880009 REFERENCE

CONTENTS

DESCRIPTION

TITLE SHEET LEGEND SITE PLAN

PROFILE

BORE LOGS

SHEET NO.

5-6

V 7BP.

STATE OF NORTH CAROLINA

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

STRUCTURE SUBSURFACE INVESTIGATION

COUNTY	TYRRE	LL						
PROJECT	DESCRI	TION .	BRIDGE	<i>NO</i> . 9	ON	NC	94	OVER
			. 15 + 93.75					
SITE DES	CRIPTION	1						

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	SF-880009	1	6

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 1999 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 (MIN-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 MOLCATED IN THE SUBSURFACE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CANDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CANDITIONS MAY WARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CANDITIONS WAS WELL AS W INCLUDING TEMPERATURES, PRECIPITATION AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

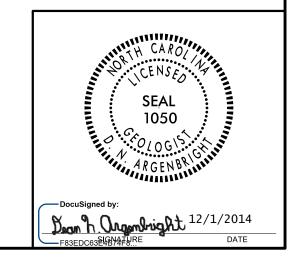
THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DES 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 MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISTY HIMSELF 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 ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

- 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 EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE
 CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

J.R. MATULA
INVESTIGATED BY $\underline{\hspace{1.5cm} D.N.ARGENBRIGHT}$
DRAWN BYC.P. TURNER
CHECKED BY D.N. ARGENBRIGHT
SUBMITTED BY

PERSONNEL

O.B. OTI D.G. PINTER



DATE __DECEMBER 2014

 PROJECT REFERENCE NO.
 SHEET NO.

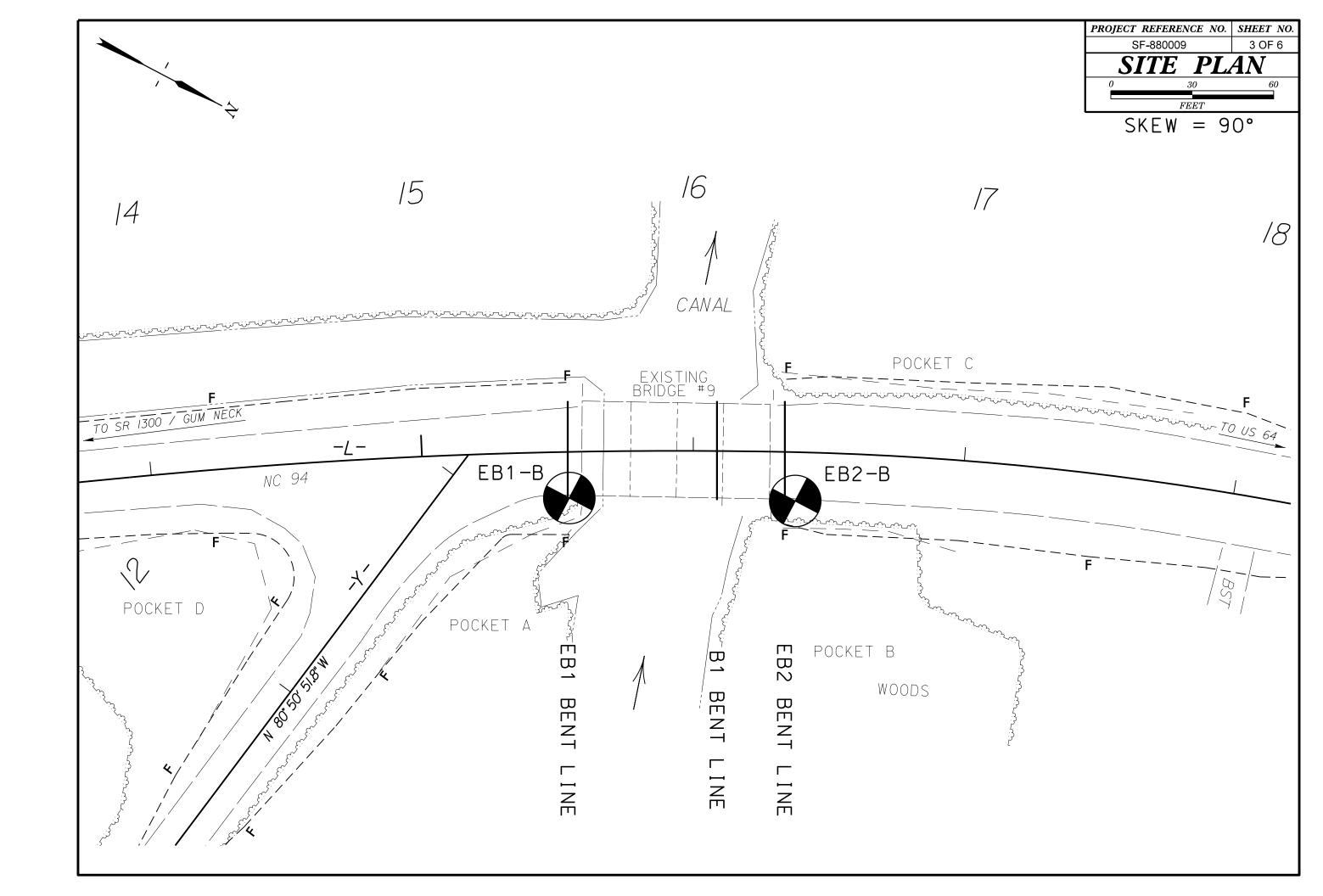
 SF-880009
 2 OF 6

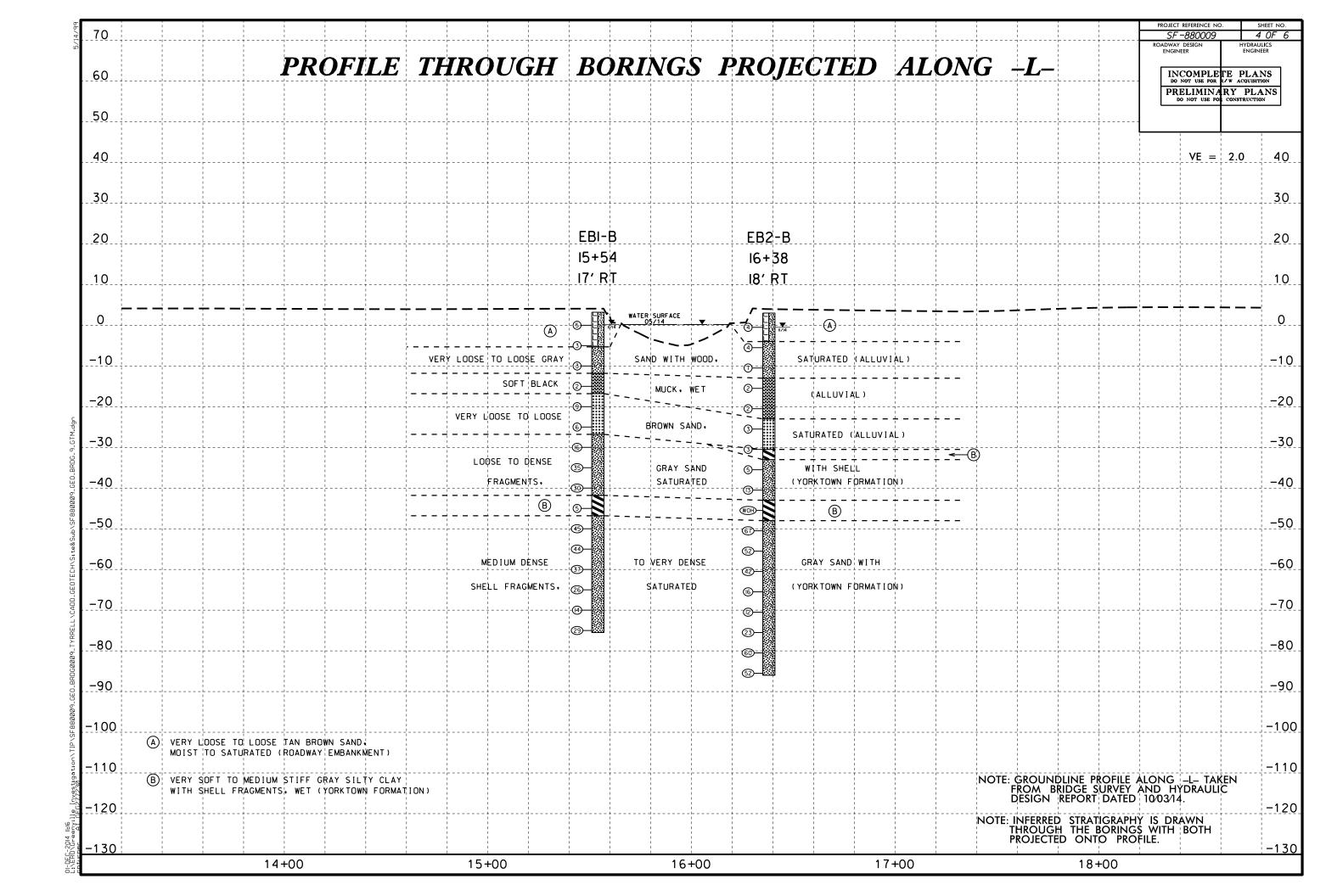
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS GEOTECHNICAL ENGINEERING UNIT

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	<u>WELL GRADED</u> - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE. <u>UNIFORMLY GRADED</u> - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE.	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.	ALLUYIUM (ALLUY.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER.				
ACCORDING TO THE STANDARD PENETRATION TEST (AASHTO T 206, ASTM DI586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY INCLUDE THE FOLLOWING:	GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLE SIZES OF TWO OR MORE SIZES.	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	AQUIFER - A WATER BEARING FORMATION OR STRATA.				
CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH	ANGULARITY OF GRAINS	REPRESENTED BY A ZONE OF WEATHERED ROCK. ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:	ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND.				
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:	SI//AI//A	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.				
SOIL LEGEND AND AASHTO CLASSIFICATION	ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.	WEATHERED VISUAL NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > 100 BLOWS PER FOOT IF TESTED.	ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT				
GENERAL GRANULAR MATERIALS SILT-CLAY MATERIALS OPERALIC MATERIALS	MINERALOGICAL COMPOSITION	CRYSTALLINE CRYSTA	WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND				
ULASS. (\$\leq 35% PASSING \(^2\)2000 (> 35% PASSING \(^2\)2000	MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDERED OF SIGNIFICANCE.	ROCK (CR) WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE, GNEISS, GABBRO, SCHIST, ETC.	SURFACE.				
GROUP A-1 A-3 A-2 A-4 A-5 A-6 A-7 A-1, A-2 A-4, A-5 CLASS. A-1-6 A-1-6 A-2-4 A-2-5 A-2-6 A-2-7 B-2-5 A-3 A-6, A-7	COMPRESSIBILITY	NON-COVETALLINE - FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN	CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE. COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM				
SYMBOI 0000000000	SLIGHTLY COMPRESSIBLE LL < 31	ROCK (NCR) SEDIMENTARY ROCK THAT WOULD YEILD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES PHYLLITE, SLATE, SANDSTONE, ETC.	OF SLOPE.				
888888888888888888888888888888888888888	MODERATELY COMPRESSIBLE LL = 31 - 50 HIGHLY COMPRESSIBLE LL > 50	COASTAL PLAIN COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD SEDIMENTARY ROCK SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, 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.				
7. PASSING 10 50 MX GRANULAR SILT- CLAY MUCK.	PERCENTAGE OF MATERIAL	(CP) SHELL BEDS, ETC. WEATHERING	DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT				
*40 30 MX 50 MX 51 MN PEAT SOILS SOILS SOILS SOILS PEAT PEA	GRANULAR SILT - CLAY ORGANIC MATERIAL SOILS SOILS OTHER MATERIAL	<u>''= </u>	ROCKS OR CUTS MASSIVE ROCK.				
MATERIAL	ORGANIC MATERIAL SOILS SOILS OTHER MATERIAL TRACE OF ORGANIC MATTER 2 - 3% 3 - 5% TRACE 1 - 10%	FRESH ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING. ROCK RINGS UNDER HAMMER IF CRYSTALLINE.	DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE				
PASSING *40 SOILS WITH	LITTLE ORGANIC MATTER 3 - 5% 5 - 12% LITTLE 10 - 20% MODERATELY ORGANIC 5 - 10% 12 - 20% SOME 20 - 35%	VERY SLIGHT ROCK GENERALLY FRESH, JOINTS STAINED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN,	HORIZONTAL. DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE				
LL - - 40 MX 41 MN LITTLE OR HIGHLY	HIGHLY ORGANIC > 10% > 20% HIGHLY 35% AND ABOVE	(V SLI.) CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF OF A CRYSTALLINE NATURE.	LINE OF DIP, MEASURED CLOCKWISE FROM NORTH.				
GROUP INDEX A A A MY B MY 12 MY 16 MY NO MY AMOUNTS OF	GROUND WATER	SLIGHT ROCK GENERALLY FRESH, JOINTS STAINED AND DISCOLORATION EXTENDS INTO ROCK UP TO	FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE				
USUAL TYPES STONE FRACS. FINE SILTY OR CLAYEY SILTY CLAYEY MATTER		(SLI.) I INCH. OPEN JOINTS MAY CONTAIN CLAY. IN GRANITOID ROCKS SOME OCCASIONAL FELDSPAR	SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE.				
OF MAJOR GRAVEL, AND MATERIALS SAND GRAVEL AND SAND SOILS SOILS	STATIC WATER LEVEL AFTER 24 HOURS	CRYSTALS ARE DULL AND DISCOLORED. CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS. MODERATE SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WEATHERING EFFECTS. IN	FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES. FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM				
CEN PATING.	✓ PW PERCHED WATER, SATURATED ZONE, OR WATER BEARING STRATA	(MOD.) GRANITOID ROCKS, MOST FELDSPARS ARE DULL AND DISCOLORED, SOME SHOW CLAY. ROCK HAS	PARENT MATERIAL.				
AS SUBGRADE EXCELLENT TO GOOD FAIR TO POOR POOR UNSUITABL	SPRING OR SEEP	DULL SOUND UNDER HAMMER BLOWS AND SHOWS SIGNIFICANT LOSS OF STRENGTH AS COMPARED WITH FRESH ROCK.	FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM.				
PI OF A-7-5 SUBGROUP IS ≤ LL - 30 ; PI OF A-7-6 SUBGROUP IS > LL - 30	<u> </u>	MODERATELY ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED, IN GRANITOID ROCKS, ALL FELDSPARS DULL	FORMATION (FM.) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE				
CONSISTENCY OR DENSENESS	MISCELLANEOUS SYMBOLS	SEVERE AND DISCOLORED AND A MAJORITY SHOW KAOLINIZATION. ROCK SHOWS SEVERE LOSS OF STRENGTH (MOD. SEV.) AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK. ROCK GIVES "CLUNK" SOUND WHEN STRUCK.	FIELD. JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED.				
PRIMARY SOIL TYPE COMPACTNESS OR PENETRATION RESISTENCE COMPRESSIVE STRENGTH	ROADWAY EMBANKMENT (RE) 25/025 DIP & DIP DIRECTION	IF TESTED, WOULD YIELD SPT REFUSAL	LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO				
CONSISTENCY CONSISTENCY (N-VALUE) (TONS/FT ²)	₩ITH SOIL DESCRIPTION → OF ROCK STRUCTURES	SEVERE ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC CLEAR AND EVIDENT BUT	ITS LATERAL EXTENT.				
GENERALLY VERY LOOSE 4 TO 10	SOIL SYMBOL SOIL SYMBOL SUPE INDICATOR INSTALLATION	(SEV.) REDUCED IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KAOLINIZED TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN.	LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS.				
MATERIAL MEDIUM DENSE 10 TO 30 N/A	ADTIFICIAL FILL AFLOTUFD A	<u>IF TESTED, WOULD YIELD SPT N VALUES > 100 BPF</u>	MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS, MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE.				
(NON-COHESIVE) DENSE 30 TO 50 VERY DENSE > 50	THAN ROADWAY EMBANKMENT AUGER BORING LUNE PENETRUMETER	VERY ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE SEVERE BUT MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK	PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE				
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 MINOR	OF AN INTERVENING IMPERVIOUS STRATUM.				
GENERALLY SOFT 2 TO 4 0.25 TO 0.5 SILT-CLAY MEDIUM STIFF 4 TO 8 0.5 TO 1.0	INFERRED ROCK LINE MN MONITORING WELL TEST BORING	VESTIGES OF ORIGINAL ROCK FABRIC REMAIN. <u>IF TESTED, WOULD YIELD SPT N VALUES < 100 BPF</u> COMPLETE ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL AND	RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK.				
MATERIAL STIFF 8 TO 15 1 TO 2	WITH CORE	SCATTERED CONCENTRATIONS. QUARTZ MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS	ROCK QUALITY DESIGNATION (ROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF COR				
(COHESIVE) VERY STIFF 15 TO 30 2 TO 4	TTT ALLUVIAL SOIL BOUNDARY ALLUVIAL SOIL BOUNDARY INSTALLATION SPT N-VALUE	ALSO AN EXAMPLE.	RUN AND EXPRESSED AS A PERCENTAGE.				
TEXTURE OR GRAIN SIZE	RECOMMENDATION SYMBOLS	ROCK HARDNESS VERY HARD CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK, BREAKING OF HAND SPECIMENS REQUIRES	SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK.				
U.S. STD. SIEVE SIZE 4 10 40 60 200 270	UNDERCUT UNCLASSIFIED EXCAVATION - UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.	SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND				
OPENING (MM) 4.76 2.00 0.42 0.25 0.075 0.053	USED IN THE TOP 3 FEET OF	HARD CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED	RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.				
BOULDER COBBLE GRAVEL COARSE FINE SILT CLAY	SHALLOW UNDERCUT UNCLASSIFIED EXCAVATION - ACCEPTABLE DEGRADABLE ROCK EMBANKMENT OR BACKFILL	TO DETACH HAND SPECIMEN. MODERATELY CAN BE SCRATCHED BY KNIFE OR PICK, GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE	SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT				
(BLDR.) (COB.) (GR.) (CSE. SD.) (F SD.) (SL.) (CL.)	ABBREVIATIONS	│ HARD	OR SLIP PLANE.				
GRAIN MM 305 75 2.0 0.25 0.05 0.005 SIZE IN. 12 3	AR - AUGER REFUSAL MED MEDIUM VST - VANE SHEAR TEST BT - BORING TERMINATED MICA MICACEOUS WEA WEATHERED	BY MODERATE BLOWS.	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				
	CL CLAY MOD MODERATELY γ - UNIT WEIGHT	MEDIUM CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. CAN BE EXCAVATED IN SMALL CHIPS TO PEICES 1 INCH MAXIMUM SIZE BY HARD BLOWS OF THE	WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER, SPT REFUSAL IS PENETRATION EQUAL				
SOIL MOISTURE - CORRELATION OF TERMS	CPT - CONE PENETRATION TEST NP - NON PLASTIC 7 _d - DRY UNIT WEIGHT CSE COARSE ORG ORGANIC	POINT OF A GEOLOGIST'S PICK.	TO OR LESS THAN 0.1 FOOT PER 60 BLOWS.				
SOIL MOISTURE SCALE FIELD MOISTURE GUIDE FOR FIELD MOISTURE DESCRIPTION	DMT - DILATOMETER TEST PMT - PRESSUREMETER TEST SAMPLE ABBREVIATIONS	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	STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.				
(ATTERBERG LIMITS) DESCRIPTION GUIDE FOR FIELD MOISTORE DESCRIPTION	DMT - DILATOMETER TEST PMT - PRESSUREMETER TEST SAMPLE ABBREVIATIONS DPT - DYNAMIC PENETRATION TEST SAP SAPROLITIC S - BULK	FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE.	TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.				
(ATTERBERG LIMITS) DESCRIPTION - SATURATED - USUALLY LIQUID; VERY WET, USUALLY (SAT.) FROM BELOW THE GROUND WATER TABLE	DMT - DILATOMETER TEST	FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE. VERY CAN BE CARVED WITH KNIFE, CAN BE EXCAVATED READILY WITH POINT OF PICK, PIECES 1 INCH	TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. STRATA ROCK QUALITY DESIGNATION (SRQD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM CQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.				
(ATTERBERG LIMITS) DESCRIPTION - SATURATED - USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE PLASTIC - LIQUID LIMIT	DMT - DILATOMETER TEST	FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE.	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				
CATTERBERG LIMITS) DESCRIPTION - SATURATED - USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE PLASTIC PLAS	DMT - DILATOMETER TEST	FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE. VERY CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK, PIECES 1 INCH SOFT OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY	TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. STRATA ROCK DUALITY 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.				
(ATTERBERG LIMITS) DESCRIPTION - SATURATED - USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE PLASTIC PLASTIC DESCRIPTION SEMISOLID; REQUIRES DRYING TO	DMT - DILATOMETER TEST PMT - PRESSUREMETER TEST SAMPLE ABBREVIATIONS DPT - DYNAMIC PENETRATION TEST SAP SAPROLITIC S - BULK e - VOID RATIO SD SAND, SANDY SS - SPLIT SPOON F - FINE SL SILT, SILTY ST - SHELBY TUBE FOSS FOSSILIFEROUS SLI SLIGHTLY RS - ROCK FRAC FRACTURED, FRACTURES TCR - TRICONE REFUSAL RT - RECOMPACTED TRIAXIAL FRAGS FRAGMENTS W- MOISTURE CONTENT CBR - CALLFORNIA BEARING HI HIGHLY V - VERY RATIO	FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE. VERY 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 FINGERNAIL. FRACTURE SPACING BEDDING TERM SPACING TERM THICKNESS	TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. STRATA ROCK DUALITY 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; BM-IO: I5' SWEETGUM AT -Y- STA, II+77.54, 40.25' RT N 798659, E 2814028				
CATTERBERG LIMITS) DESCRIPTION - SATURATED - USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE PLASTIC PLAS	DMT - DILATOMETER TEST PMT - PRESSUREMETER TEST SAMPLE ABBREVIATIONS DPT - DYNAMIC PENETRATION TEST SAP SAPROLITIC S - BULK F - VOID RATIO SD SAND, SANDY SS - SPLIT SPOON F - FINE SL SILT, SILTY ST - SHELBY TUBE FOSS FOSSILIFEROUS SLI SLIGHTLY RS - ROCK FRACT - FRACTURED, FRACTURES TCR - TRICONE REFUSAL FRAGS FRAGMENTS W - MOISTURE CONTENT HI HIGHLY V - VERY RATIO EQUIPMENT USED ON SUBJECT PROJECT	FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE. VERY 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 FINGERNAIL. FRACTURE SPACING TERM SPACING VERY WIDE MORE THAN 10 FEET WIDE 3 TO 10 FEET THICKLY BEDDED 1.5 - 4 FEET	TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. STRATA ROCK DUALITY 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: BM-IO: 15" SWEETGUM AT -Y- STA, II+77.54, 40.25' RT				
CATTERBERG LIMITS) DESCRIPTION USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE PLASTIC RANGE (PI) PL PLASTIC LIMIT - WET - (W) SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE - WOIST - (M) SOLID, AT OR NEAR OPTIMUM MOISTURE	DMT - DILATOMETER TEST PMT - PRESSUREMETER TEST SAMPLE ABBREVIATIONS DPT - DYNAMIC PENETRATION TEST SAP SAPROLITIC S - BULK S SAND, SANDY SS - SPLIT SPOON F - FINE SL SILT, SILTY ST - SHELBY TUBE FOSS FOSSILIFEROUS SLI SLIGHTLY RS - ROCK FRACL FRACTURED, FRACTURES TCR - TRICONE REFUSAL FRAGS FRAGMENTS # - MOISTURE CONTENT CBR - CALIFORNIA BEARING HI HIGHLY V - VERY RATIO EQUIPMENT USED ON SUBJECT PROJECT DRILL UNITS: ADVANCING TOOLS: HAMMER TYPE:	FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE. VERY 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 FINGERNAIL. FRACTURE SPACING TERM SPACING VERY WIDE MORE THAN 10 FEET WIDE MODERATELY CLOSE 1 TO 3 FEET THICKLY BEDDED 0.16 - 1.5 FEET	TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. STRATA ROCK DUALITY 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; BM-IO: I5' SWEETGUM AT -Y- STA, II+77.54, 40.25' RT N 798659, E 2814028				
CATTERBERG LIMITS) DESCRIPTION USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE PLASTIC RANGE (PI) PL OM OPTIMUM MOISTURE SL SHRINKAGE LIMIT DESCRIPTION - SATURATED - USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE - WET - (W) SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE SUBJECT: - MOIST - (M) SOLID; AT OR NEAR OPTIMUM MOISTURE SUBJECT: - MOIST - (M) REQUIRES ADDITIONAL WATER TO	DMT - DILATOMETER TEST DPT - DYNAMIC PENETRATION TEST SAP SAPROLITIC S - BULK S - SAPL, SAND, SANDY F - FINE SL SILT, SILTY FOSS FOSSILIFEROUS SLI SLIGHTLY FRAGS FRACTURES TOR - TRICONE REFUSAL FRAGS FRAGMENTS W - MOISTURE CONTENT HI HIGHLY EQUIPMENT USED ON SUBJECT PROJECT DRILL UNITS: ADVANCING TOOLS: CMC-45C MANUAL PRESSUREMETER TEST SAMPLE ABBREVIATIONS S - SAPLIT SPOON SS - SPLIT SPOON SS - ROCK RS - ROC	FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE. VERY CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES I INCH OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGERNAIL. FRACTURE SPACING TERM SPACING VERY WIDE MORE THAN 10 FEET WIDE 3 TO 10 FEET THICKLY BEDDED 1.5 - 4 FEET MODERATELY CLOSE 1 TO 3 FEET THINLY BEDDED 0.003 - 0.16 FEET VERY THICKLY BEDDED 0.003 - 0.16 FEET VERY THINLY BEDDED 0.003 - 0.05 FEET VERY CLOSE LESS THAN 0.16 FEET THICKLY LAMINATED 0.008 - 0.03 FEET	TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. STRATA ROCK DUALITY 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: BM-IO: I5* SWEETGUM AT -Y- STA. II+77.54, 40.25' RT N 798659, E 28I4028 ELEVATION: 2.07 FEET				
CATTERBERG LIMITS) DESCRIPTION USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE LIQUID LIMIT PLASTIC (PI) PL OM OPTIMUM MOISTURE SL SHRINKAGE LIMIT OR OPTIMUM MOISTURE SHRINKAGE LIMIT - DRY - (D) REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE	DMT - DILATOMETER TEST PMT - PRESSUREMETER TEST SAMPLE ABBREVIATIONS DPT - DYNAMIC PENETRATION TEST SAP SAPROLITIC S - BULK S SAND, SANDY SS - SPLIT SPOON F - FINE SL SILT, SILTY ST - SHELBY TUBE FOSS FOSSILIFEROUS SLI SLIGHTLY RS - ROCK FRAC FRACTURED, FRACTURES TCR - TRICONE REFUSAL FRAGS FRAGMENTS W - MOISTURE CONTENT CB - CALIFORNIA BEARING HI HIGHLY V - VERY RATIO EQUIPMENT USED ON SUBJECT PROJECT DRILL UNITS: ADVANCING TOOLS: HAMMER TYPE: CME - 45C CAY BITS X AUTOMATIC MANUAL X CMF - 85 CORE SIZE:	FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE. VERY 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 FINGERNAIL. FRACTURE SPACING IERM SPACING VERY WIDE MORE THAN 10 FEET WIDE 3 TO 10 FEET MODERATELY CLOSE 1 TO 3 FEET THICKLY BEDDED 1.5 - 4 FEET CLOSE 0.16 TO 1 FOOT VERY THINLY BEDDED 0.03 - 0.16 FEET THICKLY LAMINATED 0.008 FEET THINLY LAMINATED C 0.008 FEET	TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. STRATA ROCK DUALITY 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: BM-IO: I5* SWEETGUM AT -Y- STA. II+77.54, 40.25' RT N 798659, E 28I4028 ELEVATION: 2.07 FEET				
CATTERBERG LIMITS) DESCRIPTION DESCRIPTION USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE - WET - (W) SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE SL SHRINKAGE LIMIT - MOIST - (M) SOLID; AT OR NEAR OPTIMUM MOISTURE - DRY - (D) REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE PLASTICITY	DMT - DILATOMETER TEST	FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE. VERY CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES I INCH OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGERNAIL. FRACTURE SPACING TERM SPACING VERY WIDE MORE THAN 10 FEET WIDE 3 TO 10 FEET THICKLY BEDDED 1.5 - 4 FEET MODERATELY CLOSE 1 TO 3 FEET THINLY BEDDED 0.003 - 0.16 FEET VERY THICKLY BEDDED 0.003 - 0.16 FEET VERY THINLY BEDDED 0.003 - 0.05 FEET VERY CLOSE LESS THAN 0.16 FEET THICKLY LAMINATED 0.008 - 0.03 FEET	TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. STRATA ROCK DUALITY 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: BM-IO: I5* SWEETGUM AT -Y- STA. II+77.54, 40.25' RT N 798659, E 28I4028 ELEVATION: 2.07 FEET				
CATTERBERG LIMITS) DESCRIPTION USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE LIQUID LIMIT PLASTIC (SAT.) PLASTIC LIMIT OM OPTIMUM MOISTURE SL SHRINKAGE LIMIT - MOIST - (M) SOLID; AT OR NEAR OPTIMUM MOISTURE SHRINKAGE LIMIT - DRY - (D) REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE	DMT - DILATOMETER TEST	FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT, SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE. VERY 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 FINGERNAIL. FRACTURE SPACING TERM VERY WIDE MORE THAN 10 FEET WIDE 3 TO 10 FEET MODERATELY CLOSE 1 TO 3 FEET THICKLY BEDDED 0.16 - 1.5 FEET CLOSE 0.16 TO 1 FOOT VERY THICKLY BEDDED 0.08 - 0.03 FEET THICKLY LAMINATED 0.008 FEET THICKLY LAMINATE	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. BENCH MARK: BM-IO: I5' SWEETGUM AT -Y- STA, II+77.54, 40.25' RT N 798659, E 28I4028 ELEVATION: 2.07 FEET				
CATTERBERG LIMITS) DESCRIPTION DESCRIPTION USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE LIQUID LIMIT PLASTIC RANGE (PI) PLASTIC LIMIT OM OPTIMUM MOISTURE SL SHRINKAGE LIMIT - WET - (W) SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE SHRINKAGE LIMIT - MOIST - (M) SOLID; AT OR NEAR OPTIMUM MOISTURE PLASTICITY PLASTICITY PLASTICITY PLASTICITY PLASTICITY INDEX (PI) SLIGHTLY PLASTIC 6-15 SLIGHT DESCRIPTION USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TO ATTAIN OPTIMUM MOISTURE PLASTICITY PLASTICITY SUBJECT: OF5 VERY LOW SUBJECT: SLIGHT VERY LOW SLIGHT SUBJECT: SU	DMT - DILATOMETER TEST	FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE. VERY 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 FINGERNAIL. FRACTURE SPACING TERM SPACING VERY WIDE MORE THAN 10 FEET WIDE 3 TO 10 FEET MODERATELY CLOSE 1 TO 3 FEET THICKLY BEDDED 0.15 - 4 FEET MODERATELY CLOSE 1 TO 3 FEET THICKLY BEDDED 0.16 - 1.5 FEET VERY THICKLY BEDDED 0.16 - 1.5 FEET VERY THINLY BEDDED 0.16 - 1.5 FEET THICKLY LAMINATED 0.008 - 0.03 FEET THICKLY LAMINATED VERY CLOSE INDURATION FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC. RUBBING WITH FINGER FREES NUMEROUS GRAINS; GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE.	TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. STRATA ROCK DUALITY 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: BM-IO: I5* SWEETGUM AT -Y- STA. II+77.54, 40.25' RT N 798659, E 28I4028 ELEVATION: 2.07 FEET				
CATTERBERG LIMITS) DESCRIPTION DESCRIPTION USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE LIQUID LIMIT PLASTIC (SAT.) - SATURATED - USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE - WET - (W) SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE - MOIST - (M) SOLID; AT OR NEAR OPTIMUM MOISTURE SHRINKAGE LIMIT - DRY - (D) REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE PLASTICITY NON PLASTIC PLASTICITY INDEX (PI) 0-5 VERY LOW	DMT - DILATOMETER TEST	FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT, SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE. VERY 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 FINGERNAIL. FRACTURE SPACING TERM VERY WIDE MORE THAN 10 FEET WIDE 3 TO 10 FEET MODERATELY CLOSE 1 TO 3 FEET THICKLY BEDDED 0.16 - 1.5 FEET CLOSE 0.16 TO 1 FOOT VERY THICKLY BEDDED 0.08 - 0.03 FEET THICKLY LAMINATED 0.008 FEET THICKLY LAMINATE	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. BENCH MARK: BM-IO: I5' SWEETGUM AT -Y- STA, II+77.54, 40.25' RT N 798659, E 28I4028 ELEVATION: 2.07 FEET				
CATTERBERG LIMITS) DESCRIPTION DESCRIPTION OBJUST FOR FIELD MOISTORE DESCRIPTION - SATURATED - USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE - WET - (W) SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE - MOIST - (M) OPTIMUM MOISTURE SL SHRINKAGE LIMIT - MOIST - (M) - DRY - (D) REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE - DRY - (D) REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE - PLASTICITY NON PLASTIC SLIGHTLY PLASTIC MODERATELY PLASTIC 6-15 SLIGHT MEDIUM	DMT - DILATOMETER TEST	FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE. VERY CAN BE CARVED WITH KNIFE, CAN BE EXCAVATED READILY WITH POINT OF PICK, PIECES I INCH OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGERNAIL. FRACTURE SPACING TERM SPACING VERY WIDE MORE THAN 10 FEET VERY THICKLY BEDDED 4 FEET VIDE MODERATELY CLOSE 1 TO 3 FEET THICKLY BEDDED 1.5 - 4 FEET CLOSE 0.16 TO 1 FOOT VERY THINLY BEDDED 0.16 - 1.5 FEET CLOSE 0.16 TO 1 FOOT VERY THINLY BEDDED 0.03 - 0.16 FEET THICKLY BEDDED 0.03 - 0.16 FEET THICKLY LAMINATED < 0.008 - 0.03 FEET THICKLY LAMINATED < 0.008 FEET THICKLY LAMINATED SEDDED OF MORE SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC. FRIABLE GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE: BREAKS EASILY WHEN HIT WITH HAMMER.	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. BENCH MARK: BM-IO: I5' SWEETGUM AT -Y- STA, II+77.54, 40.25' RT N 798659, E 28I4028 ELEVATION: 2.07 FEET				
CATTERBERG LIMITS) DESCRIPTION DESCRIPTION OBSCRIPTION - SATURATED - USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE - WET - (W) SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE - WET - (W) SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE - WET - (W) SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE - DRY - (D) REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE - DRY - (D) REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE - DRY - (D) REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE - DRY - (D) SIGNIFICATION OPTIMUM MOISTURE - DRY STRENGTH WERY LOW SLIGHTLY PLASTIC MODERATELY PLASTIC HIGHLY PLASTIC 16-25 MEDIUM COLLOR	DMT - DILATOMETER TEST PMT - PRESSUREMETER TEST SAMPLE ABBREVIATIONS DPT - DYNAMIC PENETRATION TEST SAP SAPROLITIC S - BULK S - SAND, SANDY SS - SPLIT SPOON F - FINE SL SILT, SILTY ST - SHELBY TUBE FOSS FOSSILIFEROUS SLI SLIGHTLY RS - ROCK FRAC FRACTURED, FRACTURES TCR - TRICONE REFUSAL FRAGS FRAGMENTS W - MOISTURE CONTENT CR - CALIFORNIA BEARING HI HIGHLY V - VERY RATIO **EQUIPMENT USED ON SUBJECT PROJECT** DRILL UNITS: ADVANCING TOOLS: HAMMER TYPE: CME-45C CLAY BITS X AUTOMATIC MANUAL **X CME-55 CALY BITS X AUTOMATIC MANUAL **X CME-55 CASING W ADVANCER - VANE SHEAR TEST X CASING W ADVANCER - PORTABLE HOIST X TRICONE 2 15/6* STEEL TEETH HAND AUGER - TUNG,-CARB. SOUNDING ROD	FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE. VERY 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 FINGERNAIL. FRACTURE SPACING IERM SPACING VERY WIDE MORE THAN 10 FEET WIDE A 1 TO 18 FEET WIDE MODERATELY CLOSE 1 TO 3 FEET THICKLY BEDDED 1.5 - 4 FEET THICKLY BEDDED 0.16 - 1.5 FEET THICKLY LAMINATED 0.008 FEET THICKLY BEDDED 0.16 - 1.5 FEET THICKLY LAMINATED 0.008 FEET THICKLY BEDDED 0.17 FEET THICKLY BEDDED 0.18 - 1.5 FEET THICKLY LAMINATED 0.008 FEET THICKLY LAMINATED 0.008 FEET THICKLY BEDDED 0.16 - 1.5 FEET THICKLY LAMINATED 0.008 FEET THICKLY BEDDED 0.16 - 1.5 FEET THICKLY LAMINATED 0.008 FEET THICKLY BEDDED 0.16 - 1.5 FEET THICKLY LAMINATED 0.008 FEET THICKLY BEDDED 0.16 - 1.5 FE	TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. STRATA ROCK DUALITY 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: BM-IO: I5* SWEETGUM AT -Y- STA. II+77.54, 40.25' RT N 798659, E 28I4028 ELEVATION: 2.07 FEET				
CATTERBERG LIMITS) DESCRIPTION DESCRIPTION OBSCRIPTION OBSCRIPTION	DMT - DILATOMETER TEST	FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE. VERY 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 FINGERWAIL. FRACTURE SPACING TERM SPACING VERY WIDE MORE THAN 10 FEET VERY THICKLY BEDDED 4 FEET THICKLY BEDDED 1.5 - 4 FEET THICKLY BEDDED 1.5 - 4 FEET THICKLY BEDDED 1.5 - 4 FEET THICKLY BEDDED 0.16 - 1.5 FEET CLOSE 0.16 TO 1 FOOT VERY THINLY BEDDED 0.003 - 0.16 FEET THICKLY LAMINATED 0.0008 - 0.03	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. BENCH MARK: BM-IO: I5' SWEETGUM AT -Y- STA, II+77.54, 40.25' RT N 798659, E 28I4028 ELEVATION: 2.07 FEET				





(2	少 べ	W	BO	REL	LOG	REP	ORT	-																						
						SF-8800			TY TYRREI	LL			GEOL	OGIST Oti, O. B.	WBS 17BP.1.R.59 TIF						SF-880009	COUNT	Y TYRREL	L		GEOLOGIST Oti, O. B				
SITE DESCRIPTION BRIDGE NO. 9 ON -L- (NC 94) OVER A C							94) OVER A CANAL						GROUND WTR				SITE DESC	CRIPTI	ON BR	IDGE N	NO. 9 C	ON -L	(NC 94) OVER	A CANAL				-	GROUND WTR (ff	
BORING NO. EB1-B						ATION 15	5+54		OFFSET	17 ft RT			ALIGN	IMENT -L-	0	HR. N/A	BORING NO. EB1-B				s	STATION 15+54			OFFSET 17 ft RT			ALIGNMENT -L-	0 HR. N//	
COLLAR ELEV. 3.2 ft					то	TAL DEPT	TH 78.7	NORTHIN	G 798,6	80		EASTI	NG 2,813,888	24	HR. 3.0	COLLAR ELEV. 3.2 ft			Т	TOTAL DEPTH 78.7 ft			NORTHING 798,680			EASTING 2,813,888	24 HR. 3.0			
DRIL	DRILL RIG/HAMMER EFF./DATE RF000					1E-55 92% (07/12/2011	1	_	DRILL METHOD Mud			d Rotary	HA	DRILL RIG/HAMMER EFF./DATE RFOO			O0074 (00074 CME-55 92% 07/12/2011				DRILL N	IETHOD N	/lud Rotary	HAMMER TYPE Automatic				
		Pinter, D				ART DATE	1 1/18/	/14	COMP. D				SURFACE WATER DEPTH N/A				DRILLER Pinter, D. G.					STAR	RT DATE 11/18/1	14	COMP. DA	TE 11/	18/14	SURFACE WATER DEF	TH N/A	
	ELEV DRIVE DEPTH BLOW COUNTY (ft) (ft) 0.5ft 0.5ft 0				0 3	BLOWS	S PER FOO 50	OT 75 10			101		SOIL AND ROCK D	DESCRIF		ELEV DRIV	VE DEF	PTH BL	OW CC				PER FOO 50	T 75 100	SAMP.	NO.		ND ROCK DESCRIPTION		
	(ft)	+ ` '	0.510	0.510	0.510		<u> </u>	<u> </u>	70 10	110.	/ MOI	G	ELEV. (ft)			DEPTH (I) (II) (ft)	 `	7 0.511	0.510	0.510			<u> </u>	70 100	INO.	MOI G			
_																	75						Mate	ch Lino						
5		+											3.2	GROUND SU	SURFACE	= 0	-75	+		+		+-	Mato	T LINE		 	<u> </u>	Boring Terminate		
		1				1						l India	0.2	ROADWAY EME TAN BROWN SAND,	IBANKME	ENT	1	‡											Dense Sand	
0	1.0	2.2	2	2	3	5				_			_	TAN BROWN SAND,), IVIOIS I	TO SAT.		‡										-		
		‡																‡										-		
_	-4.0	7.2				<u> </u> : : : :												‡										-		
-5		†	1	1	2	4 3				\dashv			-5.3_	ALLUVI	/IAL	8	<u></u>	+										-		
		‡												GRAY SAND WITH	H WOOD	D, SAT.		‡										-		
-10	-9.0	12.2	3	2	1	3						<u> </u>	_					<u> </u>										_		
		<u> </u>										 	-11.8		— ·	<u> 15</u> .	<u>. </u>	<u> </u>												
	-14.0	17.2							-					ALLUVI BLACK MUC	VIAL CK, WET	-		ŧ										_		
-15		+	1	1	1	Q 2	 	- 		\dashv		*****	-					\pm										_		
		1				1:::							<u>-16.8</u>	ALLUVI	VIAL	20.	4	ł										_		
-20	-19.0) 7 22.2	3	4	5	7						0000		BROWN SAN	AND, SAT	-		Ŧ										-		
		Ŧ				. [0000	-					Ŧ										F		
	-24 0	27.2				: : : :	: : :		-			00000						Ŧ										F		
-25		+	2	3	3	6				$\dashv \mid$			-					Ŧ										-		
		Ŧ				: ; : :							- <u>26.8</u>	COASTAL	PLAIN	30.	<u> </u>	Ŧ										-		
-30	-29.0	32.2	4	6	10	: :/: :						-		GRAY SAND WITH SHI SAT.	HELL FRA	AGMENTS,		Ŧ										-		
		Ŧ				16-				7		F	-	(YORKTOWN FO	FORMATI	ION)		Ŧ										-		
	34.0	37.2										-						Ŧ										-		
-35		+ "	11	15	20		35-					-	-					‡										-		
		Ŧ					: /: :					-						Ŧ										-		
-40	-39.0	42.2	9	14	16		7:::					-						Ŧ										-		
		Ŧ					30						- -41.8			45.	,	‡										-		
	-44.0	1 47.2				11/								COASTAL GRAY SILTY CLAY		SHELL]	‡										-		
-45	-44.0	+ 7/-2	1	2	3	5	: : :			_			-	FRAGMENT (YORKTOWN FO	TS, WET			‡										-		
		Ţ											<u>-46.8</u>	COASTAL			4	Ŧ										-		
-50	-49.0	52.2	10	19	26		1					-		GRAY SAND WITH SHI SAT.	HELL FRA	AGMENTS,		‡										-		
1/14		‡	"					●45 }		1			-	(YORKTOWN FO	ORMATI	ION)		‡										-		
12/	E4.0	57.2						::: 1										‡										-		
-55	-54.0	+ 37.2	14	21	23			44		_			-					‡										-		
2		‡					/											‡										-		
-60	-59.0	62.2	11	18	19		: : <i>[</i> ;					-						‡										-		
9.00 -00		‡	''	10	19		37			1			-					‡										-		
8000		‡					;′: :					+						‡										-		
-65	-64.0	67.2	8	14	12		/ / 26			_			_					‡										-		
BLE		‡				::::/	1 : : :											‡										-		
	-69.0	72.2	<u> </u>			: : :/:						 						‡										-		
-70 -70	1	‡	3	6	$\mid \circ \mid$	14-				\dashv			-					‡										-		
OTE		‡				: : : `												‡												
3 75	-74.0	77.2	!	144		12 · · · · \ · · · · · · · · · · · ·												+		1	1	1						F		

WBS 17BP.1.R.59 TIP SITE DESCRIPTION BRIDGE NO. 9 ON						P SF-880			Y TYRRE	::LL		GEOL	GEOLOGIST Oti, O. B.				WBS	17BP 1	.R.59			TIP SF-880009 COUNT					TYRREL	 L		GEOLOGIST Oti, O. B.				
												1 3 -			GROUND WTR (ft)	VTR (ft)						NO. 9 ON -L- (NC 94) OVER A CANAL											GROUND V	OUND WTR (ft)
BORING				-		TATION 1		.,,		18 ft RT		ALIGI	ALIGNMENT -L-		0 HR.	N/A	BORIN				<u></u>		FATION				FFSET	18 ft RT		ALIGN	IMENT -L-		0 HR.	N/A
	COLLAR ELEV. 3.0 ft TOTAL DEPTH				ft		NORTHING 798,755		_	ING 2,813,850		4 HR.	3.5	COLLAR ELEV. 3.0 ft			TOTAL DEPTH 89.0 ft				NORTHING 798,755			EASTING 2,813,850)	24 HR.	3.5						
	DRILL RIG/HAMMER EFF./DATE RF000							1.0			Mud Rotary			RTYPE Auto		DRILL RIG/HAMMER EFF./DATE				RFO			1.,	DRILL METHOD				2,010,00		ERTYPE Au				
	DRILLER Pinter, D. G.				FART DAT			COMP. D				ACE WATER DEPT			omato					- 140	START DATE 11/19/14			c	OMP. DA	TE 11/19/			ACE WATER D			omato		
				DW CC				S PER FOC		SAMP.	7 / L	- '						DRIVE DEPTH BLOW C							WS PEF			SAMP.	/ L					
					0	25	50	75 10	00 NO.	MOILG	O G ELEV.(ft	SOIL AND ROC	CK DESCR		DEPTH (ft)	(ft)	ELEV (ft)	(ft)	0.5ft			0	25	50		100	NO.	MOI G		SOIL AND	ROCK DES	CRIPTION		
								<u>'</u>	'				-,																					
5																	-75								Match L	ine								
	7											F _{3.0}	GROUND	SURFAC	Œ	0.0		+		- 4-†	71	12		. 23	· · [·						GRAY SAND W	ASTAL PLA	IN ERAGMENTS	
	Ŧ					ļ	Ī					:-	ROADWAY E TAN BROWN SAN	EMBANKM	MENT			Ŧ							`					F	(YORKTOWN	SAT.		
0 0.	5 +	2.5	3	2	2	4				<u> </u>			TAR BICOVIA OAR	ND, MOIOT	1 10 0/11.		-80	<u>-79.5</u>	82.5	18	29	31				60				-	(TORKTOWN	FORMATIO	N) (CONTINUEU,	
	‡											 						Ŧ								7				- - - -86.0				
-5 -4	.5 ‡	7.5				[: : : :		-				-4.0	-	.ŪVĪĀL			-85 —	-84.5	87.5						::]	! : : :				F				
	‡		2	2	2	•4				-		<u>:-</u>	GRAY SAND W	ITH WOO	DD, SAT.					17	24	28			●5	52		4		-86.0	Boring Termina	ted at Fleve	tion -86 0 ft ir	89.0
	‡																	Ţ												F	Ve	y Dense Sa	nd	
-10 -9	.5 +	12.5	3	4	3	•7						<u>#</u>						‡												Ė.				
	‡											-13.0				<u>16.0</u>		‡												F				
-15 -14	1.5	17.5				<i> </i> ;::::				.	***	% 13.5 - 	ALLI BLACK M	UVIAL	т	10.0		Ţ												F				
10	‡		1	1	1	1 2				-	\$555	<u> </u>	BLACKW	NOOK, WE	- '			‡												F				
	‡					<u> </u> : : : :					\$5555	<u> </u>						Ţ												F				
-20 -19	9.5 +	22.5	WOH	WOF	1 2	1					\$\$\$\$	}} _						‡												Ė				
	‡										\$\$\$\$	××××××××××××××××××××××××××××××××××××××				26.0		‡												ļ.				
-25 -24	1.5	27.5				<u> </u>				:	000	- <u>23.0</u> _	ALLI BROWN S	UVIAL		<u>26.0</u>		‡												ļ				
-25	+		WOH	1	2	9 3				-	000	-30.5	BROWNS	SAND, SA	NI.			‡												-				
	‡					:::::				:	000	::-						‡												<u> </u>				
-30 -29	9.5	32.5	WOH	1	2						000	-30.5				33.5		‡												_				
	‡									:			COASTA GRAY SILTY CL	AL PLAIN		20.0		‡												-				
-35 -34	15 ‡	37.5				}; : : :				·	:	-33.0		ENTS, WE	T	<u>36.0</u>		‡												<u> </u>				
-35	7	<u> </u>	3	3	2	Q 5							COAST	AL PLAIN				‡												-				
	‡					:\: : :						-		SAT.		,		‡												_				
-40 -39	0.5	42.5	6	8	5	. 1				·		<u></u>	(YORKTOWN	N FORMAT	TION)			‡												_				
	‡					: ,7 - : :				:								‡												<u> </u>				
-45 -4 4	15 +	<i>1</i> 7 5				½' : : :				:	Š	- <u>43.0</u> _		AL PLAIN		<u>46.0</u>		‡												_				
-45	+	-11.0	WOH	WOF	WOH	0						*		ENTS, WE	T			+												_				
	‡					::`:`:	\			:		-48.0	(YORKTOWN			<u> 51.0</u>		‡												_				
-50 -49	0.5	52.5	15	34	33					<u>.</u>]		-	GRAY SAND WITH	AL PLAIN SHELL FR	 RAGMENTS,	i,														E				
71/14	1			"				: : : <i>}•</i>	67	:			S/ (YORKTOWN	SAT. N FORMAT	TION)			İ												E				
[]	<u>,</u>	E7 E								:			`		,			ŧ												E				
55 -5 2	1.5	57.5	16	22	30	 		9 52										\pm												F				
	Ŧ							:/:::										±												E				
2 -60 <u>-59</u>	9.5 T	62.5		10	23		1 : : : ,	/		.		<u> </u>						Ŧ												F				
39.GF	Ŧ		8	19	23			42										Ŧ												E				
88000	Ŧ						/		-									Ŧ												F				
-65 <u>-64</u>	1.5	67.5	5	5	11	6 16	,					<u></u>						Ŧ												F				
UBLE	Ŧ					::["												Ţ												F				
70 <u>-69</u>	0.5	72.5		_		: : <i>ț</i> : :						:: <u>-</u>						ţ												F				
BOR	‡		6	6	6	12.				$\exists $								‡												F				
TOC	‡					:::\:		I		:		:						‡												Ė.				
9 -75 -74	.5	77.5		1	4	'/		-	-	·		ST .						+		1									1 1	F				