

PROJECT: 33831

REFERENCE: B-4676

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STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

GEOTECHNICAL ENGINEERING UNIT

STRUCTURE

SUBSURFACE INVESTIGATION

COUNTY WILKES

PROJECT DESCRIPTION REPLACE BRIDGE 029 OVER

CUB CREEK ON SR 1001

SITE DESCRIPTION REV 2

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4676	1	13

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.

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- 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.

NCDOT PERSONNEL (2013)	CG2 PERSONNEL
<u>E. RODGERS</u>	<u>T. WENNER, PG</u>
<u>G. SKOGLUND</u>	<u>C. ODOM</u>
<u>M. MULLEN</u>	<u>CG2 EXPLORATION</u>
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INVESTIGATED BY CG2, PLLC

DRAWN BY M. BREWER, P.E.

CHECKED BY R. KRAL, P.E.

SUBMITTED BY CG2, PLLC

DATE OCTOBER 2023

Prepared in the Office of:



CAROLINAS
GEOTECHNICAL
GROUP

2400 CROWNPOINT EXECUTIVE DRIVE
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CHARLOTTE, NC 28227
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DocuSigned by:

11/15/2023

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SIGNATUREDATE

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

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 296, 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, *VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6*

SOIL LEGEND AND AASHTO CLASSIFICATION

GENERAL CLASS.	GRANULAR MATERIALS (≤ 35% PASSING #200)						SILT-CLAY MATERIALS (≥ 35% PASSING #200)				ORGANIC MATERIALS		
GROUP CLASS.	A-1		A-3	A-2			A-4	A-5	A-6	A-7	A-1, A-2	A-4, A-5	
SYMBOL	A-1-a	A-1-b		A-2-4	A-2-5	A-2-6	A-2-7			A-7-6	A-3	A-6, A-7	
% PASSING #10 #40 #200	50 MX 30 MX 15 MX	50 MX 25 MX	51 MN 10 MX	35 MX 10 MX	35 MX 10 MX	35 MX 11 MN	35 MX 11 MN	36 MN 10 MX	36 MN 10 MX	36 MN 11 MN	36 MN 11 MN		
MATERIAL PASSING #40 LL PI	— 6 MX		— NP	40 MX 10 MX	41 MN 10 MX	40 MX 11 MN	41 MN 11 MN	40 MX 10 MX	41 MN 10 MX	40 MX 11 MN	41 MN 11 MN		
GROUP INDEX	0		0	0		4 MX		8 MX	12 MX	16 MX	NO MX		
USUAL TYPES OF MAJOR MATERIALS	STONE FRAGS, GRAVEL, AND SAND		FINE SAND	SILTY OR CLAYEY GRAVEL AND SAND				SILTY SOILS	CLAYEY SOILS		SOILS WITH LITTLE OR MODERATE AMOUNTS OF ORGANIC MATTER		HIGHLY ORGANIC SOILS
GEN. RATING AS SUBGRADE	EXCELLENT TO GOOD						FAIR TO POOR				FAIR TO POOR	POOR	UNSUITABLE

PI OF A-7-5 SUBGROUP IS ≤ LL - 30 ; PI OF A-7-6 SUBGROUP IS > LL - 30

CONSISTENCY OR DENSENESS

PRIMARY SOIL TYPE	COMPACTNESS OR CONSISTENCY	RANGE OF STANDARD PENETRATION RESISTANCE (N-VALUE)	RANGE OF UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²)
GENERALLY GRANULAR MATERIAL (NON-COHESIVE)	VERY LOOSE LOOSE MEDIUM DENSE DENSE VERY DENSE	< 4 4 TO 10 10 TO 30 30 TO 50 > 50	N/A
GENERALLY SILT-CLAY MATERIAL (COHESIVE)	VERY SOFT SOFT MEDIUM STIFF STIFF VERY STIFF HARD	< 2 2 TO 4 4 TO 8 8 TO 15 15 TO 30 > 30	< 0.25 0.25 TO 0.5 0.5 TO 1.0 1 TO 2 2 TO 4 > 4

TEXTURE OR GRAIN SIZE

U.S. STD. SIEVE SIZE OPENING (MM)	4	10	40	60	200	270
	4.76	2.00	0.42	0.25	0.075	0.053

BOULDER (BLDR.)	COBBLE (COB.)	GRAVEL (GR.)	COARSE SAND (CSE. SD.)	FINE SAND (F SD.)	SILT (SL.)	CLAY (CL.)

GRAIN SIZE

MM	305	75	2.0	0.25	0.05	0.005
IN.	12	3				

SOIL MOISTURE - CORRELATION OF TERMS

SOIL MOISTURE SCALE (ATTERBERG LIMITS)		FIELD MOISTURE DESCRIPTION	GUIDE FOR FIELD MOISTURE DESCRIPTION
LL PLASTIC RANGE (PI) PL	LIQUID LIMIT	- SATURATED - (SAT.)	USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE
	PLASTIC LIMIT	- WET - (W)	SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE
OM SL	OPTIMUM MOISTURE	- MOIST - (M)	SOLID; AT OR NEAR OPTIMUM MOISTURE
	SHRINKAGE LIMIT	- DRY - (D)	REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE

PLASTICITY

PLASTICITY INDEX (PI)		DRY STRENGTH
NON PLASTIC	0-5	VERY LOW
SLIGHTLY PLASTIC	6-15	SLIGHT
MODERATELY PLASTIC	16-25	MEDIUM
HIGHLY PLASTIC	26 OR MORE	HIGH

COLOR

DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YELLOW-BROWN, BLUE-GRAY). MODIFIERS SUCH AS LIGHT, DARK, STREAKED, ETC. ARE USED TO DESCRIBE APPEARANCE.

GRADATION

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.

ANGULARITY OF GRAINS

THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS: ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.

MINERALOGICAL COMPOSITION

MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDERED OF SIGNIFICANCE.

COMPRESSIBILITY

SLIGHTLY COMPRESSIBLE	LL < 31
MODERATELY COMPRESSIBLE	LL = 31 - 50
HIGHLY COMPRESSIBLE	LL > 50

PERCENTAGE OF MATERIAL

ORGANIC MATERIAL	GRANULAR SOILS	SILT - CLAY SOILS	OTHER MATERIAL
TRACE OF ORGANIC MATTER	2 - 3%	3 - 5%	TRACE
LITTLE ORGANIC MATTER	3 - 5%	5 - 12%	LITTLE
MODERATELY ORGANIC	5 - 10%	12 - 20%	SOME
HIGHLY ORGANIC	> 10%	> 20%	HIGHLY

GROUND WATER

▽

WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING

▽

STATIC WATER LEVEL AFTER 24 HOURS

▽PW

PERCHED WATER, SATURATED ZONE, OR WATER BEARING STRATA

○

SPRING OR SEEP

MISCELLANEOUS SYMBOLS

ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION

SOIL SYMBOL

ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT

INFERRED SOIL BOUNDARY

INFERRED ROCK LINE

ALLUVIAL SOIL BOUNDARY

25/825

DIP & DIP DIRECTION OF ROCK STRUCTURES

SPT DPT DMT VST PHT

TEST BORING

⊕

AUGER BORING

○

CORE BORING

mw

MONITORING WELL

△

PIEZOMETER INSTALLATION

◡

SLOPE INDICATOR INSTALLATION

⊙

CONE PENETROMETER TEST

●

SOUNDING ROD

⊙

TEST BORING WITH CORE

○

SPT N-VALUE

RECOMMENDATION SYMBOLS

⊠

UNDERCUT

▨

SHALLOW UNDERCUT

▨

UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE

▨

UNCLASSIFIED EXCAVATION - ACCEPTABLE DEGRADABLE ROCK

⊠

UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL.

ABBREVIATIONS

AR - AUGER REFUSAL
BT - BORING TERMINATED
CL - CLAY
CPT - CONE PENETRATION TEST
CSE. - COARSE
DMT - DILATOMETER TEST
DPT - DYNAMIC PENETRATION TEST
e - VOID RATIO
F - FINE
FOSS. - FOSSILIFEROUS
FRAC. - FRACTURED, FRACTURES
FRAGS. - FRAGMENTS
HI. - HIGHLY

MED. - MEDIUM
MICA. - MICACEOUS
MOD. - MODERATELY
NP - NON PLASTIC
ORG. - ORGANIC
PMT - PRESSUREMETER TEST
SAP. - SAPROLITIC
SD. - SAND, SANDY
SL. - SILT, SILTY
SLI. - SLIGHTLY
TCR - TRICONE REFUSAL
w - MOISTURE CONTENT
V - VERY

VST - VANE SHEAR TEST
WEA. - WEATHERED
γ - UNIT WEIGHT
γ_d - DRY UNIT WEIGHT

SAMPLE ABBREVIATIONS
S - BULK
SS - SPLIT SPOON
ST - SHELBY TUBE
RS - ROCK
RT - RECOMPACTED TRIAXIAL
CBR - CALIFORNIA BEARING RATIO

EQUIPMENT USED ON SUBJECT PROJECT

DRILL UNITS:
☐ CME-45C

☐ CME-55

☒ CME-550

☐ VANE SHEAR TEST

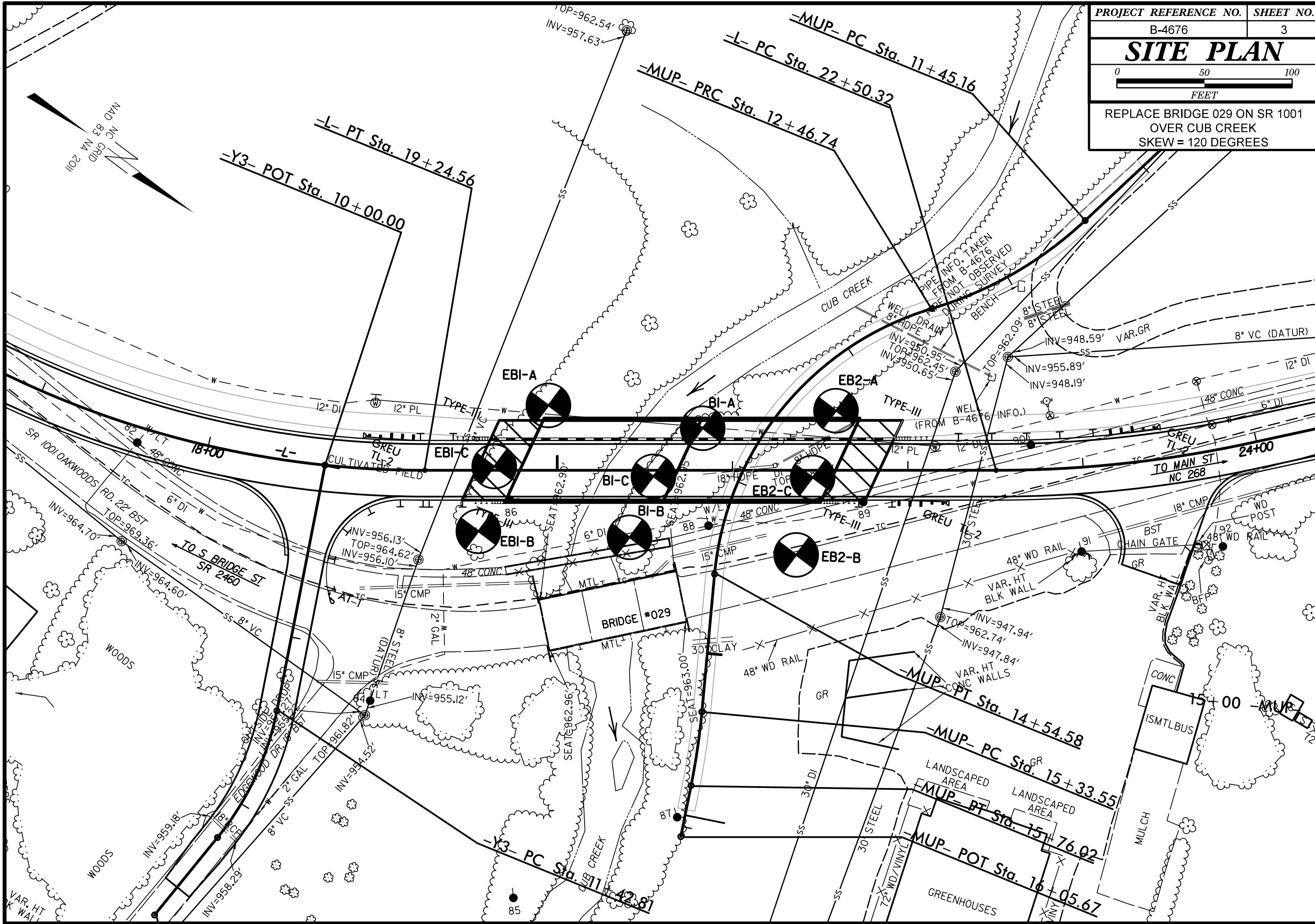
☐ PORTABLE HOIST

☒ DIEDRICH D50

☐

ADVANCING TOOLS:
☐ CLAY BITS
☒ 6" CONTINUOUS FLIGHT AUGER
☐ 8" HOLLOW AUGERS
☐ HARD FACED FINGER BITS

PROJECT REFERENCE NO.	SHEET NO.
B-4676	3
SITE PLAN	
0 50 100 FEET	
REPLACE BRIDGE 029 ON SR 1001 OVER CUB CREEK SKEW = 120 DEGREES	



6/23/16

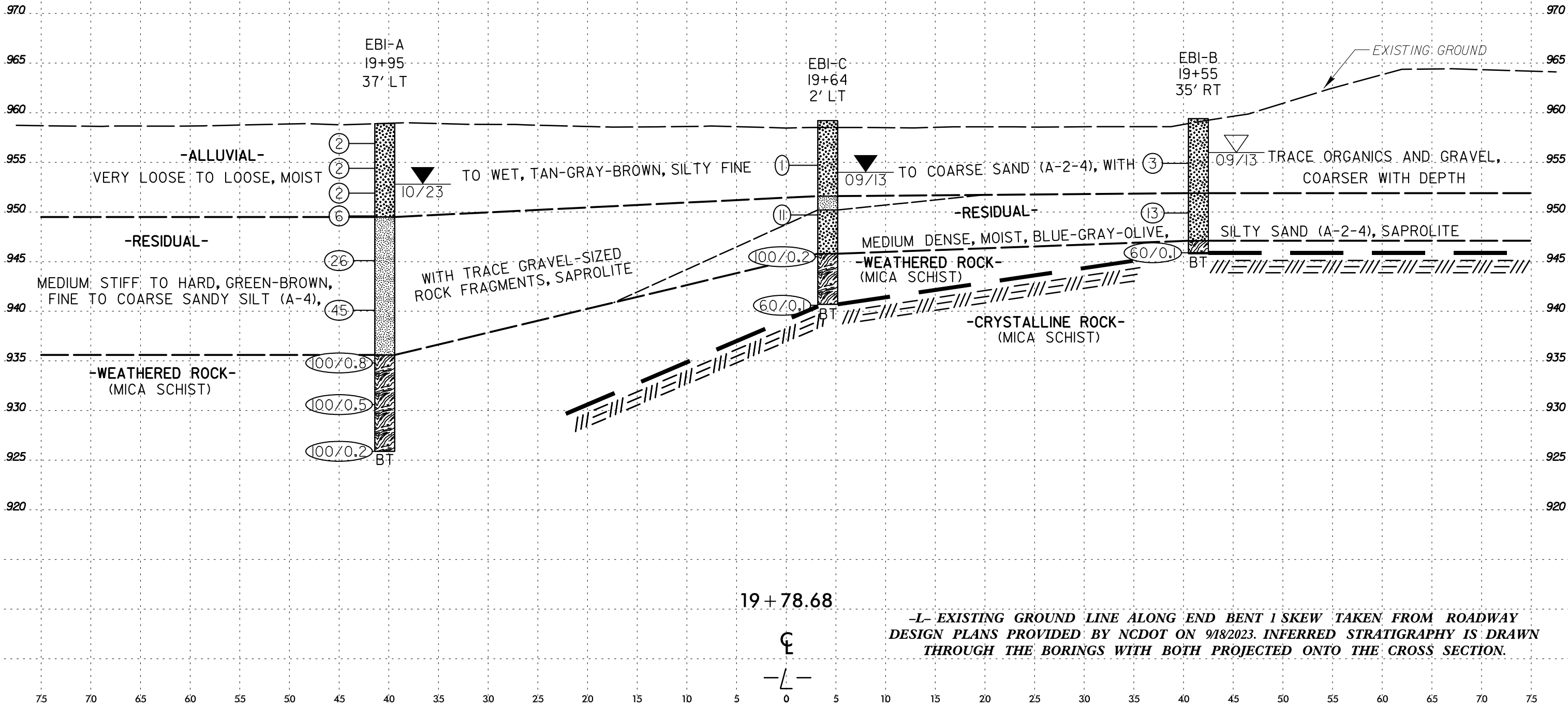
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Prepared in the Office of:
 CAROLINAS
GEOTECHNICAL
GROUP

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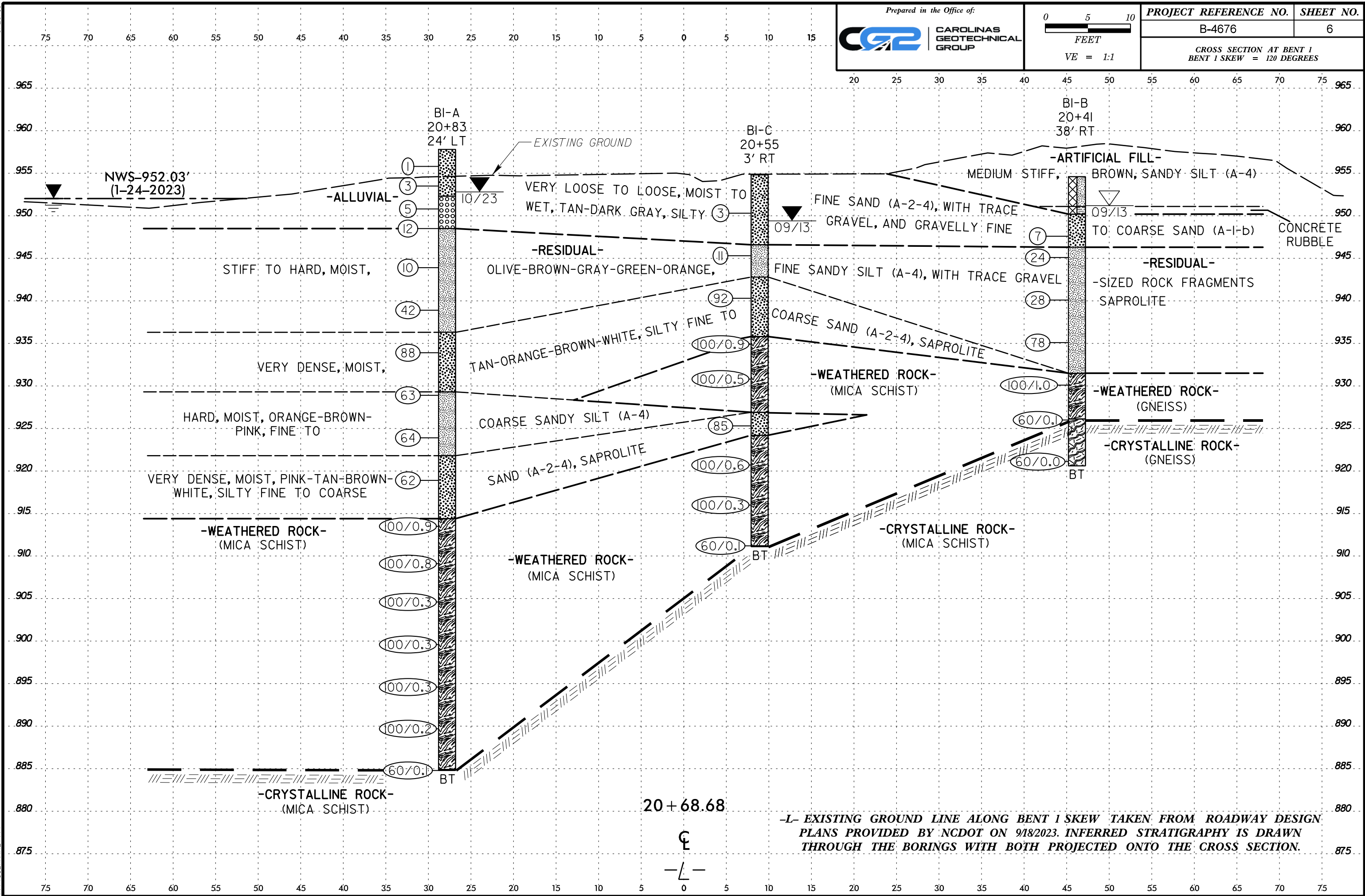
0 5 10
FEET
VE = 1:1

PROJECT REFERENCE NO.	SHEET NO.
B-4676	5
CROSS SECTION AT END BENT 1 END BENT 1 SKEW = 120 DEGREES	

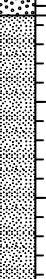


6/23/16

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GEOTECHNICAL BORING REPORT
BORE LOG

WBS 33831.1.1			TIP B-4676			COUNTY WILKES			GEOLOGIST T. Wenner, P.G.							
SITE DESCRIPTION Replace Bridge 029 on SR 1001 over Cub Creek												GROUND WTR (ft)				
BORING NO. EB1-A			STATION 19+95			OFFSET 37 ft LT			ALIGNMENT -L-			0 HR.	N/M			
COLLAR ELEV. 958.9 ft			TOTAL DEPTH 33.0 ft			NORTHING 879,797			EASTING 1,367,346			24 HR.	6.1			
DRILL RIG/HAMMER EFF./DATE CG20446 Diedrich D50 87% 05/10/2022						DRILL METHOD Mud Rotary			HAMMER TYPE Automatic							
DRILLER C. Odom			START DATE 10/04/23			COMP. DATE 10/04/23			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)	
960																
955	957.9	1.0	3	1	1	2	.	.	.	.		M		958.9	GROUND SURFACE	0.0
	955.4	3.5	1	1	1	2	.	.	.	.		M		ALLUVIAL Very Loose to Loose, Tan-Gray, Silty Fine to Coarse SAND (A-2-4), with trace organics and gravel		
	952.9	6.0	1	1	1	2	.	.	.	.		W				
950	950.6	8.3	2	2	4	6	.	.	.	.		M		949.5	9.4	
	946.1	12.8	10	12	14	26	.	.	.	.		M		RESIDUAL Medium Stiff to Hard, Green-Olive-Brown, Fine to Coarse Sandy SILT (A-4), with trace gravel-sized rock fragments		
945							.	.	.	.		M				
940	941.1	17.8	21	23	22		.	.	.	.		M				
							.	.	.	.						
935	936.1	22.8	37	62	38/0.3		.	.	.	.				935.6	23.3	
							.	.	.	.	100/0.8			WEATHERED ROCK		
930	931.1	27.8	100/0.5				.	.	.	.	100/0.5			Brown-Orange, (MICA SCHIST)		
							.	.	.	.						
	926.1	32.8	100/0.2				.	.	.	.	100/0.2			925.9	33.0	
							.	.	.	.				Boring Terminated at Elevation 925.9 ft In Weathered Rock (MICA SCHIST)		

WBS 33831.1.1			TIP B-4676			COUNTY WILKES			GEOLOGIST E. Rodgers					
SITE DESCRIPTION Wilkes County Bridge 29 on SR-1001 (Oakwoods Rd) over Cub Creek									GROUND WTR (ft)					
BORING NO. EB1-C			STATION 19+64			OFFSET 2 ft LT			ALIGNMENT -L-			0 HR. N/A		
COLLAR ELEV. 959.2 ft			TOTAL DEPTH 18.6 ft			NORTHING 879,793			EASTING 1,367,392			24 HR. 5.2		
DRILL RIG/HAMMER EFF./DATE SOI1873 CME-550X 79% 03/25/2013						DRILL METHOD H.S. Augers			HAMMER TYPE Automatic					
DRILLER G. Skoglund			START DATE 09/26/13			COMP. DATE 09/26/13			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				
960														
955	955.7	3.5	0	0	1	1								959.2 GROUND SURFACE 0.0
														ALLUVIAL Very Loose, Brown, Silty SAND (A-2-4), coarser with depth
950	950.7	8.5	8	4	7	11								951.6 7.6
														950.2 9.0
														RESIDUAL Stiff, Brown, Sandy SILT (A-4), Saprolite Medium Dense, Blue-Gray, Silty SAND (A-2-4), Saprolite
945	945.7	13.5	100/0.2											945.8 13.4
														WEATHERED ROCK (MICA SCHIST)
	940.7	18.5	60/0.1											940.7 18.5
														940.6 18.6
														CRYSTALLINE ROCK (MICA SCHIST) Boring Terminated with Standard Penetration Test Refusal at Elevation 940.6 ft In Crystalline Rock (MICA SCHIST)

NCDOT BORE DOUBLE B4676_GEO_BRDG0029_UPDATE.GPJ NC_DOT.GDT 10/20/23

GEOTECHNICAL BORING REPORT

BORE LOG

WBS 33831.1.1			TIP B-4676			COUNTY WILKES			GEOLOGIST E. Rodgers						
SITE DESCRIPTION Wilkes County Bridge 29 on SR-1001 (Oakwoods Rd) over Cub Creek									GROUND WTR (ft)						
BORING NO. EB1-B			STATION 19+55			OFFSET 35 ft RT			ALIGNMENT -L-			0 HR. 3.4			
COLLAR ELEV. 959.4 ft			TOTAL DEPTH 13.6 ft			NORTHING 879,808			EASTING 1,367,427			24 HR. FIAD			
DRILL RIG/HAMMER EFF./DATE SOI1873 CME-550X 79% 03/25/2013						DRILL METHOD H.S. Augers			HAMMER TYPE Automatic						
DRILLER G. Skoglund			START DATE 09/25/13			COMP. DATE 09/25/13			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)
960														959.4	0.0
	955.9	3.5	3	2	1									GROUND SURFACE	
955														ALLUVIAL	
														Very Loose, Brown, Silty SAND (A-2-4)	
	950.9	8.5	5	7	6									951.9	7.5
950														RESIDUAL	
														Medium Dense, Olive-Gray, Silty SAND (A-2-4), Saprolite	
	945.9	13.5	60/0.1											947.1	12.3
														945.9	13.5
														945.8	13.6
														WEATHERED ROCK (MICA SCHIST)	
														CRYSTALLINE ROCK (MICA SCHIST)	
														Boring Terminated with Standard Penetration Test Refusal at Elevation 945.8 ft In Crystalline Rock (MICA SCHIST)	

NCDOT BORE DOUBLE B4676 GEO_BRDG0029_UPDATE.GPJ NC_DOT_GDT 10/20/23

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NCDOT BORE DOUBLE B4676_GEO_BRDG0029_UPDATE.GPJ NC_DOT.GDT 10/20/23

WBS 33831.1.1			TIP B-4676			COUNTY WILKES			GEOLOGIST E. Rodgers				
SITE DESCRIPTION Wilkes County Bridge 29 on SR-1001 (Oakwoods Rd) over Cub Creek									GROUND WTR (ft)				
BORING NO. B1-B			STATION 20+41			OFFSET 38 ft RT			ALIGNMENT -L-			0 HR. 3.4	
COLLAR ELEV. 954.6 ft			TOTAL DEPTH 34.0 ft			NORTHING 879,879			EASTING 1,367,378			24 HR. FIAD	
DRILL RIG/HAMMER EFF./DATE SOI1873 CME-550X 79% 03/25/2013						DRILL METHOD H.S. Augers			HAMMER TYPE Automatic				
DRILLER G. Skoglund			START DATE 10/01/13			COMP. DATE 10/01/13			SURFACE WATER DEPTH N/A				
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION
			0.5ft	0.5ft	0.5ft	0	25	50	75	100	MOI		
955													954.6 GROUND SURFACE 0.0
950													ARTIFICIAL FILL Medium Stiff, Brown, Sandy SILT (A-4)
	948.6	6.0											951.1 3.5 950.2 4.4
945													Concrete Rubble
	946.1	8.5	4	3	4								ALLUVIAL Loose, Dark Gray, Silty SAND (A-2-4), coarser with depth
940													946.3 8.3
	941.1	13.5	9	10	14								RESIDUAL Very Stiff to Hard, Brown, Fine Sandy SILT (A-4), with trace gravel-sized rock fragments
935													
	936.1	18.5	6	10	18								
930													
	931.1	23.5	18	33	45								
925													
	926.1	28.5	32	68/0.5									931.5 23.1
													WEATHERED ROCK (GNEISS)
													926.1 28.5
													CRYSTALLINE ROCK (GNEISS)
													920.6 34.0
													Boring Terminated at Elevation 920.6 ft In Crystalline Rock (GNEISS)

NCDOT BORE DOUBLE B4676_GEO_BRDG0029_UPDATE.GPJ NC_DOT.GDT 10/20/23

WBS 33831.1.1			TIP B-4676			COUNTY WILKES			GEOLOGIST E. Rodgers																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
SITE DESCRIPTION Wilkes County Bridge 29 on SR-1001 (Oakwoods Rd) over Cub Creek									GROUND WTR (ft)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
BORING NO. EB2-C			STATION 21+46			OFFSET 4 ft RT			ALIGNMENT -L-			0 HR. N/A																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
COLLAR ELEV. 959.3 ft			TOTAL DEPTH 53.9 ft			NORTHING 879,942			EASTING 1,367,288			24 HR. 4.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
DRILL RIG/HAMMER EFF./DATE SOI1873 CME-550X 79% 03/25/2013						DRILL METHOD H.S. Augers			HAMMER TYPE Automatic																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
DRILLER G. Skoglund			START DATE 09/27/13			COMP. DATE 09/27/13			SURFACE WATER DEPTH N/A																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				MOI																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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GEOTECHNICAL BORING REPORT
BORE LOG

WBS 33831.1.1			TIP B-4676			COUNTY WILKES			GEOLOGIST E. Rodgers						
SITE DESCRIPTION Wilkes County Bridge 29 on SR-1001 (Oakwoods Rd) over Cub Creek									GROUND WTR (ft)						
BORING NO. EB2-B			STATION 21+36			OFFSET 48 ft RT			ALIGNMENT -L-			0 HR. N/M			
COLLAR ELEV. 964.1 ft			TOTAL DEPTH 54.0 ft			NORTHING 879,961			EASTING 1,367,329			24 HR. FIAD			
DRILL RIG/HAMMER EFF./DATE SOI1873 CME-550X 79% 03/25/2013						DRILL METHOD H.S. Augers			HAMMER TYPE Automatic						
DRILLER G. Skoglund			START DATE 09/26/13			COMP. DATE 09/26/13			SURFACE WATER DEPTH N/A						
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	L O G	SOIL AND ROCK DESCRIPTION	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				ELEV. (ft)	DEPTH (ft)
965															
														964.1	0.0
														GROUND SURFACE	
														ROADWAY EMBANKMENT	
														Medium Dense, Brown-Orange, Clayey, Silty	
														Fine SAND (A-2-4)	
960	960.6	3.5	7	7	6									958.1	6.0
														ALLUVIAL	
														Medium Stiff, Tan, Fine Sandy, Clayey SILT	
														(A-5)	
955	955.6	8.5	1	3	2									954.0	10.1
														Loose, Fine to Coarse SAND (A-1-b), with	
														rounded quartz gravel, (Basal Alluvium)	
950	950.6	13.5	5	5	9									951.1	13.0
														RESIDUAL	
														Stiff to Very Stiff, Tan, Fine Sandy SILT	
														(A-4), Saprolite	
945	945.6	18.5	10	10	11										
940	940.6	23.5	27	49	51/0.5									940.1	24.0
														WEATHERED ROCK	
														(MICA SCHIST)	
935	935.6	28.5	31	50	50/0.3										
930	930.6	33.5	25	32	64									930.8	33.3
														RESIDUAL	
														Very Dense, Tan, Silty Fine SAND (A-2-4),	
														Saprolite	
925	925.6	38.5	30	25	43										
920	920.6	43.5	100/0.5											921.0	43.1
														WEATHERED ROCK	
														(MICA SCHIST)	
915	915.6	48.5	100/0.5												
	910.6	53.5	100/0.5											910.1	54.0
														Boring Terminated at Elevation 910.1 ft In	
														Weathered Rock (MICA SCHIST)	

NCDOT BORE DOUBLE B4676_GEO_BRDG0029_UPDATE.GPJ NC_DOT.GDT 10/20/23