

REFERENCE: B-5746

PROJECT: 45702

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

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY SCOTLAND
PROJECT DESCRIPTION BRIDGE NO. 43 ON SR 1645
(DIXIE GUANO ROAD) OVER LEITH'S CREEK

CONTENTS

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
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STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5746	1	7

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

N. MOHS, LG

CAROLINA DRILLING

M. RADFORD

W. HAMER

INVESTIGATED BY N. MOHS, LG

DRAWN BY N. MOHS, LG

CHECKED BY D. BROWN, PE

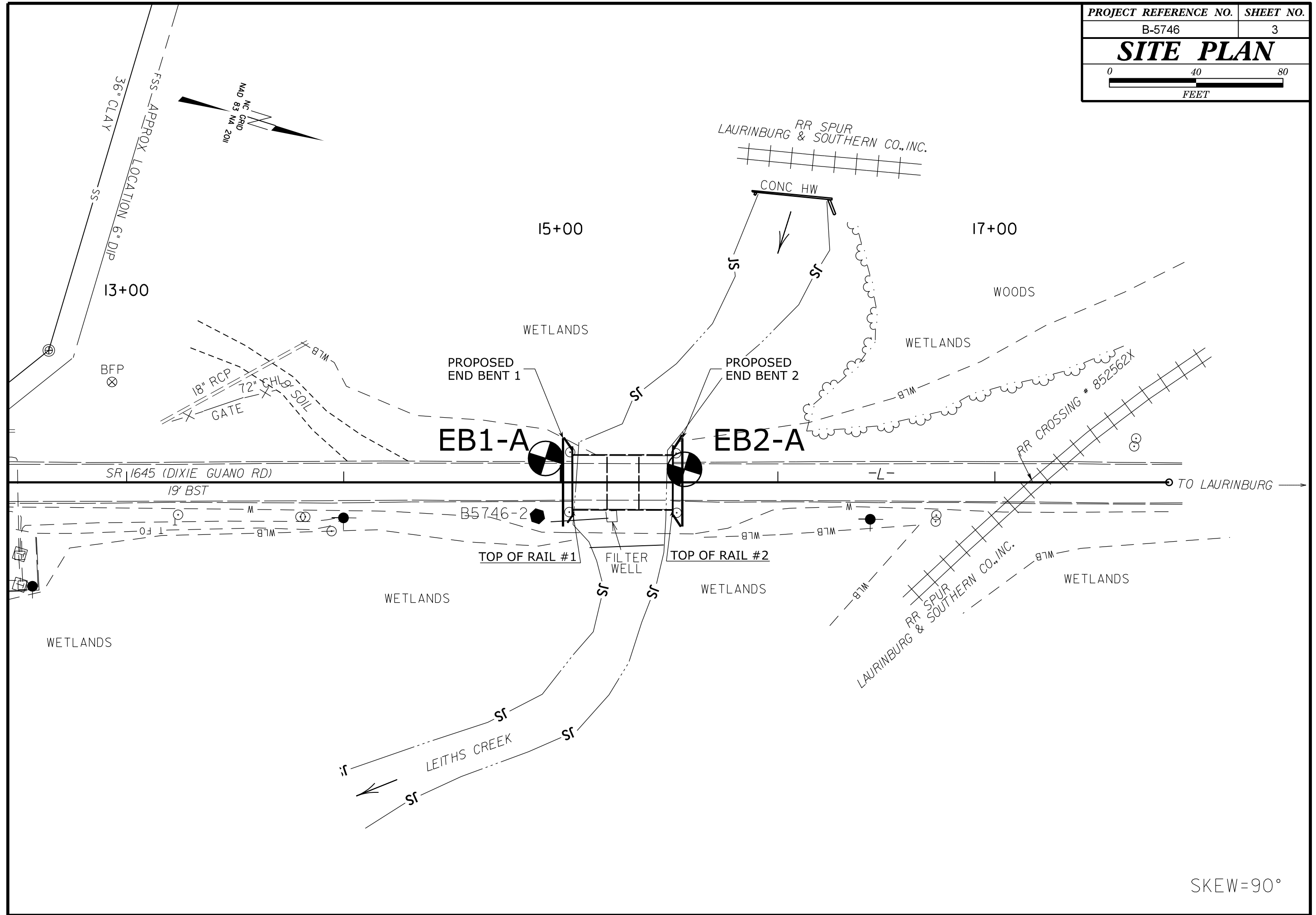
SUBMITTED BY N. MOHS, LG

DATE JUNE 2016

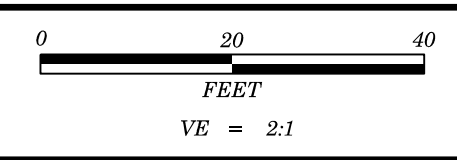


DocuSigned by:
Nathan Mohs 6/22/2016
95B48AF SIGNATURE DATE

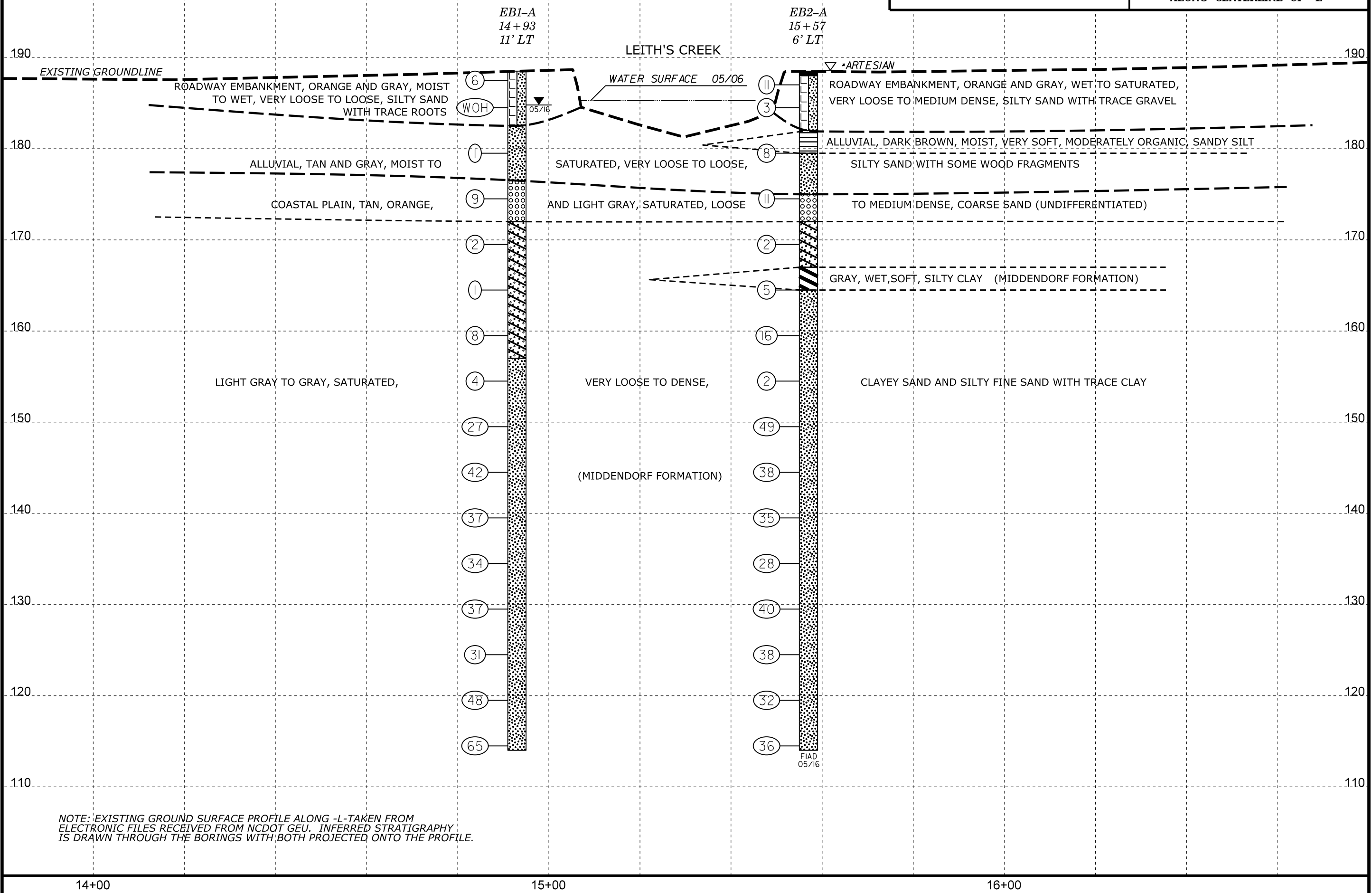
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UNLESS ALL SIGNATURES COMPLETED**



SKEW=90°



PROJECT REFERENCE NO.	SHEET NO.
B-5746	4
PROFILE OF BORINGS ALONG CENTERLINE OF -L-	



14+00

15+00

16+00

WBS 45702.1.1		TIP B-5746		COUNTY SCOTLAND		GEOLOGIST N. Mohs, LG								
SITE DESCRIPTION Bridge No. 43 on SR 1645 (Dixie Guano Road) over Leith's Creek							GROUND WTR (ft)							
BORING NO. EB1-A		STATION 14+93		OFFSET 11 ft LT		ALIGNMENT -L-								
COLLAR ELEV. 188.5 ft		TOTAL DEPTH 74.5 ft		NORTHING 370,165		EASTING 1,868,292								
DRILL RIG/HAMMER EFF./DATE BRI2974 CME-45C 79% 06/03/2015				DRILL METHOD Mud Rotary		HAMMER TYPE Automatic								
DRILLER M. Radford		START DATE 05/25/16		COMP. DATE 05/25/16		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				
190	188.5	0.0												188.5 GROUND SURFACE 0.0
			4	3	3									ROADWAY EMBANKMENT Orange and Gray, Silty Sand with Trace Roots
185	185.5	3.0	WOH	WOH	WOH									182.5 ALLUVIAL 6.0
														Tan, Silty Sand with Some Wood Fragments
180	180.5	8.0	2	1	0									176.5 COASTAL PLAIN 12.0
														Tan and Orange, Coarse Sand (Undifferentiated)
175	175.5	13.0	3	4	5									172.0 Gray, Clayey Sand (Middendorf Formation) 16.5
170	170.5	18.0	2	1	1									
165	165.5	23.0	WOH	WOH	1									
160	160.5	28.0	3	4	4									
155	155.5	33.0	3	1	3									157.0 Light Gray to Gray, Silty Fine Sand with Trace Clay (Middendorf Formation) 31.5
150	150.5	38.0	6	11	16									
145	145.5	43.0	10	15	27									
140	140.5	48.0	12	17	20									
135	135.5	53.0	15	16	18									
130	130.5	58.0	16	19	18									
125	125.5	63.0	36	16	15									
120	120.5	68.0	16	23	25									
115	115.5	73.0	23	32	33									
														114.0 Boring Terminated at Elevation 114.0 ft in Silty Sand (Middendorf Formation) 74.5

GEOTECHNICAL BORING REPORT

BORE LOG

WBS 45702.1.1		TIP B-5746		COUNTY SCOTLAND		GEOLOGIST N. Mohs, LG											
SITE DESCRIPTION Bridge No. 43 on SR 1645 (Dixie Guano Road) over Leith's Creek							GROUND WTR (ft)										
BORING NO. EB2-A		STATION 15+57		OFFSET 6 ft LT		ALIGNMENT -L-											
COLLAR ELEV. 188.5 ft		TOTAL DEPTH 74.5 ft		NORTHING 370,228		EASTING 1,868,278											
DRILL RIG/HAMMER EFF./DATE BRI2974 CME-45C 79% 06/03/2015			DRILL METHOD Mud Rotary		HAMMER TYPE Automatic												
DRILLER M. Radford		START DATE 05/25/16		COMP. DATE 05/25/16		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				ELEV. (ft)	DEPTH (ft)		
190																	
	188.0	0.5	5	5	6												
185	185.5	3.0	3	2	1												
	180.5	8.0	2	1	7												
175	175.5	13.0	4	5	6												
	170.5	18.0	2	1	1												
165	165.5	23.0	WOH	2	3												
	160.5	28.0	5	8	8												
155	155.5	33.0	1	1	1												
	150.5	38.0	14	23	26												
145	145.5	43.0	12	18	20												
	140.5	48.0	14	18	17												
135	135.5	53.0	13	14	14												
	130.5	58.0	15	19	21												
125	125.5	63.0	16	17	21												
	120.5	68.0	13	14	18												
115	115.5	73.0	10	18	18												

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DRILL RIG/HAMMER EFF./DATE BRI2974 CME-45C 79% 06/03/2015			DRILL METHOD Mud Rotary		HAMMER TYPE Automatic												
DRILLER M. Radford		START DATE 05/25/16		COMP. DATE 05/25/16		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				ELEV. (ft)	DEPTH (ft)		
110																	
Match Line																	
Note: Artesian Ground Water Measured at Elevation 188.6 Feet, 4 Hours After Drilling. Boring Sealed with Grout and Bentonite.																	

NCDOT BORE DOUBLE B5746_GEO_BRDG0043_BH.GPJ NC_DOT.GDT 6/8/16

SITE PHOTOGRAPH



VIEW LOOKING SOUTH ALONG DIXIE GUANO ROAD