

| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-------|-----------------------------|-----------|--------------|
| N.C. | BP5.R131 | 1 | 11 |

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY VANCE
 PROJECT DESCRIPTION REPLACE BRIDGE NO. 15 OVER
LITTLE RUIN CREEK ON HORSESHOE BEND
ROAD (SR 1125)

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CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL 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 WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO PERFORM INDEPENDENT SUBSURFACE INVESTIGATIONS AND MAKE INTERPRETATIONS AS NECESSARY TO CONFIRM CONDITIONS ENCOUNTERED ON THE PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

NOTES:

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

PERSONNEL

TRIGON EXP

INVESTIGATED BY LANE, R. W.

DRAWN BY HUNSBERGER, W. S.

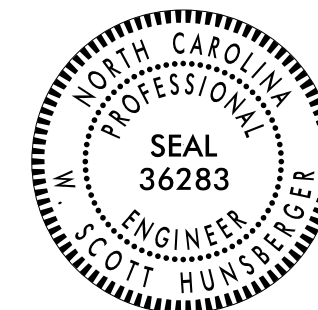
CHECKED BY HUNSBERGER, W. S.

SUBMITTED BY FALCON ENG.

DATE JANUARY 2023

REFERENCE:

PROJECT: BP5.R131



DocuSigned by:
W. Scott Hunsberger 1/27/2023
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**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

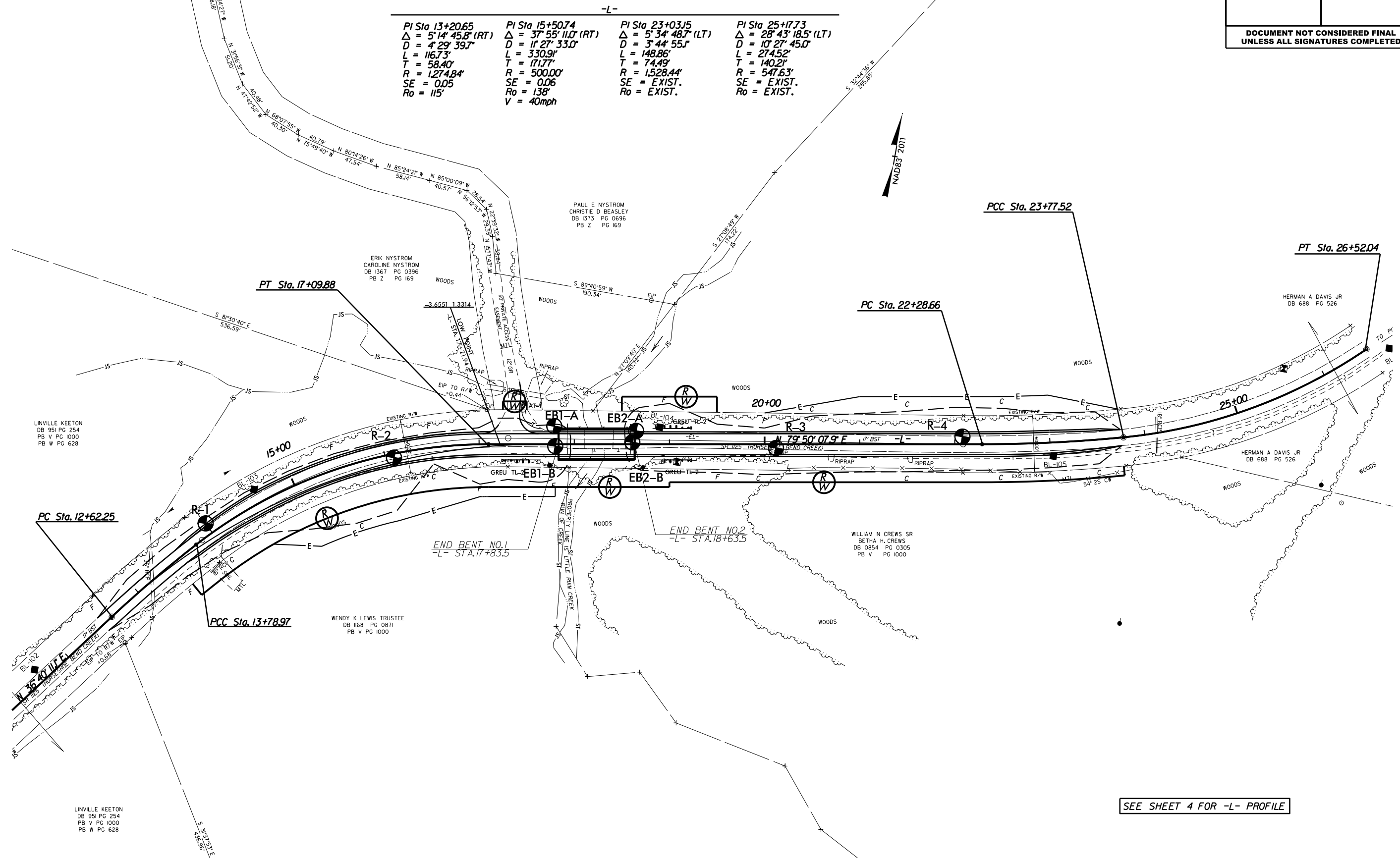
| SOIL DESCRIPTION | GRADATION | ROCK DESCRIPTION | TERMS AND DEFINITIONS |
|--|--|---|--|
| SOIL IS CONSIDERED UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS LIGHT POWER AUGER AND YIELD LESS THAN 100 BLOWS PER FOOT ACCORDING TO THE STANDARD PENETRATION TEST (AASHTO T 206, ASTM D1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY INCLUDE THE FOLLOWING: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH 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 | WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE. UNIFORMLY GRADED - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE. GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLE SIZES OF TWO OR MORE SIZES. | HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT REFUSAL IF TESTED, AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL. 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 REPRESENTED BY A ZONE OF WEATHERED ROCK. ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS: | ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER. 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. ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE. CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE. COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE. 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. DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK. DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL. DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH. FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE. FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES. FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL. FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM. FORMATION (FM) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD. 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 ITS LATERAL EXTENT. 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. PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM. RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK. ROCK QUALITY DESIGNATION (RQD) - 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. SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK. 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 THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. SLICKENSIDE - 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 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. STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH 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 ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE. TOPSOIL (TS) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER. |
| SOIL LEGEND AND AASHTO CLASSIFICATION | ANGULARITY OF GRAINS THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS: ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED. | WEATHERED ROCK (WR) CRYSTALLINE ROCK (CR) NON-CRYSTALLINE ROCK (NCR) COASTAL PLAIN SEDIMENTARY ROCK (CP) | |
| MINERALOGICAL COMPOSITION MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDERED OF SIGNIFICANCE. | MINERALOGICAL COMPOSITION MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDERED OF SIGNIFICANCE. | WEATHERING FRESH VERY SLIGHT (IV SLI.) SLIGHT (SLI.) MODERATE (MOD.) MODERATELY SEVERE (MOD. SEV.) SEVERE (SEV.) VERY SEVERE (IV SEV.) COMPLETE | |
| COMPRESSION SLIGHTLY COMPRESSIBLE MODERATELY COMPRESSIBLE HIGHLY COMPRESSIBLE | COMPRESSION SLIGHTLY COMPRESSIBLE MODERATELY COMPRESSIBLE HIGHLY COMPRESSIBLE | WEATHERING FRESH VERY SLIGHT (IV SLI.) SLIGHT (SLI.) MODERATE (MOD.) MODERATELY SEVERE (MOD. SEV.) SEVERE (SEV.) VERY SEVERE (IV SEV.) COMPLETE | |
| PERCENTAGE OF MATERIAL ORGANIC MATERIAL TRACE OF ORGANIC MATTER LITTLE ORGANIC MATTER MODERATELY ORGANIC HIGHLY ORGANIC | PERCENTAGE OF MATERIAL ORGANIC MATERIAL TRACE OF ORGANIC MATTER LITTLE ORGANIC MATTER MODERATELY ORGANIC HIGHLY ORGANIC | WEATHERING FRESH VERY SLIGHT (IV SLI.) SLIGHT (SLI.) MODERATE (MOD.) MODERATELY SEVERE (MOD. SEV.) SEVERE (SEV.) VERY SEVERE (IV SEV.) COMPLETE | |
| GROUND WATER WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING STATIC WATER LEVEL AFTER 24 HOURS PERCHED WATER, SATURATED ZONE, OR WATER BEARING STRATA SPRING OR SEEP | GROUND WATER WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING STATIC WATER LEVEL AFTER 24 HOURS PERCHED WATER, SATURATED ZONE, OR WATER BEARING STRATA SPRING OR SEEP | WEATHERING FRESH VERY SLIGHT (IV SLI.) SLIGHT (SLI.) MODERATE (MOD.) MODERATELY SEVERE (MOD. SEV.) SEVERE (SEV.) VERY SEVERE (IV SEV.) COMPLETE | |
| MISCELLANEOUS SYMBOLS ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION SOIL SYMBOL ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT INFERRED SOIL BOUNDARY INFERRED ROCK LINE ALLUVIAL SOIL BOUNDARY | MISCELLANEOUS SYMBOLS ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION SOIL SYMBOL ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT INFERRED SOIL BOUNDARY INFERRED ROCK LINE ALLUVIAL SOIL BOUNDARY | WEATHERING FRESH VERY SLIGHT (IV SLI.) SLIGHT (SLI.) MODERATE (MOD.) MODERATELY SEVERE (MOD. SEV.) SEVERE (SEV.) VERY SEVERE (IV SEV.) COMPLETE | |
| CONSISTENCY OR DENSENESS PRIMARY SOIL TYPE COMPACTNESS OR CONSISTENCY RANGE OF STANDARD PENETRATION RESISTANCE (N-VALUE) RANGE OF UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) | CONSISTENCY OR DENSENESS PRIMARY SOIL TYPE COMPACTNESS OR CONSISTENCY RANGE OF STANDARD PENETRATION RESISTANCE (N-VALUE) RANGE OF UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) | WEATHERING FRESH VERY SLIGHT (IV SLI.) SLIGHT (SLI.) MODERATE (MOD.) MODERATELY SEVERE (MOD. SEV.) SEVERE (SEV.) VERY SEVERE (IV SEV.) COMPLETE | |
| TEXTURE OR GRAIN SIZE U.S. STD. SIEVE SIZE OPENING (MM) BOULDER (BLDR.) COBBLE (COB.) GRAVEL (GR.) COARSE SAND (CSE. SD.) FINE SAND (F SD.) SILT (SL.) CLAY (CL.) | TEXTURE OR GRAIN SIZE U.S. STD. SIEVE SIZE OPENING (MM) BOULDER (BLDR.) COBBLE (COB.) GRAVEL (GR.) COARSE SAND (CSE. SD.) FINE SAND (F SD.) SILT (SL.) CLAY (CL.) | WEATHERING FRESH VERY SLIGHT (IV SLI.) SLIGHT (SLI.) MODERATE (MOD.) MODERATELY SEVERE (MOD. SEV.) SEVERE (SEV.) VERY SEVERE (IV SEV.) COMPLETE | |
| SOIL MOISTURE - CORRELATION OF TERMS SOIL MOISTURE SCALE (ATTERBERG LIMITS) FIELD MOISTURE DESCRIPTION GUIDE FOR FIELD MOISTURE DESCRIPTION | SOIL MOISTURE - CORRELATION OF TERMS SOIL MOISTURE SCALE (ATTERBERG LIMITS) FIELD MOISTURE DESCRIPTION GUIDE FOR FIELD MOISTURE DESCRIPTION | WEATHERING FRESH VERY SLIGHT (IV SLI.) SLIGHT (SLI.) MODERATE (MOD.) MODERATELY SEVERE (MOD. SEV.) SEVERE (SEV.) VERY SEVERE (IV SEV.) COMPLETE | |
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| COLOR DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YELLOW-BROWN, BLUE-BROWN). MODIFIERS SUCH AS LIGHT, DARK, STREAKED, ETC. ARE USED TO DESCRIBE APPEARANCE. | COLOR DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YELLOW-BROWN, BLUE-BROWN). MODIFIERS SUCH AS LIGHT, DARK, STREAKED, ETC. ARE USED TO DESCRIBE APPEARANCE. | WEATHERING FRESH VERY SLIGHT (IV SLI.) SLIGHT (SLI.) MODERATE (MOD.) MODERATELY SEVERE (MOD. SEV.) SEVERE (SEV.) VERY SEVERE (IV SEV.) COMPLETE | |
| EQUIPMENT USED ON SUBJECT PROJECT DRILL UNITS: CME-45C CME-55 CME-550 VANE SHEAR TEST PORTABLE HOIST MOBILE B-57 | EQUIPMENT USED ON SUBJECT PROJECT ADVANCING TOOLS: CLAY BITS 6" CONTINUOUS FLIGHT AUGER 8" HOLLOW AUGERS HARD FACED FINGER BITS TUNG-CARBIDE INSERTS CASING w/ ADVANCER TRICONE * STEEL TEETH TRICONE * TUNG-CARB. CORE BIT | WEATHERING FRESH VERY SLIGHT (IV SLI.) SLIGHT (SLI.) MODERATE (MOD.) MODERATELY SEVERE (MOD. SEV.) SEVERE (SEV.) VERY SEVERE (IV SEV.) COMPLETE | |
| RECOMMENDATION SYMBOLS UNDERCUT SHALLOW UNDERCUT UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE UNCLASSIFIED EXCAVATION - ACCEPTABLE DEGRADABLE ROCK | RECOMMENDATION SYMBOLS UNDERCUT SHALLOW UNDERCUT UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE UNCLASSIFIED EXCAVATION - ACCEPTABLE DEGRADABLE ROCK | WEATHERING FRESH VERY SLIGHT (IV SLI.) SLIGHT (SLI.) MODERATE (MOD.) MODERATELY SEVERE (MOD. SEV.) SEVERE (SEV.) VERY SEVERE (IV SEV.) COMPLETE | |
| ABBREVIATIONS AR - AUGER REFUSAL BT - BORING TERMINATED CL - CLAY CPT - CONE PENETRATION TEST CSE - COARSE DMT - DILATOMETER TEST DPT - DYNAMIC PENETRATION TEST e - VOID RATIO F - FINE FOSS. - FOSSILIFEROUS FRAC. - FRACTURED, FRACTURES FRAGS. - FRAGMENTS HI. - HIGHLY MED. - MEDIUM MICA - MICACEOUS MOD. - MODERATELY NP - NON PLASTIC ORG. - ORGANIC PMT - PRESSUREMETER TEST SAP. - SAPROLITIC SD. - SAND, SANDY SL. - SILTY, SILTY SLI. - SLIGHTLY TCR - TRICONE REFUSAL w - MOISTURE CONTENT V - VERY VST - VANE SHEAR TEST WEA. - WEATHERED W - UNIT WEIGHT W - DRY UNIT WEIGHT SAMPLE ABBREVIATIONS S - BULK SS - SPLIT SPOON ST - SHELBY TUBE RS - ROCK RT - RECOMPACTED TRIAXIAL CBR - CALIFORNIA BEARING RATIO | ABBREVIATIONS AR - AUGER REFUSAL BT - BORING TERMINATED CL - CLAY CPT - CONE PENETRATION TEST CSE - COARSE DMT - DILATOMETER TEST DPT - DYNAMIC PENETRATION TEST e - VOID RATIO F - FINE FOSS. - FOSSILIFEROUS FRAC. - FRACTURED, FRACTURES FRAGS. - FRAGMENTS HI. - HIGHLY MED. - MEDIUM MICA - MICACEOUS MOD. - MODERATELY NP - NON PLASTIC ORG. - ORGANIC PMT - PRESSUREMETER TEST SAP. - SAPROLITIC SD. - SAND, SANDY SL. - SILTY, SILTY SLI. - SLIGHTLY TCR - TRICONE REFUSAL w - MOISTURE CONTENT V - VERY VST - VANE SHEAR TEST WEA. - WEATHERED W - UNIT WEIGHT W - DRY UNIT WEIGHT SAMPLE ABBREVIATIONS S - BULK SS - SPLIT SPOON ST - SHELBY TUBE RS - ROCK RT - RECOMPACTED TRIAXIAL CBR - CALIFORNIA BEARING RATIO | WEATHERING FRESH VERY SLIGHT (IV SLI.) SLIGHT (SLI.) MODERATE (MOD.) MODERATELY SEVERE (MOD. SEV.) SEVERE (SEV.) VERY SEVERE (IV SEV.) COMPLETE | |
| FRACATURE SPACING TERM VERY WIDE WIDE MODERATELY CLOSE CLOSE VERY CLOSE | FRACATURE SPACING TERM VERY WIDE WIDE MODERATELY CLOSE CLOSE VERY CLOSE | WEATHERING FRESH VERY SLIGHT (IV SLI.) SLIGHT (SLI.) MODERATE (MOD.) MODERATELY SEVERE (MOD. SEV.) SEVERE (SEV.) VERY SEVERE (IV SEV.) COMPLETE | |
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| INDURATION FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC. FRIABLE MODERATELY INDURATED INDURATED EXTREMELY INDURATED | INDURATION FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC. FRIABLE MODERATELY INDURATED INDURATED EXTREMELY INDURATED | WEATHERING FRESH VERY SLIGHT (IV SLI.) SLIGHT (SLI.) MODERATE (MOD.) MODERATELY SEVERE (MOD. SEV.) SEVERE (SEV.) VERY SEVERE (IV SEV.) COMPLETE | |
| ELEVATION: 319.98 FEET | ELEVATION: 319.98 FEET | | |
| NOTES: | NOTES: | | |

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 1013
 BP5.R131.GEO.PSH04.dgn
 1013

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|---|------------------------|
| PROJECT REFERENCE NO. BP5.R131 | SHEET NO. 03 |
| RW SHEET NO. ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| INCOMPLETE PLANS DO NOT USE FOR E/W ACQUISITION | |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |



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|--|--|--|--|
| PI Sta 13+20.65 $\Delta = 5^{\circ}14'45.8''$ (RT) $D = 4^{\circ}29'39.7''$ $L = 116.73'$ $T = 58.40'$ $R = 1274.84'$ $SE = 0.05$ $Ro = 115'$ | PI Sta 15+50.74 $\Delta = 3^{\circ}55'11.0''$ (RT) $D = 1^{\circ}27'33.0''$ $L = 330.91'$ $T = 171.77'$ $R = 500.00'$ $SE = 0.06$ $Ro = 138'$ $V = 40\text{mph}$ | PI Sta 23+03.15 $\Delta = 5^{\circ}34'48.7''$ (LT) $D = 3^{\circ}44'55.1''$ $L = 148.86'$ $T = 74.49'$ $R = 1528.44'$ $SE = \text{EXIST.}$ $Ro = \text{EXIST.}$ | PI Sta 25+17.73 $\Delta = 28^{\circ}43'18.5''$ (LT) $D = 10^{\circ}27'45.0''$ $L = 274.52'$ $T = 140.21'$ $R = 547.63'$ $SE = \text{EXIST.}$ $Ro = \text{EXIST.}$ |
|--|--|--|--|



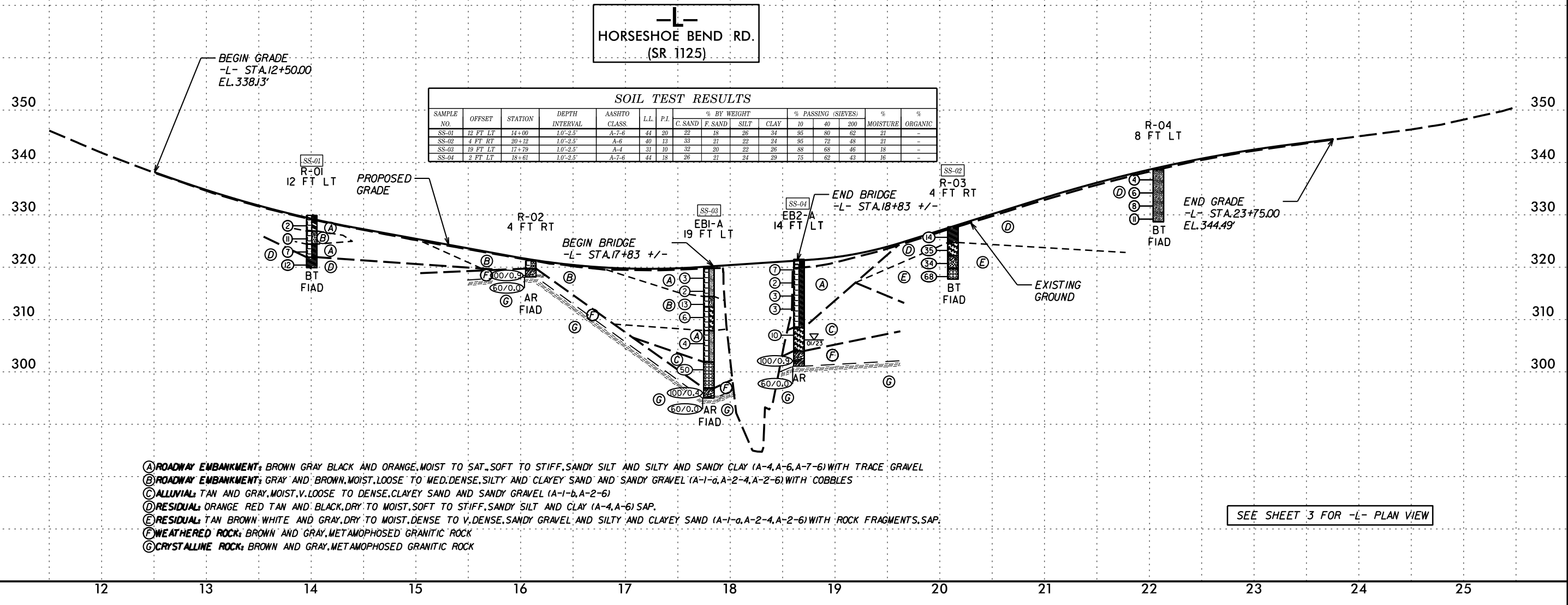
SEE SHEET 4 FOR -L- PROFILE

24-JAN-2023 14:07
 P:\1-10-2023\15\BP5.R131.GEO_BROG\CADD\GEO\TECH\State&Sub\BP5.R131.GEO.PFL05.dgn
 5/14/9c
 LOCHNER Vance County Bridge 15\BP5.R131.GEO_BROG\CADD\GEO\TECH\State&Sub\BP5.R131.GEO.PFL05.dgn
 15\BP5.R131.GEO_BROG\CADD\GEO\TECH\State&Sub\BP5.R131.GEO.PFL05.dgn
 15\BP5.R131.GEO_BROG\CADD\GEO\TECH\State&Sub\BP5.R131.GEO.PFL05.dgn

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| | |
|---|------------------------|
| PROJECT REFERENCE NO. <i>BP5.R131</i> | SHEET NO. <i>04</i> |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| INCOMPLETE PLANS DO NOT USE FOR ACQUISITION | |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |



**HORSESHOE BEND RD.
(SR. 1125)**

| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC |
|------------|----------|---------|----------------|--------------|------|------|-------------|---------|------|------|--------------------|----|-----|------------|-----------|
| | | | | | | | C. SAND | F. SAND | SILT | CLAY | 10 | 40 | 200 | | |
| SS-01 | 12 FT LT | 14+00 | 1.0'-2.5' | A-7-6 | 41 | 20 | 22 | 18 | 26 | 34 | 95 | 80 | 62 | 21 | - |
| SS-02 | 4 FT RT | 20+12 | 1.0'-2.5' | A-6 | 40 | 13 | 33 | 21 | 22 | 24 | 95 | 72 | 48 | 21 | - |
| SS-03 | 19 FT LT | 17+79 | 1.0'-2.5' | A-4 | 31 | 10 | 32 | 30 | 22 | 26 | 88 | 68 | 46 | 18 | - |
| SS-04 | 2 FT LT | 18+61 | 1.0'-2.5' | A-7-6 | 44 | 18 | 26 | 21 | 24 | 29 | 75 | 62 | 43 | 16 | - |

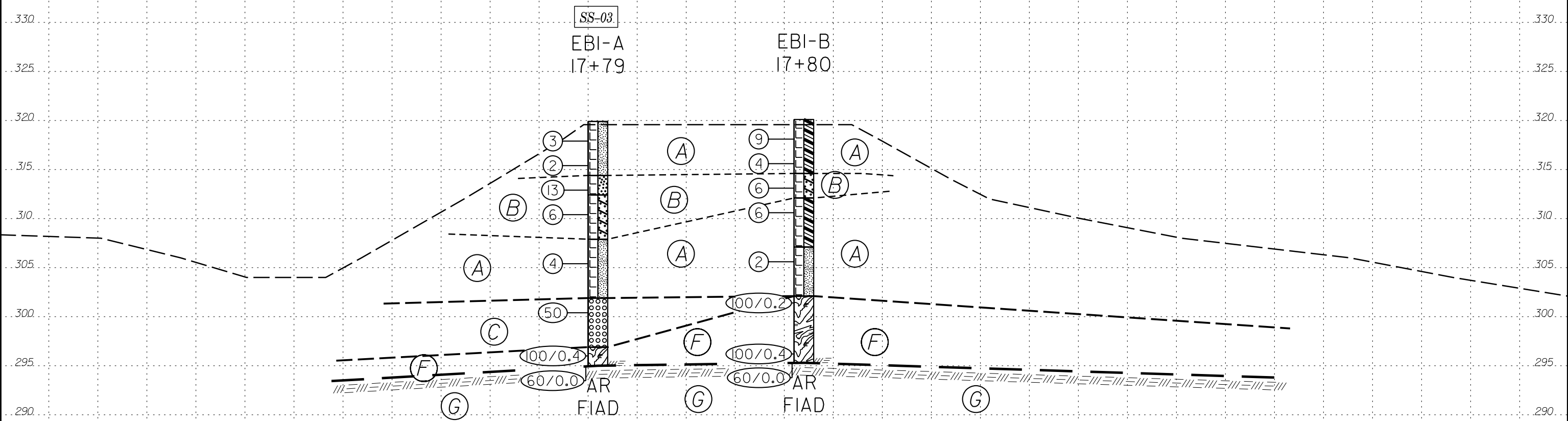
- (A) ROADWAY EMBANKMENT: BROWN GRAY BLACK AND ORANGE, MOIST TO SAT., SOFT TO STIFF, SANDY SILT AND SILTY AND SANDY CLAY (A-4, A-6, A-7-6) WITH TRACE GRAVEL
- (B) ROADWAY EMBANKMENT: GRAY AND BROWN, MOIST, LOOSE TO MED. DENSE, SILTY AND CLAYEY SAND AND SANDY GRAVEL (A-1-a, A-2-4, A-2-6) WITH COBBLES
- (C) ALLUVIAL: TAN AND GRAY, MOIST, V. LOOSE TO DENSE, CLAYEY SAND AND SANDY GRAVEL (A-1-b, A-2-6)
- (D) RESIDUAL: ORANGE RED TAN AND BLACK, DRY TO MOIST, SOFT TO STIFF, SANDY SILT AND CLAY (A-4, A-6) SAP.
- (E) RESIDUAL: TAN BROWN WHITE AND GRAY, DRY TO MOIST, DENSE TO V. DENSE, SANDY GRAVEL AND SILTY AND CLAYEY SAND (A-1-a, A-2-4, A-2-6) WITH ROCK FRAGMENTS, SAP.
- (F) WEATHERED ROCK: BROWN AND GRAY, METAMORPHOSED GRANITIC ROCK
- (G) CRYSTALLINE ROCK: BROWN AND GRAY, METAMORPHOSED GRANITIC ROCK

SEE SHEET 3 FOR -L- PLAN VIEW



75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

| SOIL TEST RESULTS | | | | | | | | | | | | | | | |
|-------------------|----------|---------|----------------|---------------|------|------|-------------|---------|------|------|--------------------|----|-----|------------|-----------|
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC |
| | | | | | | | C. SAND | F. SAND | SILT | CLAY | 10 | 40 | 200 | | |
| SS-03 | 19 FT LT | 17+79 | 1.0'-2.5' | A-4 | 31 | 10 | 32 | 20 | 22 | 26 | 88 | 68 | 46 | 18 | - |



- Ⓐ ROADWAY EMBANKMENT: BROWN AND ORANGE, MOIST TO SAT., SOFT TO STIFF, SANDY SILT AND SANDY CLAY (A-4, A-6) WITH TRACE GRAVEL
- Ⓑ ROADWAY EMBANKMENT: BROWN, MOIST, LOOSE TO MED. DENSE, SILTY AND CLAYEY SAND (A-2-4, A-2-6)
- Ⓒ ALLUVIAL: GRAY, MOIST, DENSE, SANDY GRAVEL (A-1-b)
- Ⓕ WEATHERED ROCK: BROWN AND GRAY, METAMORPHOSED GRANITIC ROCK
- Ⓖ CRYSTALLINE ROCK: BROWN AND GRAY, METAMORPHOSED GRANITIC ROCK

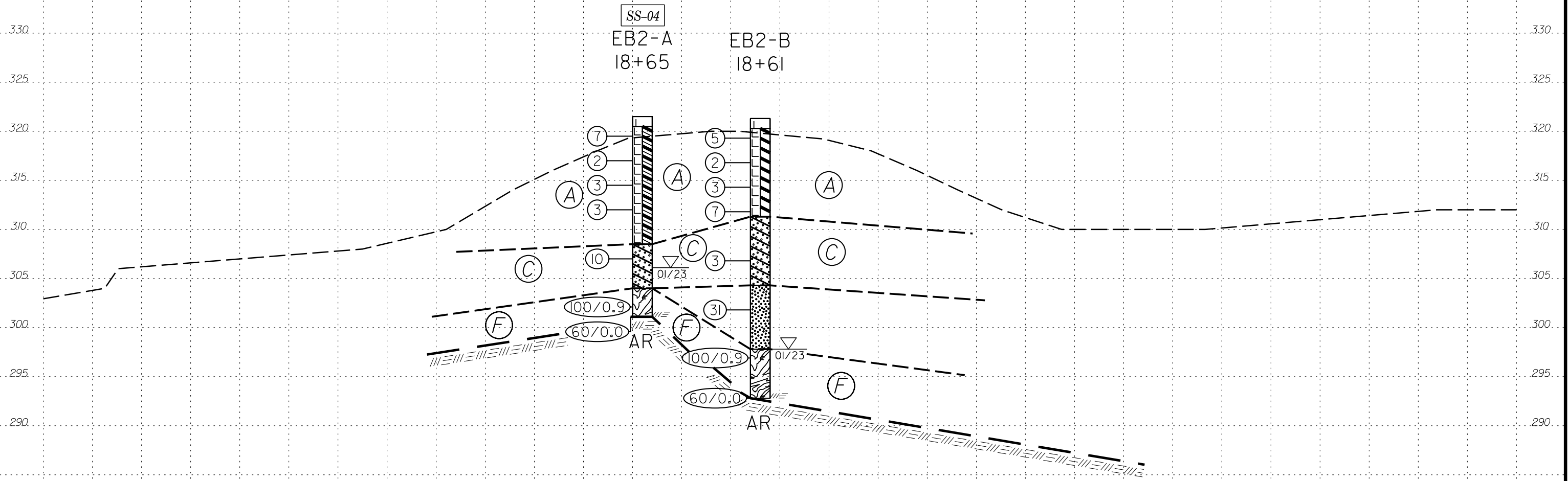
END BENT NO. 1
17+83
-L-

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

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 6/23/16



| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC |
|------------|--------|---------|----------------|---------------|------|------|-------------|---------|-------|-----------|--------------------|----|-----|------------|-----------|
| | | | | | | | C. SAND | F. SAND | SILT | CLAY | 10 | 40 | 200 | | |
| | | | | | | | SS-04 | 2 FT LT | 18+61 | 1.0'-2.5' | A-7-6 | 44 | 18 | | |



- (A) ROADWAY EMBANKMENT: ORANGE, MOIST, SOFT TO MED. STIFF, SILTY AND SANDY CLAY (A-6, A-7-6)
- (C) ALLUVIAL: TAN, MOIST, V. LOOSE TO LOOSE, CLAYEY SAND (A-2-6)
- (E) RESIDUAL: BROWN AND WHITE, DRY, DENSE, SILTY SAND (A-2-4) WITH ROCK FRAGMENTS
- (F) WEATHERED ROCK: BROWN AND GRAY, METAMORPHOSED GRANITIC ROCK
- (G) CRYSTALLINE ROCK: BROWN AND GRAY, METAMORPHOSED GRANITIC ROCK

END BENT NO. 2
18+63

-L-

GEOTECHNICAL BORING REPORT

BORE LOG

| WBS BP5.R131.1 | | TIP BP5.R131.1 | | COUNTY VANCE | | GEOLOGIST Lane, R. W. | | | | | | | | | |
|---|-----------------|---------------------|------------|--------------------------|-------|-------------------------|-----------------|----|----|-----|-----------|-----|---------------------------|------------|------|
| SITE DESCRIPTION BRIDGE 15 OVER LITTLE RUIN CREEK ON SR 1125 | | | | | | | GROUND WTR (ft) | | | | | | | | |
| BORING NO. R-01 | | STATION 14+00 | | OFFSET 12 ft LT | | ALIGNMENT -L- | | | | | | | | | |
| COLLAR ELEV. 329.9 ft | | TOTAL DEPTH 10.0 ft | | NORTHING 919,484 | | EASTING 2,149,625 | | | | | | | | | |
| DRILL RIGHAMMER EFF./DATE TRI8016 MOBILE B-57 84% 05/09/2022 | | | | DRILL METHOD H.S. Augers | | HAMMER TYPE Automatic | | | | | | | | | |
| DRILLER Estep, J. E. | | START DATE 12/30/22 | | COMP. DATE 12/30/22 | | SURFACE WATER DEPTH N/A | | | | | | | | | |
| ELEV (ft) | DRIVE ELEV (ft) | DEPTH (ft) | BLOW COUNT | | | BLOWS PER FOOT | | | | | SAMP. NO. | LOG | SOIL AND ROCK DESCRIPTION | DEPTH (ft) | |
| | | | 0.5ft | 0.5ft | 0.5ft | 0 | 25 | 50 | 75 | 100 | | | | | |
| 330 | | | | | | | | | | | | | | 329.9 | 0.0 |
| | 328.9 | 1.0 | 2 | 1 | 1 | | | | | | | | | | |
| | 326.4 | 3.5 | 4 | 6 | 5 | | | | | | | | | 326.9 | 3.0 |
| 325 | 323.9 | 6.0 | 3 | 3 | 4 | | | | | | | | | 324.4 | 5.5 |
| | 321.4 | 8.5 | 5 | 6 | 6 | | | | | | | | | 321.9 | 8.0 |
| 320 | | | | | | | | | | | | | | 319.9 | 10.0 |
| ROADWAY EMBANKMENT ORANGE, SOFT, SILTY CLAY (A-7-6) | | | | | | | | | | | | | | | |
| TAN, MED. DENSE, SILTY SAND (A-2-4) | | | | | | | | | | | | | | | |
| TAN, MED. STIFF, SANDY CLAY (A-6) | | | | | | | | | | | | | | | |
| RESIDUAL ORANGE AND BLACK, MED. STIFF, CLAY (A-6) | | | | | | | | | | | | | | | |
| Boring Terminated at Elevation 319.9 ft IN RESIDUAL: (A-6) | | | | | | | | | | | | | | | |

| WBS BP5.R131.1 | | TIP BP5.R131.1 | | COUNTY VANCE | | GEOLOGIST Lane, R. W. | | | | | | | | | |
|---|-----------------|---------------------|------------|--------------------------|-------|-------------------------|-----------------|----|----|-----|-----------|-----|---------------------------|------------|-----|
| SITE DESCRIPTION BRIDGE 15 OVER LITTLE RUIN CREEK ON SR 1125 | | | | | | | GROUND WTR (ft) | | | | | | | | |
| BORING NO. R-02 | | STATION 16+09 | | OFFSET 4 ft RT | | ALIGNMENT -L- | | | | | | | | | |
| COLLAR ELEV. 321.2 ft | | TOTAL DEPTH 3.1 ft | | NORTHING 919,587 | | EASTING 2,149,807 | | | | | | | | | |
| DRILL RIGHAMMER EFF./DATE TRI8016 MOBILE B-57 84% 05/09/2022 | | | | DRILL METHOD H.S. Augers | | HAMMER TYPE Automatic | | | | | | | | | |
| DRILLER Estep, J. E. | | START DATE 12/30/22 | | COMP. DATE 12/30/22 | | SURFACE WATER DEPTH N/A | | | | | | | | | |
| ELEV (ft) | DRIVE ELEV (ft) | DEPTH (ft) | BLOW COUNT | | | BLOWS PER FOOT | | | | | SAMP. NO. | LOG | SOIL AND ROCK DESCRIPTION | DEPTH (ft) | |
| | | | 0.5ft | 0.5ft | 0.5ft | 0 | 25 | 50 | 75 | 100 | | | | | |
| 325 | | | | | | | | | | | | | | 321.2 | 0.0 |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | 319.7 | 1.5 |
| 320 | 319.3 | 1.9 | 11 | 89 | 0.4 | | | | | | | | | 318.1 | 3.1 |
| | 318.1 | 3.1 | 60 | 0.0 | | | | | | | | | | 318.1 | 3.1 |
| ROADWAY EMBANKMENT GRAY, MED. DENSE, SANDY GRAVEL (A-1-a) WITH COBBLES/BOULDERS | | | | | | | | | | | | | | | |
| WEATHERED ROCK GRAY, METAMORPHOSED GRANITIC ROCK | | | | | | | | | | | | | | | |
| Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 318.1 ft ON CRYSTALLINE ROCK: METAMORPHOSED GRANITIC ROCK | | | | | | | | | | | | | | | |
| NOTE: OFFSET TWICE TO ATTEMPT TO ADVANCE. ROCK OUTCROPS ON ADJACENT SLOPE | | | | | | | | | | | | | | | |

NCDOT BORE DOUBLE BP5.R131_GEO_BRDG.GPJ_NC_DOT.GDT 1/24/23

GEOTECHNICAL BORING REPORT

BORE LOG

| WBS BP5.R131.1 | | TIP BP5.R131.1 | | COUNTY VANCE | | GEOLOGIST Lane, R. W. | | | | | | | | | |
|--|-----------------|---------------------|--------------------------|---------------------|-------|-------------------------|-----------------|----|----|-----|-----------|-----|---------------------------|----------------|------------|
| SITE DESCRIPTION BRIDGE 15 OVER LITTLE RUIN CREEK ON SR 1125 | | | | | | | GROUND WTR (ft) | | | | | | | | |
| BORING NO. EB2-A | | STATION 18+65 | | OFFSET 14 ft LT | | ALIGNMENT -L- | | | | | | | | | |
| COLLAR ELEV. 321.5 ft | | TOTAL DEPTH 20.4 ft | | NORTHING 919,659 | | EASTING 2,150,053 | | | | | | | | | |
| DRILL RIGHAMMER EFF./DATE TRI8016 MOBILE B-57 84% 05/09/2022 | | | DRILL METHOD H.S. Augers | | | HAMMER TYPE Automatic | | | | | | | | | |
| DRILLER Estep, J. E. | | START DATE 12/29/22 | | COMP. DATE 12/29/22 | | SURFACE WATER DEPTH N/A | | | | | | | | | |
| ELEV (ft) | DRIVE ELEV (ft) | DEPTH (ft) | BLOW COUNT | | | BLOWS PER FOOT | | | | | SAMP. NO. | LOG | SOIL AND ROCK DESCRIPTION | | |
| | | | 0.5ft | 0.5ft | 0.5ft | 0 | 25 | 50 | 75 | 100 | | | | | |
| 325 | | | | | | | | | | | | | | | |
| 320 | 320.5 | 1.0 | 6 | 4 | 3 | | | | | | | | | 321.5 320.5 | 0.0 1.0 |
| | 318.0 | 3.5 | 1 | 1 | 1 | | | | | | | | | | |
| 315 | 315.5 | 6.0 | 1 | 2 | 1 | | | | | | | | | | |
| | 313.0 | 8.5 | 2 | 1 | 2 | | | | | | | | | | |
| 310 | 308.0 | 13.5 | 2 | 8 | 2 | | | | | | | | | 308.5 | 13.0 |
| | 303.0 | 18.5 | 55 | 45/0.4 | | | | | | | | | | 304.0 | 17.5 |
| | 301.1 | 20.4 | 60/0.0 | | | | | | | | | | | 301.1 | 20.4 |
| | | | | | | | | | | | | | | | |

| WBS BP5.R131.1 | | TIP BP5.R131.1 | | COUNTY VANCE | | GEOLOGIST Lane, R. W. | | | | | | | | | |
|--|-----------------|---------------------|--------------------------|---------------------|-------|-------------------------|-----------------|----|----|-----|-----------|-----|---------------------------|----------------|------------|
| SITE DESCRIPTION BRIDGE 15 OVER LITTLE RUIN CREEK ON SR 1125 | | | | | | | GROUND WTR (ft) | | | | | | | | |
| BORING NO. EB2-B | | STATION 18+61 | | OFFSET 2 ft LT | | ALIGNMENT -L- | | | | | | | | | |
| COLLAR ELEV. 321.3 ft | | TOTAL DEPTH 28.5 ft | | NORTHING 919,647 | | EASTING 2,150,052 | | | | | | | | | |
| DRILL RIGHAMMER EFF./DATE TRI8016 MOBILE B-57 84% 05/09/2022 | | | DRILL METHOD H.S. Augers | | | HAMMER TYPE Automatic | | | | | | | | | |
| DRILLER Estep, J. E. | | START DATE 12/29/22 | | COMP. DATE 12/29/22 | | SURFACE WATER DEPTH N/A | | | | | | | | | |
| ELEV (ft) | DRIVE ELEV (ft) | DEPTH (ft) | BLOW COUNT | | | BLOWS PER FOOT | | | | | SAMP. NO. | LOG | SOIL AND ROCK DESCRIPTION | | |
| | | | 0.5ft | 0.5ft | 0.5ft | 0 | 25 | 50 | 75 | 100 | | | | | |
| 325 | | | | | | | | | | | | | | | |
| 320 | 320.3 | 1.0 | 7 | 3 | 2 | | | | | | | | | 321.3 320.3 | 0.0 1.0 |
| | 317.8 | 3.5 | 1 | 1 | 1 | | | | | | | | | | |
| 315 | 315.3 | 6.0 | 1 | 1 | 2 | | | | | | | | | | |
| | 312.8 | 8.5 | 2 | 3 | 4 | | | | | | | | | | |
| 310 | 307.8 | 13.5 | 2 | 1 | 2 | | | | | | | | | 311.3 | 10.0 |
| | 302.8 | 18.5 | 12 | 15 | 16 | | | | | | | | | 304.3 | 17.0 |
| 305 | 297.8 | 23.5 | 30 | 70/0.4 | | | | | | | | | | 304.3 | 17.0 |
| | 292.8 | 28.5 | 60/0.0 | | | | | | | | | | | 297.8 | 23.5 |
| | | | | | | | | | | | | | | 292.8 | 28.5 |
| | | | | | | | | | | | | | | | |

NCDOT BORE DOUBLE BP5.R131_GEO_BRDG.GPJ_NC_DOT.GDT 1/24/23

GEOTECHNICAL BORING REPORT

BORE LOG

| WBS BP5.R131.1 | | TIP BP5.R131.1 | | COUNTY VANCE | | GEOLOGIST Lane, R. W. | | | | | | | | | |
|--|-----------------|---------------------|------------|--------------------------|-------|-------------------------|-----------------|----|----|-----|-----------|-----|---------------------------|---|------|
| SITE DESCRIPTION BRIDGE 15 OVER LITTLE RUIN CREEK ON SR 1125 | | | | | | | GROUND WTR (ft) | | | | | | | | |
| BORING NO. R-03 | | STATION 20+12 | | OFFSET 4 ft RT | | ALIGNMENT -L- | | | | | | | | | |
| COLLAR ELEV. 327.7 ft | | TOTAL DEPTH 10.0 ft | | NORTHING 919,668 | | EASTING 2,150,201 | | | | | | | | | |
| DRILL RIGHAMMER EFF./DATE TRI8016 MOBILE B-57 84% 05/09/2022 | | | | DRILL METHOD H.S. Augers | | HAMMER TYPE Automatic | | | | | | | | | |
| DRILLER Estep, J. E. | | START DATE 12/30/22 | | COMP. DATE 12/30/22 | | SURFACE WATER DEPTH N/A | | | | | | | | | |
| ELEV (ft) | DRIVE ELEV (ft) | DEPTH (ft) | BLOW COUNT | | | BLOWS PER FOOT | | | | | SAMP. NO. | LOG | SOIL AND ROCK DESCRIPTION | DEPTH (ft) | |
| | | | 0.5ft | 0.5ft | 0.5ft | 0 | 25 | 50 | 75 | 100 | | | | | |
| 330 | | | | | | | | | | | | | | | |
| 326.7 | 326.7 | 1.0 | 4 | 7 | 7 | | | | | | | | | 0.3' TOPSOIL | 0.0 |
| 325 | 324.2 | 3.5 | 9 | 9 | 26 | | | | | | SS-02 | 21% | | RESIDUAL RED AND BROWN, STIFF, SANDY CLAY (A-6) SAP. | 3.0 |
| 320 | 321.7 | 6.0 | 16 | 18 | 16 | | | | | | | M | | TAN WHITE AND BLACK, DENSE, CLAYEY SAND (A-2-6) SAP. | 5.5 |
| | 319.2 | 8.5 | 29 | 38 | 30 | | | | | | | D | | GRAY AND TAN, DENSE, SILTY SAND (A-2-4) | 8.0 |
| | | | | | | | | | | | | D | | GRAY WHITE AND TAN, V. DENSE, SANDY GRAVEL (A-1-a) | 10.0 |
| Boring Terminated at Elevation 317.7 ft IN RESIDUAL: (A-1-a) | | | | | | | | | | | | | | | |

| WBS BP5.R131.1 | | TIP BP5.R131.1 | | COUNTY VANCE | | GEOLOGIST Lane, R. W. | | | | | | | | | |
|--|-----------------|---------------------|------------|--------------------------|-------|-------------------------|-----------------|----|----|-----|-----------|-----|---------------------------|--|-----|
| SITE DESCRIPTION BRIDGE 15 OVER LITTLE RUIN CREEK ON SR 1125 | | | | | | | GROUND WTR (ft) | | | | | | | | |
| BORING NO. R-04 | | STATION 22+08 | | OFFSET 8 ft LT | | ALIGNMENT -L- | | | | | | | | | |
| COLLAR ELEV. 338.7 ft | | TOTAL DEPTH 10.0 ft | | NORTHING 919,714 | | EASTING 2,150,392 | | | | | | | | | |
| DRILL RIGHAMMER EFF./DATE TRI8016 MOBILE B-57 84% 05/09/2022 | | | | DRILL METHOD H.S. Augers | | HAMMER TYPE Automatic | | | | | | | | | |
| DRILLER Estep, J. E. | | START DATE 12/30/22 | | COMP. DATE 12/30/22 | | SURFACE WATER DEPTH N/A | | | | | | | | | |
| ELEV (ft) | DRIVE ELEV (ft) | DEPTH (ft) | BLOW COUNT | | | BLOWS PER FOOT | | | | | SAMP. NO. | LOG | SOIL AND ROCK DESCRIPTION | DEPTH (ft) | |
| | | | 0.5ft | 0.5ft | 0.5ft | 0 | 25 | 50 | 75 | 100 | | | | | |
| 340 | | | | | | | | | | | | | | | |
| | 337.7 | 1.0 | 3 | 2 | 2 | | | | | | | | | 0.3' TOPSOIL | 0.0 |
| 335 | 335.2 | 3.5 | 3 | 2 | 4 | | | | | | | M | | RESIDUAL ORANGE AND TAN, SOFT TO STIFF, SANDY SILT (A-4) SAP. | |
| | 332.7 | 6.0 | 3 | 4 | 4 | | | | | | | D | | | |
| 330 | 330.2 | 8.5 | 4 | 5 | 6 | | | | | | | D | | | |
| Boring Terminated at Elevation 328.7 ft IN RESIDUAL: (A-4) | | | | | | | | | | | | | | | |

NCDOT BORE DOUBLE BP5.R131_GEO_BRDG.GPJ_NC_DOT.GDT 1/24/23



LABORATORY TEST RESULTS
Vance County Bridge No. 15
Vance County, NC
NCDOT Project: BP5.R131
Falcon Engineering Project No: G22075.00

| NO. | SAMPLE LOCATION | DEPTH INTERVAL | AASHTO CLASS. | ATTERBERG LIMITS | | PERCENT BY WEIGHT | | | | PERCENT PASSING SIEVE | | | MOISTURE (%) | BULK DENSITY (pcf) | ORGANICS (%) |
|-------|-----------------|----------------|---------------|------------------|----|-------------------|--------|------|------|-----------------------|-----|------|--------------|--------------------|--------------|
| | | | | LL | PI | C.SAND | F.SAND | SILT | CLAY | #10 | #40 | #200 | | | |
| SS-01 | R-1 | 1.0-2.5 | A-7-6(11) | 44 | 20 | 22 | 18 | 26 | 34 | 95 | 80 | 62 | 21 | N/A | N/A |
| SS-02 | R-3 | 1.0-2.5 | A-6(4) | 40 | 13 | 33 | 21 | 22 | 24 | 95 | 72 | 48 | 21 | N/A | N/A |
| SS-03 | EB1-A | 1.0-2.5 | A-4(2) | 31 | 10 | 32 | 20 | 22 | 26 | 88 | 68 | 46 | 18 | N/A | N/A |
| SS-04 | EB2-B | 1.0-2.5 | A-7-6(4) | 44 | 18 | 26 | 21 | 24 | 29 | 75 | 62 | 43 | 16 | N/A | N/A |

Reviewed By

Certification: 105-0803

Falcon Engineering, Inc. 1210 Trinity Road, Suite 110, Cary, NC 27513