

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	38520.1.1 (B-4748)	1	7

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

**STRUCTURE**  
**SUBSURFACE INVESTIGATION**

PROJ. REFERENCE NO. 38520.1.1 (B-4748) F.A. PROJ. \_\_\_\_\_  
COUNTY FRANKLIN  
PROJECT DESCRIPTION BRIDGE NO. 2 ON SR 1147 (HOLDEN ROAD)  
OVER HORSE CREEK

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**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. NEITHER THE SUBSURFACE PLANS AND REPORTS, NOR THE FIELD BORING LOGS, ROCK CORES, OR SOIL TEST DATA ARE PART OF THE CONTRACT.

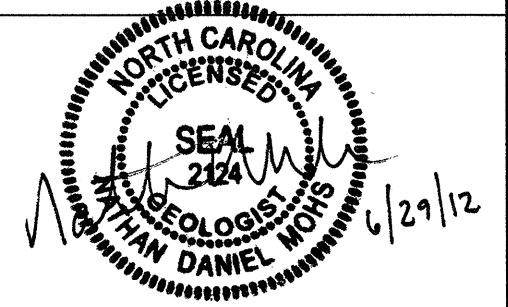
GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND 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: 38520.1.1 ID: B-4748**

PERSONNEL  
J.I. MILKOVITS, JR.  
J.R. MATULA  
H.R. CONLEY

INVESTIGATED BY N.D. MOHS  
CHECKED BY N.T. ROBERSON  
SUBMITTED BY N.T. ROBERSON  
DATE JULY 2012



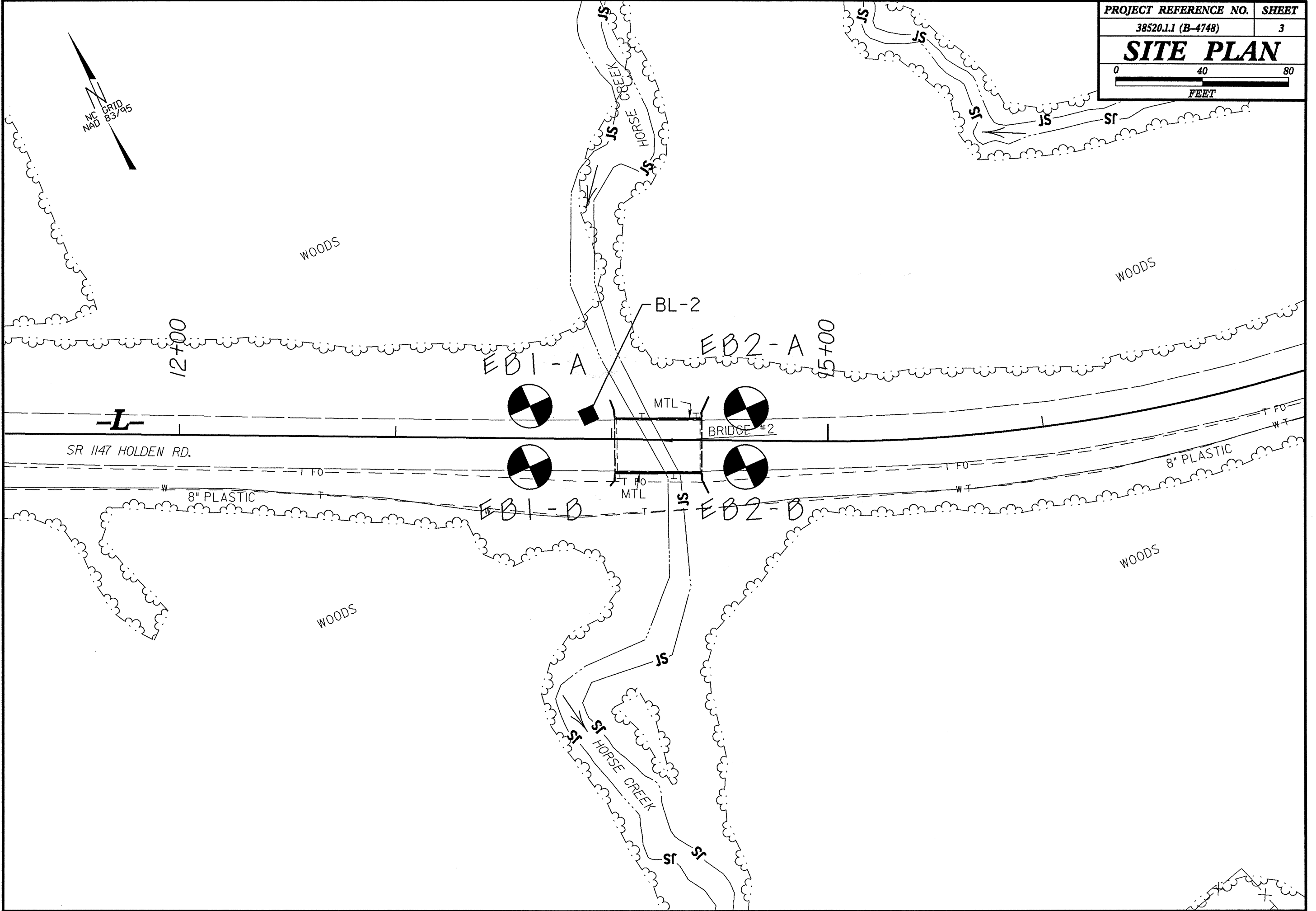
DRAWN BY: N.D. MOHS

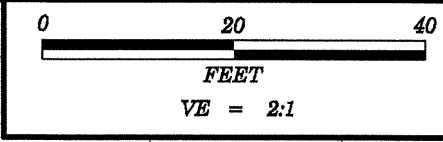
NOTE - THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS BEING ACCURATE NOR IT IS CONSIDERED TO BE PART OF THE PLANS, SPECIFICATIONS, OR CONTRACT FOR THE PROJECT.

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.

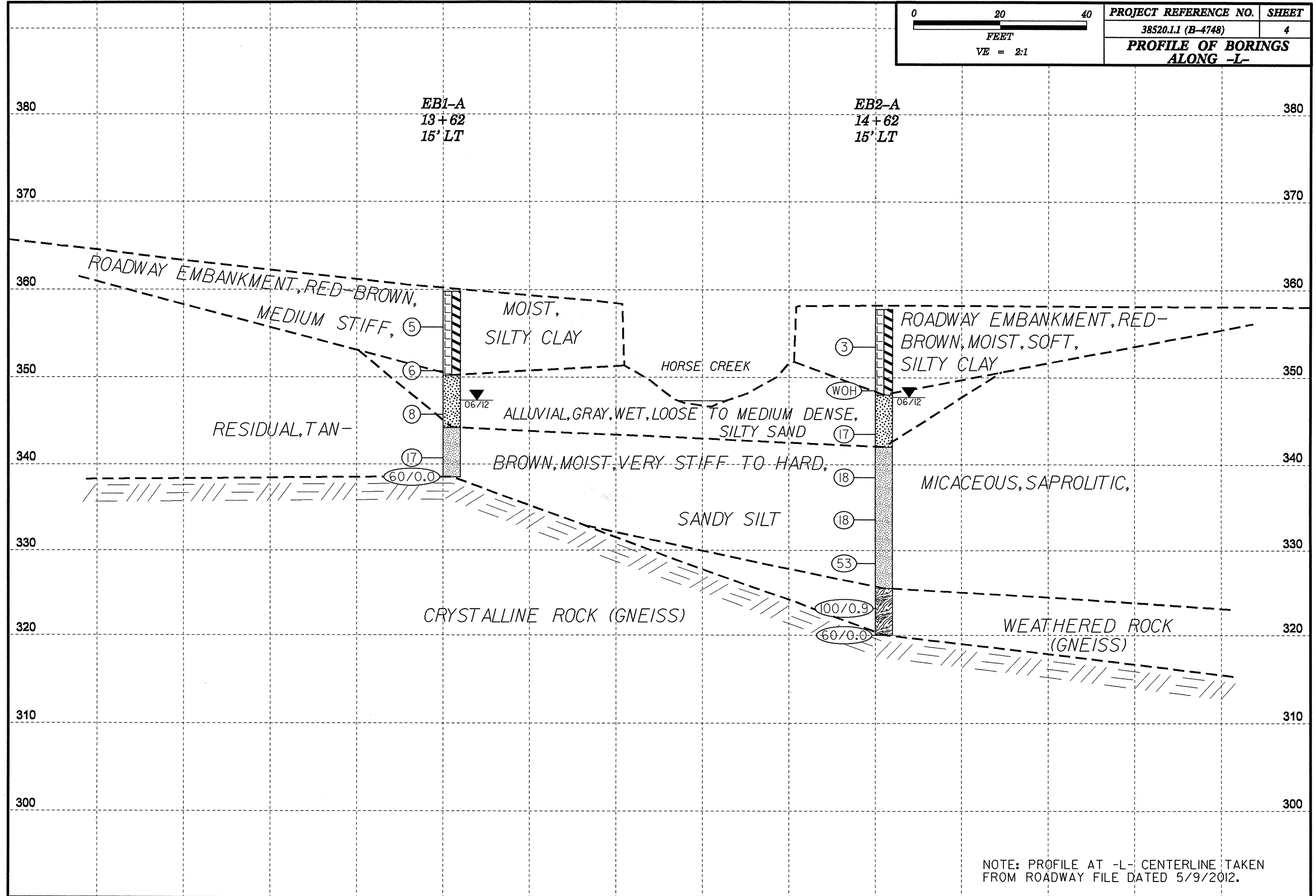


PROJECT REFERENCE NO.	SHEET
38520.1.1 (B-4748)	3
<b>SITE PLAN</b>	





PROJECT REFERENCE NO.	SHEET
38520.1.1 (B-4748)	4
PROFILE OF BORINGS ALONG -L-	



**EB1-A**  
13+62  
15' LT

**EB2-A**  
14+62  
15' LT

ROADWAY EMBANKMENT, RED-BROWN,  
MEDIUM STIFF, ⑤

MOIST,  
SILTY CLAY

ROADWAY EMBANKMENT, RED-BROWN,  
MOIST, SOFT,  
SILTY CLAY ③

HORSE CREEK

RESIDUAL, TAN

ALLUVIAL, GRAY, WET, LOOSE TO MEDIUM DENSE,  
SILTY SAND ⑥, ⑧, ①⑦

BROWN, MOIST, VERY STIFF TO HARD,

SANDY SILT ①⑧, ①⑧, ⑤③

MICACEOUS, SAPROLITIC,

CRYSTALLINE ROCK (GNEISS)

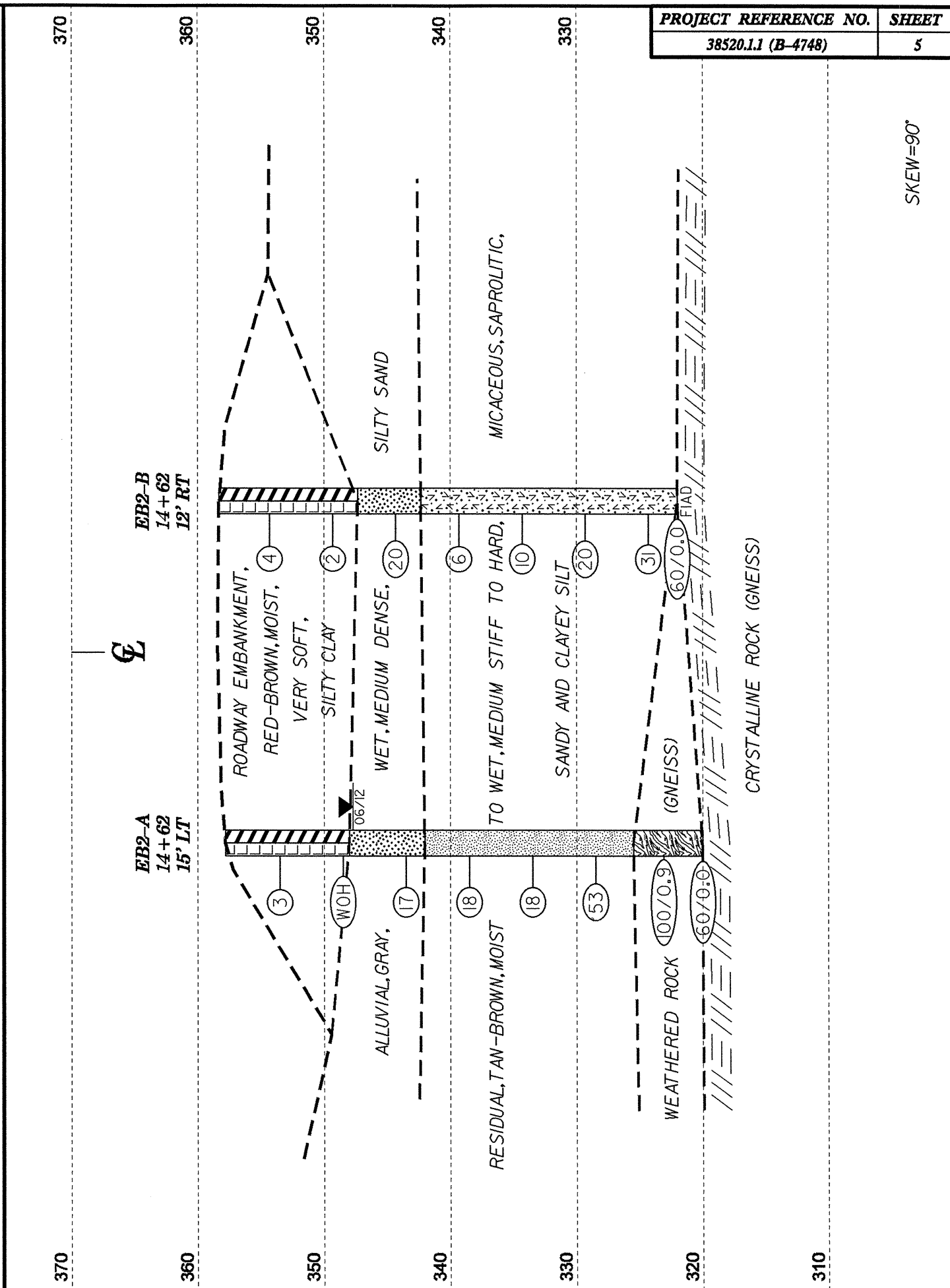
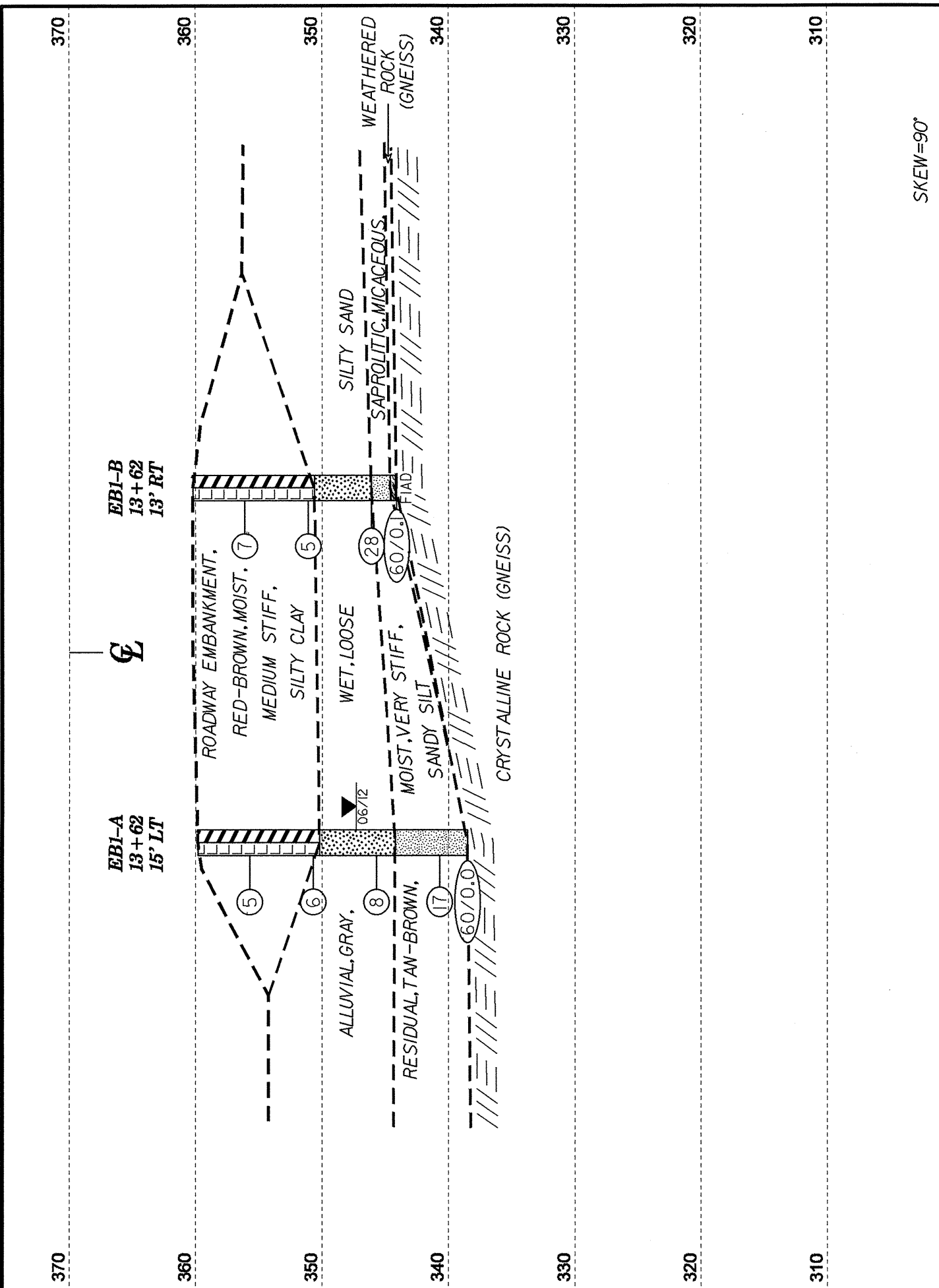
WEATHERED ROCK  
(GNEISS)

NOTE: PROFILE AT -L- CENTERLINE TAKEN FROM ROADWAY FILE DATED 5/9/2012.

13+00

14+00

15+00



SKEW=90°

SKEW=90°

HORIZ. SCALE 0 10 20 (FEET)

V.E. = 1:1

END BENT 1 CROSS SECTION

HORIZ. SCALE 0 10 20 (FEET)

V.E. = 1:1

END BENT 2 CROSS SECTION



WBS 38520.1.1		TIP B-4748		COUNTY FRANKLIN		GEOLOGIST Milkovits, J. I.										
SITE DESCRIPTION BRIDGE NO. 2 ON SR 1147 (HOLDEN ROAD) OVER HORSE CREEK							GROUND WTR (ft)									
BORING NO. EB2-A		STATION 14+62		OFFSET 15 ft LT		ALIGNMENT -L-										
COLLAR ELEV. 357.8 ft		TOTAL DEPTH 37.8 ft		NORTHING 828,086		EASTING 2,142,278										
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 92% 07/12/2011		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER Conley, H. R.		START DATE 06/27/12		COMP. DATE 06/27/12		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						
360														357.8	GROUND SURFACE	0.0
															ROADWAY EMBANKMENT RED-BROWN, SILTY CLAY	
355	354.5	3.3	2	2	1											
350	349.5	8.3	WOH	WOH	WOH											
345	344.5	13.3	9	11	6										ALLUVIAL GRAY, SILTY SAND WITH SOME GRAVEL	9.8
340	339.5	18.3	6	8	10										RESIDUAL TAN-BROWN, MICACEOUS, SAPROLITIC, SANDY SILT	15.8
335	334.5	23.3	5	8	10											
330	329.5	28.3	15	26	27											
325	324.5	33.3	40	60/0.4											WEATHERED ROCK (GNEISS)	32.3
320	320.0	37.8	60/0.0												Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 320.0 ft ON CRYSTALLINE ROCK (GNEISS)	37.8

WBS 38520.1.1		TIP B-4748		COUNTY FRANKLIN		GEOLOGIST Milkovits, J. I.										
SITE DESCRIPTION BRIDGE NO. 2 ON SR 1147 (HOLDEN ROAD) OVER HORSE CREEK							GROUND WTR (ft)									
BORING NO. EB2-B		STATION 14+62		OFFSET 12 ft RT		ALIGNMENT -L-										
COLLAR ELEV. 358.3 ft		TOTAL DEPTH 36.3 ft		NORTHING 828,062		EASTING 2,142,267										
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 92% 07/12/2011		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER Conley, H. R.		START DATE 06/28/12		COMP. DATE 06/28/12		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						
360														358.3	GROUND SURFACE	0.0
															ROADWAY EMBANKMENT TAN-BROWN, MICACEOUS, SILTY CLAY	
355	355.3	3.0	2	2	2											
350	350.3	8.0	1	1	1											
345	345.3	13.0	1	12	8										ALLUVIAL GRAY, SILTY SAND WITH SOME GRAVEL	11.0
340	340.3	18.0	2	2	4										RESIDUAL TAN-BROWN, HIGHLY MICACEOUS, SAPROLITIC, CLAYEY SILT	16.0
335	335.3	23.0	3	4	6											
330	330.3	28.0	7	9	11											
325	325.3	33.0	11	12	19											
	322.0	36.3	60/0.0												Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 322.0 ft ON CRYSTALLINE ROCK (GNEISS)	36.3