

PROJECT: 50197

REFERENCE: R-5739

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STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

GEOTECHNICAL ENGINEERING UNIT

STRUCTURE

SUBSURFACE INVESTIGATION

COUNTY NORTHAMPTON

PROJECT DESCRIPTION -L- (NC 46) FROM NC 48 IN GASTON TO VIRGINIA STATE LINE

SITE DESCRIPTION TEMPORARY SHORING INVESTIGATION FOR CULVERTS AT -L- STA. 38 + 74, 280 + 87, 324 + 26, 451 + 96, 499 + 65, 520 + 60, 529 + 00

REVISED

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5739	1	16

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 PERFORM INDEPENDENT SUBSURFACE INVESTIGATIONS AND MAKE INTERPRETATIONS AS NECESSARY TO CONFIRM CONDITIONS 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

S.N. ZIMARINO

T.W. MILLER

J.M. EDMONDSON

C.M. WALKER

INVESTIGATED BY T.C. BOTTOMS

DRAWN BY T.W. MILLER

CHECKED BY D.N. ARGENBRIGHT

SUBMITTED BY D.N. ARGENBRIGHT

DATE JANUARY 2024



DocuSigned by:

Tyler Bottoms

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01/24/2024

SIGNATURE

DATE

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

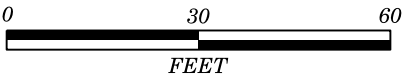
GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

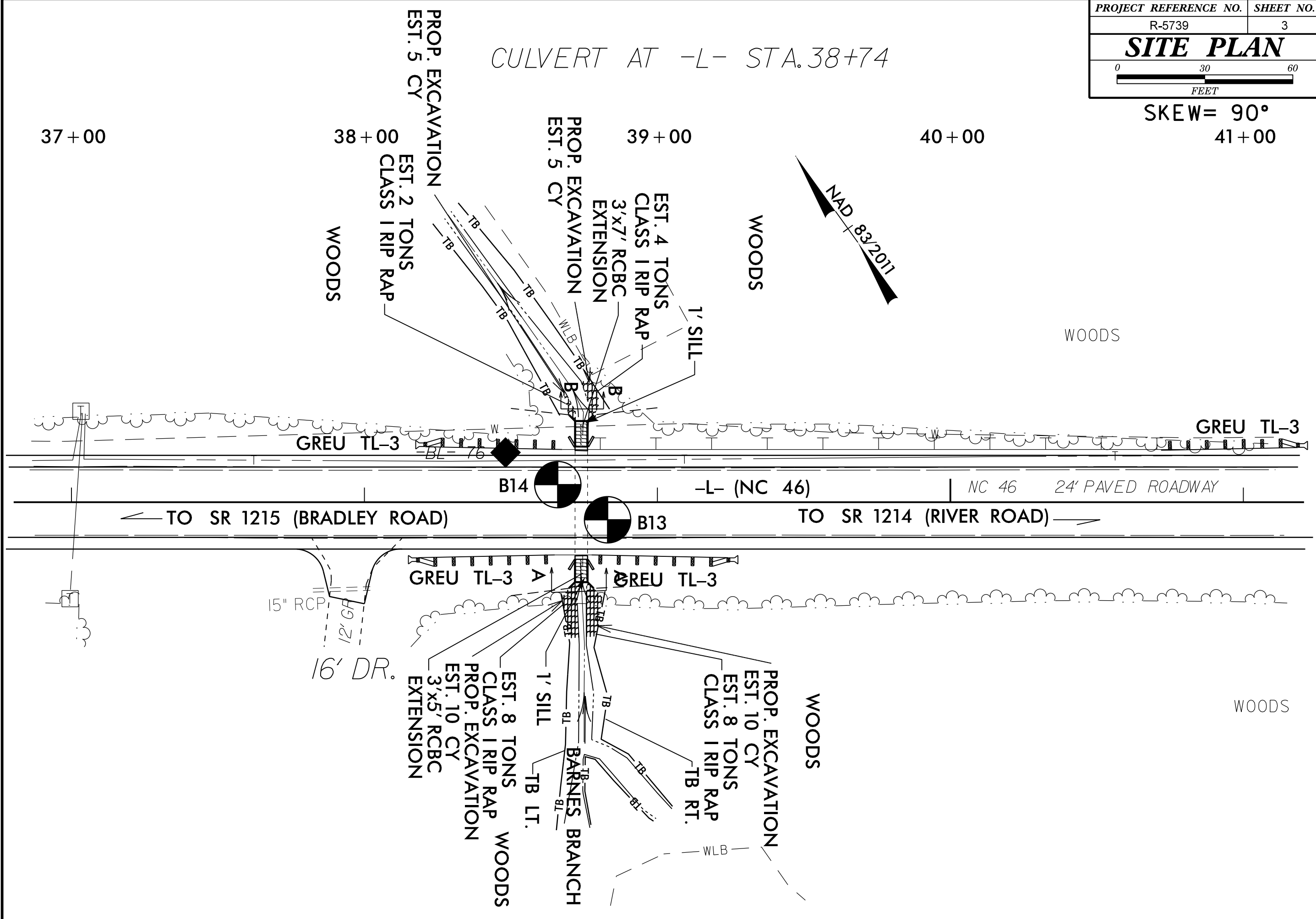
SOIL DESCRIPTION										GRADATION										ROCK DESCRIPTION										TERMS AND DEFINITIONS									
SOIL IS CONSIDERED UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER AND YIELD LESS THAN 100 BLOWS PER FOOT ACCORDING TO THE 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>										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.										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: <div><div>WEATHERED ROCK (WR)</div><div></div><div>NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > 100 BLOWS PER FOOT IF TESTED.</div></div> <div><div>CRYSTALLINE ROCK (ICR)</div><div></div><div>FINE TO COARSE GRAIN IGNEOUS AND METAMORPHIC ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE, GNEISS, GABBRO, SCHIST, ETC.</div></div> <div><div>NON-CRYSTALLINE ROCK (NCR)</div><div></div><div>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.</div></div> <div><div>COASTAL PLAIN SEDIMENTARY ROCK (CPS)</div><div></div><div>COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED SHELL BEDS, ETC.</div></div>										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. FLOOD - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLOOED 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 (N 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.									
SOIL LEGEND AND AASHTO CLASSIFICATION										MINERALOGICAL COMPOSITION										WEATHERING																			
GENERAL CLASS.										MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDERED OF SIGNIFICANCE.										FRESH ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING. ROCK RINGS UNDER HAMMER IF CRYSTALLINE.																			
GROUP CLASS.										COMPRESSIBILITY										VERY SLIGHT (V SL.) ROCK GENERALLY FRESH, JOINTS STAINED. SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN. CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF OF A CRYSTALLINE NATURE.																			
SYMBOL										PERCENTAGE OF MATERIAL										SLIGHT (SL.) ROCK GENERALLY FRESH, JOINTS STAINED AND DISCOLORATION EXTENDS INTO ROCK UP TO 1 INCH. OPEN JOINTS MAY CONTAIN CLAY. IN GRANITOID ROCKS SOME OCCASIONAL FELDSPAR CRYSTALS ARE DULL AND DISCOLORED. CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS.																			
Z PASSING #10 #20 #40										GROUND WATER										MODERATE (MOD.) SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WEATHERING EFFECTS. IN GRANITOID ROCKS, MOST FELDSPARS ARE DULL AND DISCOLORED, SOME SHOW CLAY. ROCK HAS DULL SOUND UNDER HAMMER BLOWS AND SHOWS SIGNIFICANT LOSS OF STRENGTH AS COMPARED WITH FRESH ROCK.																			
MATERIAL PASSING #40 LL PI										MISCELLANEOUS SYMBOLS										MODERATELY SEVERE (MOD. SEV.) ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. IN GRANITOID ROCKS, ALL FELDSPARS DULL AND DISCOLORED AND A MAJORITY SHOW KAOLINIZATION. ROCK SHOWS SEVERE LOSS OF STRENGTH AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK. ROCK GIVES "CLUNK" SOUND WHEN STRUCK. <i>IF TESTED, WOULD YIELD SPT REFUSAL</i>																			
GROUP INDEX										ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION										SEVERE (SEV.) ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC CLEAR AND EVIDENT BUT REDUCED IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KAOLINIZED TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN. <i>IF TESTED, WOULD YIELD SPT N VALUES > 100 BPF</i>																			
USUAL TYPES OF MAJOR MATERIALS										SOIL SYMBOL										VERY SEVERE (V SEV.) ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE BUT MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK REMAINING. SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE THAT ONLY MINOR VESTIGES OF ORIGINAL ROCK FABRIC REMAIN. <i>IF TESTED, WOULD YIELD SPT N VALUES < 100 BPF</i>																			
GEN. RATING AS SUBGRADE										ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT										COMPLETE ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL AND SCATTERED CONCENTRATIONS. QUARTZ MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS ALSO AN EXAMPLE.																			
PI OF A-7-5 SUBGROUP IS ≤ LL - 30; PI OF A-7-6 SUBGROUP IS > LL - 30										INFERRED SOIL BOUNDARY										ROCK HARDNESS																			
CONSISTENCY OR DENSENESS										INFERRED ROCK LINE										VERY HARD CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK. BREAKING OF HAND SPECIMENS REQUIRES SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.																			
PRIMARY SOIL TYPE										ALLUVIAL SOIL BOUNDARY										HARD CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.																			
COMPACTNESS OR CONSISTENCY										RECOMMENDATION SYMBOLS										MODERATELY HARD CAN BE SCRATCHED BY KNIFE OR PICK, GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS.																			
RANGE OF STANDARD PENETRATION RESISTANCE (N-VALUE)										ABBREVIATIONS										MEDIUM HARD CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. CAN BE EXCAVATED IN SMALL CHIPS TO PIECES 1 INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK.																			
RANGE OF UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²)										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 _u - 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									
TEXTURE OR GRAIN SIZE										EQUIPMENT USED ON SUBJECT PROJECT										SOFT CAN BE GROVED OR GOUGED READILY BY KNIFE OR PICK. CAN BE EXCAVATED IN FRAGMENTS FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE.																			
U.S. STD. SIEVE SIZE OPENING (MM)										DRILL UNITS:										VERY SOFT CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES 1 INCH OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGER NAIL.																			
BOULDER (BLDR.) COBBLE (COB.) GRAVEL (GR.) COARSE SAND (CSE. SD.) FINE SAND (F SD.) SILT (SL.) CLAY (CL.)										ADVANCING TOOLS:										FRACTURE SPACING																			
GRAIN SIZE MM IN.										CLAY BITS 6" CONTINUOUS FLIGHT AUGER 8" HOLLOW AUGERS HARD FACED FINGER BITS TUNG-CARBIDE INSERTS CASING w/ ADVANCER TRICONE * STEEL TEETH TRICONE * TUNG.-CARB. CORE BIT										BEDDING																			
SOIL MOISTURE - CORRELATION OF TERMS										VANE SHEAR TEST PORTABLE MOIST										INDURATION																			
SOIL MOISTURE SCALE (ATTERBERG LIMITS)										HAMMER TYPE: [X] AUTOMATIC [] MANUAL										FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.																			
FIELD MOISTURE DESCRIPTION										CORE SIZE: [] -B [] -H [] -N										FRIABLE RUBBING WITH FINGER FREES NUMEROUS GRAINS; GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE.																			
GUIDE FOR FIELD MOISTURE DESCRIPTION										HAND TOOLS: [] POST HOLE DIGGER [] HAND AUGER [] SOUNDING ROD [] VANE SHEAR TEST										MODERATELY INDURATED GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE; BREAKS EASILY WHEN HIT WITH HAMMER.																			
LIQUID LIMIT										INDURATED GRAINS ARE DIFFICULT TO SEPARATE WITH STEEL PROBE; DIFFICULT TO BREAK WITH HAMMER.										EXTREMELY INDURATED SHARP HAMMER BLOWS REQUIRED TO BREAK SAMPLE; SAMPLE BREAKS ACROSS GRAINS.																			
PLASTIC LIMIT																																							
OPTIMUM MOISTURE SHRINKAGE LIMIT																																							
DRY - DRY (D)																																							
PLASTICITY																																							
NON PLASTIC SLIGHTLY PLASTIC MODERATELY PLASTIC HIGHLY PLASTIC																																							
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.																																							

SITE PLAN

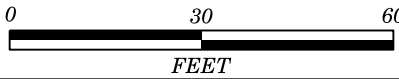


SKEW= 90°

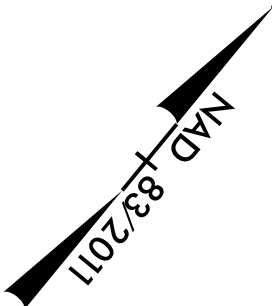
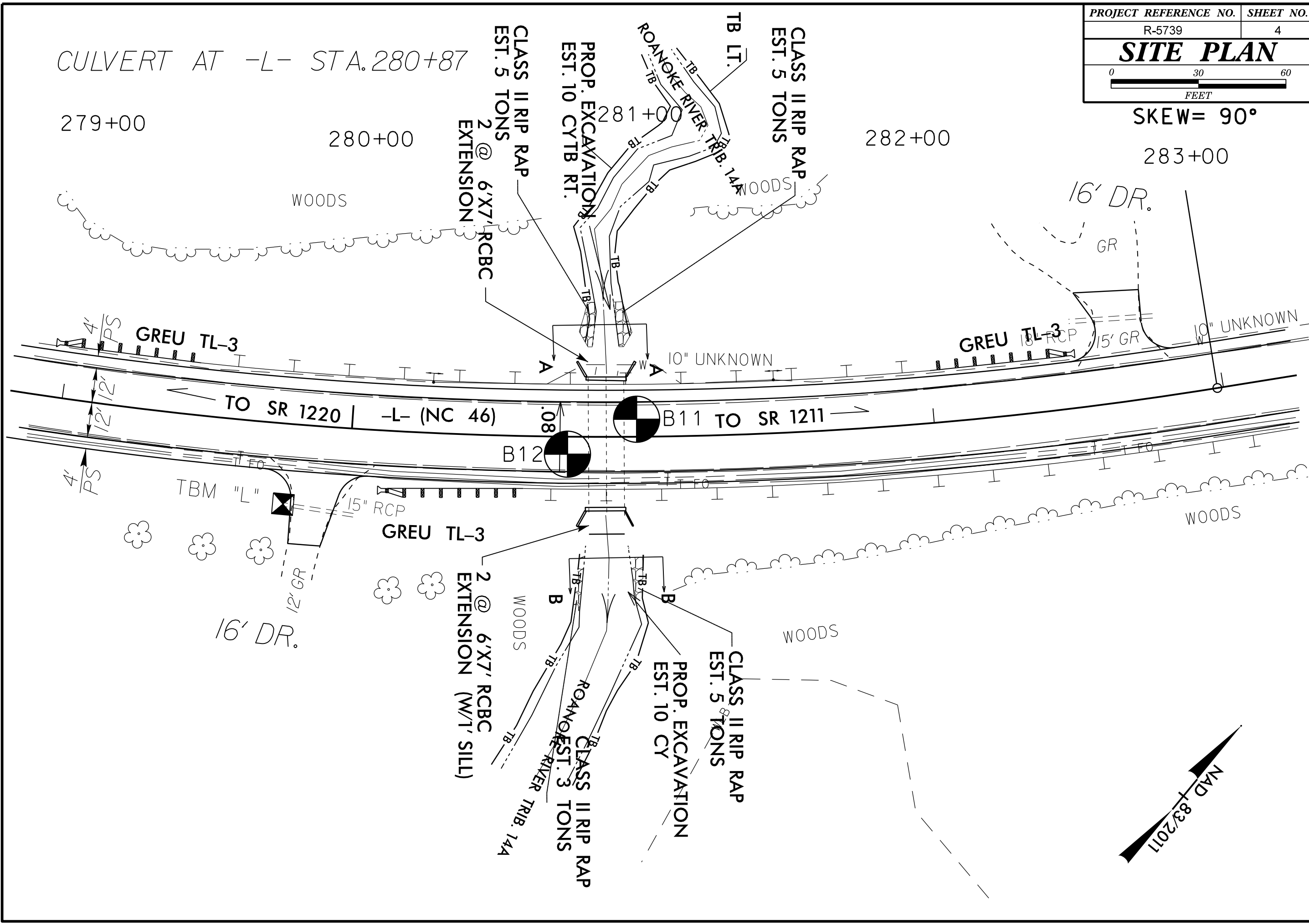
CULVERT AT -L- STA.38+74



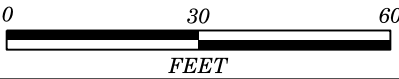
SITE PLAN



SKEW= 90°

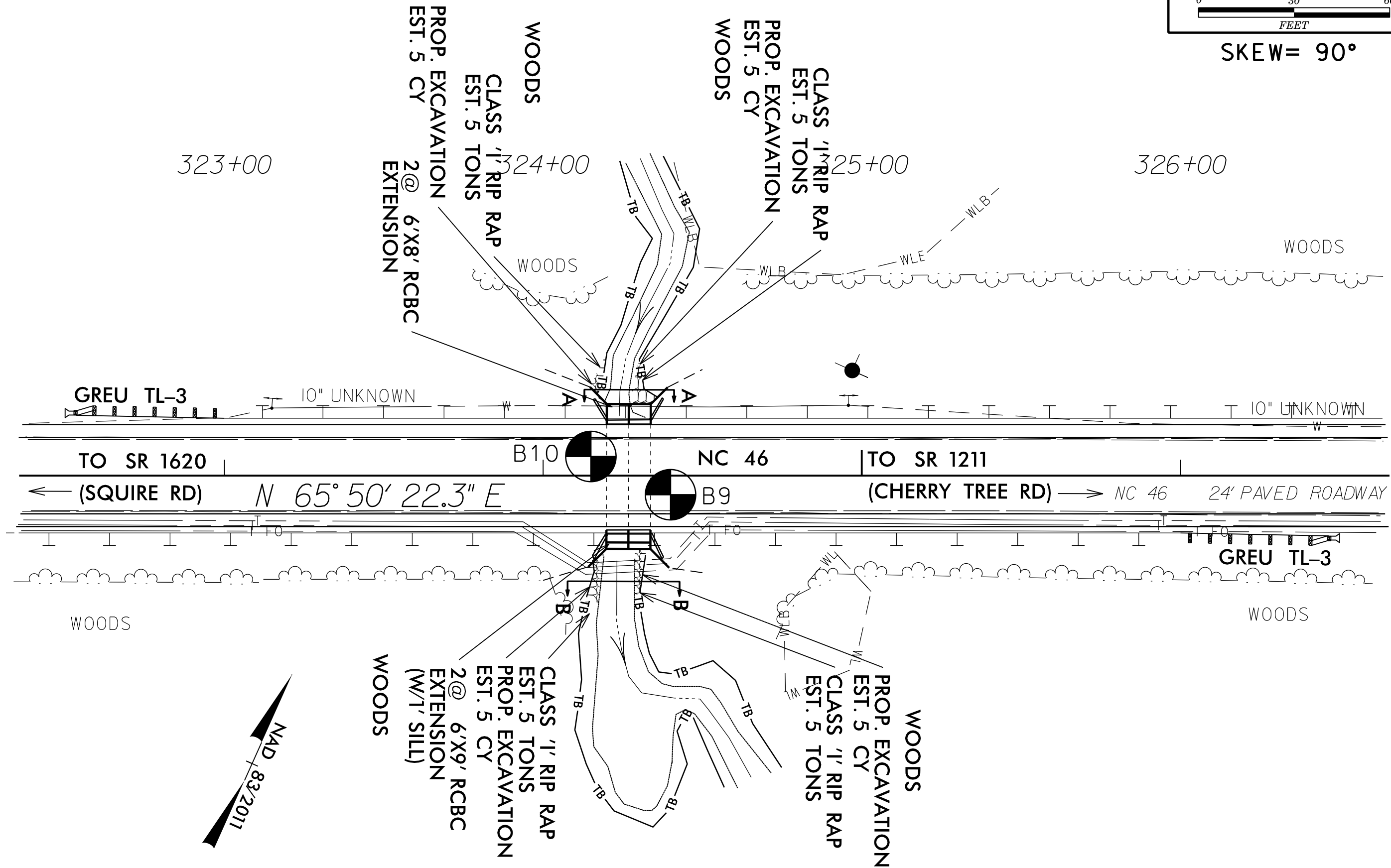


SITE PLAN



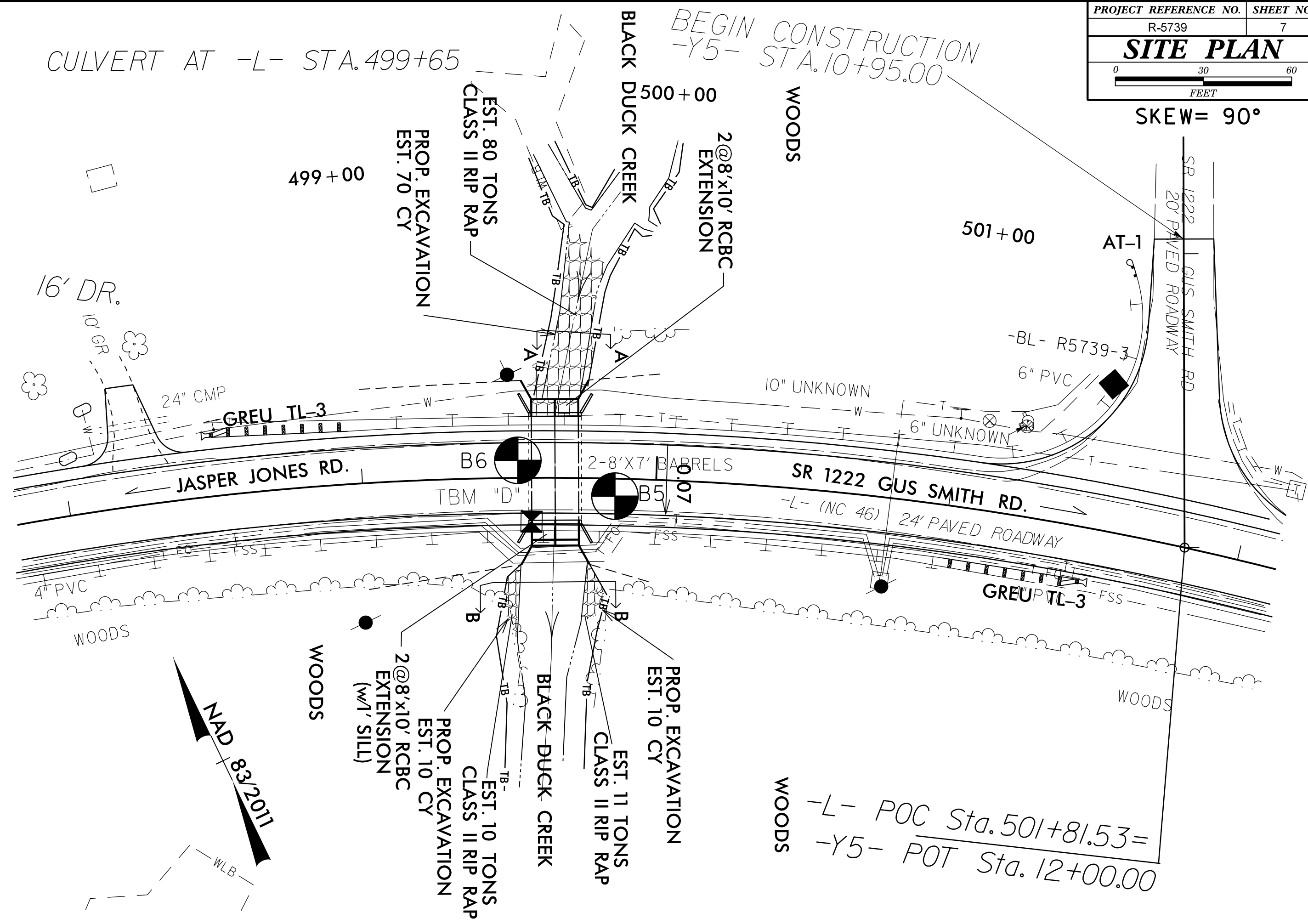
SKEW= 90°

CULVERT AT -L- STA.324+26



PROJECT REFERENCE NO.	SHEET NO.
R-5739	7
SITE PLAN	

SKEW= 90°



CULVERT AT -L- STA.499+65

BEGIN CONSTRUCTION
-Y5- STA.10+95.00

499+00

500+00

501+00

16' DR.

GREU TL-3

JASPER JONES RD.

SR 1222 GUS SMITH RD.

GREU TL-3

WOODS

WOODS

WOODS

-L- POC Sta.501+81.53=
-Y5- POT Sta.12+00.00

MAAD 83/21011

WLB

PROP. EXCAVATION
EST. 70 CY

EST. 80 TONS
CLASS II RIP RAP

2@8'x10' RCBC
EXTENSION

BLACK DUCK CREEK

B6

TBM "D"

2-8'x7' BARRELS

B5

-L- (NC 46)

6" UNKNOWN

-BL- R5739-3
6" PVC

AT-1

SR 1222
20' PAVED ROADWAY
GUS SMITH RD.

4" PVC

WOODS

2@8'x10' RCBC
EXTENSION
(w/1' SILL)

PROP. EXCAVATION
EST. 10 CY

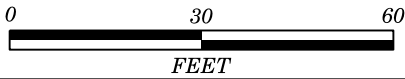
EST. 10 TONS
CLASS II RIP RAP

BLACK DUCK CREEK

PROP. EXCAVATION
EST. 10 CY

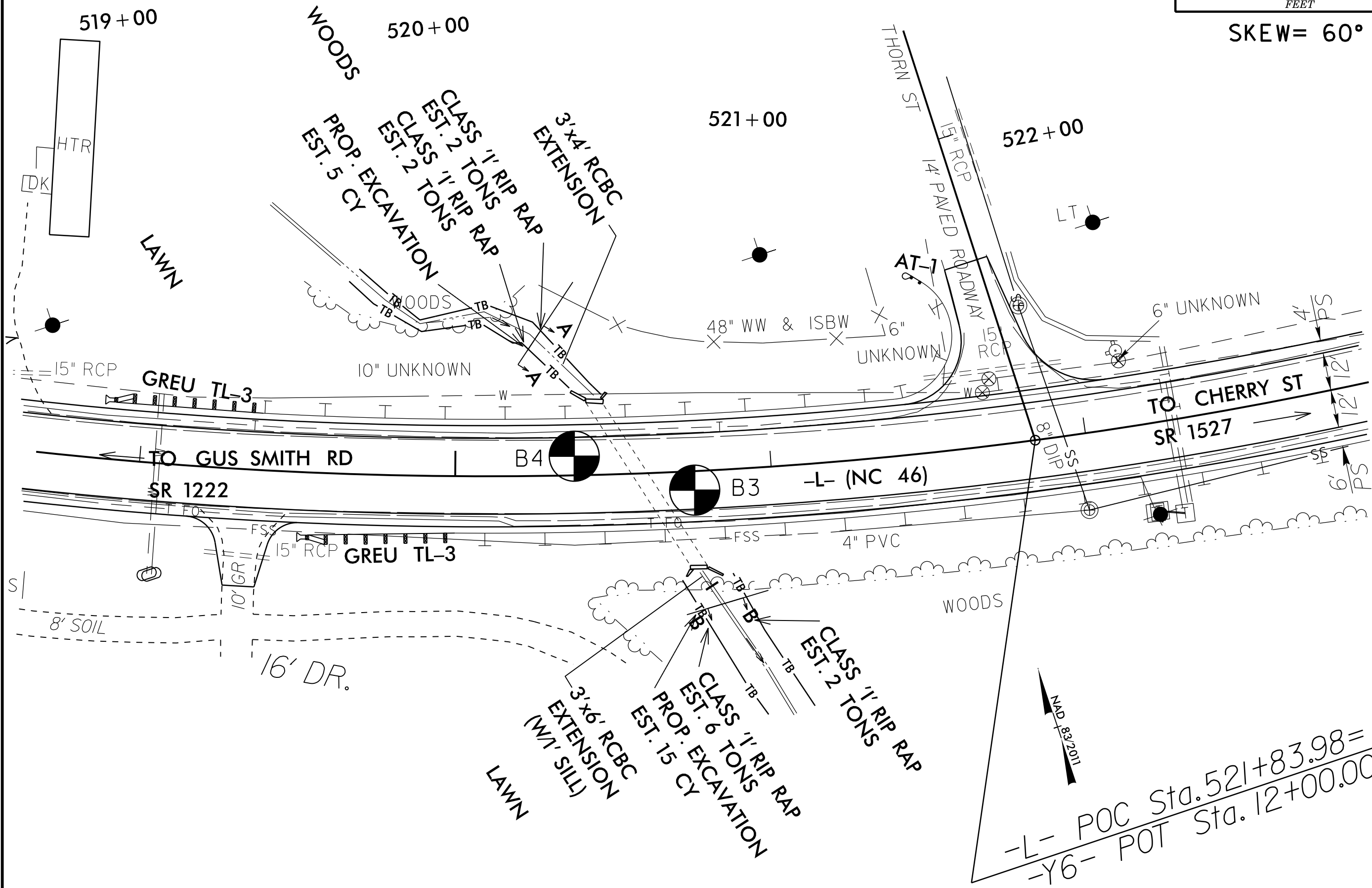
EST. 11 TONS
CLASS II RIP RAP

SITE PLAN



SKEW= 60°

CULVERT AT -L- STA.520+60



GEOTECHNICAL BORING REPORT
BORE LOG

WBS 50197.1.1			TIP R-5739			COUNTY NORTHAMPTON			GEOLOGIST Miller, T. W.				
SITE DESCRIPTION TEMPORARY SHORING ALONG -L- (NC 46) FROM NC 48 IN GASTON TO VIRGINIA STATE LINE									GROUND WTR (ft)				
BORING NO. B14			STATION 38+66			OFFSET 6 ft LT			ALIGNMENT -L-			0 HR. 10.0 Caved	
COLLAR ELEV. 301.4 ft			TOTAL DEPTH 35.2 ft			NORTHING 1,017,356			EASTING 2,353,422			24 HR. N/A	
DRILL RIG/HAMMER EFF./DATE RFC0074 CME-55 92% 08/02/2022						DRILL METHOD H.S. Augers			HAMMER TYPE Automatic				
DRILLER Edmondson, J. M.			START DATE 12/20/23			COMP. DATE 01/11/24			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			ELEV. (ft) DEPTH (ft)
305													
300	300.4	1.0											301.4 GROUND SURFACE 0.0
													300.4 PAVEMENT 1.0
	297.7	3.7	7	14	13								ROADWAY EMBANKMENT
													TAN SILTY SAND, MOIST
295	297.7	3.7	8	6	5								295.4 6.0
													ALLUVIAL
	292.7	8.7	3	6	7								GREEN AND GRAY SANDY CLAY WITH GRAVEL, MOIST TO WET
290	292.7	8.7											290.4 11.0
													SAPROLITE
	287.7	13.7	2	3	4								GREEN AND ORANGE, SAPROLITIC, SILTY CLAY WITH MICA, WET
285	287.7	13.7											285.4 16.0
													LIGHT GRAY AND ORANGE, SAPROLITIC, CLAYEY SAND WITH MICA, SATURATED
	282.7	18.7	2	2	4								280.4 21.0
280	282.7	18.7											LIGHT GRAY, TAN, AND ORANGE, SAPROLITIC, SILTY SAND WITH MICA, SATURATED
	277.7	23.7	2	2	3								
275	277.7	23.7											
	272.7	28.7	2	2	7								
270	272.7	28.7											
	267.7	33.7	4	5	6								270.4 31.0
													GRAY AND TAN MICACEOUS CLAYEY SILT, SAPROLITIC, WET
													266.2 35.2
													Boring Terminated at Elevation 266.2 ft IN STIFF CLAYEY SILT

WBS 50197.1.1				TIP R-5739		COUNTY NORTHAMPTON		GEOLOGIST Miller, T. W.						
SITE DESCRIPTION TEMPORARY SHORING ALONG -L- (NC 46) FROM NC 48 IN GASTON TO VIRGINIA STATE LINE										GROUND WTR (ft)				
BORING NO. B13				STATION 38+83		OFFSET 6 ft RT		ALIGNMENT -L-		0 HR. 8.7 Caved				
COLLAR ELEV. 301.9 ft				TOTAL DEPTH 30.2 ft		NORTHING 1,017,337		EASTING 2,353,429		24 HR. N/A				
DRILL RIG/HAMMER EFF./DATE RFC0074 CME-55 92% 08/02/2022						DRILL METHOD H.S. Augers			HAMMER TYPE Automatic					
DRILLER Edmondson, J. M.				START DATE 12/20/23		COMP. DATE 01/11/24		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		
305														
300	301.1	0.8	4	5	6	11								301.9 GROUND SURFACE 0.0 301.1 PAVEMENT 0.8
	298.2	3.7	9	8	5	13								ROADWAY EMBANKMENT TAN SILTY SAND, MOIST
295														295.9 6.0
	293.2	8.7	2	5	7	12								ALLUVIAL GRAY AND GREEN SANDY CLAY WITH WOOD FRAGMENTS, MOIST TO WET
290														290.9 11.0
	288.2	13.7	1	2	2	4								SAPROLITE TAN, ORANGE, AND GRAY, SAPROLITIC, SANDY CLAY WITH MICA AND QUARTZ, WET
285														285.9 16.0
	283.2	18.7	3	1	4	5								TAN, ORANGE, AND GRAY, SAPROLITIC, SILTY CLAY WITH MICA AND QUARTZ, WET
280														
	278.2	23.7	3	5	7	12								
275														
	273.2	28.7	7	13	27	40								271.7 30.2
														Boring Terminated at Elevation 271.7 ft IN HARD SILTY CLAY

NCDOT BORE DOUBLE R-5739_GEO_TEMP_SHORING.GPJ NC_DOT.GDT 1/22/24

NCDOT BORE DOUBLE R-5739 GEO_TEMP_SHORING.GPJ NC_DOT.GDT 1/22/24

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NC DOT BORE DOUBLE R-5739 GEO_TEMP_SHORING.GPJ NC_DOT.GDT 1/22/24

WBS 50197.1.1			TIP R-5739			COUNTY NORTHAMPTON			GEOLOGIST Miller, T. W.				
SITE DESCRIPTION TEMPORARY SHORING ALONG -L- (NC 46) FROM NC 48 IN GASTON TO VIRGINIA STATE LINE									GROUND WTR (ft)				
BORING NO. B9			STATION 324+40			OFFSET 6 ft RT			ALIGNMENT -L-				
COLLAR ELEV. 189.4 ft			TOTAL DEPTH 14.1 ft			NORTHING 1,006,955			EASTING 2,375,675				
									0 HR. 7.0 Caved				
									24 HR. N/A				
DRILL RIG/HAMMER EFF./DATE RFC0074 CME-55 92% 08/02/2022						DRILL METHOD H.S. Augers			HAMMER TYPE Automatic				
DRILLER Edmondson, J. M.			START DATE 12/19/23			COMP. DATE 12/19/23			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			
190													
	188.6	0.8	12	5	6								189.4 GROUND SURFACE 0.0
													188.6 PAVEMENT 0.8
185	185.7	3.7	4	3	2								183.4 ROADWAY EMBANKMENT 6.0
													ALLUVIAL GRAY SILTY SAND, MOIST TO SATURATED
180	180.7	8.7	WOH	4	8								178.4 WEATHERED ROCK (GRANITE) 11.0
													175.3 CRYSTALLINE ROCK (GRANITE) 14.1
	175.7	13.7											Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 175.3 ft ON CRYSTALLINE ROCK
	175.3	14.1	100/0.4										
			60/0.0										

GEOTECHNICAL BORING REPORT
BORE LOG

WBS 50197.1.1		TIP R-5739		COUNTY NORTHAMPTON		GEOLOGIST Miller, T. W.							
SITE DESCRIPTION TEMPORARY SHORING ALONG -L- (NC 46) FROM NC 48 IN GASTON TO VIRGINIA STATE LINE							GROUND WTR (ft)						
BORING NO. B8		STATION 451+82		OFFSET 6 ft RT		ALIGNMENT -L-		0 HR. 7.5 Caved					
COLLAR ELEV. 186.6 ft		TOTAL DEPTH 35.1 ft		NORTHING 1,005,758		EASTING 2,387,944		24 HR. N/A					
DRILL RIGHAMMER EFF./DATE RFC0074 CME-55 92% 08/02/2022				DRILL METHOD H.S. Augers			HAMMER TYPE Automatic						
DRILLER Edmondson, J. M.		START DATE 12/19/23		COMP. DATE 01/17/24		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			ELEV. (ft) DEPTH (ft)
190													
185	185.8	0.8	4	9	6	15							186.6 GROUND SURFACE 0.0
													185.8 PAVEMENT 0.8
	183.0	3.6	6	8	4	12							ROADWAY EMBANKMENT
180													TAN AND ORANGE SILTY SAND, MOIST
	178.0	8.6	WOH	WOH	WOH	0							180.6 ALLUVIAL 6.0
													GRAY SANDY CLAY WITH WOOD FRAGMENTS, MOIST TO WET
175													175.6 COASTAL PLAIN 11.0
	173.0	13.6	3	6	4	10							TAN SILTY SAND WITH GRAVEL, SATURATED (TERRACE DEPOSITS AND UPLAND SEDIMENTS)
170													171.6 GRAY SAND, SATURATED (TERRACE DEPOSITS AND UPLAND SEDIMENTS) 15.0
	168.0	18.6	1	1	1	2							GRAY SAND, SATURATED (TERRACE DEPOSITS AND UPLAND SEDIMENTS)
165													
	163.0	23.6	WOH	1	1	2							160.6 GRAY SAND WITH GRAVEL, SATURATED (TERRACE DEPOSITS AND UPLAND SEDIMENTS) 26.0
160													
	158.0	28.6	3	4	4	8							GRAY SAND WITH GRAVEL, SATURATED (TERRACE DEPOSITS AND UPLAND SEDIMENTS)
155													
	153.0	33.6	2	1	10	11							151.8 34.8
													151.5 35.1
													SAPROLITE
													TAN, GRAY, AND RED MICACEOUS SILTY CLAY, SAPROLITIC, WET
													Boring Terminated at Elevation 151.5 ft IN STIFF SILTY CLAY

WBS 50197.1.1		TIP R-5739		COUNTY NORTHAMPTON		GEOLOGIST Miller, T. W.							
SITE DESCRIPTION TEMPORARY SHORING ALONG -L- (NC 46) FROM NC 48 IN GASTON TO VIRGINIA STATE LINE							GROUND WTR (ft)						
BORING NO. B7		STATION 452+10		OFFSET 6 ft LT		ALIGNMENT -L-		0 HR. 9.8					
COLLAR ELEV. 187.5 ft		TOTAL DEPTH 40.2 ft		NORTHING 1,005,772		EASTING 2,387,971		24 HR. N/A					
DRILL RIGHAMMER EFF./DATE RFC0074 CME-55 92% 08/02/2022				DRILL METHOD H.S. Augers			HAMMER TYPE Automatic						
DRILLER Edmondson, J. M.		START DATE 12/19/23		COMP. DATE 01/17/24		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			
190													
185	186.7	0.8	4	5	5	10							187.5 GROUND SURFACE 0.0
	183.8	3.7	8	8	7	15							186.7 PAVEMENT 0.8
180													ROADWAY EMBANKMENT
	178.8	8.7	1	1	3	4							TAN AND ORANGE SILTY SAND, MOIST
175													181.5 ALLUVIAL 6.0
	173.8	13.7	4	8	13	21							TAN SANDY CLAY, MOIST TO WET
170													176.5 COASTAL PLAIN 11.0
	168.8	18.7	1	1	1	2							TAN SILTY SAND WITH GRAVEL, SATURATED (TERRACE DEPOSITS AND UPLAND SEDIMENTS)
165													
	163.8	23.7	WOH	WOH	WOH	0							166.5 GRAY SAND WITH GRAVEL, SATURATED (TERRACE DEPOSITS AND UPLAND SEDIMENTS) 21.0
160													
	158.8	28.7	1	2	1	3							
155													
	153.8	33.7	1	1	0	1							
150													
	148.8	38.7	8	17	52	69							148.3 39.2
													147.3 40.2
													SAPROLITE
													TAN, BROWN, AND RED MICACEOUS SILTY CLAY, SAPROLITIC, WET
													Boring Terminated at Elevation 147.3 ft IN HARD SILTY CLAY

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GEOTECHNICAL BORING REPORT
BORE LOG

WBS 50197.1.1			TIP R-5739			COUNTY NORTHAMPTON			GEOLOGIST Miller, T. W.						
SITE DESCRIPTION TEMPORARY SHORING ALONG -L- (NC 46) FROM NC 48 IN GASTON TO VIRGINIA STATE LINE									GROUND WTR (ft)						
BORING NO. B6			STATION 499+53			OFFSET 6 ft LT			ALIGNMENT -L-			0 HR. 7.5 Caved			
COLLAR ELEV. 138.5 ft			TOTAL DEPTH 13.7 ft			NORTHING 1,004,831			EASTING 2,392,612			24 HR. N/A			
DRILL RIGHAMMER EFF./DATE RFC0074 CME-55 92% 08/02/2022						DRILL METHOD H.S. Augers			HAMMER TYPE Automatic						
DRILLER Edmondson, J. M.			START DATE 12/19/23			COMP. DATE 12/19/23			SURFACE WATER DEPTH N/A						
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	L O G	SOIL AND ROCK DESCRIPTION ELEV. (ft) DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					
140															
135	137.7	0.8	7	4	5	9									138.5 GROUND SURFACE 0.0 137.7 PAVEMENT 0.8
	134.7	3.8	5	7	4	11									ROADWAY EMBANKMENT TAN AND ORANGE SILTY SAND, MOIST
130															132.5 ALLUVIAL 6.0 GRAY SILTY SAND, MOIST TO SATURATED
	129.7	8.8	9	14	6	20									
125	124.8	13.7	60/0.0			60/0.0									124.8 CRYSTALLINE ROCK 13.7 (GRANITE) Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 124.8 ft ON CRYSTALLINE ROCK

WBS 50197.1.1				TIP R-5739			COUNTY NORTHAMPTON			GEOLOGIST Miller, T. W.				
SITE DESCRIPTION TEMPORARY SHORING ALONG -L- (NC 46) FROM NC 48 IN GASTON TO VIRGINIA STATE LINE										GROUND WTR (ft)				
BORING NO. B5				STATION 499+86			OFFSET 6 ft RT			ALIGNMENT -L-			0 HR. 9.4 Caved	
COLLAR ELEV. 137.3 ft				TOTAL DEPTH 11.7 ft			NORTHING 1,004,806			EASTING 2,392,637			24 HR. N/A	
DRILL RIGHAMMER EFF./DATE RFC0074 CME-55 92% 08/02/2022							DRILL METHOD H.S. Augers				HAMMER TYPE Automatic			
DRILLER Edmondson, J. M.				START DATE 12/19/23			COMP. DATE 12/19/23			SURFACE WATER DEPTH N/A				
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	L O G	SOIL AND ROCK DESCRIPTION
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				
140														
135	136.4	0.9	9	8	5									137.3 GROUND SURFACE 0.0 136.4 PAVEMENT 0.9
	133.5	3.8	2	2	2									ROADWAY EMBANKMENT ORANGE AND TAN SILTY SAND, MOIST
130														131.3 ALLUVIAL 6.0
	128.5	8.8	18	27	18									GRAY SAND WITH GRAVEL, MOIST TO SATURATED
	125.6	11.7	60/0.0											125.6 CRYSTALLINE ROCK 11.7 (GRANITE) Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 125.6 ft ON CRYSTALLINE ROCK

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GEOTECHNICAL BORING REPORT
BORE LOG

WBS 50197.1.1			TIP R-5739			COUNTY NORTHAMPTON			GEOLOGIST Miller, T. W.							
SITE DESCRIPTION TEMPORARY SHORING ALONG -L- (NC 46) FROM NC 48 IN GASTON TO VIRGINIA STATE LINE									GROUND WTR (ft)							
BORING NO. B4			STATION 520+38			OFFSET 6 ft LT			ALIGNMENT -L-			0 HR. 5.6 Caved				
COLLAR ELEV. 134.5 ft			TOTAL DEPTH 33.9 ft			NORTHING 1,003,611			EASTING 2,394,285			24 HR. N/A				
DRILL RIGHAMMER EFF./DATE RFC0074 CME-55 92% 08/02/2022						DRILL METHOD H.S. Augers			HAMMER TYPE Automatic							
DRILLER Edmondson, J. M.			START DATE 12/18/23			COMP. DATE 01/17/24			SURFACE WATER DEPTH N/A							
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	L O G	SOIL AND ROCK DESCRIPTION ELEV. (ft) DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
135																
130	133.7	0.8		3	3	3										134.5 GROUND SURFACE 0.0 133.7 PAVEMENT 0.8
	130.8	3.7		2	3	2										ROADWAY EMBANKMENT ORANGE AND TAN SILTY SAND, MOIST
125	125.8	8.7		WOH	1	2										128.5 SAPROLITE 6.0 GRAY, SAPROLITIC, SILTY SAND WITH QUARTZ, MOIST TO SATURATED
120	120.8	13.7		WOH	WOH	WOH										123.5 BLUE, GRAY, TAN, RED, SAPROLITIC, 11.0 SILTY CLAY WITH MICA, AND QUARTZ, WET
115	115.8	18.7		1	2	3										
110	112.5	22.0		3	3	5										
	110.8	23.7		17	34	66/0.3										110.8 WEATHERED ROCK 23.7 (GRANITE)
105	105.8	28.7		14	31	60										107.5 SAPROLITE 27.0 GRAY, TAN, RED, SAPROLITIC, SILTY CLAY WITH MICA, AND QUARTZ, WET
	100.8	33.7														103.5 WEATHERED ROCK 31.0 (GRANITE)
	100.6	33.9														100.6 CRYSTALLINE ROCK 33.9 (GRANITE) Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 100.6 ft ON CRYSTALLINE ROCK

WBS 50197.1.1			TIP R-5739			COUNTY NORTHAMPTON			GEOLOGIST Miller, T. W.					
SITE DESCRIPTION TEMPORARY SHORING ALONG -L- (NC 46) FROM NC 48 IN GASTON TO VIRGINIA STATE LINE									GROUND WTR (ft)					
BORING NO. B3			STATION 520+75			OFFSET 6 ft RT			ALIGNMENT -L-			0 HR. 10.6 Caved		
COLLAR ELEV. 135.8 ft			TOTAL DEPTH 23.2 ft			NORTHING 1,003,589			EASTING 2,394,317			24 HR. N/A		
DRILL RIGHAMMER EFF./DATE RFC0074 CME-55 92% 08/02/2022						DRILL METHOD H.S. Augers			HAMMER TYPE Automatic					
DRILLER Edmondson, J. M.			START DATE 12/19/23			COMP. DATE 01/17/24			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				
140														
135	134.8	1.0	4	4	4									135.8 GROUND SURFACE 0.0 134.8 PAVEMENT 1.0
130	131.8	4.0	3	2	1									ROADWAY EMBANKMENT TAN SILTY SAND, MOIST
125	126.8	9.0	2	5	6									SAPROLITE TAN, SAPROLITIC, SILTY SAND WITH QUARTZ, MOIST TO SATURATED
120	121.8	14.0	3	2	3									BLUE, GRAY, ORANGE, AND GREEN, SAPROLITIC, SILTY CLAY WITH QUARTZ, WET
115	116.8	19.0	WOH	WOH	1									CRYSTALLINE ROCK (GRANITE) Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 112.6 ft ON CRYSTALLINE ROCK
	115.3	20.5	1	5	13									
	112.6	23.2	60/0.0											112.6 23.2

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GEOTECHNICAL BORING REPORT
BORE LOG

WBS 50197.1.1			TIP R-5739			COUNTY NORTHAMPTON			GEOLOGIST Miller, T. W.					
SITE DESCRIPTION TEMPORARY SHORING ALONG -L- (NC 46) FROM NC 48 IN GASTON TO VIRGINIA STATE LINE									GROUND WTR (ft)					
BORING NO. B2			STATION 528+89			OFFSET 6 ft LT			ALIGNMENT -L-			0 HR. 12.8 Caved		
COLLAR ELEV. 122.5 ft			TOTAL DEPTH 37.2 ft			NORTHING 1,003,554			EASTING 2,395,128			24 HR. N/A		
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 92% 08/02/2022						DRILL METHOD H.S. Augers			HAMMER TYPE Automatic					
DRILLER Edmondson, J. M.			START DATE 12/18/23			COMP. DATE 01/17/24			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			ELEV. (ft)	DEPTH (ft)
125														
120	121.6	0.9	4	6	3								122.5	GROUND SURFACE 0.0
													121.6	PAVEMENT 0.9
115	118.1	4.4	3	2	2									
													115.5	SAPROLITE 7.0
110	113.1	9.4	2	2	2									
														BLUE, RED, TAN, GRAY, SAPROLITIC, SILTY CLAY WITH QUARTZ, MOIST TO WET
105	108.1	14.4	3	8	11									
100	103.1	19.4	7	14	17									
													100.5	RED, TAN, GRAY, SAPROLITIC, SANDY CLAY WITH QUARTZ, WET 22.0
95	98.1	24.4	14	38	48									
													96.5	WEATHERED ROCK (GRANITE) 26.0
90	93.7	28.8	12	47	53/0.4									
	88.7	33.8	92	100/0.2										
	85.3	37.2	60/0.0										85.3	CRYSTALLINE ROCK (GRANITE) 37.2
														Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 85.3 ft ON CRYSTALLINE ROCK

WBS 50197.1.1			TIP R-5739			COUNTY NORTHAMPTON			GEOLOGIST Miller, T. W.				
SITE DESCRIPTION TEMPORARY SHORING ALONG -L- (NC 46) FROM NC 48 IN GASTON TO VIRGINIA STATE LINE									GROUND WTR (ft)				
BORING NO. B1			STATION 529+15			OFFSET 7 ft RT			ALIGNMENT -L-			0 HR. 16.7 Caved	
COLLAR ELEV. 122.6 ft			TOTAL DEPTH 26.6 ft			NORTHING 1,003,541			EASTING 2,395,154			24 HR. N/A	
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 92% 08/02/2022						DRILL METHOD H.S. Augers			HAMMER TYPE Automatic				
DRILLER Edmondson, J. M.			START DATE 12/18/23			COMP. DATE 12/18/23			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			
125													
120	121.3	1.3	2	2	3								122.6 GROUND SURFACE 0.0
	118.8	3.8	3	3	2								121.3 PAVEMENT 1.3
115													ROADWAY EMBANKMENT TAN AND ORANGE SILTY SAND, MOIST
	113.8	8.8	6	9	5								
110													SAPROLITE BLUE, GRAY, TAN, RED, SAPROLITIC, SILTY CLAY WITH QUARTZ, MOIST TO WET
	108.8	13.8	4	6	8								
105	103.8	18.8	7	5	5								
100	98.8	23.8	4	39	61/0.4								98.3 24.3
	97.4	25.2	31	63	37/0.4								96.0 26.6
			</										

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