

REFERENCE: I-2513AC

PROJECT: 34165

CONTENTS

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

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY BUNCOMBE
PROJECT DESCRIPTION I-26 CONNECTOR (I-40 TO
US 19 – US 23 – US 70 NORTH TO ASHEVILLE)
SITE DESCRIPTION BRIDGES NO. 900 AND NO. 901
ON I-26 /I-240 OVER STATE STREET BETWEEN
SR 3556 (AMBOY ROAD) AND US 23 BUSINESS
(HAYWOOD ROAD)

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-2513AC	1	11

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.

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 PERFORM INDEPENDENT SUBSURFACE INVESTIGATIONS AND MAKE INTERPRETATIONS AS NECESSARY TO CONFIRM CONDITIONS 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:
- 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

MARPLES, Z. J.

TURNAGE, J. R.

OXENDINE, J.

WHITEHEAD, T.

DUGGINS, W. T.

INVESTIGATED BY MARPLES, Z. J.

DRAWN BY ALMULLA, H.

CHECKED BY RIGGS, Jr., A. F.

SUBMITTED BY RIGGS, Jr., A. F.

DATE MAY 2024

Prepared in the Office of:



2401 BRENTWOOD ROAD, SUITE 107
RALEIGH, NORTH CAROLINA 27604
NC REGISTERED ENGINEERING FIRM: E-0869
NC REGISTERED GEOLOGIC FIRM: C-367

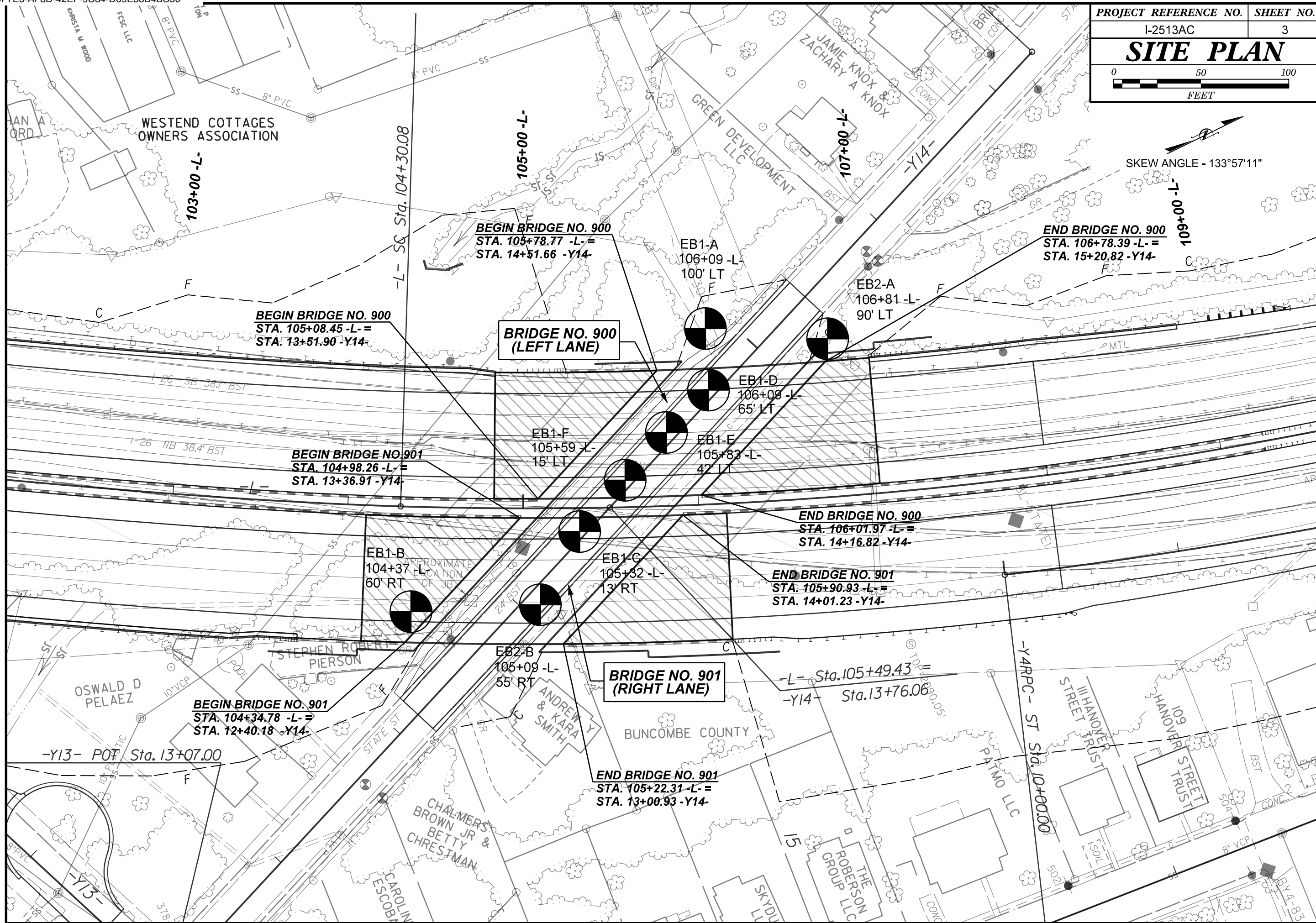


DocuSigned by:

Abner Riggs Jr. 2/26/2025

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SIGNATURE DATE

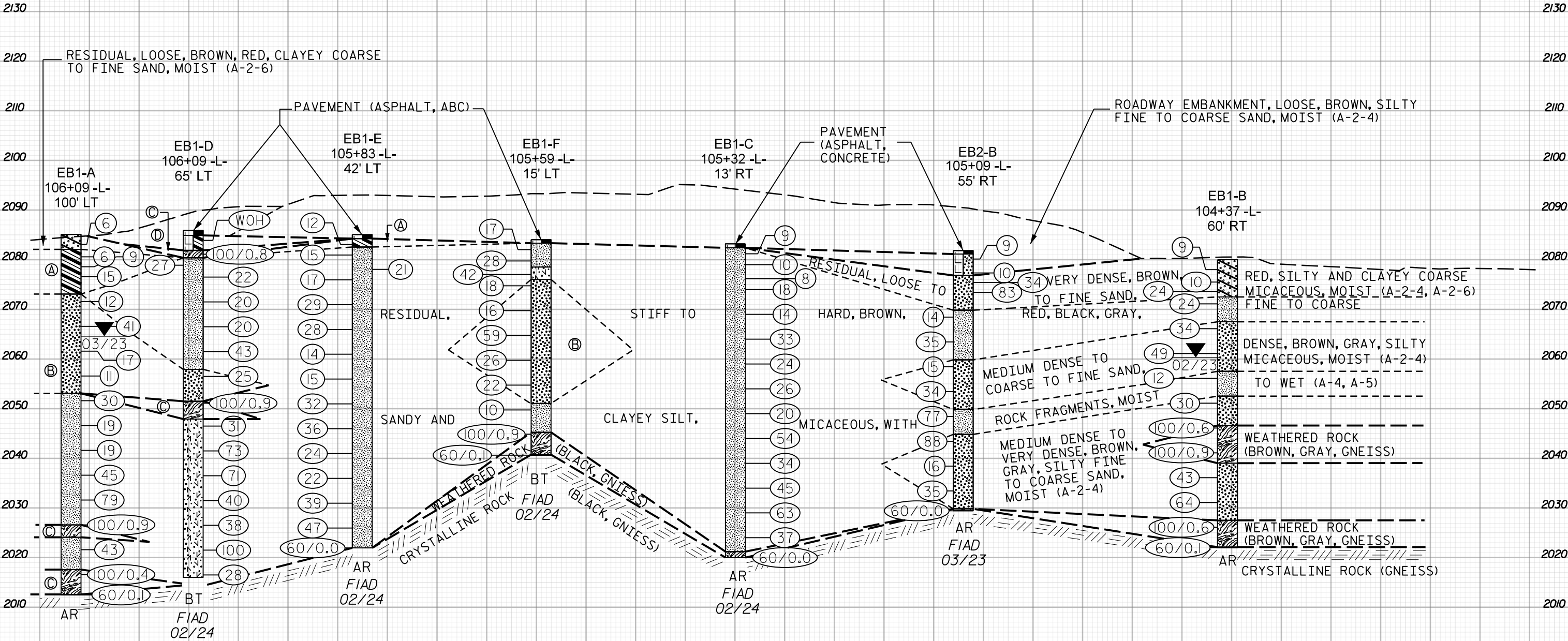
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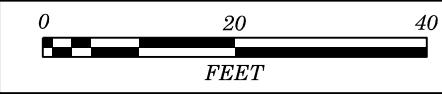
NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS AND PROJECTED ON TO THE CROSS SECTION. GROUND LINE TAKEN FROM PROVIDED TIN FILE: i2513_ls_tnl.tin (DATED: 01/19/2023)

SKEW ANGLE - 133°57'11"

CROSS SECTION ALONG END BENT 1 AT STA. 105+03.34 -L-



- Ⓐ RESIDUAL, MEDIUM STIFF TO STIFF, RED, BROWN, FINE TO COARSE SANDY CLAY, MOIST (A-6)
- Ⓑ RESIDUAL, MEDIUM DENSE TO VERY DENSE, BROWN, RED, GRAY, BLACK, SILTY FINE TO COARSE SAND, MOIST TO WET (A-2-4)
- Ⓒ WEATHERED ROCK (BROWN, GNEISS)
- Ⓓ ROADWAY EMBANKMENT, VERY SOFT, BROWN, RED, COARSE TO FINE SANDY CLAY, MOIST (A-6)

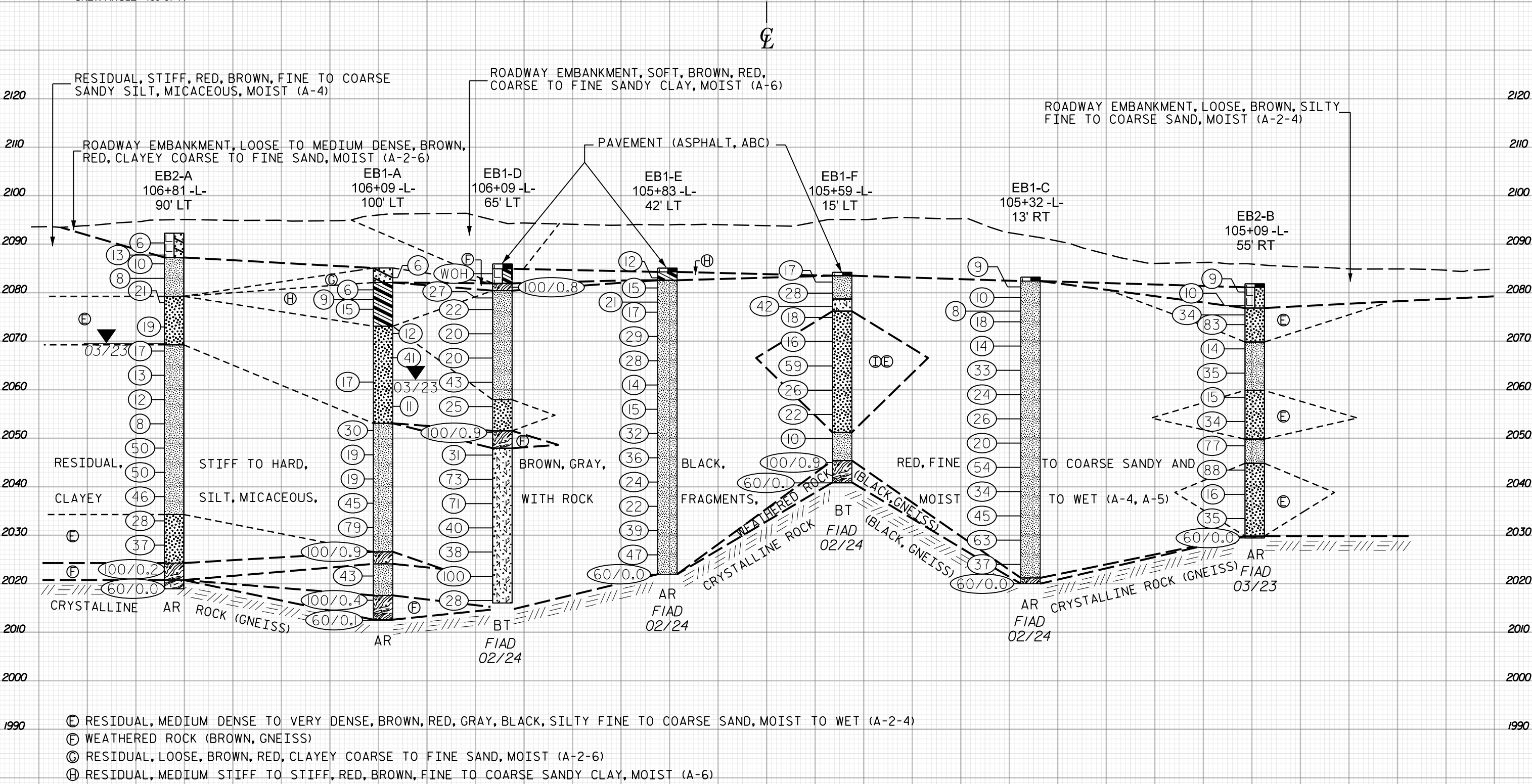


PROJ. REFERENCE NO.	SHEET NO.
I-2513AC	5

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS AND PROJECTED ON TO THE CROSS SECTION. GROUND LINE TAKEN FROM PROVIDED TIN FILE: i2513_ls_tnl.tin (DATED: 01/19/2023)

SKEW ANGLE - 133°57'11"

CROSS SECTION ALONG END BENT 2 AT STA. 105+96.43 -L-



GEOTECHNICAL BORING REPORT
BORE LOG

WBS 34165.1.6			TIP I-2513AC			COUNTY BUNCOMBE			GEOLOGIST Marples. Z. J.						
SITE DESCRIPTION BRIDGES NO. 900 AND NO. 901 ON I-26/ I-240 OVER STATE STREET BETWEEN SR 3556 AND US 23 BUS.												GROUND WTR (ft)			
BORING NO. EB1-A			STATION 106+09			OFFSET 100 ft LT			ALIGNMENT -L-			0 HR. N/A			
COLLAR ELEV. 2,085.1 ft			TOTAL DEPTH 72.6 ft			NORTHING 682,925			EASTING 934,526			24 HR. 20.5			
DRILL RIG/HAMMER EFF./DATE TER373 DIEDRICH D-50 93% 01/28/2022						DRILL METHOD Mud Rotary			HAMMER TYPE Automatic						
DRILLER Turnage, J.			START DATE 03/01/23			COMP. DATE 03/01/23			SURFACE WATER DEPTH N/A						
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	▼	L O G	SOIL AND ROCK DESCRIPTION	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					MOI
2090															
2085															
2080	2,084.1	1.0	6	2	4	6						M		2,085.1 GROUND SURFACE 0.0	
	2,081.6	3.5	4	3	3	6						M		2,082.1 RESIDUAL LOOSE, BROWN, RED, CLAYEY COARSE TO FINE SAND, MOIST (A-2-6) 3.0	
	2,079.6	5.5	3	4	5	6						M		MEDIUM STIFF TO STIFF, RED, BROWN, FINE TO COARSE SANDY CLAY, MOIST (A-6)	
2075	2,077.6	7.5	4	6	9	9						M			
	2,072.6	12.5	4	4	8	15						M		2,073.1 MEDIUM DENSE TO DENSE, BROWN, GRAY, SILTY FINE TO COARSE SAND, MOIST (A-2-4) 12.0	
2070						12									
2065	2,067.6	17.5	16	22	19										
	2,062.6	22.5	7	8	9	41									
2060						17						M			
2055	2,057.6	27.5	4	4	7							M			
	2,052.6	32.5	14	16	14	11						M		2,053.1 VERY STIFF TO HARD, BROWN, FINE TO COARSE SANDY SILT, MICACEOUS, MOIST (A-4) 32.0	
2050						30						M			
2045	2,047.6	37.5	8	7	12	19						M			
	2,042.6	42.5	10	9	10	19						M			
2040												M			
2035	2,037.6	47.5	11	21	24							M			
	2,032.6	52.5	14	28	51	45						M			
2030						79						M			
2025	2,027.6	57.5	15	32	68/0.4									2,026.6 WEATHERED ROCK (BROWN, GNEISS) 58.5	
	2,022.6	62.5	8	17	26							M		2,024.1 RESIDUAL HARD, BROWN, FINE TO COARSE SANDY SILT, MICACEOUS, MOIST (A-4) 61.0	
2020						43								2,017.6 WEATHERED ROCK (BROWN, GNEISS) 67.5	
2015	2,017.6	67.5	100/0.4												
	2,012.6	72.5	60/0.1											2,012.6 WEATHERED ROCK (BROWN, GNEISS) 72.5	
														2,012.5 CRYSTALLINE ROCK (GNEISS) 72.6	

NC DOT BORE SINGLE I2513AC_GEO_BRDG_STATE STREET - UPDATED 03-11-24.GPJ NC_DOT.GDT 5/23/24

GEOTECHNICAL BORING REPORT
BORE LOG

WBS 34165.1.6			TIP I-2513AC			COUNTY BUNCOMBE			GEOLOGIST Marples. Z. J.						
SITE DESCRIPTION BRIDGES NO. 900 AND NO. 901 ON I-26/ I-240 OVER STATE STREET BETWEEN SR 3556 AND US 23 BUS.									GROUND WTR (ft)						
BORING NO. EB1-A			STATION 106+09			OFFSET 100 ft LT			ALIGNMENT -L-			0 HR.	N/A		
COLLAR ELEV. 2,085.1 ft			TOTAL DEPTH 72.6 ft			NORTHING 682,925			EASTING 934,526			24 HR.	20.5		
DRILL RIG/HAMMER EFF./DATE TER373 DIEDRICH D-50 93% 01/28/2022						DRILL METHOD Mud Rotary				HAMMER TYPE Automatic					
DRILLER Turnage, J.			START DATE 03/01/23			COMP. DATE 03/01/23			SURFACE WATER DEPTH N/A						
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	▼ MOI	L O G	SOIL AND ROCK DESCRIPTION	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				ELEV. (ft)	DEPTH (ft)
2010						Match Line									
														Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 2,012.5 ft IN CRYSTALLINE ROCK (GNEISS)	

NC DOT BORE SINGLE I2513AC_GEO_BRDG_STATE STREET - UPDATED 03-11-24.GPJ NC_DOT.GDT 5/23/24

GEOTECHNICAL BORING REPORT
BORE LOG

WBS 34165.1.6					TIP I-2513AC					COUNTY BUNCOMBE					GEOLOGIST Marples, Z. J.						
SITE DESCRIPTION BRIDGES NO. 900 AND NO. 901 ON I-26/ I-240 OVER STATE STREET BETWEEN SR 3556 AND US 23 BUS.															GROUND WTR (ft)						
BORING NO. EB1-B					STATION 104+37					OFFSET 60 ft RT					ALIGNMENT -L-					0 HR. N/A	
COLLAR ELEV. 2,080.0 ft					TOTAL DEPTH 58.0 ft					NORTHING 682,703					EASTING 934,597					24 HR. 19.7	
DRILL RIG/HAMMER EFF./DATE TER373 DIEDRICH D-50 93% 01/28/2022										DRILL METHOD Mud Rotary					HAMMER TYPE Automatic						
DRILLER Turnage, J.					START DATE 02/28/23					COMP. DATE 02/28/23					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)					
2085																					
2080															2,080.0	GROUND SURFACE 0.0					
2075	2,079.0	1.0		2	4	5								M		RESIDUAL LOOSE TO MEDIUM DENSE, RED, BROWN, CLAYEY COARSE TO FINE SAND, MOIST (A-2-6)					
	2,076.5	3.5		4	4	6							M								
	2,074.6	5.4		11	11	13							M								
2070	2,072.1	7.9		8	11	13								M		VERY STIFF, BROWN, RED, FINE TO COARSE, SANDY SILT, MICACEOUS, MOIST (A-4)	7.5				
	2,067.1	12.9		11	14	20							M								
	2,062.1	17.9		12	14	35							M								
2060	2,057.1	22.9		2	5	7								M		STIFF, BROWN, GRAY, FINE TO COARSE, SANDY SILT, MICACEOUS, MOIST (A-4)	22.5				
	2,052.1	27.9		43	20	10							M								
	2,047.1	32.9	17	70	30/0.1																
2040	2,042.1	37.9		20	80/0.4										WEATHERED ROCK (BROWN, GRAY, GNEISS)	33.4					
	2,037.1	42.9		16	16	27							M								
2030	2,032.1	47.9		49	36	28								M		RESIDUAL DENSE TO VERY DENSE, BROWN, GRAY, SILTY COARSE TO FINE SAND, MOIST (A-2-4)	41.0				
	2,027.1	52.9		90	10/0.1																
2025	2,022.1	57.9		60/0.1										WEATHERED ROCK (BROWN, GRAY, GNEISS)	52.5						
														2,022.1	CRYSTALLINE ROCK (GNEISS)	57.9					
														2,022.0			Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 2,022.0 ft IN CRYSTALLINE ROCK (GNEISS)	58.0			

NC DOT BORE SINGLE I-2513AC_GEO_BRDG_STATE STREET - UPDATED 03-11-24.GPJ NC_DOT.GDT 5/23/24

GEOTECHNICAL BORING REPORT
BORE LOG

WBS 34165.1.6				TIP I-2513AC				COUNTY BUNCOMBE				GEOLOGIST Marples, Z. J.					
SITE DESCRIPTION BRIDGES NO. 900 AND NO. 901 ON I-26/ I-240 OVER STATE STREET BETWEEN SR 3556 AND US 23 BUS.												GROUND WTR (ft)					
BORING NO. EB2-B				STATION 105+10				OFFSET 55 ft RT				ALIGNMENT -L-				0 HR. N/A	
COLLAR ELEV. 2,081.8 ft				TOTAL DEPTH 52.4 ft				NORTHING 682,771				EASTING 934,626				24 HR. FIAD	
DRILL RIG/HAMMER EFF./DATE TER373 DIEDRICH D-50 93% 01/28/2022								DRILL METHOD Mud Rotary				HAMMER TYPE Automatic					
DRILLER Turnage, J.				START DATE 03/07/23				COMP. DATE 03/07/23				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)		
2085																	
2080	2,081.1	0.7												2,081.8	GROUND SURFACE	0.0	
			3	4	5									2,081.1	PAVEMENT (0.5' ASPHALT, 0.2' CONCRETE)	0.7	
	2,078.3	3.5															
	2,076.4	5.4	6	4	6												
2075	2,074.4	7.4	13	15	19									2,076.8	ROADWAY EMBANKMENT LOOSE, BROWN, SILTY FINE TO COARSE SAND, MOIST (A-2-4)	5.0	
			14	31	52										RESIDUAL DENSE TO VERY DENSE, BROWN, SILTY COARSE TO FINE SAND, MOIST, MICACEOUS (A-2-4)		
2070	2,069.4	12.4												2,069.8	STIFF TO VERY DENSE, BROWN, RED FINE TO COARSE SANDY SILT, MICACEOUS, MOIST (A-4)	12.0	
2065	2,064.4	17.4	7	11	24												
2060	2,059.4	22.4												2,059.8	MEDIUM DENSE TO DENSE, BROWN, SILTY FINE TO COARSE SAND, MICACEOUS, MOIST (A-2-4)	22.0	
			5	5	10												
2055	2,054.4	27.4	10	14	20												
2050	2,049.4	32.4												2,049.8	HARD, BROWN, GRAY, FINE TO COARSE SANDY SILT, MICACEOUS, MOIST (A-4)	32.0	
			16	33	44												
2045	2,044.4	37.4	16	56	32									2,044.8	MEDIUM DENSE TO VERY DENSE, BROWN, SILTY FINE TO COARSE SAND, MOIST (A-2-4)	37.0	
2040	2,039.4	42.4															
			5	7	9												
2035	2,034.4	47.4															
			6	13	22												
2030	2,029.4	52.4												2,029.8	CRYSTALLINE ROCK (GNEISS)	52.0	
			60/0.0											2,029.4	Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 2,029.4 ft IN CRYSTALLINE ROCK (GNEISS)	52.4	

NC DOT BORE SINGLE I-2513AC_GEO_BRDG_STATE STREET - UPDATED 03-11-24.GPJ NC_DOT.GDT 5/23/24

GEOTECHNICAL BORING REPORT
BORE LOG

WBS 34165.1.6			TIP I-2513AC			COUNTY BUNCOMBE			GEOLOGIST Marples. Z. J.								
SITE DESCRIPTION BRIDGES NO. 900 AND NO. 901 ON I-26/ I-240 OVER STATE STREET BETWEEN SR 3556 AND US 23 BUS.												GROUND WTR (ft)					
BORING NO. EB2-A			STATION 106+81			OFFSET 90 ft LT			ALIGNMENT -L-			0 HR. N/A					
COLLAR ELEV. 2,092.3 ft			TOTAL DEPTH 73.3 ft			NORTHING 682,985			EASTING 934,562			24 HR. 22.7					
DRILL RIG/HAMMER EFF./DATE TER373 DIEDRICH D-50 93% 01/28/2022						DRILL METHOD Mud Rotary				HAMMER TYPE Automatic							
DRILLER Turnage, J.			START DATE 03/01/23			COMP. DATE 03/01/23			SURFACE WATER DEPTH N/A								
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	▼	MOI	L O G	SOIL AND ROCK DESCRIPTION		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					ELEV. (ft)	DEPTH (ft)	
2095																	
2090	2,091.3	1.0	2	3	3										2,092.3	GROUND SURFACE	0.0
	2,088.8	3.5	6	6	7										2,087.3	ROADWAY EMBANKMENT	5.0
	2,087.0	5.3	3	5	5									LOOSE TO MEDIUM DENSE, BROWN, RED, CLAYEY COARSE TO FINE SAND, MOIST (A-2-6)			
2085	2,084.0	8.3	3	2	6										2,079.3	RESIDUAL	13.0
														STIFF, RED, BROWN, FINE TO COARSE SANDY SILT, MICACEOUS, MOIST (A-4)			
2080	2,079.0	13.3	7	9	12										2,079.3	MEDIUM DENSE, BROWN, GRAY, SILTY COARSE TO FINE SAND, MOIST (A-2-4)	13.0
2075	2,074.0	18.3	9	9	10										2,069.3	STIFF TO HARD, BROWN, GRAY, FINE TO COARSE SANDY SILT, MICACEOUS, MOIST (A-4)	23.0
	2,069.0	23.3	7	8	9												
2065	2,064.0	28.3	5	5	8										2,069.3	STIFF TO HARD, BROWN, GRAY, FINE TO COARSE SANDY SILT, MICACEOUS, MOIST (A-4)	23.0
2060	2,059.0	33.3	4	5	7										2,069.3	STIFF TO HARD, BROWN, GRAY, FINE TO COARSE SANDY SILT, MICACEOUS, MOIST (A-4)	23.0
2055	2,054.0	38.3	4	5	3										2,069.3	STIFF TO HARD, BROWN, GRAY, FINE TO COARSE SANDY SILT, MICACEOUS, MOIST (A-4)	23.0
2050	2,049.0	43.3	13	16	34										2,069.3	STIFF TO HARD, BROWN, GRAY, FINE TO COARSE SANDY SILT, MICACEOUS, MOIST (A-4)	23.0
2045	2,044.0	48.3	30	22	28										2,069.3	STIFF TO HARD, BROWN, GRAY, FINE TO COARSE SANDY SILT, MICACEOUS, MOIST (A-4)	23.0
2040	2,039.0	53.3	10	16	30										2,069.3	STIFF TO HARD, BROWN, GRAY, FINE TO COARSE SANDY SILT, MICACEOUS, MOIST (A-4)	23.0
2035	2,034.0	58.3	2	10	18										2,069.3	STIFF TO HARD, BROWN, GRAY, FINE TO COARSE SANDY SILT, MICACEOUS, MOIST (A-4)	23.0
2030	2,029.0	63.3	30	21	16										2,069.3	STIFF TO HARD, BROWN, GRAY, FINE TO COARSE SANDY SILT, MICACEOUS, MOIST (A-4)	23.0
2025	2,024.0	68.3	100/0.2												2,069.3	STIFF TO HARD, BROWN, GRAY, FINE TO COARSE SANDY SILT, MICACEOUS, MOIST (A-4)	23.0
2020	2,019.0	73.3	60/0.0												2,069.3	STIFF TO HARD, BROWN, GRAY, FINE TO COARSE SANDY SILT, MICACEOUS, MOIST (A-4)	23.0

NC DOT BORE SINGLE I2513AC_GEO_BRDG_STATE STREET - UPDATED 03-11-24.GPJ NC_DOT.GDT 5/23/24

GEOTECHNICAL BORING REPORT
BORE LOG

WBS 34165.1.6			TIP I-2513AC			COUNTY BUNCOMBE			GEOLOGIST Marples. Z. J.						
SITE DESCRIPTION BRIDGES NO. 900 AND NO. 901 ON I-26/ I-240 OVER STATE STREET BETWEEN SR 3556 AND US 23 BUS.									GROUND WTR (ft)						
BORING NO. EB2-A			STATION 106+81			OFFSET 90 ft LT			ALIGNMENT -L-			0 HR.	N/A		
COLLAR ELEV. 2,092.3 ft			TOTAL DEPTH 73.3 ft			NORTHING 682,985			EASTING 934,562			24 HR.	22.7		
DRILL RIG/HAMMER EFF./DATE TER373 DIEDRICH D-50 93% 01/28/2022						DRILL METHOD Mud Rotary				HAMMER TYPE Automatic					
DRILLER Turnage, J.			START DATE 03/01/23			COMP. DATE 03/01/23			SURFACE WATER DEPTH N/A						
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	▼ MOI	L O G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					
2015						Match Line									
														ROCK (GNEISS)	

NC DOT BORE SINGLE I2513AC_GEO_BRDG_STATE STREET - UPDATED 03-11-24.GPJ NC_DOT.GDT 5/23/24

NCDOT BORE SINGLE I2513AC GEO BRDG STATE STREET - UPDATED 03-11-24.GPJ NC DOT.GDT 5/23/24

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GEOTECHNICAL BORING REPORT
BORE LOG

WBS 34165.1.6			TIP I-2513AC			COUNTY BUNCOMBE			GEOLOGIST Marples, Z. J.						
SITE DESCRIPTION BRIDGES NO. 900 AND NO. 901 ON I-26/ I-240 OVER STATE STREET BETWEEN SR 3556 AND US 23 BUS.												GROUND WTR (ft)			
BORING NO. EB1-E			STATION 105+83			OFFSET 42 ft LT			ALIGNMENT -L-			0 HR. N/A			
COLLAR ELEV. 2,085.1 ft			TOTAL DEPTH 63.1 ft			NORTHING 682,879			EASTING 934,569			24 HR. FIAD			
DRILL RIG/HAMMER EFF./DATE TER1006 Geoprobe 7822DT 90% 01/20/2023						DRILL METHOD Mud Rotary				HAMMER TYPE Automatic					
DRILLER WHITEHEAD, T.			START DATE 02/20/24			COMP. DATE 02/20/24			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)
2090															
2085															
2080	2,084.1	1.0	4	5	7	12	.	.	.	.	M			2,085.1 GROUND SURFACE 0.0	
	2,082.0	3.1	4	7	8	15	.	.	.	.	M			2,084.3 PAVEMENT 0.8	
	2,079.1	6.0	5	10	11	21	.	.	.	.	M			2,082.6 RESIDUAL 2.5	
2075	2,077.0	8.1	3	8	9	17	.	.	.	.	M			STIFF, BROWN, RED, FINE TO COARSE SANDY CLAY, MOIST (A-6)	
	2,072.0	13.1	6	14	15	29	.	.	.	.	M			STIFF TO HARD, BROWN, RED, BLACK, FINE TO COARSE SANDY SILT, MOIST (A-4)	
2070						29	.	.	.	.	M				
2065	2,067.0	18.1	11	13	15	28	.	.	.	.	M				
	2,062.0	23.1	7	7	7	14	.	.	.	.	M				
2060						14	.	.	.	.	M				
2055	2,057.0	28.1	6	7	8	15	.	.	.	.	M				
	2,052.0	33.1	11	15	17	32	.	.	.	.	M				
2050						32	.	.	.	.	M				
2045	2,047.0	38.1	9	18	18	36	.	.	.	.	M				
	2,042.0	43.1	8	11	13	24	.	.	.	.	M				
2040						24	.	.	.	.	M				
2035	2,037.0	48.1	7	10	12	22	.	.	.	.	M				
	2,032.0	53.1	8	18	21	39	.	.	.	.	M				
2030						39	.	.	.	.	M				
2025	2,027.0	58.1	11	23	24	47	.	.	.	.	M				
	2,022.0	63.1	60/0.0			60/0.0	.	.	.	.	M			2,022.0	63.1
														Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 2,022.0 ft ON CRYSTALLINE ROCK (GNEISS)	

NC DOT BORE SINGLE I2513AC_GEO_BRDG_STATE STREET - UPDATED 03-11-24.GPJ NC_DOT.GDT 5/23/24

GEOTECHNICAL BORING REPORT
BORE LOG

WBS 34165.1.6			TIP I-2513AC			COUNTY BUNCOMBE			GEOLOGIST Marples, Z. J.						
SITE DESCRIPTION BRIDGES NO. 900 AND NO. 901 ON I-26/ I-240 OVER STATE STREET BETWEEN SR 3556 AND US 23 BUS.										GROUND WTR (ft)					
BORING NO. EB1-F			STATION 105+59			OFFSET 15 ft LT			ALIGNMENT -L-			0 HR. N/A			
COLLAR ELEV. 2,084.2 ft			TOTAL DEPTH 43.4 ft			NORTHING 682,846			EASTING 934,584			24 HR. FIAD			
DRILL RIG/HAMMER EFF./DATE TER1006 Geoprobe 7822DT 90% 01/20/2023						DRILL METHOD Mud Rotary				HAMMER TYPE Automatic					
DRILLER WHITEHEAD, T.			START DATE 02/21/24			COMP. DATE 02/21/24			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	DEPTH (ft)
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					
2085															
	2,083.2	1.0													2,084.2 GROUND SURFACE 0.0
															2,083.5 0.7
2080	2,080.9	3.3													
	2,078.2	6.0													2,078.7 5.5
2075	2,075.9	8.3													2,076.2 8.0
2070	2,070.9	13.3													
2065	2,065.9	18.3													
2060	2,060.9	23.3													
2055	2,055.9	28.3													
2050	2,050.9	33.3													2,051.2 33.0
2045	2,045.9	38.3													2,045.4 38.8
	2,040.9	43.3													2,040.9 43.3
															2,040.8 43.4

NC DOT BORE SINGLE I2513AC_GEO_BRDG_STATE STREET - UPDATED 03-11-24.GPJ NC_DOT.GDT 5/23/24

PROJECT REFERENCE NO.	SHEET NO.
I-2513AC	11

SITE PHOTOGRAPHS

BRIDGES NO. 900 AND NO. 901 ON I-26 / I-240 OVER STATE STREET
BETWEEN SR 3556 (AMBOY ROAD) AND US 23 BUSINESS (HAYWOOD ROAD)



END BENT 1 LOOKING EAST



END BENT 2 LOOKING WEST



ON STATE STREET ALONG -Y14-
ALIGNMENT LOOKING SOUTH



ON STATE STREET ALONG -Y14-
ALIGNMENT LOOKING NORTH