### **CONTENTS**

SHEET NO. 2

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5021

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REFERENCE

**DESCRIPTION** TITLE SHEET LEGEND (SOIL & ROCK) SITE PLAN PROFILE

### STATE OF NORTH CAROLINA

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

# **STRUCTURE** SUBSURFACE INVESTIGATION

COUNTY BRUNSWICK

PROJECT DESCRIPTION NC 211 FROM SR 1500 (MIDWAY RD.) TO NC 87

SITE DESCRIPTION WALL 13 RIGHT OF -YREV-*STA*. 47+00

STATE PROJECT REFERENCE NO. STATE SHEETS NO. N.CR-5021 1 4

#### **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 AVAIL

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 UN-FLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DECREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOLI MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOLI MOISTURE CONDITIONS MAY YARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTONED 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 DOS NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERRETATIONS MADE, OR OPNION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONSTROST TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY IMINSELF 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 ACUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

- NOTES: I. THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR CUARANTEED BY THE N.C.DEPARTMENT OF TRANSPORTATION AS ACCURATE NOR IS IT CONSIDERED PART OF THE PLANS, SPECIFICATIONS OR CONTRACT FOR THE PROJECT. 2. BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

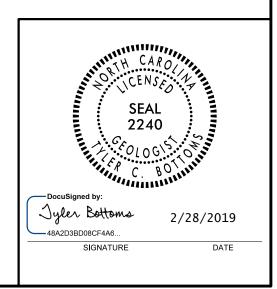
PERSONNEL

S.N. ZIMARINO

R.E. SMITH

C.E. RAWLINS

INVESTIGATED BY \_\_\_\_\_. BOTTOMS DRAWN BY \_T.C. BOTTOMS CHECKED BY \_\_\_\_\_\_. D.N. ARGENBRIGHT SUBMITTED BY \_\_\_\_\_\_. ARGENBRIGHT DATE JUNE 2018



## 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			
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 (AASTHT) 7 206, ASTH DIBBG, SOIL CLASSIFICATION IS BASED ON THE ASHTD SYSTEM, BASIC DESCRIPTIONS GENERALLY INCLUDE THE FOLLOWING; CONSISTENCY, COLOR, TEXTURE, MOISTURE, ASHTD CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH								ER FOOT CATION NG: RS SUCH	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						HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT REFUSAL IF TESTE ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO R LESS THAN 0.1 BLOWS IN NON-COASTAL PLAIN MATERIAL, THE TRANSITION BETWEEN SOIL AND ROCK REFRESENTED BY A ZONE OF WEATHERED ROCK. ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:				
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									THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS:						WEATHERED	HLS HRE		3	IN MATERIAL THAT WOULD YIELD SP
SOIL LEGEND AND AASHTO CLASSIFICATION								ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED. MINERALOGICAL COMPOSITION							ROCK (WR) 100 BLOWS PER FOOT IF TESTED.				
GENERAL CLASS.		GRANULAR MATERIALS         SILT-CLAY MATERIALS         ORGANIC MATERIALS           ( ≤ 35%, PASSING ■200)         ( > 35%, PASSING ■200)         ORGANIC MATERIALS				IALS	MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC.							RYSTALLINE FINE TO COARSE GRAIN IGNEOUS AND METAMOR OCK (CR) FINE TO COARSE GRAIN IGNEOUS AND METAMOR WOULD YIELD SPT REFUSAL IF TESTED. ROCK					
GROUP					A-6 A-7	A-1, A-2 A-4, A-5			ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDERED OF SIGNIFICANCE.							FINE TO COARSE GRAIN METAMORPHIC			GRAIN METAMORPHIC AND NON-COAST
0	A-1-a A-1-b					COMPRESSIBILITY SLIGHTLY COMPRESSIBLE LL < 31							LINE		SEDIMENTARY ROCH	<pre>&lt; THAT WOULD YEILD SPT REFUSAL DES PHYLLITE, SLATE, SANDSTONE, ETH</pre>			
SYMBOL	000000000000000000000000000000000000000								MODE	RATELY	Y COMPRESSIE	BLE	LL = 31 - LL > 50	50	COASTAL PLA SEDIMENTARY		FF-	COASTAL PLAIN SE	DIMENTS CEMENTED INTO ROCK, BUT CK TYPE INCLUDES LIMESTONE, SANDS
	50 MX						SILT- CLAY	MUCK,				GE OF MATER			(CP)			SHELL BEDS, ETC.	HERING
	30 MX 50 MX 15 MX 25 MX		35 MX 35 MX 35 M	1X 36 MN 36 M	N 36 MN 36 MN	SOILS	SOILS	PEAT	ORGANIC MATERIAL		GRANULAR SOILS	SILT - CLAY SOILS	OTHE	MATERIAL	FRESH		RESH CRYST		TS MAY SHOW SLIGHT STAINING. ROCK
MATERIAL PASSING *40 LL PI	-		41 MN 40 MX 41 M				5 WITH LE OR		TRACE OF ORGANIC MU LITTLE ORGANIC MATT MODERATELY ORGANIC HIGHLY ORGANIC	ATTER TER	2 - 3% 3 - 5% 5 - 10% > 10%	3 - 5% 5 - 12% 12 - 20% > 20%	TRACE LITTLE SOME HIGHLY	1 - 10% 10 - 20% 20 - 35% 35% AND ABOVE		HAMMER ROCK GE CRYSTAL	R IF CRYSTAL ENERALLY FF LS ON A BRO	LINE. RESH, JOINTS STAINED, DKEN SPECIMEN FACE	SOME JOINTS MAY SHOW THIN CLAY C SHINE BRIGHTLY. ROCK RINGS UNDER H
GROUP INDEX	6 MX Ø	0 0	10 MX 11 MN 11 M 4 MX		X 16 MX NO MX		ERATE NTS OF	HIGHLY ORGANIC				UND WATER			SLIGHT		RYSTALLINE		AND DISCOLORATION EXTENDS INTO RO
USUAL TYPES S	STONE FRAGS. GRAVEL, AND SAND	FINE SIL	TY OR CLAYEY	SILTY	CLAYEY	ORGANIC MATTER			✓     WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING       ▼     STATIC WATER LEVEL AFTER 24 HOURS						(SLI.)	1 INCH, OPEN JOINTS MAY CONTAIN CLAY, IN GRANITOID ROCK CRYSTALS ARE DULL AND DISCOLORED, CRYSTALLINE ROCKS R SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WI			IN GRANITOID ROCKS SOME OCCASIONA YSTALLINE ROCKS RING UNDER HAMMER
GEN. RATING			c000	5410	T0 0000	FAIR TO DOOD				PERCHED WATER, SATURATED ZONE, C					(MOD.)	GRANITO	DID ROCKS, M	OST FELDSPARS ARE D	DULL AND DISCOLORED, SOME SHOW CLA SHOWS SIGNIFICANT LOSS OF STRENGTH
AS SUBGRADE		EXCELLENT TO			TO POOR	POOR		UNSUITABLE	- O-M- Spring or seep								RESH ROCK.	HHMMEN BLOWS HND :	SHOWS SIGNIFICHNI LUSS OF SINENDIF
			BGROUP IS ≤ LL			> LL - 30					MISCELL	ANEOUS SYMBO	JLS		MODERATELY SEVERE				R STAINED. IN GRANITOID ROCKS,ALL   KAOLINIZATION. ROCK SHOWS SEVERE L
0011407			TNESS OR	RANGE 0	F STANDARD	RAN	RANGE OF UNC								(MOD. SEV.)	AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK. ROCK GIVES *CLUNK* SOUND IF TESTED, WOULD YIELD SPT REFUSAL			
PRIMARY SOIL TYPE		VERY	ERY LOOSE		TRATION RESISTENCE (N-VALUE) < 4 4 TO 10		COMPRESSIVE STRENGTH (TONS/FT <sup>2</sup> )		ROADWAY EMBANKMENT (RE) 2008C5 DIP & DIP DIRECTION WITH SOIL DESCRIPTION → OF ROCK STRUCTURES SOIL SYMBOL → SOIL SYMBOL STRUCTURES SOIL SYMBOL → STRUCTURES					SEVERE (SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC CLEAR AND E REDUCED IN STRENCTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS / TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN.				
GRANULAR MATERIAL		MEDIUM DENSE DENSE		10	10 TO 30		N/A								VEDV	IF TESTED, WOULD YIELD SPT N VALUES > 100 BPF			
(NON-CO		VERY	ERY DENSE ERY SOFT		30 TO 50 > 50 < 2		< 0.25		THAN ROADWA				•	TEST SOUNDING ROD	VERY SEVERE (V SEV.)	BUT MAS REMAINI	ISS IS EFFEC	TIVELY REDUCED TO S TE IS AN EXAMPLE OF	R STAINED. ROCK FABRIC ELEMENTS AF SOIL STATUS, WITH ONLY FRAGMENTS O ROCK WEATHERED TO A DEGREE THAT
GENERAL SILT-CL MATERIA (COHESI)	AY IL	SOF MEDIUM STIF VERY S		4 8	TO 4 TO 8 TO 15 TO 30	0.25 TO 0.5 0.5 TO 1.0 1 TO 2 2 TO 4		1.0 ?	INFERRED ROCK LINE MONITORING WELL TEST BORING WITH CORE				COMPLETE	VESTIGES OF ORIGINAL ROCK FABRIC REMAIN. <u>IF TESTED, WOULD YIELD SPT N</u> ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY SCATTERED CONCENTRATIONS. QUARTZ MAY BE PRESENT AS DIKES OR STRINGER ALSO AN EXAMPLE.					
		н	ARD	>	30	> 4			INSTALLATION							ROCK HARDNESS			
TEXTURE OR GRAIN SIZE																RP PICK. BREAKING OF HAND SPECIMEN			
U.S. STD. SIE OPENING (MM			4 10 4.76 2.00	40 0.42	60 200 0.25 0.075				UNDERCUT UNCLASSIFIED EXCAVATION - UNCLASSIF						HARD			VS OF THE GEOLOGIST BY KNIFE OR PICK ON	'S PICK. NLY WITH DIFFICULTY. HARD HAMMER B
BOULDEF	а со	BBLE	GRAVEL	COARSE	FINE		SILT CLAY		SHALLOW UNCLASSIFIED EXCAVATION - USED IN THE TOP 3 FEET OF ACCEPTABLE DEGRADABLE ROCK EMBANKMENT OR BACKFILL							TO DETACH HAND SPECIMEN.			
(BLDR.) GRAIN MM	(COB,)         (GR.)         SHRU SHRU (F SD,)         SHRU (F SD,)         SHRU (F SD,)         SHRU (F SD,)         (CL.)           1         305         75         2.0         0.25         0.05         0.005				ABBREVIATIONS AR - AUGER REFUSAL MED MEDIUM VST - VANE SHEAR TEST						MODERATELY HARD	EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DE BY MODERATE BLOWS.							
SIZE IN.					BT - BORING TERMINATED MICA MICACEOUS WEA WEATHERED CL CLAY MOD MODERATELY 2 - UNIT WEIGHT										5 DEEP BY FIRM PRESSURE OF KNIFE ( PEICES 1 INCH MAXIMUM SIZE BY HARD				
SOIL MOISTURE - CORRELATION OF TERMS SOIL MOISTURE SCALE (ATTERBERG LIMITS) SOIL MOISTURE DESCRIPTION GUIDE FOR FIELD MOISTURE DESCRIPTION					$\begin{array}{ccc} \mbox{CPT} & -\mbox{CONE} \mbox{PRE} \mbox{Trans} & \mbox{NP} & -\mbox{NON} \mbox{PLASTIC} & \mbox{$\mathcal{Y}_{\rm C}$-} \mbox{DRV} \mbox{UNIT WEIGHT} \\ \mbox{CSE.} & -\mbox{COARSE} & \mbox{ORGANIC} \\ \mbox{DMT} & \mbox{OLATOMETER TEST} & \mbox{PMT} & \mbox{PRESSURMETER TEST} & \mbox{SAMPLE ABBREVIATIONS} \end{array}$						SOFT	CAN BE		GOUGED READILY BY	KNIFE OR PICK. CAN BE EXCAVATED IN BY MODERATE BLOWS OF A PICK POIN				
			- SATURA (SAT.		USUALLY LIG FROM BELOW				OPT         DYNAMIC         PENETRATION         TEST         SAPROLITIC         S - BULK           e         - VOID RATIO         SD SAND, SANDY         SS - SPLIT SPOON           F         - FINE         SL SILT, SILTY         ST - SHELBY TUBE					VERY SOF T	CAN BE	CARVED WIT		SURE. AVATED READILY WITH POINT OF PICK. BY FINGER PRESSURE. CAN BE SCRATCH	
PLASTIC RANGE {			- WET -		SOLID; REQUIRES DRYING TO AIN OPTIMUM MOISTURE			<ul> <li>FOSS FOSSILIFEROUS</li> <li>FRAC FRACTURED, FRAC</li> <li>FRAGS FRAGMENTS</li> </ul>	TURES	TCR - w - M	SLIGHTLY • TRICONE REFUSAL 40ISTURE CONTENT	RS - RT - CBR -	RECOMPACTED TRIAXIAL CALIFORNIA BEARING		FINGERN			BEDDING	
(FI) PL L	PLASTI	C LIMIT							HI HIGHLY					RATIO	TERM VERY WIDE	F	MUBI	<u>SPACING</u> THAN 10 FEET	TERM VERY THICKLY BEDDED
		M MOISTURE AGE LIMIT	- MOIST - (M) SOLID; AT O						DRILL UNITS:	ADVA	JIPMENT USED ON SUBJECT ADVANCING TOOLS: CLAY BITS			HAMMER TYPE:		LY CLOS	3 5E 1	TO 10 FEET TO 3 FEET 16 TO 1 FOOT	THICKLY BEDDED 1 THINLY BEDDED 0. VERY THINLY BEDDED 0.
			- DRY -	- DRY - (D) REQUIRES A ATTAIN OPT				D	CME-55			JS FLIGHT AUGER	CORE SIZ		VERY CLO	3E	LESS	THAN 0.16 FEET	THICKLY LAMINATED 0.00 THINLY LAMINATED <
	1		PLA	ASTICITY							8'HOLLOW A		□-в_	П-н					RATION
PLASTICITY_INDEX_(P))         DRY_STRENGTH           NON_PLASTIC         0-5         VERY_LOW           SLIGHTLY_PLASTIC         6-15         SLIGHT					CME-550 HARD FACED FINGER BITS -N							IMENTARY ROCKS, INDURATION IS THE HARDENING OF MATERIAL BY CEMENTING, HE RUBBING WITH FINGER FREES NUMEROUS GRAINS; CENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE.							
SLIGHTLY PLASTIC MODERATELY PLASTIC HIGHLY PLASTIC			2	6-15 16-25 6 OR MORE	MEDIUM				PORTABLE HOIST	X		] W/ ADVANCER <u>2 <sup>15</sup>/16</u> •STEEL TEETH	POS	JLS: IT HOLE DIGGER ID AUGER	MODER	ATELY I	NDURATED	GRAINS CAN BE	E SEPARATED FROM SAMPLE WITH ST Y WHEN HIT WITH HAMMER.
				COLOR						$ \overline{\Box} $		• TUNGCARB.		INDING ROD	INDURA	<b>ATED</b>			FFICULT TO SEPARATE WITH STEEL BREAK WITH HAMMER.
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.								CORE BIT			E SHEAR TEST	EXTRE	MELY INC	DURATED	SHARP HAMMER	BREAK WITH HAMMER. BLOWS REQUIRED TO BREAK SAMPL! S ACROSS GRAINS.			





	TERMS AND DEFINITIONS									
ED. AN INFERRED	ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER.									
) SPT REFUSAL. 1 FOOT PER 60	AQUIFER - A WATER BEARING FORMATION OR STRATA.									
IS OFTEN	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									
T N VALUES >	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									
OCK THAT NCLUDES GRANITE,	WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE.									
AL PLAIN IF TESTED. C.	<u>CALCAREOUS (CALC.)</u> - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE. <u>COLLUVIUM</u> - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE.									
MAY NOT YIELD STONE, 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.									
RINGS UNDER	DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK.									
	$\overline{\text{DIP}}$ - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL.									
COATINGS IF OPEN. HAMMER BLOWS IF	DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH.									
DCK UP TO AL FELDSPAR	FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE.									
R BLOWS. IS. IN	FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES. FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM									
AY. ROCK HAS	PARENT MATERIAL.									
H AS COMPARED	FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM.									
FELDSPARS DULL	FORMATION (FM.) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE									
LOSS OF STRENGTH	FIELD. JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED.									
WHEN STRUCK.	<u>JUINI</u> - FRACTURE IN RUCK ALUNG WHICH NU APPRECIABLE MUVEMENT HAS UCCURRED. LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO									
EVIDENT BUT	LEDGE - A SHELF-LIKE RIDGE OK PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT.									
ARE 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									
RE DISCERNIBLE	USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE.									
OF STRONG ROCK T ONLY MINOR	PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM.									
VALUES < 100 BPF	RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK.									
IN SMALL AND S. SAPROLITE IS	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. <u>SAPPOLITE (SAP.)</u> - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK.									
NS REQUIRES	SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND									
BLOWS REQUIRED	THE MELATINE COMPARED WITH TIS LATERAL EXTENT THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.									
DEEP CAN BE DETACHED	$\underline{\text{SLICKENSIDE}}$ - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE.									
OR PICK POINT. BLOWS OF THE	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 I 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.									
N FRAGMENTS NT. SMALL, THIN	<u>STRATA CORE RECOVERY (SREC.)</u> - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.									
. PIECES 1 INCH HED READILY BY	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.									
	BENCH MARK: ELEVATIONS OBTAINED FROM R5021_LS_TNL.TIN									
THICKNESS										
4 FEET 1.5 - 4 FEET	ELEVATION: FEET									
.16 - 1.5 FEET	NOTES:									
03 - 0.16 FEET 08 - 0.03 FEET										
0.008 FEET										
EAT, PRESSURE, ETC.										
• TEEL PROBE:										
PROBE;										

