

REFERENCE: B-5632

PROJECT: 45587

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

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY DUPLIN
PROJECT DESCRIPTION REPLACE BRIDGE NO. 187 ON
SR 1828 OVER BACK SWAMP AT -L- STA. 17+53

CONTENTS

SHEET NO.	DESCRIPTION
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2	LEGEND (SOIL & ROCK)
3	SITE PLAN
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STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5632	1	11

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:
- 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.
 - 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. HOLLAND
J. ROSE
CATLIN INC.

INVESTIGATED BY J. CRENSHAW
DRAWN BY J. ROSE
CHECKED BY J. WESSELL
SUBMITTED BY SCHNABEL ENG.
DATE SEPTEMBER 2022



DocuSigned by:
Jared K. Crenshaw
676F8AF1678B46E SIGNATURE
10/11/2022 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**

SOIL DESCRIPTION										GRADATION										ROCK DESCRIPTION										TERMS AND DEFINITIONS																																																																									
<p>SOIL IS CONSIDERED UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER AND YIELD LESS THAN 100 BLOWS PER FOOT ACCORDING TO THE STANDARD PENETRATION TEST (AASHTO T 206, ASTM D1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY INCLUDE THE FOLLOWING: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. FOR EXAMPLE, <i>VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6</i></p>										<p>WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE. UNIFORMLY GRADED - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE. GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLE SIZES OF TWO OR MORE SIZES.</p>										<p>HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT REFUSAL IF TESTED, AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL. SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS IN NON-COASTAL PLAIN MATERIAL. THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK. ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:</p>										<p>ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER. AQUIFER - A WATER BEARING FORMATION OR STRATA. ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND. ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, SUCH AS SHALE, SLATE, ETC. ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE. CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE. COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE. CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE. DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK. DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL. DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH. FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE. FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES. FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLOADED FROM PARENT MATERIAL. FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM. FORMATION (FM) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD. JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED. LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT. LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS. MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE. PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM. RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK. ROCK QUALITY DESIGNATION (ROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE. SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK. SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE. STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS (IN OR BPF) OF A 140 LB. HAMMER FALLING 30 INCHES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOIL WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS. STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. STRATA ROCK QUALITY DESIGNATION (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE. TOPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.</p>																																																																									
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<p>MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDERED OF SIGNIFICANCE.</p>										<p>SLIGHTLY COMPRESSIBLE LL < 31 MODERATELY COMPRESSIBLE LL = 31 - 50 HIGHLY COMPRESSIBLE LL > 50</p>										<p>FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN SEDIMENTARY ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES PHYLLITE, SLATE, SANDSTONE, ETC.</p>										<p>COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED SHELL BEDS, ETC.</p>																																																																									
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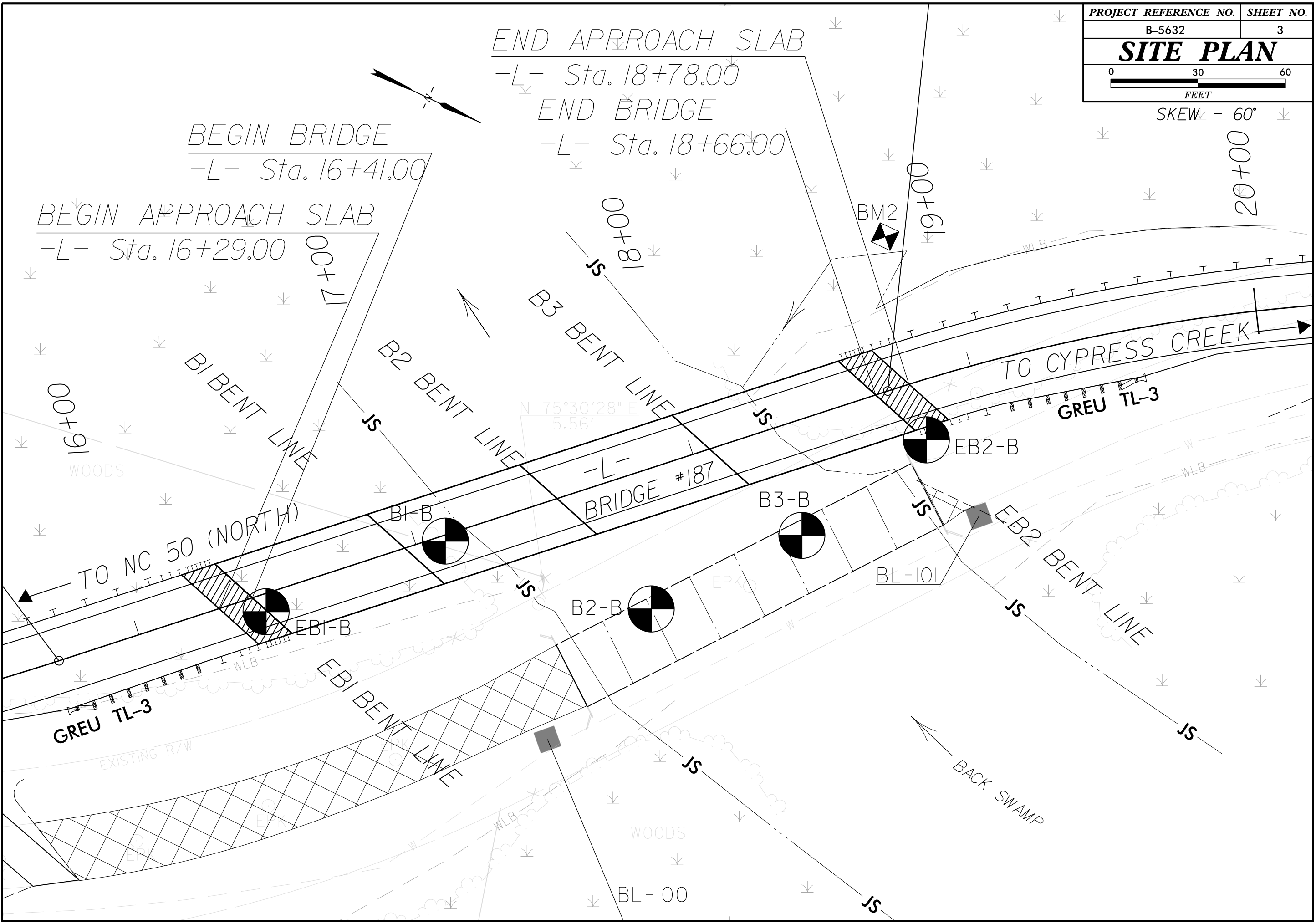
SKEW - 60°

20+00

END APPROACH SLAB
-L- Sta. 18+78.00
END BRIDGE
-L- Sta. 18+66.00

BEGIN BRIDGE
-L- Sta. 16+41.00

BEGIN APPROACH SLAB
-L- Sta. 16+29.00



BRIDGE #187

TO NC 50 (NORTH)

TO CYPRESS CREEK

BACK SWAMP

GREU TL-3

EXISTING R/W

N 75°30'28" E
5.56'

16+00

16+21

18+00

BM2

19+00

20+00

B1 BENT LINE

B2 BENT LINE

B3 BENT LINE

EB2 BENT LINE

EB1 BENT LINE

B1-B

B2-B

B3-B

EB2-B

EB1-B

BL-101

BL-100

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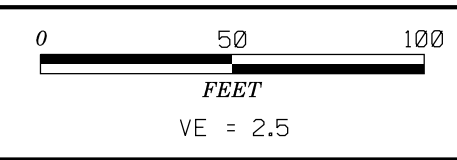
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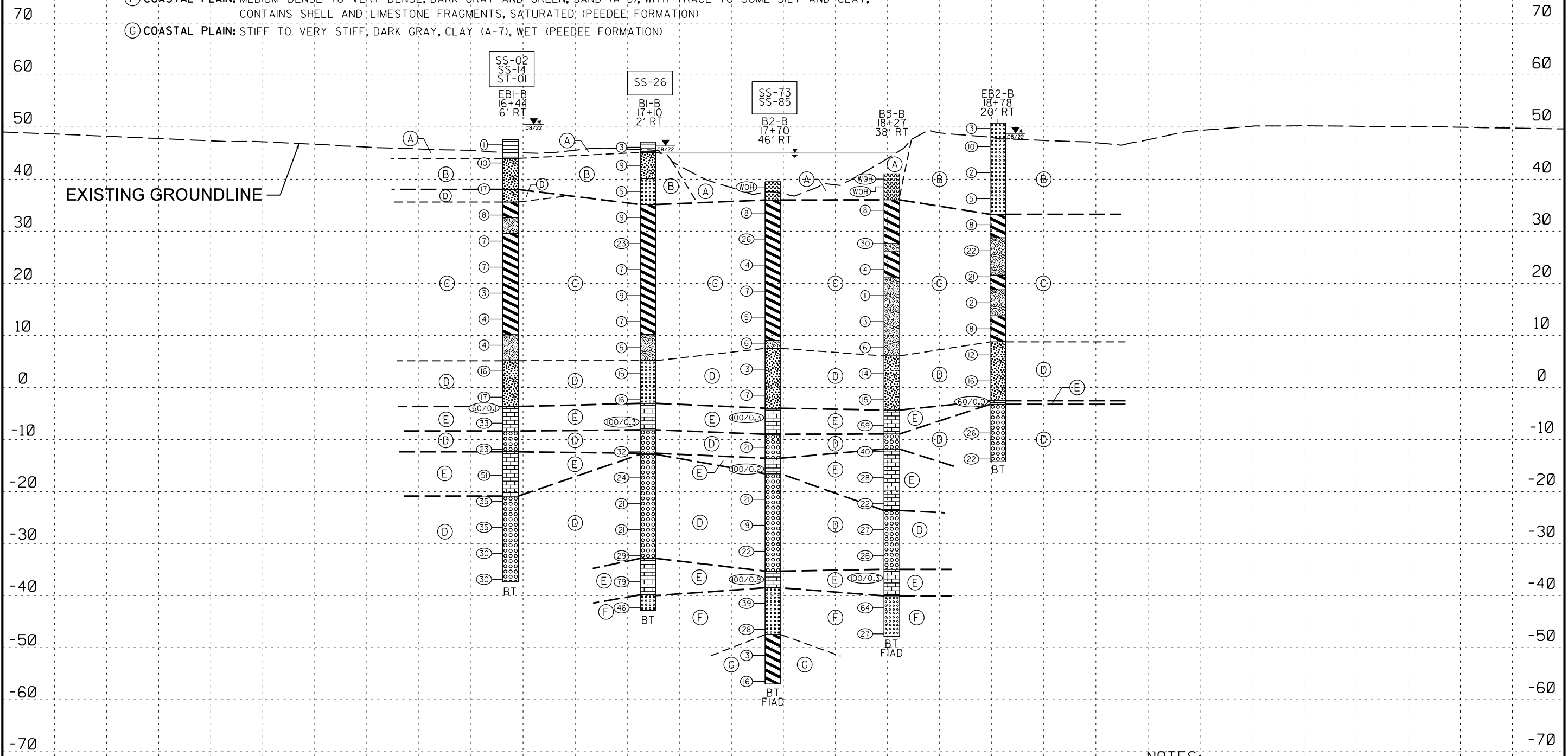
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PROJECT REFERENCE NO.	SHEET NO.
B-5632	4
PROFILE - BRIDGE NO. 187 BORINGS PROJECTED ONTO -L-	

- Ⓐ **ALLUVIAL:** VERY SOFT TO SOFT DARK GRAY AND DARK BROWN, LITTLE TO MODERATELY ORGANIC SANDY AND CLAYEY SILT (A-4, A-5), AND VERY SOFT, DARK BROWN, MUCK, CONTAINS WOOD AND ROOT FRAGMENTS, MOIST TO SATURATED
- Ⓑ **ALLUVIAL:** VERY LOOSE TO MEDIUM DENSE, DARK GRAY, DARK BROWN, AND LIGHT BROWN, SAND, AND SILTY SAND (A-3, A-2-4), WITH TRACE TO LITTLE ORGANICS, MOIST TO SATURATED
- Ⓒ **COASTAL PLAIN:** SOFT TO HARD, LIGHT GRAY AND GREEN, SILTY AND SANDY CLAY, AND SANDY SILT (A-7, A-4), CONTAINS SHELL AND LIMESTONE FRAGMENTS, WET (CASTLE HAYNE FORMATION)
- Ⓓ **COASTAL PLAIN:** LOOSE TO VERY DENSE, LIGHT GRAY AND GREEN, SAND AND SILTY SAND (A-1-B, A-3, A-2-4), CONTAINS SHELL AND LIMSTONE FRAGMENTS, SATURATED (CASTLE HAYNE FORMATION)
- Ⓔ **COASTAL PLAIN - SEDIMENTARY ROCK:** MODERATELY HARD, LIGHT GRAY, LIMESTONE, WITH SAND LAYERS, SATURATED (CASTLE HAYNE FORMATION)
- Ⓕ **COASTAL PLAIN:** MEDIUM DENSE TO VERY DENSE, DARK GRAY AND GREEN, SAND (A-3), WITH TRACE TO SOME SILT AND CLAY, CONTAINS SHELL AND LIMESTONE FRAGMENTS, SATURATED (PEEDEE FORMATION)
- Ⓖ **COASTAL PLAIN:** STIFF TO VERY STIFF, DARK GRAY, CLAY (A-7), WET (PEEDEE FORMATION)



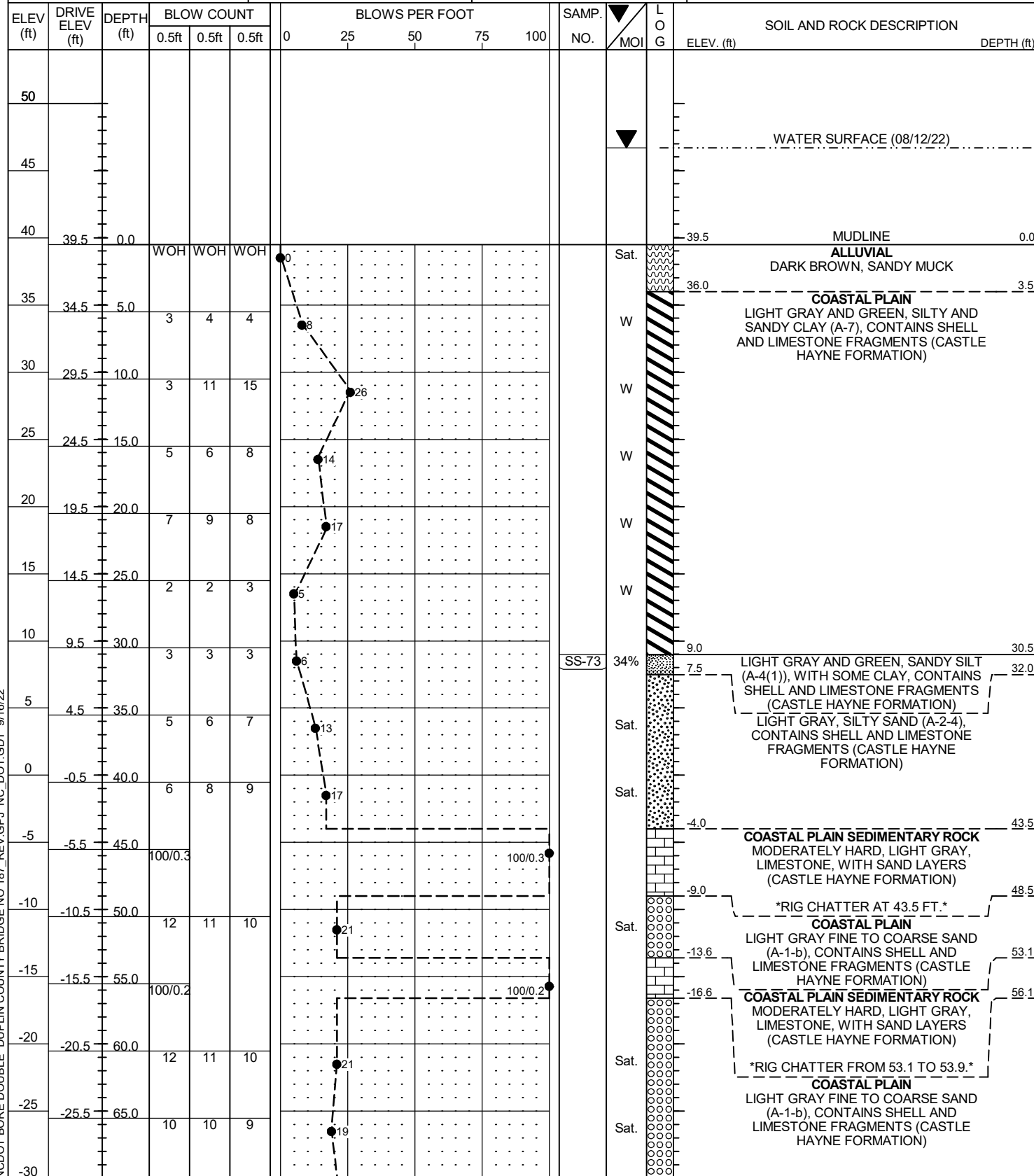
NOTES:
 1. BORINGS AND INFERRED STRATIGRAPHY ARE PROJECTED ONTO -L-
 2. GROUNDLINE TAKEN FROM ROADWAY DESIGN FILED DATED 7-1-2022
 3. - ARTESIAN HEAD ELEVATION

15+00 16+00 17+00 18+00 19+00 20+00 21+00

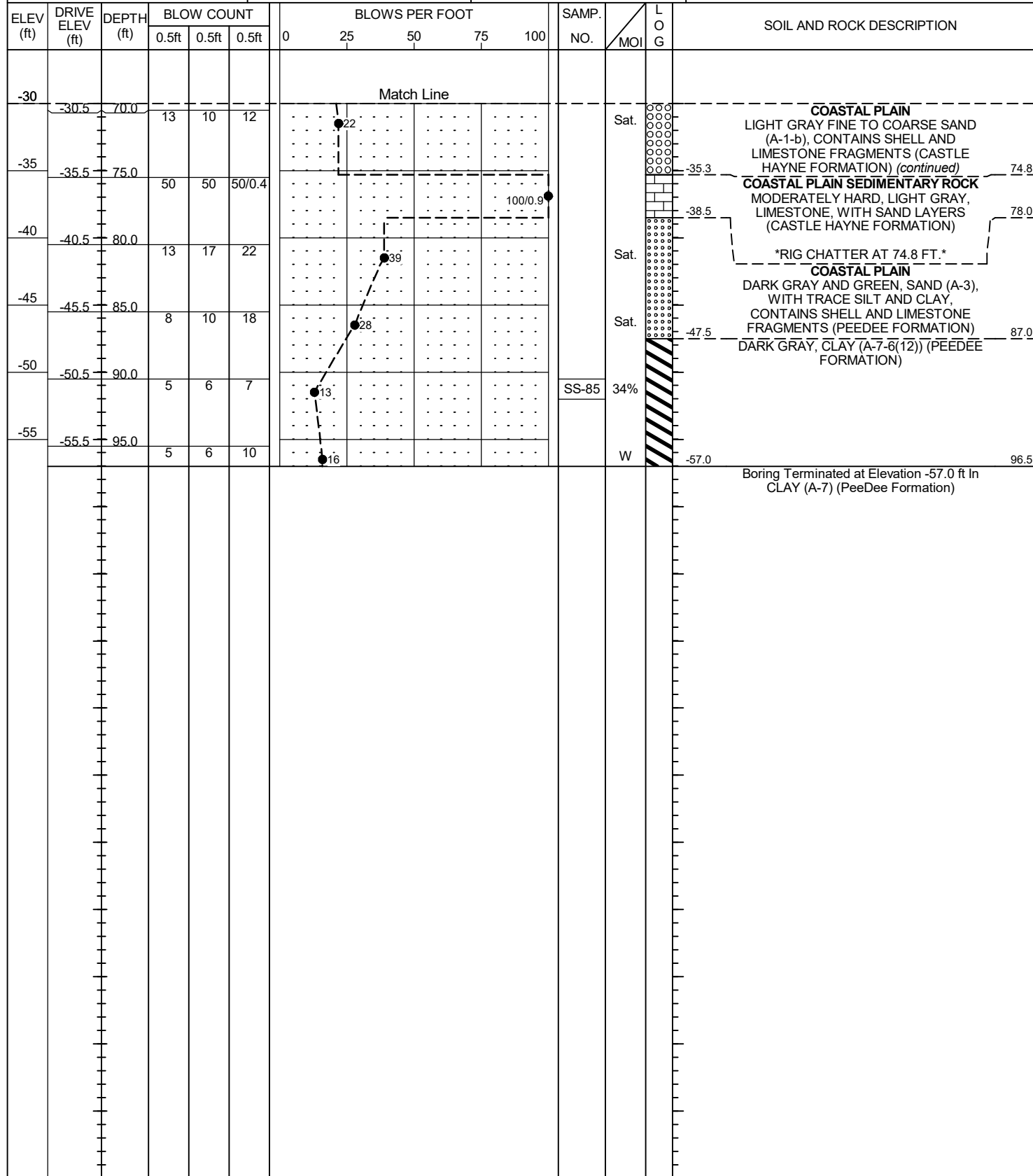
GEOTECHNICAL BORING REPORT

BORE LOG

WBS 45587.1.1		TIP B-5632		COUNTY DUPLIN		GEOLOGIST J. Holland	
SITE DESCRIPTION Bridge No. 187 on -L- (SR 1828) Over Back Swamp							GROUND WTR (ft)
BORING NO. B2-B		STATION 17+70		OFFSET 46 ft RT		ALIGNMENT -L-	
COLLAR ELEV. 39.5 ft		TOTAL DEPTH 96.5 ft		NORTHING 369,471		EASTING 2,388,009	
DRILL RIG/HAMMER EFF./DATE CAT4425 CME-55 88.1% 03/03/2022		DRILL METHOD Mud Rotary		HAMMER TYPE Automatic			
DRILLER J. White		START DATE 08/12/22		COMP. DATE 08/12/22		SURFACE WATER DEPTH 7.2ft	



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NCDOT BORE DOUBLE DUPLIN COUNTY BRIDGE NO 187_REV.GPJ NC DOT.GDT 9/16/22

GEOTECHNICAL BORING REPORT

BORE LOG

WBS 45587.1.1		TIP B-5632		COUNTY DUPLIN		GEOLOGIST J. Holland	
SITE DESCRIPTION Bridge No. 187 on -L- (SR 1828) Over Back Swamp							GROUND WTR (ft)
BORING NO. B3-B		STATION 18+27		OFFSET 38 ft RT		ALIGNMENT -L-	
COLLAR ELEV. 41.6 ft		TOTAL DEPTH 88.9 ft		NORTHING 369,508		EASTING 2,387,963	
DRILL RIG/HAMMER EFF./DATE CAT4425 CME-55 88.1% 03/03/2022		DRILL METHOD Mud Rotary		HAMMER TYPE Automatic			
DRILLER J. White		START DATE 08/12/22		COMP. DATE 08/12/22		SURFACE WATER DEPTH 5.2ft	

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION	ELEV. (ft)	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100							
50																	
45																	
41.6	41.6	0.0															
40	40.1	1.5	WOH	WOH	WOH												
35	35.6	6.0	WOR	WOR	WOR												
30	29.2	12.4	3	5	25												
25	24.2	17.4	3	1	3												
20	19.2	22.4	4	5	6												
15	14.2	27.4	2	1	2												
10	9.2	32.4	4	3	3												
5	4.2	37.4	5	6	8												
0	-0.8	42.4	7	7	8												
-5	-5.8	47.4	18	22	37												
-10	-10.8	52.4	14	19	21												
-15	-15.8	57.4	12	14	14												
-20	-20.8	62.4	12	11	11												
-25	-25.8	67.4	11	13	14												
-30																	

WBS 45587.1.1		TIP B-5632		COUNTY DUPLIN		GEOLOGIST J. Holland	
SITE DESCRIPTION Bridge No. 187 on -L- (SR 1828) Over Back Swamp							GROUND WTR (ft)
BORING NO. B3-B		STATION 18+27		OFFSET 38 ft RT		ALIGNMENT -L-	
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ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION	ELEV. (ft)	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100							
-30	-30.8	72.4															
-35	-35.8	77.4															
-40	-40.8	82.4															
-45	-45.8	87.4															

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION	ELEV. (ft)	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100							
-30																	
-34.4																	
-39.5																	
-47.3																	

NCDOT BORE DOUBLE DUPLIN COUNTY BRIDGE NO 187 REV.GPJ NC DOT.GDT 9/16/22

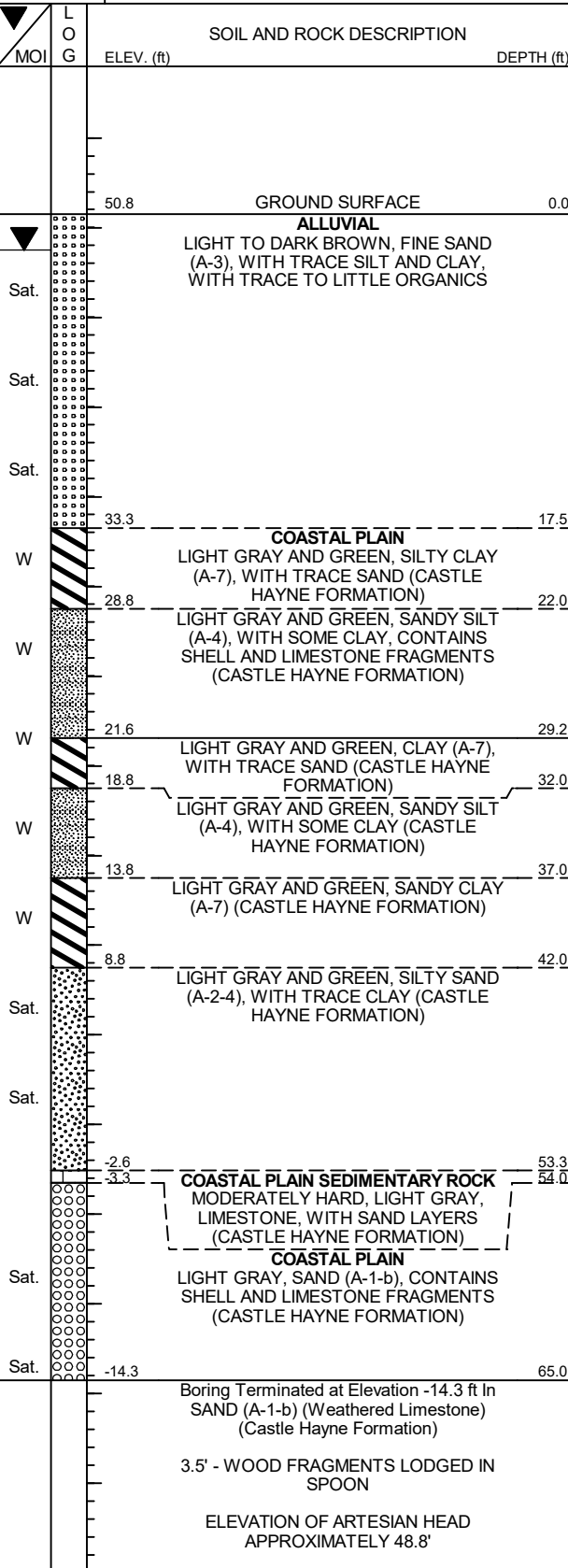
GEOTECHNICAL BORING REPORT

BORE LOG

WBS 45587.1.1		TIP B-5632		COUNTY DUPLIN		GEOLOGIST J. Rose	
SITE DESCRIPTION Bridge No. 187 on -L- (SR 1828) Over Back Swamp							GROUND WTR (ft)
BORING NO. EB2-B		STATION 18+78		OFFSET 20 ft RT		ALIGNMENT -L-	
COLLAR ELEV. 50.8 ft		TOTAL DEPTH 65.0 ft		NORTHING 369,532		EASTING 2,387,915	
DRILL RIG/HAMMER EFF./DATE CAT4425 CME-55 88.1% 03/03/2022			DRILL METHOD Mud Rotary			HAMMER TYPE Automatic	
DRILLER J. White		START DATE 08/11/22		COMP. DATE 08/12/22		SURFACE WATER DEPTH N/A	

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				ELEV. (ft)	DEPTH (ft)	
55																
50.8	50.8	0.0													50.8	GROUND SURFACE
47.3		3.5	WOH	1	2											
45				4	5	5										
42.3		8.5	WOH	1	1											
40																
37.3		13.5		1	2	3										
35																
32.3		18.5		4	4	4										
30																
27.3		23.5		7	10	12										
25																
22.3		28.5		8	10	11										
20																
17.3		33.5		2	1	1										
15																
12.3		38.5		2	4	4										
10																
7.3		43.5		4	5	7										
5																
2.3		48.5		6	7	9										
0																
-2.8		53.5														
-5																
-7.8		58.5		13	13	13										
-10																
-12.8		63.5		16	12	10										

NCDOT BORE DOUBLE DUPLIN COUNTY BRIDGE NO 187 REV.GPJ NC DOT.GDT 9/16/22



LABORATORY SUMMARY SHEET

AASHTO Standard Specifications

(As modified by NCDOT, Material and Tests Unit, 2000.)

TEST RESULTS

Proj. Sample Number	SS-26	SS-73	SS-85	SS-02	SS-14										
Lab Sample Number	S-03	SS-04	SS-05	SS-01	SS-02										
Retained #4 Sieve %	0	0	0	0.1	7.6										
Passing #10 Sieve %	100	99.4	100	99.8	68.3										
Passing #40 Sieve %	88	94	100	99	38										
Passing #200 Sieve %	52	60	66	26	16										
MINUS NUMBER 10 FRACTION															
SOIL MORTAR - 100%															
Coarse Sand Ret.-#60 %	20.9	13.5	1.0	3.4	73.2										
Fine Sand Ret.-#270 %	30.4	30.7	44.2	76.0	12.1										
Silt 0.05 - 0.005mm %	21.8	23.7	23.1	9.6	10.6										
Clay <0.005mm %	26.9	32.0	31.7	11.1	4.1										
Liquid Limit (LL)	23	26	42	22	NP										
Plasticity Index (PI)	1	4	20	1	NP										
AASHTO Classification /Group Index	A-4(0)	A-4(1)	A-7-6(12)	A-2-4(0)	A-2-4(0)										
Organic Content %	N/A	N/A	N/A	2.5	N/A										
Station	17+10	17+70	17+70	16+44	16+44										
Offset	2ft RT	46ft RT	46ft RT	6ft RT	6ft RT										
Alignment															
Boring Identification	B-1	B-2	B-2	EB-1	EB-1										
Depth (FT)	38.5	30.5	90.0	3.5	63.5										
to	40.0	31.5	91.5	5.0	65.0										
Field Moist. Content %	31	34	34	31	19										
Tested By	MDMASON	MDMASON	MDMASON	MDMASON	MDMASON										
Submitted By	JROSE	JROSE	JROSE	JROSE	JROSE										
Date Submitted	08/17/22	08/17/22	08/17/22	08/17/22	08/17/22										

NP = Non-Plastic
 NEM = Not Enough Material for Analysis
 N/A = Not Applicable / Not Analyzed

Michael D. Mason
 Laboratory Manager

Report Date: 8/30/2022
 Laboratory Report Page 1 of 1

SITE PHOTOGRAPHS
BRIDGE NO. 187 OVER BACK SWAMP ON SR 1828 (CRYPRESS CREEK RD.)



View of SR 1828 looking southeast.



View of SR 1828 looking northwest.



View of Back Swamp looking southeast.