**DESCRIPTION** 

LEGEND (SOIL & ROCK)

TITLE SHEET

SITE PLAN

BORE LOGS

PROFILE

# 5898 **CONTENTS** SHEET NO. 186/B 5 $\mathbf{m}$ Ŕ REFERENCE 32/48030 (m) **o** m PROJEC

# STATE OF NORTH CAROLINA

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

# **STRUCTURE** SUBSURFACE INVESTIGATION

### COUNTY\_HAYWOOD

PROJECT DESCRIPTION US 23/US 74/US 19 (GREAT SMOKY MOUNTAIN HWY) FROM WEST OF NC 209(CRABTREE RD.) TO EAST OF RUSS AVE. SITE DESCRIPTION **RETAINING WALL #1** FROM -L LT- STA. 48+60.08 TO 49+09.03

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3186/B-5898	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 REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N.C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT 1999 TO7-6860. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

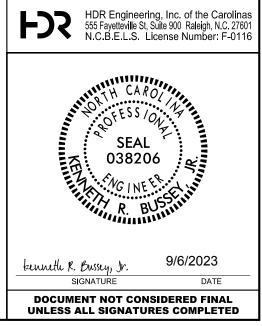
CENERAL SOL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU UN-PLACED TEST DATA CAN BE RELIED ON ONLY TO THE DECREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOLL MOISTURE CONDITIONS. NDICATED 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 WARANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE AND THE SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE ENCOUNTERED. ON THE RECONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE ENCOUNTERED ON THE PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OF 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: I, 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. 2. BY HAVING REDUESTED THS: 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

C. SWAFFORD
GEOTECHNOLOGY, INC.
INVESTIGATED BY <b>C. SWAFFORD</b>
DRAWN BY
CHECKED BY K. BUSSEY
SUBMITTED BY
DATE NOVEMBER 2021
DATE



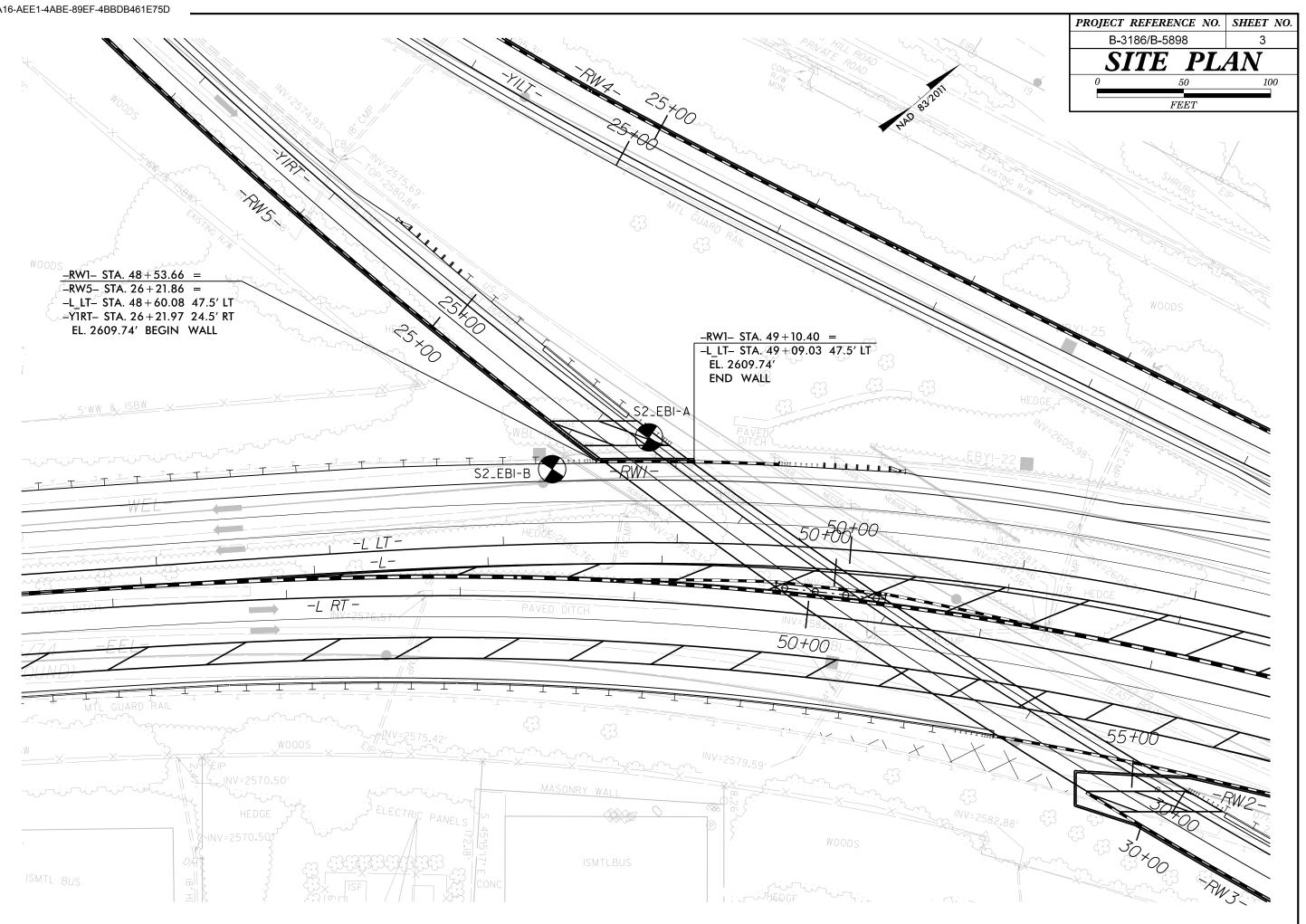
# NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS GEOTECHNICAL ENGINEERING UNIT SUBSURFACE INVESTIGATION

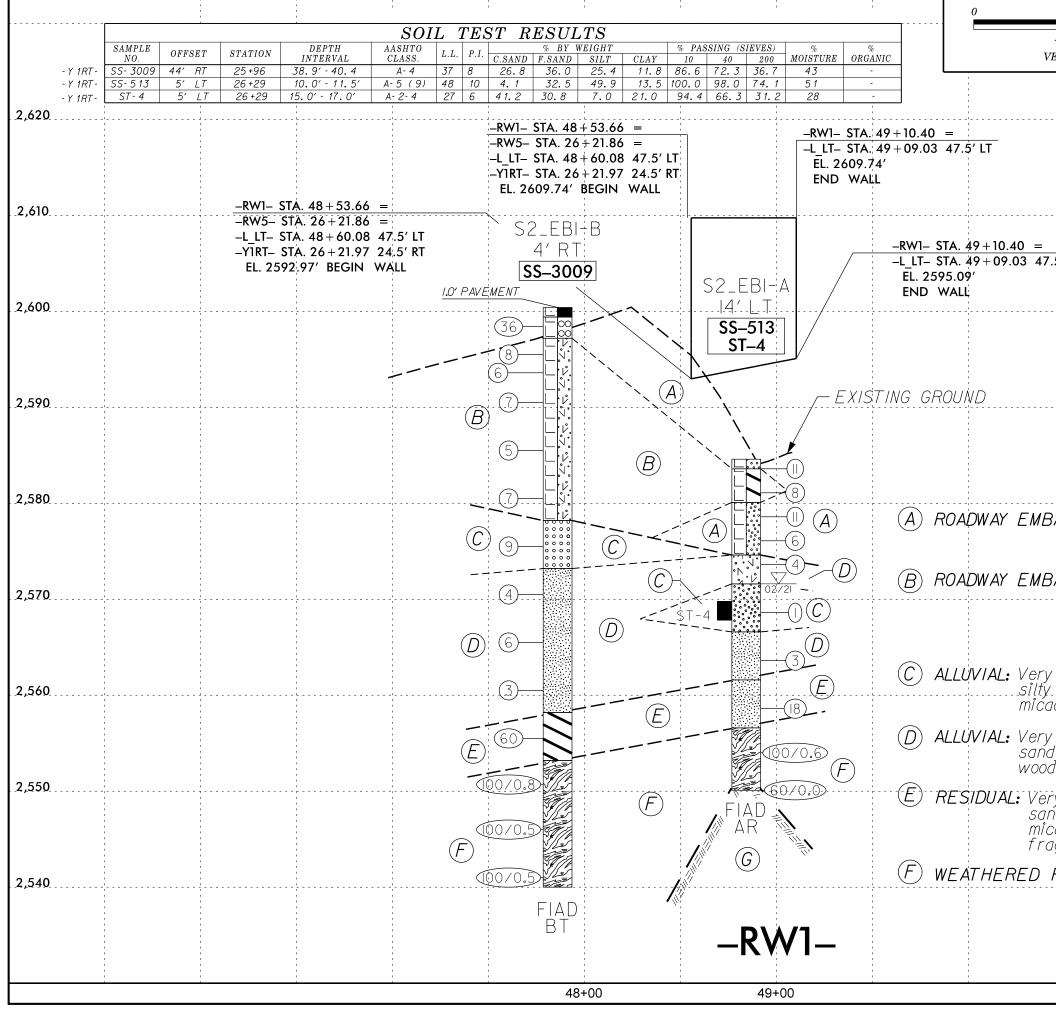
SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

			TERMO AND DEELNITIONO			
SOIL DESCRIPTION SOIL IS CONSIDERED UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CA	GRADATION	ROCK DESCRIPTION HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT REFUSAL IF TESTED. AN INFERRED	TERMS AND DEFINITIONS			
BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER AND YIELD LESS THAN 100 BLOWS PER FOO	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.	ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL.	ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER.			
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 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 SUC	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 SAN			
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//29///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 NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > ROCK (WR) 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 ORGANIC MATERIALS	MINERALOGICAL COMPOSITION	CRYSTALLINE	WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND			
LLASS. ( \$ 354 PASSING *200) ( \$ 354 PASSING *200)	MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC.	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-a         A-1-b         A-2-4         A-2-5         A-2-6         A-2-7         A-6         A-7         A-1, A-2         A-4, A-5         A-6         A-7         A-1-b         A-2-6         A-2-6         A-2-7         A-6         A-7         A-3         A-6, A-7	COMPRESSIBILITY	NON-CRYSTALLINE FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN	CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE.			
CLH33. A-I-a A-I-b A-2-4 A-2-5 A-2-6 A-2-7 A-7-6 H-3 H-5 H-6 H-7	SLIGHTLY COMPRESSIBLE LL < 31	ROCK (NCR) STREFUSAL IF TESTED.	COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE.			
SYMBOL COORDOOOD	MODERATELY COMPRESSIBLE LL = 31 - 50	COASTAL PLAIN COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD	CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED			
7. PASSING SILT-	HIGHLY COMPRESSIBLE LL > 50	SEDIMENTARY ROCK SANDSTONE, CEMENTED SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED SHELL BEDS, ETC.	BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.			
*10 50 MX GRANULAR CLAY MU *40 30 MX 50 MX 51 MN S01LS CLAY PE		WEATHERING	DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT			
*200 15 MX 25 MX 10 MX 35 MX 35 MX 35 MX 35 MX 36 MN 36 MN 36 MN 36 MN 36 MN	ORGANIC MATERIAL SOILS OTHER MATERIAL	FRESH ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING. ROCK RINGS UNDER	ROCKS OR CUTS MASSIVE ROCK. DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE			
MATERIAL	TRACE         OF ORGANIC         MATTER         2         - 3%         3         - 5%         TRACE         1         - 10%           LITTLE         ORGANIC         MATTER         3         - 5%         5         - 12%         LITTLE         10         - 20%	HAMMER IF CRYSTALLINE.	HORIZONTAL.			
PASSING *40	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, (V SLI.) CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF	DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE			
PI 6 MX NP 10 MX 10 MX 11 MN 11 MN 10 MX 10 MX 11 MN 11 MN MODEPATE HIG		OF A CRYSTALLINE NATURE.	LINE OF DIP, MEASURED CLOCKWISE FROM NORTH.			
GROUP INDEX 0 0 0 4 MX 8 MX 12 MX 16 MX NO MX AMOUNTS OF URG		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 SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE.			
USUAL TYPES STONE FRAGS. FINE SILTY OR CLAYEY SILTY CLAYEY MATTER	WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING	(SLI.) I INCH. OPEN JOINTS MAY CONTAIN CLAY. IN GRANITOID ROCKS SOME OCCASIONAL FELDSPAR CRYSTALS ARE DULL AND DISCOLORED. CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS.	FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES.			
OF MAJOR GRAVEL, AND SAND GRAVEL AND SAND SOILS SOILS	▼ STATIC WATER LEVEL AFTER <u>24</u> HOURS	MODERATE SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WEATHERING EFFECTS. IN	FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM			
CEN RATING EAIR TO	✓ 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 UNSUI	BLE	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		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	FIELD.			
PRIMARY SOIL TYPE COMPACTNESS OR RANGE OF STANDARD RANGE OF UNCONFIN		(MOD. SEV.) AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK. ROCK GIVES "CLUNK" SOUND WHEN STRUCK. IF TESTED, WOULD YIELD SPT REFUSAL	JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED.			
CONSISTENCY (N-VALUE) (TONS/FT <sup>2</sup> )	WITH SOIL DESCRIPTION OF ROCK STRUCTURES	SEVERE ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC CLEAR AND EVIDENT BUT	LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT.			
GENERALLY VERY LOOSE < 4	SOIL SYMBOL	(SEV.) REDUCED IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KAOLINIZED	LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS.			
GRANULAR MEDIUM DENSE 10 TO 30 N/O	8	TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN. IF TESTED, WOULD YIELD SPT N VALUES > 100 BPF	MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS			
MATERIAL DENSE 30 TO 50	ARTIFICIAL FILL (AF) OTHER AUGER BORING CONE PENETROMETEF	VERY ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE	USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE.			
VERY DENSE > 50		SEVERE BUT MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK (V SEV.) REMAINING, SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE THAT ONLY MINOR	PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM.			
VERY SOFT         < 2         < 0.25           GENERALLY         SOFT         2 TO 4         0.25 TO 0.5	- INFERRED SOIL BOUNDARY - CORE BORING SOUNDING ROD	(V SEV.) REMAINING. SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE THAT ONLY MINOR VESTIGES OF ORIGINAL ROCK FABRIC REMAIN. <u>IF TESTED, WOULD YIELD SPT N VALUES &lt; 100 BPF</u>	RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK.			
SILT-CLAY MEDIUM STIFF 4 TO 8 0.5 TO 1.0	TEST BORING WELL - TEST BORING WELL - TEST BORING WITH CORE	COMPLETE ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE OR DISCERNIBLE ONLY IN SMALL AND	ROCK QUALITY DESIGNATION (RQD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF			
MATERIAL         STIFF         8 TO 15         1 TO 2           (COHESIVE)         VERY STIFF         15 TO 30         2 TO 4		SCATTERED CONCENTRATIONS. QUARTZ MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS ALSO AN EXAMPLE.	ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE			
HARD > 30 > 4	TTTTT ALLUVIAL SOIL BOUNDARY A INSTALLATION - SPT N-VALUE		RUN AND EXPRESSED AS A PERCENTAGE.			
TEXTURE OR GRAIN SIZE	RECOMMENDATION SYMBOLS	ROCK HARDNESS	SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK.			
	NECOLINEINDATION STIBBES					
U.S. STD. SIEVE SIZE 4 10 40 60 200 270	UNCLASSIFIED EXCAVATION - TA UNCLASSIFIED EXCAVATION -	VERY HARD CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK. BREAKING OF HAND SPECIMENS REQUIRES SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.	SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND			
U.S. STD. SIEVE SIZE 4 10 40 60 200 270 OPENING (MM) 4.76 2.00 0.42 0.25 0.075 0.053	UNDERCUT UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE		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			
OPENING (MM)         4.76         2.00         0.42         0.25         0.075         0.053           POILI DEP         COBBLE         CBAVEL         COARSE         FINE         SUIT         CLA	UNCLASSIFIED EXCAVATION - TA UNCLASSIFIED EXCAVATION -	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK. HARD CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.	RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.			
OPENING (MM) 4.76 2.00 0.42 0.25 0.075 0.053	UNDERCUT UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE UNCLASSIFIED EXCAVATION - UNCLASSIFIED EXCAVATION - EMBANKMENT OR BACKFILL	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK. HARD CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN. MODERATELY CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE	RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO			
OPENING (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR,)         COBBLE (COB,)         GRAVEL (GR,)         COARSE SAND (GR,)         FINE SAND (CSE, SD,)         SILT (F SD,)         CLA (SL,)         CLA (CLA	UNDERCUT UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE UNCLASSIFIED EXCAVATION - SHALLOW UNCLASSIFIED EXCAVATION - UNCLASSIFIED EXCAVATION - UNCLASSIFI	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK. HARD CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.	RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. <u>SLICKENSIDE</u> - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT			
OPENING (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR,)         COBBLE (COB,)         GRAVEL (GR,)         COARSE SAND (GR,)         FINE SAND (CSE, SD,)         SILT (F SD,)         CLA (SL,)         CLA (CLA	UNDERCUT UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE UNCLASSIFIED EXCAVATION - UNCLASSIFIED EXCAVATION - ACCEPTABLE DECRADABLE ROCK UNCLASSIFIED EXCAVATION - ACCEPTABLE DECRADABLE ROCK USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL ABBRE VIA TIONS AR - AUGER REFUSAL BT - BORING TEMINATED MICA MICACEOUS WEA WEATHERED	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK. HARD CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN. MODERATELY CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE HARD EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS. MEDIUM CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT.	RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. <u>SLICKENSIDE</u> - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE. <u>STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT)</u> - NUMBER OF BLOWS (N OR BPF) OF A 140 LB. HAMMER FALLING 30 INCHES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOIL			
OPENING (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR,)         COBBLE (COB,)         CRAVEL (GR,)         COARSE SAND (GR,)         FINE SAND (CSE, SD,)         FINE SAND (F SD,)         SIL T (SL,)         CLA (CL.)           GRAIN         MM         305         75         2.0         0.25         0.05         0.005	UNDERCUT UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE UNDERCUT UNCLASSIFIED EXCAVATION - UNDERCUT UNCLASSIFIED EXCAVATION - UNCLASSIFIED EXCAVATION -	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK. HARD CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN. MODERATELY CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE HARD EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS. MEDIUM CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD CAN BE EXCAVATED IN SMALL CHIPS TO PEICES I INCH MAXIMUM SIZE BY HARD BLOWS OF THE	RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. <u>SLICKENSIDE</u> - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE. <u>STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT)</u> - NUMBER OF BLOWS (N OR BPF) OF			
OPENING (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR.)         COBBLE (COB.)         GRAVEL (GR.)         COARSE SAND (GS. SD.)         FINE SAND (F SD.)         SILT (SL.)         CLA (CL.)           GRAIN SIZE         NM         305         75         2.0         0.25         0.05         0.005           SIZE         IN.         12         3         CORRELATION OF TERMS         SOIL         MOISTURE         CORRELATION OF TERMS	UNDERCUT UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE UNCLASSIFIED EXCAVATION - UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL ABBRE VIATIONS AR - AUGER REFUSAL BT - BORING TERMINATED CL CLAY CPT - CONE PENETRATION TEST NP - NON PLASTIC CSE COARSE UNCLASSIFIED EXCAVATION - ACCEPTABLE DECOVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL VISCASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL VISCASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL VISCASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL VISCASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL VISCASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL VISCASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL VISCASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL VISCASSIFIED ACCEPTABLE BECARDABLE ROCK VISCASSIFIED ACCEPTABLE BECARDABLE ROCK	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK. HARD CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN. MODERATELY CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE HARD EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS. MEDIUM CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT.	RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. <u>SLICKENSIDE</u> - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE. <u>STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT)</u> - 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. STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY			
OPENING         (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR,)         COBBLE (COB,)         CRAVEL (GR,)         COARSE SAND (GR,)         FINE SAND (CSE, SD,)         FINE SAND (F SD,)         SIL T (SL,)         CLA (CL.)           GRAIN SIZE         NM         305         75         2.0         0.25         0.05         0.005           SIZE         IN.         12         3         -         -         0.25         0.05         0.005	UNDERCUT UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE SHALLOW UNCLASSIFIED EXCAVATION - UNCLASSIFIED EXCAVATION - UNCLASSIFIED EXCAVATION - UNCLASSIFIED EXCAVATION - UNCLASSIFIED EXCAVATION - OCCEPTABLE, BUT NOT TO BE UNCLASSIFIED EXCAVATION - OCCEPTABLE, BUT NOT TO BE UNCLASSIFIED EXCAVATION - CSED IN THE TOP 3 FEET OF BARKMENT OR BACKFILL ABBREVIATIONS AR - AUGER REFUSAL MED MEDIUM MED MEDIUM MICA MICACEOUS WEA WEATHERED CL CLAY CPT - COME PENETRATION TEST NP - NON PLASTIC CSE COARSE DMT - DILATOMETER TEST DMT - PRESSUREMETER TEST SAMPLE ABBREVIATIONS	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK. HARD CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN. MODERATELY CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE HARD EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS. MEDIUM CAN BE GROOVED OR GOUGED 0.25 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD CAN BE EXCAVATED IN SMALL CHIPS TO PEICES I INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK. 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	RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. <u>SLICKENSIDE</u> - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE. <u>STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT)</u> - 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. <u>STRATA CORE RECOVERY (SREC.)</u> - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.			
OPENING         (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR,)         COBBLE (COB,)         CRAVEL (GR,)         COARSE SAND (CSE, SD,)         FINE SAND (F SD,)         SIL T (F SD,)         CLA (CL, (F SD,)           GRAIN SIZE         NM         305         75         2.0         0.25         0.05         0.005           SIZE         IN.         12         3         0.25         0.05         0.005           SOIL         MOISTURE         - CORRELATION OF TERMS           SOIL         MOISTURE SCALE DESCRIPTION         GUIDE FOR FIELD MOISTURE DESCRIPT           -         - SATURATED -         USUALLY LIQUID; VERY WET, USUALLY	UNDERCUT UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL MURCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL MURCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL MURCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL MURCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL MICLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL MICLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL MICLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL MICLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL MICLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL MICLASSIFIED ACCEPTABLE BOR MICLASSIFIED ACCEPTABLE OF EMBANKMENT OR BACKFILL WEAL - WEATHERED CL COMP FENETRATION TEST NOR - NON PLASTIC CEL - COMPENETRATION TEST DPT - DINAMIC PENETRATION TEST SAPPLE ABBREVIATIONS SAPPLE ABBREVIATIONS SAPP	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK. HARD CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN. MODERATELY CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE HARD EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS. MEDIUM CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD CAN BE EXCAVATED IN SMALL CHIPS TO PEICES I INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK. 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.	RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO         THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. <u>SLICKENSIDE</u> - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT         OR SLIP PLANE. <u>STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT)</u> - 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. <u>STRATA CORE RECOVERY (SREC.)</u> - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY         TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. <u>STRATA ROCK QUALITY DESIGNATION (SROD)</u> - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL         LENGTH OF ROCK SEGENERIS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY			
OPENING         (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR,)         COBBLE (COB,)         GRAVEL (GR,)         COARSE SAND (GR,)         FINE SAND (CSE, SD,)         FINE FINE (F SD,)         SIL T (SL,)         CLA (CL.)           GRAIN SIZE         NM         305         75         2.0         0.25         0.05         0.005           SIZE         IN.         12         3         -         -         CORRELATION OF TERMS           SOIL         MOISTURE SCALE (ATTERBERG LIMITS)         FIELD MOISTURE DESCRIPTION         GUIDE FOR FIELD MOISTURE DESCRIPT GUIDE FOR FIELD MOISTURE DESCRIPT - SATURATED - (SAT.)         USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TAB	UNDERCUT UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE SHALLOW UNCLASSIFIED EXCAVATION - UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL ABBREVIATIONS AR - AUGER REFUSAL BT - BORING TERMINATED CL CLAY CCL - COAY CCL - COAY CCL - COARSE DT - DILATOMETER TEST DFT - DYNAMIC PENETRATION TEST PT - DYNAMIC PENETRATION TEST DFT - DYNAMIC PENETRATION TEST E - VOID RATIO E - VOID RATIO E - VOID RATIO E - FINE UNCLASSIFIED EXCAVATION - ACCEPTABLE BUT NOT TO ACCEVE UNCLASSIFIED EXCAVATION - ACCEPTABLE BUT NOT TO SEC USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO SEC USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO SEC USED IN THE SEC USED I	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK. HARD CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN. MODERATELY CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE HARD EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS. MEDIUM CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD CAN BE GROOVED 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. 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	RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO         THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.         SLICKENSDE - 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 NUCKES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOLL         WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL         TO R. LESS THAN 0.1 FOOT PER 60 BLOWS.         STRATA CORE RECOVERY (SRCC) - TOTAL LENOTH 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 STRATA AND EXPRESSED AS A PERCENTAGE.			
OPENING         (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR.)         COBBLE (COB.)         CRAVEL (GR.)         COARSE SAND (CSE. SD.)         FINE SAND (F SD.)         SILT (SL.)         CLA           GRAIN SIZE         NM         305         75         2.0         0.25         0.05         0.005           SOIL         MOISTURE         - CORRELATION OF TERMS         SOIL         SOIL MOISTURE SCALE         FIELD MOISTURE         GUIDE FOR FIELD MOISTURE DESCRIPTION           SOIL         MOISTURE SCALE         FIELD MOISTURE         GUIDE FOR FIELD MOISTURE DESCRIPTION           LL         L         LIDUID LIMIT         - SATURATED - USAT.)         USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TAB	UNDERCUT UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL MURCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL MURCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL MURCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL MURCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL MICLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL MICLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL MICLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL MICLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL MICLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL MICLASSIFIED ACCEPTABLE BOR MICLASSIFIED ACCEPTABLE OF EMBANKMENT OR BACKFILL WEAL - WEATHERED CL COMP FENETRATION TEST NOR - NON PLASTIC CEL - COMPENETRATION TEST DPT - DINAMIC PENETRATION TEST SAPPLE ABBREVIATIONS SAPPLE ABBREVIATIONS SAPP	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK. HARD CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN. MODERATELY CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE HARD EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS. MEDIUM CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD CAN BE EXCAVATED IN SMALL CHIPS TO PEICES 1 INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK. 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. 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 FINGERNAIL.	RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO         THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. <u>SLICKENSIDE</u> - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT         OR SLIP PLANE. <u>STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT)</u> - 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. <u>STRATA CORE RECOVERY (SREC.)</u> - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY         TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. <u>STRATA ROCK QUALITY DESIGNATION (SROD)</u> - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL         LENGTH OF ROCK SEGENERIS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY			
OPENING (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR.)         COBBLE (COB.)         GRAVEL (GR.)         COARSE SAND (GR.)         FINE SAND (CSE. SD.)         FINE SAND (F SD.)         SIL T (SL.)         CLA           GRAIN SIZE         NM         305         75         2.0         0.25         0.05         0.005           SOIL CATERBERG LIMITS         MOISTURE         - CORRELATION OF TERMS         0.005         0.005         0.005           SOIL CATERBERG LIMITS         FIELD MOISTURE DESCRIPTION         GUIDE FOR FIELD MOISTURE DESCRIPT GUIDE FOR FIELD MOISTURE DESCRIPT CATERBERG LIMITS         - SATURATED - SATURATED - SATURATED - CATER         USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TAB SEMISOLID; REQUIRES DRYING TO	UNDERCUT UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE SHALLOW UNCLASSIFIED EXCAVATION - UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL ABBRE VIATIONS AR - AUGER REFUSAL BT - BORING TERMINATED CL CLAY MCD MODENATELY CPT - CONE PENETRATION TEST NC - NON PLASTIC CSL - COARSE ORG, - ORGANIC DMT - DILATOMETER TEST DPT - DYNAMIC PENETRATION TEST SAP SAPROLITIC S - BULK - VOID RATIO F - FINE FOSS FOSSILIFEROUS SLI - SLICHTLY FRAC FRACTURED, FRACTURES WCA STOCK REFUSAL RT - RECOMPACED TRIAXIAL CBT - CONE PENETRATION TEST MC - VOID RATIO SLI - SLICHTLY FRAC FRACTURED, FRACTURES WCA STOCK REFUSAL RT - RECOMPACED TRIAXIAL CBT - CONE PENETRATION TEST MC - VOID RATIO SLI - SLICHTLY FRAC FRACTURED, FRACTURES WCA CALLFORNIA BEARING CBT - CALLFORNIA BEARING CBT - CALLFORNIA BEARING	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.           HARD         CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED           TO DETACH HAND SPECIMEN.         MODERATELY           MODERATELY         CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE           HARD         EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED           BY MODERATE BLOWS.         MEDIUM           CAN BE CROVED OR GOUGED 0.065 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT.           HARD         CAN BE EXCAVATED IN SMALL CHIPS TO PEICES I INCH MAXIMUM SIZE BY HARD BLOWS OF THE           POINT OF A GEOLOGIST'S PICK.         SOFT           CAN BE EXCAVATED IN SMALL CHIPS TO PEICES I INCH MAXIMUM SIZE BY HARD BLOWS OF THE           POINT OF A GEOLOGIST'S PICK.         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.           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           FINGERNAIL.         FRACTURE SPACING           BEDDING         FRACTURE SPACING	RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO         THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.         SLICKENSDE - 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 NUCKES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOLL         WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL         TO R. LESS THAN 0.1 FOOT PER 60 BLOWS.         STRATA CORE RECOVERY (SRCC) - TOTAL LENOTH 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 STRATA AND EXPRESSED AS A PERCENTAGE.			
OPENING (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR.)         COBBLE (COB.)         GRAVEL (GR.)         COARSE SAND (GR.)         FINE SAND (CSE. SD.)         FINE SAND (F SD.)         SIL T (SL.)         CLA           GRAIN SIZE         NM         305         75         2.0         0.25         0.05         0.005           SOIL CATERBERG LIMITS         MOISTURE         - CORRELATION OF TERMS         0.005         0.005         0.005           SOIL CATERBERG LIMITS         FIELD MOISTURE DESCRIPTION         GUIDE FOR FIELD MOISTURE DESCRIPT GUIDE FOR FIELD MOISTURE DESCRIPT CATERBERG LIMITS         - SATURATED - SATURATED - SATURATED - CATER         USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TAB SEMISOLID; REQUIRES DRYING TO	UNDERCUT UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE SHALLOW UNCLASSIFIED EXCAVATION - ACCEPTABLE DECRADABLE ROCK ABBREVIATIONS ABBREVIATIONS AR - AUGER REFUSAL BT - BORING TERMINATED CL CLAY CCL - CLAY CCL - CLAY CONFERENCE DIA THE TEST DPT - DUNAMIC PENETRATION TEST NC F - FUNE DIA TOMETER TEST DPT - DUNAMIC PENETRATION TEST SAP SAPROLITIC SL - SAUL DIA TOMETER TEST DPT - DUNAMIC PENETRATION TEST DPT - DUNAMIC PENETRATION TEST SAP SAPROLITIC SL - SAUL DIA TOMETER TEST DPT - DUNAMIC PENETRATION TEST SAP SAPROLITIC SL - SAULS SAPROLITIC SL - SAULS SAPROLITIC S - BULK SL - SILT, SILT Y FOSS FOSSILIFEROUS SLI - SILT, SILT Y FRAC FRACTURED, FRACTURES HIL - HIGHLY V - VERY UNCLASSIFIED EXCAVATION - ACCEPTABLE BUT NOT TO ACCEVE UNCLASSIFIED EXCAVATION - CER - COALSSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO ACCEVE USED IN THE DTP 3 FEED EXCAVATION - ACCEPTABLE, BUT NOT TO ACCEVE BABANKMENT OR BACKFILL UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE BABANKMENT OR BACKFILL VSED IN THE ST ABBREVIATIONS VST - VANE SHEAR TEST WEA WATHERED VST - VANE SHEAR TEST VST - VANE SHEAR T	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.           HARD         CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY, HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.           MODERATELY         CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE EXCAVATED BY HARD BLOW OF A GEOLOCIST'S PICK, HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS.           MEDIUM         CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD           CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD           CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD           CAN BE GROOVED 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.           VERY         CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES 1 INCH SOFT           VERY         CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES 1 INCH SOFT           VERY         CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES 1 INCH SOFT           VERY         CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES 1 INCH SOFT           FRACTURE         SPACING           FRACTURE         SPACING	RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO         THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. <u>SLICKENSIDE</u> - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT         OR SLIP PLANE. <u>STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPI)</u> - 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 R LESS THAN 0.1 FOOT PER 60 BLOWS. <u>STRATA CORE RECOVERY (SREC.)</u> - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY         TOTAL LENGTH OF STRATATUM AND EXPRESSED AS A PERCENTAGE. <u>STRATA ROCK QUALITY DESIGNATION (SROD)</u> - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL         LENGTH OF STRATA MOLE STRATA MATERIAL ROCK SECHENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY         THE TOTAL LENGTH OF STRATA MOLE STRATE ON AS A PERCENTAGE. <u>STRATA ROCK QUALITY DESIGNATION (SROD)</u> - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL         LENGTH OF STRATA MOLE STRATE AND EXPRESSED AS A PERCENTAGE. <u>STRATA ROCK SEGMENTS WITHIN A STRATUM EQUAL</u> TO OR GREATER THAN 4 INCHES DIVIDED BY         THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE. <u>TOPSOIL (TS.)</u> - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.			
OPENING (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR.)         COBBLE (COB.)         GRAVEL (GR.)         COARSE SAND (GR.)         FINE SAND (CSE. SD.)         FINE SAND (F SD.)         SIL T (SL.)         CLA           GRAIN SIZE         NM         305         75         2.0         0.25         0.05         0.005           SOIL CATERBERG LIMITS         MOISTURE         - CORRELATION OF TERMS         0.005         0.005         0.005           SOIL CATERBERG LIMITS         FIELD MOISTURE DESCRIPTION         GUIDE FOR FIELD MOISTURE DESCRIPT GUIDE FOR FIELD MOISTURE DESCRIPT CATERBERG LIMITS         - SATURATED - SATURATED - SATURATED - CATER         USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TAB SEMISOLID; REQUIRES DRYING TO	UNDERCUT UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE SHALLOW UNCLASSIFIED EXCAVATION - ACCEPTABLE DECRADABLE ROCK ABBREVIATIONS A	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.         HARD       CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.         MODERATELY       CAN BE SCRATCHED BY KNIFE OR PICK, COUGES 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.         MEDIUM       CAN BE GROVED OR COUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD         CAN BE EXCAVATED IN SMALL CHIPS TO PEICES I INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK.         SOFT       CAN BE EXCAVATED IN SMALL CHIPS TO PEICES I INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK.         SOFT       CAN BE GROVED OR COUGED READILY BY KNIFE OR PICK. CAN BE EXCAVATED IN FRAGMENTS FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A ICK 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 SOFT         OF MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGERNAIL.         FRACTURE SPACING       IERM         VERY WIDE       MORE THAN 10 FEET       VERY THICKLY BEDDED         VERY WIDE       MORE THAN 10 FEET       VERY THICKLY BEDDED       4 FEET         WIDE       3 TO 10 FFET       THICKLY BEDDED       1.5 - 4 FEET	FELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO         THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. <u>SLICKENSIDE</u> - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT         OR SLIP PLANE. <u>STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT)</u> - NUMBER OF BLOWS (N OR BPF) OF         A 140 LB. HAMMER FALLING 30 INCHES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOLL         WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL         TO R LESS THAN 0.1 FOOT PER 60 BLOWS. <u>STRATA CORE RECOVERY (SREC.)</u> - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY         TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. <u>STRATA ROCK OWALTY DESIGNATION (SROD)</u> - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL         LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE. <u>STRATA ROCK SEGMENTS WITHIN A STRATUM</u> EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY         THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE. <u>TOPOSUL (TS.)</u> - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.			
OPENING (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR,)         COBBLE (COB,)         GRAVEL (GR,)         COARSE (GR,)         FINE SAND (CSE, SD,)         FINE (F SD,)         SILT (SL,)         CLA (CL,)           GRAIN SIZE         NM         305         75         2.0         0.25         0.05         0.005           SOIL CATERBERG LIMITS         MOISTURE         - CORRELATION OF TERMS         SOLD MOISTURE DESCRIPTION         GUIDE FOR FIELD MOISTURE DESCRIPT DESCRIPTION         GUIDE FOR FIELD MOISTURE DESCRIPT USUALLY FROM BELOW THE GROUND WATER TAB FROM BELOW THE GROUND WATER TAB           LL PLASTIC (PI) PL         PLASTIC LIMIT         - WET - (W)         SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE	UNDERCUT UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE SHALLOW UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF BMANKMENT OR BACKFILL WED, - MEDIUM MED, - MEDIUM ST - VANE SHEAR TEST WED, - MEDIUM MCA, - MICACEOUS MCA, - WEA, - WEATHERED MCA, - MICACEOUS MCA, - MICACEOUS MCA, - MICACEOUS MCA, - WEA, - WEATHERED MCA, - WEA, - WEATHERED MCA, - MICACEOUS MCA, - WEA, - WEATHERED MCA, - MICACEOUS MCA, - WEA, - WEATHERE MCA, - WEATHERED MCA, - MICACEOUS MCA, - WIT WEIGHT CET - ONNAMIC PENETRATION TEST MCA, - SAND, SANDY SS - SPLIT SPOON FRAC, - FRACTURES MCA, - SILT, SILTY FRAC, - FRACTURES, FRACTURES MCA, - MISTURE CONTENT CER - CALIFORNIA BEARING HI, - HICHY W - VERY MCA, - WEATHERED MCA, - MODENT MCA, - MON PLASTIC CENCOMPACTED TRIAXIAL CENCOMPACTED TRI	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.       HARD     CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.       MODERATELY     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.       MEDIUM     CAN BE GROOVED OR GOUGED 0.85 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD       CAN BE GROOVED OR GOUGED 0.805 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD       CAN BE GROOVED OR GOUGED RADILY 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.       VERY     CAN BE CARVED WIT KNIFE. CAN BE EXCAVATE DREADILY WITH POINT OF PICK. PIECES 1 INCH SOFT       VERY     CAN BE CARVED WIT KNIFE. CAN BE EXCAVATE DREADILY WITH POINT OF PICK. PIECES 1 INCH SOFT       VERY     CAN BE BROKEN BY FINGER PRESSURE.       VERY     WORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGERNALL.       ERACTURE     SPACINO       TERM     SPACINO       VERY WIDE     MORE THAN 10 FEET       WIDE     MORE THAN 10 FEET       WIDE     AT THAN 10 FEET       WIDERATELY CLOSE     1 TO 3 FEET	RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO         THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. <u>SLICKENSIDE</u> - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT         OR SLIP PLANE. <u>STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPI)</u> - 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 R LESS THAN 0.1 FOOT PER 60 BLOWS. <u>STRATA CORE RECOVERY (SREC.)</u> - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY         TOTAL LENGTH OF STRATATUM AND EXPRESSED AS A PERCENTAGE. <u>STRATA ROCK QUALITY DESIGNATION (SROD)</u> - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL         LENGTH OF STRATA MOLE STRATA MATERIAL ROCK SECHENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY         THE TOTAL LENGTH OF STRATA MOLE STRATE ON AS A PERCENTAGE. <u>STRATA ROCK QUALITY DESIGNATION (SROD)</u> - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL         LENGTH OF STRATA MOLE STRATE AND EXPRESSED AS A PERCENTAGE. <u>STRATA ROCK SEGMENTS WITHIN A STRATUM EQUAL</u> TO OR GREATER THAN 4 INCHES DIVIDED BY         THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE. <u>TOPSOIL (TS.)</u> - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.			
OPENING (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR,)         COBBLE (COB,)         CRAVEL (GR,)         COARSE SAND (GR,)         FINE SAND (CSE, SD,)         FINE SAND (F SD,)         SILT (SL,)         CLA           CRAIN (BLDR,)         305         75         2.0         0.25         0.05         0.005           SILE IN.         12         3         0.25         0.05         0.005         0.005           SOIL (ATTERBERG LIMITS)         MOISTURE DESCRIPTION         GUIDE FOR FIELD MOISTURE DESCRIPT GUIDE FOR FIELD MOISTURE DESCRIPTION         GUIDE FOR FIELD MOISTURE DESCRIPTION           PLASTIC (PI) PL         LIOUID LIMIT PLASTIC LIMIT         - SATURATED - (SAT,)         USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TAB SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE SEMINKAGE LIMIT           OM         OPTIMUM MOISTURE SL         - MOIST - (M)         SOLID; AT OR NEAR OPTIMUM MOISTURE SOLID; AT OR NEAR OPTIMUM MOISTURE	UNDERCUT       UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE       UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE SHALLOW         UNDERCUT       UNCLASSIFIED EXCAVATION - ACCEPTABLE DECRADABLE ROCK       UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE SED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL         AR - AUGER REFUSAL       MED MEDIUM       VST - VANE SHEAR TEST         BT - BORING TERMINATED       MICA MICACEOUS       VST - VANE SHEAR TEST         CL CLAY       MDD MODERATELY       VST - VANE SHEAR TEST         CDT - CONE PENETRATION TEST       NP - NON PLASTIC       7 - DRY UNIT WEIGHT         DT - DILATOMETER TEST       PMT - PRESSUREMETER TEST       SAMPLE ABBREVIATIONS         PT - DYNAMIC PENETRATION TEST       SAP SAPROLITIC       S - BULK         VOID RATIO       SL - SILT, SILTY       ST - SHELBY TUBE         FAC FRACTURED, FRACTURES       SL - SILT, SILTY       ST - SHELBY TUBE         FRAC FRACTURED, FRACTURES       CR - TRICONE REFUSAL       RT - RECOMPACTED TRIAXIAL         FRAC FRACTURED, FRACTURES       W - MOISTURE CONTENT       RATIO         HI HIGHLY       V - VERY       RATIO         EQUIPMENT       USED ON SUBJECT       PROJECT         DRILL UNITS:       CLAY BITS       AUTOMATIC       MANUAL         GCME-45C       GCONTINUOUS FLIGHT AUGER       M	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.       HARD     CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY, HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.       MODERATELY     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.       MEDIUM     CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD       CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD       CAN BE GROOVED 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.       VERY     CAN BE CARVED WITH KNIFE, CAN BE EXCAVATED READILY WITH POINT OF PICK, PIECES I INCH SOFT       VERY     CAN BE CARVED WITH KNIFE, CAN BE EXCAVATED READILY WITH POINT OF PICK, PIECES I INCH SOFT       VERY     CAN BE GROKEN BY FINGER PRESSURE.       VERY     MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGERNAIL.       VERY     MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGERNAIL.       VERY     WIDE     3 TO 10 FEET       WIDE     3 TO 10 FEET     VERY THICKLY BEDDED       MODERATELY CLOSE     1 TO 3 FEET     THICKLY BEDDED       WIDE     3 TO 10 FEET     THICKLY BEDDED       WIDE     3 TO 10 FEET     THICKLY BEDDED       WIDE <td>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 PEMETRATION TEST (PENETRATION RESISTANCE) (SPI) - 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 SPION 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 PERCENTACE.         STRATA ROCK QUALITY DESIGNATION (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL         LENGTH OF STRAT AND EXPRESSED AS A PERCENTAGE.         STRATA LENGTH OF STRAT AND EXPRESSED AS A PERCENTAGE.         STRATA LENGTH OF STRAT AND EXPRESSED AS A PERCENTAGE.         STRATA LENGTH OF STRAT AND EXPRESSED AS A PERCENTAGE.         STRATA LENGTH OF STRAT AND EXPRESSED AS A PERCENTAGE.         STRATA LENGTH OF STRAT 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 GRATER THAN 4 INCHES DIVIDED BY         THE TOTAL LENGTH OF STRAT AND EXPRESSED AS A PERCENTAGE.         TOPSOIL (TS.) - SURFACE SOIL</td>	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 PEMETRATION TEST (PENETRATION RESISTANCE) (SPI) - 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 SPION 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 PERCENTACE.         STRATA ROCK QUALITY DESIGNATION (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL         LENGTH OF STRAT AND EXPRESSED AS A PERCENTAGE.         STRATA LENGTH OF STRAT AND EXPRESSED AS A PERCENTAGE.         STRATA LENGTH OF STRAT AND EXPRESSED AS A PERCENTAGE.         STRATA LENGTH OF STRAT AND EXPRESSED AS A PERCENTAGE.         STRATA LENGTH OF STRAT AND EXPRESSED AS A PERCENTAGE.         STRATA LENGTH OF STRAT 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 GRATER THAN 4 INCHES DIVIDED BY         THE TOTAL LENGTH OF STRAT AND EXPRESSED AS A PERCENTAGE.         TOPSOIL (TS.) - SURFACE SOIL			
OPENING (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR,)         COBBLE (COB,)         GRAVEL (GR,)         COARSE SAND (CSE, SD,)         FINE SAND (F D,)         SILT (SL,)         CLA           GRAIN (BLDR,)         305         75         2.0         0.25         0.05         0.005           SILE (ATTERBERG LIMITS)         SOIL (ATTERBERG LIMITS)         MOISTURE DESCRIPTION         GUIDE FOR FIELD MOISTURE DESCRIPT GUIDE FOR FIELD MOISTURE DESCRIPTION           LL PLASTIC (PI) PL         LIOUID LIMIT PLASTIC LIMIT         - SATURATED (SAT,)         USUALLY LIQUID: VERY WET, USUALLY FROM BELOW THE GROUND WATER TAB (PI) PLASTIC LIMIT         - WET - (W)         SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE SEMISOLID; AT OR NEAR OPTIMUM MOISTURE           OM SL SHRINKAGE LIMIT         OPTIMUM MOISTURE SHRINKAGE LIMIT         - MOIST - (M)         SOLID; AT OR NEAR OPTIMUM MOISTURE	UNDERCUT       UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE       UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF ACCEPTABLE DECRADABLE ROCK         AR - AUGER REFUSAL       WED MEDIUM       VST - VANE SHEAR TEST         BT - BORING TERMINATED       MICA MICACCEOUS       VST - VANE SHEAR TEST         CL CLAY       MOD MODERATELY       VST - VANE SHEAR TEST         CPT - CONE PENETRATION TEST       NP - NON PLASTIC       YS - VANE SHEAR TEST         DMT - DILATOMETER TEST       PM - NON PLASTIC       YG - DRY UNIT WEIGHT         VID       ORG ORGANIC       SS - SPLIT SPOON         PT - D'NAMIC PENETRATION TEST       SAP SAPROLITIC       S - BULK         PT - D'NAMIC PENETRATION TEST       SAP SAPROLITIC       S - BULK         PT - D'NAMIC PENETRATION TEST       SAP SAPROLITIC       S - BULK         PT - D'NAMIC PENETRATION TEST       SAP SAPROLITIC       S - BULK         PT - D'NAMIC PENETRATION TEST       SAP SANDY       SS - SPLIT SPOON         FF - FINE       SL SLICHTLY       ST - SHELBY TUBE         FOSS FOSSILIFEROUS       SL SLICHTLY       ST - SHELBY TUBE         FRAC FRACTURES, FRACTURES       W - TOTINUOUS FLICHT AUGER       RT - RECOMPACTED TRIAXIAL         FRAC FRACTURES       MOISTURE CONTENT       CBR - CALIFORNIA BEARING	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.         HARD       CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.         MODERATELY       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.         MEDIUM       CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD         CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD         CAN BE EXCAVATED IN SMALL CHIPS TO PEICES 1 INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK.         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.         VERY       CAN BE CARVED WIT KNIFE. CAN BE EXCAVATE DREADILY WITH POINT OF PICK. PIECES 1 INCH SOFT         VERY       CAN BE CARVED WIT KNIFE. CAN BE EXCAVATE DREADILY WITH POINT OF PICK. PIECES 1 INCH SOFT         VERY       CAN BE GROKEN BY FINGER PRESSURE.         VERY       WIDE         MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGERNAL.         VERY WIDE       MORE THAN 10 FEET         VERY WIDE       MORE THAN 10 FEET         VERY WIDE       MORE THAN 10 FEET         VERY THINLY BEDDED       1.5 - 4 FEET <t< td=""><td>RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO         THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.         SLICKENSDE - 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 I FOOT INTO SOIL         WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPON SAMPLER, SPT REFUSAL IS PENETRATION EQUAL         TO OR LESS THAN 0.1 FOOT PER 60 BLOWS.         STRATA CORE RECOVERY (SREC.) - TOTAL LENOTH OF STRATA MATERIAL RECOVERED DIVIDED BY         TOTAL LENOTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.         STRATA CORE NECOVERY (SREC.) - TOTAL LENOTH OF STRATA MATERIAL RECOVERED DIVIDED BY         TOTAL LENOTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.         STRATA CORE NECOVERY SITHIN A STRATUM EQUAL TO OR CREATER THAN 4 INCHES DIVIDED BY         TOTAL LENOTH OF STRATA AND EXPRESSED AS A PERCENTAGE.         STRATA ROCK DUALITY DESIGNATION (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL         LENOTH OF STRATA AND EXPRESSED AS A PERCENTAGE.         STRATA ROCK DUALITY DESIGNATION (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL         LENOTH OF STRATA AND EXPRESSED AS A PERCENTAGE.         IDPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.         BENCH MARK: N/A</td></t<>	RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO         THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.         SLICKENSDE - 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 I FOOT INTO SOIL         WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPON SAMPLER, SPT REFUSAL IS PENETRATION EQUAL         TO OR LESS THAN 0.1 FOOT PER 60 BLOWS.         STRATA CORE RECOVERY (SREC.) - TOTAL LENOTH OF STRATA MATERIAL RECOVERED DIVIDED BY         TOTAL LENOTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.         STRATA CORE NECOVERY (SREC.) - TOTAL LENOTH OF STRATA MATERIAL RECOVERED DIVIDED BY         TOTAL LENOTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.         STRATA CORE NECOVERY SITHIN A STRATUM EQUAL TO OR CREATER THAN 4 INCHES DIVIDED BY         TOTAL LENOTH OF STRATA AND EXPRESSED AS A PERCENTAGE.         STRATA ROCK DUALITY DESIGNATION (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL         LENOTH OF STRATA AND EXPRESSED AS A PERCENTAGE.         STRATA ROCK DUALITY DESIGNATION (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL         LENOTH OF STRATA AND EXPRESSED AS A PERCENTAGE.         IDPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.         BENCH MARK: N/A			
OPENING (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR,)         COBBLE (COB,)         GRAVEL (GR,)         COARSE SAND (CSE, SD,)         FINE SAND (F BD,)         SILT (SL,)         CLA           GRAIN (BLDR,)         305         75         2.0         0.25         0.05         0.005           SIZE IN.         12         3         0         5         0.005         0.005           SOIL (ATTERBERG LIMITS)         MOISTURE DESCRIPTION         GUIDE FOR FIELD MOISTURE DESCRIPT GUIDE FOR FIELD MOISTURE DESCRIPTION         GUIDE FOR FIELD MOISTURE DESCRIPTION           LL (PLASTIC (PI) PLASTIC LIMIT         - SATURATED PLASTIC LIMIT         - SATURATED - (SAT,)         USUALLY LIQUID: VERY WET, USUALLY FROM BELOW THE CROUND WATER TAB OM           OPTIMUM MOISTURE SL SHRINKAGE LIMIT         - WET - (W)         SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE           - WET - (D)         SOLID; AT OR NEAR OPTIMUM MOISTURE SHRINKAGE LIMIT         - MOIST - (M)         SOLID; AT OR NEAR OPTIMUM MOISTURE           - DRY - (D)         REDUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE         - DRY - (D)         REDUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE	UNDERCUT       UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE       UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO SEE USED IN THE TOP 3 FEET OF BARNAMENT OR BACKFILL         AR - AUGER REFUSAL BT - BORING TERMINATED       MED MEDIUM MICA MICACEOUS       VST - VANE SHEAR TEST WEA WEATHERED OC CLAY         CL CLAY       MOD MODERATELY CPT - CONE PENETRATION TEST       NON PLASTIC ORG ORGANIC       VST - VANE SHEAR TEST WEA WEATHERED ORG ORGANIC         DPT - DINAMIC PENETRATION TEST       NON PLASTIC ORG ORGANIC       SS - SULK SILS SIL, SILTY S - BULK       SAMPLE ABBREVIATIONS S - SULK SIL S - SULK SILTY S - SHELBY TUBE FOSS FOSSILIFEROUS S - SIL, SILTY FAAC FRACTURED, FRACTURES TCR - TRICONE REFUSAL FRACS FRACMENTS       SL - SILTONE REFUSAL RT - RECOMPACTED TRIAXIAL CRE - SEC COME - 55         CME - 45C       CLAY BITS       AUTOMATIC       MANUAL         CME - 55       B' HOLLOW AUGERS       CORE SIZE: B' - H       MANUAL	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.         HARD       CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.         MODERATELY       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.         MEDIUM       CAN BE GROVED OR GOUGED 0.85 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT.         HARD       CAN BE GROVED OR GOUGED 0.85 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT.         HARD       CAN BE GROVED OR GOUGED 0.85 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT.         HARD       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.         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. CAN BE SCRATCHED READILY BY FINGERNALL.         VERY CAN BE GROVEN DY FINGER PRESSURE         VERY WIDE       MORE THAN 10 FEET         VERY WIDE       MORE THAN 10 FEET         VERY WIDE       MORE THAN 10 FEET         VERY WIDE       MORE THAN 10 FE	RELATIVELY THIN COMPARED WITH ITS LATERAL EXTERT, THAT HAS BEEN EMPLACED PARALLEL TO         THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.         SLICKENSDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT         OR SLIP PLANE.         STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPI) - NUMBER OF BLOWS (N OR BPF) OF         A 140 LB, HAMMER FALLING 30 INCHÉS REQUIRED TO PRODUCE A PENETRATION OF I FOOT INTO SOIL         WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL         TO R LESS THAN 0.1 FOOT PER 60 BLOWS.         STRATA CORE RECOVERY (SRECL) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY         TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.         STRATA CORE NECOVERY (SRECL) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY         TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.         STRATA CORE NOT STRATA AND EXPRESSED AS A PERCENTAGE.         INFLATE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.         INFLATE OF DOCK SECONATION (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL         LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.         IMPODIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.         BENCH MARK: N/A         LELEVATION: FEET         NOTES:         BORING ELEVATIONS OBTAINED FROM TRIMBLE RIZ CNSS RECEIVER         CERTIFIED WITH FCC PART I5 (CLASS B DEVICE), 24, 32; RCM; PTCRB;			
OPENING         (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR,)         COBBLE (COB,)         CRAVEL (COB,)         COARSE (GRAVEL (CR,)         COARSE SAND (CSE, SD,)         FINE SAND (F SD,)         SILT (SL,)         CLA (CL,)           CRAIN SIZE         NM         305         75         2.0         0.25         0.05         0.005           SOIL (ATTERBERG         MOISTURE         COARSE SOIL         FIELD         MOISTURE         COARSE SOIL         0.25         0.05         0.005           SOIL (ATTERBERG         MOISTURE         COARSE SOIL         FIELD         MOISTURE         COARSE DESCRIPTION         GUIDE FOR FIELD         MOISTURE         DESCRIPTION           LL PLASTIC (PI) PL         LIDUID         LIMIT         - SATURATED - (SAT,)         USUALLY         LIDUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TAB SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE           VET - (W)         SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE         - WET - (W)         SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE           SL         SHRINKAGE LIMIT         - MOIST - (M)         SOLID; AT OR NEAR OPTIMUM MOISTURE           SHRINKAGE LIMIT         - DRY - (D)         REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE	UNDERCUT       UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE       UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE UNCLASSIFIED EXCAVATION - ACCEPTABLE, DECRADABLE ROCK         AR - AUGER REFUSAL       WED MEDIUM       VST - VANE SHEAR TEST         BT - BORING TERMINATED       MICA MICACCEOUS       VST - VANE SHEAR TEST         CL CLAY       MOD MODERATELY       VST - VANE SHEAR TEST         CPT - CONE PENETRATION TEST       NP - NON PLASTIC       VST - VANE SHEAR TEST         IN       DHT - DILATOMETER TEST       PPT - NON PLASTIC       VST - VANE SHEAR TEST         IN       DHT - DILATOMETER TEST       PPT - NON PLASTIC       VST - VANE SHEAR TEST         IN       DHT - DILATOMETER TEST       PMT - NON PLASTIC       S - BULK         IN       DHT - DINAMIC PENETRATION TEST       SAP SAPROLITIC       S - BULK         IN       DHT - DINAMIC PENETRATION TEST       SAP SAPROLITIC       S - BULK         IN       DHT - DINAMIC PENETRATION TEST       SAP SAPROLITIC       S - BULK         IN       SL SLICHTLY       ST - SHELBY TUBE       RS - SOCK         FF - FINE       SLI SLICHTLY       ST - SHELBY TUBE       RS - ROCK         FRACS FRAGMENTS       W - VERY       RS - ROCK       RATIO         FRACS FRAGMENTS       W - VERY       AUTOMATIC	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.         HARD       CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.         MODERATELY       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.         MEDIUM       CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD         CAN BE GROOVED OR GOUGED READLY BY KNIFE OR PICK. CAN BE EXCAVATED IN FRAGMENTS FOINT OF A GEOLOGIST'S PICK.         SOFT       CAN BE GROVED OR GOUGED READLY 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.         VERY       CAN BE CARVED WITH KNIFE, CAN BE EXCAVATED READLY WITH POINT OF PICK. PIECES I INCH SOFT         VERY       CAN BE CARVED WITH KNIFE, CAN BE EXCAVATED READLY WITH POINT OF PICK. PIECES I INCH SOFT         VERY       MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READLY BY FINGERNAIL.         VERY WIDE       MORE THAN 10 FEET         VERY WIDE       ALG 1 FEET         VERY WIDE       ALG 1 FOOT         VERY WIDE       ALG 1 FEET         VERY CLOSE       LESS THAN 0.16 FEET	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 PEMETRATION TEST (PENETRATION RESISTANCE) (SPI) - 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 SPION 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 PERCENTACE.         STRATA ROCK QUALITY DESIGNATION (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL         LENGTH OF STRAT AND EXPRESSED AS A PERCENTAGE.         STRATA LENGTH OF STRAT AND EXPRESSED AS A PERCENTAGE.         STRATA LENGTH OF STRAT AND EXPRESSED AS A PERCENTAGE.         STRATA LENGTH OF STRAT AND EXPRESSED AS A PERCENTAGE.         STRATA LENGTH OF STRAT AND EXPRESSED AS A PERCENTAGE.         STRATA LENGTH OF STRAT 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 GRATER THAN 4 INCHES DIVIDED BY         THE TOTAL LENGTH OF STRAT AND EXPRESSED AS A PERCENTAGE.         TOPSOIL (TS.) - SURFACE SOIL			
OPENING (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR,)         COBBLE (COB,)         GRAVEL (GR,)         COARSE SAND (CSE, SD,)         FINE SAND (F SD,)         SILT (SL,)         CLA           GRAIN (BLDR,)         305         75         2.0         0.25         0.05         0.005           SILE (ATTERBERG LIMITS)         SOIL (ATTERBERG LIMITS)         FIELD MOISTURE DESCRIPTION         GUIDE FOR FIELD MOISTURE DESCRIPT GUIDE FOR FIELD MOISTURE DESCRIPTION           LL (PLASTIC (PI) PL         LIQUID LIMIT PLASTIC LIMIT         - SATURATED - (SAT,)         USUALLY LIQUID: VERY WET, USUALLY FROM BELOW THE GROUND WATER TAR (PI) PLASTIC LIMIT           OM (PI) PL         OPTIMUM MOISTURE SHRINKAGE LIMIT         - MOIST - (W)         SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE ORY - (D)           NON PLASTIC SLIGHTLY PLASTIC         PLASTICITY INDEX (PI) 0-5         DRY - STRENGTH VERY LOW SUBHTLY PLASTIC	UNDERCUT       UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE       UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE UNCLASSIFIED EXCAVATION - ACCEPTABLE, DECRADABLE ROCK         AR - AUGER REFUSAL       UNCLASSIFIED EXCAVATION - ACCEPTABLE, DECRADABLE ROCK       UNCLASSIFIED EXCAVATION - CONTON 2 STORED STATUS         AR - AUGER REFUSAL       MED MEDIUM       VST - VANE SHEAR TEST         BT - BORING TERMINATED       MICA MICACECOUS       VST - VANE SHEAR TEST         CL CLAY       MOD MODERATELY       VST - VANE SHEAR TEST         CPT - CONE PENETRATION TEST       NP - NON PLASTIC       VS - VANE SHEAR TEST         IN       DPT - DILATOMETER TEST       PMT - PRESSUREMETER TEST       SAMPLE ABBREVIATIONS         NN       DPT - DINAMIC PENETRATION TEST       SAP SAPROLITIC       S - BULK         SD - SAND, SANDY       SS - SPLIT SPOON       SS - SPLIT SPOON         F - FINE       SL SLICHTLY       ST - SHELBY TUBE         FOSS FOSSILIFEROUS       SLI SLICHTLY       ST - SHELBY TUBE         FRAC, - FRACTURED, FRACTURES       TC - TRICONE REFUSAL       RT - RECOMPACTED TRIAXIAL         CME - 45C       CLAY BITS       AUTOMATIC       MANUAL         CME - 550X       B' HOLLOW AUGERS       B' HOLLOW AUGERS       B' HOLLOW AUGERS         WAND STREME SHEAR TEST       TUNGCARBIDE INSERTS       HAND. TOU S'	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.         HARD       CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.         MODERATELY       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.         MEDIUM       CAN BE GROVED OR GOUGED 0.85 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT.         HARD       CAN BE GROVED OR GOUGED 0.85 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT.         HARD       CAN BE GROVED OR GOUGED 0.85 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT.         HARD       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.         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. CAN BE SCRATCHED READILY BY FINGERNALL.         VERY CAN BE GROVEN DY FINGER PRESSURE         VERY WIDE       MORE THAN 10 FEET         VERY WIDE       MORE THAN 10 FEET         VERY WIDE       MORE THAN 10 FEET         VERY WIDE       MORE THAN 10 FE	RELATIVELY THIN COMPARED WITH ITS LATERAL EXTERT, THAT HAS BEEN EMPLACED PARALLEL TO         THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.         SLICKENSDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT         OR SLIP PLANE.         STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPI) - NUMBER OF BLOWS (N OR BPF) OF         A 140 LB, HAMMER FALLING 30 INCHÉS REQUIRED TO PRODUCE A PENETRATION OF I FOOT INTO SOIL         WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL         TO R LESS THAN 0.1 FOOT PER 60 BLOWS.         STRATA CORE RECOVERY (SRECL) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY         TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.         STRATA CORE NECOVERY (SRECL) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY         TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.         STRATA CORE NOT STRATA AND EXPRESSED AS A PERCENTAGE.         INFLATE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.         INFLATE OF DOCK SECONATION (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL         LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.         IMPODIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.         BENCH MARK: N/A         LELEVATION: FEET         NOTES:         BORING ELEVATIONS OBTAINED FROM TRIMBLE RIZ CNSS RECEIVER         CERTIFIED WITH FCC PART I5 (CLASS B DEVICE), 24, 32; RCM; PTCRB;			
OPENING         (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR,)         COBBLE (COB,)         CRAVEL (COB,)         COARSE SAND (CSE, SD,)         FINE SAND (F SD,)         SILT (SL,)         CLA (CL,)           GRAIN SIZE         NM         305         75         2.0         0.25         0.05         0.005           SOIL         MOISTURE SCALE (ATTERBERG LIMITS)         FIELD MOISTURE DESCRIPTION         GUIDE FOR FIELD MOISTURE DESCRIPT OUDE FOR FIELD MOISTURE DESCRIPTION         GUIDE FOR FIELD MOISTURE DESCRIPT (ATTERBERG LIMITS)           PLASTIC (PI) (PL         LIOUID LIMIT PLASTIC LIMIT         - SATURATED - (SAT,)         USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TAB ATTAIN OPTIMUM MOISTURE           (PI) PL         OPTIMUM MOISTURE SL         SHRINKAGE LIMIT         - WET - (W)         SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE           SL         SHRINKAGE LIMIT         - MOIST - (M)         SOLID; AT OR NEAR OPTIMUM MOISTURE           SL         SHRINKAGE LIMIT         - MOIST - (M)         SOLID; AT OR NEAR OPTIMUM MOISTURE           VERY - (D)         REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE         - DRY - (D)         REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE           NON PLASTIC         0-5         VERY LOW SLIGHTLY PLASTIC         6-15	UNDERCUT       UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE       UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF ACCEPTABLE DECRADABLE ROCK         AR - AUGER REFUSAL       UNCLASSIFIED EXCAVATION - ACCEPTABLE DECRADABLE ROCK       UNCLASSIFIED EXCAVATION - CEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF BARMAMENT OR BACKFILL         BT - BORING TERMINATED       MED MEDIUM       VST - VANE SHEAR TEST         BT - BORING TERMINATED       MICA MICACECOUS       VST - VANE SHEAR TEST         CL CLAY       MOD MODERATELY       VST - VANE SHEAR TEST         CPT - CONE PENETRATION TEST       NP - NON PLASTIC       VST - VANE SHEAR TEST         DPT - DILATOMETER TEST       PMT - PRESSUREMETER TEST       SAMPLE ABBREVIATIONS         DPT - DYNAMIC PENETRATION TEST       SAP SAPROLITIC       S - BULK         e - VOID RATIO       SL SLICT, SLITY       ST - SHELBY TUBE         FASS FRACHURED, FRACTURES       SLI SLICHTY       ST - SHELBY TUBE         FAGS FRACHURED, FRACTURES       TCR - TRICONE REFUSAL       RT - RECOMPACTED TRIAXIAL         FRACS FRACHURES       W - VERY       RT - RECOMPACTED TRIAXIAL         CME - 45C       CLAY BITS       WICLAYBUT AUGER         MALL UNITS;       BUPMANCING TOOLS;       HAMMER TYPE;         MALL WITS;       BUHLOW AUGERS       -N       -N	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK. HARD CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN. MODERATELY CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE HARD EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS. MEDIUM CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD CAN BE GROVED OR GOUGED READILY BY KNIFE OR PICK. CAN BE EXCAVATED IN FRAGMENTS FOOM 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 WIT KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES I INCH SOFT OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGERNALL. FRACTURE SPACING VERY WIDE MORE THAN 10 FEET WIDE MORE THAN 0.16 FEET WIDE A 0.008 FEET WIDE MORE THAN 0.16 FEET WIDE MO	RELATIVELY THIN COMPARED WITH ITS LATERAL EXTERT, THAT HAS BEEN EMPLACED PARALLEL TO         THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.         SLICKENSDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT         OR SLIP PLANE.         STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPI) - NUMBER OF BLOWS (N OR BPF) OF         A 140 LB, HAMMER FALLING 30 INCHÉS REQUIRED TO PRODUCE A PENETRATION OF I FOOT INTO SOIL         WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL         TO R LESS THAN 0.1 FOOT PER 60 BLOWS.         STRATA CORE RECOVERY (SRECL) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY         TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.         STRATA CORE NECOVERY (SRECL) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY         TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.         STRATA CORE NOT STRATA AND EXPRESSED AS A PERCENTAGE.         INFLATE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.         INFLATE OF DOCK SECONATION (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL         LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.         IMPODIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.         BENCH MARK: N/A         LELEVATION: FEET         NOTES:         BORING ELEVATIONS OBTAINED FROM TRIMBLE RIZ CNSS RECEIVER         CERTIFIED WITH FCC PART I5 (CLASS B DEVICE), 24, 32; RCM; PTCRB;			
OPENING         (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR,)         COBBLE (COB,)         CRAVEL (COB,)         COARSE SAND (CSE, SD,)         FINE SAND (F SD,)         SILT (SL.)         CLA (CL.)           GRAIN SIZE         NM         305         75         2.0         0.25         0.05         0.005           SOIL         MOISTURE         CORRELATION OF TERMS         SOUDE FOR FIELD MOISTURE DESCRIPTION DESCRIPTION         GUIDE FOR FIELD MOISTURE DESCRIPT         GUIDE FOR FIELD MOISTURE DESCRIPTION           CLL PLASTIC         LIOUID LIMIT PLASTIC         - SATURATED - (SAT.)         USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TAB DESCRIPTION         SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE           (PI) PLASTIC         OPTIMUM MOISTURE SL         - WET - (W)         SEMISOLID; AT OR NEAR OPTIMUM MOISTURE - WET - (W)         SOLID; AT OR NEAR OPTIMUM MOISTURE           SUL         OPTIMUM MOISTURE SL         SHRINKAGE LIMIT         - MOIST - (M)         SOLID; AT OR NEAR OPTIMUM MOISTURE           VERY - (D)         REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE         - DRY - (D)         REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE           NON PLASTIC         0-5         VERY LOW SLIGHTLY PLASTIC         6-15         SLIGHT VERY LOW SLIGHTLY PLASTIC         0-5	UNDERCUT       UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE       UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE SHALLOW         UNDERCUT       UNCLASSIFIED EXCAVATION - ACCEPTABLE DECRADABLE ROCK       UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO B SFEET OF EMBANKMENT OR BACKFILL         AR - AUGER REFUSAL       MED MEDIUM       VST - VANE SHEAR TEST         BT - BORING TERMINATED       MICA MICACEOUS       VST - VANE SHEAR TEST         CL CLAY       MOD MODERATELY       VST - VANE SHEAR TEST         DT - DILATOMETER TEST       PM - NON PLASTIC       0F, - ORGANIC         DT - DILATOMETER TEST       PM - PRESSUREMETER TEST       SAMPLE ABBREVIATIONS         VANE SHEAR TOST       SL - SILT, SILTY       ST - SHELBY TUBE         FOSS, - FOSSILIFEROUS       SL - SILT, SILTY       ST - SHELBY TUBE         FRAC, - FRACTURED, FRACTURES       CR - TRICONE REFUSAL       RT - RECOMPACTED TRIAXIAL         FRAC, - FRACHURED, FRACTURES       W - MOISTURE CONTENT       RT - RECOMPACTED TRIAXIAL         HI HIGHLY       V - VERY       RATIO       CBR - CALIFORNIA BEARING         WILL - SIGNA       G* ONLINUOUS FLIGHT AUGER       MAUTOMATIC       MANUAL         CME-555       B* HOLLOW AUGERS       G* CONTINUOUS FLIGHT AUGER       -N       -N       -N         WANE SHEAR TEST       HARD FACED FINGER BITS <td< td=""><td>SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK. HARD CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN. MODERATELY CAN BE SCRATCHED BY KNIFE OR PICK, COUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE HARD EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS. MEDIUM CAN BE GROVED OR GOUGED 0.405 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD CAN BE GROVED OR GOUGED 0.405 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD CAN BE EXCAVATED IN SMALL CHIPS TO PEICES 1 INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK. 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. 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 FINGERNALL. FRACTURE SPACING VERY WIDE MORE ITHAN 10 FEET WIDE 3 TO 10 FEET WIDE 3 TO 10 FEET WIDE MORE THAN 10 FEET WIDE 3 TO 10 FEET WIDE MORE THAN 10 FEET WIDE 0.0.6 TIG 5 THE VERY THICKLY BEDDED 0.0.6 - 1.5 FEET WIDE 0.0.6 TIG 5 THO TY VERY CLOSE LESS THAN 0.16 FEET THICKLY LAMINATED 0.0008 FEET THICKLY LAMINATED 0.0008 FEET THICKLY LAMINATED 0.0008 FEET THINLY LAMINATE</td><td>RELATIVELY THIN COMPARED WITH ITS LATERAL EXTERT, THAT HAS BEEN EMPLACED PARALLEL TO         THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.         SLICKENSDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT         OR SLIP PLANE.         STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPI) - NUMBER OF BLOWS (N OR BPF) OF         A 140 LB, HAMMER FALLING 30 INCHÉS REQUIRED TO PRODUCE A PENETRATION OF I FOOT INTO SOIL         WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL         TO R LESS THAN 0.1 FOOT PER 60 BLOWS.         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OPENING         (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR,)         COBBLE (COB,)         CRAVEL (COB,)         COARSE SAND (CSE, SD,)         FINE SAND (F SD,)         SILT (SL,)         CLA (CL,)           GRAIN SIZE         NM         305         75         2.0         0.25         0.05         0.005           SOIL         MOISTURE SCALE (ATTERBERG LIMITS)         FIELD MOISTURE DESCRIPTION         GUIDE FOR FIELD MOISTURE DESCRIPT OUDE FOR FIELD MOISTURE DESCRIPTION         GUIDE FOR FIELD MOISTURE DESCRIPT (ATTERBERG LIMITS)           PLASTIC (PI) (PL         LIOUID LIMIT PLASTIC LIMIT         - SATURATED - (SAT,)         USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TAB ATTAIN OPTIMUM MOISTURE           (PI) PL         OPTIMUM MOISTURE SL         SHRINKAGE LIMIT         - WET - (W)         SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE           SL         SHRINKAGE LIMIT         - MOIST - (M)         SOLID; AT OR NEAR OPTIMUM MOISTURE           SL         SHRINKAGE LIMIT         - MOIST - (M)         SOLID; AT OR NEAR OPTIMUM MOISTURE           VERY - (D)         REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE         - DRY - (D)         REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE           NON PLASTIC         0-5         VERY LOW SLIGHTLY PLASTIC         6-15	UNDERCUT       UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE       UNCLASSIFIED EXCAVATION - ACCEPTABLE DECRADABLE ROCK       ACCESTABLE BUT NOT TO BE ACCEPTABLE DECRADABLE ROCK         AR - AUGER REFUSAL       UNCLASSIFIED EXCAVATION - ACCEPTABLE DECRADABLE ROCK       USED IN THE TOP 3 FEEL OF EMBANKMENT OR BACKFILL         AR - AUGER REFUSAL       MED MEDIUM       VST - VANE SHEAR TEST         BT - BORING TERMINATED       MICA MICACEOUS       VST - VANE SHEAR TEST         CL CLAY       MDD MODERATELY       VST - VANE SHEAR TEST         CDT - CONE PENETRATION TEST       NP - NON PLASTIC       VST - VANE SHEAR TEST         DT - DYLANKC PENETRATION TEST       NP - NON PLASTIC       VST - VANE SHEAR TEST         DT - DYLANKC PENETRATION TEST       SAP SAPROLITIC       S - BULK         V OLID RATIO       SL - SILT, SILTY       ST - SHELBY TUBE         FRAC FRACTURED, FRACTURES       SL - SILT, SILTY       ST - SHELBY TUBE         FRAC FRACTURED, FRACTURES       W - MOISTURE CONTENT       RS - ROCK         HIL - HIGHLY       V - VERY       RATIO         CME-55       X B' HOLLOW AUGERS       AUTOMATIC         MARD FACED FINGER BITS       HARD FACED FINGER BITS       -N         WANE SHEAR TEST       CASING       W ADVANCER       -N         WANE SHEAR TEST       CASING       W ADVANCER<	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK. 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FRACTURE SPACING TERM THICKLY BEDDED 4 FEET WIDE MORE THAN 10 FEET WIDE MORE ALLY CLOSE LESS THAN 0.16 FEET WIDE MORE ALEY AND ALLY ALMINATED CON 0.0000 FEET WIDE	RELATIVELY THIN COMPARED WITH ITS LATERAL EXTERT, THAT HAS BEEN EMPLACED PARALLEL TO         THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.         SLICKENSDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT         OR SLIP PLANE.         STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPI) - NUMBER OF BLOWS (N OR BPF) OF         A 140 LB, HAMMER FALLING 30 INCHÉS REQUIRED TO PRODUCE A PENETRATION OF I FOOT INTO SOIL         WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL         TO R LESS THAN 0.1 FOOT PER 60 BLOWS.         STRATA CORE RECOVERY (SRECL) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY         TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.         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OPENING         (MM)         4.76         2.00         0.42         0.25         0.075         0.053           BOULDER (BLDR,)         COBBLE (COB,)         CRAVEL (COB,)         COARSE SAND (CSE, SD,)         FINE SAND (F SD,)         SILT (SL.)         CLA (CL.)           GRAIN SIZE         NM         305         75         2.0         0.25         0.05         0.005           SOIL         MOISTURE         CORRELATION OF TERMS         SOUDE FOR FIELD MOISTURE DESCRIPTION DESCRIPTION         GUIDE FOR FIELD MOISTURE DESCRIPT         GUIDE FOR FIELD MOISTURE DESCRIPTION           CLL PLASTIC         LIOUID LIMIT PLASTIC         - SATURATED - (SAT.)         USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TAB DESCRIPTION         SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE           (PI) PLASTIC         OPTIMUM MOISTURE SL         - WET - (W)         SEMISOLID; AT OR NEAR OPTIMUM MOISTURE - WET - (W)         SOLID; AT OR NEAR OPTIMUM MOISTURE           SUL         OPTIMUM MOISTURE SL         SHRINKAGE LIMIT         - MOIST - (M)         SOLID; AT OR NEAR OPTIMUM MOISTURE           VERY - (D)         REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE         - DRY - (D)         REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE           NON PLASTIC         0-5         VERY LOW         SLIGHT VERY LOW         SLIGHT VERY LOW         SLIGHT VERY LOW <t< td=""><td>WIDERCUT       UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE       UNCLASSIFIED EXCAVATION - ACCEPTABLE DECRADABLE ROCK       ACCENTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL         AR - AUGER REFUSAL       MED MEDIUM       VST - VANE SHEAR TEST         BT - BORING TERMINATED       MICA MICACECOUS       VST - VANE SHEAR TEST         CL CLAY       MOD MODERATELY       VST - VANE SHEAR TEST         CT - CONE PENETRATION TEST       NP - NON PLASTIC       % - UNIT WEIGHT         DTT - DILATOMETER TEST       PMT - PRESSUREMETER TEST       SAMPLE ABBREVIATIONS         N       SL - SAILS       SL - SLICHTLY       S - BULK         e - VOID RATIO       SL - SLICHTLY       S - BULK       S - BULK         FACS FRACTURED, FRACTURES       SL - SLICHTLY       S - SHIT SPOON       S - SHIT SPOON         FACS FRACTURED, FRACTURES       SL - SLICHTLY       R - RECOMPACTED TRIAXIAL         FRACS FRACTURED, FRACTURES       SL - SLICHTLY       RS - ROCK         RT - MICHTY       V - VERY       RATIO       CBR - CALIFORNIA BEARING         HIL - HIGHLY       V - VERY       RATIO       CBR - CALIFORNIA BEARING         FRACS FRACHMETS       Ø' HOLLOW AUGERS       HAMD FACED FINGER BITS       MANUALIC         CME-550X       G' HADLOW AUGERS      9H -       -</td><td>SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.         HARD       CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY, HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.         MODERATELY       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.         MEDIUM       CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD         CAN BE GROOVED OR GOUGED READLY BY KNIFE OR PICK, CAN BE EXCAVATED IN FRAGMENTS FOINT OF A GEOLOGIST'S PICK.         SOFT       CAN BE GROVED OR GOUGED READLY 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.         VERY       CAN BE CARVED WITH KNIFE, CAN BE EXCAVATED READLY WITH POINT OF PICK, PIECES I INCH SOFT         VERY       CAN BE CARVED WITH KNIFE, CAN BE EXCAVATED READLY WITH POINT OF PICK, PIECES I INCH SOFT         VERY       CAN BE GROKEN BY FINGER PRESSURE.         VERY       MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READLY BY FINGERNALL.         VERY WIDE       MORE THAN 10 FEET WIDE       YERY THICKLY BEDDED       1.5 - 4 FEET         WIDE       3 TO 10 FEET WIDE       YERY THINLY BEDDED       0.60 - 1.5 FEET         VERY VLOSE       LESS THAN 0.16 FEET       THINLY LAMINATED       0.008 FEET         VERY CLOSE       0.16 TO 1 FOOT       <td< td=""><td>RELATIVELY THIN COMPARED WITH ITS LATERAL EXTERT, THAT HAS BEEN EMPLACED PARALLEL TO         THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.         SLICKENSDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT         OR SLIP PLANE.         STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPI) - NUMBER OF BLOWS (N OR BPF) OF         A 140 LB, HAMMER FALLING 30 INCHÉS REQUIRED TO PRODUCE A PENETRATION OF I FOOT INTO SOIL         WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL         TO R LESS THAN 0.1 FOOT PER 60 BLOWS.         STRATA CORE RECOVERY (SRECL) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY         TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.         STRATA CORE RECOVERY (SRECL) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY         TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.         STRATA CORE NOT STRATA AND EXPRESSED AS A PERCENTAGE.         INFLATE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.         INFLATE OF DOCK SECONATION (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL         ENCH MORK IN / A         BENCH MARK: N/A         ELEVATION: FEET         NOTES:         BORING ELEVATIONS OBTAINED FROM TRIMBLE RIZ CNSS RECEIVER         CERTIFIED WITH FCC PART IS (CLASS B DEVICE), 24, 32; RCM; PTCRB;</td></td<></td></t<>	WIDERCUT       UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE       UNCLASSIFIED EXCAVATION - ACCEPTABLE DECRADABLE ROCK       ACCENTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL         AR - AUGER REFUSAL       MED MEDIUM       VST - VANE SHEAR TEST         BT - BORING TERMINATED       MICA MICACECOUS       VST - VANE SHEAR TEST         CL CLAY       MOD MODERATELY       VST - VANE SHEAR TEST         CT - CONE PENETRATION TEST       NP - NON PLASTIC       % - UNIT WEIGHT         DTT - DILATOMETER TEST       PMT - PRESSUREMETER TEST       SAMPLE ABBREVIATIONS         N       SL - SAILS       SL - SLICHTLY       S - BULK         e - VOID RATIO       SL - SLICHTLY       S - BULK       S - BULK         FACS FRACTURED, FRACTURES       SL - SLICHTLY       S - SHIT SPOON       S - SHIT SPOON         FACS FRACTURED, FRACTURES       SL - SLICHTLY       R - RECOMPACTED TRIAXIAL         FRACS FRACTURED, FRACTURES       SL - SLICHTLY       RS - ROCK         RT - MICHTY       V - VERY       RATIO       CBR - CALIFORNIA BEARING         HIL - HIGHLY       V - VERY       RATIO       CBR - CALIFORNIA BEARING         FRACS FRACHMETS       Ø' HOLLOW AUGERS       HAMD FACED FINGER BITS       MANUALIC         CME-550X       G' HADLOW AUGERS      9H -       -	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.         HARD       CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY, HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.         MODERATELY       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.         MEDIUM       CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD         CAN BE GROOVED OR GOUGED READLY BY KNIFE OR PICK, CAN BE EXCAVATED IN FRAGMENTS FOINT OF A GEOLOGIST'S PICK.         SOFT       CAN BE GROVED OR GOUGED READLY 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.         VERY       CAN BE CARVED WITH KNIFE, CAN BE EXCAVATED READLY WITH POINT OF PICK, PIECES I INCH SOFT         VERY       CAN BE CARVED WITH KNIFE, CAN BE EXCAVATED READLY WITH POINT OF PICK, PIECES I INCH SOFT         VERY       CAN BE GROKEN BY FINGER PRESSURE.         VERY       MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READLY BY FINGERNALL.         VERY WIDE       MORE THAN 10 FEET WIDE       YERY THICKLY BEDDED       1.5 - 4 FEET         WIDE       3 TO 10 FEET WIDE       YERY THINLY BEDDED       0.60 - 1.5 FEET         VERY VLOSE       LESS THAN 0.16 FEET       THINLY LAMINATED       0.008 FEET         VERY CLOSE       0.16 TO 1 FOOT <td< td=""><td>RELATIVELY THIN COMPARED WITH ITS LATERAL EXTERT, THAT HAS BEEN EMPLACED PARALLEL TO         THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.         SLICKENSDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT         OR SLIP PLANE.         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#### SHEET NO.

## PROJECT REFERENCE NO. B-3186/B-5898





50	100	PROJECT	REFERENCE NO	D. SHEET NO.
FEET		В-:	3186/B-5898	4
VE = 1:5			-RW1- PROFIL	LE
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				2,610
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= 47.5′ LT				
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			, , , , , , , , , , , , , , , , , , ,	
			1 1 1 1 1 1 1 1 1 1	
				2,580
BANKMENT:	Loose gray,G	RAVEL	and SAND	
	(A-1-L	D, A−2−4	1)	
BANKMENT:				2 5 7 0
L	CLAY G	ind clay	and black, ey SILT i trace fine	2,570
	A+5, A Sand	–7) witt	itrace fine	
		<b>C</b> •		
ry loose to loc ty SAND and	se,gro SAND	19,11ne 1 (A-2-	o coarse 4,A-3).	2,560
ćaceous				
ry soft to soft ndy SILTS (A	t, ġray,	<u>s</u> andy C	LAY and	
ndy:SILIS (A od :fragments	-4, A-	( ), MICaC	ceous,trace	
	1 1	n brown	and orango	2,550
ery stiff to h andy CLAY and	d isana	dy SILT	(A-4, A-7),	
nicarceous, sapr ragiments	olitic,i	trace ro	ck	
				C
ROCK: Brow	n, or an	iye and	while, GNEIS	<sup>&gt;</sup> 2,540
			·	
			1	

# GEOTECHNICAL BORING REPORT BORE LOG

									1	ORE				,																
WBS	38332	2.1.FS1			T	<b>TIP</b> B-31	86 / I	B-5898	COUNT	Y HAYWO	DOD			GE	ologi	ST C. Swa	fford					2.1.FS1						B-5898	COUN	
				23/ US	6 74 (G	Great Smo	oky M	lountain l	Highway)	1								-	ID WTR (ft)									Mountain I	Highway	·
BOR	NG NO.	S2_E	B1-B			STATION				OFFSET	44 ft R	Г		ALI	GNME	NT -Y1RT		0 HR.	22.0	BOR	ing no	). S2_E	EB1-A			STATIC	<b>DN</b> 26	+29		C
	LAR EL					OTAL D			ť	NORTHIN						819,251		24 HR.	FIAD			<b>.EV.</b> 2						<b>H</b> 34.5 f		N
DRILL	. RIG/HAN	/IMER EF	-F./DAT	TE GT	C3277	CME-7583	3%(09	9/15/2020)		1	DRILL	METH	OD	Mud Rota	У		HAMM	ERTYPE	Automatic	DRIL	_ RIG/HA	MMER E	FF./DAT	TE GT	C9083	CME-55	.0X 80%	6(11/24/202	20)	
	LER K					START D				COMP. D			1	SU	RFACE	WATER D	EPTH N//	Ą		DRIL		Wans	1			START	DATE	02/25/2		C
ELEV (ft)	DRIVE ELEV	DEPT⊦ (ft)	<u>ال</u>	OW CC			25		PER FOO 50	T 7 <u>5</u> 10	ISAMI	17				SOIL AND F	OCK DES	CRIPTION		ELEV (ft)	DRIVE ELEV (ft)	DEPTI	·	OW CC			2		PER FOC	от 7 <u>5</u>
. ,	(ft)		0.01	0.010	0.01			-				_/м		G ELEV	. (ft)				DEPTH (ft)	. ,	(11)		0.01	0.010	0.01			<u> </u>	<u> </u>	
2605																				2585										
2005		ŧ												F						2000	2,584.6	<del>5 0.0</del>	5	7	4	<u> </u>	11	· · · ·		
		ŧ												F							2,582.1	1 2.5	3	4	4	-  :	<b>7</b> 4 4 1	· · · · ·		.
2600	2,599.4	+ + 1.0										-		- 2,600 - 2,599		ROADWA	IND SURF	KMENT	0.0	2580	2,579.6	+ 5.0				_   -`¶	18 · · ·	· · · ·	· · ·	·
		Ŧ	11	20	16							M		2,596	<u> </u>		PAVEMEN		] <u>3.5</u>		2,577.2	† 1 7.5	6	5	6		<b>9</b> 11			-
2595	2,596.5	÷	6	4	4					·   · · · · ·		м				Dense, bro dium stiff, ora				2575	,	Ŧ	3	3	3	<b> </b>   •	3			-
	2,594.6	<u> </u>	6	3	3	6						м			Wet	clayey SILT	(A-5), with t	trace sand			- 2,574.8	<del>}+</del> 10.0 T	3	2	2	-   <del> </del> 4				
	2,591.5	8.9	4	3	4																	Ŧ								-
2590	-	ŧ			-					• • • • • •		M								2570	2,569.6	<del>)  </del> 15.0	1	WOF	1 1	-  <u> -</u>	<u> </u>	 	<u> </u>	
	2,586.5	-				:::		· · · · ·														ŧ					· · ·			:
2585		-	3	2	3	5						м								2565	2.564.6	+ 3+ 20.0					· · ·	· · · ·	· · ·	·
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2580	2,581.5	+ 18.9 +	3	3	4			· · · · ·		·   · · · · ·		м								2560		‡				÷	÷;	· · · · ·		:
2000		ŧ												2,578	.4				22.0		2,559.6	<del>}+</del> 25.0 +	4	7	11	-11	••••••• ••••			
	2,576.5	23.9						· · · · ·		.			000000	00	V	ery loose to lo	LLUVIAL ose, gray,	SAND (A-				ŧ					· - [-			-
2575		Ŧ	4	4	5	9				· · · · · ·		W	000000000000000000000000000000000000000			r	nicaceous			2555	2,554.6	30.0	90	10/0.1	-					
		<b>†</b>								·   · · · · ·			000000	00								Ŧ	90	10/0.	'			· · · · ·		-
2570	2,571.5	<u>T 28.9</u> I	3	3	1							w	000000000000000000000000000000000000000								2,550.1	T 1 34.5								
		Ī											000	2,568	.4	to medium st			32.0			Ŧ	60/0.0	0						
	2,566.5	33.9		3	3	-  !::						l w			cont	tains trace wo	od fragmer ganic odor	nts, micace	eous,			ŧ								
2565	-	ŧ				<b>9</b> 6						1				UI UI	yanic odor					‡								
	2,561.5	+ 38.9						· · · · ·		.   .				-								‡								
2560	_	ŧ	WOH	1 1	2	<b>4</b> 3			· · · ·		SS-30	09 43%	6									‡								
		ŧ								 				2,558	.4				<u> </u>			‡								
2555	2,556.5	+ 43.9 	18	27	33	-  :::			- <b> </b> - ●60			w		3	Ha con	ard, tan and b tains trace ro	ck fragmen	y CLAY (A ts, micace	-7), eous,			ŧ								
		Ŧ															saprolitic					Ŧ								
	2,551.5	48.9	32	68/0.3	3				· · ·	<u>.  </u>			34	2,551	.5		HERED RO	<u>ск</u>	<u>48.9</u>			ŧ								
2550	-	ŧ		00/010						100/0	8					Brown, G	NEISS, mic	aceous				+								
	2,546.5	- 53.9						· · · · ·	· · · ·	.   .												‡								
2545		+	86	14/0.0	ס					100/0	5											‡								
		ŧ						· · · · ·		.												‡								
2540	2,541.5	<u>+ 58.9</u> +	79	21/0.0	ס					100/0	5			2,540	0				60.4			ŧ								
2010		Ŧ									-			-		ng Terminate Weather	d at Elevati d Rock (G	ion 2,540.0 NEISS)				Ŧ								
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#### SHEET 5

HAYWOOD			GEOLOGIST C. Swaffor	ď		
					GROUN	D WTR (ft)
OFFSET 5 ft I	LT		ALIGNMENT -Y1RT-		0 HR.	13.0
NORTHING 6	66,917		EASTING 819,274		24 HR.	FIAD
DR	ILL METHOD	H.S.	Augers	HAMME	R TYPE	Automatic
COMP. DATE	02/25/21		SURFACE WATER DEPT	H N/A		
SA	AMP.	L O				
75 100 N	NO. MOI	G	SOIL AND ROC	K DESC	RIPTION	
			.2,584.6 GROUND	SURFA	CE	0.0
· · · ·	М		2,583.6 ROADWAY E	MBANK	MENT	1.0
	м			gravel		
<u> </u>			2,580.1 Soft, brown and o Loose to medium de	ense gr	LAY (A-7	<u>) 4.5</u>
	M			·2-4)		
	Sat.					
· · · ·   ss	6-513 51%			JVIAL		<u> </u>
		л <sup>V</sup>	Soft, gray, SILT (A			13.0
			Very loose, gray, f	silty SAI	ND (A-2-4	-),
	W 28%					
		<u>-</u>	2,566.6 Soft, gray, f sandy S	ILT (A-4	), micace	ous <u>18.0</u>
	W					
			2,561.6			23.0
· · · ·		Æ	RESI	DUAL orange	f sandy S	
	w	Į.	(A-4), micace	eous, sa	orolitic	
		Ø.				
			2,554.6		ск	<u> </u>
100/0.6			Brown, orange, a			3
60/0.0			2,550.1		<u>.</u>	34.5
00/0.0		E	Boring Terminat Penetration Test F	Refusal a	at Elevatio	n
		E	2,550.1 ft on Crysta	Illine Ro	ck (GNEIS	6S)
		F	. <u>Other Samples:</u> ST-4 (15.0 - 17.0)			
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