

REFERENCE: U-3330

PROJECT: 36596

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

**STRUCTURE
SUBSURFACE INVESTIGATION**

COUNTY NASH
PROJECT DESCRIPTION US 301 BYPASS FROM NC 43-48
(BENVENUE RD.) TO SR 1836 (MAY DR.)
SITE DESCRIPTION BRIDGE ON -L- (US 301 BYPASS)
OVER STONY CREEK

CONTENTS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	LEGEND
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15	SOIL TEST RESULTS
16	CORE PHOTOGRAPHS)

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3330	1	16

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 1919 TOT-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.

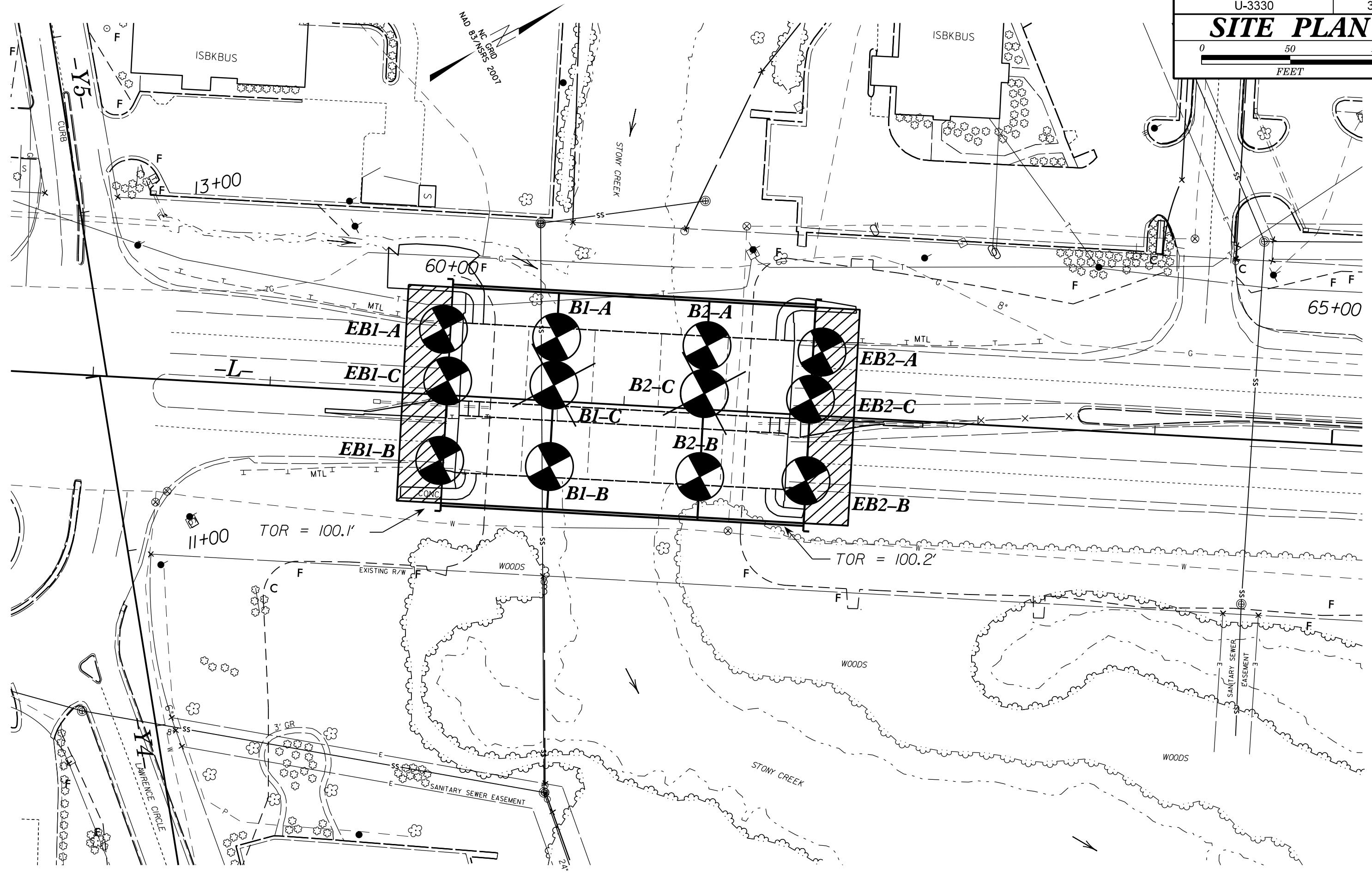
PERSONNEL

J.R. SWARTLEY
O.B. OTI
D.G. PINTER
C. CONGLETON

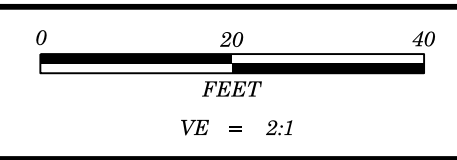
INVESTIGATED BY J.R. SWARTLEY
DRAWN BY T. WALKER
CHECKED BY N.T. ROBERSON
SUBMITTED BY N.T. ROBERSON
DATE FEBRUARY 2015



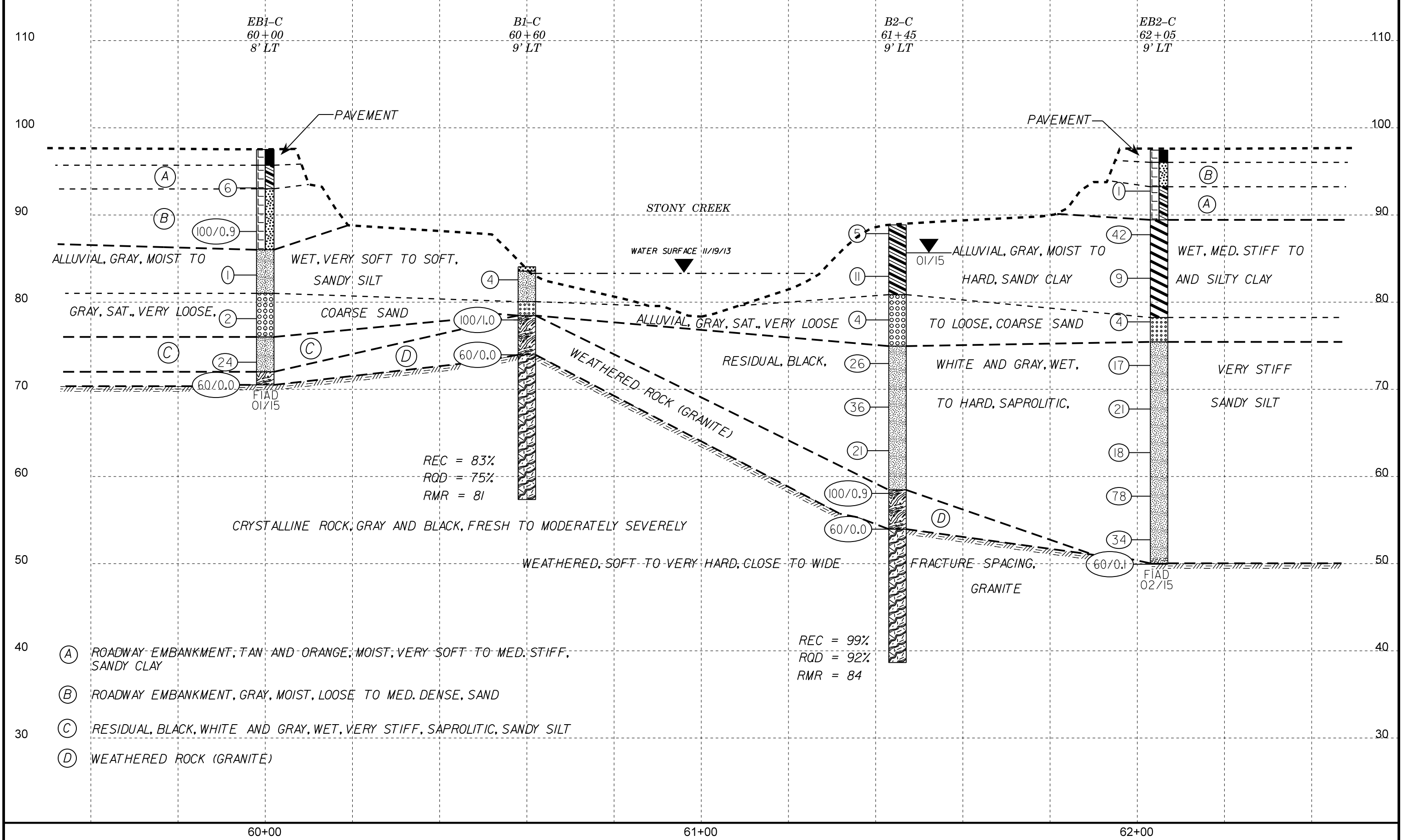
DocuSigned by:
Jarett Swartley 8/31/2016
7F355C29F75A413 SIGNATURE DATE



SKEW=90°



PROJECT REFERENCE NO.	SHEET NO.
U-3330	4
PROFILE BORINGS PROJECTED ALONG -L-	



(A)

(B)

(C)

(A) ROADWAY EMBANKMENT, TAN AND ORANGE, MOIST, VERY SOFT TO MED. STIFF, SANDY CLAY

(B) ROADWAY EMBANKMENT, GRAY, MOIST, LOOSE TO MED. DENSE, SAND

(C) RESIDUAL, BLACK, WHITE AND GRAY, WET, VERY STIFF, SAPROLITIC, SANDY SILT

(D) WEATHERED ROCK (GRANITE)

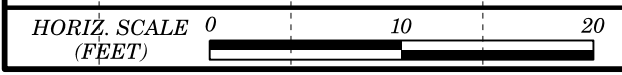
REC = 83%
RQD = 75%
RMR = 81

REC = 99%
RQD = 92%
RMR = 84

60+00

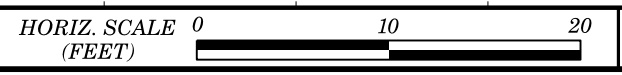
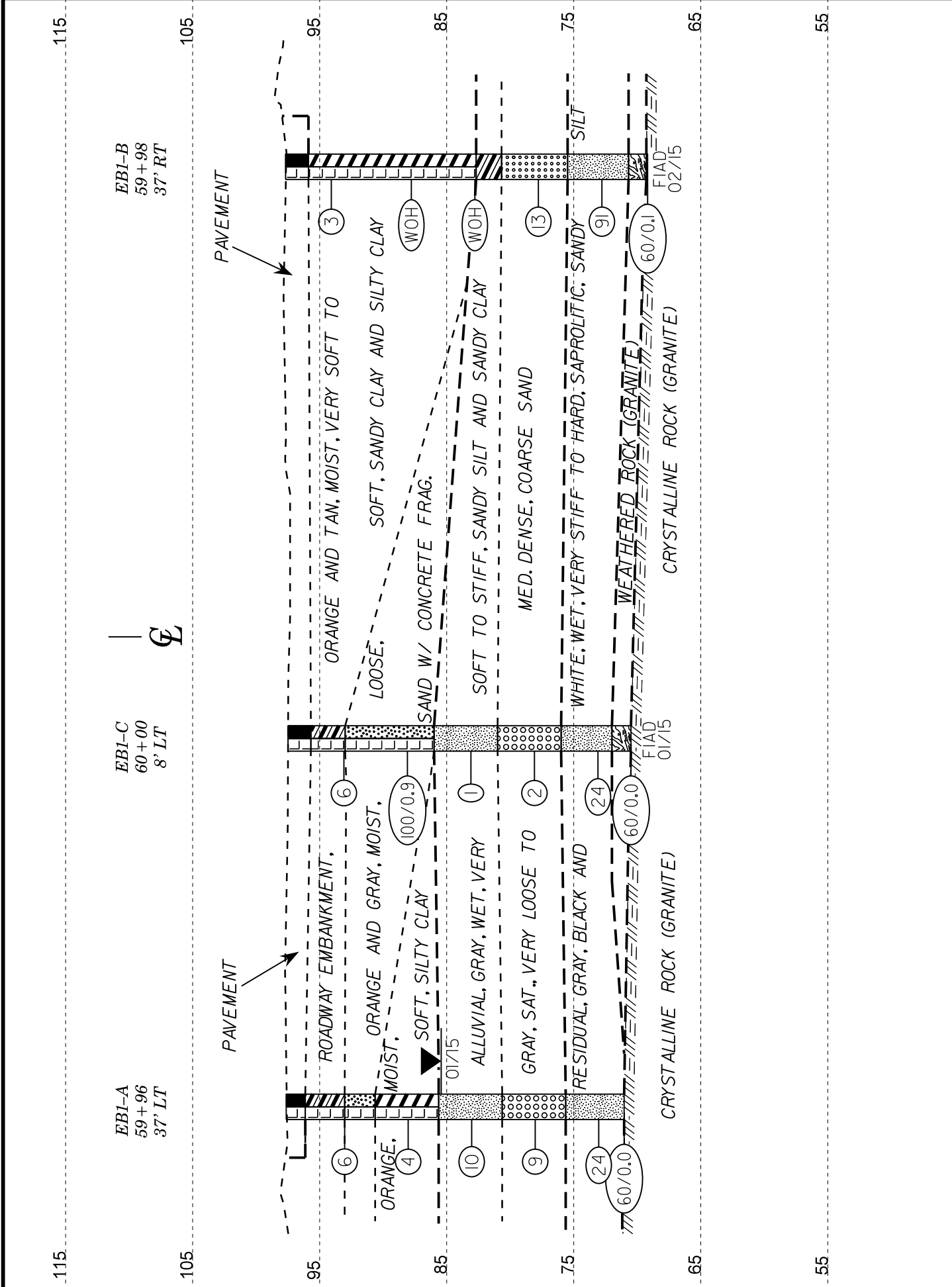
61+00

62+00



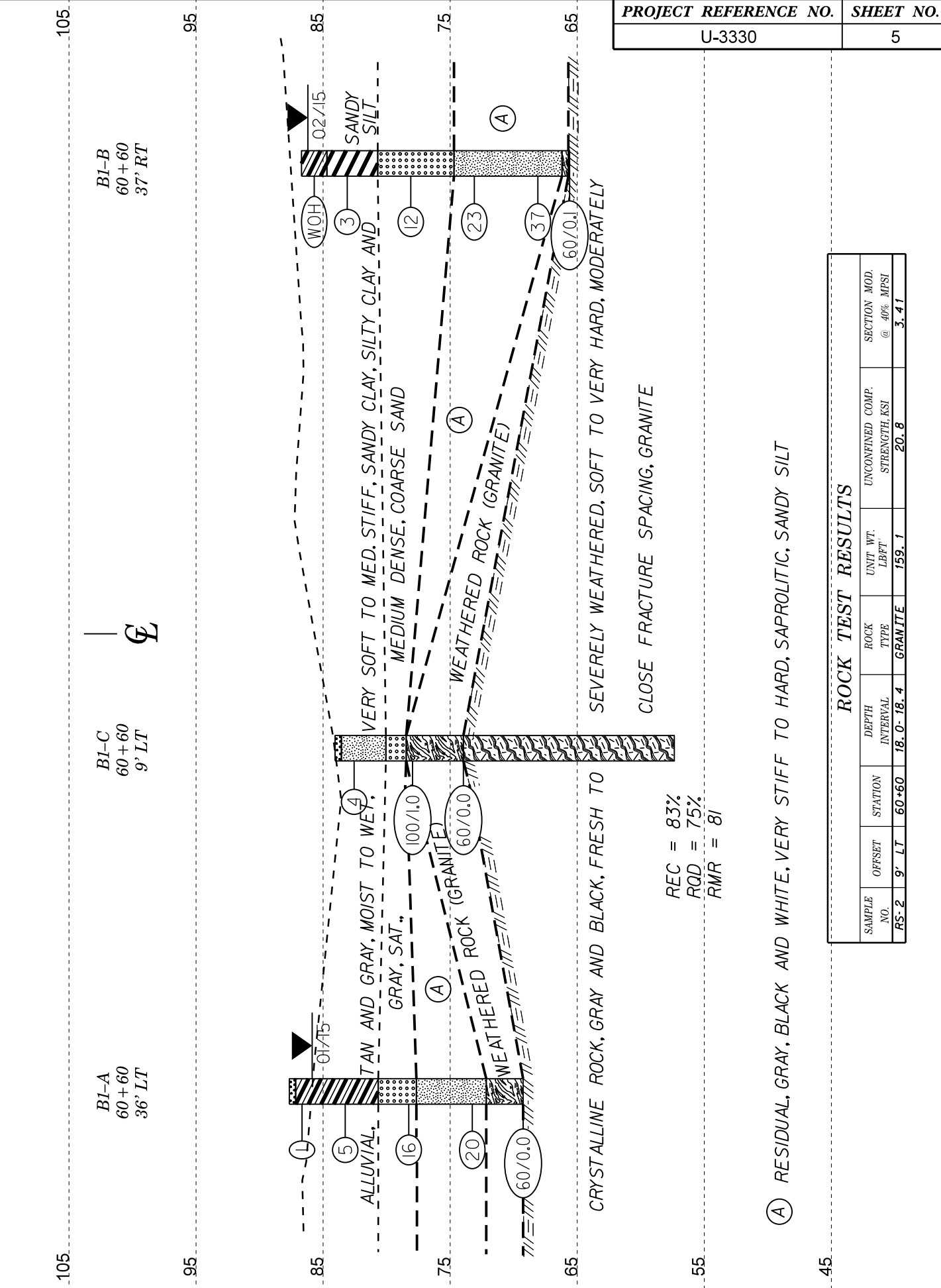
VE = 1:1

CROSS SECTION THROUGH END BENT 1



VE = 1:1

CROSS SECTION THROUGH BENT 1

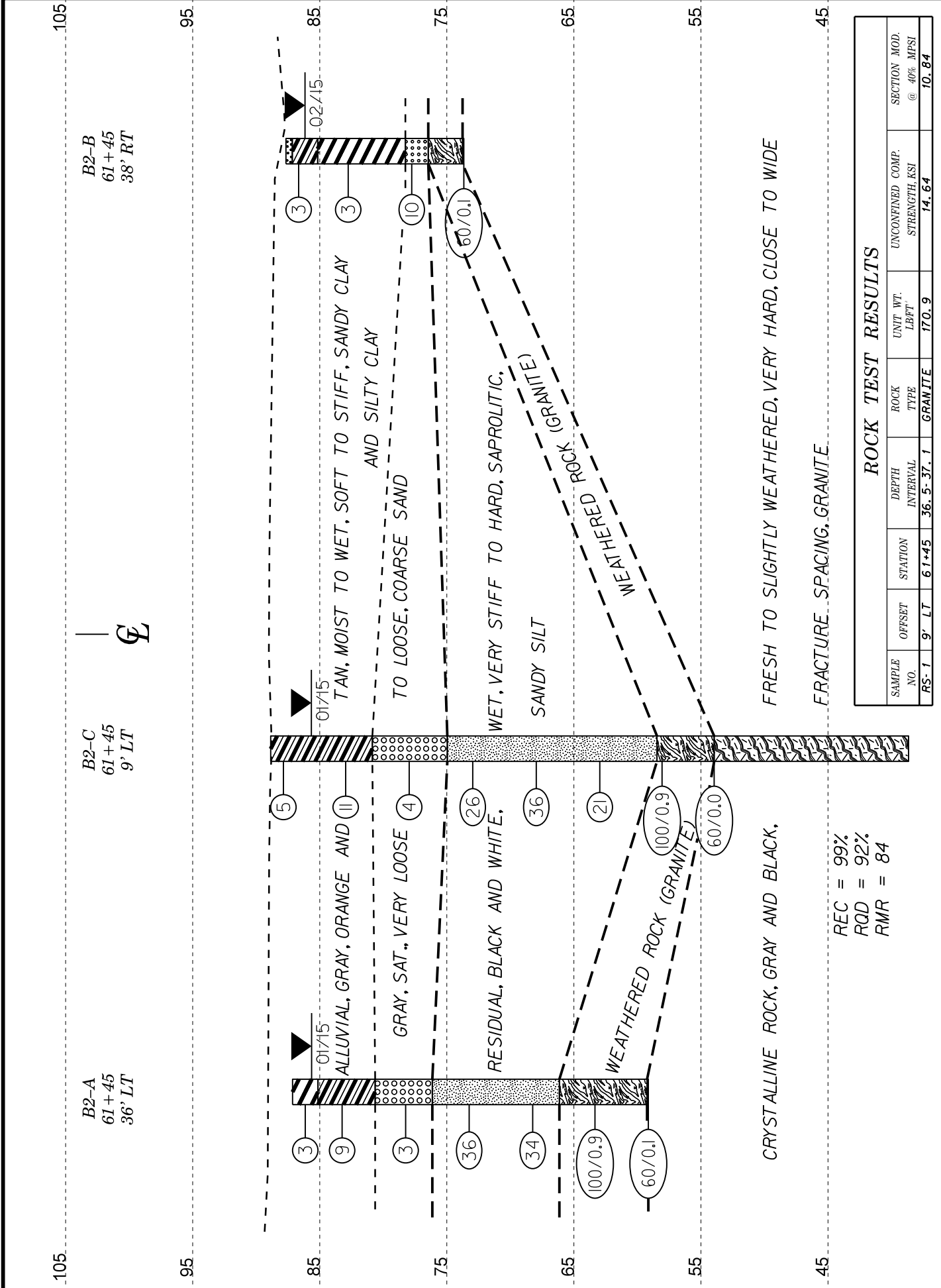


REC = 83%
RQD = 75%
RMR = 81

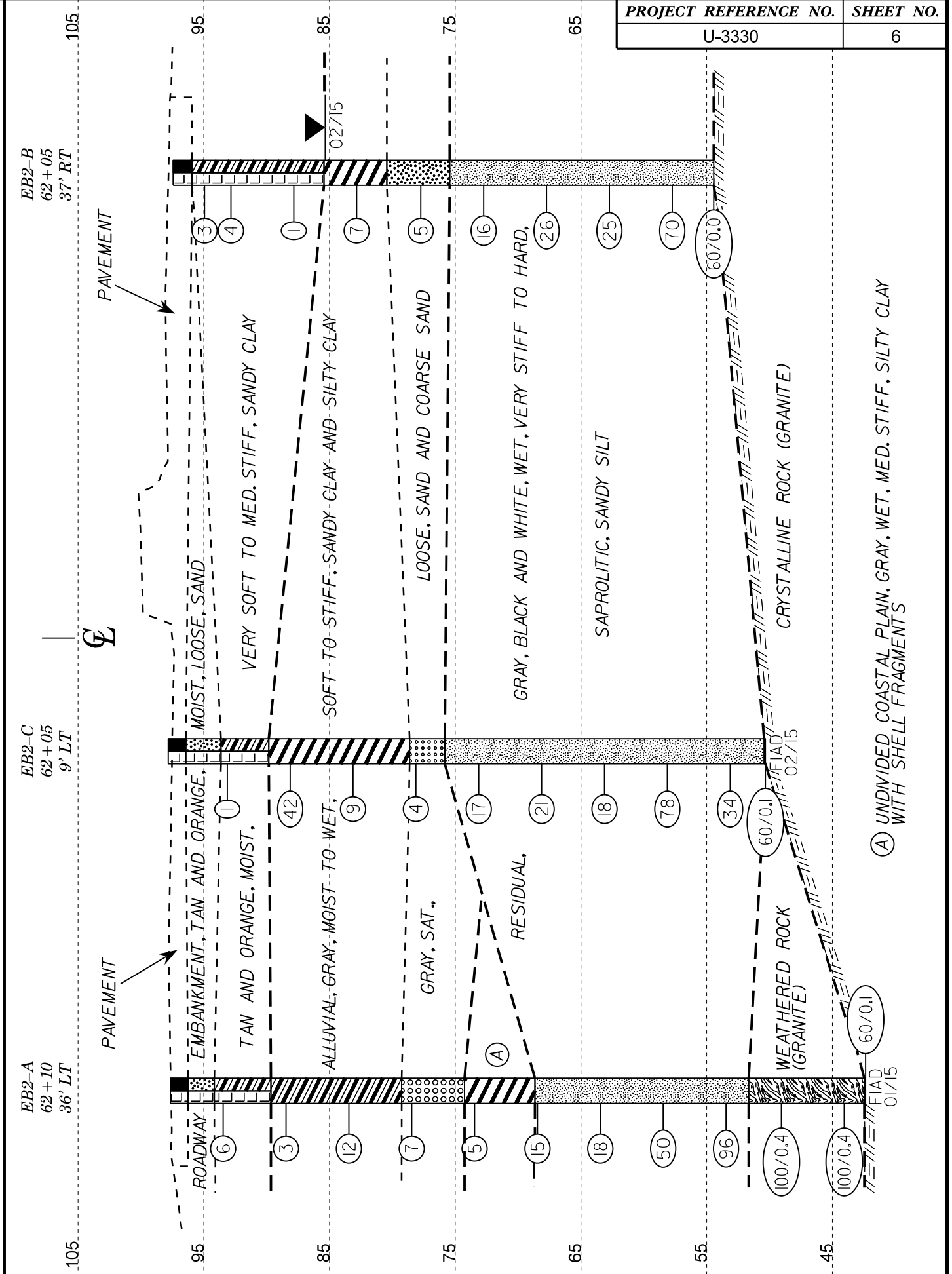
Ⓐ RESIDUAL, GRAY, BLACK AND WHITE, VERY STIFF TO HARD, SAPROLITIC, SANDY SILT

ROCK TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ROCK TYPE	UNIT WT. LB/FT ³	UNCONFINED COMP. STRENGTH, KSI	SECTION MOD. @ 40% MPST
RS-2	9' LT	60+60	18.0 - 18.4	GRANITE	159.1	20.8	3.41



HORIZ. SCALE 0 10 20 (FEET) VE = 1:1 CROSS SECTION THROUGH BENT 2



HORIZ. SCALE 0 10 20 (FEET) VE = 1:1 CROSS SECTION THROUGH END BENT 2

GEOTECHNICAL BORING REPORT BORE LOG

WBS 36596.1.2	TIP U-3330	COUNTY NASH	GEOLOGIST Swartley, J. R.	
SITE DESCRIPTION BRIDGE ON -L- (US 301 BYPASS) OVER STONY CREEK				GROUND WTR (ft)
BORING NO. EB1-A	STATION 59+96	OFFSET 37 ft LT	ALIGNMENT -L-	0 HR. N/A
COLLAR ELEV. 97.7 ft	TOTAL DEPTH 26.6 ft	NORTHING 806,951	EASTING 2,348,943	24 HR. 12.2
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 92% 07/12/2011		DRILL METHOD NW Casing w/ SPT	HAMMER TYPE Automatic	
DRILLER Pinter, D. G.	START DATE 01/22/15	COMP. DATE 01/22/15	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							
100															97.7	GROUND SURFACE (PAVEMENT)	0.0
															96.2	ROADWAY EMBANKMENT (PAVEMENT)	1.5
95	94.1	3.6	WOH	3	3										93.1	ROADWAY EMBANKMENT ORANGE, SANDY CLAY	4.6
															90.7	ORANGE AND TAN, SILTY SAND	7.0
90	89.1	8.6		1	2	2									85.7	ORANGE, SILTY CLAY	12.9
												SS-2			80.7	ALLUVIAL GRAY, SANDY SILT	17.0
85	84.1	13.6		2	5	5									75.7	RESIDUAL GRAY, COARSE SAND	22.0
												SS-3			71.1	RESIDUAL GRAY, BLACK AND WHITE, SAPROLITIC, SANDY SILT	26.6
80	79.1	18.6		2	5	4									Boring Terminated with Standard Penetration Test Refusal at Elevation 71.1 ft ON CRYSTALLINE ROCK		
75	74.1	23.6		6	8	16											
	71.1	26.6															

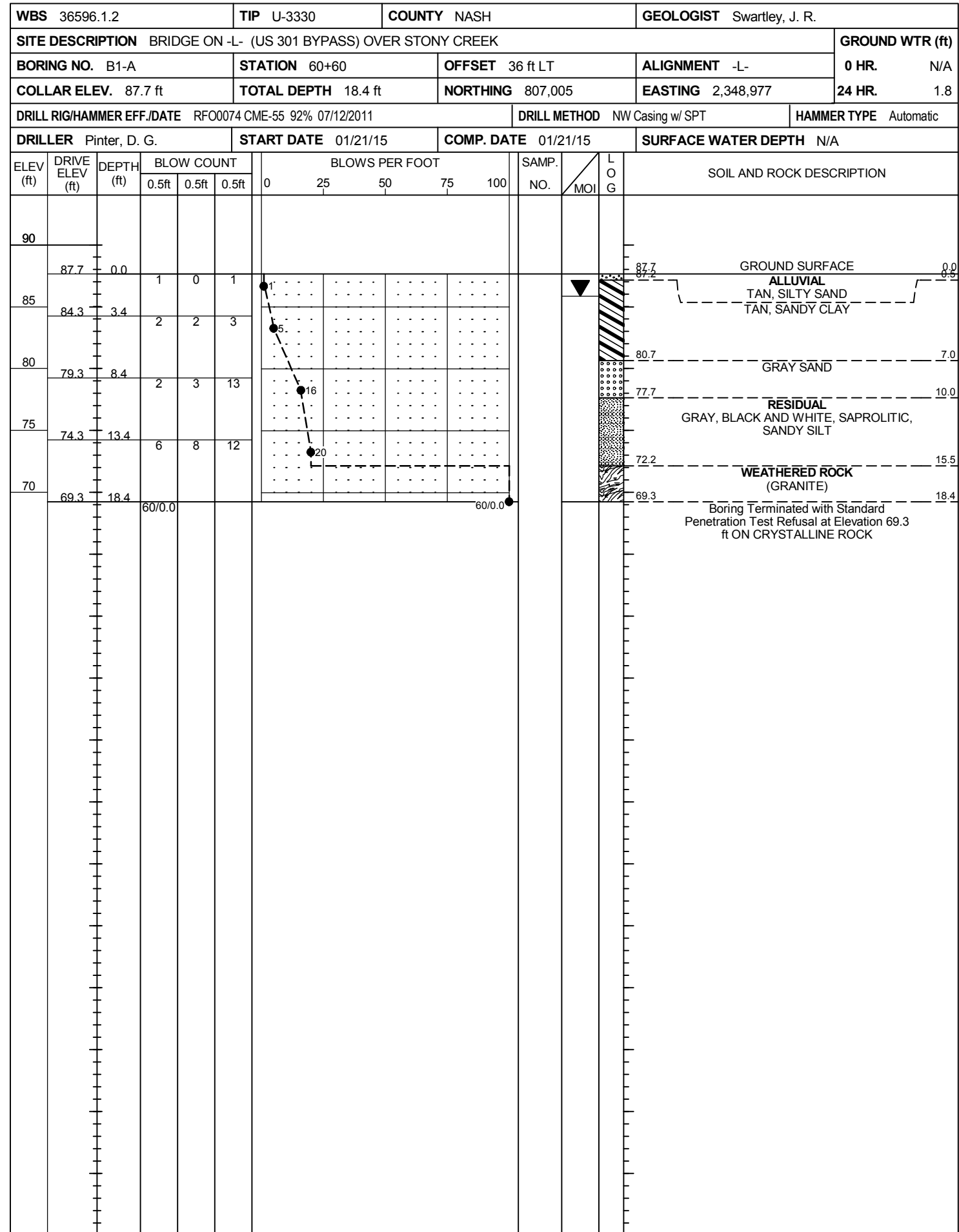
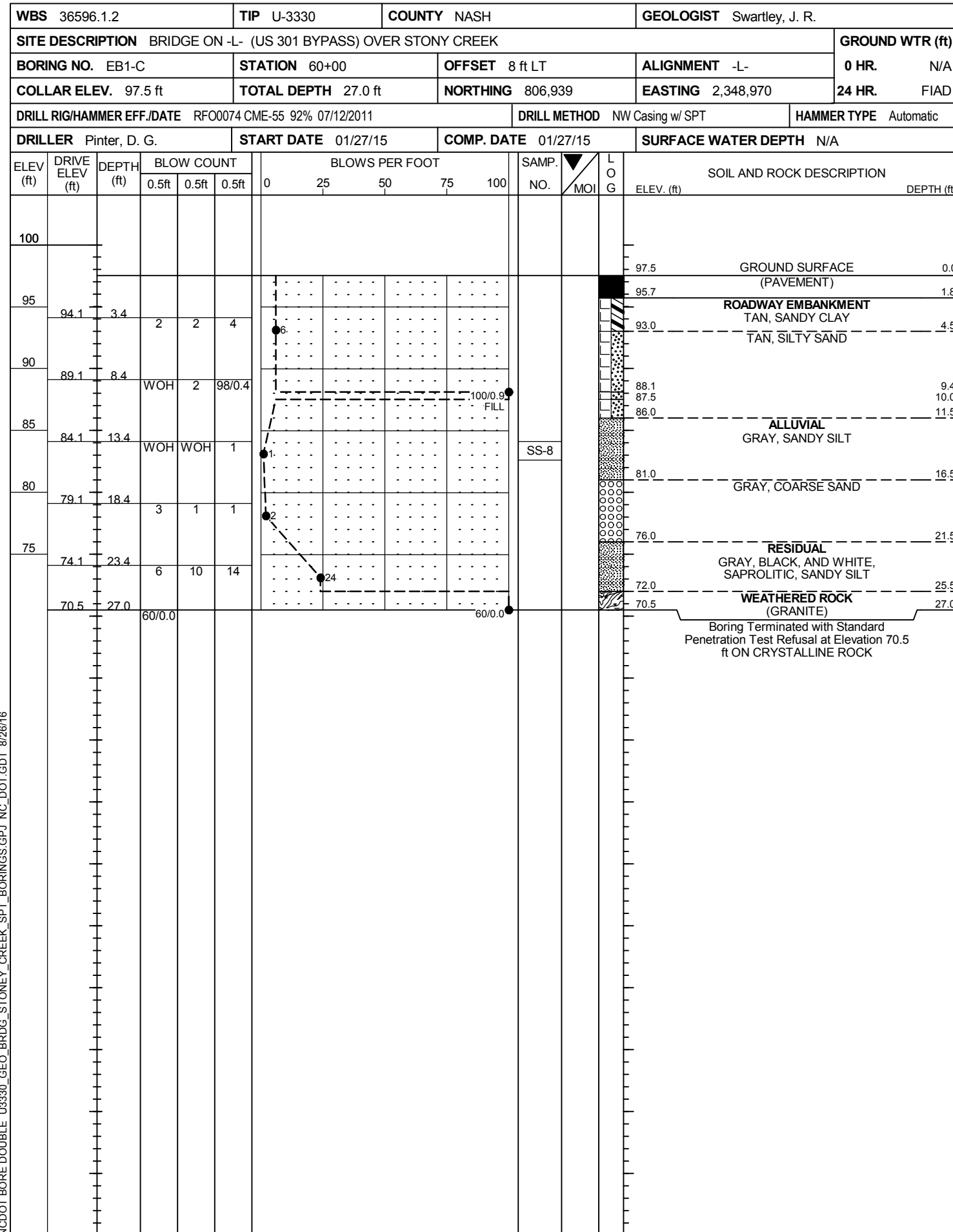
WBS 36596.1.2	TIP U-3330	COUNTY NASH	GEOLOGIST Swartley, J. R.	
SITE DESCRIPTION BRIDGE ON -L- (US 301 BYPASS) OVER STONY CREEK				GROUND WTR (ft)
BORING NO. EB1-B	STATION 59+98	OFFSET 37 ft RT	ALIGNMENT -L-	0 HR. N/A
COLLAR ELEV. 97.7 ft	TOTAL DEPTH 28.5 ft	NORTHING 806,914	EASTING 2,349,007	24 HR. FIAD
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 92% 07/12/2011		DRILL METHOD NW Casing w/ SPT	HAMMER TYPE Automatic	
DRILLER Pinter, D. G.	START DATE 02/03/15	COMP. DATE 02/03/15	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							
100															97.7	GROUND SURFACE (PAVEMENT)	0.0
															95.9	ROADWAY EMBANKMENT (PAVEMENT)	1.8
95	95.1	2.6		1	2	1									88.8	ROADWAY EMBANKMENT ORANGE, SILTY CLAY	8.9
															83.8	ALLUVIAL GRAY, SANDY SILT	13.9
90															80.7	ALLUVIAL ORANGE, SANDY CLAY	17.0
															78.8	ALLUVIAL GRAY SAND	18.9
85	88.8	8.9		WOH	WOH	WOH									75.7	RESIDUAL GRAY, COARSE SAND	22.0
															73.8	RESIDUAL BLACK AND GRAY, SAPROLITIC, SANDY SILT	23.9
80															69.3	WEATHERED ROCK (GRANITE)	28.4
															69.2	CRYSTALLINE ROCK (GRANITE)	28.5
75															Boring Terminated with Standard Penetration Test Refusal at Elevation 69.2 ft IN CRYSTALLINE ROCK		
70	69.3	28.4															

NCDOT BORE DOUBLE U3330_GEO_BRDG_STONEY_CREEK_SPT_BORINGS.GPJ NC_DOT_GDT 8/26/16

GEOTECHNICAL BORING REPORT

BORE LOG



WBS 36596.1.2		TIP U-3330		COUNTY NASH		GEOLOGIST Swartley, J. R.								
SITE DESCRIPTION BRIDGE ON -L- (US 301 BYPASS) OVER STONY CREEK							GROUND WTR (ft)							
BORING NO. B1-B		STATION 60+60		OFFSET 37 ft RT		ALIGNMENT -L-	0 HR. N/A							
COLLAR ELEV. 86.7 ft		TOTAL DEPTH 21.1 ft		NORTHING 806,967		EASTING 2,349,039	24 HR. 0.5							
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 92% 07/12/2011				DRILL METHOD NW Casing w/ SPT		HAMMER TYPE Automatic								
DRILLER Pinter, D. G.		START DATE 02/03/15		COMP. DATE 02/04/15		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				
90														
	86.7	0.0												86.7 GROUND SURFACE 0.0
85	84.1	2.6	WOH	WOH	WOH	0								84.7 ALLUVIAL GRAY, SANDY CLAY AND SILTY CLAY 2.0
80	79.1	7.6	1	2	1									80.7 GRAY SAND 6.0
75	74.1	12.6	3	4	8									74.7 RESIDUAL GRAY, BLACK AND WHITE, SAPROLITIC, SANDY SILT 12.0
70	69.1	17.6	7	10	13									
	65.7	21.0	17	21	16									66.2 WEATHERED ROCK (GRANITE) 20.5
			60/0.1											65.7 CRYSTALLINE ROCK (GRANITE) 21.0
														65.6 Boring Terminated with Standard Penetration Test Refusal at Elevation 65.6 ft IN CRYSTALLINE ROCK 21.1

GEOTECHNICAL BORING REPORT BORE LOG

GEOTECHNICAL BORING REPORT CORE LOG

WBS 36596.1.2		TIP U-3330		COUNTY NASH		GEOLOGIST Swartley, J. R.										
SITE DESCRIPTION BRIDGE ON -L- (US 301 BYPASS) OVER STONY CREEK							GROUND WTR (ft)									
BORING NO. B1-C		STATION 60+60		OFFSET 9 ft LT		ALIGNMENT -L-										
COLLAR ELEV. 84.1 ft		TOTAL DEPTH 26.7 ft		NORTHING 806,991		EASTING 2,349,000										
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 92% 07/12/2011		DRILL METHOD NW Casing W/SPT & Core		HAMMER TYPE Automatic												
DRILLER Pinter, D. G.		START DATE 01/28/15		COMP. DATE 01/28/15		SURFACE WATER DEPTH 1.6ft										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				ELEV. (ft)	DEPTH (ft)	
85	83.6	0.5	2	1	3										84.1	GROUND SURFACE
															83.6	ALLUVIAL GRAY, SILTY SAND
															80.1	GRAY, SANDY SILT
80	79.0	5.1	16	84/0.5											80.1	GRAY SAND
															78.5	WEATHERED ROCK (GRANITE)
75	74.0	10.1	60/0.0												74.0	CRYSTALLINE ROCK
																GRAY, FRESH TO MODERATELY SEVERELY WEATHERED, SOFT TO VERY HARD, MODERATELY CLOSE FRACTURE SPACING, GRANITE
70																REC = 83% RQD = 75% RMR = 81
65																
60																
															57.4	Boring Terminated at Elevation 57.4 ft IN CRYSTALLINE ROCK

WBS 36596.1.2		TIP U-3330		COUNTY NASH		GEOLOGIST Swartley, J. R.					
SITE DESCRIPTION BRIDGE ON -L- (US 301 BYPASS) OVER STONY CREEK							GROUND WTR (ft)				
BORING NO. B1-C		STATION 60+60		OFFSET 9 ft LT		ALIGNMENT -L-					
COLLAR ELEV. 84.1 ft		TOTAL DEPTH 26.7 ft		NORTHING 806,991		EASTING 2,349,000					
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 92% 07/12/2011		DRILL METHOD NW Casing W/SPT & Core		HAMMER TYPE Automatic							
DRILLER Pinter, D. G.		START DATE 01/28/15		COMP. DATE 01/28/15		SURFACE WATER DEPTH 1.6ft					
CORE SIZE NWD3			TOTAL RUN 16.6 ft								
ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN		SAMP. NO.	STRATA		LOG	DESCRIPTION AND REMARKS
					REC. (%)	RQD (%)		REC. (%)	RQD (%)		
73.96	74.0	10.1	1.6	N=60/0.0 32/0.6 53/1.0	(1.6)	(1.5)		(13.7)	(12.4)		Begin Coring @ 10.1 ft
	72.4	11.7	5.0	1:14/1.0 1:13/1.0 1:11/1.0 59/1.0 34/1.0	100%	94%		83%	75%		CRYSTALLINE ROCK GRAY, FRESH TO MODERATELY SEVERELY WEATHERED, SOFT TO VERY HARD, MODERATELY CLOSE FRACTURE SPACING, GRANITE
70					(2.6)	(2.3)					
					52%	46%					
	67.4	16.7	5.0	1:14/1.0 1:24/1.0 2:15/1.0 3:27/1.0 5:40/1.0	(4.5)	(3.7)	RS-2				
65					90%	74%					
	62.4	21.7	5.0	9:00/1.0 31:00/1.0 3:45/1.0 4:15/1.0 7:00/1.0	(5.0)	(4.9)					
60					100%	98%					
	57.4	26.7									Boring Terminated at Elevation 57.4 ft IN CRYSTALLINE ROCK

NCDOT BORE DOUBLE U3330_GEO_BRDG_STONEY_CREEK_SPT_BORINGS.GPJ_NC_DOT.GDT 8/26/16

NCDOT CORE SINGLE U3330_GEO_BRDG_STONEY_CREEK_SPT_BORINGS.GPJ_NC_DOT.GDT 8/26/16

GEOTECHNICAL BORING REPORT

BORE LOG

WBS 36596.1.2		TIP U-3330		COUNTY NASH		GEOLOGIST Swartley, J. R.									
SITE DESCRIPTION BRIDGE ON -L- (US 301 BYPASS) OVER STONY CREEK							GROUND WTR (ft)								
BORING NO. B2-A		STATION 61+45		OFFSET 36 ft LT		ALIGNMENT -L-									
COLLAR ELEV. 87.1 ft		TOTAL DEPTH 28.0 ft		NORTHING 807,078		EASTING 2,349,021									
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 92% 07/12/2011			DRILL METHOD NW Casing w/ SPT			HAMMER TYPE Automatic									
DRILLER Pinter, D. G.		START DATE 01/21/15		COMP. DATE 01/21/15		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					
90															
	87.1	0.0												87.1	0.0
			WOH	WOH	3										
85	84.2	2.9												85.1	2.0
			3	4	5										
80	79.2	7.9												80.6	6.5
			2	1	2										
75	74.2	12.9												76.1	11.0
			4	9	27										
70	69.2	17.9													
			10	15	19										
65	64.2	22.9												66.1	21.0
			18	82/0.4											
60	59.2	27.9												59.2	27.9
			60/0.1											59.1	28.0

WBS 36596.1.2		TIP U-3330		COUNTY NASH		GEOLOGIST Swartley, J. R.									
SITE DESCRIPTION BRIDGE ON -L- (US 301 BYPASS) OVER STONY CREEK							GROUND WTR (ft)								
BORING NO. B2-B		STATION 61+45		OFFSET 38 ft RT		ALIGNMENT -L-									
COLLAR ELEV. 87.7 ft		TOTAL DEPTH 14.0 ft		NORTHING 807,039		EASTING 2,349,084									
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 92% 07/12/2011			DRILL METHOD NW Casing w/ SPT			HAMMER TYPE Automatic									
DRILLER Pinter, D. G.		START DATE 02/04/15		COMP. DATE 02/04/15		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					
90															
	87.7	0.0												87.7	0.0
			1	2	1										
85	83.8	3.9												85.2	2.5
			2	1	2										
80	78.8	8.9												78.3	9.4
			WOH	4	6									76.5	11.2
75	73.8	13.9												73.8	13.9
			60/0.1											73.7	14.0

NCDOT BORE DOUBLE U3330_GEO_BRDG_STONEY_CREEK_SPT_BORINGS.GPJ NC_DOT_GDT 8/26/16

GEOTECHNICAL BORING REPORT BORE LOG

GEOTECHNICAL BORING REPORT CORE LOG

WBS 36596.1.2		TIP U-3330	COUNTY NASH	GEOLOGIST Swartley, J. R.											
SITE DESCRIPTION BRIDGE ON -L- (US 301 BYPASS) OVER STONEY CREEK						GROUND WTR (ft)									
BORING NO. B2-C		STATION 61+45	OFFSET 9 ft LT	ALIGNMENT -L-		0 HR.	N/A								
COLLAR ELEV. 88.9 ft		TOTAL DEPTH 50.2 ft	NORTHING 807,064	EASTING 2,349,044		24 HR.	3.2								
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 92% 07/12/2011				DRILL METHOD NW Casing W/SPT & Core		HAMMER TYPE Automatic									
DRILLER Pinter, D. G.		START DATE 01/29/15	COMP. DATE 01/29/15	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					
90	88.9	0.0	WOH	2	3								GROUND SURFACE	0.0	
85	84.0	4.9		3	5	6							SS-10	ALLUVIAL TAN, SANDY CLAY	
80	79.0	9.9		3	2	2								GRAY, COARSE SAND	8.0
75	74.0	14.9		7	11	15								RESIDUAL GRAY, GREEN AND BLACK, SAPROLITIC, SANDY SILT	13.9
70	69.0	19.9		6	13	23									
65	64.0	24.9		6	8	13									
60	59.0	29.9		21	79/0.4										
55	54.0	34.9		60/0.0										WEATHERED ROCK (GRANITE)	30.4
50														CRYSTALLINE ROCK GRAY, FRESH TO SLIGHTLY WEATHERED, VERY HARD, CLOSE TO WIDE FRACTURE SPACING, GRANITE	34.9
45														REC = 99% RQD = 92% RMR = 84	
40															
														CRS-1	
															38.7
Boring Terminated at Elevation 38.7 ft IN CRYSTALLINE ROCK															

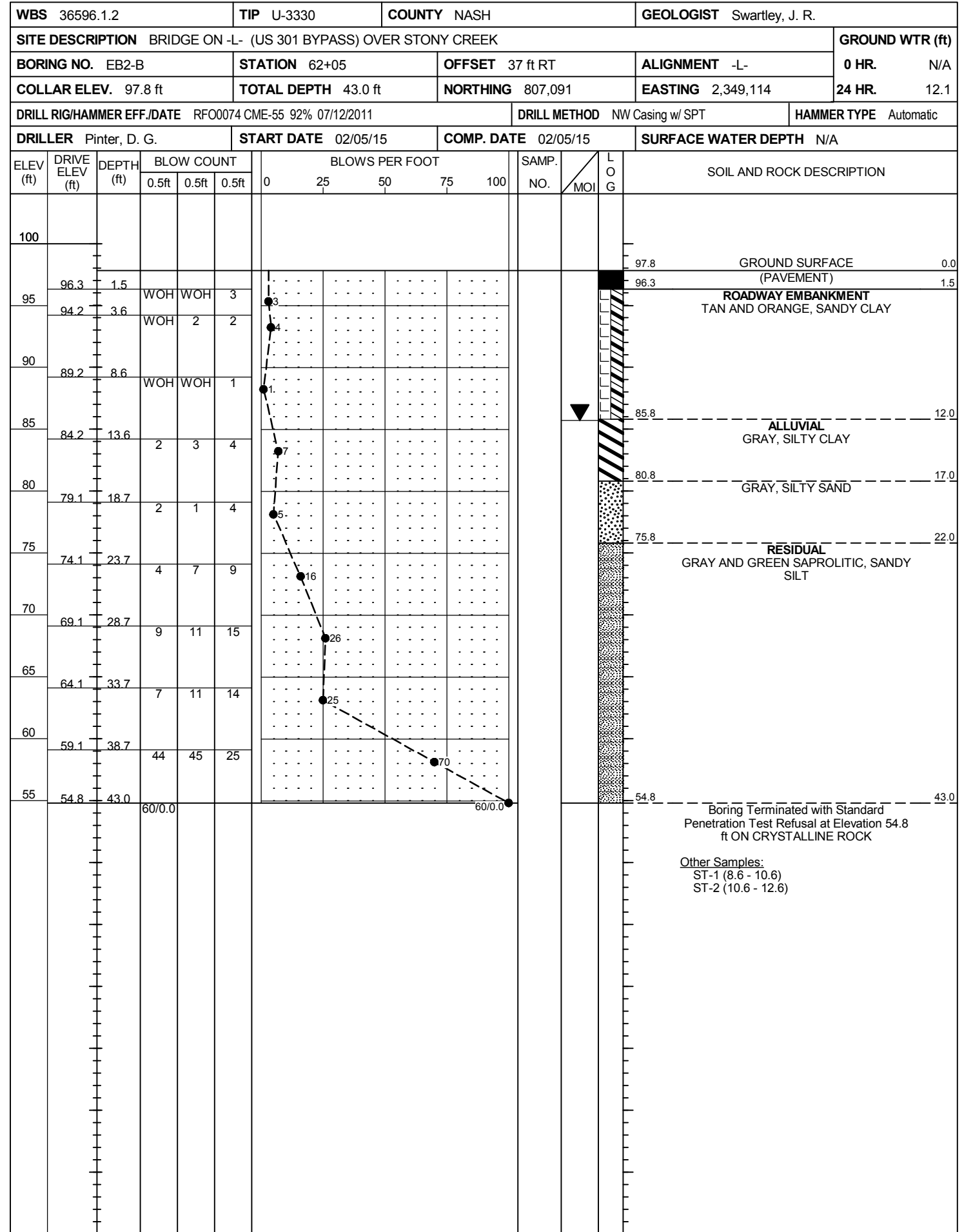
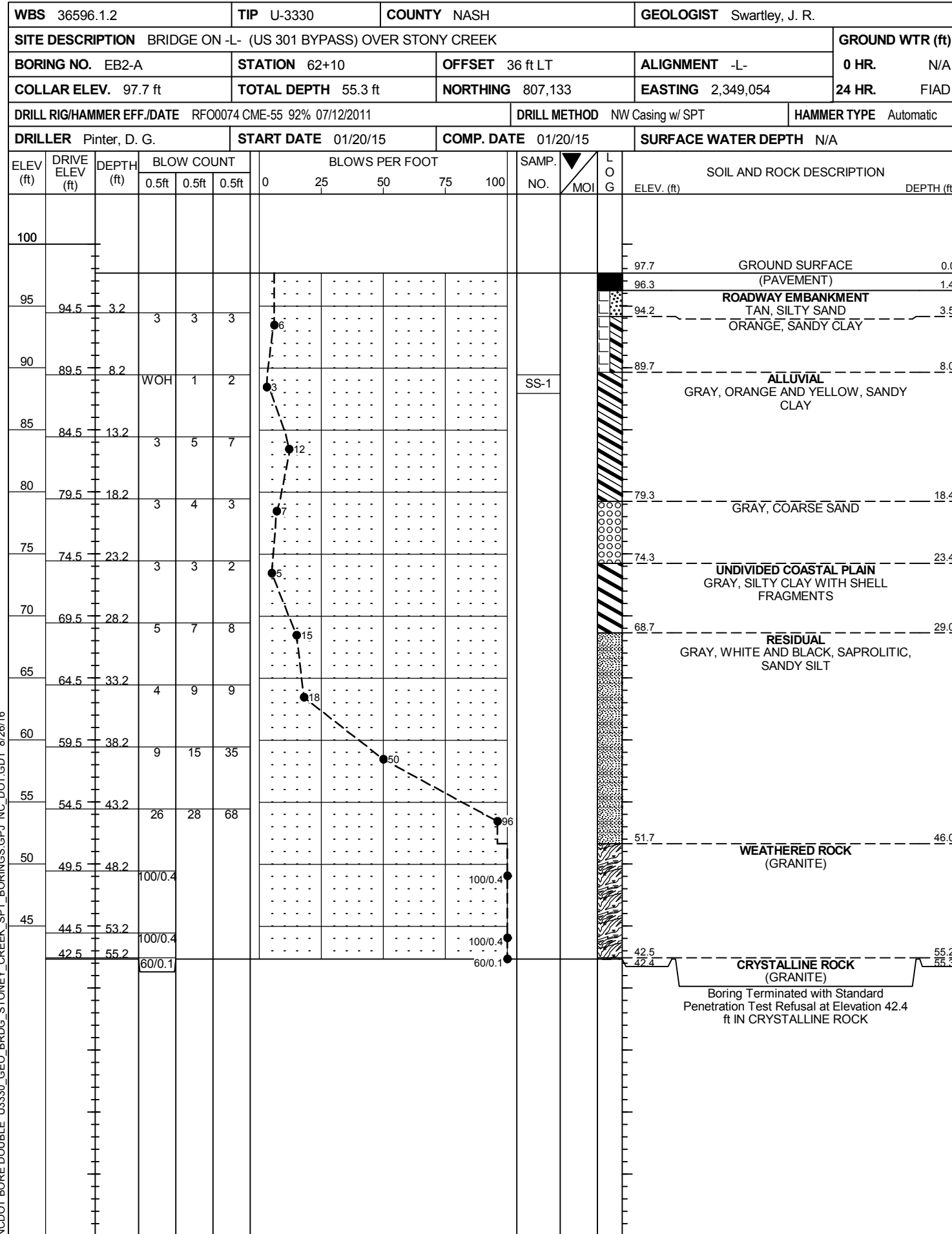
WBS 36596.1.2		TIP U-3330	COUNTY NASH	GEOLOGIST Swartley, J. R.							
SITE DESCRIPTION BRIDGE ON -L- (US 301 BYPASS) OVER STONEY CREEK						GROUND WTR (ft)					
BORING NO. B2-C		STATION 61+45	OFFSET 9 ft LT	ALIGNMENT -L-		0 HR.	N/A				
COLLAR ELEV. 88.9 ft		TOTAL DEPTH 50.2 ft	NORTHING 807,064	EASTING 2,349,044		24 HR.	3.2				
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 92% 07/12/2011				DRILL METHOD NW Casing W/SPT & Core		HAMMER TYPE Automatic					
DRILLER Pinter, D. G.		START DATE 01/29/15	COMP. DATE 01/29/15	SURFACE WATER DEPTH N/A							
ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN		STRATA		LOG	DESCRIPTION AND REMARKS	DEPTH (ft)
					REC. (%)	RQD (%)	REC. (%)	RQD (%)			
53.96	54.0	34.9	1.6	N=60/0.0 47/0.6	(1.5) 94%	(0.9) 56%	(15.1) 99%	(14.0) 92%		Begin Coring @ 34.9 ft	34.9
50	52.4	36.5	5.0	1:20/1.0 1:02/1.0 1:47/1.0 1:23/1.0 1:47/1.0 1:48/1.0	(4.9) 98%	(4.4) 88%			RS-1	GRAY, FRESH TO SLIGHTLY WEATHERED, VERY HARD, CLOSE TO WIDE FRACTURE SPACING, GRANITE	
45	47.4	41.5	5.0	1:37/1.0 1:55/1.0 2:04/1.0 2:15/1.0 3:00/1.0	(5.0) 100%	(5.0) 100%					
40	42.4	46.5	3.7	3:10/1.0 5:00/1.0 7:08/1.0 20:00/0.7	(3.7) 100%	(3.7) 100%					
	38.7	50.2								Boring Terminated at Elevation 38.7 ft IN CRYSTALLINE ROCK	50.2

NCDOT BORE DOUBLE U3330_GEO_BRDG_STONEY_CREEK_SPT_BORINGS.GPJ NC_DOT.GDT 8/26/16

NCDOT CORE SINGLE U3330_GEO_BRDG_STONEY_CREEK_SPT_BORINGS.GPJ NC_DOT.GDT 8/26/16

GEOTECHNICAL BORING REPORT

BORE LOG



NCDOT BORE DOUBLE U3330_GEO_BRDG_STONEY_CREEK_SPT_BORINGS.GPJ NC_DOT.GDT 8/26/16

WBS 36596.1.2		TIP U-3330		COUNTY NASH		GEOLOGIST Swartley, J. R.								
SITE DESCRIPTION BRIDGE ON -L- (US 301 BYPASS) OVER STONY CREEK							GROUND WTR (ft)							
BORING NO. EB2-C		STATION 62+05		OFFSET 9 ft LT		ALIGNMENT -L-		0 HR. N/A						
COLLAR ELEV. 97.4 ft		TOTAL DEPTH 47.5 ft		NORTHING 807,115		EASTING 2,349,075		24 HR. FIAD						
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 92% 07/12/2011						DRILL METHOD NW Casing w/ SPT		HAMMER TYPE Automatic						
DRILLER Pinter, D. G.		START DATE 02/02/15		COMP. DATE 02/03/15		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				
100														
														97.4 GROUND SURFACE 0.0
														(PAVEMENT) 1.4
95	93.7	3.7	1	0	1									ROADWAY EMBANKMENT
														TAN, SILTY SAND
														ORANGE, SANDY CLAY 4.2
90	88.7	8.7	WOH	WOH	42									
														ALLUVIAL
														GRAY, SILTY CLAY 8.0
85	83.7	13.7	2	4	5									
80	78.7	18.7	3	2	2									
														GRAY, COARSE SAND 19.2
75	73.7	23.7	6	6	11									
														RESIDUAL
														GREEN, GRAY AND BLACK, SAPROLITIC, SANDY SILT 22.0
70	68.7	28.7	6	9	12									
65	63.7	33.7	6	7	11									
60	58.7	38.7	22	23	55									
55	53.7	43.7	8	13	21									
50	50.0	47.4												
			60/0.1											CRYSTALLINE ROCK (GRANITE) 47.4
														47.5

Boring Terminated with Standard Penetration Test Refusal at Elevation 49.9 ft IN CRYSTALLINE ROCK

EB1-A

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-2	37'LT	59+96	8.6'-9.7'	A-7-6(6)	41	24	30.3	27.1	16.4	26.3	94	74	43	-	-
SS-3	37'LT	59+96	13.6'-15.1'	A-4(5)	29	10	7.1	25.7	37.0	30.3	96	94	70	-	-

EB1-C

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-8	8'LT	60+00	13.4'-14.9'	A-4(3)	25	9	13.5	29.9	28.3	28.3	100	94	64	-	-

EB1-B

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-11	37'RT	59+98	2.6'-4.1'	A-7-6(6)	43	24	36.0	22.8	12.9	28.3	97	73	43	-	-

B1-C

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-9	9'LT	60+60	0.5'-1.5'	A-4(1)	23	7	16.4	39.8	21.6	22.2	100	94	49	-	-

B2-C

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-10	9'LT	61+45	4.9'-6.4'	A-6(11)	31	15	1.2	21.8	38.6	38.4	100	100	84	-	-

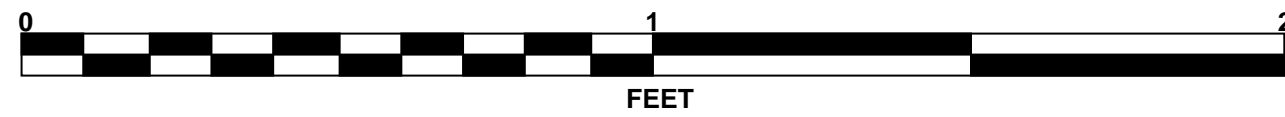
EB2-A

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-1	36'LT	62+10	8.2'-9.7'	A-6(13)	38	20	14.7	16.6	30.3	38.4	100	91	73	-	-

CORE PHOTOGRAPHS

B1-C

BOXES 1 & 2: 10.1 - 26.7 FEET



B2-C

BOXES 1 & 2: 34.9 - 50.2 FEET

