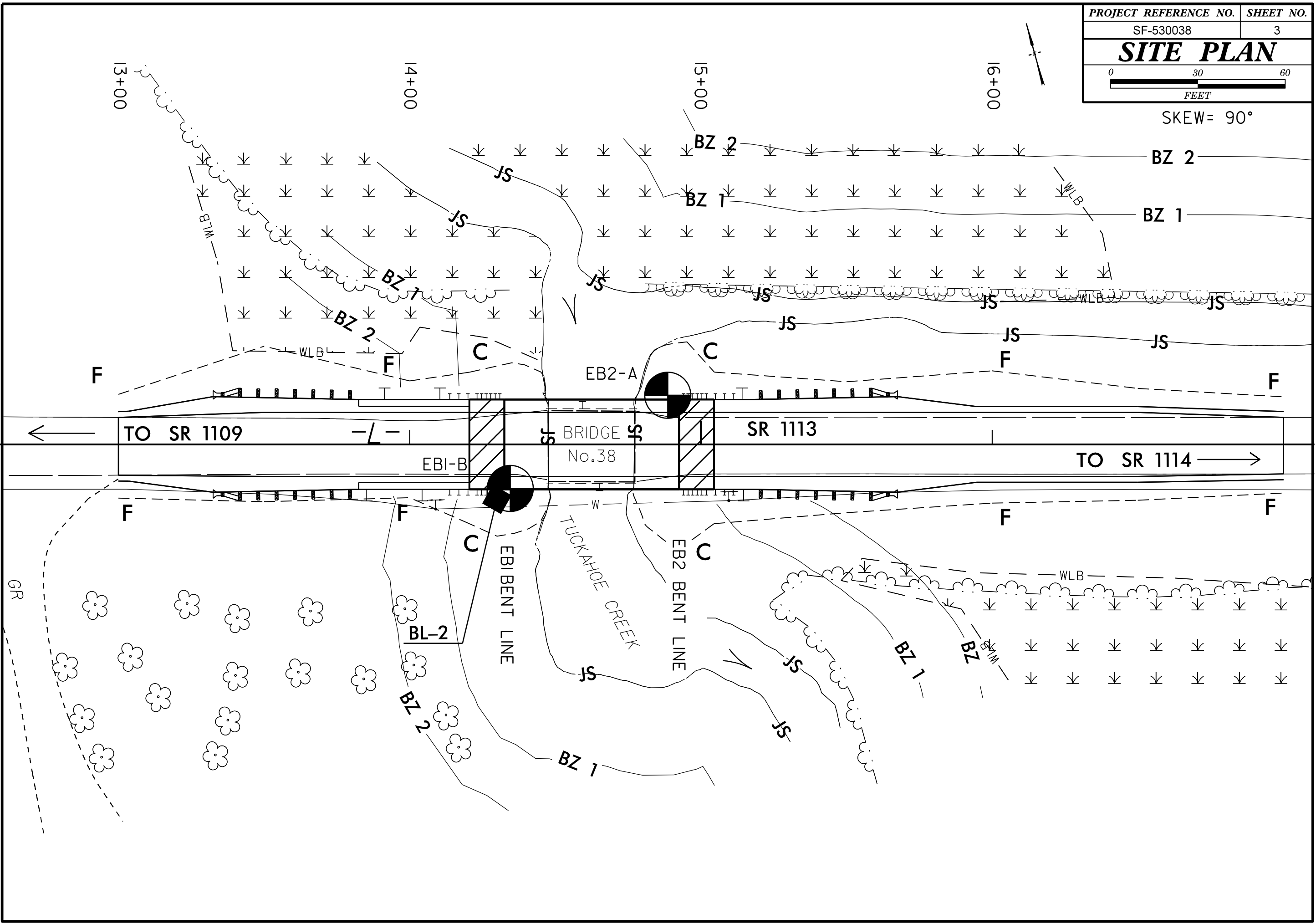
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Tyler Bottoms 6/21/2017  
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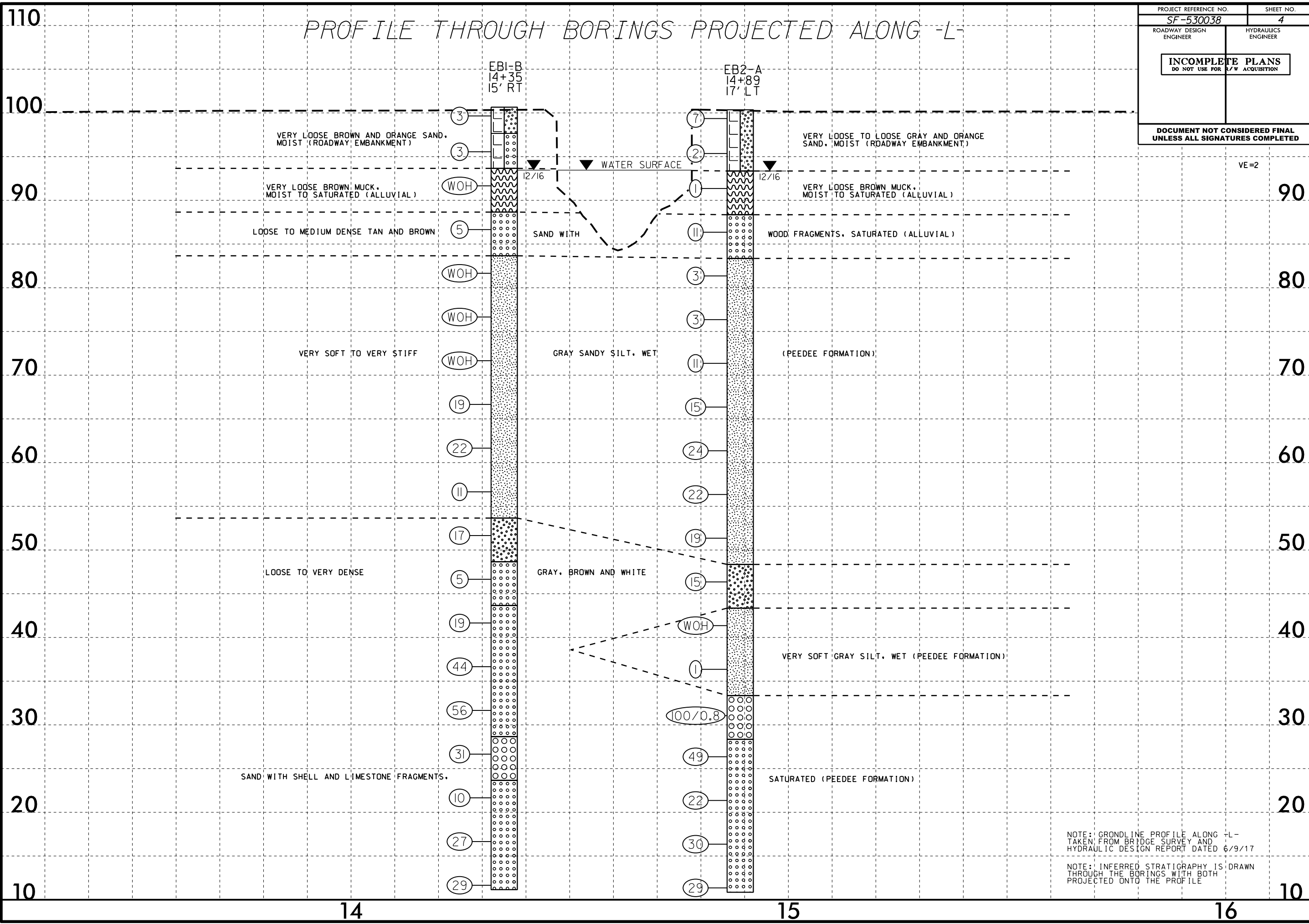
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT
SUBSURFACE INVESTIGATION
SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

Main body of the document containing various tables and sections: SOIL DESCRIPTION, GRADATION, ROCK DESCRIPTION, TERMS AND DEFINITIONS, SOIL LEGEND AND AASHTO CLASSIFICATION, ANGULARITY OF GRAINS, MINERALOGICAL COMPOSITION, COMPRESSIBILITY, PERCENTAGE OF MATERIAL, GROUND WATER, MISCELLANEOUS SYMBOLS, RECOMMENDATION SYMBOLS, ABBREVIATIONS, EQUIPMENT USED ON SUBJECT PROJECT, SOIL MOISTURE - CORRELATION OF TERMS, PLASTICITY, COLOR, FRACTURE SPACING, BEDDING, INDURATION, and NOTES.

SKEW= 90°



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 \$\$\$\$SRMIDM\$\$\$\$



PROJECT REFERENCE NO. <b>SF-530038</b>	SHEET NO. <b>4</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

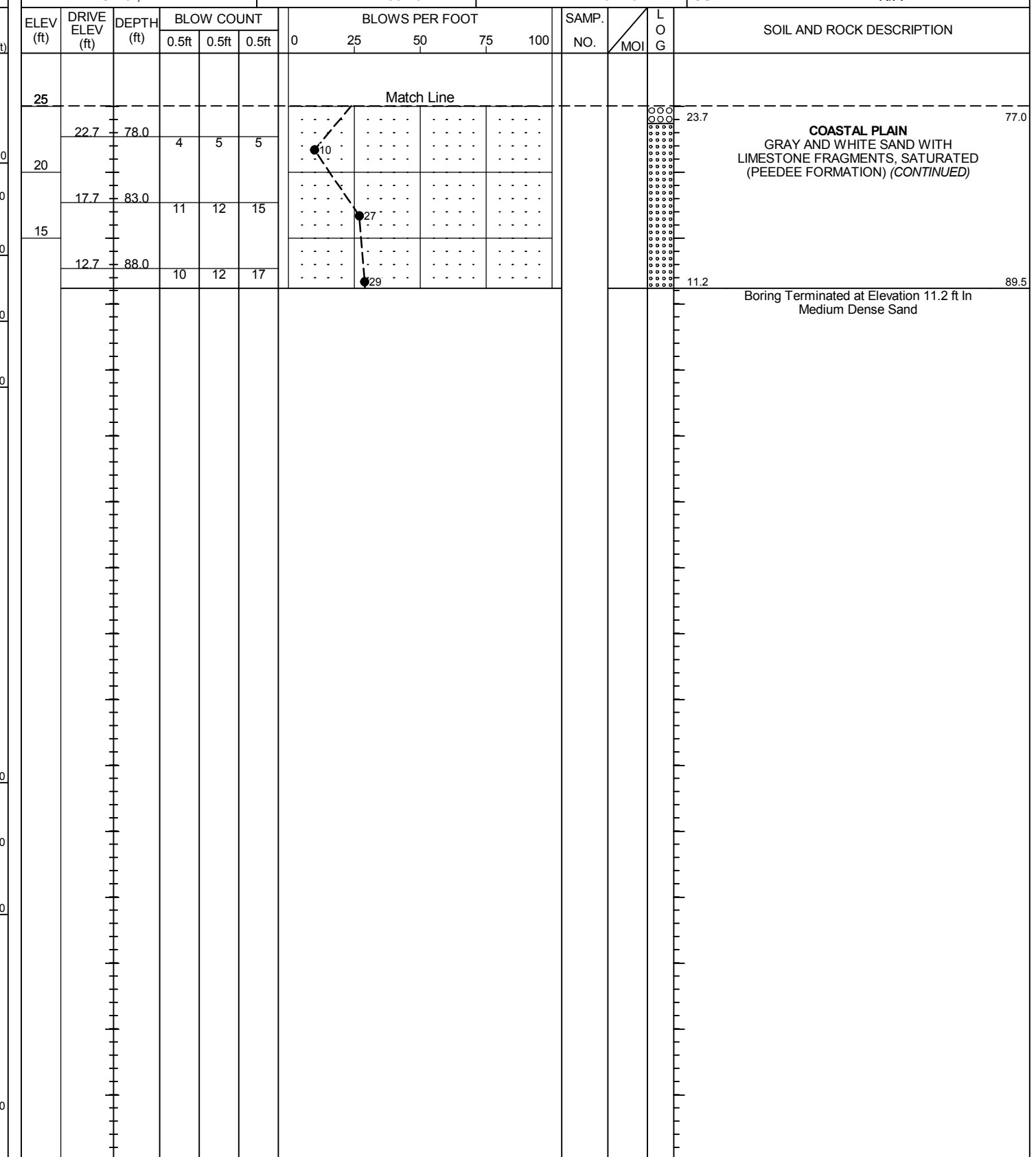
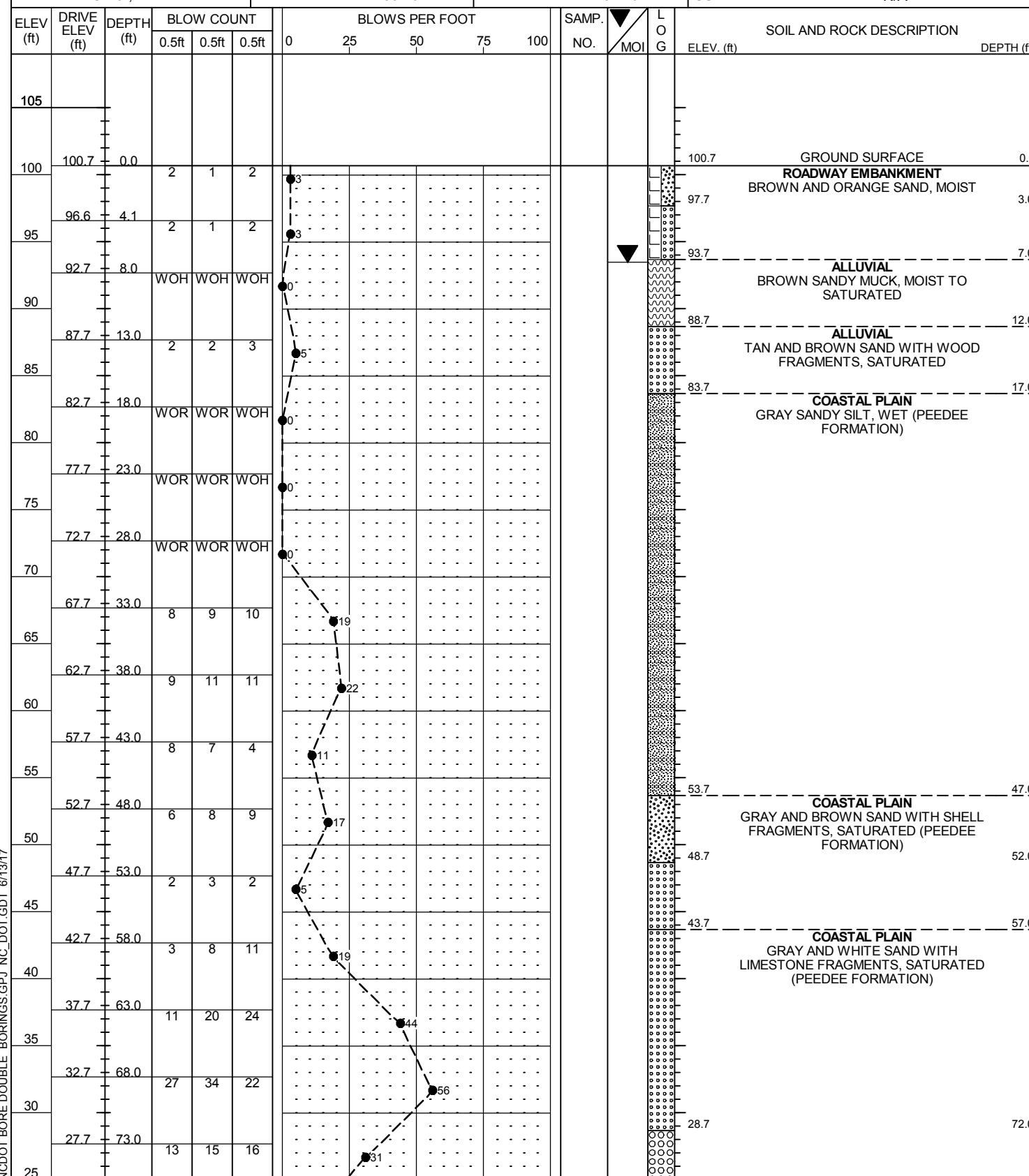
NOTE: GROUNDLINE PROFILE ALONG -L- TAKEN FROM BRIDGE SURVEY AND HYDRAULIC DESIGN REPORT DATED 6/9/17  
 NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE PROFILE

# GEOTECHNICAL BORING REPORT

## BORE LOG

<b>WBS</b> 17BP.2.R.83	<b>TIP</b> SF-530038	<b>COUNTY</b> LENOIR	<b>GEOLOGIST</b> Crenshaw, J. K.
<b>SITE DESCRIPTION</b> BRIDGE NO. 38 ON -L- (SR 1113) OVER TUCKAHOE SWAMP			<b>GROUND WTR (ft)</b>
<b>BORING NO.</b> EB1-B	<b>STATION</b> 14+35	<b>OFFSET</b> 15 ft RT	<b>ALIGNMENT</b> -L-
<b>COLLAR ELEV.</b> 100.7 ft	<b>TOTAL DEPTH</b> 89.5 ft	<b>NORTHING</b> 480,060	<b>EASTING</b> 2,382,919
<b>DRILL RIG/HAMMER EFF./DATE</b> GFO0075 CME-45C 83% 04/11/2016			<b>DRILL METHOD</b> Mud Rotary
<b>DRILLER</b> Smith, R. E.			<b>HAMMER TYPE</b> Automatic
<b>START DATE</b> 11/30/16	<b>COMP. DATE</b> 12/01/16	<b>SURFACE WATER DEPTH</b> N/A	

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NCDOT BORE DOUBLE BORINGS.GPJ NC\_DOT.GDT 6/13/17

# GEOTECHNICAL BORING REPORT

## BORE LOG

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SITE DESCRIPTION BRIDGE NO. 38 ON -L- (SR 1113) OVER TUCKAHOE SWAMP				GROUND WTR (ft)
BORING NO. EB2-A	STATION 14+89	OFFSET 17 ft LT	ALIGNMENT -L-	0 HR. N/A
COLLAR ELEV. 100.4 ft	TOTAL DEPTH 89.5 ft	NORTHING 480,076	EASTING 2,382,979	24 HR. 7.0
DRILL RIG/HAMMER EFF./DATE GFO0075 CME-45C 83% 04/11/2016		DRILL METHOD Mud Rotary	HAMMER TYPE Automatic	
DRILLER Edmondson, J. M.	START DATE 11/30/16	COMP. DATE 11/30/16	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					
110															
100	100.4	0.0	3	3	4									100.4	GROUND SURFACE
95	96.4	4.0	1	1	1										
90	92.4	8.0	WOH	WOH	1										
85	87.4	13.0	1	4	7										
80	82.4	18.0	2	1	2										
75	77.4	23.0	2	2	1										
70	72.4	28.0	6	6	5										
65	67.4	33.0	4	6	9										
60	62.4	38.0	9	11	13										
55	57.4	43.0	7	11	11										
50	52.4	48.0	7	9	10										
45	47.4	53.0	6	7	8										
40	42.4	58.0	WOR	WOH	WOH										
35	37.4	63.0	WOR	WOH	1										
30	32.4	68.0	9	48	52/0.3									100/0.8	

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			0.5ft	0.5ft	0.5ft	0	25	50	75	100					
30															
	27.4	73.0	13	21	28										
25															
20	22.4	78.0	5	7	15										
15	17.4	83.0	13	15	15										
	12.4	88.0	12	13	16										

Match Line

**COASTAL PLAIN**  
 GRAY AND WHITE SAND WITH LIMESTONE FRAGMENTS, SATURATED (PEEDEE FORMATION) *(continued)*

Boring Terminated at Elevation 10.9 ft In Medium Dense Sand

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