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REFERENCE: B-4461

PROJECT: 33712

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

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY CHATHAM
PROJECT DESCRIPTION BRIDGE NO. 10 ON SR 1916
(CORINTH RD) OVER SHADDOX CREEK

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STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4461	1	17

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 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 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:
1. 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 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

W. S. HUNSBERGER

TRIGON EXP

INVESTIGATED BY WSH

DRAWN BY WSH

CHECKED BY J.R. HAMM

SUBMITTED BY FALCON

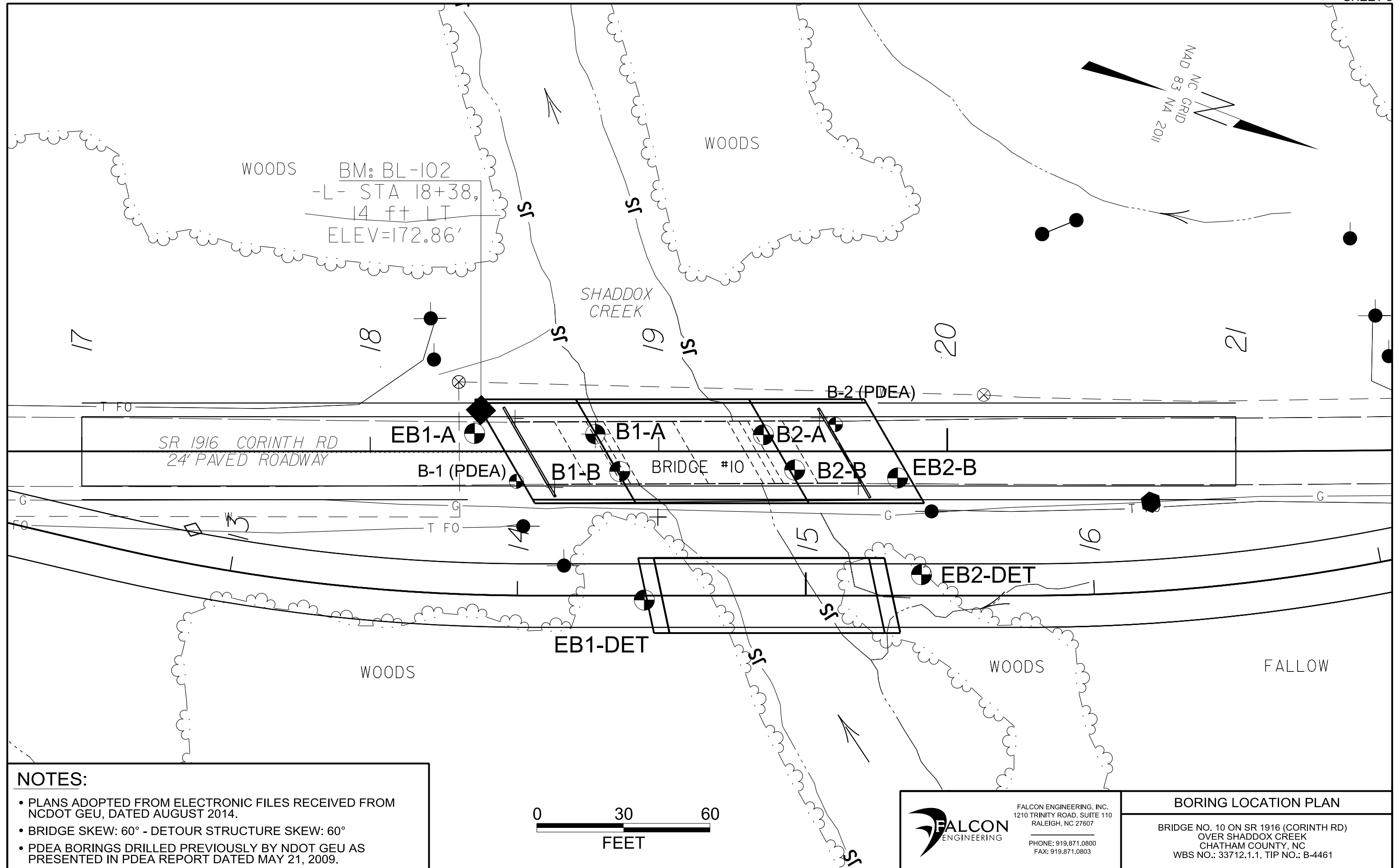
DATE DECEMBER 2014



DocuSigned by:
Jeremy R. Hamm 12/19/2014
ED793808 SIGNATURE DATE

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT
SUBSURFACE INVESTIGATION
 SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION												GRADATION												ROCK DESCRIPTION												TERMS AND DEFINITIONS											
SOIL IS CONSIDERED UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER AND YIELD LESS THAN 100 BLOWS PER FOOT 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, <i>VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6</i>												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 (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. 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. SLICKENISE - 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												WEATHERED ROCK (WR)																							
GRANULAR MATERIALS (≤ 35% PASSING #200) SILT-CLAY MATERIALS (> 35% PASSING #200) ORGANIC MATERIALS												THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS: ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.												NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > 100 BLOWS PER FOOT IF TESTED.																							
MINERALOGICAL COMPOSITION												COMPRESSIONS												CRYSTALLINE ROCK (CR)																							
MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDERED OF SIGNIFICANCE.												SLIGHTLY COMPRESSIBLE LL < 31 MODERATELY COMPRESSIBLE LL = 31 - 50 HIGHLY COMPRESSIBLE LL > 50												FINE TO COARSE GRAIN IGNEOUS AND METAMORPHIC ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE, GNEISS, GABBRO, SCHIST, ETC.																							
PERCENTAGE OF MATERIAL												GROUND WATER												NON-CRYSTALLINE ROCK (NCR)																							
ORGANIC MATERIAL: TRACE OF ORGANIC MATTER 2-3%, LITTLE ORGANIC MATTER 3-5%, MODERATELY ORGANIC 5-10%, HIGHLY ORGANIC > 10% GRANULAR SOILS: SILT - CLAY SOILS: OTHER MATERIAL: TRACE 1-10%, LITTLE 10-20%, SOME 20-35%, HIGHLY 35% AND ABOVE												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												FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN SEDIMENTARY ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES PHYLLITE, SLATE, SANDSTONE, ETC.																							
CONSISTENCY OR DENSENESS												MISCELLANEOUS SYMBOLS												COASTAL PLAIN SEDIMENTARY ROCK (CP)																							
PRIMARY SOIL TYPE: COMPACTNESS OR CONSISTENCY: RANGE OF STANDARD PENETRATION RESISTANCE (N-VALUE): RANGE OF UNCONFINED COMPRESSIVE STRENGTH (TONS/FT²)												ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION SOIL SYMBOL ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT INFERRED SOIL BOUNDARY INFERRED ROCK LINE ALLUVIAL SOIL BOUNDARY												ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING. ROCK RINGS UNDER HAMMER IF CRYSTALLINE. ROCK GENERALLY FRESH, JOINTS STAINED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN. CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF OF A CRYSTALLINE NATURE.																							
TEXTURE OR GRAIN SIZE												RECOMMENDATION SYMBOLS												WEATHERING																							
U.S. STD. SIEVE SIZE OPENING (MM): 4, 10, 40, 60, 200, 270 BOULDER (BLDR.), COBBLE (COB.), GRAVEL (GR.), COARSE SAND (CSE. SD.), FINE SAND (F SD.), SILT (SL.), CLAY (CL.)												UNDERCUT EXCAVATION, UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE, UNCLASSIFIED EXCAVATION - ACCEPTABLE DEGRADABLE ROCK, UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL												ROCK GENERALLY FRESH, JOINTS STAINED AND DISCOLORATION EXTENDS INTO ROCK UP TO 1 INCH. OPEN JOINTS MAY CONTAIN CLAY. IN GRANITOID ROCKS SOME OCCASIONAL FELDSPAR CRYSTALS ARE DULL AND DISCOLORED. CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS.																							
SOIL MOISTURE - CORRELATION OF TERMS												ABBREVIATIONS												SEVERE (MOD. SEV.)																							
SOIL MOISTURE SCALE (ATTERBERG LIMITS), FIELD MOISTURE DESCRIPTION, GUIDE FOR FIELD MOISTURE DESCRIPTION												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. - SILT, SILTY, SLI. - SLIGHTLY, TCR - TRICONE REFUSAL, w - MOISTURE CONTENT, V - VERY, VST - VANE SHEAR TEST, WEA. - WEATHERED, U - UNIT WEIGHT, Wg - DRY UNIT WEIGHT, SAMPLE ABBREVIATIONS: S - BULK, SS - SPLIT SPOON, ST - SHELBY TUBE, RS - ROCK, RT - RECOMPACTED TRIAXIAL, CBR - CALIFORNIA BEARING RATIO												ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. IN GRANITOID ROCKS, ALL FELDSPARS DULL AND DISCOLORED AND A MAJORITY SHOW KAOLINIZATION. ROCK SHOWS SEVERE LOSS OF STRENGTH AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK. ROCK GIVES "CLUNK" SOUND WHEN STRUCK. IF TESTED, WOULD YIELD SPT REFUSAL.																							
PLASTICITY												EQUIPMENT USED ON SUBJECT PROJECT												SEVERE (SEV.)																							
PLASTICITY INDEX (PI), DRY STRENGTH												DRILL UNITS: CME-45C, CME-55, CME-550, VANE SHEAR TEST, PORTABLE HOIST, MOBIL B-57 ADVANCING TOOLS: CLAY BITS, 6" CONTINUOUS FLIGHT AUGER, 8" HOLLOW AUGERS, HARD FACED FINGER BITS, TUNG-CARBIDE INSERTS, CASING w/ ADVANCER, TRICONE 2-15/16" STEEL TEETH, TRICONE TUNG-CARB., CORE BIT HAMMER TYPE: AUTOMATIC, MANUAL CORE SIZE: B, H, N Q2 HAND TOOLS: POST HOLE DIGGER, HAND AUGER, SOUNDING ROD, VANE SHEAR TEST												ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC CLEAR AND EVIDENT BUT REDUCED IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KAOLINIZED TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN. IF TESTED, WOULD YIELD SPT N VALUES > 100 BPF.																							
COLOR												FRACTURE SPACING												MODERATE (MOD.)																							
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.												TERM: VERY WIDE, WIDE, MODERATELY CLOSE, CLOSE, VERY CLOSE SPACING: MORE THAN 10 FEET, 3 TO 10 FEET, 1 TO 3 FEET, 0.16 TO 1 FOOT, LESS THAN 0.16 FEET												ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE BUT MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK REMAINING. SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE THAT ONLY MINOR VESTIGES OF ORIGINAL ROCK FABRIC REMAIN. IF TESTED, WOULD YIELD SPT N VALUES < 100 BPF.																							
FRACURE SPACING												BEDDING												MODERATELY SEVERE (SEV.)																							
												TERM: VERY THICKLY BEDDED, THICKLY BEDDED, THINLY BEDDED, VERY THINLY BEDDED, THICKLY LAMINATED, THINLY LAMINATED THICKNESS: 4 FEET, 1.5 - 4 FEET, 0.16 - 1.5 FEET, 0.03 - 0.16 FEET, < 0.008 FEET												ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL AND SCATTERED CONCENTRATIONS. FABRIC MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS ALSO AN EXAMPLE.																							
INDURATION												BENCH MARK												VERY SEVERE (SEV.)																							
FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.												BENCH MARK: BL-102: 36" REBAR WITH ALUMINUM TRAVERSE CAP N: 671912.4092 E: 1986960.5208 -L- STA 18+38.14 FT LT ELEVATION: 172.86 FEET												FRIABLE: RUBBING WITH FINGER FREES NUMEROUS GRAINS; GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE. MODERATELY INDURATED: GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE; BREAKS EASILY WHEN HIT WITH HAMMER. INDURATED: GRAINS ARE DIFFICULT TO SEPARATE WITH STEEL PROBE; DIFFICULT TO BREAK WITH HAMMER. EXTREMELY INDURATED: SHARP HAMMER BLOWS REQUIRED TO BREAK SAMPLE; SAMPLE BREAKS ACROSS GRAINS.																							
NOTES																																															
FIAD - FILLED-IN AFTER DRILLING																																															



NOTES:

- PLANS ADOPTED FROM ELECTRONIC FILES RECEIVED FROM NCDOT GEU, DATED AUGUST 2014.
- BRIDGE SKEW: 60° - DETOUR STRUCTURE SKEW: 60°
- PDEA BORINGS DRILLED PREVIOUSLY BY NDOT GEU AS PRESENTED IN PDEA REPORT DATED MAY 21, 2009.

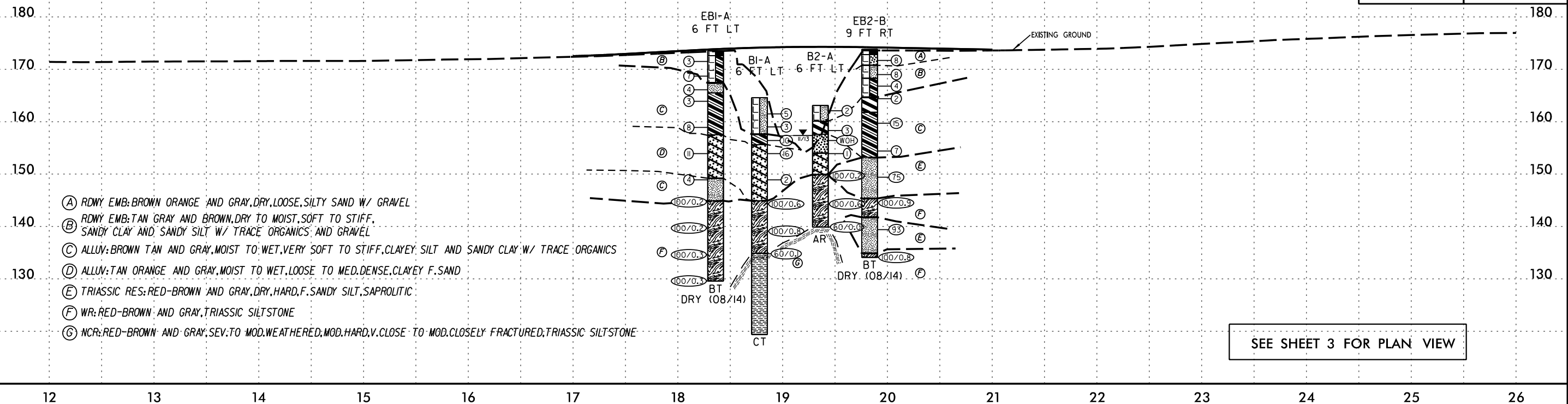


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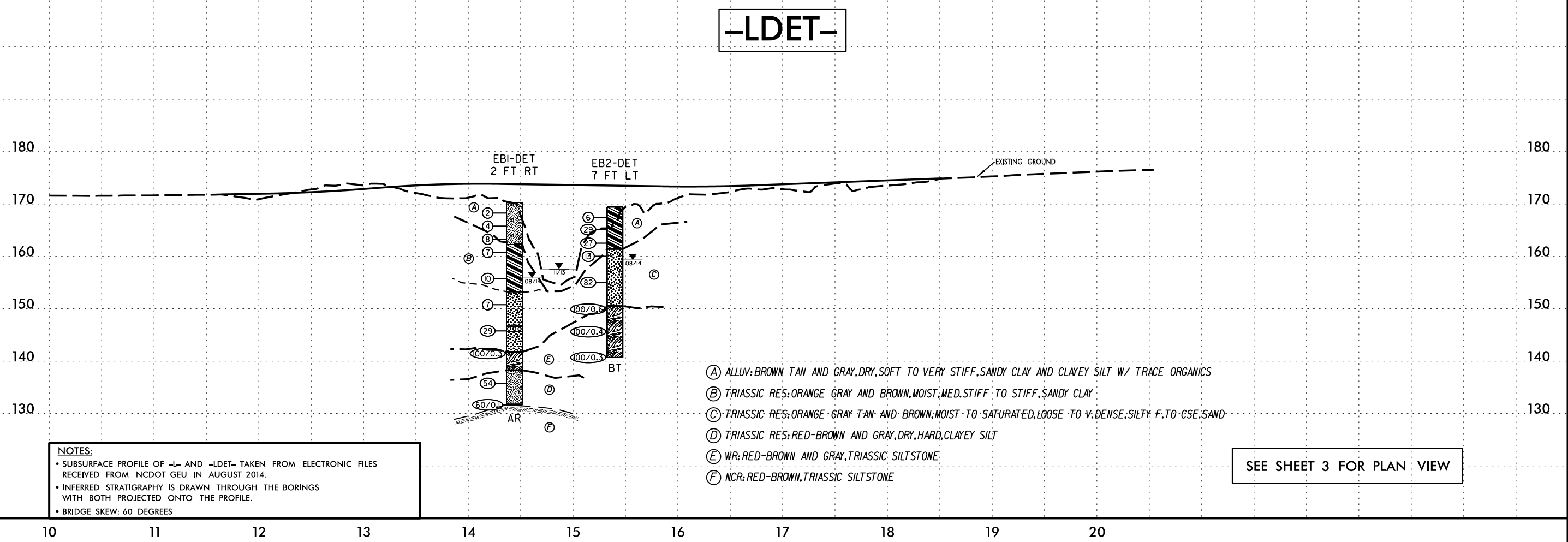
BORING LOCATION PLAN
 BRIDGE NO. 10 ON SR 1916 (CORINTH RD)
 OVER SHADDOX CREEK
 CHATHAM COUNTY, NC
 WBS NO.: 33712.1.1, TIP NO.: B-4461

5/28/99

PROJECT REFERENCE NO. B-4461	SHEET NO. 4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



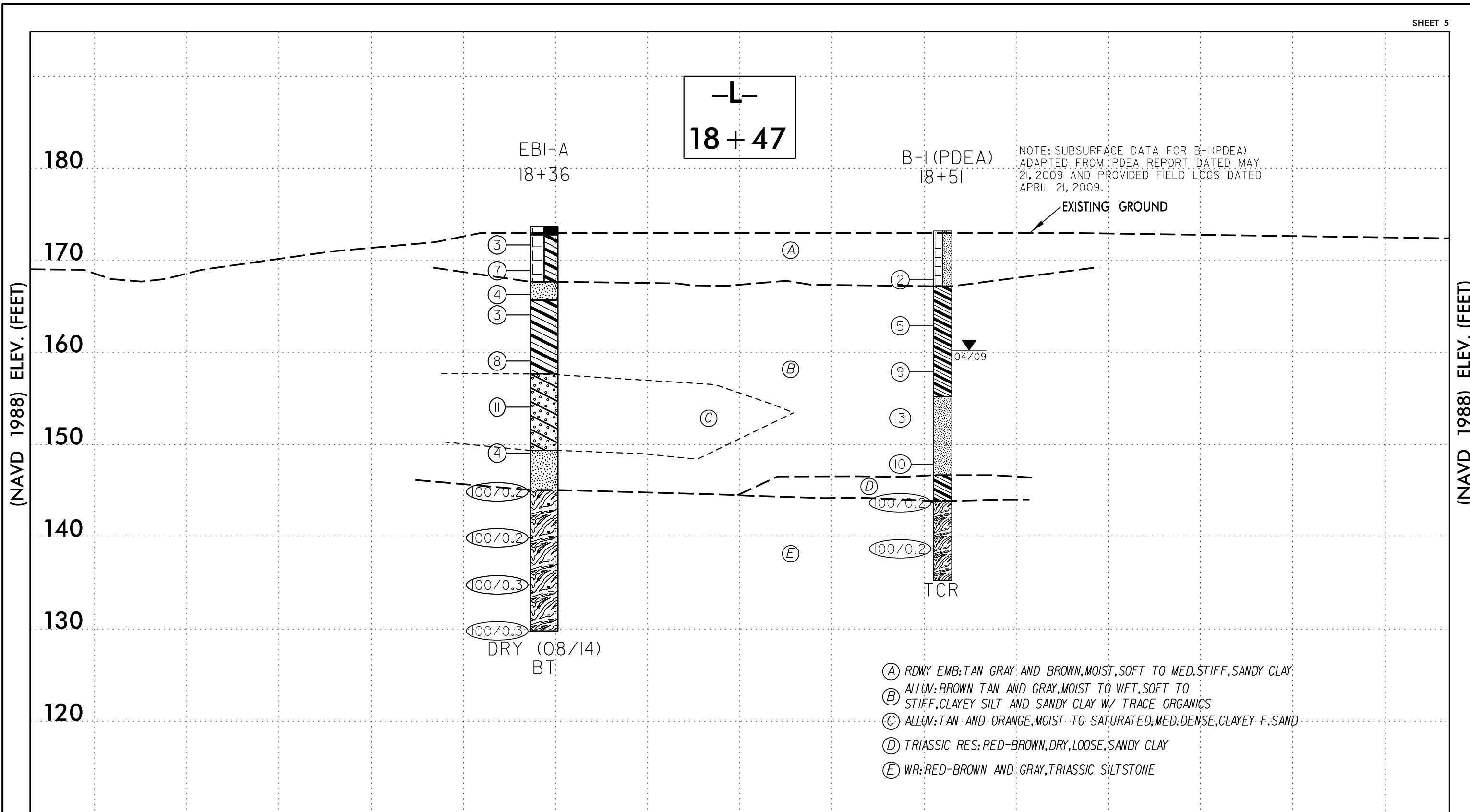
SEE SHEET 3 FOR PLAN VIEW



NOTES:

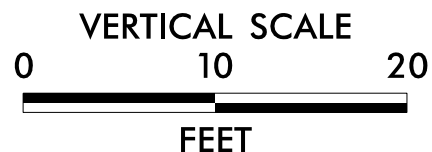
- SUBSURFACE PROFILE OF -L- AND -LDET- TAKEN FROM ELECTRONIC FILES RECEIVED FROM NCDOT GEU IN AUGUST 2014.
- INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE PROFILE.
- BRIDGE SKEW: 60 DEGREES

SEE SHEET 3 FOR PLAN VIEW



NOTES:

- GROUNDLINE CROSS SECTION ALONG BENT TAKEN FROM ELECTRONIC FILES RECEIVED FROM NCDOT GEU IN AUGUST 2014.
- INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.
- BRIDGE SKEW: 60 DEGREES



- (A) RDWY EMB: TAN GRAY AND BROWN, MOIST, SOFT TO MED. STIFF, SANDY CLAY
- (B) ALLUV: BROWN TAN AND GRAY, MOIST TO WET, SOFT TO STIFF, CLAYEY SILT AND SANDY CLAY W/ TRACE ORGANICS
- (C) ALLUV: TAN AND ORANGE, MOIST TO SATURATED, MED. DENSE, CLAYEY F. SAND
- (D) TRIASSIC RES: RED-BROWN, DRY, LOOSE, SANDY CLAY
- (E) WR: RED-BROWN AND GRAY, TRIASSIC SILTSTONE

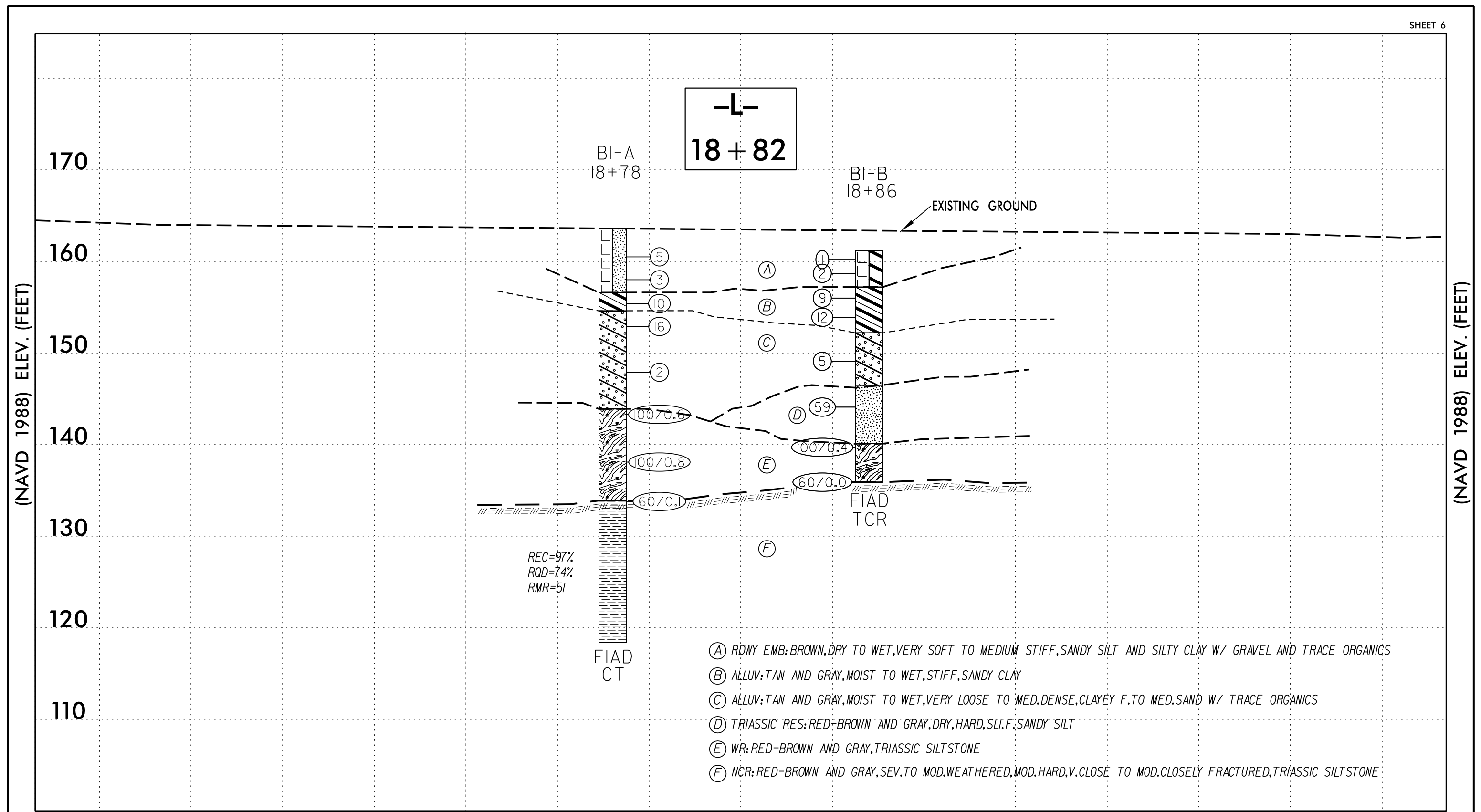
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-L- SUBSURFACE CROSS SECTION (END BENT 1)

BRIDGE NO. 10 ON SR 1916
(CORINTH RD) OVER SHADDOX CREEK
CHATHAM COUNTY, NORTH CAROLINA
WBS.: 33712.1.1, TIP.: B-4461



NOTES:

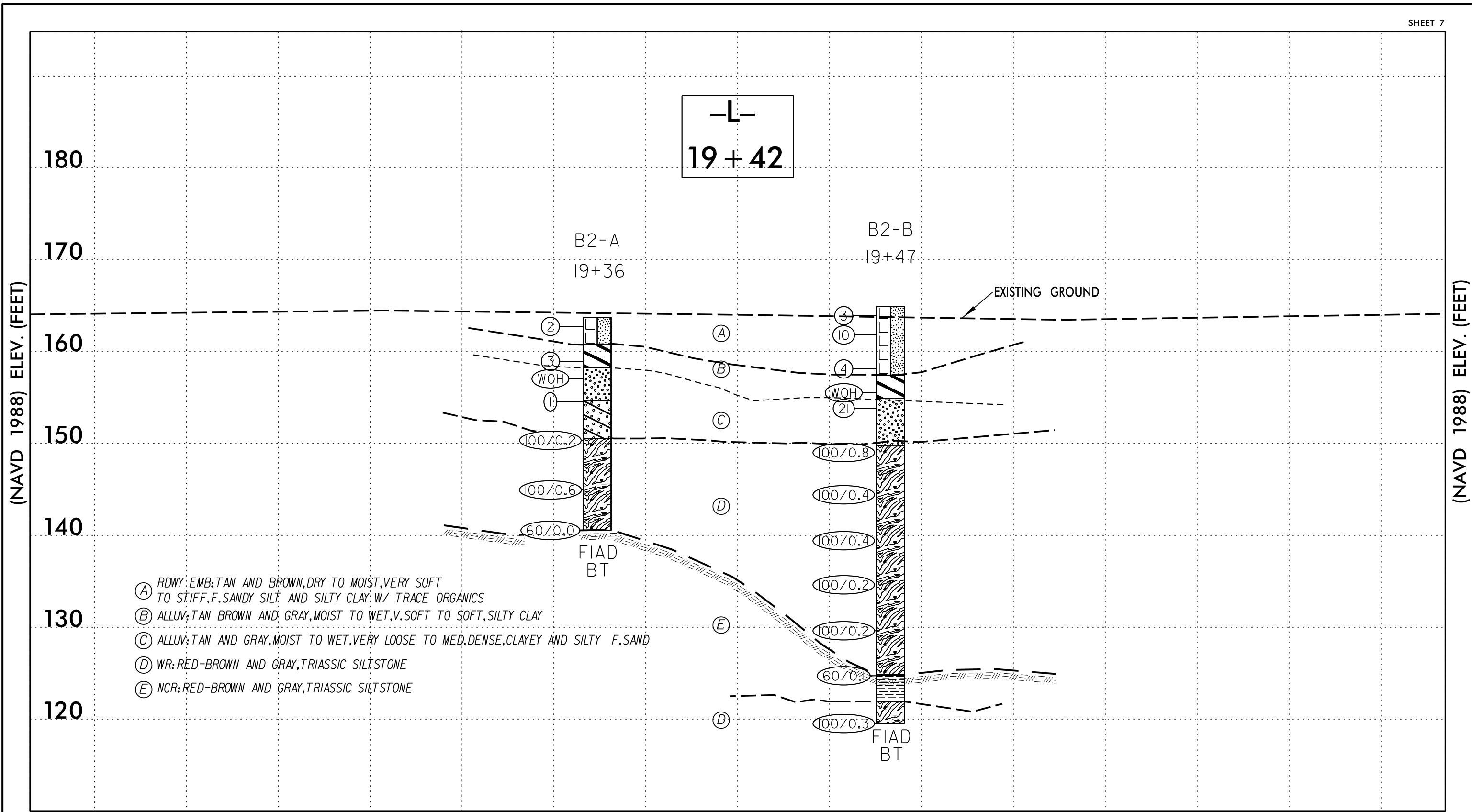
- GROUNDLINE CROSS SECTION ALONG BENT TAKEN FROM ELECTRONIC FILES RECEIVED FROM NCDOT GEU IN AUGUST 2014.
- INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.
- BRIDGE SKEW: 60 DEGREES



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-L- SUBSURFACE CROSS SECTION (INTERIOR BENT 1)

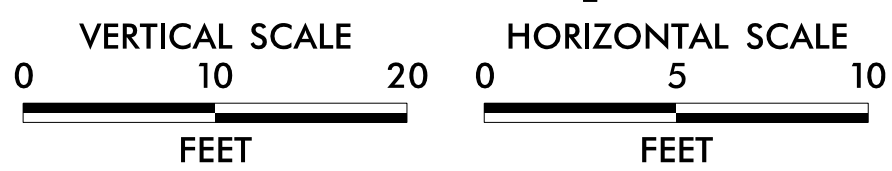
BRIDGE NO. 10 ON SR 1916
(CORINTH RD) OVER SHADDOX CREEK
CHATHAM COUNTY, NORTH CAROLINA
WBS.: 33712.1.1, TIP.: B-4461



- (A) RDWY: EMB: TAN AND BROWN, DRY TO MOIST, VERY SOFT TO STIFF, F. SANDY SILT AND SILTY CLAY W/ TRACE ORGANICS
- (B) ALLUV: TAN BROWN AND GRAY, MOIST TO WET, V. SOFT TO SOFT, SILTY CLAY
- (C) ALLUV: TAN AND GRAY, MOIST TO WET, VERY LOOSE TO MED. DENSE, CLAYEY AND SILTY F. SAND
- (D) WR: RED-BROWN AND GRAY, TRIASSIC SILTSTONE
- (E) NCR: RED-BROWN AND GRAY, TRIASSIC SILTSTONE

NOTES:

- GROUNDLINE CROSS SECTION ALONG BENT TAKEN FROM ELECTRONIC FILES RECEIVED FROM NCDOT GEU IN AUGUST 2014.
- INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.
- BRIDGE SKEW: 60 DEGREES



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1210 TRINITY ROAD, SUITE 110
RALEIGH, NC 27607
PHONE: 919.871.0800
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-L- SUBSURFACE CROSS SECTION (INTERIOR BENT 2)

BRIDGE NO. 10 ON SR 1916
(CORINTH RD) OVER SHADDOX CREEK
CHATHAM COUNTY, NORTH CAROLINA
WBS.: 33712.1.1, TIP.: B-4461

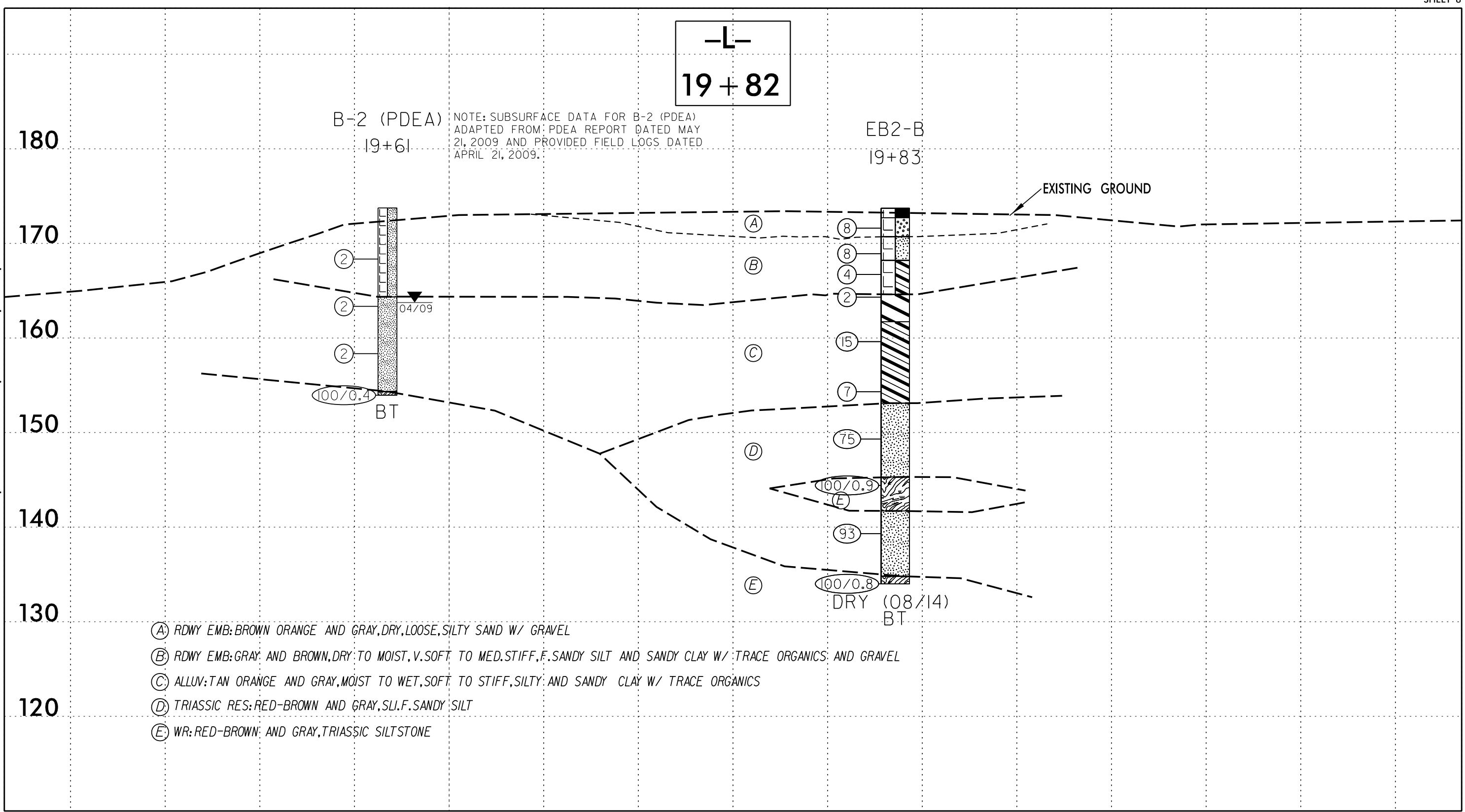
-L-
19 + 82

B-2 (PDEA) 19+61
NOTE: SUBSURFACE DATA FOR B-2 (PDEA) ADAPTED FROM: PDEA REPORT DATED MAY 21, 2009 AND PROVIDED FIELD LOGS DATED APRIL 21, 2009.

EB2-B 19+83

(NAVD 1988) ELEV. (FEET)

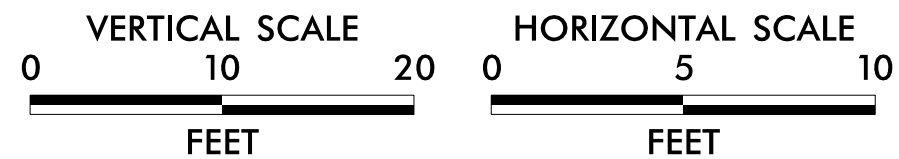
(NAVD 1988) ELEV. (FEET)



- (A) RDWY EMB: BROWN ORANGE AND GRAY, DRY, LOOSE, SILTY SAND W/ GRAVEL
- (B) RDWY EMB: GRAY AND BROWN, DRY TO MOIST, V. SOFT TO MED. STIFF, F. SANDY SILT AND SANDY CLAY W/ TRACE ORGANICS AND GRAVEL
- (C) ALLUV: TAN ORANGE AND GRAY, MOIST TO WET, SOFT TO STIFF, SILTY AND SANDY CLAY W/ TRACE ORGANICS
- (D) TRIASSIC RES: RED-BROWN AND GRAY, SL. F. SANDY SILT
- (E) WR: RED-BROWN AND GRAY, TRIASSIC SILTSTONE

NOTES:

- GROUNDLINE CROSS SECTION ALONG BENT TAKEN FROM ELECTRONIC FILES RECEIVED FROM NCDOT GEU IN AUGUST 2014.
- INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.
- BRIDGE SKEW: 60 DEGREES



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-L- SUBSURFACE CROSS SECTION (END BENT 2)

BRIDGE NO. 10 ON SR 1916
(CORINTH RD) OVER SHADDOX CREEK
CHATHAM COUNTY, NORTH CAROLINA
WBS.: 33712.1.1, TIP.: B-4461

WBS 33712.1.1		TIP B-4461		COUNTY CHATHAM		GEOLOGIST Hunsberger, W. S.										
SITE DESCRIPTION BRIDGE NO. 10 ON SR 1916 (CORINTH RD) OVER SHADDOX CREEK							GROUND WTR (ft)									
BORING NO. EB1-A		STATION 18+36		OFFSET 6 ft LT		ALIGNMENT -L-										
COLLAR ELEV. 173.5 ft		TOTAL DEPTH 43.9 ft		NORTHING 671,913		EASTING 1,986,969										
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 92% 02/07/2014				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER GOWER, S.		START DATE 08/21/14		COMP. DATE 08/21/14		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						
175																
	172.5	1.0	3	1	2								M	173.5 EXISTING PAVEMENT 0.0		
													M	172.6 0.9' BITUMINOUS CONCRETE 0.9		
170	169.7	3.8	1	3	4								M	ROADWAY EMBANKMENT TAN GRAY AND BROWN, SANDY CLAY (A-6)		
	167.1	6.4	1	2	2								M	167.5 ALLUVIAL 6.0		
165	164.9	8.6	1	1	2								M	165.5 BROWN AND TAN, CLAYEY SILT (A-4) 8.0		
													W	BROWN AND GRAY, SANDY CLAY (A-6) W/ TRACE ORGANICS		
160	159.9	13.6	22	3	5								M	157.5 TAN AND ORANGE, CLAYEY F. SAND (A-2-6) 16.0		
155	154.9	18.6	3	5	6								W			
150	149.9	23.6	5	3	1								Sat.	149.2 GRAY, CLAYEY SILT (A-4) W/ TRACE ORGANICS 24.3		
145	144.9	28.6	100/0.2											144.9 WEATHERED ROCK 28.6		
														RED-BROWN AND GRAY, TRIASSIC SILTSTONE		
140	139.9	33.6	100/0.2													
135	134.9	38.6	100/0.3													
130	129.9	43.6	100/0.3													
																Boring Terminated at Elevation 129.6 ft in WR: TRIASSIC SILTSTONE

NCDOT BORE SINGLE B4461_GEO_BRDG0010_GINT.GPJ NC_DOT.GDT 11/13/14

WBS 33712.1.1	TIP B-4461	COUNTY CHATHAM	GEOLOGIST Hunsberger, W. S.
SITE DESCRIPTION BRIDGE NO. 10 ON SR 1916 (CORINTH RD) OVER SHADDOX CREEK			GROUND WTR (ft)
BORING NO. B1-A	STATION 18+78	OFFSET 6 ft LT	ALIGNMENT -L-
COLLAR ELEV. 164.6 ft	TOTAL DEPTH 45.2 ft	NORTHING 671,952	EASTING 1,986,954
DRILL RIG/HAMMER EFF./DATE TRI0055 CME-55 73% 02/07/2014		DRILL METHOD Wash Boring	HAMMER TYPE Automatic
DRILLER WICHARD, W.	START DATE 08/28/14	COMP. DATE 08/28/14	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					
165														164.6	0.0
	162.5	2.1	2	3	2										
160	160.0	4.6	2	1	2										
	157.4	7.2	5	5	5										
155	154.9	9.7	6	7	9										
150	149.9	14.7	4	1	1										
145	144.9	19.7	74	26/0.1											
140	139.9	24.7	56	44/0.3											
135	134.9	29.7	60/0.1												
130															
125															
120															

Boring Terminated at Elevation 119.4 ft in NCR: TRIASSIC SILTSTONE														
O HR WATER LEVEL INACCURATE DUE TO DRILLING METHOD														

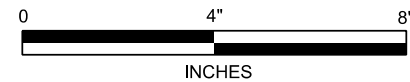
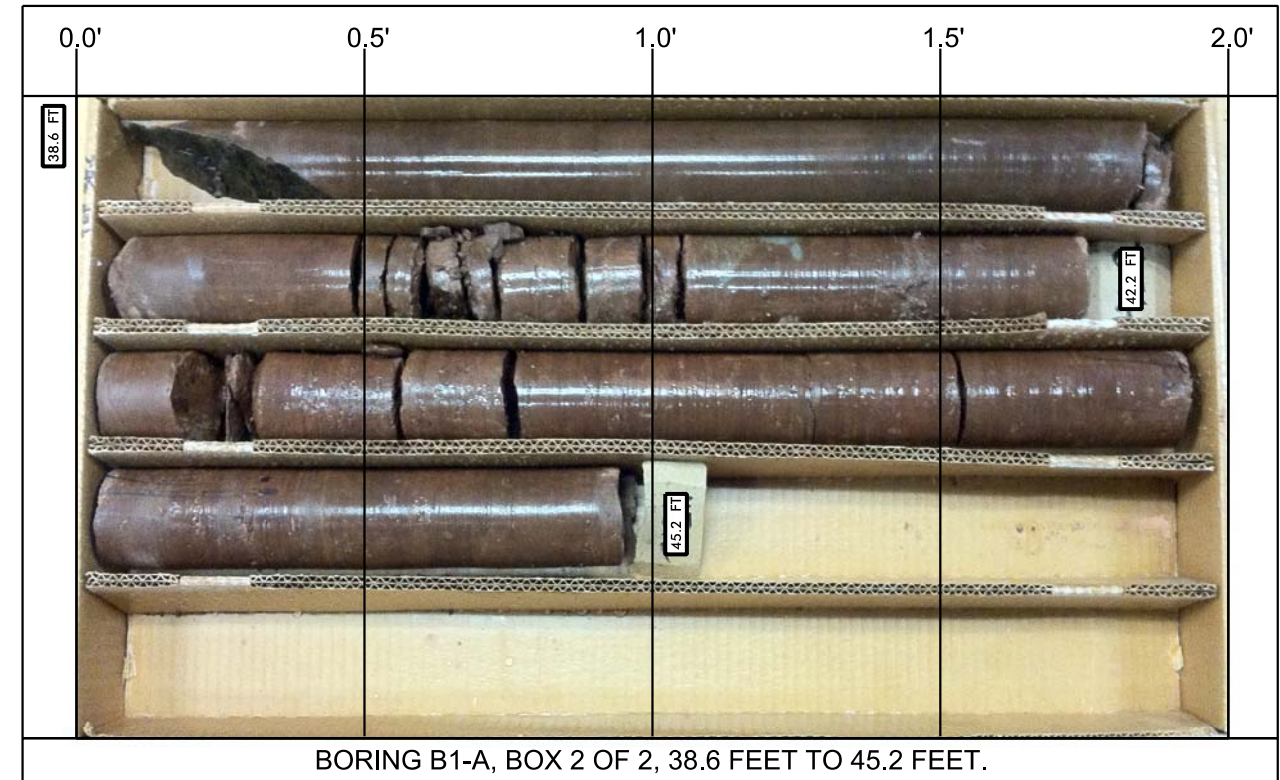
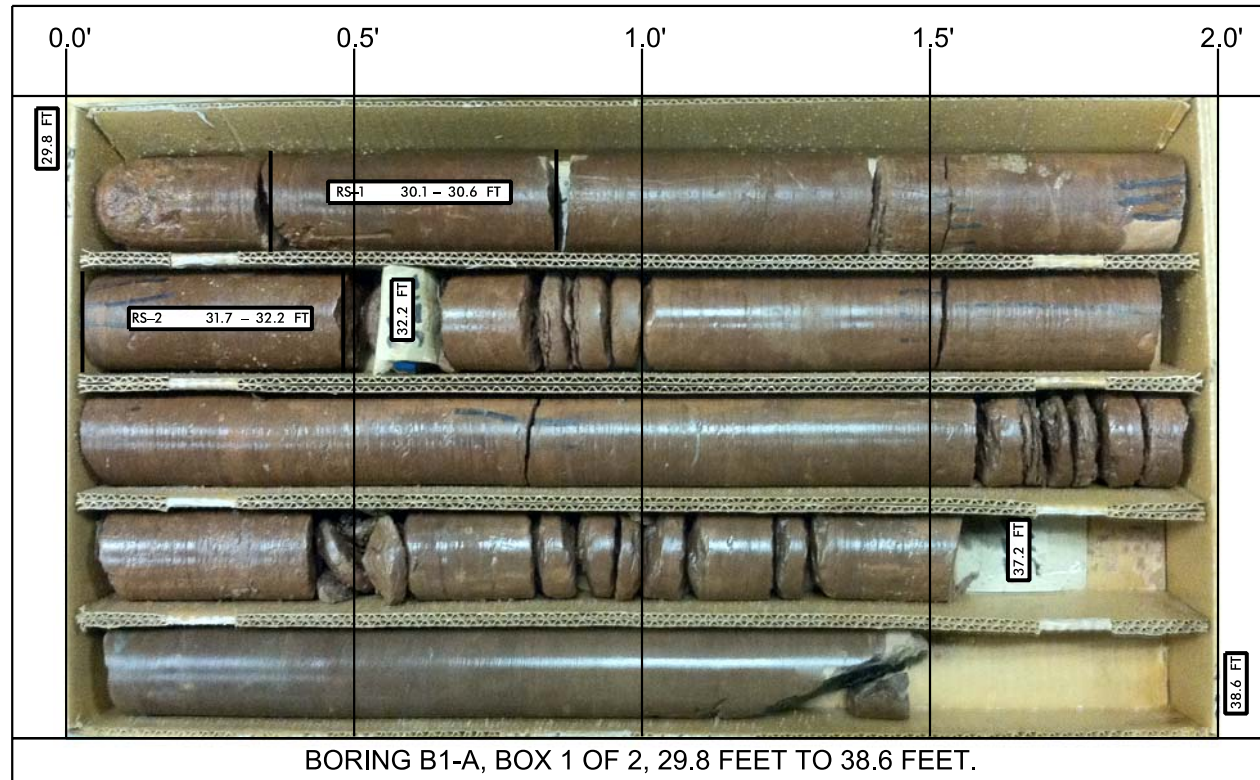
NCDOT BORE SINGLE B4461_GEO_BRD0010_GINT.GPJ NC_DOT.GDT 11/13/14

WBS 33712.1.1	TIP B-4461	COUNTY CHATHAM	GEOLOGIST Hunsberger, W. S.
SITE DESCRIPTION BRIDGE NO. 10 ON SR 1916 (CORINTH RD) OVER SHADDOX CREEK			GROUND WTR (ft)
BORING NO. B1-A	STATION 18+78	OFFSET 6 ft LT	ALIGNMENT -L-
COLLAR ELEV. 164.6 ft	TOTAL DEPTH 45.2 ft	NORTHING 671,952	EASTING 1,986,954
DRILL RIG/HAMMER EFF./DATE TRI0055 CME-55 73% 02/07/2014		DRILL METHOD Wash Boring	HAMMER TYPE Automatic
DRILLER WICHARD, W.	START DATE 08/28/14	COMP. DATE 08/28/14	SURFACE WATER DEPTH N/A

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN		SAMP. NO.	STRATA		LOG	DESCRIPTION AND REMARKS	DEPTH (ft)
					REC. (%)	RQD (%)		REC. (%)	RQD (%)			
134.9												
	134.9	29.7	2.5	3:55/0.5	(2.5)	(2.1)	RS-1	(15.1)	(11.4)			
	132.4	32.2		5:25/1.0	100%	84%	RS-2	97%	74%			
130			5.0	3:42/1.0								
				5:17/1.0	(4.8)	(2.9)						
				3:45/1.0	96%	58%						
				4:18/1.0								
				5:27/1.0								
				6:21/1.0								
125			5.0	3:51/1.0	(4.9)	(4.0)						
				4:13/1.0	98%	80%						
				4:33/1.0								
				5:25/1.0								
				5:27/1.0								
120			3.0	5:28/1.0	(2.9)	(2.4)						
				5:52/1.0	97%	80%						
				4:13/1.0								

Boring Terminated at Elevation 119.4 ft in NCR: TRIASSIC SILTSTONE											
O HR WATER LEVEL INACCURATE DUE TO DRILLING METHOD											

NCDOT CORE SINGLE B4461_GEO_BRD0010_GINT.GPJ NC_DOT.GDT 12/10/14



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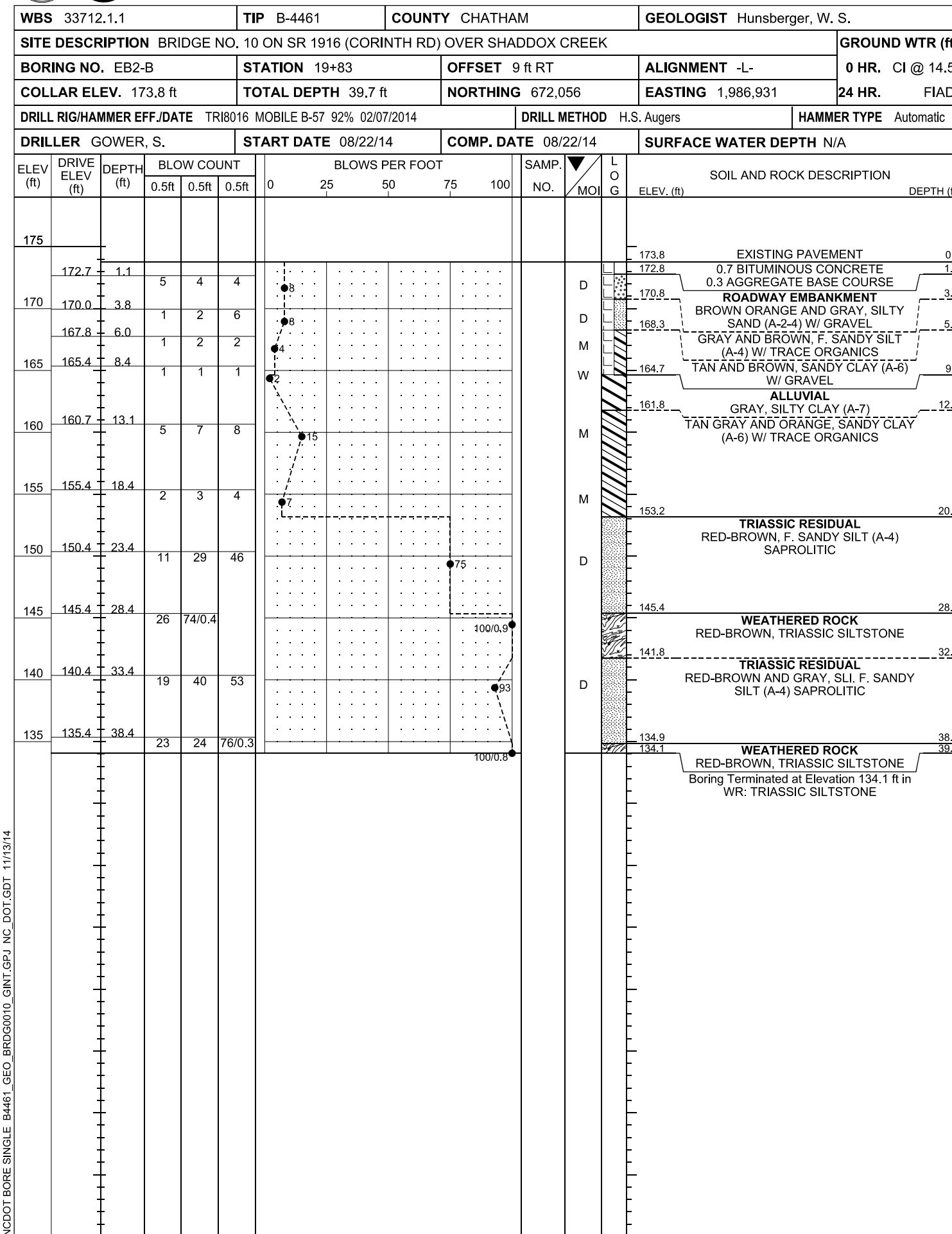
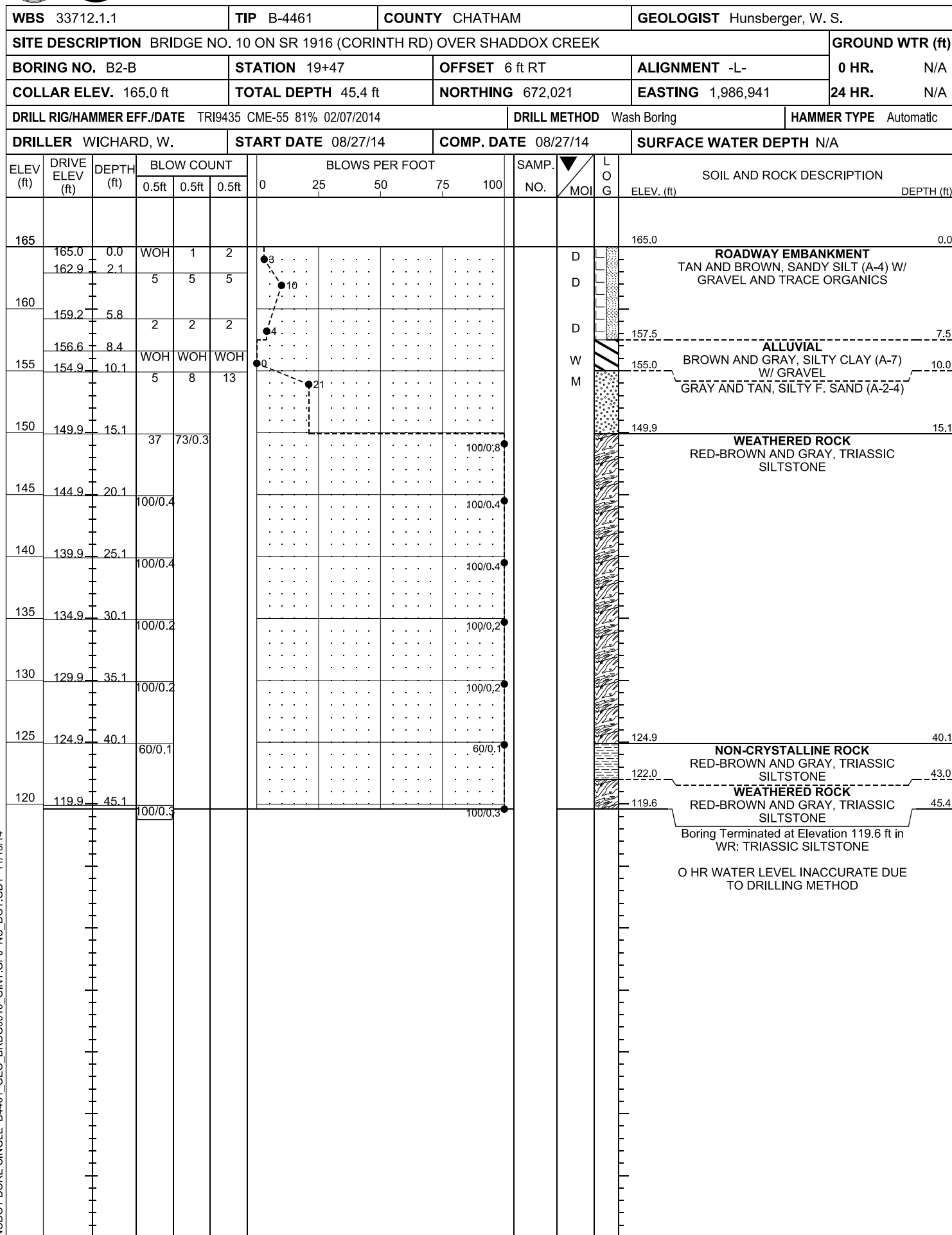
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ROCK CORE PHOTOGRAPHS

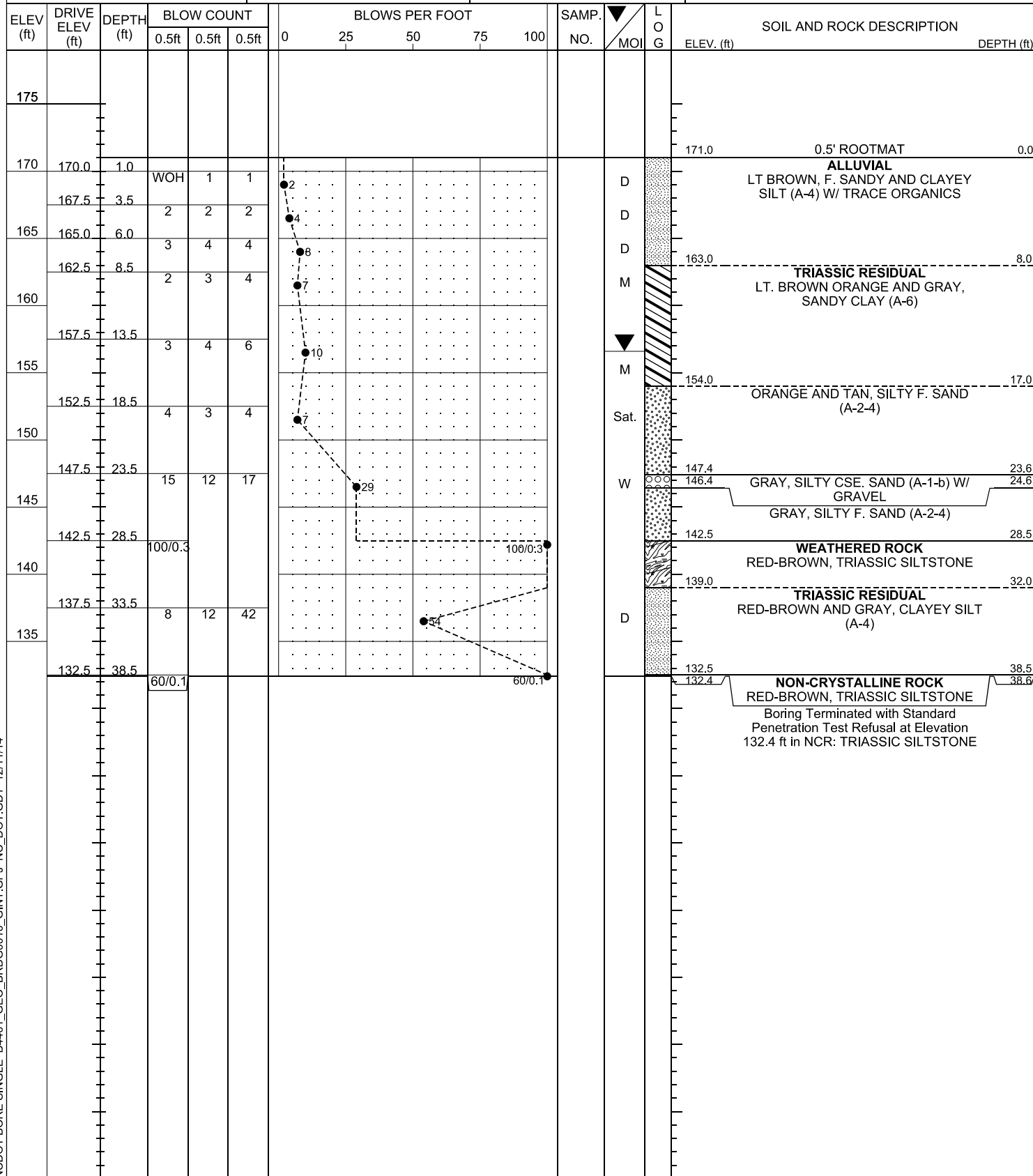
BRIDGE NO. 10 ON SR 1916
(CORINTH RD) OVER SHADDOX CREEK
CHATHAM COUNTY, NC
WBS NO.: 33712.1.1, TIP NO.: B-4461

WBS 33712.1.1		TIP B-4461		COUNTY CHATHAM		GEOLOGIST Hunsberger, W. S.										
SITE DESCRIPTION BRIDGE NO. 10 ON SR 1916 (CORINTH RD) OVER SHADDOX CREEK							GROUND WTR (ft)									
BORING NO. B1-B		STATION 18+86		OFFSET 7 ft RT		ALIGNMENT -L-										
COLLAR ELEV. 161.2 ft		TOTAL DEPTH 25.3 ft		NORTHING 671,965		EASTING 1,986,963										
DRILL RIG/HAMMER EFF./DATE TRI9435 CME-55 81% 02/07/2014		DRILL METHOD Wash Boring		HAMMER TYPE Automatic												
DRILLER WICHARD, W.		START DATE 08/26/14		COMP. DATE 08/26/14		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
165																
160	161.2	0.0	1	WOH	1									ROADWAY EMBANKMENT LT. BROWN, SILTY CLAY (A-7) W/ TRACE ORGANICS	0.0	
	159.7	1.5	WOH	WOH	2											
	157.0	4.2	4	4	5									ALLUVIAL GRAY AND TAN, SANDY CLAY (A-6)	4.0	
155	154.9	6.3	3	5	7											
	150.1	11.1	3	2	3									GRAY AND TAN, CLAYEY F. TO MED. SAND (A-2-6)	9.0	
145	145.1	16.1	29	33	26									TRIASSIC RESIDUAL RED-BROWN AND GRAY, SLI. F. SANDY SILT (A-4)	14.7	
140	140.1	21.1	100/0.4											WEATHERED ROCK RED-BROWN AND GRAY, TRIASSIC SILTSTONE	21.1	
	135.9	25.3	60/0.0											Boring Terminated by Tricone Refusal at Elevation 135.9 ft on NCR: TRIASSIC SILTSTONE	25.3	
														O HR WATER LEVEL INACCURATE DUE TO DRILLING METHOD		

WBS 33712.1.1		TIP B-4461		COUNTY CHATHAM		GEOLOGIST Hunsberger, W. S.										
SITE DESCRIPTION BRIDGE NO. 10 ON SR 1916 (CORINTH RD) OVER SHADDOX CREEK							GROUND WTR (ft)									
BORING NO. B2-A		STATION 19+36		OFFSET 6 ft LT		ALIGNMENT -L-										
COLLAR ELEV. 163.1 ft		TOTAL DEPTH 23.2 ft		NORTHING 672,007		EASTING 1,986,934										
DRILL RIG/HAMMER EFF./DATE TRI9435 CME-55 81% 02/07/2014		DRILL METHOD Mud Rotary		HAMMER TYPE Automatic												
DRILLER WICHARD, W.		START DATE 08/26/14		COMP. DATE 08/26/14		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
165																
	163.1	0.0	WOH	1	1									ROADWAY EMBANKMENT TAN, F. SANDY SILT (A-4)	0.0	
160	159.3	3.8	2	1	2									ALLUVIAL TAN, SILTY CLAY (A-7)	3.0	
	157.4	5.7	WOH	WOH	WOH									TAN, SILTY SAND (A-2-4)	5.5	
155	154.9	8.2	WOH	WOH	1									GRAY, CLAYEY F. SAND (A-2-6)	9.1	
150	149.9	13.2	100/0.2											WEATHERED ROCK RED-BROWN AND GRAY, TRIASSIC SILTSTONE	13.2	
145	144.9	18.2	71	29/0.1												
140	139.9	23.2	60/0.0													
														Boring Terminated with Standard Penetration Test Refusal at Elevation 139.9 ft on NCR: TRIASSIC SILTSTONE	23.2	
														O HR WATER LEVEL INACCURATE DUE TO DRILLING METHOD		

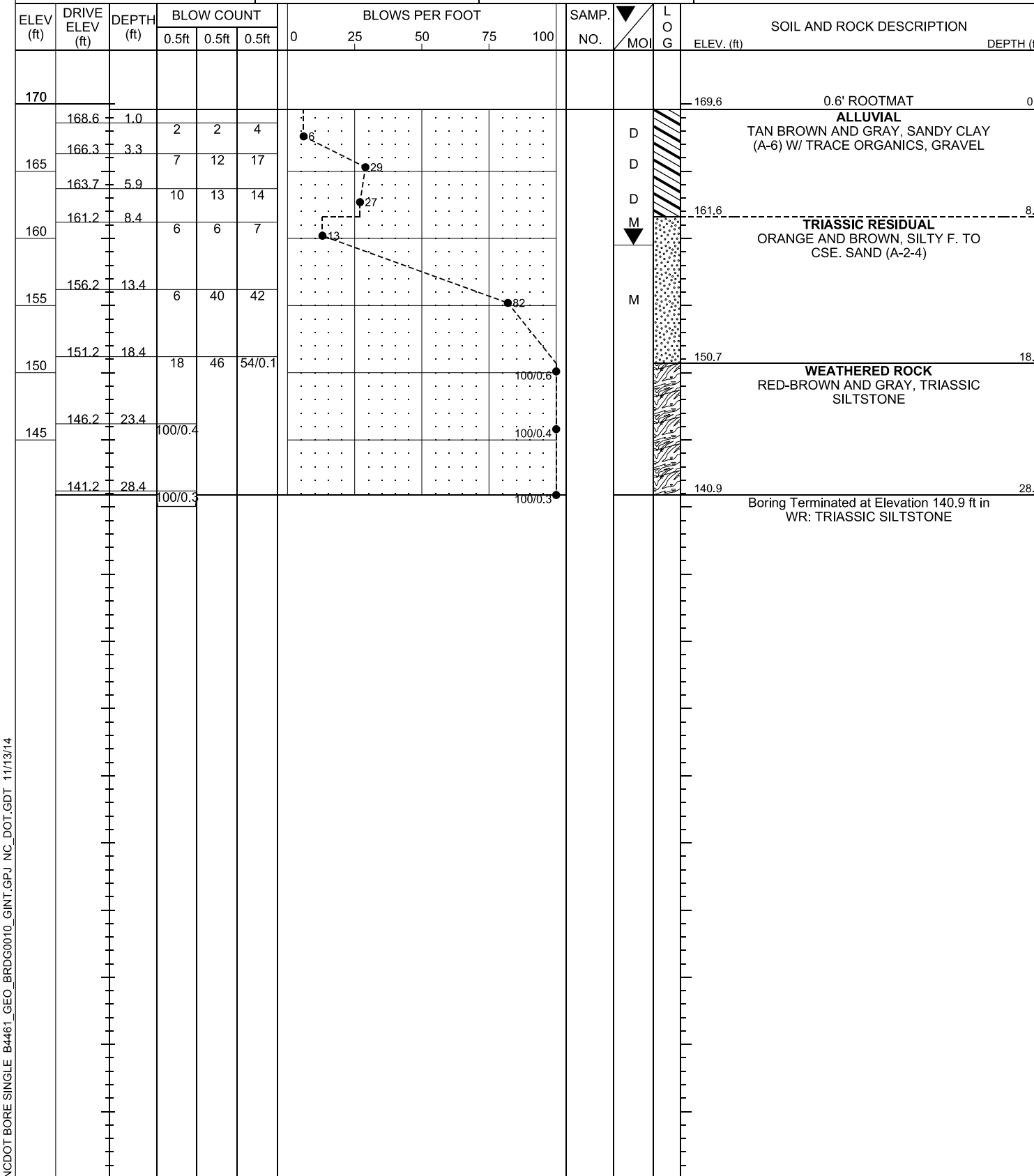


WBS 33712.1.1	TIP B-4461	COUNTY CHATHAM	GEOLOGIST Hunsberger, W. S.
SITE DESCRIPTION BRIDGE NO. 10 ON SR 1916 (CORINTH RD) OVER SHADDOX CREEK			GROUND WTR (ft)
BORING NO. EB1 DET	STATION 14+44	OFFSET 2 ft RT	ALIGNMENT -LDET-
COLLAR ELEV. 171.0 ft	TOTAL DEPTH 38.6 ft	NORTHING 671,989	EASTING 1,987,002
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 92% 02/07/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER WICHARD, W.	START DATE 08/25/14	COMP. DATE 08/26/14	SURFACE WATER DEPTH N/A



NCDOT BORE SINGLE B4461_GEO_BRDG0010_GINT.GPJ NC_DOT.GDT 12/11/14

WBS 33712.1.1	TIP B-4461	COUNTY CHATHAM	GEOLOGIST Hunsberger, W. S.
SITE DESCRIPTION BRIDGE NO. 10 ON SR 1916 (CORINTH RD) OVER SHADDOX CREEK			GROUND WTR (ft)
BORING NO. EB2 DET	STATION 15+40	OFFSET 7 ft LT	ALIGNMENT -LDET-
COLLAR ELEV. 169.6 ft	TOTAL DEPTH 28.7 ft	NORTHING 672,075	EASTING 1,986,959
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 92% 02/07/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER WICHARD, W.	START DATE 08/25/14	COMP. DATE 08/25/14	SURFACE WATER DEPTH N/A



NCDOT BORE SINGLE B4461_GEO_BRDG0010_GINT.GPJ NC_DOT.GDT 11/13/14

WBS 33712.1.1		TIP B-4461		COUNTY CHATHAM		GEOLOGIST Stickney, J. K.										
SITE DESCRIPTION BRIDGE NO. 10 ON SR 1916 (CORINTH RD) OVER SHADDOX CREEK							GROUND WTR (ft)									
BORING NO. B-1 (PDEA)		STATION 18+51		OFFSET 10 ft RT		ALIGNMENT -L-										
COLLAR ELEV. 173.2 ft		TOTAL DEPTH 37.9 ft		NORTHING 671,933		EASTING 1,986,979										
DRILL RIG/HAMMER EFF./DATE N/A		DRILL METHOD N/A		HAMMER TYPE Automatic												
DRILLER N/A		START DATE 04/21/09		COMP. DATE 04/21/09		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
175															173.2	0.0
170	168.9	4.3	2	1	1							SS-1	M		173.2	0.0
165	163.9	9.3	1	2	3							SS-2	M		167.2	6.0
160	158.9	14.3	2	4	5							SS-3	M		155.2	18.0
155	153.9	19.3	3	6	7							SS-4	M		146.7	26.5
150	148.9	24.3	5	5	5							SS-5	Sat.		143.9	29.3
145	143.9	29.3	100/0.2												143.9	29.3
140	138.9	34.3	100/0.2												135.3	37.9
Boring Terminated by Tricone Refusal at Elevation 135.3 ft on NCR: TRIASSIC SILTSTONE NOTE: SUBSURFACE DATA FOR B-1 (PDEA) ADAPTED FROM PDEA REPORT DATED MAY 21, 2009 AND PROVIDED FIELD LOGS DATED APRIL 21, 2009.																

WBS 33712.1.1		TIP B-4461		COUNTY CHATHAM		GEOLOGIST Stickney, J. K.										
SITE DESCRIPTION BRIDGE NO. 10 ON SR 1916 (CORINTH RD) OVER SHADDOX CREEK							GROUND WTR (ft)									
BORING NO. B-2 (PDEA)		STATION 19+61		OFFSET 9 ft LT		ALIGNMENT -L-										
COLLAR ELEV. 173.8 ft		TOTAL DEPTH 19.8 ft		NORTHING 672,029		EASTING 1,986,921										
DRILL RIG/HAMMER EFF./DATE N/A		DRILL METHOD N/A		HAMMER TYPE Automatic												
DRILLER N/A		START DATE 04/21/09		COMP. DATE 04/21/09		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
175															173.8	0.0
170	169.4	4.4	1	1	1							SS-6	M		173.8	0.0
165	164.4	9.4	1	1	1							SS-7	M		164.4	9.4
160	159.4	14.4	WOH	1	2								M		154.4	19.4
155	154.4	19.4	100/0.4												154.0	19.8
WEATHERED ROCK RED-BROWN, TRIASSIC SILTSTONE Boring Terminated by Tricone Refusal at Elevation 154.0 ft on NCR: TRIASSIC SILTSTONE NOTE: SUBSURFACE DATA FOR B-2 (PDEA) ADAPTED FROM PDEA REPORT DATED MAY 21, 2009 AND PROVIDED FIELD LOGS DATED APRIL 21, 2009.																

AASHTO SOIL CLASSIFICATION AND GRADATION SHEET
BRIDGE NO. 10 ON SR 1916 (CORINTH ROAD) OVER SHADDOX CREEK
TIP NO.: B-4461

CHATHAM COUNTY, NORTH CAROLINA
FALCON ENGINEERING, INC. PROJECT NO: G14035.00

LABORATORY SUMMARY SHEET FOR ROCK CORE SAMPLES
BRIDGE NO. 10 ON SR 1916 (CORINTH ROAD) OVER SHADDOX CREEK
TIP NO.: B-4461

CHATHAM COUNTY, NORTH CAROLINA
FALCON ENGINEERING, INC. PROJECT NO: G14035.00

BORING			SAMPLE	TOTAL SAMPLE			Atterberg Limit Test Results			COARSE SAND (%)	FINE SAND (%)	SILT (%)	CLAY (%)
AASHTO Classification			PERCENT PASSING			LL	PL	PI					
STATION	OFFSET (FEET)	DEPTH (FEET)	#10	#40	#200								
B-1 (PDEA)			SS-1	100	99	88	30	22	8	2.2	18.9	50.5	28.4
A-4													
18+51 -L-	10' RT	4.8-5.8											
B-1 (PDEA)			SS-2	100	100	91	33	21	12	0.4	16.4	45.0	38.1
A-6													
18+51 -L-	10' RT	9.8-10.8											
B-1 (PDEA)			SS-3	100	100	95	37	22	15	1.4	9.0	47.4	42.1
A-6													
18+51 -L-	10' RT	14.8-15.8											
B-1 (PDEA)			SS-4	100	99	81	27	20	7	3.2	23.9	44.8	28.1
A-4													
18+51 -L-	10' RT	19.8-20.8											
B-1 (PDEA)			SS-5	100	82	40	17	15	2	39.3	25.5	23.2	12.0
A-4													
18+51 -L-	10' RT	24.8-25.8											
B-2 (PDEA)			SS-6	99	98	78	24	19	5	1.6	32.7	39.6	26.1
A-4													
19+61 -L-	9' LT	4.8-5.9											
B-2 (PDEA)			SS-7	100	100	91	26	21	5	0.4	19.5	52.1	28.1
A-4													
19+61 -L-	9' LT	9.9-10.9											

Sample No.	Boring	Depth (ft)	Rock Type	Geologic Map Unit	Run RQD	Length (ft)	Diameter (ft)	Unit Weight (PCF)	Unconfined Compressive Strength (PSI)	Young's Modulus (PSI)	Rock Mass Rating (RMR)
RS-1	B1-A	30.1-30.5	TRIASSIC SILTSTONE	TRcp	84%	0.35	0.16	165.9	10,020	1,316,005	51
RS-2	B1-A	31.7-32.0	TRIASSIC SILTSTONE	TRcp	84%	0.34	0.16	164.1	8,205	884,465	51



PHOTOGRAPH TAKEN ON SR 1916 (CORINTH RD)
LOOKING UPSTATION ALONG ALIGNMENT -L-



PHOTOGRAPH TAKEN FROM END BENT 2
LOOKING DOWNSTATION ALONG -L-



PHOTOGRAPH TAKEN FROM EAST OF END BENT 2
LOOKING LEFT AND SHOWING EXISTING INTERIOR BENTS



PHOTOGRAPH TAKEN FROM NEAR END BENT 2 OF THE
DETOUR STRUCTURE LOOKING DOWNSTATION ALONG -LDET-



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FAX: 919.871.0803

SITE PHOTOGRAPHS

BRIDGE NO. 10 ON SR 1916
(CORINTH RD) OVER SHADDOX CREEK
CHATHAM COUNTY, NC
WBS NO.: 33712.1.1, TIP NO.: B-4461