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REFERENCE: B-5165

PROJECT: 42341

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

**STRUCTURE**  
**SUBSURFACE INVESTIGATION**

COUNTY DAVIDSON  
 PROJECT DESCRIPTION REPLACE BRIDGE NO. 42 OVER  
MUDDY CREEK ON SR 1485 (HAMPTON ROAD)

**CONTENTS**

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
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2	LEGEND
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4	PROFILE
5	CROSS SECTION
6 - 9	BORE LOGS & CORE REPORT WITH CORE PHOTOGRAPHS
10	LABORATORY SUMMARY SHEET FOR ROCK CORE SAMPLES

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5165	1	10

**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

STICKNEY, J. K.

SMITH, C. L.

MOORE, M. R.

INVESTIGATED BY STICKNEY, J. K.

DRAWN BY ALEXANDER, M. J.

CHECKED BY MILLER, K. B.

SUBMITTED BY MILLER, K. B.

DATE AUGUST 2016



DocuSigned by:

957A789AED704CB...

8/2/2016

SIGNATURE

DATE

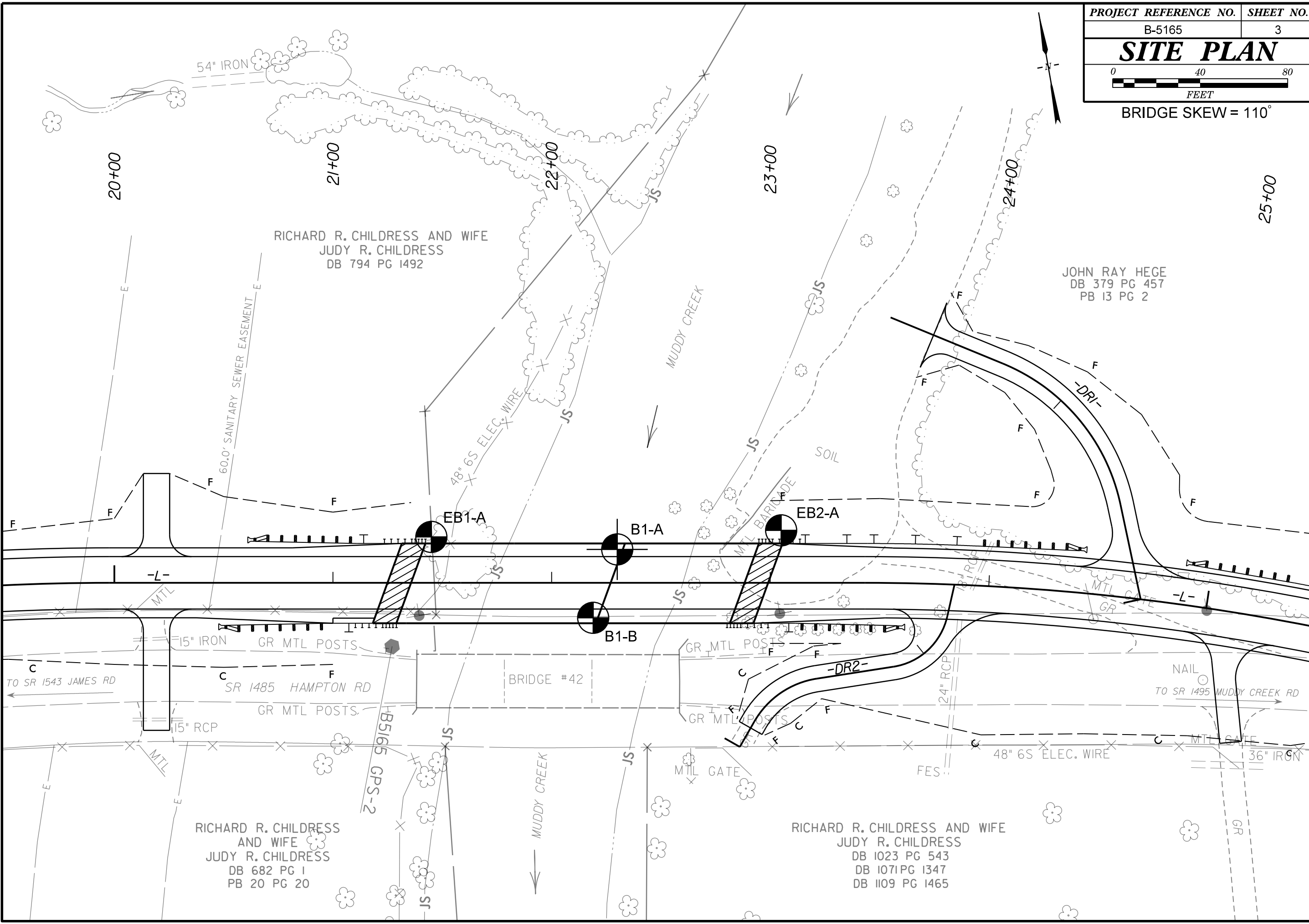
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**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
GEOTECHNICAL ENGINEERING UNIT  
SUBSURFACE INVESTIGATION  
SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS**

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 208, 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 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 DISLOGGED 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. 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.									
<b>SOIL LEGEND AND AASHTO CLASSIFICATION</b>										<b>ANGULARITY OF GRAINS</b>										<b>WEATHERED ROCK (WR)</b>										<b>CRYSTALLINE ROCK (CR)</b>									
<b>MINERALOGICAL COMPOSITION</b>										<b>NON-CRYSTALLINE ROCK (NCR)</b>										<b>COASTAL PLAIN SEDIMENTARY ROCK (CP)</b>										<b>WEATHERING</b>									
<b>COMPRESSION</b>										<b>PERCENTAGE OF MATERIAL</b>										<b>GROUND WATER</b>										<b>MISCELLANEOUS SYMBOLS</b>									
<b>TEXTURE OR GRAIN SIZE</b>										<b>RECOMMENDATION SYMBOLS</b>										<b>ROCK HARDNESS</b>										<b>ABBREVIATIONS</b>									
<b>CONSISTENCY OR DENSENESS</b>										<b>SOIL MOISTURE - CORRELATION OF TERMS</b>										<b>FRACTURE SPACING</b>										<b>BEDDING</b>									
<b>PLASTICITY</b>										<b>EQUIPMENT USED ON SUBJECT PROJECT</b>										<b>INDURATION</b>										<b>NOTES:</b>									
<b>COLOR</b>																																							
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.																																							

ELEVATION: 670.90 FEET

NOTES:  
FIAD - FILLED IMMEDIATELY AFTER DRILLING  
NM - NOT MEASURED

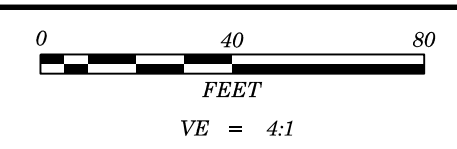


RICHARD R. CHILDRESS AND WIFE  
 JUDY R. CHILDRESS  
 DB 794 PG 1492

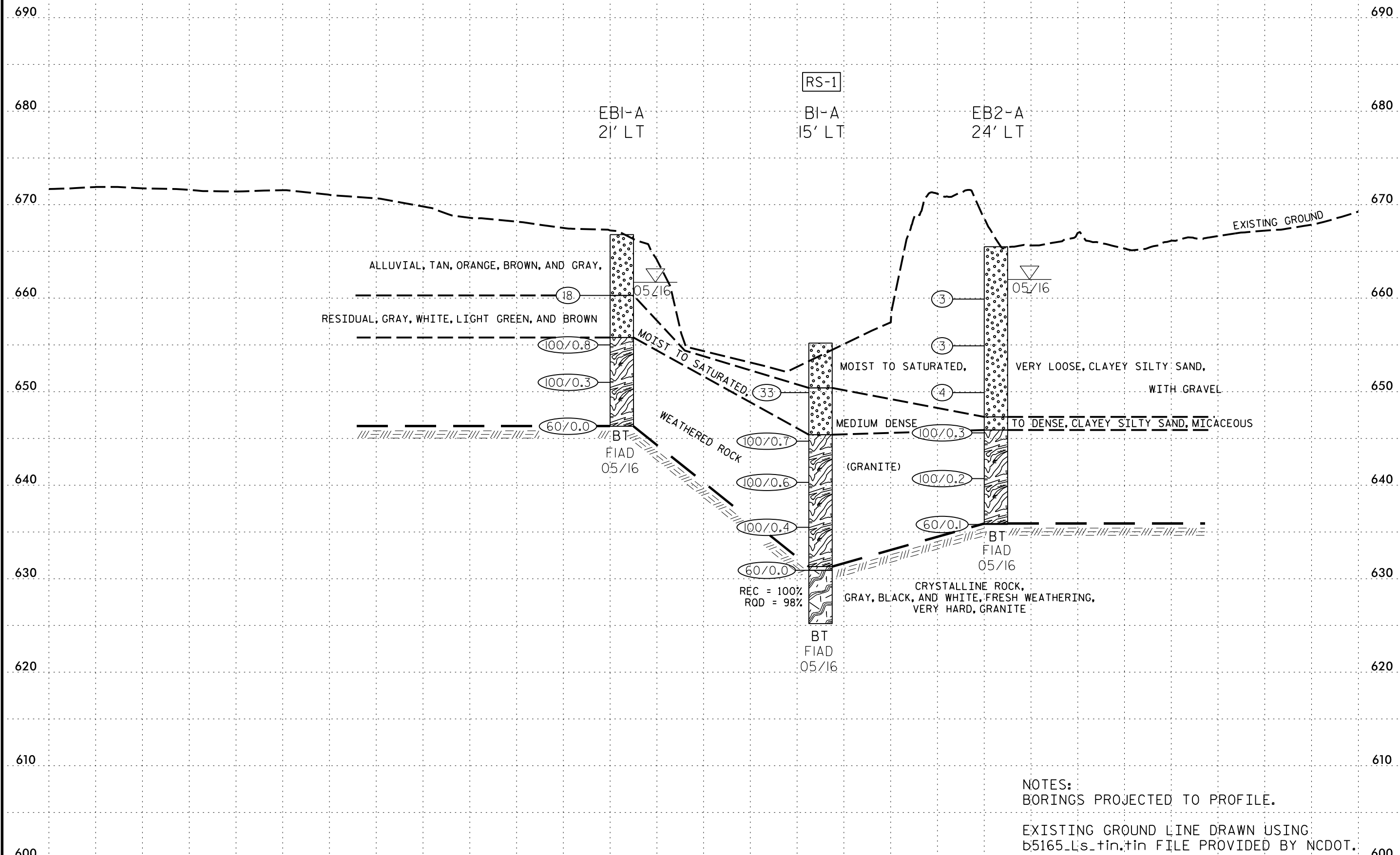
JOHN RAY HEGE  
 DB 379 PG 457  
 PB 13 PG 2

RICHARD R. CHILDRESS  
 AND WIFE  
 JUDY R. CHILDRESS  
 DB 682 PG 1  
 PB 20 PG 20

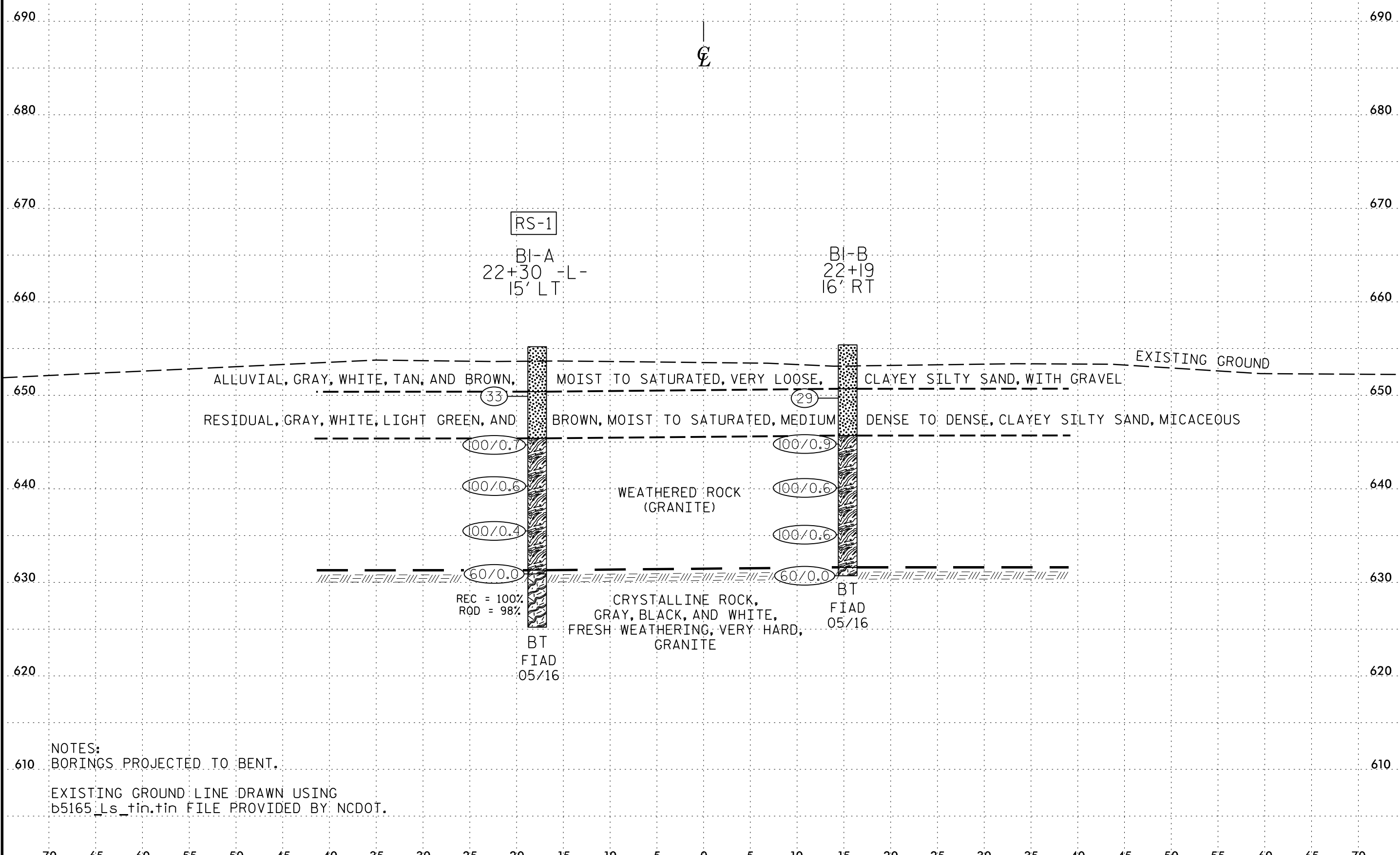
RICHARD R. CHILDRESS AND WIFE  
 JUDY R. CHILDRESS  
 DB 1023 PG 543  
 DB 1071 PG 1347  
 DB 1109 PG 1465



PROJECT REFERENCE NO.	SHEET NO.
B-5165	4
PROFILE ALONG -L- AT BRIDGE NO. 42	



NOTES:  
BORINGS PROJECTED TO PROFILE.  
EXISTING GROUND LINE DRAWN USING  
b5165\_Ls\_tin.tin FILE PROVIDED BY NCDOT.



NOTES:  
BORINGS PROJECTED TO BENT.  
EXISTING GROUND LINE DRAWN USING  
b5165\_Ls\_tin.tin FILE PROVIDED BY NCDOT.

# GEOTECHNICAL BORING REPORT BORE LOG

WBS 42341	TIP B-5165	COUNTY DAVIDSON	GEOLOGIST Stickney, J. K.
SITE DESCRIPTION BRIDGE NO. 42 OVER MUDDY CREEK ON SR 1485 (HAMPTON ROAD)			GROUND WTR (ft)
BORING NO. EB1-A	STATION 21+45	OFFSET 21 ft LT	ALIGNMENT -L-
COLLAR ELEV. 666.8 ft	TOTAL DEPTH 20.5 ft	NORTHING 799,904	EASTING 1,598,047
DRILL RIG/HAMMER EFF./DATE HFO0072 CME-550X 85% 05/20/2016		DRILL METHOD NW Casing w/ SPT	HAMMER TYPE Automatic
DRILLER Smith, C. L.	START DATE 05/16/16	COMP. DATE 05/16/16	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								
670																		
665															666.8	GROUND SURFACE	0.0	
660	661.3	5.5	5	2	16										660.3	ALLUVIAL TAN, BROWN, AND ORANGE, SILTY SAND	6.5	
655	656.3	10.5	8	64	36/0.3										655.8	RESIDUAL BROWN AND WHITE, CLAYEY SILTY SAND, WITH SOME MICA	11.0	
650	651.3	15.5			100/0.3													
	646.3	20.5			60/0.0										646.3	WEATHERED ROCK (GRANITE)	20.5	
																Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 646.3 ft ON CRYSTALLINE ROCK (GRANITE)		

NCDOT BORE SINGLE B5165 BRDG0042\_BH.GPJ NC\_DOT.GDT 7/28/16

# GEOTECHNICAL BORING REPORT BORE LOG

WBS 42341		TIP B-5165		COUNTY DAVIDSON		GEOLOGIST Stickney, J. K.								
SITE DESCRIPTION BRIDGE NO. 42 OVER MUDDY CREEK ON SR 1485 (HAMPTON ROAD)							GROUND WTR (ft)							
BORING NO. B1-A		STATION 22+30		OFFSET 15 ft LT		ALIGNMENT -L-								
COLLAR ELEV. 655.2 ft		TOTAL DEPTH 30.0 ft		NORTHING 799,953		EASTING 1,597,980								
DRILL RIG/HAMMER EFF./DATE HFO0072 CME-550X 85% 05/20/2016		DRILL METHOD NW Casing W/SPT & Core		HAMMER TYPE Automatic										
DRILLER Smith, C. L.		START DATE 05/09/16		COMP. DATE 05/10/16		SURFACE WATER DEPTH 5.3ft								
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					
660														
655													GROUND SURFACE	0.0
650	650.9	4.3	5	15	18							M	ALLUVIAL GRAY, CLAYEY SILTY SAND, WITH GRAVEL	4.8
645	645.9	9.3	22	70	30/0.2								RESIDUAL GRAY, WHITE, AND LIGHT GREEN, CLAYEY SILTY SAND, MICACEOUS	9.8
640	640.9	14.3	71	29/0.1									WEATHERED ROCK (GRANITE)	
635	635.9	19.3	100/0.4											
630	630.9	24.3	60/0.0										CRYSTALLINE ROCK (GRANITE)	24.3
												RS-1		
													Boring Terminated at Elevation 625.2 ft IN CRYSTALLINE ROCK (GRANITE)	30.0

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# GEOTECHNICAL BORING REPORT CORE LOG

WBS 42341		TIP B-5165		COUNTY DAVIDSON		GEOLOGIST Stickney, J. K.						
SITE DESCRIPTION BRIDGE NO. 42 OVER MUDDY CREEK ON SR 1485 (HAMPTON ROAD)							GROUND WTR (ft)					
BORING NO. B1-A		STATION 22+30		OFFSET 15 ft LT		ALIGNMENT -L-						
COLLAR ELEV. 655.2 ft		TOTAL DEPTH 30.0 ft		NORTHING 799,953		EASTING 1,597,980						
DRILL RIG/HAMMER EFF./DATE HFO0072 CME-550X 85% 05/20/2016		DRILL METHOD NW Casing W/SPT & Core		HAMMER TYPE Automatic								
DRILLER Smith, C. L.		START DATE 05/09/16		COMP. DATE 05/10/16		SURFACE WATER DEPTH 5.3ft						
CORE SIZE NX				TOTAL RUN 5.7 ft								
ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	RQD (ft) %	LOG	DESCRIPTION AND REMARKS	DEPTH (ft)
630.9	630.9	24.3	0.7	N=60/0.0 NM/0.7	(0.7) 100%	(0.7) 100%		(5.7) 100%	(5.6) 98%		Begin Coring @ 24.3 ft	24.3
630	630.2	25.0	5.0	1:34/1.0 1:27/1.0 1:32/1.0 1:34/1.0 1:31/1.0	(5.0) 100%	(4.9) 98%	RS-1				CRYSTALLINE ROCK GRAY, BLACK, AND WHITE, FRESH WEATHERING, VERY HARD, GRANITE	24.3
	625.2	30.0									Boring Terminated at Elevation 625.2 ft IN CRYSTALLINE ROCK (GRANITE)	30.0

NCDOT CORE SINGLE B5165\_BRDG0042\_BH.GPJ NC\_DOT.GDT 7/28/16



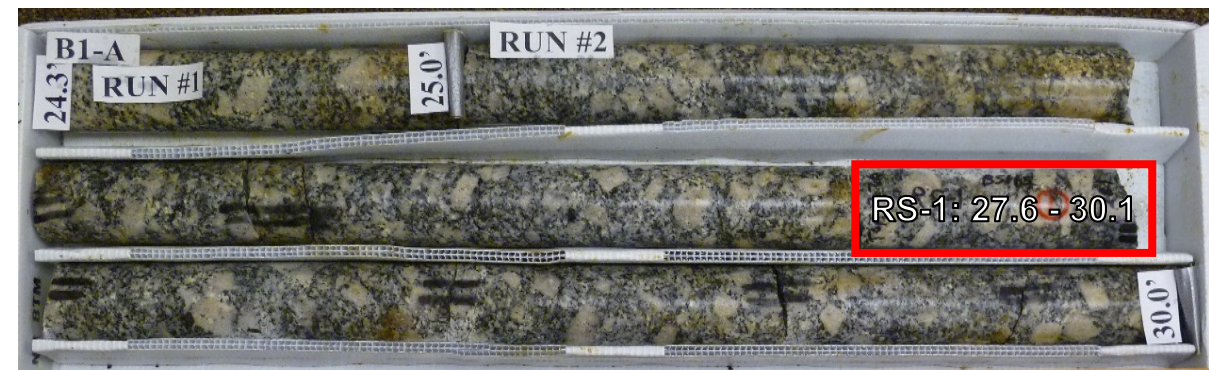
# CORE PHOTOGRAPHS

42341 (B-5165)

BRIDGE NO. 42 OVER MUDDY CREEK ON SR 1485 (HAMPTON ROAD)

## B1-A

BOX 1: 24.3 - 30.0 FEET



## GEOTECHNICAL BORING REPORT BORE LOG

WBS 42341		TIP B-5165		COUNTY DAVIDSON		GEOLOGIST Stickney, J. K.										
SITE DESCRIPTION BRIDGE NO. 42 OVER MUDDY CREEK ON SR 1485 (HAMPTON ROAD)						GROUND WTR (ft)										
BORING NO. B1-B		STATION 22+19		OFFSET 16 ft RT		ALIGNMENT -L-										
COLLAR ELEV. 655.4 ft		TOTAL DEPTH 24.7 ft		NORTHING 799,933		EASTING 1,598,063										
DRILL RIG/HAMMER EFF./DATE HFO0072 CME-550X 85% 05/20/2016		DRILL METHOD NW Casing w/ SPT		HAMMER TYPE Automatic												
DRILLER Smith, C. L.		START DATE 05/10/16		COMP. DATE 05/10/16		SURFACE WATER DEPTH 4.9ft										
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						
660																
655															655.4	GROUND SURFACE 0.0
650	650.7	4.7	13	15	14									M	650.7	ALLUVIAL GRAY, WHITE, TAN, AND BROWN, CLAYEY SILTY SAND, WITH GRAVEL 4.7
645	645.7	9.7	41	59/0.4											645.7	RESIDUAL GRAY, WHITE, LIGHT GREEN, TAN, AND BROWN, CLAYEY SILTY SAND, MICACEOUS 9.7
640	640.7	14.7	68	32/0.1											100/0.9	WEATHERED ROCK (GRANITE)
635	635.7	19.7	63	37/0.1											100/0.6	
	630.7	24.7	60/0.0												631.6	CRYSTALLINE ROCK (GRANITE) 23.8
															630.7	CRYSTALLINE ROCK (GRANITE) 24.7
																Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 630.7 ft IN CRYSTALLINE ROCK (GRANITE)

NCDOT BORE SINGLE B5165\_BRDG0042\_BH.GPJ NC\_DOT.GDT 7/28/16

## GEOTECHNICAL BORING REPORT BORE LOG

WBS 42341		TIP B-5165		COUNTY DAVIDSON		GEOLOGIST Stickney, J. K.										
SITE DESCRIPTION BRIDGE NO. 42 OVER MUDDY CREEK ON SR 1485 (HAMPTON ROAD)						GROUND WTR (ft)										
BORING NO. EB2-A		STATION 23+05		OFFSET 24 ft LT		ALIGNMENT -L-										
COLLAR ELEV. 665.5 ft		TOTAL DEPTH 29.7 ft		NORTHING 799,928		EASTING 1,598,138										
DRILL RIG/HAMMER EFF./DATE HFO0072 CME-550X 85% 05/20/2016		DRILL METHOD NW Casing w/ SPT		HAMMER TYPE Automatic												
DRILLER Smith, C. L.		START DATE 05/06/16		COMP. DATE 05/06/16		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						
670																
665															665.5	GROUND SURFACE 0.0
660	660.9	4.6	1	1	2									M	660.9	ALLUVIAL TAN AND ORANGE TO GRAY AND WHITE, CLAYEY SILTY SAND, WITH GRAVEL
655	655.9	9.6	1	1	2									M	655.9	
650	650.9	14.6	1	2	2									W	650.9	
645	645.9	19.6	100/0.3												647.3	RESIDUAL GRAY AND WHITE, CLAYEY SILTY SAND, MICACEOUS 18.2
640	640.9	24.6	100/0.2												645.9	WEATHERED ROCK (GRANITE) 19.6
	635.9	29.6	60/0.1												635.9	CRYSTALLINE ROCK (GRANITE) 29.6
															635.8	CRYSTALLINE ROCK (GRANITE) 29.6
																Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 635.8 ft IN CRYSTALLINE ROCK (GRANITE)

NCDOT BORE SINGLE B5165\_BRDG0042\_BH.GPJ NC\_DOT.GDT 7/28/16

