

REFERENCE: DF18314.2045155

PROJECT: N/A

CONTENTS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	LEGEND (SOIL & ROCK)
3	SITE PLAN
4-7	BORE LOGS
8	SOIL TEST RESULTS

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

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY HENDERSON
 PROJECT DESCRIPTION REPAIR SR 1188 (DAVIS MOUNTAIN ROAD)
 SITE DESCRIPTION SITE 821: -L2- STA. 12 + 75.00-16 + 50.00

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	DF18314.2045155	1	

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
M. MALISHER, E.I.T.
CG2 EXPLORATION

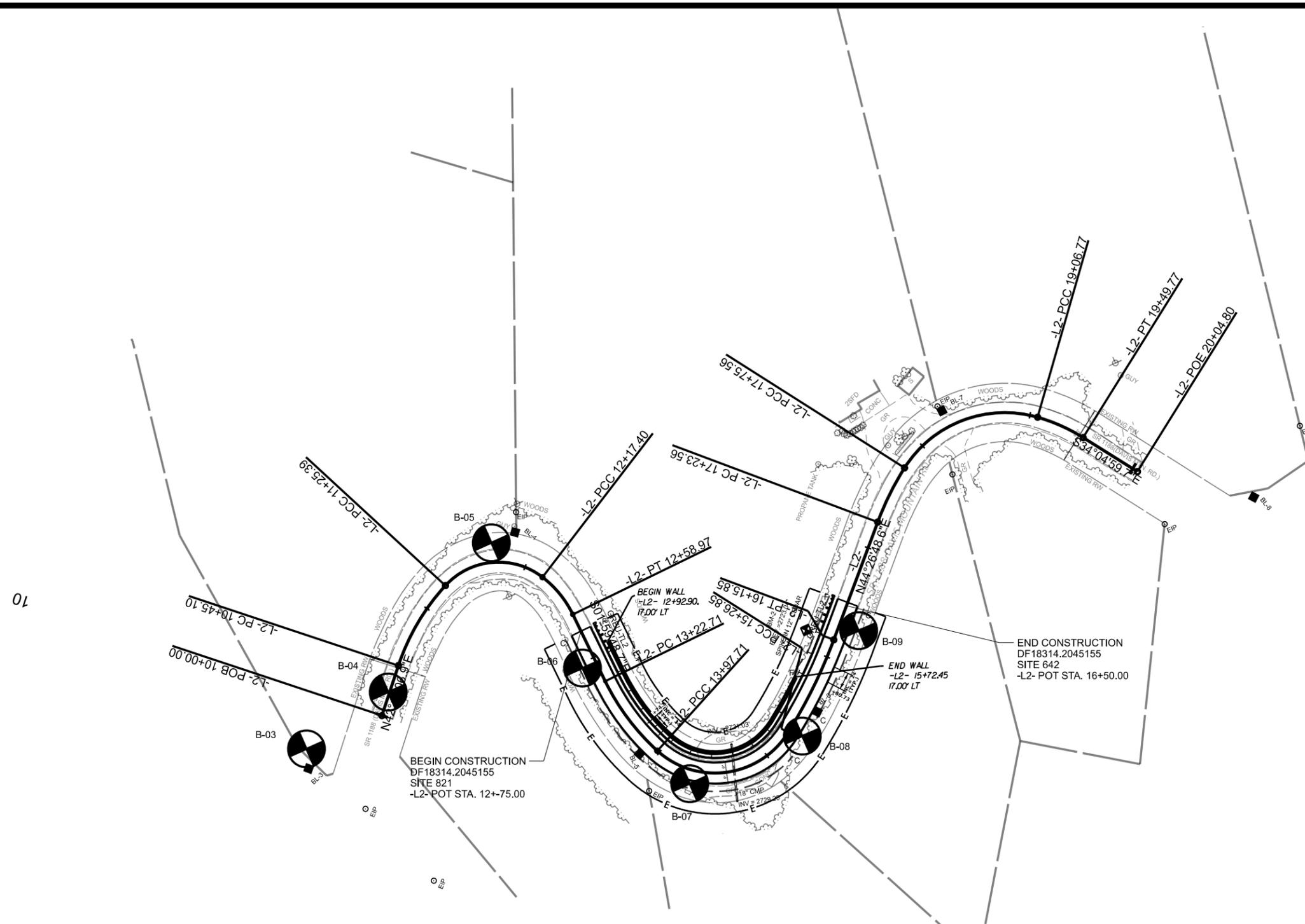
INVESTIGATED BY CG2, PLLC
 DRAWN BY M. MALISHER, E.I.T.
 CHECKED BY K. DE MONTBRUN, P.E.
 SUBMITTED BY CG2, PLLC
 DATE JULY 2025

Prepared in the Office of:
 **CAROLINAS GEOTECHNICAL GROUP**
 1805 SARDIS ROAD NORTH
 SUITE 100
 CHARLOTTE, NC 28270
 (980) 339-8684

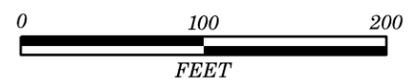


SIGNATURE _____ DATE _____

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**



CUR DATA -L2- Pc = 12+38.56 Δc = 26°27'46.4" (RT) D = 63°39'43.1" Lc = 41.57 Tc = 21.16 R = 90	CUR DATA -L2- Pc = 11+32.23 Δc = 85°01'28.6" (RT) D = 92°24'45.2" Lc = 92.01 Tc = 96.84 R = 62	CUR DATA -L2- Pc = 10+85.25 Δc = 24°12'43.4" (RT) D = 30°09'20.4" Lc = 80.30 Tc = 40.76 R = 190	CUR DATA -L2- Pc = 13+60.57 Δc = 21°55'27.9" (LT) D = 29°13'57.1" Lc = 75.00 Tc = 37.96 R = 196	CUR DATA -L2- Pc = 14+85.38 Δc = 99°59'22.6" (LT) D = 77°25'36.2" Lc = 129.14 Tc = 66.17 R = 74	CUR DATA -L2- Pc = 15+71.50 Δc = 11°38'32.3" (LT) D = 13°04'52.4" Lc = 89.00 Tc = 44.65 R = 438	CUR DATA -L2- Pc = 14+85.38 Δc = 99°59'22.6" (LT) D = 77°25'36.2" Lc = 129.14 Tc = 66.17 R = 74	CUR DATA -L2- Pc = 15+71.50 Δc = 11°38'32.3" (LT) D = 13°04'52.4" Lc = 89.00 Tc = 44.65 R = 438	CUR DATA -L2- Pc = 13+60.57 Δc = 21°55'27.9" (LT) D = 29°13'57.1" Lc = 75.00 Tc = 37.96 R = 196	CUR DATA -L2- Pc = 13+60.57 Δc = 21°55'27.9" (LT) D = 29°13'57.1" Lc = 75.00 Tc = 37.96 R = 196	CUR DATA -L2- Pc = 13+28.41 Δc = 15°53'41.8" (RT) D = 36°57'54.1" Lc = 43.00 Tc = 21.64 R = 155	CUR DATA -L2- Pc = 17+48.56 Δc = 11°52'12.2" (RT) D = 22°49'37.2" Lc = 52.00 Tc = 26.09 R = 251	CUR DATA -L2- Pc = 16+52.01 Δc = 73°42'17.7" (RT) D = 56°10'20.4" Lc = 131.21 Tc = 76.45 R = 102
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GEOTECHNICAL BORING REPORT

BORE LOG

WBS DF18314.2045155		TIP N/A		COUNTY HENDERSON		GEOLOGIST M. Malisher									
SITE DESCRIPTION Repair SR 1188 (Davis Mountain Road) Site 821							GROUND WTR (ft)								
BORING NO. B-03		STATION N/A		OFFSET N/A		ALIGNMENT N/A									
COLLAR ELEV. 2,709.0 ft		TOTAL DEPTH 11.3 ft		NORTHING 588,689		EASTING 948,208									
DRILL RIG/HAMMER EFF./DATE CG24113 CME-550X 78% 05/06/2024			DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER J. Estep		START DATE 04/22/25		COMP. DATE 04/22/25		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					
2710															
	2,708.0	1.0	12	20	22										
2705	2,705.5	3.5	4	3	4										
	2,703.0	6.0	1	0	1										
2700	2,700.5	8.5	WOH	3	20										
	2,697.7	11.3													

WBS DF18314.2045155		TIP N/A		COUNTY HENDERSON		GEOLOGIST M. Malisher									
SITE DESCRIPTION Repair SR 1188 (Davis Mountain Road) Site 821							GROUND WTR (ft)								
BORING NO. B-04		STATION 10+21		OFFSET 1 ft LT		ALIGNMENT -L2-									
COLLAR ELEV. 2,711.4 ft		TOTAL DEPTH 14.0 ft		NORTHING 588,705		EASTING 948,292									
DRILL RIG/HAMMER EFF./DATE CG24113 CME-550X 78% 05/06/2024			DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER J. Estep		START DATE 04/22/25		COMP. DATE 04/22/25		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					
2715															
	2,711.4	0.0													
2710	2,710.4	1.0	12	10	7										
	2,707.9	3.5	8	7	3										
2705	2,705.4	6.0	14	13	12										
	2,702.9	8.5	23	31	37										
2700	2,697.4	14.0													

NCDOT BORE DOUBLE GEO_DAVIS MOUNTAIN ROADWAY REPAIRS_GTM.GPJ NC_DOT.GDT 7/22/25

GEOTECHNICAL BORING REPORT

BORE LOG

WBS DF18314.2045155		TIP N/A		COUNTY HENDERSON		GEOLOGIST M. Malisher											
SITE DESCRIPTION Repair SR 1188 (Davis Mountain Road) Site 821							GROUND WTR (ft)										
BORING NO. B-05		STATION 11+72		OFFSET 17 ft LT		ALIGNMENT -L2-											
COLLAR ELEV. 2,719.7 ft		TOTAL DEPTH 39.2 ft		NORTHING 588,786		EASTING 948,425											
DRILL RIG/HAMMER EFF./DATE CG24113 CME-550X 78% 05/06/2024			DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER J. Estep		START DATE 04/18/25		COMP. DATE 04/18/25		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)		
2720															2,719.7	0.0	GROUND SURFACE
	2,718.7	1.0	6	4	4										2,716.7	3.0	RESIDUAL Loose, Brown, Silty Fine to Coarse SAND (A-2-4), with trace gravel-sized rock fragments
2715	2,716.2	3.5	3	4	6												
	2,713.7	6.0	14	5	7												
2710	2,711.2	8.5	10	10	14												
	2,706.2	13.5	14	10	16												
2705																	
	2,701.2	18.5	5	4	7												
2700																	
	2,696.2	23.5	33	56	24												
2695																	
	2,691.2	28.5	16	23	33												
2690																	
	2,686.2	33.5	17	39	56												
2685																	
	2,681.2	38.5	55	45/0.2													
															2,681.2	38.5	WEATHERED ROCK Gray-White (Granitic Gneiss) Boring Terminated at Elevation 2,680.5 ft In Weathered Rock (Granitic Gneiss)
															2,680.5	39.2	Surficial Organic Laden Soil 0.0'-0.2'

WBS DF18314.2045155		TIP N/A		COUNTY HENDERSON		GEOLOGIST M. Malisher											
SITE DESCRIPTION Repair SR 1188 (Davis Mountain Road) Site 821							GROUND WTR (ft)										
BORING NO. B-06		STATION 13+04		OFFSET 13 ft RT		ALIGNMENT -L2-											
COLLAR ELEV. 2,727.6 ft		TOTAL DEPTH 2.7 ft		NORTHING 588,656		EASTING 948,453											
DRILL RIG/HAMMER EFF./DATE CG24113 CME-550X 78% 05/06/2024			DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER J. Estep		START DATE 04/18/25		COMP. DATE 04/18/25		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)		
2730															2,727.6	0.0	GROUND SURFACE
	2,726.6	1.0	11	12	18										2,724.9	2.7	RESIDUAL Medium Dense, Gray-White, Silty Fine to Coarse SAND (A-2-4), with trace gravel-sized rock fragments Boring Terminated with Standard Penetration Test Refusal at Elevation 2,724.9 ft On Crystalline Rock (Granitic Gneiss)
2725	2,724.9	2.7	60/0.0														

NCDOT BORE DOUBLE GEO_DAVIS MOUNTAIN ROADWAY REPAIRS_GTM.GPJ NC_DOT.GDT 7/28/25

GEOTECHNICAL BORING REPORT

BORE LOG

WBS DF18314.2045155		TIP N/A		COUNTY HENDERSON		GEOLOGIST M. Malisher									
SITE DESCRIPTION Repair SR 1188 (Davis Mountain Road) Site 821							GROUND WTR (ft)								
BORING NO. B-07		STATION 14+33		OFFSET 12 ft RT		ALIGNMENT -L2-									
COLLAR ELEV. 2,731.7 ft		TOTAL DEPTH 15.5 ft		NORTHING 588,528		EASTING 948,497									
DRILL RIG/HAMMER EFF./DATE CG24113 CME-550X 78% 05/06/2024			DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER J. Estep		START DATE 04/17/25		COMP. DATE 04/17/25		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					
2735															
2730	2,730.7	1.0	WOH	3	3									2,731.7	0.0
	2,728.2	3.5		2	4	5								2,731.1	0.8
2725	2,725.7	6.0		4	5	8								2,728.7	3.0
	2,723.2	8.5		8	4	96/0.3								2,726.2	5.5
2720	2,718.2	13.5		50	11	89/0.2								2,722.7	9.0
	2,716.2	15.5	60/0.0											2,716.2	15.5

WBS DF18314.2045155		TIP N/A		COUNTY HENDERSON		GEOLOGIST M. Malisher									
SITE DESCRIPTION Repair SR 1188 (Davis Mountain Road) Site 821							GROUND WTR (ft)								
BORING NO. B-08		STATION 15+31		OFFSET 12 ft RT		ALIGNMENT -L2-									
COLLAR ELEV. 2,731.2 ft		TOTAL DEPTH 26.8 ft		NORTHING 588,526		EASTING 948,602									
DRILL RIG/HAMMER EFF./DATE CG24113 CME-550X 78% 05/06/2024			DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER J. Estep		START DATE 04/17/25		COMP. DATE 04/17/25		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					
2735															
2730	2,730.2	1.0		5	4	3								2,731.2	0.0
	2,727.7	3.5		4	5	6									
2725	2,725.2	6.0		3	3	4								2,725.7	5.5
	2,722.7	8.5		2	3	3									
2720	2,717.7	13.5		2	5	6								2,719.2	12.0
	2,712.7	18.5		2	2	4								2,714.2	17.0
2715	2,707.7	23.5		36	64/0.3									2,707.7	23.5
2710															
2705	2,704.4	26.8	60/0.0											2,704.4	26.8

NCDOT BORE DOUBLE GEO_DAVIS MOUNTAIN ROADWAY REPAIRS_GTM.GPJ NC_DOT.GDT 7/22/25

GEOTECHNICAL BORING REPORT

BORE LOG

WBS DF18314.2045155		TIP N/A		COUNTY HENDERSON		GEOLOGIST M. Malisher										
SITE DESCRIPTION Repair SR 1188 (Davis Mountain Road) Site 821							GROUND WTR (ft)									
BORING NO. B-09		STATION 16+31		OFFSET 17 ft RT		ALIGNMENT -L2-	0 HR. Dry									
COLLAR ELEV. 2,725.2 ft		TOTAL DEPTH 27.5 ft		NORTHING 588,589		EASTING 948,683	24 HR. 23.0									
DRILL RIG/HAMMER EFF./DATE CG24113 CME-550X 78% 05/06/2024				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER J. Estep		START DATE 04/17/25		COMP. DATE 04/17/25		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)	
2730																
2725	2,724.2	1.0	3	5	5	10									2,725.2	0.0
2720	2,721.7	3.5	4	5	7	10									RESIDUAL Stiff, Orange-Brown-White-Gray, Fine to Coarse Sandy SILT (A-4(0)), with trace mica and Manganese Oxide staining	
	2,719.2	6.0	4	4	6	10										
2715	2,716.7	8.5	3	5	7	12									WEATHERED ROCK Gray-White (Granitic Gneiss)	
	2,711.7	13.5	3	5	7	12										
2710	2,706.7	18.5	3	7	93/0.2	100/0.7									2,706.2	19.0
2705	2,701.7	23.5	36	63	37/0.2	100/0.7									Boring Terminated with Standard Penetration Test Refusal at Elevation 2,697.7 ft On Crystalline Rock (Granitic Gneiss)	
2700	2,697.7	27.5	60/0.0			60/0.0								2,697.7		

NCDOT BORE DOUBLE GEO_DAVIS MOUNTAIN ROADWAY REPAIRS_GTM.GPJ NC_DOT.GDT 7/22/25

SOIL TEST RESULTS

Boring ID	SAMPLE NO.	OFFSET	STATION	NORTH (FT)	EAST (FT)	DEPTH INTERVAL (ft.)	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
										C. SAND	F. SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
B-03	SS-1371	N/A	N/A	588689	948208	6.0-7.5	A-6(6)	33	15	19.2%	26.8%	25.5%	28.5%	98.7%	88.7%	58.2%	35.4%	ND
B-05	SS-1321	17' LT	11+72 -L2-	588786	948425	13.5-15.0	A-2-4	NP	NP	30.0%	46.4%	21.6%	2.0%	73.3%	61.5%	22.9%	7.3%	ND
B-07	SS-1312	12' RT	14+33 -L2-	588528	948497	3.5-5.0	A-6(2)	29	11	23.3%	28.5%	19.8%	28.4%	82.9%	71.2%	44.0%	18.4%	ND
B-09	SS-1298	17' RT	16+31 -L2-	588589	948683	8.5-10.0	A-4(0)	NP	NP	22.3%	27.3%	42.3%	8.1%	91.0%	78.6%	50.5%	18.4%	ND

	130-04-0212
	NCDOT Cert. No.
	10/03/24
Authorized Signature	Date

Prepared in the Office of:
F&ME CONSULTANTS, INC.
 COLUMBIA, SOUTH CAROLINA.
 NCDOT LAB CERT. NO. 130-0212