NORTH CAROLINA DIVISION OF HIGHWAYS

GEOTECHNICAL UNIT

10F36

SOIL AND ROCK CLASSIFICATION, LEGEND, AND ABBREVIATIONS

SOIL AND ROCK CLASSIFICATION, 22		NOTOTEL	יע מת מכני	CENECC
SOIL LEGEND AND AASHTO CLASSIFICATION		1	CY OR DEN	RANGE OF UNCONFINED
GENERAL GRANULAR MATERIALS SILT-CLAY MATERIALS ORGANIC MATERIALS	PRIMARY SOIL TYPE	COMPACTNESS OR CONSISTENCY	PENETRATION RESISTANT (N - VALUE)	CE COMPRESSIVE STRENGTH (qu)
GROUP A-1 A-3 A-2 A-4 A-5 A-6 A-7 A-1,A-2 A-4,A-5 A-6,A-7	65:=-	VERY LOOSE	< 4	
CLASS. A-1-a-A-1-b A-2-4A-2-5A-2-5A-2-77 SYMBOL 08888888	GENERALLY GRANULAR MATERIAL	LOOSE MEDIUM DENSE DENSE	4 TO 10 10 TO 30 30 TO 50	N/A
% PASSING GRANULAR SILT- MUCK, SOILS SOI		VERY DENSE	> 50	< 25
#40 38 MX 58 MX 51 MN	GENERALLY	VERY SOFT SOFT MEDIUM STIFF	2 TO 4 4 TO 8	25 TO 50 50 TO 100
(PASSING *40)	SILT-CLAY MATERIAL	STIFF VERY STIFF	8 TO 15 15 TO 30 > 30	100 TO 200 200 TO 400 > 400
GROUP INDEX 0 0 0 4 MX 8 MX 12 MX 16 MX NO MX AMOUNTS OF SOILS		GRO	DUND WATE	R
OF MAJOR GRAVEL & SAND GRAVEL AND SAND SOILS SOILS	VATI	ER LEVEL IN BOR	E HOLE SOON AFTE	LY AFTER DRILLING (I.A.D.) ER DRILLING (HRS.)
PI OF A-7-5 & (LL-30); PI OF A-7-6 > (LL-30) TEXTURE OR GRAIN SIZE			SATURATED ZONE.	OR WATER BEARING STRATA
BOULDER COBBLE GRAVEL COARSE FINE SILT CLAY	OM> SPR	ING OR SEEPAGE		
GRAIN (mm) 305 75 2 0.6 0.425 0.2 0.075 0.005	MISCEL	LANEOUS S	371	ABBREVIATIONS SAMPLE DESIGNATIONS
SOIL MOISTURE - CORRELATION OF TERMS	- - SOIL	WAY EMBANKMENT WI	"31 "	DESIGNATIONS
SOIL MOISTURE SCALE FIELD MOISTURE GUIDE FOR FIELD MOISTURE DESCRIPTION	ARTIFI	ICIAL FILL OTHER 1	<u>.</u>	SS-SPLIT SPOOM
-SATURATED- USUALLY LIQUID: VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE	ROADW	IAY EMBANKMENIS	A PIEZOME	ST-SHELBY TUBE
PLASTIC SEMISOLID: REQUIRES DRYING TO ATTAIN	NFER	RRED SOIL BOUNDA		INDICATOR
(PI) PL: PLASTIC LIMIT	APPA APPA	KE AND DIP	O- SPT N-	
SI SUPINIZAGE LIMIT	-	MAL TO) SOUNDING	O	ORING WELL
-ORY- (D) REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE	ROD		BBREVIATIO	
ROCK DESCRIPTION	_	H		
IN THE BROADEST MEANING, HARD ROCK IS CONSIDERED TO BE THAT INDURATED EARTH MATERIAL WHICH CANNOT	ALLUV.	ALLUVIUM	MIC.	MICACEOUS MOTTLED
IN THE BROADEST MEANING, HARD ROLK IS CONSTRUCTED FOR THE BROADEST MEANING, HARD ROLK INC. TOOLS OR TECHNICIES THE ROLLMARY RETIFEN SOIL AND ROCK	AR	AUGER REFI	USAL MOT.	BLOWS / 30 CM
BE SAMPLED BY CONVENTIONAL SOIL SAMPLING TOOLS OR TECHNIQUES. THE BOUNDARY BETWEEN SOIL AND ROCK BE SAMPLED BY CONVENTIONAL SOIL SAMPLING TOOLS OR TECHNIQUES. THE BOUNDARY BETWEEN SOIL AND ROCK IS DETEN REPRESENTED BY A ZONE OF "WEATHERED	BLDR.	BOULDER CALCAREOU	1	NO SAMPLE TAKEN
IS ARBITRARY, TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF "WEATHERED	CALC.	CLAY	ORG.	ORGANIC
ROCK'. FOR THE PURPOSE OF THIS INVESTIGATION, THESE MATERIALS ARE DIVIDED AS FOLLOWS:	LL.	_	REF.	REFER TO
	CLY.	CLAYEY	RES.	RESIDUAL
TERM SYMBOLS DESCRIPTION	COB.	COARSE	S.	SOFT
TERM STRICTS INFERRED MATERIAL THAT CANNOT BE PENETRATED BY POWER	CSE.	COARSE		SATURATED
ROCK LINE AUGERG EXCEPT IN THIN LEDGES, AND REGULACES	DPT	DYNAMIC PENETR	ATION IEST SAT.	SAND
ROCK (HR) ROCK CORING TOOLS FOR OBTAINING A SAMPLE	EST.	ESTIMATED	SDY.	SANDY
HARD WATERIAL THAT CAN BE PENETRATED WITH GREAT	F.	FINE FOSSILIFÉRI	1	
WEATHERED DIEFICIALTY USING POWER AUGERS AND VIELDS SPT REFUSA	AL FOSS.	FOSSILIFER		SILT, SILTY _
WEATHERED RUCK (HWR)		FRACTURED	S) SLI.	SLIGHTLY
ROCK MATERIAL THAT CAN BE PENETRATED WITH SOME		. FRAGMENT(S) SLI.	STANDARD PENETRATION TO
(WK) DESTRICTED DISEIGN TY LISING POWER AUGERS AND YIELDS	GR.	GRAVEL	1 -	TOPSOIL
ROCK (SWR) SPT VALUES > 100 BLOWS BUT < SPT REFUSAL	GS	SPECIFIC G		VANE SHEAR TEST
The state of the s	GW	GROUND W		VERY VERY
1 SPT REFUSAL ≤ 2.5 cm OF PENETRATION PER 50 BLOWS IN SPT.	MED.	MEDIUM	V. W/	WITH
2 THE LEVEL AT WHICH AUGERS COULD NO LUNGER PENCINA	TE.		W/	
AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH AGGES COOLS NO CONSTITUTE THE HARD ROCK SYMBOL IS SHOWN WHEN ROCK IS CORED AND ONLY TO THAT DEPTH CORED.	1			
THE HARD ROCK SYMBOL IS SHOWN WHEN ROCK IS CORED AND CITE A A DESCRIPTION OF ROCK IS GIVEN, INCLUDING:			D COILE !	N RASE OF
A DESCRIPTION OF BOOK IS DIVER, INCLUDING.	BENCH MA	RK: NO 2 - R	K SHIKE I	N BASE OF
CORE RECOVERY (REC.) - TOTAL LENGTH OF ROCK RECOVERED IN THE CORE BARREL DIVIDED BY THE TOTAL LENGTH OF THE CORE RUN TIMES 100%.		UANIT	KEE IIII IS	T -BL- STA 6+9
BY THE TOTAL LENGTH OF THE CORE ROW TIMES TOOM		EL = 50)4.099	
ROCK QUALITY DESIGNATION (ROD) - TOTAL LENGTH OF SOUND ROCK SEGMENTS RECOVERED THAT	CT. TT TO	OJECT NO. 8. 2	2860401	
ARE LONGER THAN UR EUUAL TO 10 CM DIVIDED OF		D 0507	_ D	RZ-1001(14)
TOTAL LENGTH OF THE CORE RUN TIMES 100%.	T.I.P. NO	B-2583		
CAROLOGICA	COUNTY _	MADISON	ROUTE_	POOI DDIVE
ENSINE NO.	SITE DES	SITE DESCRIPTION BRIDGE ON SCHOOL DRIVE OVER FRENCH BROAD RIVER PROJECT GEOLOGIST CAD SUBMITTED BY GLASS		
CHAR 1004 SEAL	ı	SHELL	suar	
	PERSONN	GOSNE		1
Mula hudavylumugan		BAILE	<u>Y</u> D	ATE SUBMITTED SEPT
PREWS DE Lander And Jan Wilmingan	-		-	
Signature [/	1			

