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REFERENCE

CONTENTS

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SHEET NO. **DESCRIPTION** 2A - 3

TITLE SHEET LEGEND (SOIL & ROCK) SUPPLEMENTAL LEGEND (GSI) SITE PLAN PROFILE SOIL TEST RESULTS

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION **DIVISION OF HIGHWAYS GEOTECHNICAL ENGINEERING UNIT**

STRUCTURE SUBSURFACE INVESTIGATION

COUNTY HENDERSON

PROJECT DESCRIPTION <u>US-64</u> IMPROVEMENTS FROM WHITE PINE STREET TO BLYTHE STREET

SITE DESCRIPTION _RETAINING WALL #6

STATE STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C. U–5783	1	5

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 SOLI TEST DATA AVAILABLE MAY BE REVEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N.C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL LENGMEENING UNIT AT 1991 707-6860. THE SUBSIFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

GENERAL SOL 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 UNPELACED TEST DATA CAN BE RELIED ON ONLY TO THE DECREE OF RELIABILITY INHERENT IN THE STANDARD TEST WETHO. THE OBSERVED WATER LEVELS OR SOLL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOLL 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 MARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MODE, OR OPHIONO OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO PERFORM INDEPENDENT SUBSURFACE INVESTIGATION 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 THA ECTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

NOTES:

- TES: 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 SITEMISSION OF NO INFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE. 2.

PERSONNEL

A. BLACKMORE

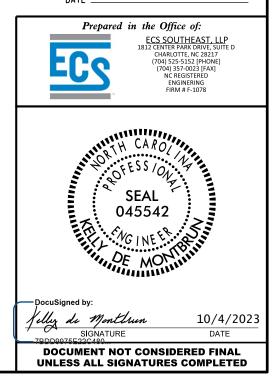
GEOLOGIC EXPLORATION

INVESTIGATED BY ECS SOUTHEAST, LLP DRAWN BY <u>K. DE</u> MONTBRUN, P.E.

CHECKED BY _M. WALKO, P.E.

SUBMITTED BY ______ ECS SOUTHEAST, LLP

DATE OCTOBER 2023



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION **DIVISION OF HIGHWAYS GEOTECHNICAL ENGINEERING UNIT** SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

-		DESCRIPTION			GRADATION			ROCK DES				
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				FOOT	WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE UNIFORMLY GRADED - INDICATES THAT SOIL PARTICLES ARE ALL		ROCK LINE IND	DICATES THE LEVEL AT WHICH NON-COAS	OULD YIELD SPT REFUSAL IF TESTED. AN IN STAL PLAIN MATERIAL WOULD YIELD SPT REF			
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:					GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLE SIZES		BLOWS IN NOM	N-COASTAL PLAIN MATERIAL. THE TRAN	MPLER EQUAL TO OR LESS THAN 0.1 FOOT PE NSITION BETWEEN SOIL AND ROCK IS OFTE			
CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. FOR EXAMPLE,					ANGULARITY OF GRAINS		REPRESENTED BY A ZONE OF WEATHERED ROCK.					
VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6					THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESI ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.	IGNATED BY THE TERMS:	WEATHERED		N MATERIAL THAT WOULD YIELD SPT N VALU			
	SOIL LEGEND AND	AASHTO CLASSIFI	CATION		MINERALOGICAL COMPOSIT	ION	ROCK (WR)	100 BLOWS PER FOO				
GENERAL CLASS.	Granular Materials (≤ 35% Passing ≢200)	(> 35% PASSING #200)	ORGANIC MATERIAL	S	MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TAL	.C, KAOLIN, ETC.	CRYSTALLINE ROCK (CR)	WOULD YIELD SPT F	RAIN IGNEOUS AND METAMORPHIC ROCK THAT REFUSAL IF TESTED. ROCK TYPE INCLUDES (
GROUP A-1	A-3 A-2	A-4 A-5 A-6 A-7	A-1, A-2 A-4, A-5		ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDER	RED OF SIGNIFICANCE.	NON-CRYSTALL	INF FINE TO COARSE GF	HIST,ETC. RAIN METAMORPHIC AND NON-COASTAL PLAIN			
CLASS. A-1-a A-1-b		2-7 4-7-5 4-7-6	A-3 A-6, A-7	********	COMPRESSIBILITY SLIGHTLY COMPRESSIBLE	LL < 31	ROCK (NCR)		THAT WOULD YEILD SPT REFUSAL IF TESTE ES PHYLLITE, SLATE, SANDSTONE, ETC.			
SYMBOL SCOOL					MODERATELY COMPRESSIBLE	LL = 31 - 50 LL > 50	COASTAL PLAI SEDIMENTARY	IN COASTAL PLAIN SEE	DIMENTS CEMENTED INTO ROCK, BUT MAY NOT K TYPE INCLUDES LIMESTONE, SANDSTONE, CE			
2 PASSING *10 50 MX			GRANULAR SILT-	MUCK,	PERCENTAGE OF MATERIA		(CP)	SHELL BEDS, ETC.				
*40 30 MX 50 MX *200 15 MX 25 MX	1X 51 MN 1X 10 MX 35 MX 35 MX 35 MX 35		SOILS SOILS	PEAT	GRANULAR SILT - CLAY ORGANIC MATERIAL SOILS SOILS		1	WEATH				
MATERIAL	10 10 11 33 11 33 11 33 11 33	PIX 30 PIN 30 PIN 30 PIN			<u>ORGANIC MATERIAL</u> <u>SOILS</u> TRACE OF ORGANIC MATTER 2 - 3% 3 - 5%	OTHER MATERIAL TRACE 1 - 10%		HAMMER IF CRYSTALLS BRIGHT, FEW JOINTS	S MAY SHOW SLIGHT STAINING. ROCK RINGS UN			
PASSING #40			SOILS WITH		LITTLE ORGANIC MATTER 3 - 5% 5 - 12% MODERATELY ORGANIC 5 - 10% 12 - 20%	LITTLE 10 - 20% SOME 20 - 35%			SOME JOINTS MAY SHOW THIN CLAY COATINGS			
PI 6 MX		MN 40 MX 41 MN 40 MX 41 MN MN 10 MX 10 MX 11 MN 11 MN	LITTLE OR MODERATE	HIGHLY	HIGHLY ORGANIC > 10% > 20%	HIGHLY 35% AND ABOVE		CRYSTALS ON A BROKEN SPECIMEN FACE SI OF A CRYSTALLINE NATURE.	SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BL			
GROUP INDEX Ø	0 0 4 MX	8 MX 12 MX 16 MX NO MX	AMOUNTS OF	ORGANIC SOILS	GROUND WATER				AND DISCOLORATION EXTENDS INTO ROCK UP TO			
USUAL TYPES STONE FRAGS OF MAJOR GRAVEL, AND		SILTY CLAYEY	ORGANIC MATTER		WATER LEVEL IN BORE HOLE IMMEDIATE	ELY AFTER DRILLING			IN GRANITOID ROCKS SOME OCCASIONAL FELDSP YSTALLINE ROCKS RING UNDER HAMMER BLOWS.			
OF MAJOR GRAVEL, AND MATERIALS SAND	SAND GRAVEL AND SAND	SOILS SOILS			STATIC WATER LEVEL AFTER 24 HOL	URS		SIGNIFICANT PORTIONS OF ROCK SHOW DISC				
GEN. RATING	EXCELLENT TO GOOD	FAIR TO POOR	FAIR TO POOR L	INSUITABLE	∇PW PERCHED WATER, SATURATED ZONE, OR W	ATER BEARING STRATA			ULL AND DISCOLORED, SOME SHOW CLAY, ROCK I HOWS SIGNIFICANT LOSS OF STRENGTH AS COMP			
AS SUBGRADE		- 30 ; PI OF A-7-6 SUBGROUP IS	PUUR		SPRING OR SEEP			WITH FRESH ROCK.				
		CY OR DENSENESS	× LL 30		MISCELLANEOUS SYMBOL	S			STAINED. IN GRANITOID ROCKS.ALL FELDSPARS			
	COMPACTNESS OF	RANGE OF STANDARD	RANGE OF UNCON					AND CAN BE EXCAVATED WITH A GEOLOGIST IF TESTED, WOULD YIELD SPT REFUSAL	T'S PICK. ROCK GIVES "CLUNK" SOUND WHEN STR			
PRIMARY SOIL TYPE	CONSISTENCY	PENETRATION RESISTENCE (N-VALUE)	COMPRESSIVE STF (TONS/FT ²)		L ROADWAY EMBANKMENT (RE) 297029 DIP & DIP DIREC WITH SOIL DESCRIPTION OF ROCK STRUCTU				STAINED. ROCK FABRIC CLEAR AND EVIDENT B			
GENERALLY	VERY LOOSE	< 4			SOIL SYMBOL		(SEV.)		N GRANITOID ROCKS ALL FELDSPARS ARE KAOLI			
GRANULAR	LOOSE MEDIUM DENSE	4 TO 10 10 TO 30	N/A			 INSTALLATION CONE PENETROMETER 		IF TESTED, WOULD YIELD SPT N VALUES >				
MATERIAL (NON-COHESIVE)	DENSE VERY DENSE	30 TO 50 > 50			AHTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT AUGER BORING				R STAINED. ROCK FABRIC ELEMENTS ARE DISCER OIL STATUS, WITH ONLY FRAGMENTS OF STRONG			
	VERY SOFT	< 2	< 0.25		INFERRED SOIL BOUNDARY - CORE BORING	SOUNDING ROD	(V SEV.)	REMAINING. SAPROLITE IS AN EXAMPLE OF	ROCK WEATHERED TO A DEGREE THAT ONLY MI			
GENERALLY SILT-CLAY	SOFT MEDIUM STIFF	2 TO 4 4 TO 8	0.25 TO 0.5 0.5 TO 1.0			TEST BORING			NIN. <u>IF TESTED, WOULD YIELD SPT N VALUES <</u>			
MATERIAL	STIFF	8 TO 15	1 TO 2			WITH CORE		SCATTERED CONCENTRATIONS. QUARTZ MAY	DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL BE PRESENT AS DIKES OR STRINGERS, SAPROL			
(COHESIVE)	VERY STIFF HARD	15 TO 30 > 30	2 TO 4 > 4		ALLUVIAL SOIL BOUNDARY ALLUVIAL SOIL BOUNDARY	- SPT N-VALUE		ALSO AN EXAMPLE.				
	TEXTURE	OR GRAIN SIZE			RECOMMENDATION SYMBOL	LS	VERY HARD					
U.S. STD. SIEVE SIZE	4 10	40 60 200	270		UNDERCUT UNCLASSIFIED EXCAVATION -	NCLASSIFIED EXCAVATION -		SEVERAL HARD BLOWS OF THE GEOLOGIST'S	RP PICK. BREAKING OF HAND SPECIMENS REQUIR			
OPENING (MM)	4.76 2.00		5 0.053		SHALLOW UNCLASSIFIED EXCAVATION -	USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL		CAN BE SCRATCHED BY KNIFE OR PICK ONL TO DETACH HAND SPECIMEN.	LY WITH DIFFICULTY. HARD HAMMER BLOWS REQ			
	COBBLE GRAVEL (COB.) (GR.)	SAND SAND	' (su)	CLAY (CL.)		EMBANKMENT UR BACKFILL			DUGES OR GROOVES TO 0.25 INCHES DEEP CAN			
		(CSE. SD.) (F SD.	.)		ABBREVIATIONS		HARD		ST'S PICK. HAND SPECIMENS CAN BE DETACHED			
GRAIN MM 305 SIZE IN. 12	75 2.0 3	0.25	0.05 0.005		AR - AUGER REFUSAL MED MEDIUM BT - BORING TERMINATED MICA MICACEOUS	VST - VANE SHEAR TEST WEA WEATHERED			DEEP BY FIRM PRESSURE OF KNIFE OR PICK P			
	SOIL MOISTURE -	CORRELATION OF	TERMS		CL CLAY MOD MODERATELY CPT - CONE PENETRATION TEST NP - NON PLASTIC	γ - UNIT WEIGHT $\gamma_{ m d}$ - DRY UNIT WEIGHT		CAN BE EXCAVATED IN SMALL CHIPS TO PE POINT OF A GEOLOGIST'S PICK.	EICES I INCH MAXIMUM SIZE BY HARD BLOWS O			
SOIL MOISTURE	E SCALE FIELD M		FIELD MOISTURE DESC	RIPTION	CSE COARSE ORG ORGANIC	-			NIFE OR PICK. CAN BE EXCAVATED IN FRAGMEN			
(ATTERBERG L	LIMITS) DESCR	IPTION			DMT - DILATOMETER TEST PMT - PRESSUREMETER TEST DPT - DYNAMIC PENETRATION TEST SAP SAPROLITIC	T <u>SAMPLE ABBREVIATIONS</u> S - BULK		FROM CHIPS TO SEVERAL INCHES IN SIZE I PIECES CAN BE BROKEN BY FINGER PRESSL	BY MODERATE BLOWS OF A PICK POINT. SMALL,			
	- SATUR (SAT		DUID; VERY WET, USUAL / THE GROUND WATER		e - VOID RATIO SD SAND, SANDY	SS - SPLIT SPOON			AVATED READILY WITH POINT OF PICK. PIECES 1			
		./ ••••••••••••••••••••••••••••••••••••			F - FINE SL SILT, SILTY FOSS FOSSILIFEROUS SLI SLIGHTLY	ST - SHELBY TUBE RS - ROCK		OR MORE IN THICKNESS CAN BE BROKEN BY FINGERNAIL.	Y FINGER PRESSURE. CAN BE SCRATCHED READ			
PLASTIC RANGE <	- WET -		REQUIRES DRYING TO		FRAC FRACTURED, FRACTURES TCR - TRICONE REFUSAL FRAGS FRAGMENTS w - MOISTURE CONTENT	RT - RECOMPACTED TRIAXIAL CBR - CALIFORNIA BEARING		RACTURE SPACING	BEDDING			
	TIC LIMIT	HITHIN OFT	IMUM MOISTURE		HI HIGHLY V - VERY	RATIO	TERM	SPACING	TERM THICKNE			
014 007711	MUM MOISTURE - MOIST	- (M) SOLID; AT OF	R NEAR OPTIMUM MOIS	TURE	EQUIPMENT USED ON SUBJECT		VERY WIDE WIDE	MORE THAN 10 FEET 3 TO 10 FEET	VERY THICKLY BEDDED 4 FEET THICKLY BEDDED 1.5 - 4 FI			
					DRILL UNITS: ADVANCING TOOLS:		MODERATEL CLOSE		THINLY BEDDED 0.16 - 1.5 VERY THINLY BEDDED 0.03 - 0.16			
	- DRY -		DDITIONAL WATER TO			X AUTOMATIC MANUAL	VERY CLOSE		THICKLY LAMINATED 0.008 - 0.03			
		ATTAIN UPTI	IMUM MOISTURE		CME-55			INDUR	THINLY LAMINATED < 0.008 FI			
		ASTICITY			CME-550 HARD FACED FINGER BITS	вн	FOR SEDIMENT		HIIUN ING OF MATERIAL BY CEMENTING, HEAT, PRES			
NON PLASTIC		0-5	DRY STRENGTH VERY LOW	1		-N	FRIABLE	RUBBING WITH F	FINGER FREES NUMEROUS GRAINS;			
SLIGHTLY PLA	ASTIC	6-15	SLIGHT		VANE SHEAR TEST	HAND TOOLS:	FRIHBLE	GENILE BLUW B	BY HAMMER DISINTEGRATES SAMPLE.			
MODERATELY HIGHLY PLAST		16-25 26 OR MORE	MEDIUM HIGH			POST HOLE DIGGER	MODERA		SEPARATED FROM SAMPLE WITH STEEL PROU			
		COLOR			TRICONE • TUNGCARB.	HAND AUGER		CRAINS ARE DIE	FFICULT TO SEPARATE WITH STEEL PROBE;			
DESCRIPTIONS MAY	Y INCLUDE COLOR OR COLOR	COMBINATIONS (TAN. RED	YELLOW-BROWN, BLUE-	GRAY).			INDURA	DIFFICULT TO B	BREAK WITH HAMMER.			
	SUCH AS LIGHT, DARK, STRE						EXTREM		BLOWS REQUIRED TO BREAK SAMPLE: S ACROSS GRAINS.			
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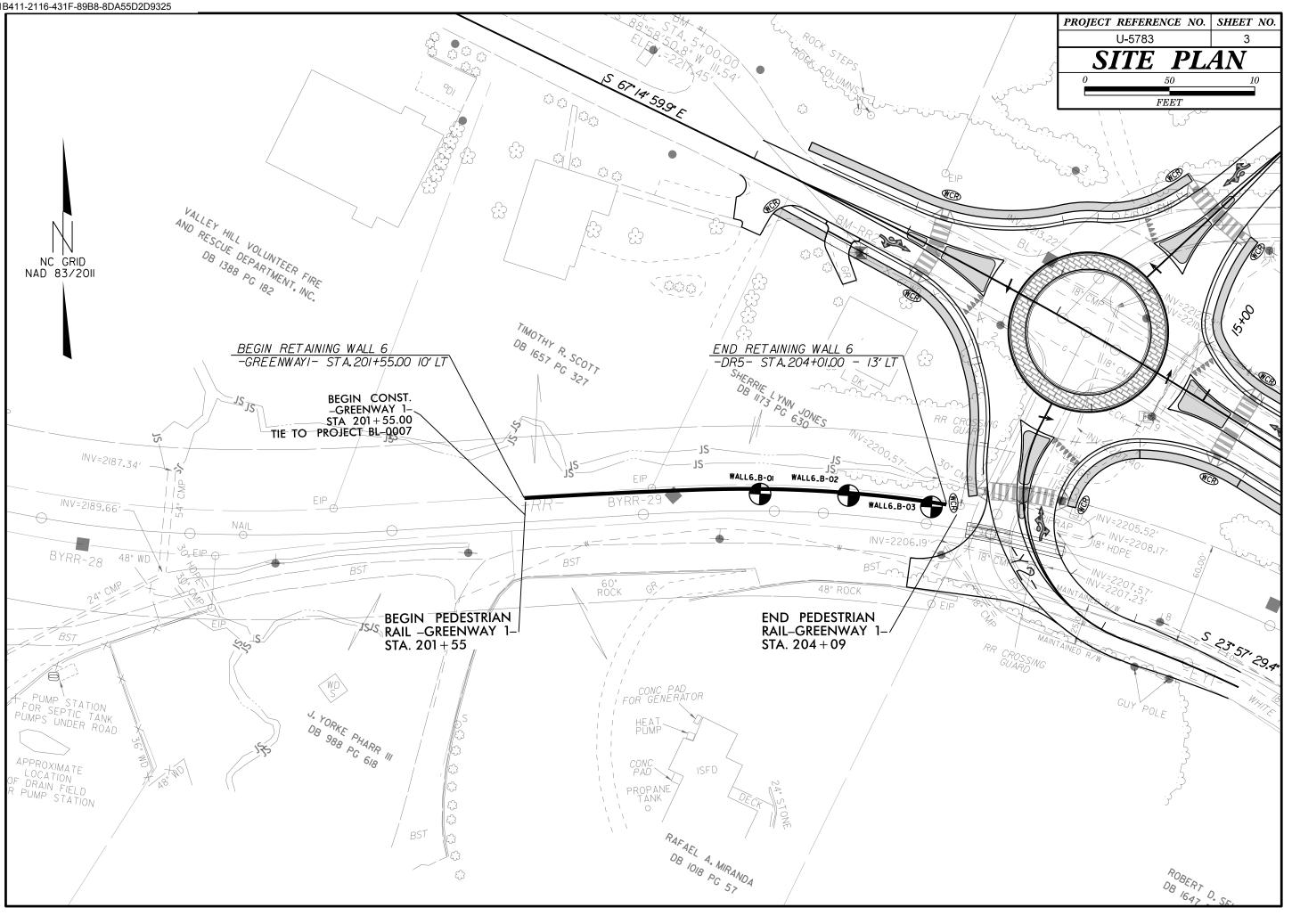
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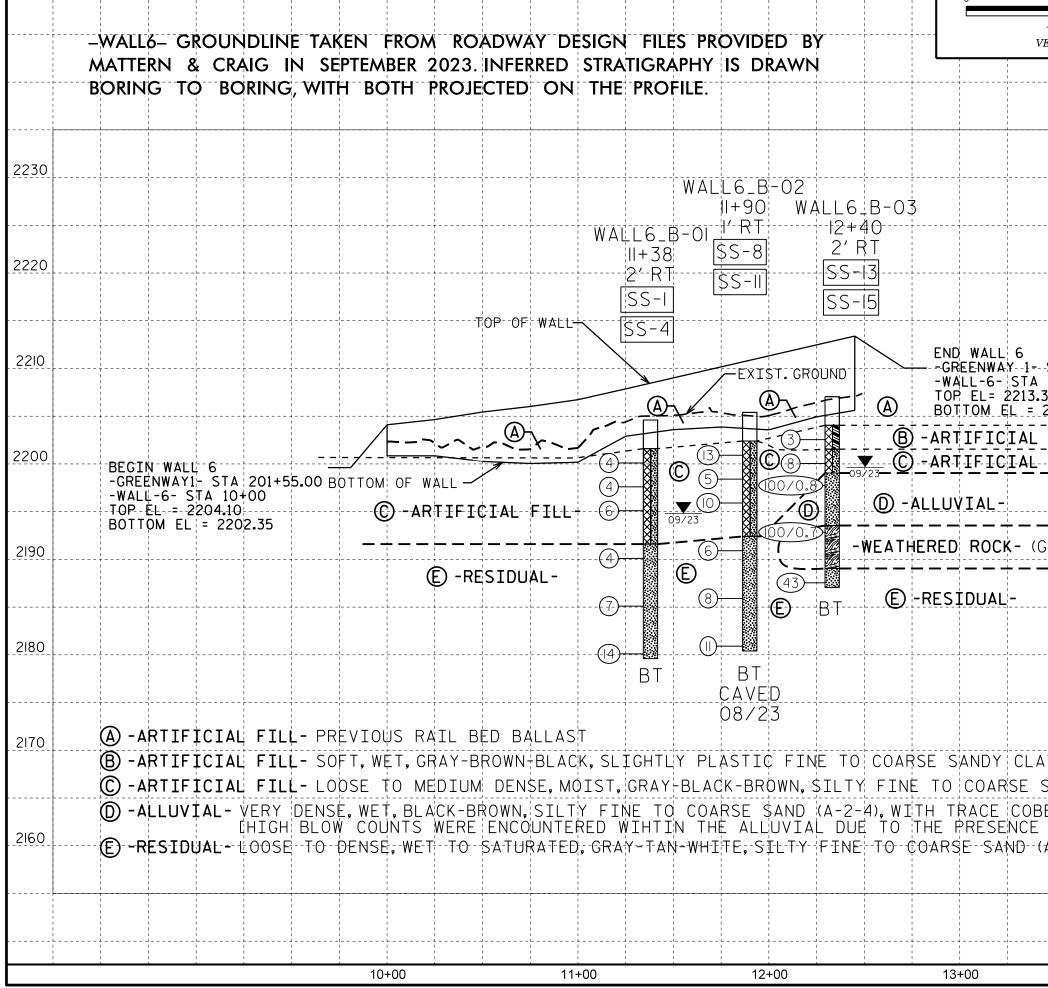


TERMS AND DEFINITIONS D. AN INFERRED SPT REFUSAL. FOOT PER 60 S OFTEN ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER. AQUIFER - A WATER BEARING FORMATION OR STRATA. ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND. ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, SUCH AS SHALE, SLATE, ETC. N VALUES > 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 LUDES GRANITE, SURFACE. CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE. PLAIN TESTED. COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE. MAY NOT YIELD ONE, CEMENTED 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. INGS UNDER DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL. TINGS IE OPEN. DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH. IMER BLOWS IF FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE UP TO SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE. FELDSPAR FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES. $\underline{\mathsf{FLOAT}}$ - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL. ROCK HAS AS COMPARED 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. LDSPARS DULL SS OF STRENGTH HEN STRUCK. 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 IDENT BUT ITS LATERAL EXTENT. KAOLINIZED 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. DISCERNIBLE PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM. STRONG ROCK ONLY MINOR LUES < 100 BPF $\underline{\text{RESIDUAL}} \ (\text{RES.}) \ \text{SOIL} \ \text{-} \ \text{SOIL} \ \text{FORMED} \ \text{IN} \ \text{PLACE} \ \text{BY} \ \text{THE} \ \text{WEATHERING} \ \text{OF} \ \text{ROCK}.$ SMALL AND

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 SAPROLITE IS RUN AND EXPRESSED AS A PERCENTAGE. SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK. REQUIRES <u>SILL</u> - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO WS REQUIRED THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. $\underline{\text{SLICKENSIDE}}$ - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE. P CAN BE 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 PICK POINT. LOWS OF THE 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. RAGMENTS SMALL, THIN

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. PIECES 1 INCH READILY BY TOPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER. BENCH MARK: N/A HICKNESS 4 FEET FEET ELEVATION: - 4 FEET - 1.5 FEET NOTES: - 0.16 FEET - 0.03 FEET ROADWAY DESIGN FILES PROVIDED BY MATTERN & CRAIG. 0.008 FEET NORTHING AND EASTINGS OBTAINED USING A TRIMBLE GEO7X. ELEVATIONS WERE OBTAINED USING THE PROVIDED .TIN FILE. T, PRESSURE, ETC. FIAD = FILLED IN AFTER DRILLING EL PROBE: ROBE:





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SOIL TEST RESULTS																		
BORING	SAMPLE		OFFGE	CTTATION	DEPTH	AASHTO		זת	% BY WEIGHT				% PAS	SSING (S	IEVES)	%	%	
ID	NO.	ALIGNMENT	ALIGNMENT	OFFSET	STATION	INTERVAL	CLASS.	L.L.	<i>P.I.</i>	C. SAND	F. SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
WALL6_B-01	SS-1	-WALL6-	2'RT	11+38	3.5–5.0'	A-2-4(0)	29	9	33.4	27.5	13.4	25.7	76.3	59.2	33.7	19.4	_	
WALL6_B-01	SS-4	-WALL6-	2' RT	11+38	13.5–15.0'	A-2-5(0)	44	NP	34.4	43.7	12.5	9.5	90.5	69.7	27.5	35.5	_	
$WALL6_B-02$	SS-8	-WALL6-	1'RT	11+90	6.0–7.5'	A-2-4(0)	34	NP	47.9	34.2	8.5	9.5	81.6	56.0	18.6	22.8	-	
$WALL6_B-02$		-WALL6-	1'RT	11+90	18.5–20.0'	A-2-4(0)	39	NP	33.0	43.6	15.9	7.4	95.1	74.6	30.3	28.0	_	
$WALL6_B-03$	SS-13	-WALL6-	2'RT	12+40	3.5–5.0'	A-6(2)	34	11	27.4	26.1	20.7	25.7	86.8	71.5	45.1	32.6	_	
$WALL6_B-03$	SS-15	-WALL6-	2'RT	AS+40	8.5–10.0'	A-2-4(0)	30	2	40.7	28.5	15.1	15.7	84.3	62.0	29.4	26.9	_	

LAB TECHNICIAN: DILLON KESTNER

NCDOT CERTIFICATION NO. 135–01–0816

SHEET NO.

PROJECT REFERENCE NO. U-5783