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REFERENCE: B-5400

PROJECT: 46115

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5400 46115	1	10

CONTENTS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	LEGEND (SOIL & ROCK)
2A	SUPPLEMENTAL LEGEND (GSI)
3	SITE PLAN
4	CROSS SECTIONS
5-10	BORE LOGS & CORE REPORT

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY BUNCOMBE
 PROJECT DESCRIPTION BRIDGE NO. 259 ON SR 3466
OVER SOUTH HOMINY CREEK
 SITE DESCRIPTION _____

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.

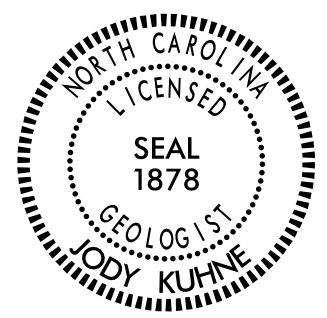
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- THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS ACCURATE NOR IS IT CONSIDERED PART OF THE PLANS, SPECIFICATIONS OR CONTRACT FOR THE PROJECT.
 - BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR 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

DO CHEEK _____
 CJ COFFEY _____

INVESTIGATED BY D MULLEN
 DRAWN BY J KUHNE *JMK*
 CHECKED BY D MULLEN
 SUBMITTED BY J KUHNE
 DATE 7/25/2017



DocuSigned by:
Jody G. Kuhne 7/25/2017
 4F9C0666430670RE DATE

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT
SUBSURFACE INVESTIGATION

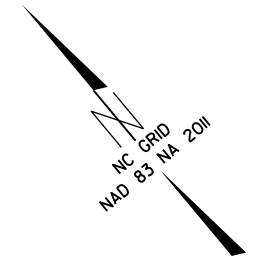
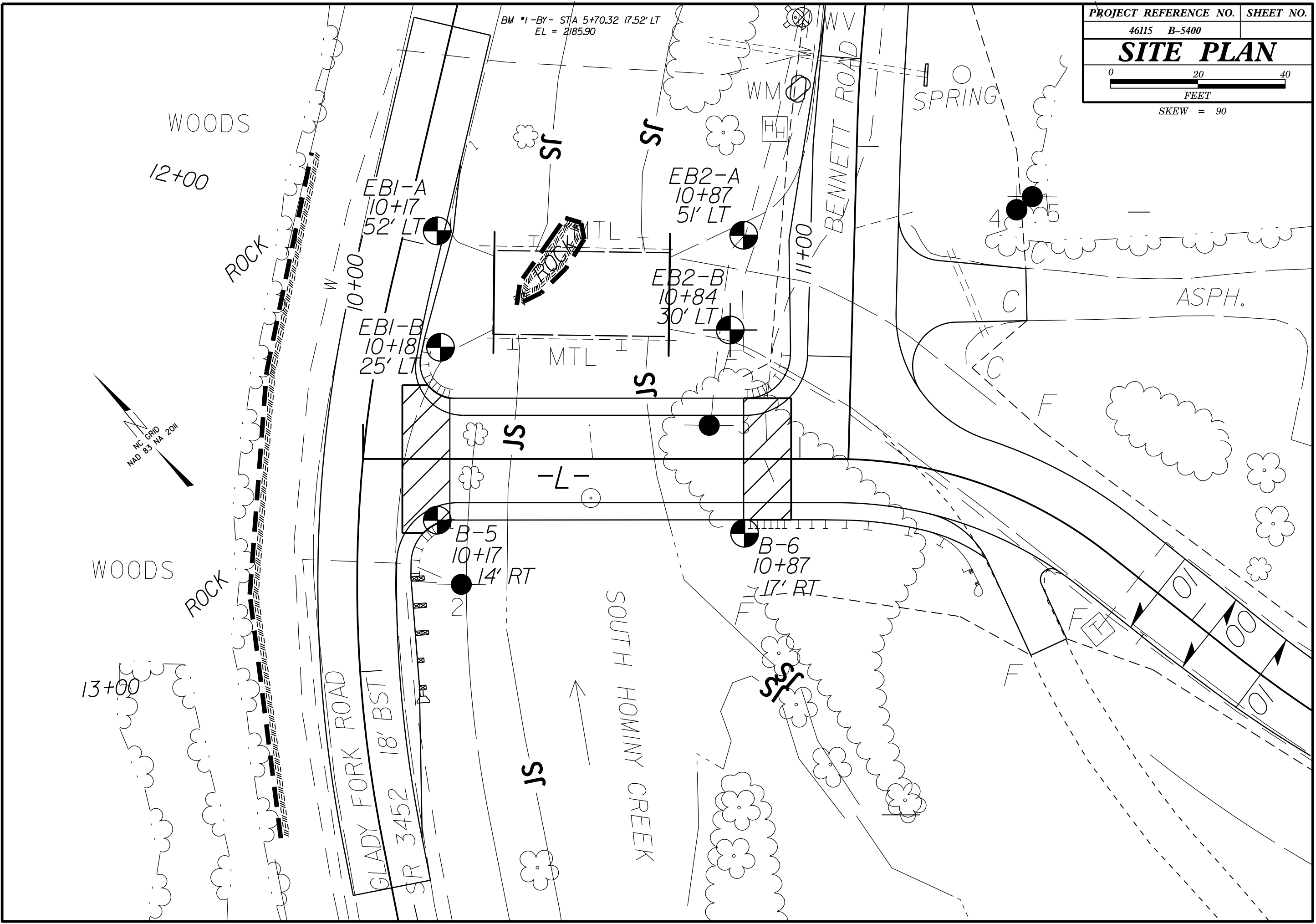
SUPPLEMENTAL LEGEND, GEOLOGICAL STRENGTH INDEX (GSI) TABLES
FROM AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

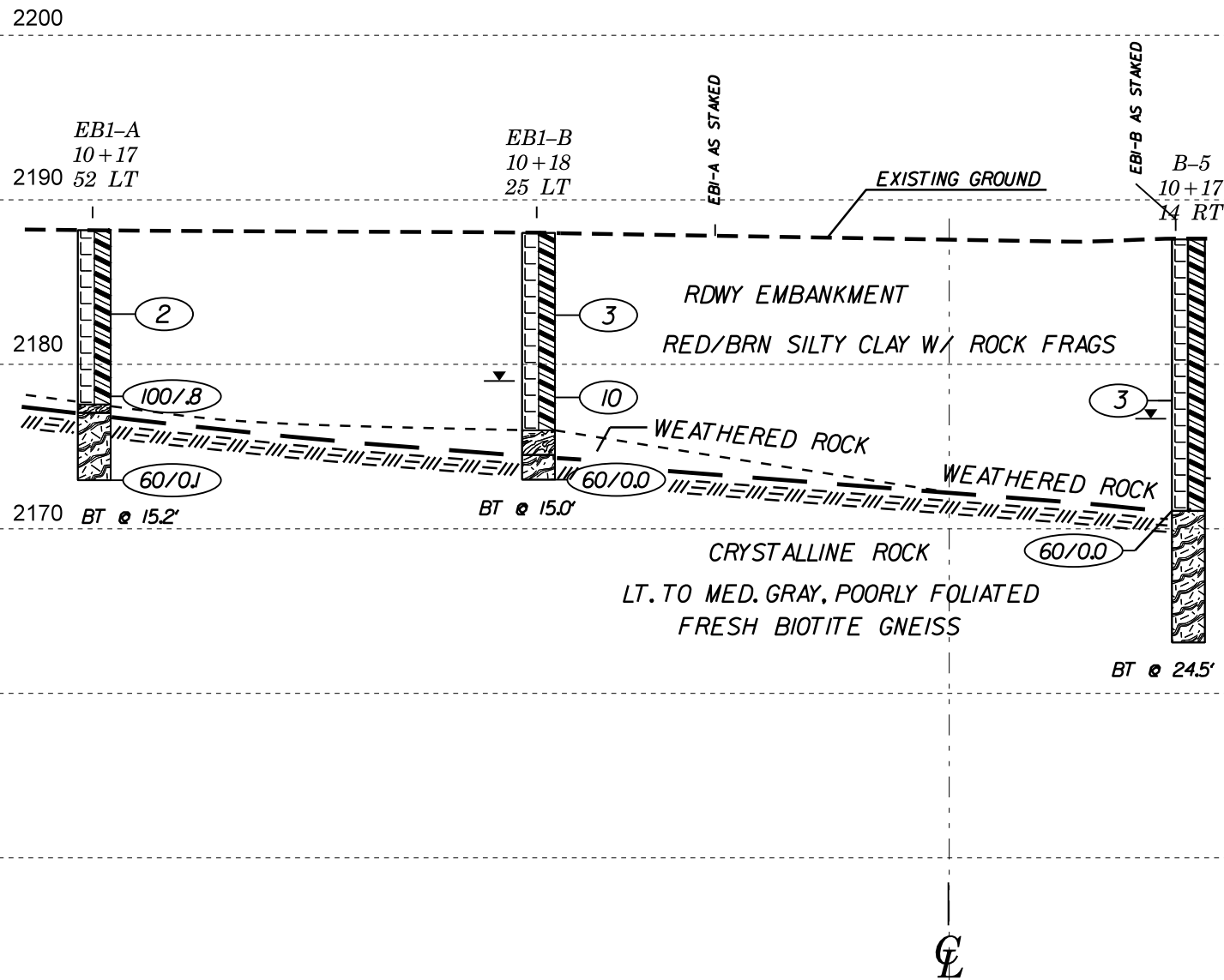
AASHTO LRFD Figure 10.4.6.4-1 — Determination of GSI for Jointed Rock Mass (Marinos and Hoek, 2000)

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)		SURFACE CONDITIONS					GSI FOR HETEROGENEOUS ROCK MASSES SUCH AS FLYSCH (Marinos, P and Hoek E., 2000)		SURFACE CONDITIONS OF DISCONTINUITIES (Predominantly bedding planes)				
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.		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	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.		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, slickensided or highly weathered surfaces with soft clay coatings or fillings
STRUCTURE		DECREASING SURFACE QUALITY →					COMPOSITION AND STRUCTURE						
	INTACT OR MASSIVE - intact rock specimens or massive in situ rock with few widely spaced discontinuities	90			N/A	N/A		70					
	BLOCKY - well interlocked undisturbed rock mass consisting of cubical blocks formed by three intersecting discontinuity sets	80					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.	60	A				
	VERY BLOCKY - interlocked, partially disturbed mass with multi-faceted angular blocks formed by 4 or more joint sets		70					50	B	C	D	E	
	BLOCKY/DISTURBED/SEAMY - folded with angular blocks formed by many intersecting discontinuity sets. Persistence of bedding planes or schistosity		60	50				40					
	DISINTEGRATED - poorly interlocked, heavily broken rock mass with mixture of angular and rounded rock pieces			40	30			30					
	LAMINATED/SHEARED - Lack of blockiness due to close spacing of weak schistosity or shear planes				20			20					
					10			10					
		N/A	N/A								G	H	10
							→ Means deformation after tectonic disturbance						

BM *1-BY- STA 5+70.32 17.52' LT
EL = 2185.90

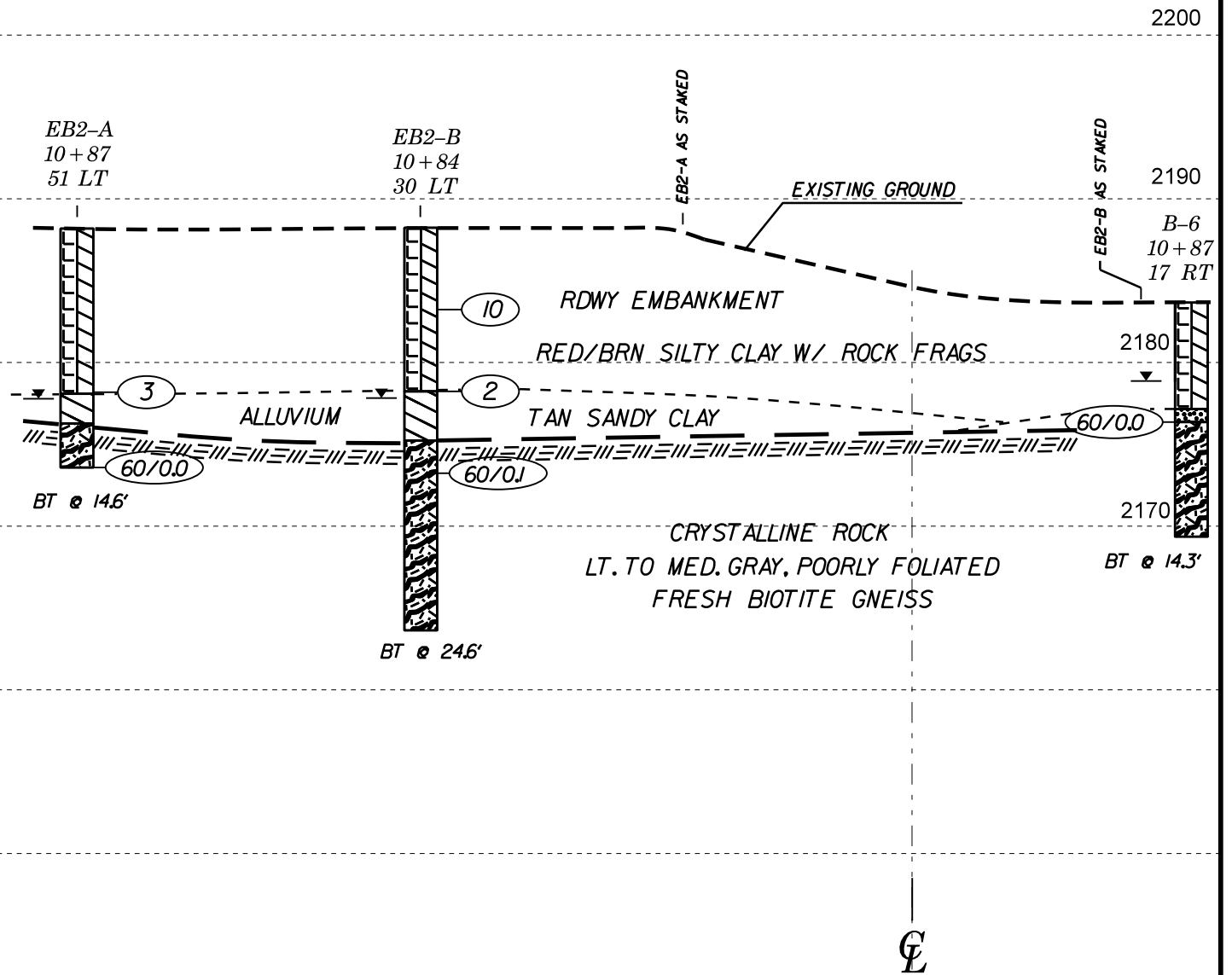




HORIZ. SCALE 0 10 20 (FEET)

VE = 1:1

SECTION THROUGH EB1



HORIZ. SCALE 0 10 20 (FEET)

VE = 1:1

SECTION THROUGH EB2

GEOTECHNICAL BORING REPORT

BORE LOG

WBS B-5400		TIP 46115.1.1		COUNTY BUNCOMBE		GEOLOGIST Mullen, D. M.										
SITE DESCRIPTION Bridge No. 259 on SR 3466 over South Hominy Creek							GROUND WTR (ft)									
BORING NO. EB1-A		STATION 10+17		OFFSET 52 ft LT		ALIGNMENT N/A										
COLLAR ELEV. 2,188.2 ft		TOTAL DEPTH 15.2 ft		NORTHING 657,994		EASTING 897,604										
DRILL RIG/HAMMER EFF./DATE AFO0071 CME-550X 72% 09/03/2009		DRILL METHOD NW Casing w/ SPT		HAMMER TYPE Automatic												
DRILLER Coffey, Jr., C.		START DATE 02/27/13		COMP. DATE 02/27/13		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						
2190														2,188.2	0.0	GROUND SURFACE
2185	2,183.1	5.1	1	1	1											ROADWAY EMBANKMENT Red-brown silty CLAY with rock fragments
2180	2,178.1	10.1	6	94/0.3												
2175	2,173.1	15.1	60/0.1												100/0.8	
														2,177.6	10.6	WEATHERED ROCK (metagraywacke)
														2,177.1	11.1	CRYSTALLINE ROCK METAGRAYWACKE
														2,173.0	15.2	Boring Terminated at Elevation 2,173.0 ft In Crystalline Rock: METAGRAYWACKE
																All Elevations Assumed

WBS B-5400		TIP 46115.1.1		COUNTY BUNCOMBE		GEOLOGIST Mullen, D. M.										
SITE DESCRIPTION Bridge No. 259 on SR 3466 over South Hominy Creek							GROUND WTR (ft)									
BORING NO. EB1-B		STATION 10+18		OFFSET 25 ft LT		ALIGNMENT N/A										
COLLAR ELEV. 2,188.2 ft		TOTAL DEPTH 15.0 ft		NORTHING 657,973		EASTING 897,588										
DRILL RIG/HAMMER EFF./DATE AFO0071 CME-550X 72% 09/03/2009		DRILL METHOD NW Casing w/ SPT		HAMMER TYPE Automatic												
DRILLER Cheek, D. O.		START DATE 02/27/13		COMP. DATE 02/27/13		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						
2190														2,188.2	0.0	GROUND SURFACE
2185	2,183.2	5.0	1	1	2											ROADWAY EMBANKMENT Red-brown silty CLAY with rock fragments
2180	2,178.2	10.0	3	5	5											
2175	2,173.2	15.0	60/0.02												60/0.02	
														2,176.2	12.0	WEATHERED ROCK (metagraywacke)
														2,174.7	13.5	CRYSTALLINE ROCK METAGRAYWACKE
														2,173.2	15.0	Boring Terminated at Elevation 2,173.2 ft In Crystalline Rock: METAGRAYWACKE
																All Elevations Assumed

NCDOT BORE DOUBLE B5400_GEO_BH_PDEA_BRDG0259_BUNCOMBE.GPJ_NC_DOT.GDT 7/5/17

GEOTECHNICAL BORING REPORT

BORE LOG

WBS B-5400		TIP 46115.1.1		COUNTY BUNCOMBE		GEOLOGIST Mullen, D. M.										
SITE DESCRIPTION Bridge No. 259 on SR 3466 over South Hominy Creek							GROUND WTR (ft)									
BORING NO. EB2-A		STATION 10+87		OFFSET 51 ft LT		ALIGNMENT N/A										
COLLAR ELEV. 2,188.3 ft		TOTAL DEPTH 14.6 ft		NORTHING 657,948		EASTING 897,657										
DRILL RIG/HAMMER EFF./DATE AFO0071 CME-550X 72% 09/03/2009		DRILL METHOD NW Casing w/ SPT		HAMMER TYPE Automatic												
DRILLER Coffey, Jr., C.		START DATE 02/27/13		COMP. DATE 02/27/13		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						
2190														2,188.3	GROUND SURFACE	0.0
2185															ROADWAY EMBANKMENT Red-brown silty CLAY with rock fragments	
2180	2,178.2	10.1	1	2	1									2,178.2	ALLUVIAL Tan sandy CLAY	10.1
2175	2,173.7	14.6												2,176.4	CRYSTALLINE ROCK METAGRAYWACKE	11.9
														2,173.7	Boring Terminated at Elevation 2,173.7 ft In Crystalline Rock: METAGRAYWACKE	14.6
															All Elevations Assumed	

WBS B-5400		TIP 46115.1.1		COUNTY BUNCOMBE		GEOLOGIST Mullen, D. M.										
SITE DESCRIPTION Bridge No. 259 on SR 3466 over South Hominy Creek							GROUND WTR (ft)									
BORING NO. EB2-B		STATION 10+84		OFFSET 30 ft LT		ALIGNMENT N/A										
COLLAR ELEV. 2,188.5 ft		TOTAL DEPTH 24.6 ft		NORTHING 657,934		EASTING 897,641										
DRILL RIG/HAMMER EFF./DATE AFO0071 CME-550X 72% 09/03/2009		DRILL METHOD NW Casing W/SPT & Core		HAMMER TYPE Automatic												
DRILLER Cheek, D. O.		START DATE 02/28/13		COMP. DATE 02/28/13		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						
2190														2,188.5	GROUND SURFACE	0.0
2185															ROADWAY EMBANKMENT Red-brown silty CLAY with rock fragments	
2180	2,183.5	5.0	1	9	1									2,178.5	ALLUVIAL Tan sandy CLAY	10.0
2175	2,173.5	15.0												2,175.5	CRYSTALLINE ROCK Gray, fresh, hard, very to moderately closely fractured METAGRAYWACKE Run 1: 16.3-20.0' REC=92% RQD=62% Run 2: 20.0-24.6' REC=100% RQD=100%	13.0
2170															Boring Terminated at Elevation 2,163.9 ft In Crystalline Rock: METAGRAYWACKE	24.6
2165															All Elevations Assumed	

NCDOT BORE DOUBLE B5400_GEO_BH_PDEA_BRDG0259_BUNCOMBE.GPJ NC_DOT.GDT 7/5/17

GEOTECHNICAL BORING REPORT CORE LOG

WBS B-5400		TIP 46115.1.1		COUNTY BUNCOMBE		GEOLOGIST Mullen, D. M.					
SITE DESCRIPTION Bridge No. 259 on SR 3466 over South Hominy Creek							GROUND WTR (ft)				
BORING NO. EB2-B		STATION 10+84		OFFSET 30 ft LT		ALIGNMENT N/A					
COLLAR ELEV. 2,188.5 ft		TOTAL DEPTH 24.6 ft		NORTHING 657,934		EASTING 897,641					
DRILL RIG/HAMMER EFF./DATE AFO0071 CME-550X 72% 09/03/2009				DRILL METHOD NW Casing W/SPT & Core		HAMMER TYPE Automatic					
DRILLER Cheek, D. O.		START DATE 02/28/13		COMP. DATE 02/28/13		SURFACE WATER DEPTH N/A					
CORE SIZE NXWL		TOTAL RUN 8.3 ft									
ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN		STRATA		LOG	DESCRIPTION AND REMARKS	DEPTH (ft)
					REC. (ft) %	RQD (ft) %	REC. (ft) %	RQD (ft) %			
2172.16	2,172.2	16.3	3.7		(3.4) 92%	(2.3) 62%				Begin Coring @ 16.3 ft CRYSTALLINE ROCK (continued)	
2170	2,168.5	20.0	4.6		(4.6) 100%	(4.6) 100%					
2165	2,163.9	24.6								Boring Terminated at Elevation 2,163.9 ft In Crystalline Rock: METAGRAYWACKE All Elevations Assumed	24.6

B-5400 BORING EB2-B



STATION 10+84, 30' LT 16.3 TO 24.6'

BLOCKY GOOD GNEISS GSI = 65 - 75

GEOTECHNICAL BORING REPORT

BORE LOG

WBS B-5400		TIP 46115.1.1		COUNTY BUNCOMBE		GEOLOGIST Mullen, D. M.										
SITE DESCRIPTION Bridge No. 259 on SR 3466 over South Hominy Creek							GROUND WTR (ft)									
BORING NO. B-5		STATION 10+17		OFFSET 14 ft RT		ALIGNMENT N/A										
COLLAR ELEV. 2,187.6 ft		TOTAL DEPTH 24.5 ft		NORTHING 657,943		EASTING 897,562										
DRILL RIG/HAMMER EFF./DATE AFO0071 CME-550X 72% 09/03/2009			DRILL METHOD NW Casing W/SPT & Core			HAMMER TYPE Automatic										
DRILLER Cheek, D. O.		START DATE 07/17/17		COMP. DATE 07/17/17		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						
2190														2,187.6	0.0	GROUND SURFACE
2185																ROADWAY EMBANKMENT BRN SANDY SILTY CLAY W/ GRAVEL BOULDERS AT 11'
2180	2,177.8	9.8	2	1	2											
2175																
2170	2,171.1	16.5	60/0.0											2,171.1	16.5	CRYSTALLINE ROCK MED. TO DK GRAY. MOD TO WELL FOLIATED BIOTITE GNEISS, FRESH
2165														2,163.1	24.5	Boring Terminated at Elevation 2,163.1 ft IN CRYSTALLINE ROCK:

WBS B-5400		TIP 46115.1.1		COUNTY BUNCOMBE		GEOLOGIST Mullen, D. M.										
SITE DESCRIPTION Bridge No. 259 on SR 3466 over South Hominy Creek							GROUND WTR (ft)									
BORING NO. B-6		STATION 10+87		OFFSET 17 ft RT		ALIGNMENT N/A										
COLLAR ELEV. 2,183.7 ft		TOTAL DEPTH 14.3 ft		NORTHING 657,896		EASTING 897,614										
DRILL RIG/HAMMER EFF./DATE AFO0071 CME-550X 72% 09/03/2009			DRILL METHOD NW Casing W/SPT & Core			HAMMER TYPE Automatic										
DRILLER Cheek, D. O.		START DATE 07/17/17		COMP. DATE 07/17/17		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						
2185														2,183.7	0.0	GROUND SURFACE
2180																ALLUVIAL VERY LOOSE SILTY SAND
2175	2,176.4	7.3	60/0.0											2,176.4	7.3	SAPROLITE SILTY SAND
2170														2,169.4	14.3	CRYSTALLINE ROCK LT. TO MED GRAY, POORLY TO MOD. FOLIATED BIOTITE GNEISS, FRESH
																Boring Terminated at Elevation 2,169.4 ft IN CRYSTALLINE ROCK; METAGRAYWACKE

NCDOT BORE DOUBLE B5400_GEO_BH_PDEA_BRDG0259_BUNCOMBE.GPJ NC_DOT.GDT 7/25/17

GEOTECHNICAL BORING REPORT CORE LOG

WBS B-5400		TIP 46115.1.1		COUNTY BUNCOMBE		GEOLOGIST Mullen, D. M.						
SITE DESCRIPTION Bridge No. 259 on SR 3466 over South Hominy Creek							GROUND WTR (ft)					
BORING NO. B-5		STATION 10+17		OFFSET 14 ft RT		ALIGNMENT N/A						
COLLAR ELEV. 2,187.6 ft		TOTAL DEPTH 24.5 ft		NORTHING 657,943		EASTING 897,562						
DRILL RIG/HAMMER EFF./DATE AFO0071 CME-550X 72% 09/03/2009				DRILL METHOD NW Casing W/SPT & Core		HAMMER TYPE Automatic						
DRILLER Cheek, D. O.		START DATE 07/17/17		COMP. DATE 07/17/17		SURFACE WATER DEPTH N/A						
CORE SIZE NXWL		TOTAL RUN 8.0 ft										
ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN		SAMP. NO.	STRATA		LOG	DESCRIPTION AND REMARKS	DEPTH (ft)
					REC. (ft)	RQD (ft)		REC. (ft)	RQD (ft)			
2171.14	2,171.1	16.5	3.0	N=60/0.0 1:05/1.0 0:58/1.0 1:18/1.0	(2.9) 95%	(2.9) 95%					Begin Coring @ 16.5 ft CRYSTALLINE ROCK	16.5
2165	2,168.1	19.5	5.0	1:59/1.0 1:28/1.0 1:45/1.0 2:09/1.0	(4.9) 98%	(4.9) 98%						
	2,163.1	24.5									Boring Terminated at Elevation 2,163.1 ft IN CRYSTALLINE ROCK:	24.5

NCDOT CORE DOUBLE B5400_GEO_BH_PDEA_BRDG0259_BUNCOMBE.GPJ NC_DOT.GDT 7/25/17



B-5400 BORING B-5

STATION 10+17, 14' RT 16.5 TO 24.5

BLOCKY GOOD TO VERY GOOD GNEISS GSI = 75 - 85

GEOTECHNICAL BORING REPORT CORE LOG

WBS B-5400		TIP 46115.1.1		COUNTY BUNCOMBE		GEOLOGIST Mullen, D. M.						
SITE DESCRIPTION Bridge No. 259 on SR 3466 over South Hominy Creek							GROUND WTR (ft)					
BORING NO. B-6		STATION 10+87		OFFSET 17 ft RT		ALIGNMENT N/A						
COLLAR ELEV. 2,183.7 ft		TOTAL DEPTH 14.3 ft		NORTHING 657,896		EASTING 897,614						
DRILL RIG/HAMMER EFF./DATE AFO0071 CME-550X 72% 09/03/2009				DRILL METHOD NW Casing W/SPT & Core		HAMMER TYPE Automatic						
DRILLER Cheek, D. O.		START DATE 07/17/17		COMP. DATE 07/17/17		SURFACE WATER DEPTH N/A						
CORE SIZE NXWL		TOTAL RUN 7.0 ft										
ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN		SAMP. NO.	STRATA		LOG	DESCRIPTION AND REMARKS	DEPTH (ft)
					REC. (ft) %	RQD (ft) %		REC. (ft) %	RQD (ft) %			
2176.37												
2175	2,176.4	7.3	2.0	N=60/0.0 2:38/1.0	(1.8) 90%	(1.8) 90%				2,176.4	Begin Coring @ 7.3 ft CRYSTALLINE ROCK	7.3
	2,174.4	9.3	5.0	3:18/1.0 2:28/1.0	(4.9) 98%	(4.7) 94%						
2170	2,169.4	14.3		1:30/1.0 2:40/1.0 2:30/1.0						2,169.4	Boring Terminated at Elevation 2,169.4 ft IN CRYSTALLINE ROCK; METAGRAYWACKE	14.3

NCDOT CORE DOUBLE B5400_GEO_BH_PDEA_BRDG0259_BUNCOMBE.GPJ NC_DOT.GDT 7/25/17



B-5400 BORING B-6
 STATION 10+87 17' RT 7.5 TO 14.3
 BLOCK GOOD TO VERY GOOD GNEISS GSI = 75 - 85