

REFERENCE: BR-0150

PROJECT: 67150

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

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY WILSON
PROJECT DESCRIPTION REPLACE BRIDGE NO.23 ON
US 117 ALT OVER GREAT SWAMP

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0150	1	12

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- 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.
 - 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.O. MOORE

M.J. MORENCY

J.M. EDMONSON

C.M. WALKER

INVESTIGATED BY N.O. MOORE

DRAWN BY N.O. MOORE

CHECKED BY N.T. ROBERSON

SUBMITTED BY N.O. MOORE

DATE OCTOBER 2024



DocuSigned by:
Nick Moore 01/30/2025
8636AFA78511411...
SIGNATURE DATE

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

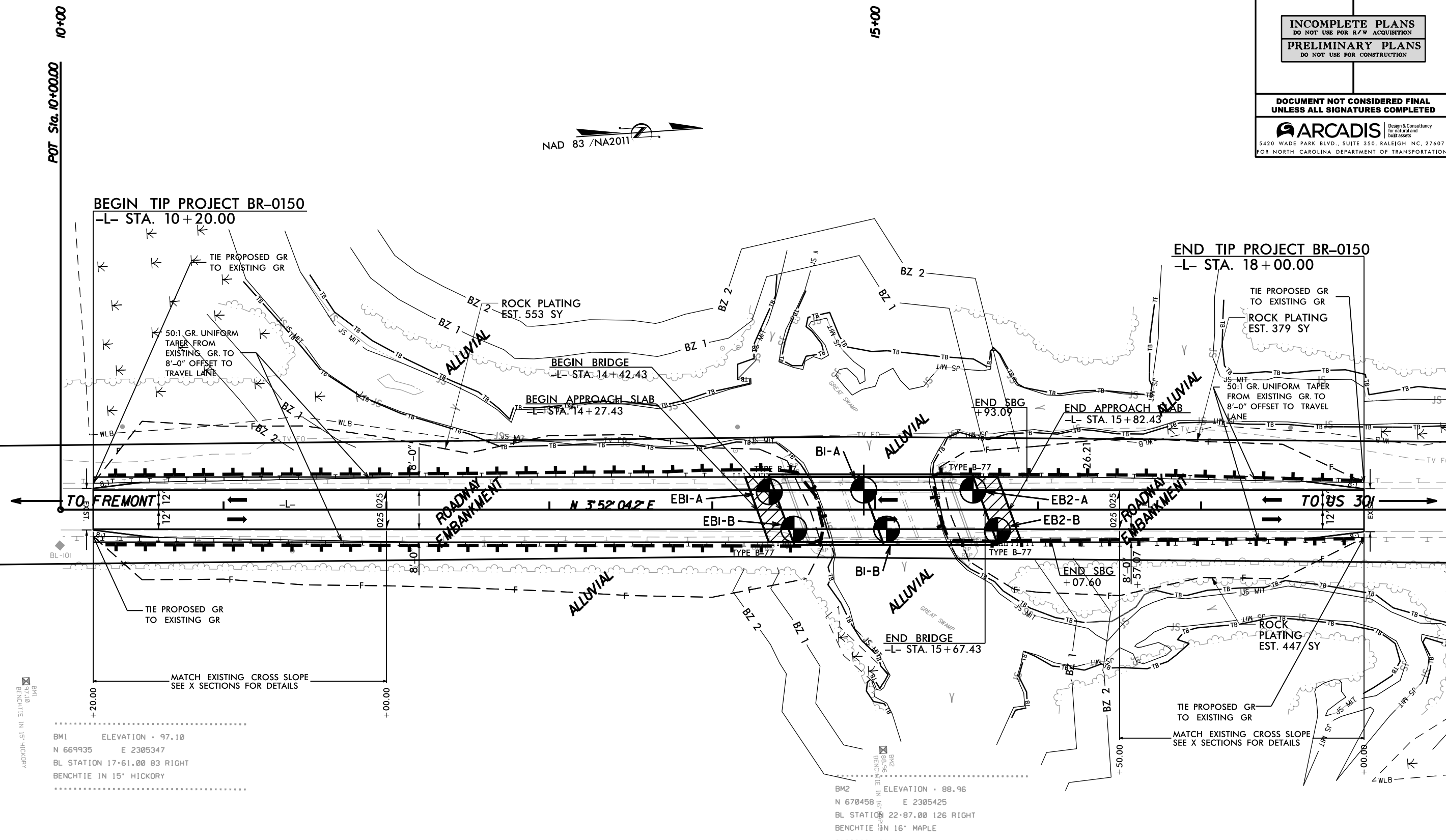
SUPPLEMENTAL LEGEND, GEOLOGICAL STRENGTH INDEX (GSI) TABLES
FROM AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

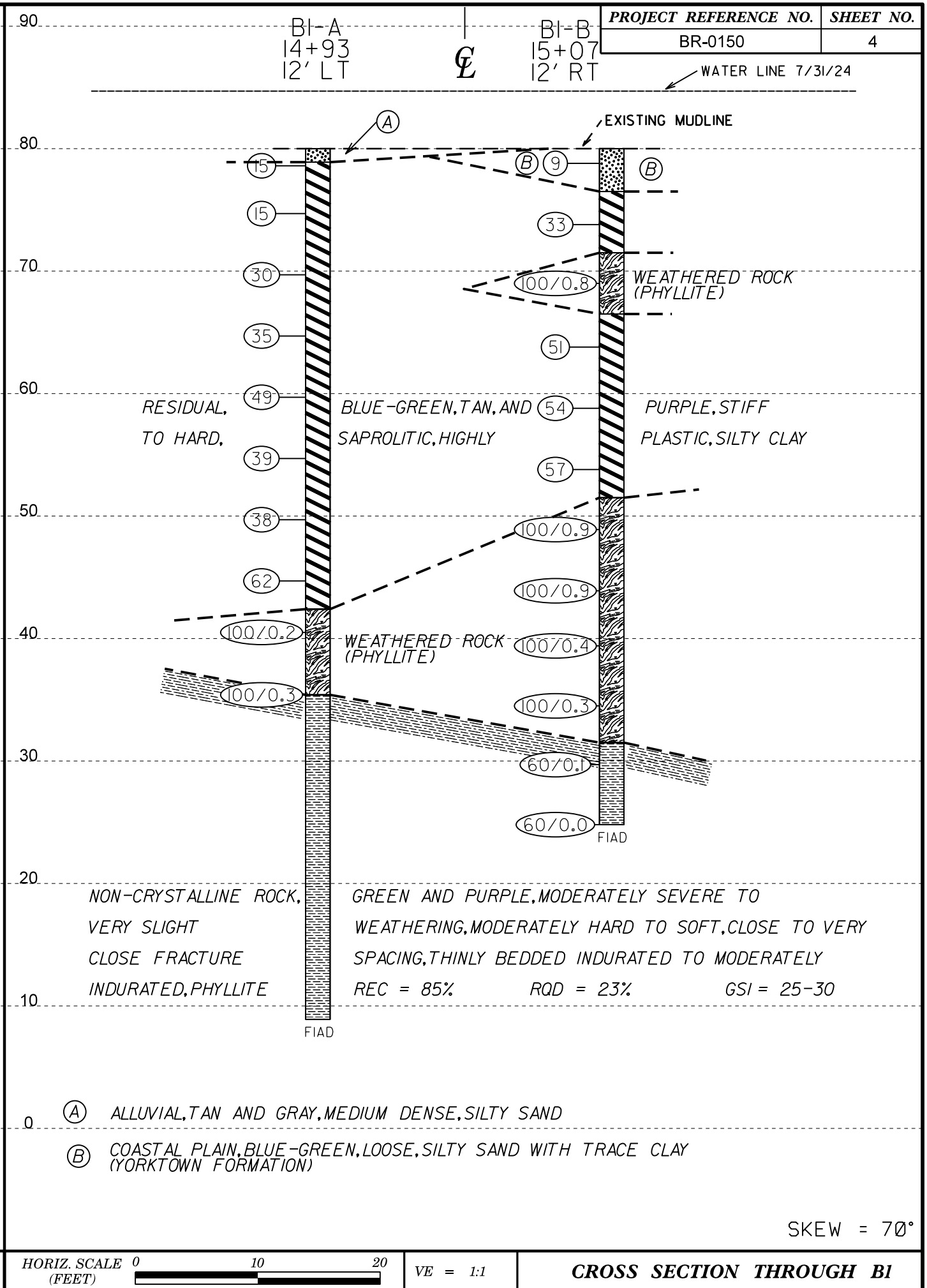
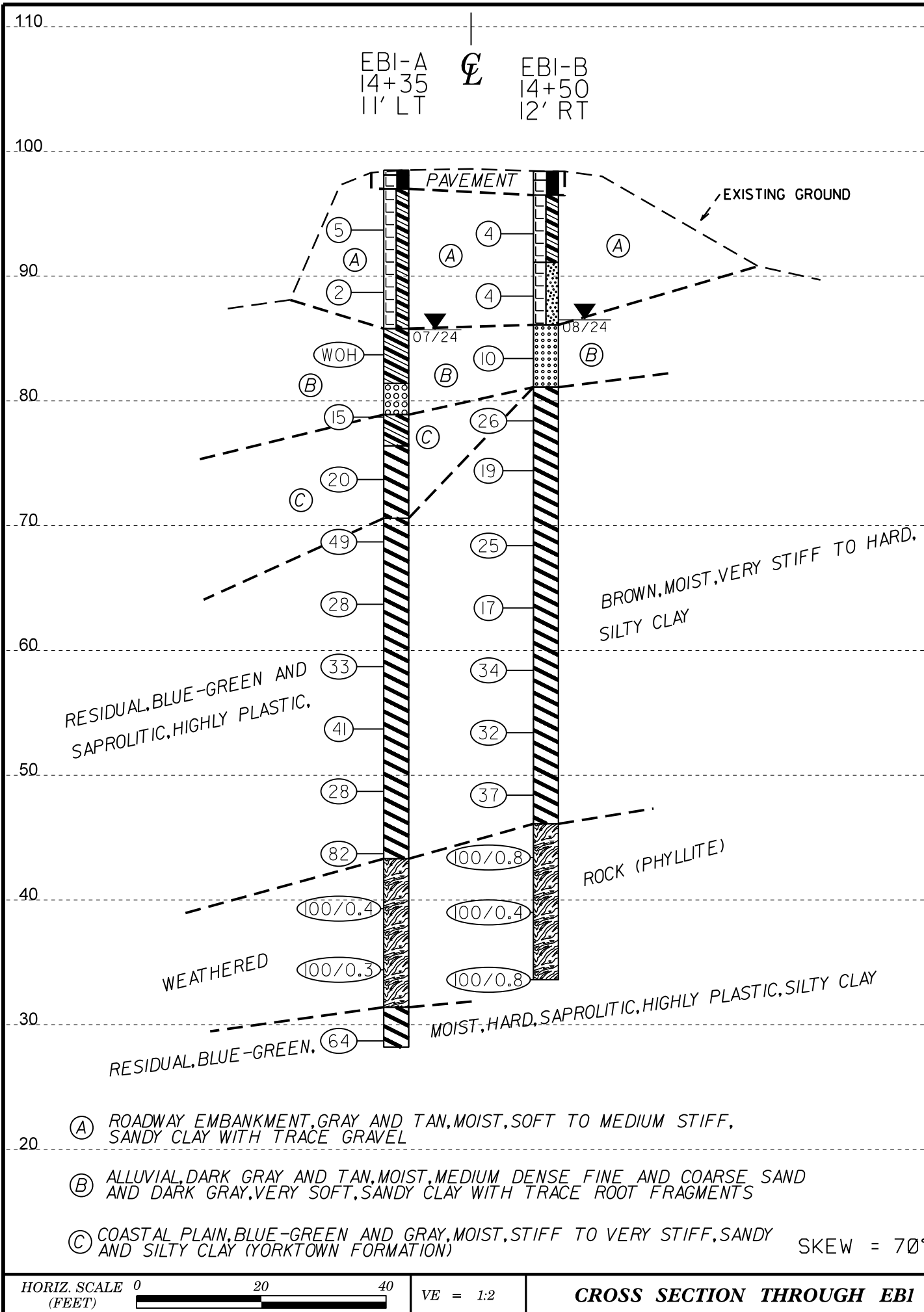
AASHTO LRFD Figure 10.4.6.4-1 — Determination of GSI for Jointed Rock Mass (Marinos and Hoek, 2000)

AASHTO LRFD Figure 10.4.6.4-2 — Determination of GSI for Tectonically Deformed Heterogeneous Rock Masses (Marinos and Hoek, 2000)

GEOLOGICAL STRENGTH INDEX (GSI) FOR JOINTED ROCKS (Hoek and Marinos, 2000) From the lithology, structure and surface conditions of the discontinuities, estimate the average value of GSI. Do not try to be too precise. Quoting a range from 33 to 37 is more realistic than stating that GSI = 35. Note that the table does not apply to structurally controlled failures. Where weak planar structural planes are present in an unfavorable orientation with respect to the excavation face, these will dominate the rock mass behaviour. The shear strength of surfaces in rocks that are prone to deterioration as a result of changes in moisture content will be reduced if water is present. When working with rocks in the fair to very poor categories, a shift to the right may be made for wet conditions. Water pressure is dealt with by effective stress analysis. STRUCTURE		SURFACE CONDITIONS VERY GOOD Very rough, fresh unweathered surfaces GOOD Rough, slightly weathered, iron stained surfaces FAIR Smooth, moderately weathered and altered surfaces POOR Slickensided, highly weathered surfaces with compact coatings or fillings or angular fragments VERY POOR Slickensided, highly weathered surfaces with soft clay coatings or fillings DECREASING SURFACE QUALITY ➡					GSI FOR HETEROGENEOUS ROCK MASSES SUCH AS FLYSCH (Marinos, P and Hoek E., 2000) From a description of the lithology, structure and surface conditions (particularly of the bedding planes), choose a box in the chart. Locate the position in the box that corresponds to the condition of the discontinuities and estimate the average value of GSI from the contours. Do not attempt to be too precise. Quoting a range from 33 to 37 is more realistic than giving GSI = 35. Note that the Hoek-Brown criterion does not apply to structurally controlled failures. Where unfavourably oriented continuous weak planar discontinuities are present, these will dominate the behaviour of the rock mass. The strength of some rock masses is reduced by the presence of groundwater and this can be allowed for by a slight shift to the right in the columns for fair, poor and very poor conditions. Water pressure does not change the value of GSI and it is dealt with by using effective stress analysis. SURFACE CONDITIONS OF DISCONTINUITIES (Predominantly bedding planes) VERY GOOD - Very Rough, fresh unweathered surfaces GOOD - Rough, slightly weathered surfaces FAIR - Smooth, moderately weathered and altered surfaces POOR - Very smooth, occasionally slickensided surfaces with compact coatings or fillings with angular fragments VERY POOR - Very smooth, slicken-sided or highly weathered surfaces with soft clay coatings or fillings	
INTACT OR MASSIVE - intact rock specimens or massive in situ rock with few widely spaced discontinuities BLOCKY - well interlocked undisturbed rock mass consisting of cubical blocks formed by three intersecting discontinuity sets VERY BLOCKY - interlocked, partially disturbed mass with multi-faceted angular blocks formed by 4 or more joint sets BLOCKY/DISTURBED/SEAMY - folded with angular blocks formed by many intersecting discontinuity sets. Persistence of bedding planes or schistosity DISINTEGRATED - poorly interlocked, heavily broken rock mass with mixture of angular and rounded rock pieces LAMINATED/SHEARED - Lack of blockiness due to close spacing of weak schistosity or shear planes DECREASING INTERLOCKING OF ROCK PIECES ➡		COMPOSITION AND STRUCTURE A. Thick bedded, very blocky sandstone The effect of pelitic coatings on the bedding planes is minimized by the confinement of the rock mass. In shallow tunnels or slopes these bedding planes may cause structurally controlled instability. B. Sandstone with thin inter-layers of siltstone C. Sandstone and siltstone in similar amounts D. Siltstone or silty shale with sandstone layers E. Weak siltstone or clayey shale with sandstone layers C, D, E, and G - may be more or less folded than illustrated but this does not change the strength. Tectonic deformation, faulting and loss of continuity moves these categories to F and H. F. Tectonically deformed, intensively folded/faulted, sheared clayey shale or siltstone with broken and deformed sandstone layers forming an almost chaotic structure G. Undisturbed silty or clayey shale with or without a few very thin sandstone layers H. Tectonically deformed silty or clayey shale forming a chaotic structure with pockets of clay. Thin layers of sandstone are transformed into small rock pieces. ➡ Means deformation after tectonic disturbance						

DATE: 8-19-16





GEOTECHNICAL BORING REPORT
BORE LOG

WBS 67150.1.1			TIP BR-0150			COUNTY WILSON			GEOLOGIST Morency, M.						
SITE DESCRIPTION BR. NO. 23 ON US-117 ALT OVER GREAT SWAMP CREEK												GROUND WTR (ft)			
BORING NO. EB1-A			STATION 14+35			OFFSET 11 ft LT			ALIGNMENT -L-			0 HR.	N/A		
COLLAR ELEV. 98.5 ft			TOTAL DEPTH 70.3 ft			NORTHING N/A			EASTING N/A			24 HR.	12.8		
DRILL RIG/HAMMER EFF./DATE GFO0075 CME-45C 90% 11/21/2022						DRILL METHOD Mud Rotary			HAMMER TYPE Automatic						
DRILLER Edmondson, J. M.			START DATE 07/30/24			COMP. DATE 07/30/24			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	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				ELEV. (ft)	DEPTH (ft)
100															
														98.5	0.0
														98.7	0.2
														97.0	1.5
95	94.7	3.8	3	3	2						SS-01	M		ROADWAY EMBANKMENT	
														TAN AND GRAY, MEDIUM STIFF TO SOFT, SANDY CLAY, WITH TRACE GRAVEL	
90	89.7	8.8	1	1	1						SS-02	M			
85	84.7	13.8	WOH	WOH	WOH						SS-03	M		85.8	12.7
80	79.7	18.8	13	7	8						SS-04	M		81.4	17.1
														78.9	19.6
75	74.7	23.8	8	7	13						SS-05	M		76.4	22.1
														COASTAL PLAIN	
70	69.7	28.8	20	26	23						SS-06	M		BLUE-GREEN AND GRAY, STIFF, SANDY CLAY (YORKTOWN)	
														LOW RECOVERY, BLUE-GREEN, VERY STIFF, HIGHLY PLASTIC, SILTY CLAY (YORKTOWN)	
65	64.7	33.8	17	18	10									70.6	27.9
														RESIDUAL	
60	59.7	38.8	17	18	15									BLUE-GREEN AND BROWN, HARD, SAPROLITIC, HIGHLY PLASTIC, SILTY CLAY	
55	54.7	43.8	16	20	21										
50	49.7	48.8	16	14	14						SS-07	M			
45	44.7	53.8	11	22	60									43.3	55.2
														WEATHERED ROCK	
40	39.7	58.8	100/0.4											BLUE-GREEN AND BROWN, PHYLLITE, WITH VERTICAL FOLIATION	
35	34.7	63.8	100/0.3												
30	29.7	68.8	27	32	32									31.4	67.1
														RESIDUAL	
														BLUE-GREEN, HARD, SAPROLITIC, HIGHLY PLASTIC, SILTY CLAY	
														Boring Terminated at Elevation 28.2 ft IN RES (SILTY CLAY)	

WBS 67150.1.1			TIP BR-0150			COUNTY WILSON			GEOLOGIST Morency, M.				
SITE DESCRIPTION BR. NO. 23 ON US-117 ALT OVER GREAT SWAMP CREEK												GROUND WTR (ft)	
BORING NO. EB1-B			STATION 14+50			OFFSET 12 ft RT			ALIGNMENT -L-			0 HR. N/A	
COLLAR ELEV. 98.4 ft			TOTAL DEPTH 64.8 ft			NORTHING N/A			EASTING N/A			24 HR. 11.9	
DRILL RIG/HAMMER EFF./DATE GFO0075 CME-45C 90% 11/21/2022						DRILL METHOD Mud Rotary			HAMMER TYPE Automatic				
DRILLER Walker, C. M.			START DATE 08/12/24			COMP. DATE 08/12/24			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	MOI		
100													
95	94.4	4.0	2	2	2								98.4 GROUND SURFACE 0.0
													97.7 ASPHALT 0.7
													96.5 CONCRETE 1.9
													ROADWAY EMBANKMENT
													TAN, ORANGE, AND GRAY, SOFT, SANDY CLAY
90	89.4	9.0	1	2	2								91.1 BROWN, LOOSE, SILTY SAND 7.3
85	84.4	14.0	1	4	6								86.1 ALLUVIAL 12.3
													LIGHT GRAY, MEDIUM DENSE, FINE SAND
80	79.4	19.0	7	10	16								81.1 RESIDUAL 17.3
													BLUE-GREEN, VERY STIFF, SAPROLITIC, HIGHLY PLASTIC, SILTY CLAY
75	75.4	23.0	7	8	11								
70	69.4	29.0	9	11	14								
65	64.4	34.0	10	9	8								
60	59.4	39.0	10	17	17								
55	54.4	44.0	13	15	17								
50	49.4	49.0	10	21	16								
45	44.4	54.0	10	73	27/0.3								46.1 WEATHERED ROCK 52.3
													BLUE-GREEN, GRAY, AND BROWN, PHYLLITE
40	39.4	59.0	100/0.4										
35	34.4	64.0	30	70/0.3									33.6 Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 33.6 ft IN WR (PHYLLITE) 64.8

NCDOT BORE DOUBLE BR-0150_GEO_BRDG_BH.GPJ NC_DOT.GDT 10/3/24

GEOTECHNICAL BORING REPORT
BORE LOG

WBS 67150.1.1			TIP BR-0150			COUNTY WILSON			GEOLOGIST Morency, M.						
SITE DESCRIPTION BR. NO. 23 ON US-117 ALT OVER GREAT SWAMP CREEK									GROUND WTR (ft)						
BORING NO. B1-A			STATION 14+93			OFFSET 12 ft LT			ALIGNMENT -L-			0 HR. N/A			
COLLAR ELEV. 80.0 ft			TOTAL DEPTH 71.1 ft			NORTHING N/A			EASTING N/A			24 HR. N/A			
DRILL RIG/HAMMER EFF./DATE GFO0075 CME-45C 90% 11/21/2022						DRILL METHOD Mud Rotary w/ Core			HAMMER TYPE Automatic						
DRILLER Walker, C. M.			START DATE 08/14/24			COMP. DATE 08/15/24			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	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				ELEV. (ft)	DEPTH (ft)
80	79.6	0.4	5	5	10									80.0	0.0
	75.7	4.3	3	6	9									78.9	1.1
75														ALLUVIAL	
	70.7	9.3	8	13	17									TAN AND GRAY, MEDIUM DENSE, SILTY SAND	
70														RESIDUAL	
	65.7	14.3	13	16	19									BLUE-GREEN, TAN, AND PURPLE, VERY STIFF TO HARD, SAPROLITIC, HIGHLY PLASTIC, SILTY CLAY	
65															
	60.7	19.3	9	25	24										
60															
	55.7	24.3	12	16	23										
55															
	50.7	29.3	8	14	24										
50															
	45.7	34.3	8	22	40										
45															
	40.7	39.3	100/0.2												
40															
	35.7	44.3	100/0.3												
35															
30															
25															
20															
15															
10															

NCDOT BORE DOUBLE BR-0150_GEO_BRDG_BH.GPJ NC_DOT.GDT 10/4/24

GEOTECHNICAL BORING REPORT
CORE LOG

SHEET 7

WBS 67150.1.1				TIP BR-0150				COUNTY WILSON				GEOLOGIST Morency, M.					
SITE DESCRIPTION BR. NO. 23 ON US-117 ALT OVER GREAT SWAMP CREEK												GROUND WTR (ft)					
BORING NO. B1-A				STATION 14+93				OFFSET 12 ft LT				ALIGNMENT -L-				0 HR. N/A	
COLLAR ELEV. 80.0 ft				TOTAL DEPTH 71.1 ft				NORTHING N/A				EASTING N/A				24 HR. N/A	
DRILL RIG/HAMMER EFF./DATE GFO0075 CME-45C 90% 11/21/2022								DRILL METHOD Mud Rotary w/ Core				HAMMER TYPE Automatic					
DRILLER Walker, C. M.				START DATE 08/14/24				COMP. DATE 08/15/24				SURFACE WATER DEPTH N/A					
CORE SIZE N/A				TOTAL RUN 26.5 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)		
													ELEV. (ft)				
35.4													Begin Coring @ 44.6 ft				
	35.4	44.6	2.5	03:01/1.0	(2.3)	(0.6)							35.4	NON-CRYSTALLINE ROCK	44.6		
	32.9	47.1		04:12/1.0	92%	24%								MODERATELY SEVERE TO VERY SLIGHT WEATHERING, MODERATELY HARD TO SOFT, CLOSE TO VERY CLOSE FRACTURE SPACING, THINLY BEDDED, WITH SOME VERY THINLY BEDDED TO THICKLY LAMINATED, INDURATED TO MODERATELY INDURATED, GREEN AND PURPLE PHYLLITE REC = 85% RQD = 23% GSI = 25-30			
			4.5	02:15/0.5	(4.3)	(1.7)											
				03:53/1.0	96%	38%											
				04:32/1.0													
				03:49/1.0													
	28.4	51.6		03:41/1.0													
			5.0	03:34/0.5	(5.0)	(0.4)											
				04:14/1.0	100%	8%											
				04:03/1.0													
				04:20/1.0													
				04:51/1.0													
	23.4	56.6		04:30/1.0													
			5.0	05:05/1.0	(4.8)	(2.2)											
				04:23/1.0	96%	44%											
				04:00/1.0													
				03:26/1.0													
	18.4	61.6		04:26/1.0													
			4.5	04:15/1.0	(3.7)	(1.0)											
				04:22/1.0	82%	22%											
				06:41/1.0													
	13.9	66.1		05:15/1.0													
			5.0	02:55/0.5	(2.5)	(1.3)											
				04:53/1.0	50%	26%											
				04:09/1.0													
				08:38/1.0													
	8.9	71.1		06:53/1.0									8.9		71.1		
				08:11/1.0										Boring Terminated at Elevation 8.9 ft IN NCR (PHYLLITE)			

NCDOT CORE DOUBLE BR-0150_GEO_BRDG_BH.GPJ NC_DOT.GDT 10/4/24

GEOTECHNICAL BORING REPORT
BORE LOG

WBS 67150.1.1			TIP BR-0150			COUNTY WILSON			GEOLOGIST Morency, M.					
SITE DESCRIPTION BR. NO. 23 ON US-117 ALT OVER GREAT SWAMP CREEK												GROUND WTR (ft)		
BORING NO. B1-B			STATION 15+07			OFFSET 12 ft RT			ALIGNMENT -L-			0 HR.	N/A	
COLLAR ELEV. 80.0 ft			TOTAL DEPTH 55.2 ft			NORTHING N/A			EASTING N/A			24 HR.	N/A	
DRILL RIG/HAMMER EFF./DATE GFO0075 CME-45C 90% 11/21/2022						DRILL METHOD Mud Rotary			HAMMER TYPE Automatic					
DRILLER Edmondson, J. M.			START DATE 08/13/24			COMP. DATE 08/13/24			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)
80	79.8	0.2	3	4	5								80.0	0.0
													GROUND SURFACE	
													COASTAL PLAIN	
													BLUE-GREEN, LOOSE, SILTY SAND, WITH	
													TRACE CLAY	
													(YORKTOWN FORMATION)	
75	74.8	5.2	11	13	20								76.5	3.5
													RESIDUAL	
													BLUE-GREEN, HARD, SAPROLITIC,	
													HIGHLY PLASTIC, SILTY CLAY	
70	69.8	10.2	38	62/0.3									71.5	8.5
													WEATHERED ROCK	
													BLUE-GREEN PHYLLITE	
65	64.8	15.2	25	23	28								66.5	13.5
													RESIDUAL	
													BLUE-GREEN, PURPLE, AND GRAY,	
													HARD, SAPROLITIC, HIGHLY PLASTIC,	
													SILTY CLAY	
60	59.8	20.2	15	24	30									
55	54.8	25.2	16	17	40									
50	49.8	30.2	34	66/0.4									51.5	28.5
													WEATHERED ROCK	
													BLUE-GREEN, PURPLE, AND GRAY,	
													PHYLLITE	
45	44.8	35.2	36	64/0.4										
40	39.8	40.2	100/0.4											
35	34.8	45.2	100/0.3											
30	29.8	50.2	60/0.1										31.5	48.5
													NON-CRYSTALLINE ROCK	
													BLUE-GREEN PHYLLITE, WITH VERITCAL	
													FOLIATIONS	
25	24.8	55.2	60/0.0										24.8	55.2
													Boring Terminated WITH STANDARD	
													PENETRATION TEST REFUSAL at	
													Elevation 24.8 ft IN NCR (PHYLLITE)	

WBS 67150.1.1			TIP BR-0150			COUNTY WILSON			GEOLOGIST Morency, M.					
SITE DESCRIPTION BR. NO. 23 ON US-117 ALT OVER GREAT SWAMP CREEK											GROUND WTR (ft)			
BORING NO. EB2-A			STATION 15+60			OFFSET 12 ft LT			ALIGNMENT -L-			0 HR. N/A		
COLLAR ELEV. 98.5 ft			TOTAL DEPTH 74.1 ft			NORTHING N/A			EASTING N/A			24 HR. 14.0		
DRILL RIG/HAMMER EFF./DATE GFO0075 CME-45C 90% 11/21/2022						DRILL METHOD Mud Rotary			HAMMER TYPE Automatic					
DRILLER Walker, C. M.			START DATE 08/01/24			COMP. DATE 08/01/24			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		MOI		
100														98.5 GROUND SURFACE 0.0
														97.4 ASPHALT 1.1
														95.3 CONCRETE 3.2
95	94.5	4.0	1	2	4	6						M		ROADWAY EMBANKMENT
														ORANGE-BROWN, TAN, AND GRAY, MEDIUM STIFF TO SOFT, SANDY CLAY
90	89.5	9.0	2	1	2	3						M		
85	84.5	14.0	WOH	1	2	3						SS-08		86.2 12.3
														ALLUVIAL
														GRAY, VERY LOOSE, SILTY SAND 14.4
80	79.5	19.0	100/0.4											COASTAL PLAIN
														BLUE-GREEN, SOFT, SANDY CLAY, WITH TRACE WOOD FRAGMENTS (YORKTOWN)
75	74.5	24.0	7	11	14									79.1 19.4
														76.2 22.3
70	69.5	29.0	9	19	25	25						M		RESIDUAL
														BLUE-GREEN, PURPLE, AND BROWN, VERY STIFF TO HARD, SAPROLITIC, HIGHLY PLASTIC, SILTY CLAY
65	64.5	34.0	22	30	35							M		
60	59.5	39.0	30	37	37							M		
55	54.5	44.0	27	41	49							M		
50	49.5	49.0	31	43	57/0.3									51.2 47.3
														WEATHERED ROCK
														BLUE-GREEN AND GRAY PHYLLITE
45	44.5	54.0	34	29	52									46.2 52.3
														RESIDUAL
														BLUE-GREEN AND PURPLE-GRAY, HARD, HIGHLY PLASTIC, SILTY CLAY
40	39.5	59.0	13	16	17							M		
35	34.5	64.0	18	25	27							M		
30	29.5	69.0	100/0.3											31.2 67.3
														WEATHERED ROCK
														BLUE-GREEN PHYLLITE
25	24.5	74.0	60/0.1											26.5 72.0
														26.4 72.1
														NON-CRYSTALLINE ROCK
														BLUE-GREEN AND GRAY PHYLLITE WITH VERTICAL FOLIATION
														Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 24.4 ft IN NCR (PHYLLITE)

NCDOT BORE DOUBLE BR-0150_GEO_BRDG_BH.GPJ NC_DOT.GDT 10/4/24

GEOTECHNICAL BORING REPORT
BORE LOG

WBS 67150.1.1			TIP BR-0150			COUNTY WILSON			GEOLOGIST Morency, M.					
SITE DESCRIPTION BR. NO. 23 ON US-117 ALT OVER GREAT SWAMP CREEK									GROUND WTR (ft)					
BORING NO. EB2-B			STATION 15+75			OFFSET 13 ft RT			ALIGNMENT -L-			0 HR. N/A		
COLLAR ELEV. 98.5 ft			TOTAL DEPTH 64.5 ft			NORTHING N/A			EASTING N/A			24 HR. 8.4		
DRILL RIG/HAMMER EFF./DATE GFO0075 CME-45C 90% 11/21/2022						DRILL METHOD Mud Rotary			HAMMER TYPE Automatic					
DRILLER Edmondson, J. M.			START DATE 08/06/24			COMP. DATE 08/12/24			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)
100														
													98.5	0.0
													97.7	0.8
													96.6	1.9
													ROADWAY EMBANKMENT	
													GRAY, ORANGE, AND BROWN, SOFT, SANDY CLAY	
95	94.6	3.9	3	2	1							M		
90	89.6	8.9	2	2	2							M		
85	84.6	13.9	1	1	1							M		86.3 12.2
80	79.6	18.9	4	10	15							M		81.3 17.2
75	74.6	23.9	15	20	26							M		
70	69.6	28.9	13	16	24							M		
65	64.6	33.9	14	43	51							M		
60	59.6	38.9	55	45/0.4								M		61.3 37.2
55	54.6	43.9	18	20	24							M		56.3 42.2
50	50.4	48.1	100/0.4									M		51.8 46.7
45	45.4	53.1	62	38/0.3								M		
40	40.4	58.1	13	17	21							M		42.1 56.4
35	35.4	63.1	26	48	52/0.4							M		37.1 61.4
													34.0	64.5
													Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 34.0 ft IN WR (PHYLLITE)	

NCDOT BORE DOUBLE BR-0150_GEO_BRDG_BH.GPJ NC_DOT.GDT 10/4/24

PROJ. NO. - 67150.1.1
ID NO. - BR-0150
COUNTY - WILSON

EB1-A

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-1	11' LT	14+35	3.8-5.3	A-6(6)	36	18	17.2	34.2	16.3	32.4	100	91	53	-	-
SS-2	11' LT	14+35	8.8-10.3	A-6(3)	34	15	30.9	26.7	10.0	32.4	98	78	44	-	-
SS-3	11' LT	14+35	13.8-15.3	A-6(6)	30	15	5.5	43.1	15.1	36.4	100	99	58	-	-
SS-4	11' LT	14+35	19.6-20.3	A-6(2)	37	12	25.7	33.2	23.0	18.2	93	79	44	-	-
SS-5	11' LT	14+35	23.8-25.3	A-7-6(21)	52	29	4.9	19.4	35.3	40.4	90	87	73	-	-
SS-6	11' LT	14+35	28.8-30.3	A-7-6(26)	51	27	0.6	19.6	41.4	38.4	99	99	88	-	-
SS-7	11' LT	14+35	48.8-50.3	A-7-6(19)	50	25	10.5	20.2	34.9	34.4	98	91	76	-	-

EB2-A

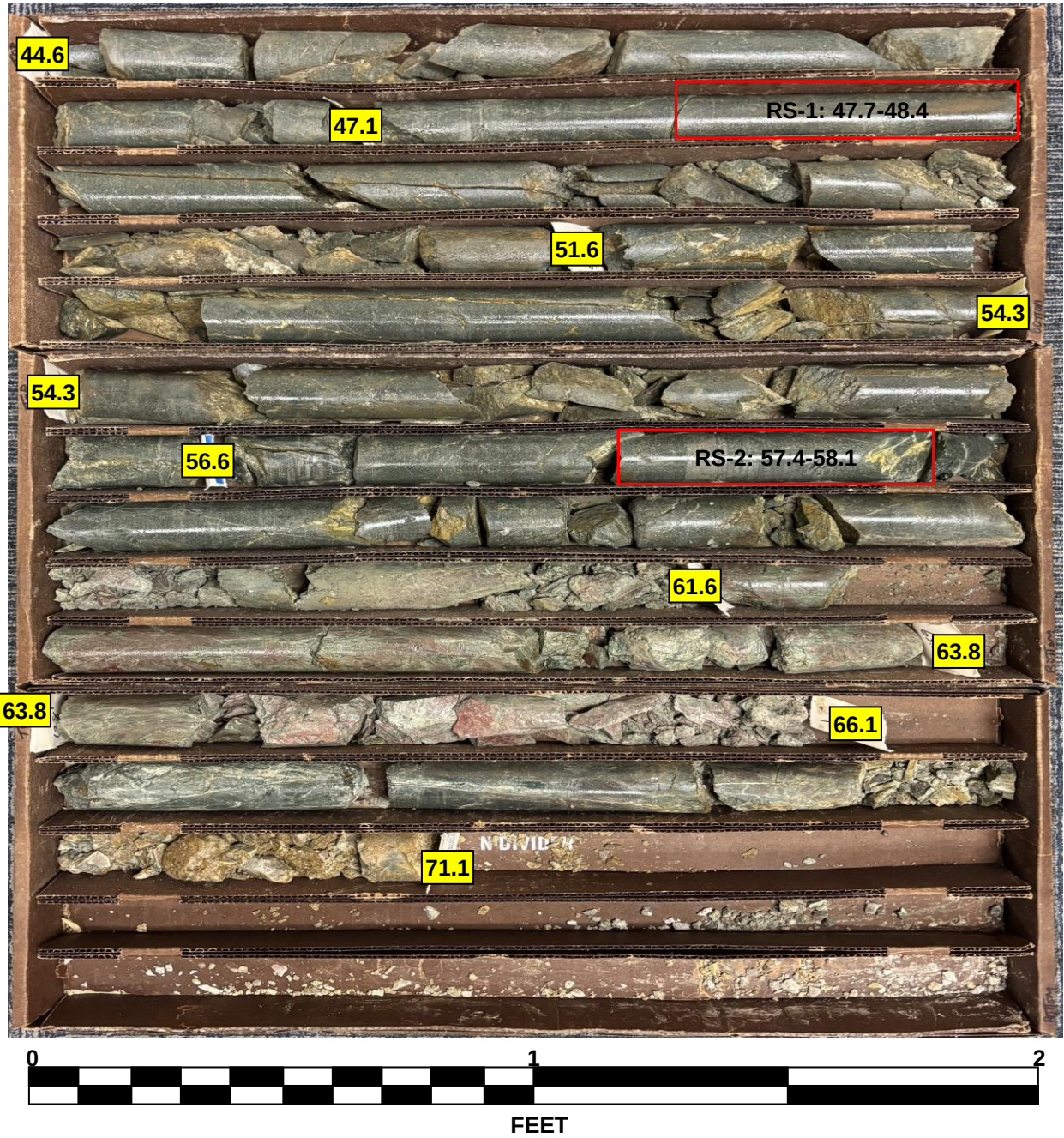
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-8	12' LT	15+60	14.0-14.4	A-2-4(0)	22	6	41.3	28.9	9.6	20.2	97	73	31	-	-
SS-9	12' LT	15+60	54.0-55.5	A-7-6(25)	48	26	0.8	15.0	47.8	36.4	97	97	90	-	-

EB2-B

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-10	13' RT	15+75	13.9-15.4	A-2-4(0)		NP	12.1	66.9	8.8	12.1	100	98	25	-	-

CORE PHOTOGRAPHS

B1-A
BOXES 1, 2, & 3: 44.6 - 71.1 FEET



SITE PHOTOGRAPH

Bridge No. # 23 on -L- (SR 1637) over Great Swamp



Looking North towards End Bent 2