CONTENTS

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REFERENCE

| <u>SHEET NO.</u> | DESCRIPTION |
|------------------|----------------------|
| I. | TITLE SHEET |
| 2 | LEGEND (SOIL & ROCK) |
| 3 | SITE PLAN |
| 4 | PROFILE(S) |
| 5-6 | CROSS SECTION(S) |
| 7-8 | BORE LOG(S) |
| 9 | SITE PHOTOGRAPH(S) |

STATE OF NORTH CAROLINA

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

STRUCTURE SUBSURFACE INVESTIGATION

COUNTY STANLY

SITE DESCRIPTION BRIDGE NO. 160 ON SAM ROAD (SR 1253) OVER RAMSEY BRANCH

| STATE | STATE PROJECT REPERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-------|-----------------------------|--------------|-----------------|
| N.C. | B-5800 | 1 | 9 |

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOLT TEST DATA AVAILABLE MAY BE REVEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N.C. DEPARTMENT OF TRANSFORTATION, GEOTECHNICAL ENGINEERING UNIT AT 1999 1707-6800. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN STIU UNI-FLACE)TEST DATA CAN BE RELIED ON ONLY TO THE DECREE OF RELIABILITY INHERENT IN THE STANDARD TEST WETHOD. THE OBSERVED WATER LEVELS OR SOLI MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOLI MOISTURE CONDITIONS MAY YARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE BUBSURFACE 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 WARRANT OR GUARANTE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION WADE, NOR THE INTERPRETATIONS MADE, OR OPNION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONSTRUCTION STO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISY HIMSELF AS TO CONDITIONS TO BE ENCOUNTERED ON THE PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTION FOR MATERIAL COMPENSATION, OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTION FOR MATERIAL COMPENSATION, THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION,

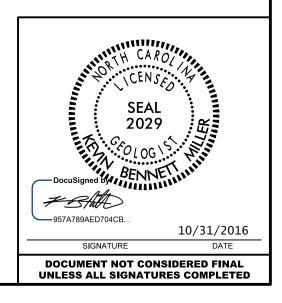
- NOTES: I. THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N.C. DEPARTMENT OF TRANSPORTATION AS ACCURATE NOR IS IT CONSIDERED PART OF THE PLANS, SPECIFICATIONS OR CONTRACT FOR THE PROJECT. BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR SPECIFICALLY WAVES ANY CLAIMS FOR INCREASED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

PERSONNEL

| C.L. | SMITH |
|------|--------------|
| | |

M.R. MOORE

| INVESTIGATED BY STICKN | EY |
|---------------------------------|-----|
| DRAWN BY WALKER | |
| CHECKED BY | JEB |
| SUBMITTED BY <u>K.B. MILLER</u> | |
| DATE OCTOBER 2016 | |



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

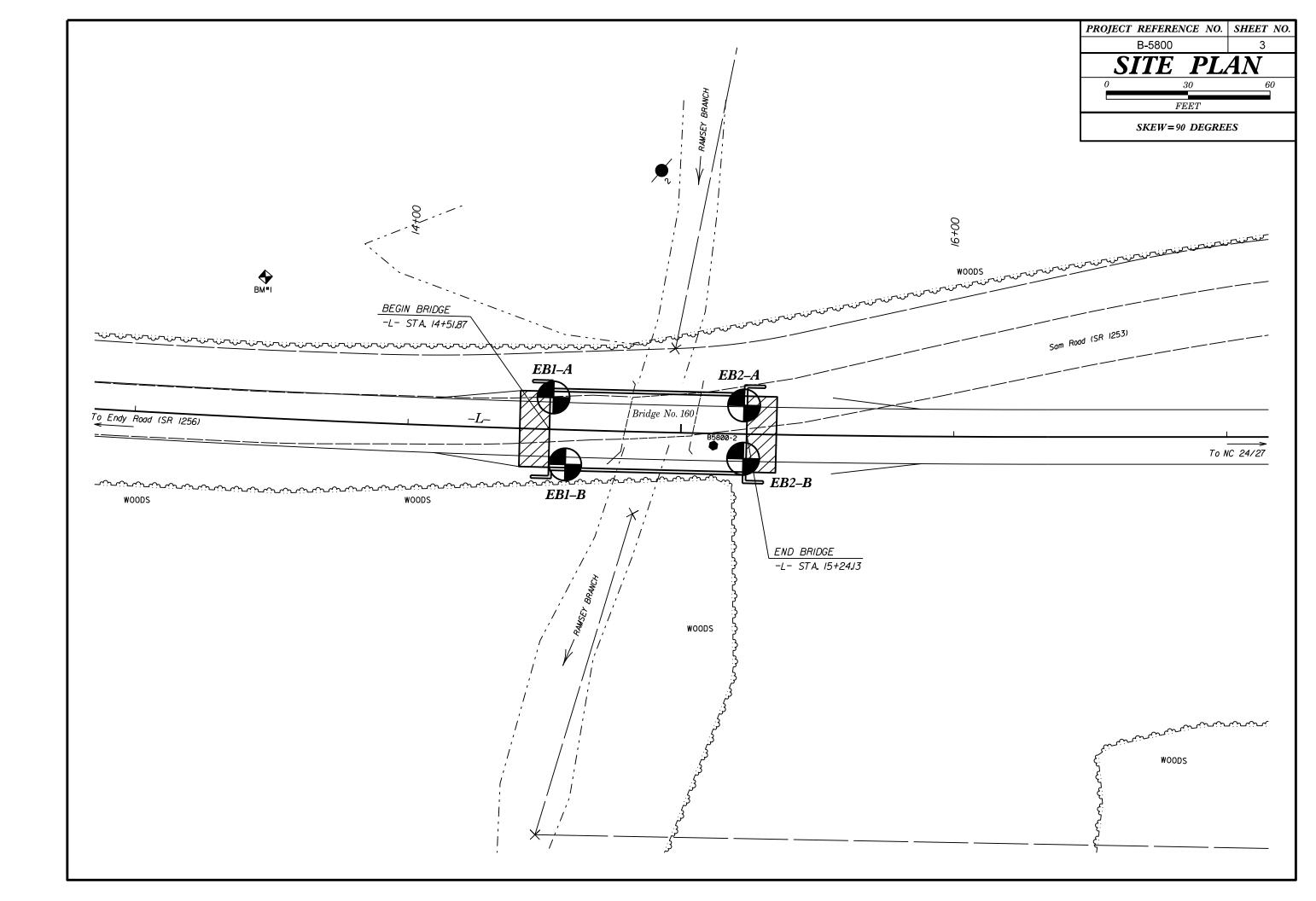
SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

| | | | SOIL | DESCRIP | TION | | | | | | GF | RADATION | | | | | | ROCI | | CRIPTION | | |
|-----------------------|---|-----------------------------|-----------------------------|-------------------------|-----------------------------|--------------------------|------------------------------|------------------|--|---------|--------------------------------|------------------------------|-------------|---|--|------------|-----------------------|-------------------------|-----------|---|-----------|--|
| | | UNCONSOLID | TED, SEMI-CO | ISOL IDATED. | OR WEATHER | | | | | | GOOD REPRESE | INTATION OF PARTIC | | S FROM FINE TO COARSE. | | | | n Material | THAT WO | uld yield spt refusal | | |
| BE PENE ACCOR | etrated with Ding to the | h a continuo Standard Pe | US FLIGHT PO NETRATION T | WER AUGER ST (AASHTO | AND YIELD L T 206. ASTI | .ess than 1 D1586), 9 | 100 BLOWS P SOIL CLASSIFI | ER FOOT | | | | | | XIMATELY THE SAME SIZE. | SPT REFUSA | L IS PENET | RATION BY | A SPLIT SP | OON SAM | AL PLAIN MATERIAL WOUL PLER EQUAL TO OR LESS | THAN | |
| IS | BASED ON TH | HE AASHTO S | STEM. BASIC | DESCRIPTION | IS GENERALL | Y INCLUDE | THE FOLLOW | ING: | <u>GAP-GRADED</u> - INDICATE | 5 H M | | | | TWU UK MURE SIZES. | | | | ATERIAL, T | | SITION BETWEEN SOIL AN | ND ROC | |
| CUNSIS | AS MINERALO | GICAL COMPOS | ITION, ANGULA | RITY, STRUC | TURE, PLASTI | CITY, ETC. | FOR EXAMPLE | | | | | SOIL GRAINS IS D | | | | | | DIVIDED AS | | | | |
| | | GRAY, SILTY CLAY | | | | | | | ANGULAR, SUBAN | | | | . 510MH 11 | U DI INE LENNO: | WEATHERED | 1 | MATERIAL THAT WOULD Y | YIELD S | | | | |
| GENERAL | | OIL LEGE | | | ULASSI AY MATERIALS | FILATI | UN | | 1 | M | INERALOG | ICAL COMPOS | TION | | ROCK (WR) | | 1 3 | | | T IF TESTED. | oppute | |
| CLASS. | | STANDLAR MATE | | | PASSING 200 | | ORGANIC MATER | RIALS | MINERAL NAM | MES SU | UCH AS QUART | Z, FELDSPAR, MICA, T | ALC, KAC | LIN, ETC. | CRYSTALLINE ROCK (CR) FINE TO COARSE GRAIN IGNEOUS AND M WOULD YIELD SPT REFUSAL IF TESTED. | | | | | | | |
| GROUP | A-1 | A-3 | A-2 | A-4 A | | | 2 A-4, A-5 | | ARE USED IN | I DESC | | N THEY ARE CONSID | ERED OF | SIGNIFICANCE. | | لا | | GNEISS, GAE | | ST.ETC. AIN METAMORPHIC AND NO | ON-COAS | |
| CLASS. | A-1-a A-1-b | A-2-4 6 | -2-5 A-2-6 A-2 | -7 | A 7 A 7 | A-3 | A-6, A-7 | - | | | | RESSIBILITY | | | NON-CRYSTA ROCK (NCR) | | | SEDIMENTAR | RY ROCK | THAT WOULD YEILD SPT R | REFUSA | |
| SYMBOL | 000000000000000000000000000000000000000 | | | | | | | | | | COMPRESSIBLE Y COMPRESSIBI | LE | LL < | 31 31 - 50 | COASTAL PL | AIN | | | | S PHYLLITE, SLATE, SANDS MENTS CEMENTED INTO R | | |
| % PASSING | | | | | | | SILT- | | HIGHL | | MPRESSIBLE | | LL > | 50 | SEDIMENTAR (CP) | Y ROCK | | SPT REFUS | | TYPE INCLUDES LIMESTON | JNE, SAN | |
| "10 "40 | 50 MX 30 MX 50 MX | 51 MN | | | | GRANUL | CLAY | MUCK, PEAT | | | | GE OF MATER | IAL | | - | | | | VEATHE | RING | | |
| ·200 | | 10 MX 35 MX 3 | 5 MX 35 MX 35 | MX 36 MN 36 | MN 36 MN 36 | | SOILS | | ORGANIC MATERIAL | | GRANULAR SOILS | SILT - CLAY SOILS | Q | THER MATERIAL | FRESH | ROCK FRES | SH, CRYSTAL | S BRIGHT, FE | W JOINTS | MAY SHOW SLIGHT STAININ | ING. ROC | |
| MATERIAL | | | | | | | | | TRACE OF ORGANIC M LITTLE ORGANIC MAT | | 2 - 3% 3 - 5% | 3 - 5% 5 - 12% | TRA LIT | | | HAMMER IF | CRYSTALL | INE. | | | | |
| PASSING #40 | _ | - 48 MX | 1 MN 40 MX 41 | 4N 40 MX 41 | MN 40 MX 41 | | DILS WITH | | MODERATELY ORGANIC | | 5 - 10% | 12 - 20% | SOM | E 20 - 35% | VERY SLIGHT | | | | | DME JOINTS MAY SHOW THIN INE BRIGHTLY. ROCK RINGS | | |
| PI | 6 MX | | 8 MX 11 MN 11 | | | աս հ | ittle or 100erate | HIGHLY | HIGHLY ORGANIC | | > 10% | > 20% | HIG | ILY 35% AND ABOVE | | | STALLINE N | | 1 402 50 | NE BRIGHTEN HOCK HINGS | , 01021 | |
| GROUP INDEX | 0 | 0 0 | 4 MX | 8 MX 12 | MX 16 MX NO | | IOUNTS OF | ORGANIC SOILS | | | GRO | UND WATER | | | SLIGHT | | | | | D DISCOLORATION EXTENDS | | |
| USUAL TYPES | STONE FRAGS. | FINE SIL | TY OR CLAYEY | SILTY | CLAYEY | | ORGANIC MATTER | | ∇_{-} | WAT | ER LEVEL IN | BORE HOLE IMMEDIA | TELY A | TER DRILLING | (SLI.) | | | | | GRANITOID ROCKS SOME O | | |
| of Major Materials | GRAVEL, AND SAND | sand gra | vel and sand | SOILS | SOILS | | | | ▼ | STA | TIC WATER LE | VEL AFTER 24 | IOURS | | MODERATE | | | | | DLORATION AND WEATHERING | | |
| GEN, RATING | | EXCELLENT TO | -000 | | R TO POOR | FAIR T | 0 POOR | UNSUITABLE | | PER | CHED WATER, S | SATURATED ZONE, OR | WATER | BEARING STRATA | (MOD.) | | | | | L AND DISCOLORED, SOME S WS SIGNIFICANT LOSS OF | | |
| as subgrade | | | | | | POOR | | UNSUITABLE | - O-M- | SPR | ING OR SEEP | | | | | WITH FRES | | HIMMEN DEOW | | WS STORFTCHAT LUSS OF | STRENU | |
| | 1 | PI OF A-7-5 SUE | | | | | 30 | | 0.00 | | | | | | MODERATELY | | | | | STAINED. IN GRANITOID ROC | | |
| | | | NSISTEN | | | | | | | | MISLELLA | NEOUS SYMBO | JLS | | SEVERE (MOD. SEV.) | | | | | OLINIZATION. ROCK SHOWS : S PICK. ROCK GIVES "CLUN | | |
| PRIMARY | SOIL TYPE | | INESS OR STENCY | PENETRAT | of Standar(Ion Resister | | ANGE OF UNC MPRESSIVE 9 | STRENGTH | ROADWAY EMB | | | | | | | | | ELD SPT REF | | | | |
| | | | | 0 | -VALUE) | | (TONS/F | 12) | | .SCRIPT | | OF ROCK STRU STRU | CTURES | | SEVERE | | | | | STAINED. ROCK FABRIC CLE GRANITOID ROCKS ALL FEL | | |
| GENER | | | LOOSE OSE | 4 | < 4 TO 10 | | | | SOIL SYMBOL | | | OPTONT TEST BOP | RING (| SLOPE INDICATOR | (SEV.) | | | | | ONG ROCK USUALLY REMAIN | | |
| GRANU MATER | | MEDIU | DENSE | 10 | TO 30 | | N/A | | | ILL (AF | | | | | | | | ELD SPT N V | | | | |
| | OHESIVE) | | NSE DENSE | | 1 TO 50 > 50 | | | | THAN ROADWA | Y EMB | | AUGER BORING | (| TEST | VERY SEVERE | | | | | STAINED. ROCK FABRIC ELE L STATUS, WITH ONLY FRAC | | |
| | | _ | SOF T | | < 2 | | < 0.25 | 5 | - INFERRED SOI | L BOU | NDARY - | - CORE BORING | | SOUNDING ROD | (V SEV.) | REMAINING | . SAPROLIT | e is an exai | APLE OF F | ROCK WEATHERED TO A DEG | GREE TH | |
| GENER | | | OFT 1 STIFF | | TO 4 | | 0.25 TO 0.5 TO | | | | E ^{MW} C |) MONITORING WI | | TEST BORING | | | | | | I. <u>IF TESTED, WOULD YIELD</u> | | |
| MATER | | | IFF | | TO 15 | | 1 TO 2 | | SINENS INFERRED ROL | K LINE | | • | | WITH CORE | COMPLETE | | | | | DISCERNIBLE, OR DISCERNIB BE PRESENT AS DIKES OR S | | |
| COHES | SIVE) | | STIFF | | TO 30 > 30 | | 2 TO > 4 | 4 | ★▼★★★ ALLUVIAL SOI | L BOUI | NDARY 🛆 | PIEZOMETER INSTALLATION | (| - SPT N-VALUE | | also an e | | | | | | |
| | | | EXTURE | | | | | | | | | | RO | СК НА | RDNESS | | | | | | | |
| U.S. STD. S | 15VE 6175 | | 4 10 | 40 | | 00 27 | 2 | | | | | DATION SYMB | | LASSIFIED EXCAVATION - | VERY HARD | | | D BY KNIFE | | PICK. BREAKING OF HAND | SPECIME | |
| OPENING (| | | 4.76 2.00 | - | | 075 0.05 | | | | Δū | NSUITABLE WAS | STE L | اعد العشي | EPTABLE, BUT NOT TO BE D IN THE TOP 3 FEET OF | HARD | | | | | WITH DIFFICULTY. HARD H | HAMMER | |
| BOULD | ER CO | BBLE (| RAVEL | COARSE | | INE | SILT | CLAY | | M E | NCLASSIFIED E CCEPTABLE DEI | SCAVATION - GRADABLE ROCK | | BANKMENT OR BACKFILL | | | h hand spe | | | | | |
| (BLOR | | COB.) | (GR.) | SAND | | AND SD.) | (SL.) | (CL.) | | | | REVIATIONS | | | MODERATELY HARD | | | | | GES OR GROOVES TO 0.25 'S PICK. HAND SPECIMENS (| | |
| GRAIN M | M 305 | 75 | 2.0 | | 0.25 | 0.0 | 5 0.00 | 5 | AR - AUGER REFUSAL | | | MEDIUM | ۷ | ST - VANE SHEAR TEST | | | ATE BLOWS | · | | | | |
| SIZE I | N. 12 | 3 | | | | | | | BT - BORING TERMINATED | J | | - MICACEOUS MODERATELY | | EA WEATHERED Υ-UNIT WEIGHT | MEDIUM HARD | | | | | eep by firm pressure of Ces 1 inch maximum size | | |
| | S | SOIL MOI | STURE - | CORREL | ATION O | F TERN | 1S | | CPT - CONE PENETRATIO | N TEST | | NON PLASTIC | | A- DRY UNIT WEIGHT | пно | | A GEOLOGI | | -5 10 -61 | JES I INCH MAXIMUM SIZE | | |
| | . MOISTURE | | FIELD M DESCR | | GUIDE FO | R FIELD M | IOISTURE DE | SCRIPTION | CSE COARSE DMT - DILATOMETER TES | т | | ORGANIC PRESSUREMETER TI | ST | SAMPLE ABBREVIATIONS | SOFT | | | | | FE OR PICK. CAN BE EXCA | | |
| | | | 1 | | | | | | DPT - DYNAMIC PENETRA | | TEST SAP | SAPROLITIC | 9 | - BULK | | | | EN BY FINGE | | Y MODERATE BLOWS OF A F NE. | PICK PU | |
| | | | - SATUR (SAT | | | | RY WET, USU GROUND WATE | | e - VOID RATIO F - FINE | | | SAND, SANDY SILT, SILTY | | S - SPLIT SPOON T - SHELBY TUBE | VERY | | | | | ATED READILY WITH POINT | | |
| | | LIMIT | | | | | | | FOSS FOSSILIFEROUS | | SL I | SLIGHTLY | F | S - ROCK | SOFT | OR MORE I | | ss can be b | ROKEN BY | FINGER PRESSURE. CAN BE | E SCRAT | |
| PLASTIC RANGE < | | | -WET- | (W) | | | S DRYING TO | כ | FRAC FRACTURED, FRAC FRAGS FRAGMENTS | TURES | · · · | TRICONE REFUSAL | F | T - RECOMPACTED TRIAXIAL BR - CALIFORNIA BEARING | | FRACTUR | | | | BEL | DDING | |
| (PI) PL | | C LIMIT | | | | IPTIMUM M | UISTURE | | HI HIGHLY | | V - VE | | | RATIO | TERM | | | SPACING | | TERM | 201110 | |
| | | | - MOIST | - 00 | COL 10: A1 | | OPTIMUM M | NETURE | EO | UIPM | IENT USED | ON SUBJECT | PRO | JECT | VERY WI | DE | MORE | THAN 10 FEE | T I | VERY THICKLY BEDDED | Ð | |
| | M _ OPTIMU | | - MUISI | - (191) | SUL IU; A | UR NEAR | | DISTURE | DRILL UNITS: | ADV | ANCING TOOLS: | | HAM | IER TYPE: | WIDE MODERAT | ELY CLOSE | | TO 10 FEET TO 3 FEET | | THICKLY BEDDED THINLY BEDDED | | |
| | | | | | PEOUIPES | | IAL WATER T | n | CME-45C | | CLAY BITS | | X | AUTOMATIC MANUAL | CLOSE | | | 5 TO 1 FOOT | | VERY THINLY BEDDED | | |
| 1 | | | - DRY - | (D) | | PTIMUM M | | - | | | 6" CONTINUOU | S FLIGHT AUGER | CORE | SIZE: | VERY CL | USE | LESS | THAN 0.16 FE | c' | THICKLY LAMINATED THINLY LAMINATED | 0. | |
| | | | PI | ASTICIT | Y | | | | CME-55 | X | 8" HOLLOW AU | JGERS | | _ | | | | | INDURA | TION | | |
| | | | | ICITY INDE | | | DRY STREN | GTH | CME-550 | 10 | HARD FACED | FINGER BITS | | | FOR SEDIME | NTARY ROCK | S, INDURAT | ION IS THE | HARDENIN | G OF MATERIAL BY CEME | ENTING, I | |
| | N PLASTIC | | | 0-5 | | | VERY LOW | N | | 1 | TUNGCARBID | E INSERTS | _ | | FRIA | BLE | | | | NGER FREES NUMEROUS G HAMMER DISINTEGRATES | | |
| | IGHTLY PLAS | | | 6-15 16-25 | | | SLIGHT MEDIUM | | VANE SHEAR TEST | ーロ | CASING 🗌 | W/ ADVANCER | HAN | TOOLS: | | | | | | | | |
| | GHLY PLASTI | | | 6 OR MORE | | | HIGH | | PORTABLE HOIST | 11 | | STEEL TEETH | $ \square$ | POST HOLE DIGGER | MODE | RATELY IND | URATED | | | SEPARATED FROM SAMPLE WHEN HIT WITH HAMMER. | . WITH S | |
| | | | | COLOR | | | | | | ΙH | TRICONE | TUNGCARB. | $ \square$ | HAND AUGER SOUNDING ROD | | | | GRAINS | ARE DIFF | ICULT TO SEPARATE WITH | H STEE | |
| DESCRIPT | | INCLUDE COL | | COMPINAT | ONS (TAN D | | | E-CRAY | X <u>CME-550X</u> | エ | CORE BIT | | $ $ | VANE SHEAR TEST | INDU | RATED | | | | EAK WITH HAMMER. | | |
| | | JCH AS LIGH | | | | | | | | 二 | i | | H | | EXTR | EMELY INDU | RATED | | | LOWS REQUIRED TO BREAN | AK SAMP | |
| - | | | | | | | | | | | | | | | | | | JHPIFLE | | | | |

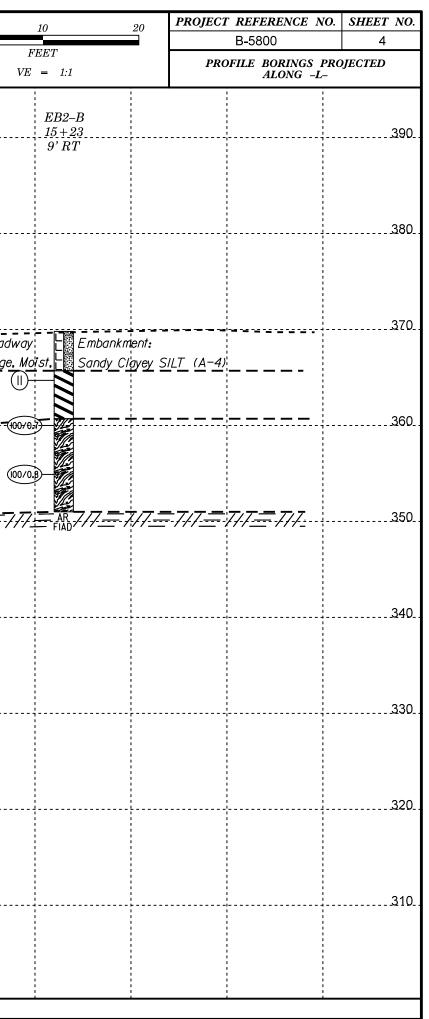


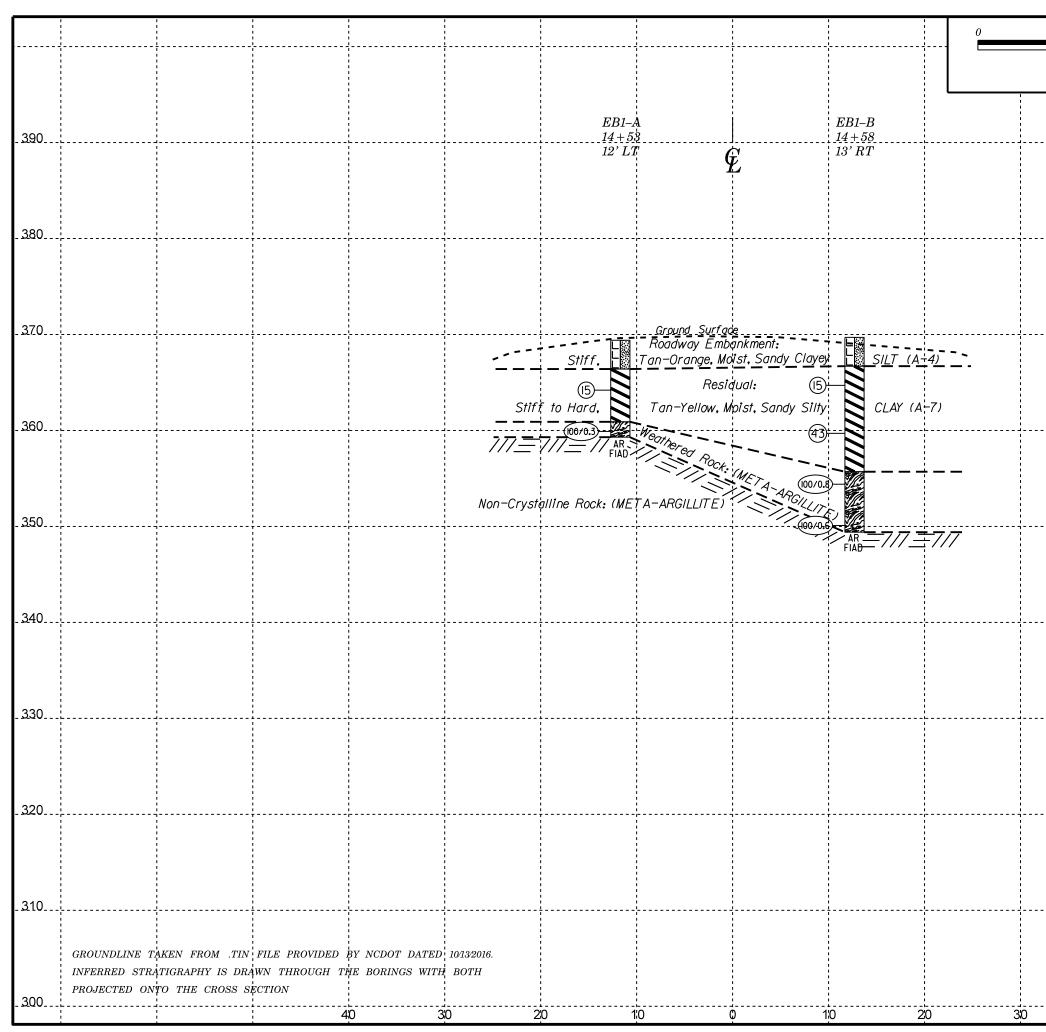
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| | TERMS AND DEFINITIONS |
|--|---|
| STED. AN INFERRED LD SPT REFUSAL. | ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER. |
| 0.1 FOOT PER 60 CK IS OFTEN | AQUIFER - A WATER BEARING FORMATION OR STRATA. |
| | ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND. |
| | ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, SUCH AS SHALE, SLATE, ETC. |
| SPT N VALUES > | ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT |
| ROCK THAT INCLUDES GRANITE. | WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE. |
| STAL PLAIN | CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE. |
| L IF TESTED. ETC. | <u>COLLUVIUM</u> - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE. |
| UT MAY NOT YIELD NDSTONE, CEMENTED | CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE. |
| CK RINGS UNDER | <u>DIKE</u> - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK. |
| | <u>DIP</u> - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL. |
| COATINGS IF OPEN, R HAMMER BLOWS IF | DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH. |
| rock up to DNAL Feldspar | FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE. |
| MER BLOWS. | FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES. |
| CTS. IN CLAY. ROCK HAS | <u>Float</u> - Rock fragments on surface near their original position and dislodged from Parent material, |
| GTH AS COMPARED | FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM, |
| L FELDSPARS DULL LOSS OF STRENGTH | FORMATION (FM.) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD. |
| D WHEN STRUCK. | JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED. |
| | LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO |
|) evident but S are kaolinized | ITS LATERAL EXTENT. |
| S HAE KHOLINIZED | LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS. |
| | MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE. |
| ARE DISCERNIBLE | PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE |
| G OF STRONG ROCK HAT ONLY MINOR | OF AN INTERVENING IMPERVIOUS STRATUM. |
| N VALUES < 100 BPF | RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK. |
| LY IN SMALL AND ERS. SAPROLITE IS | ROCK QUALITY DESIGNATION (ROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE |
| | RUN AND EXPRESSED AS A PERCENTAGE. <u>SAPPOLITE (SAP.)</u> - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK. |
| IENS REQUIRES | SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND |
| BLOWS REQUIRED | THE ATTICLY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. |
| DEEP CAN BE DETACHED | <u>SLICKENSIDE</u> - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE. |
| E OR PICK POINT. RD BLOWS OF THE | STANDARD PENETRATION TEST (PENETRATION RESISTANCE)(SPT) - NUMBER OF BLOWS (N OR BPF)OF A 140 LB. HAMMER FALLING 30 INCHES REDURED 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. |
| IN FRAGMENTS DINT. SMALL. THIN | STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. |
| CK. PIECES 1 INCH | <u>STRATA ROCK DUALITY DESIGNATION (SROD)</u> - A MEASURE OF ROCK DUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEDMENTS WITHIN A STRATUM EDUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE. |
| TCHED READILY BY | TOPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER. |
| 5 | BENCH MARK: BM "I-RR SPIKE SET IN BASE OF 30" POPLAR TREE |
| THICKNESS 4 FEET | (N: 561036, E: 1611674) -L- STATION 11+82.00, 46' LEFT ELEVATION: 372.91 FEET |
| 1.5 - 4 FEET | |
| 0.16 - 1.5 FEET 0.03 - 0.16 FEET | NOTES: |
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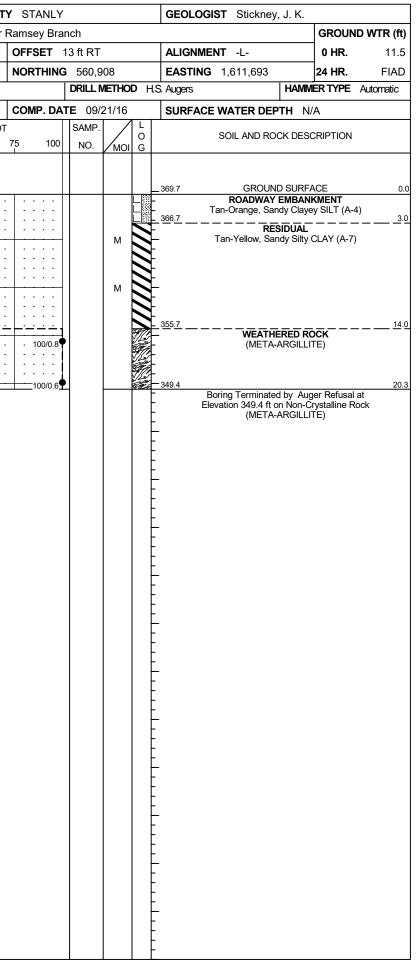
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SITE PHOTOGRAPHS



Photograph : At End Bent 1 looking towards End Bent 2

SHEET 9