

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.12.R.32	1	7

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

STRUCTURE SUBSURFACE INVESTIGATION

PROJ. REFERENCE NO. 17BP.12.R.32 F.A. PROJ. _____

COUNTY IREDELL

PROJECT DESCRIPTION BRIDGE 282 ON SR 1828 (BARNARD MILL RD.)
OVER N. HUNTING CREEK

SITE DESCRIPTION _____

CONTENTS

<u>SHEET</u>	<u>DESCRIPTION</u>
1	TITLE SHEET
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7	AERIAL PHOTO

PERSONNEL

J.K. STICKNEY

C.L. SMITH

INVESTIGATED BY C.B. LITTLE

CHECKED BY C.B. LITTLE

SUBMITTED BY C.B. LITTLE

DATE SEPTEMBER 2013

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF PREPARING THE SCOPE OF WORK TO BE INCLUDED IN THE REQUEST FOR PROPOSAL. 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) 250-4088. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES, AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

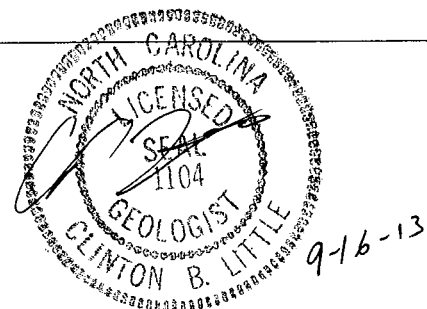
SOIL AND ROCK BOUNDARIES WITHIN A BOREHOLE ARE BASED ON GEOTECHNICAL INTERPRETATION UNLESS ENCOUNTERED IN A SAMPLE. INTERPRETED BOUNDARIES MAY NOT NECESSARILY REFLECT ACTUAL SUBSURFACE CONDITIONS BETWEEN SAMPLED STRATA, AND BOREHOLE INFORMATION MAY NOT NECESSARILY REFLECT ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS. 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 DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION 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.

NOTE - THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N.C. DEPARTMENT OF TRANSPORTATION AS BEING ACCURATE NOR IT IS CONSIDERED TO BE PART OF THE PLANS, SPECIFICATIONS, OR CONTRACT FOR THE PROJECT.

NOTE - 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.

DRAWN BY: J.K. McCLURE



REVISÉ 09/23/09

PROJECT REFERENCE NO.		SHEET NO.	
17BP.12.R.32		2A	

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MICHAEL KEITH MILLER
DB 581PG 448

LARRY G. WELLS
DB 673 PG 683

JOHNNY L. DICKERSON
CAROLYN B. DICKERSON
DB 783 PG 582
DB 135 PG 123

JOHNNY L. DICKERSON
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DB 783 PG 582
DB 135 PG 123

MICHAEL KEITH MILLER
DB 581PG 448

BM #1(50) ELEVATION = 839.56
N 841907.1218 E 1476889.1534
BL STATION 13+24.11 20.25 LEFT
RAIL-ROAD SPIKE SET IN 12" SYCAMORE

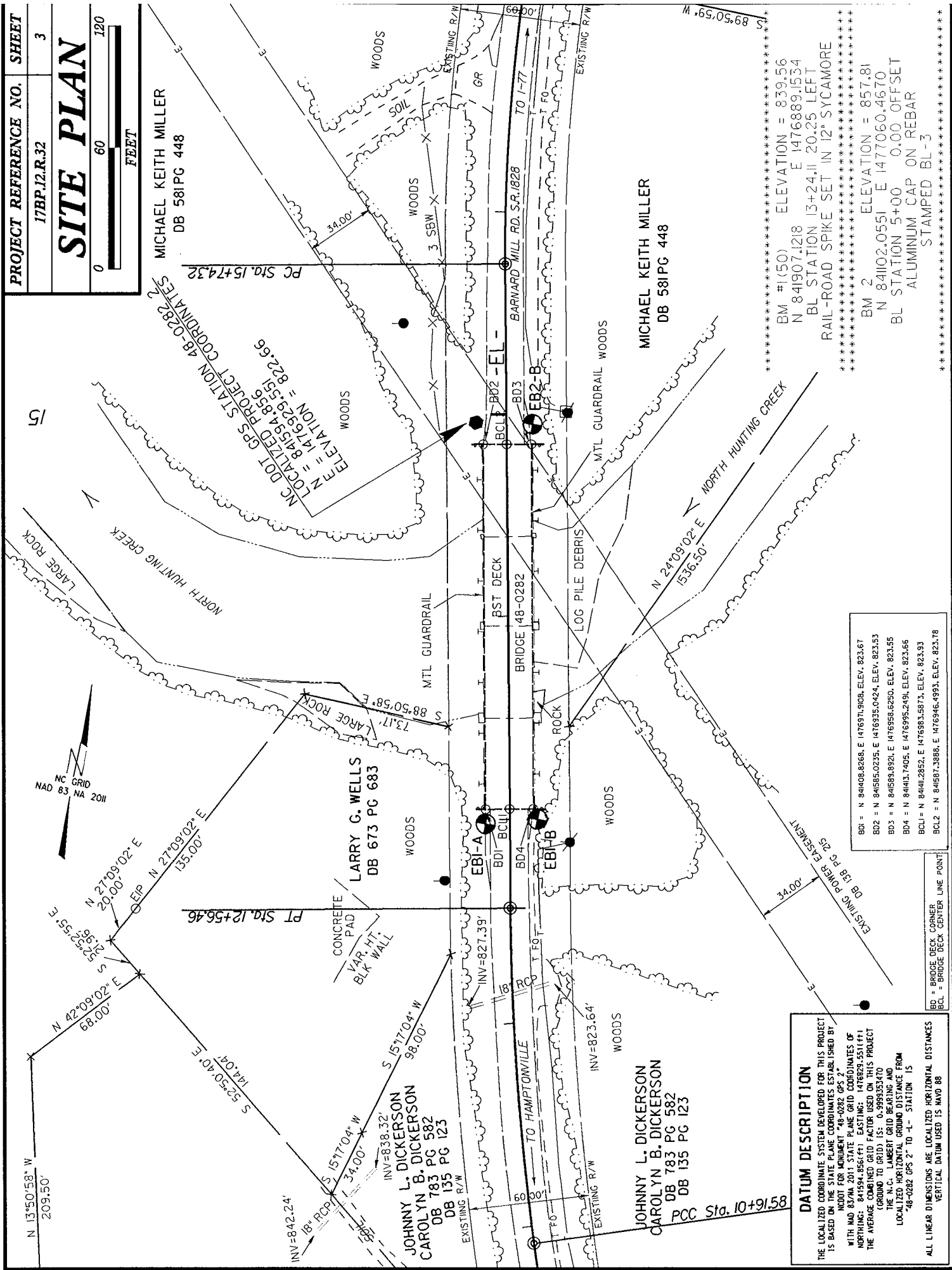
BM 2 ELEVATION = 857.81
N 841102.0551 E 1477060.4670
BL STATION 5+00 0.00 OFFSET
ALUMINUM CAP ON REBAR
STAMPED BL-3

DATUM DESCRIPTION
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NC DOT FOR MONUMENT "48-0282 GPS 2" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTING: 841594.856(11) EASTING: 1476829.551(11) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999353470
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "48-0282 GPS 2" TO "L" STATION IS

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

BD1 = N 841408.8268, E 1476571.9108, ELEV. 823.67
BD2 = N 841585.0235, E 1476935.0424, ELEV. 823.53
BD3 = N 841589.8921, E 1476958.6250, ELEV. 823.55
BD4 = N 841413.7405, E 1476995.2491, ELEV. 823.66
BCL1 = N 841412.2852, E 1476983.5873, ELEV. 823.93
BCL2 = N 841687.3886, E 1476946.4993, ELEV. 823.78

BD = BRIDGE DECK CORNER
BCL = BRIDGE DECK CENTER LINE POINT





WBS 17BP.12.R.32			TIP 17BP12R32			COUNTY IREDELL			GEOLOGIST Stickney, J. K.					
SITE DESCRIPTION BRIDGE 282 ON SR 1828 (BARNARD MILL RD.) OVER N. HUNTING CREEK									GROUND WTR (ft)					
BORING NO. EB1-A			STATION 12+98			OFFSET 12 ft LT			ALIGNMENT -EL-					
COLLAR ELEV. 824.0 ft			TOTAL DEPTH 24.9 ft			NORTHING 841,402			EASTING 1,476,973					
DRILL RIG/HAMMER EFF./DATE HFO0072 CME-550 86% 01/09/2013						DRILL METHOD H.S. Augers			HAMMER TYPE Automatic					
DRILLER Smith, C. L.			START DATE 09/10/13			COMP. DATE 09/10/13			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				
825														
820	820.7	3.3	2	3	3								GROUND SURFACE	0.0
													ROADWAY EMBANKMENT	
													RED-ORANGE-BRN MED. STIFF MOIST MICA. SILTY SANDY CLAY (A-7)	
815	815.7	8.3	4	5	6								RESIDUAL	5.5
													TAN-GRAY-WHITE & GRAY-WHITE MED. DENSE TO V. DENSE DRY SILTY CLAYEY SAND & MICA. CLAYEY SILTY SAND (A-2)	
810	810.7	13.3	11	21	13									
805	805.7	18.3	16	26	36									
800	800.7	23.3	15	36	64/0.4									
													WEATHERED ROCK	23.8
													GRAY-WHITE SEV. WEATH. CRYSTALLINE ROCK	24.9
													Boring Terminated BY AUGER REFUSAL at Elevation 799.1 ft ON CRYSTALLINE ROCK	



NCDOT GEOTECHNICAL ENGINEERING UNIT

BORELOG REPORT

SHEET 5

WBS 17BP.12.R.32		TIP 17BP12R32		COUNTY IREDELL		GEOLOGIST Stickney, J. K.							
SITE DESCRIPTION BRIDGE 282 ON SR 1828 (BARNARD MILL RD.) OVER N. HUNTING CREEK						GROUND WTR (ft)							
BORING NO. EB1-B		STATION 13+00		OFFSET 14 ft RT		ALIGNMENT -EL-							
COLLAR ELEV. 823.5 ft		TOTAL DEPTH 20.0 ft		NORTHING 841,409		EASTING 1,476,998							
DRILL RIG/HAMMER EFF./DATE HFO0072 CME-550 86% 01/09/2013				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic							
DRILLER Smith, C. L.		START DATE 09/10/13		COMP. DATE 09/10/13		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)
825													
												823.5	0.0
												GROUND SURFACE	
												ROADWAY EMBANKMENT	
												RED-ORANGE-BRN MED. STIFF MOIST	
												MICA. SILTY SANDY CLAY (A-7)	
820	819.9	3.6	1	2	3						M		
815	814.9	8.6									M	814.4	9.1
			4	4	4								
												811.9	11.6
												ALLUVIAL	
												GRAY MED. STIFF TO STIFF MOIST SLI.	
												MICA. SILTY SANDY CLAY (A-7)	
810	809.9	13.6									D	809.9	13.6
												RESIDUAL	
												GRAY-WHITE MED. DENSE MOIST SILTY	
												SAND (A-2)	
805	804.9	18.6									D	803.5	20.0
												WEATHERED ROCK	
												GRAY-WHITE SEV. WEATH.	
												CRYSTALLINE ROCK	
												Boring Terminated BY AUGER REFUSAL at	
												Elevation 803.5 ft ON CRYSTALLINE ROCK	

NCDOT BORE SINGLE 049&000_GEO_BH_BRDG0282_IREDELL.GPJ NC_DOT_GDT 9/13/13



NCDOT GEOTECHNICAL ENGINEERING UNIT

BORELOG REPORT

SHEET 6

WBS 17BP.12.R.32		TIP 17BP12R32		COUNTY IREDELL		GEOLOGIST Stickney, J. K.							
SITE DESCRIPTION BRIDGE 282 ON SR 1828 (BARNARD MILL RD.) OVER N. HUNTING CREEK						GROUND WTR (ft)							
BORING NO. EB2-B		STATION 14+95		OFFSET 13 ft RT		ALIGNMENT -EL-							
COLLAR ELEV. 823.1 ft		TOTAL DEPTH 23.1 ft		NORTHING 841,600		EASTING 1,476,957							
DRILL RIG/HAMMER EFF./DATE HFO0072 CME-550 86% 01/09/2013				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic							
DRILLER Smith, C. L.		START DATE 09/10/13		COMP. DATE 09/10/13		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)
825													
												823.1	0.0
												GROUND SURFACE	
												ROADWAY EMBANKMENT	
												RED-BRN & RED-ORANGE MED. STIFF	
												MOIST SANDY SILTY CLAY (A-7)	
820	819.9	3.2	1	2	3						M		
815	814.9	8.2	3	3	4						M		
810	809.9	13.2	3	4	6						M	808.9	14.2
												806.1	17.0
805	804.9	18.2	3	5	4						M	ALLUVIAL	
												TAN-BRN LOOSE MOIST CLAYEY SAND (A-2)	
												801.8	21.3
												ALLUVIAL	
												GRAY STIFF MOIST SANDY SILTY CLAY (A-7)	
												800.2	22.9
800												RESIDUAL	
												GRAY MED. DENSE MOIST CLAYEY SILTY SAND (A-2)	
												800.0	23.1
												WEATHERED ROCK	
												SEV. WEATH. CRYSTALLINE ROCK	
												Boring Terminated BY AUGER REFUSAL at Elevation 800.0 ft ON CRYSTALLINE ROCK	

NCDOT BORE SINGLE 049&000_GEO_BH_BRDG0282_IREDLL.GPJ NC_DOT_GDT 9/13/13

Aerial Photo

