

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

STRUCTURE
SUBSURFACE INVESTIGATION

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PROJ. REFERENCE NO. 38529.1.1 (B-4757) F.A. PROJ. BRZ-2795(1)
COUNTY GUILFORD
PROJECT DESCRIPTION BRIDGE NO. 175 ON SR2795 OVER
BUFFALO 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 1919 250-4088. NEITHER THE SUBSURFACE PLANS AND REPORTS, NOR THE FIELD BORING LOGS, ROCK CORES, OR SOIL TEST DATA ARE PART OF THE CONTRACT.

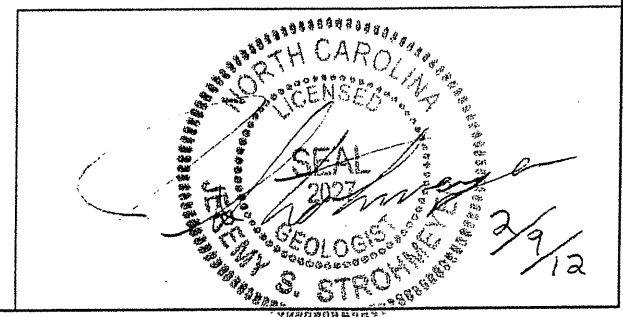
GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND 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 THIS 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.

PROJECT: 38529.1.1 ID: B-4757

PERSONNEL
TRIGON EXPLORATION
(DRILLER)

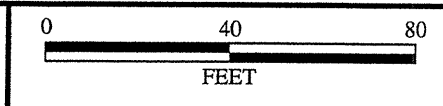
INVESTIGATED BY S.M. BUCHANAN
CHECKED BY J.S. STROHMEYER
SUBMITTED BY J.S. STROHMEYER
DATE FEBRUARY 2012



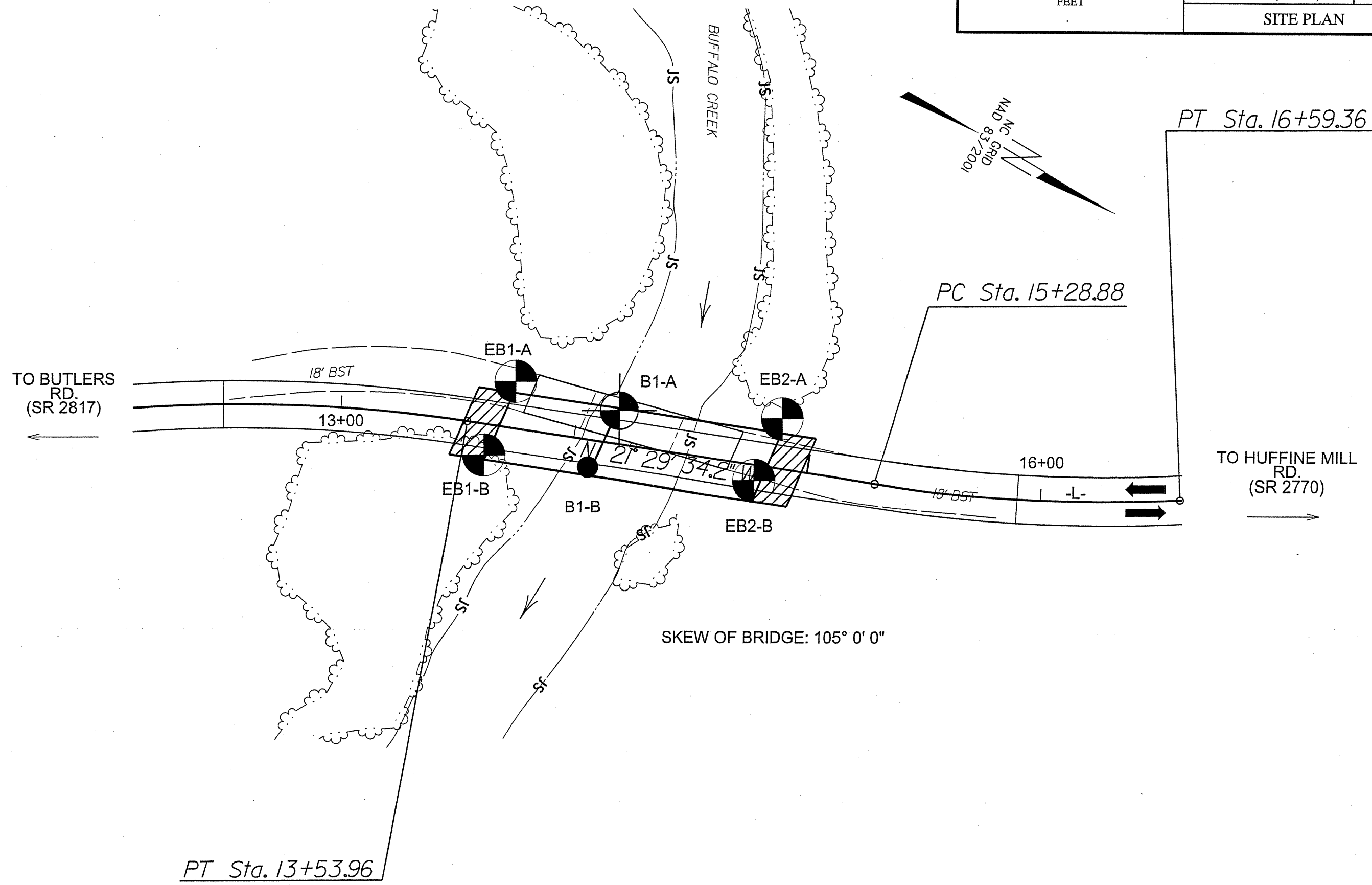
DRAWN BY: R.D. MATTINGLY, S. KITTS

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.

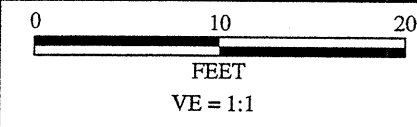
NOTE - BY HAVING REQUESTED THIS INFORMATION THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.



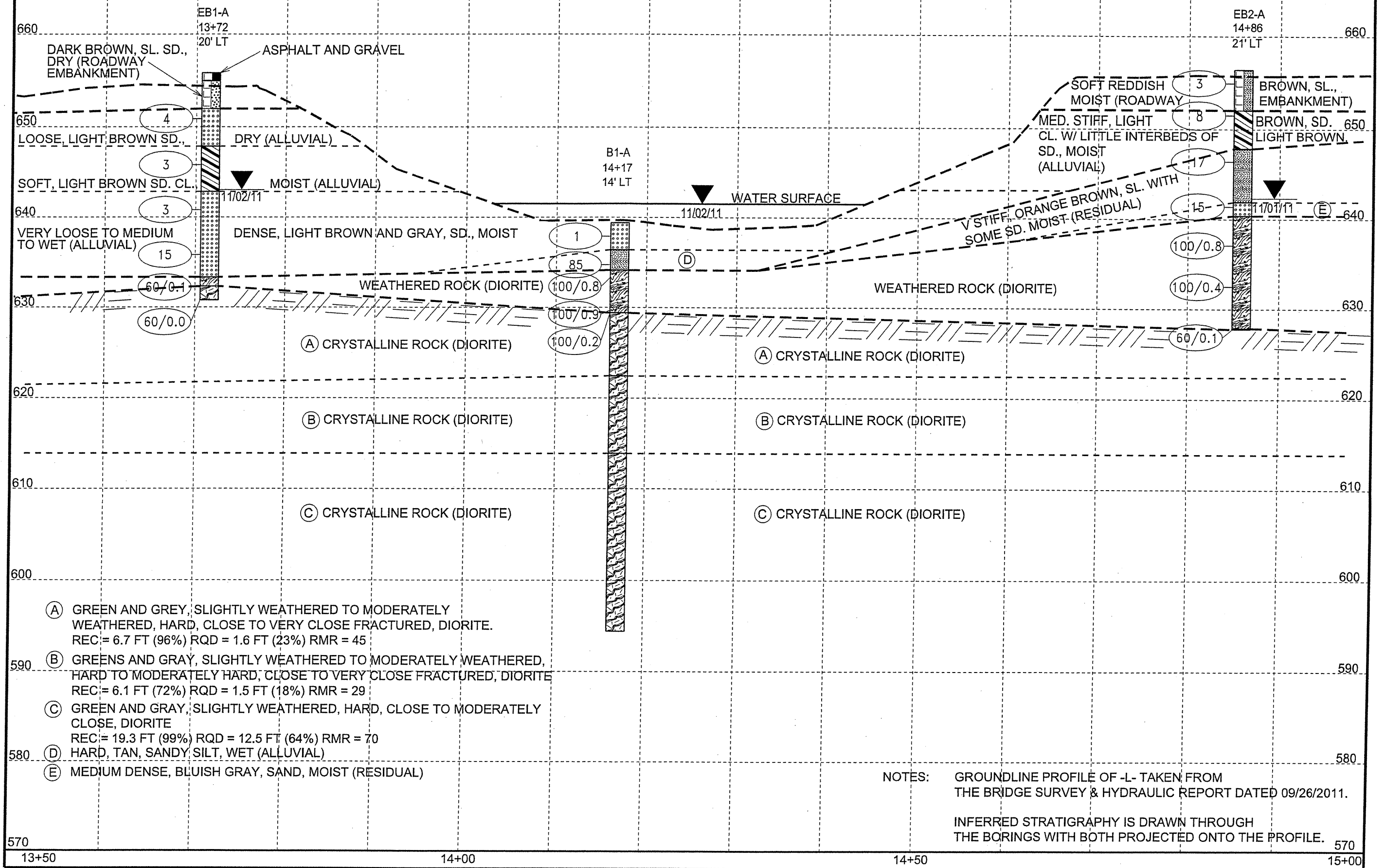
PROJECT REFERENCE NO.	SHEET
38529.1.1 (B-4757)	3 OF 13
SITE PLAN	



PROFILE THROUGH BORINGS PROJECTED ALONG -L-



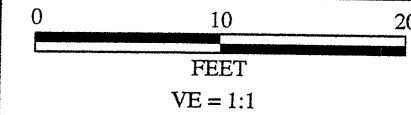
PROJECT REFERENCE NO.	SHEET
38529.1.1 (B-4757)	4 OF 13
BRIDGE PROFILE ALONG CENTER LINE	



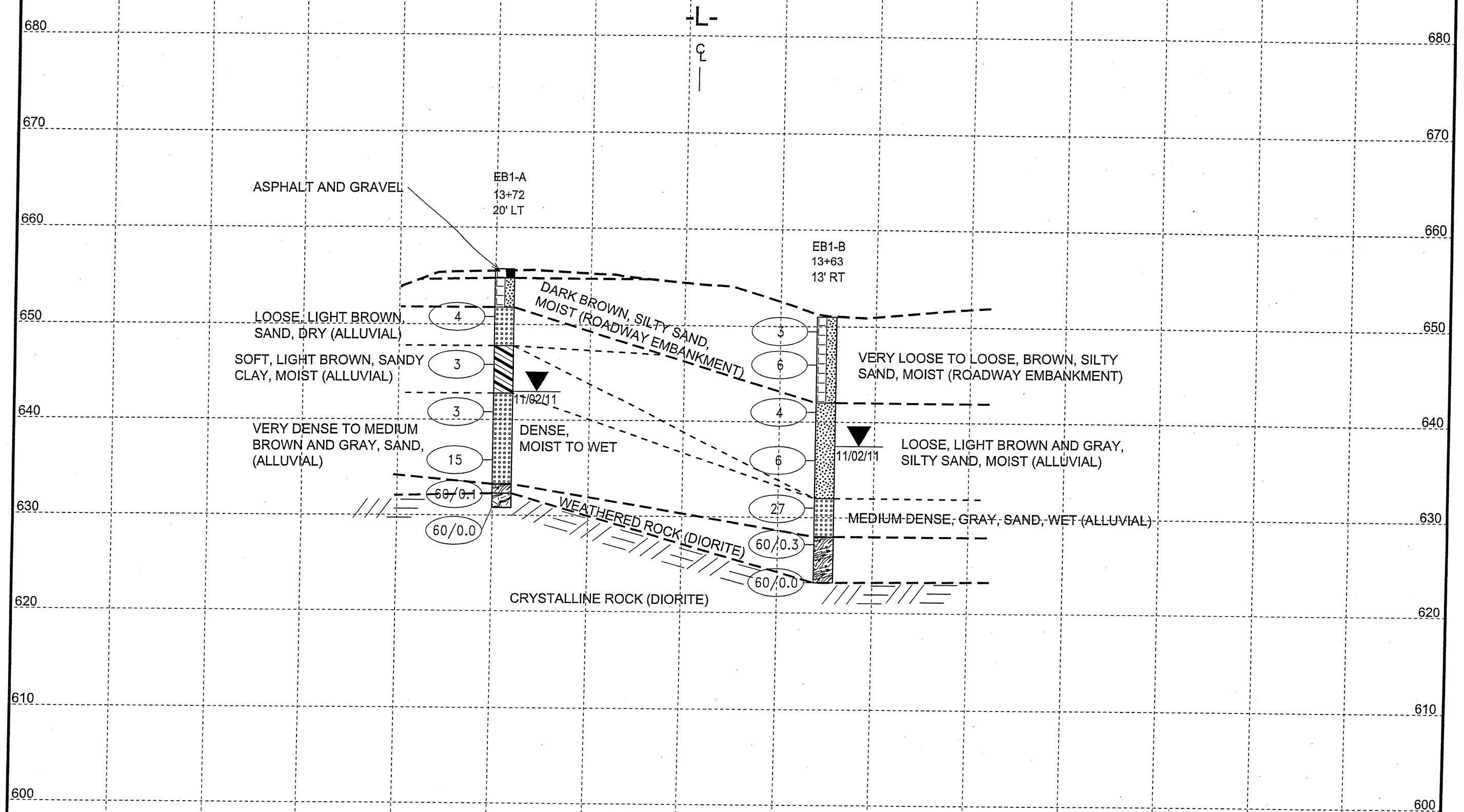
- (A) GREEN AND GREY, SLIGHTLY WEATHERED TO MODERATELY WEATHERED, HARD, CLOSE TO VERY CLOSE FRACTURED, DIORITE.
REC = 6.7 FT (96%) RQD = 1.6 FT (23%) RMR = 45
- (B) GREENS AND GRAY, SLIGHTLY WEATHERED TO MODERATELY WEATHERED, HARD TO MODERATELY HARD, CLOSE TO VERY CLOSE FRACTURED, DIORITE
REC = 6.1 FT (72%) RQD = 1.5 FT (18%) RMR = 29
- (C) GREEN AND GRAY, SLIGHTLY WEATHERED, HARD, CLOSE TO MODERATELY CLOSE, DIORITE
REC = 19.3 FT (99%) RQD = 12.5 FT (64%) RMR = 70
- (D) HARD, TAN, SANDY SILT, WET (ALLUVIAL)
- (E) MEDIUM DENSE, BLUISH GRAY, SAND, MOIST (RESIDUAL)

NOTES: GROUNDLINE PROFILE OF -L- TAKEN FROM THE BRIDGE SURVEY & HYDRAULIC REPORT DATED 09/26/2011.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE PROFILE.

SECTION THROUGH BORING PROJECTED ALONG EB1

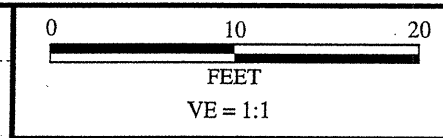


PROJECT REFERENCE NO.	SHEET
38529.1.1 (B-4757)	5 OF 13
CROSS SECTION END BENT 1	

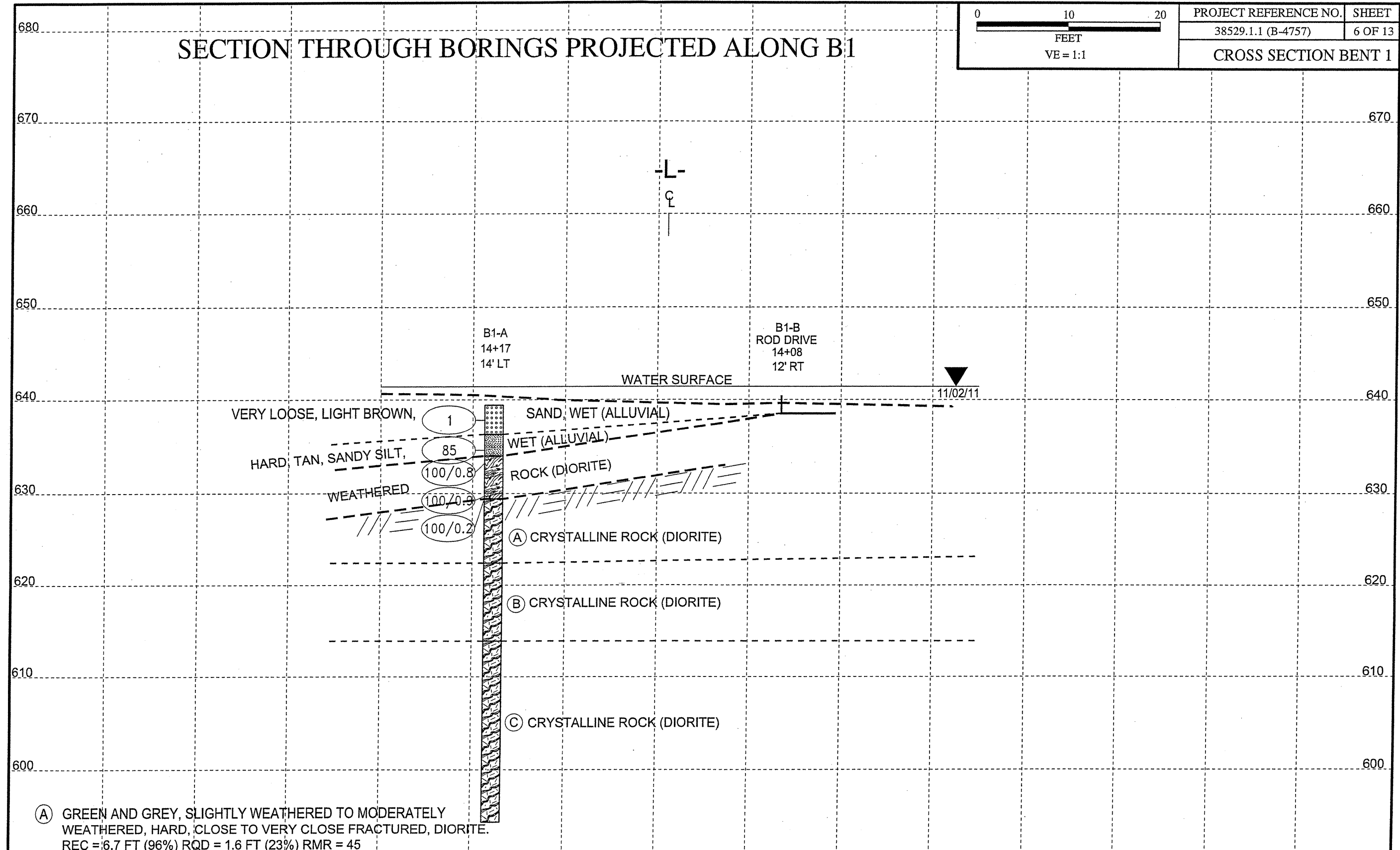


NOTES: GROUNDLINE CROSS SECTION OF -L- TAKEN FROM B4757_LS_TIN, TIN DATED 11/26/2010.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.

SECTION THROUGH BORINGS PROJECTED ALONG B1



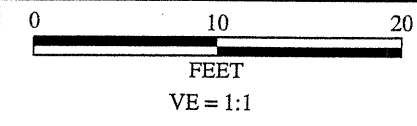
PROJECT REFERENCE NO.	SHEET
38529.1.1 (B-4757)	6 OF 13
CROSS SECTION BENT 1	



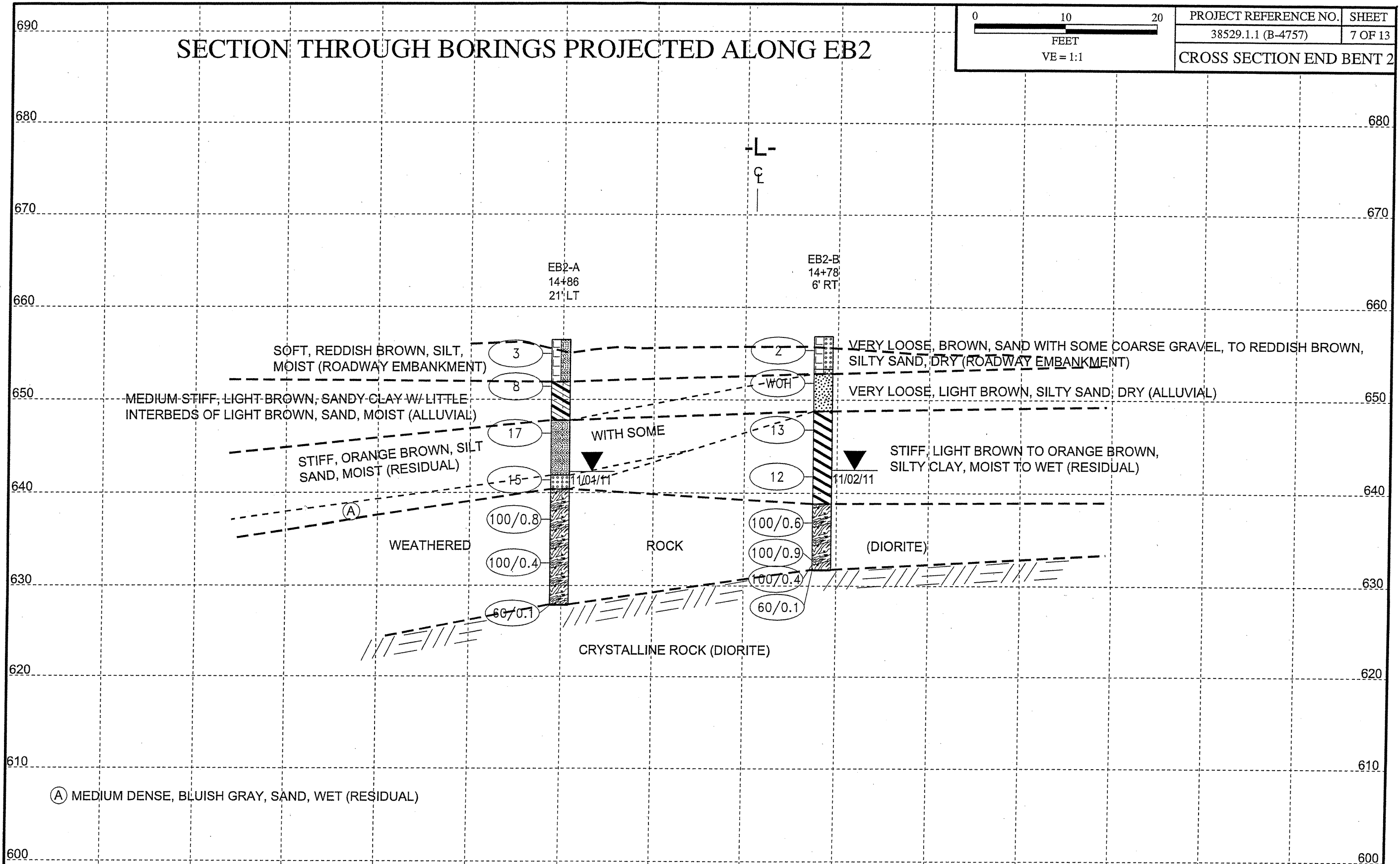
- (A) GREEN AND GREY, SLIGHTLY WEATHERED TO MODERATELY WEATHERED, HARD, CLOSE TO VERY CLOSE FRACTURED, DIORITE. REC = 6.7 FT (96%) RQD = 1.6 FT (23%) RMR = 45
- (B) GREENS AND GRAY, SLIGHTLY WEATHERED TO MODERATELY WEATHERED, HARD TO MODERATELY HARD, CLOSE TO VERY CLOSE FRACTURED, DIORITE. REC = 6.1 FT (72%) RQD = 1.5 FT (18%) RMR = 29
- (C) GREEN AND GRAY, SLIGHTLY WEATHERED, HARD, CLOSE TO MODERATELY CLOSE, DIORITE. REC = 19.3 FT (99%) RQD = 12.5 FT (64%) RMR = 70

NOTES: GROUNDLINE CROSS SECTION OF -L- TAKEN FROM B4757_LS_TIN.TIN DATED 11/26/2010.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.

SECTION THROUGH BORINGS PROJECTED ALONG EB2



PROJECT REFERENCE NO.	SHEET
38529.1.1 (B-4757)	7 OF 13
CROSS SECTION END BENT 2	



NOTES: GROUNDLINE CROSS SECTION OF -L- TAKEN FROM B4757_LS_TIN, TIN DATED 11/26/2010.

INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.



NCDOT GEOTECHNICAL ENGINEERING UNIT
BORELOG REPORT

WBS 38529.1.1		TIP B-4757		COUNTY GUILFORD		GEOLOGIST S. Buchanan										
SITE DESCRIPTION Bridge No. 175 on SR 2795 over Buffalo Creek							GROUND WTR (ft)									
BORING NO. EB1-A		STATION 13+72		OFFSET 20 ft LT		ALIGNMENT -L-										
COLLAR ELEV. 655.8 ft		TOTAL DEPTH 25.0 ft		NORTHING 871,559		EASTING 1,808,714										
DRILL RIG/HAMMER EFF./DATE TRI0055 CME-55 82% 11/5/2010		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER W. Witchard		START DATE 11/02/11		COMP. DATE 11/02/11		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	LOG G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
660																
655																
	652.3	3.5	3	2	2											
650																
	647.3	8.5	5	1	2											
645																
	642.3	13.5	WOH	1	2											
640																
	637.3	18.5		4	7	8										
635																
	632.3	23.5														
	630.8	25.0	60/0.1													
			60/0.0													

WBS 38529.1.1		TIP B-4757		COUNTY GUILFORD		GEOLOGIST S. Buchanan										
SITE DESCRIPTION Bridge No. 175 on SR 2795 over Buffalo Creek							GROUND WTR (ft)									
BORING NO. EB1-B		STATION 13+63		OFFSET 13 ft RT		ALIGNMENT -L-										
COLLAR ELEV. 651.0 ft		TOTAL DEPTH 27.8 ft		NORTHING 871,563		EASTING 1,808,748										
DRILL RIG/HAMMER EFF./DATE TRI0055 CME-55 82% 11/5/2010		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER W. Witchard		START DATE 11/02/11		COMP. DATE 11/02/11		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	LOG G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
655																
650	651.0	0.0	1	1	2											
	647.5	3.5	2	3	3											
645																
	642.5	8.5	3	2	2											
640																
	637.5	13.5	5	3	3											
635																
	632.5	18.5	4	7	20											
630																
	627.5	23.5	60/0.3													
625																
	623.2	27.8	60/0.0													

NCDOT BORE DOUBLE B-4757_GEO_BH.GPJ NC_DOT.GDT 2/6/12

WBS 38529.1.1		TIP B-4757		COUNTY GUILFORD		GEOLOGIST S. Buchanan								
SITE DESCRIPTION Bridge No. 175 on SR 2795 over Buffalo Creek							GROUND WTR (ft)							
BORING NO. B1-A		STATION 14+17		OFFSET 14 ft LT		ALIGNMENT -L-								
COLLAR ELEV. 639.4 ft		TOTAL DEPTH 45.0 ft		NORTHING 87,107		EASTING 1,808,703								
DRILL RIG/HAMMER EFF./DATE GFO0055 CME-45B 84% 6/27/2011		DRILL METHOD SPT Core Boring		HAMMER TYPE Automatic										
DRILLER W. Fletcher		START DATE 11/02/11		COMP. DATE 11/09/11		SURFACE WATER DEPTH 2.1ft								
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
640	639.4	0.0										639.4	GROUND SURFACE	0.0
			WOH	WOH	1								ALLUVIAL	
													Very Loose, Light Brown, SAND with little organics, wood fragments, and coarse gravel (quartz)	
635	636.2	3.2	25	33	52							636.4		3.0
	634.1	5.3	40	60/0.3								634.1	Hard, Tan, Sandy SILT (N value influenced by coarse gravel)	5.3
	631.1	8.3										629.4	WEATHERED ROCK (Diorite)	10.0
630	629.6	9.8	26	72	28/0.4							629.4		10.0
			100/0.2									629.4	CRYSTALLINE ROCK (Diorite)	10.0
625														
												622.4	CRYSTALLINE ROCK (Diorite)	17.0
620														
												613.9	CRYSTALLINE ROCK (Diorite)	25.5
615														
												613.9		25.5
610														
605														
600														
595														

NCDOT BORE SINGLE B-4757_GEO_BH.GPJ NC_DOT.GDT 2/6/12

WBS 38529.1.1		TIP B-4757		COUNTY GUILFORD		GEOLOGIST S. Buchanan						
SITE DESCRIPTION Bridge No. 175 on SR 2795 over Buffalo Creek							GROUND WTR (ft)					
BORING NO. B1-A		STATION 14+17		OFFSET 14 ft LT		ALIGNMENT -L-						
COLLAR ELEV. 639.4 ft		TOTAL DEPTH 45.0 ft		NORTHING 87,107		EASTING 1,808,703						
DRILL RIG/HAMMER EFF./DATE GFO0055 CME-45B 84% 6/27/2011		DRILL METHOD SPT Core Boring		HAMMER TYPE Automatic								
DRILLER W. Fletcher		START DATE 11/02/11		COMP. DATE 11/09/11		SURFACE WATER DEPTH 2.1ft						
ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN		SAMP. NO.	STRATA		LOG	DESCRIPTION AND REMARKS	DEPTH (ft)
					REC. (%)	ROD (%)		REC. (%)	ROD (%)			
629.4												
	629.4	10.0	1.0	6:04/1.0	(1.0)	(0.0)		(6.7)	(1.6)		Begin Coring @ 10.0 ft	10.0
	625.9	13.5	2.5	4:36/1.0	100%	0%		96%	23%		CRYSTALLINE ROCK	
625				3:37/1.0	(2.5)	(1.1)					Green and Gray, slightly weathered to moderately weathered, hard, close to very close fractured, DIORITE	
	623.7	15.7	2.2	7:59/0.5	100%	44%					R1=12, R2=3, R3=5, R4=18, R5=7	
				0:44/0.5	(1.9)	(0.0)					RMR=45	
	621.4	18.0	2.3	5:02/1.0	(0.0)	(0.0)					Rock Type=E	17.0
	620.2	19.2	1.2	6:40/1.0	(2.3)	(0.5)		(6.1)	(1.5)		Class III: Fair Rock	
	618.5	20.8	0.8	3:07/0.3	100%	22%		72%	18%		changed to slightly weathered	
				5:43/1.0	(1.2)	(0.0)					CRYSTALLINE ROCK	
				1:53/0.2	100%	0%					Green and Gray, slightly weathered to moderately weathered, hard to moderately hard, close to very close fractured, DIORITE	
				3:47/0.8	(0.6)	(0.6)					R1=4, R2=3, R3=3, R4=12, R5=7	
615	614.9	24.5	3.7	3:04/0.6	(0.2)	(0.0)		(19.3)	(12.5)		RMR=29	25.5
	613.9	25.5	1.0	0:21/0.2	100%	0%		99%	64%		Rock Type=E	
				3:27/1.0	(0.6)	(0.0)					Class IV: Poor Rock	
				3:31/1.0	(0.0)	(0.0)					changed to severely weathered, soft	
				6:01/0.5	100%	0%					changed to slightly weathered to moderately weathered, hard to moderately hard	
				2:44/1.0	(1.5)	(0.0)					mud/soil observed on rock core	
	608.9	30.5	4.8	2:49/1.0	41%	0%					CRYSTALLINE ROCK	
				2:41/1.0	(1.0)	(0.9)					Green and Gray, slightly weathered, hard, close to moderately close fractured, DIORITE	
				3:05/1.0	(4.8)	(2.4)					R1=12, R2=13, R3=15, R4=23, R7=7	
	604.1	35.3	4.1	2:38/1.0	96%	48%					RMR=70	
				3:06/1.0	(4.8)	(3.7)					Rock Type=E	
				2:43/1.0	(4.1)	(2.8)					Class II: Good Rock	
	600.0	39.4	1.6	3:10/1.0	100%	77%					gained 0.4 ft from Run 12, gained 0.5 ft	
				1:05/0.5	(4.1)	(1.6)					gained 0.2 ft, measured hole with tape, depth of hole is 41.0 ft	
	598.4	41.0	4.0	2:40/1.0	(1.6)	(1.6)						45.0
				2:59/0.6	100%	100%						
				2:22/1.6	(4.0)	(2.0)						
	594.4	45.0		2:19/1.0	100%	50%					Boring Terminated at Elevation 594.4 ft in Crystalline Rock (Diorite)	
				2:45/1.0							Partial loss to Complete loss of return water at 13.5'	
				2:38/1.0							Complete loss of return water at 15.5'	
				3:01/1.0							Full return water at 20.8'	

NCDOT CORE SINGLE B-4757_GEO_BH.GPJ NC_DOT.GDT 2/6/12



NCDOT GEOTECHNICAL ENGINEERING UNIT
BORELOG REPORT

WBS 38529.1.1		TIP B-4757		COUNTY GUILFORD		GEOLOGIST S. Buchanan										
SITE DESCRIPTION Bridge No. 175 on SR 2795 over Buffalo Creek							GROUND WTR (ft)									
BORING NO. B1-B		STATION 14+08		OFFSET 12 ft RT		ALIGNMENT -L-										
COLLAR ELEV. 640.4 ft		TOTAL DEPTH 1.8 ft		NORTHING 871,604		EASTING 1,808,730										
DRILL RIG/HAMMER EFF./DATE N/A		DRILL METHOD Rod Sounding		HAMMER TYPE N/A												
DRILLER W. Fletcher		START DATE 11/09/11		COMP. DATE 11/09/11		SURFACE WATER DEPTH 2.1ft										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	L O G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					ELEV. (ft)	
645																
640	640.4	0.0												640.4	GROUND SURFACE	0.0
	639.4	1.0	N/A	WOH	WOH											
	638.6	1.8	N/A	3	3									638.6	ALLUVIAL Very Loose, Light Brown, SAND	1.8
			N/A	60/0											Boring Terminated at Elevation 638.6 ft in Weathered Rock (Diorite)	

NCDOT BORE DOUBLE B-4757_GEO_BH.GPJ NC_DOT.GDT 2/6/12



NCDOT GEOTECHNICAL ENGINEERING UNIT

BORELOG REPORT

WBS 38529.1.1		TIP B-4757		COUNTY GUILFORD		GEOLOGIST S. Buchanan											
SITE DESCRIPTION Bridge No. 175 on SR 2795 over Buffalo Creek							GROUND WTR (ft)										
BORING NO.	STATION	OFFSET	ALIGNMENT			0 HR.	17.1										
EB2-A	14+86	21 ft LT	-L-			24 HR.	14.1										
COLLAR ELEV.	TOTAL DEPTH	NORTHING	EASTING														
656.4 ft	28.6 ft	871,665	1,808,671														
DRILL RIG/HAMMER EFF./DATE TRI0055 CME-55 82% 11/5/2010			DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER W. Witchard		START DATE 11/01/11	COMP. DATE 11/01/11	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							
660																	
	656.4	0.0													656.4	GROUND SURFACE	0.0
655																ROADWAY EMBANKMENT	
	652.9	3.5													651.9	Soft, Reddish Brown, SILT	4.5
650																ALLUVIAL	
	647.9	8.5													647.8	Medium Stiff, Light Brown, Sandy CLAY, with little fine gravel and interbedded Light Brown, SAND	8.6
645																RESIDUAL	
	642.9	13.5													641.9	Very Stiff, Orange Brown, SILT with some sand	14.5
640																WEATHERED ROCK	
	640.4														640.4	Medium Dense, Bluish Gray, SAND	16.0
635																WEATHERED ROCK	
	637.9	18.5													638.3	(Diorite)	18.0
630																CRYSTALLINE ROCK	
	632.9	23.5													631.8	(Diorite)	25.0
	627.9	28.5													627.8	CRYSTALLINE ROCK	28.5
																(Diorite)	
																Boring Terminated with Standard Penetration Test Refusal at Elevation 627.8 ft in Crystalline Rock (Diorite)	

WBS 38529.1.1		TIP B-4757		COUNTY GUILFORD		GEOLOGIST S. Buchanan											
SITE DESCRIPTION Bridge No. 175 on SR 2795 over Buffalo Creek							GROUND WTR (ft)										
BORING NO.	STATION	OFFSET	ALIGNMENT			0 HR.	17.0										
EB2-B	14+78	6 ft RT	-L-			24 HR.	14.3										
COLLAR ELEV.	TOTAL DEPTH	NORTHING	EASTING														
656.8 ft	25.1 ft	871,668	1,808,699														
DRILL RIG/HAMMER EFF./DATE TRI0055 CME-55 82% 11/5/2010			DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER W. Witchard		START DATE 11/01/11	COMP. DATE 11/01/11	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							
660																	
	656.8	0.0													656.8	GROUND SURFACE	0.0
655																ROADWAY EMBANKMENT	
	653.3	3.5													653.3	Very Loose, Brown, SAND with some coarse gravel and roots	3.5
650															652.8	Very Loose, Reddish Brown, Silty SAND	4.0
	648.3	8.5													648.8	ALLUVIAL	
645																Very Loose, Light Brown, Silty SAND	8.0
	643.3	13.5														RESIDUAL	
640																Stiff, Light Brown to Orange Brown, Silty CLAY	
	638.3	18.5														WEATHERED ROCK	
635																(Diorite)	
	633.7	23.1														WEATHERED ROCK	
	632.8	24.0														(Diorite)	
	631.8	25.0														CRYSTALLINE ROCK	
																(Diorite)	
																Boring Terminated with Standard Penetration Test Refusal at Elevation 631.7 ft in Crystalline Rock (Diorite)	
																Pulled augers at 24.4 feet, replace auger teeth, at 23.1' split spoon sampler bent, shoe not retrieved with sampler	

B-4757

38529.1.1

BRIDGE NO. 175 ON DR 2795 OVER BUFFALO CREEK

EB1-A

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL (ft)	AASHTO CLASS.	LL.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-2	20 ft LT	13+72	8.5-10.0	A-6	33	20	2	28	35	35	100	99.8	77.2	27.4	-

EB2-A

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL (ft)	AASHTO CLASS.	LL.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-3	21 ft LT	14+86	8.5-10.0	A-7-6	45	18	-	-	-	-	98.1	95	81.1	25.8	-

EB2-B

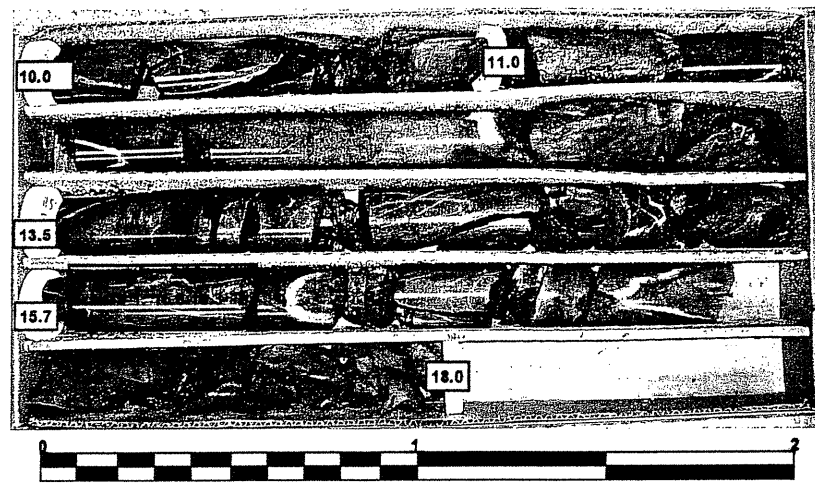
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL (ft)	AASHTO CLASS.	LL.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-4	6 ft RT	14+78	13.5-15.0	A-7-6	45	23	16	24	25	35	98.5	90.9	66.4	25.2	-

B1-A

ROCK TEST RESULTS												
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL (ft)	LENGTH (in.)	DIAMETER (in.)	AREA (sq. in.)	VOLUME		UNIT WEIGHT (pcf)	COMPRESSIVE STRENGTH		TESTING METHOD
							(in. ³)	(cf)		(psi)	(MPa)	
RS-1	14 ft LT	14+17	15.8-16.3	3.920	1.986	3.098	12.143	0.007	183.727	21080	-	ASTM D-7012-10 METHOD C
RS-2	14 ft LT	14+17	19.2-19.7	4.272	1.981	3.082	13.167	0.007	174.736	3780	-	ASTM D-7012-10 METHOD C
RS-3	14 ft LT	14+17	31.8-32.2	3.0	1.874	-	-	-	-	30000	210	ASTM D-5731

ROCK CORE PHOTOGRAPHS

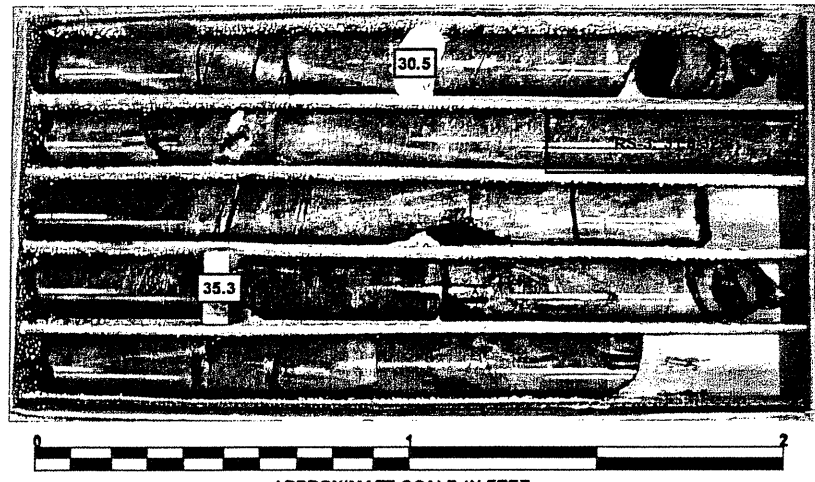
B1-A
BOX 1: 10.0 - 18.0 FEET



B1-A
BOX 2: 18.0 - 29.3 FEET



B1-A
BOX 3: 29.3 - 38.1 FEET



B1-A
BOX 4: 38.1 - 45.0 FEET

