

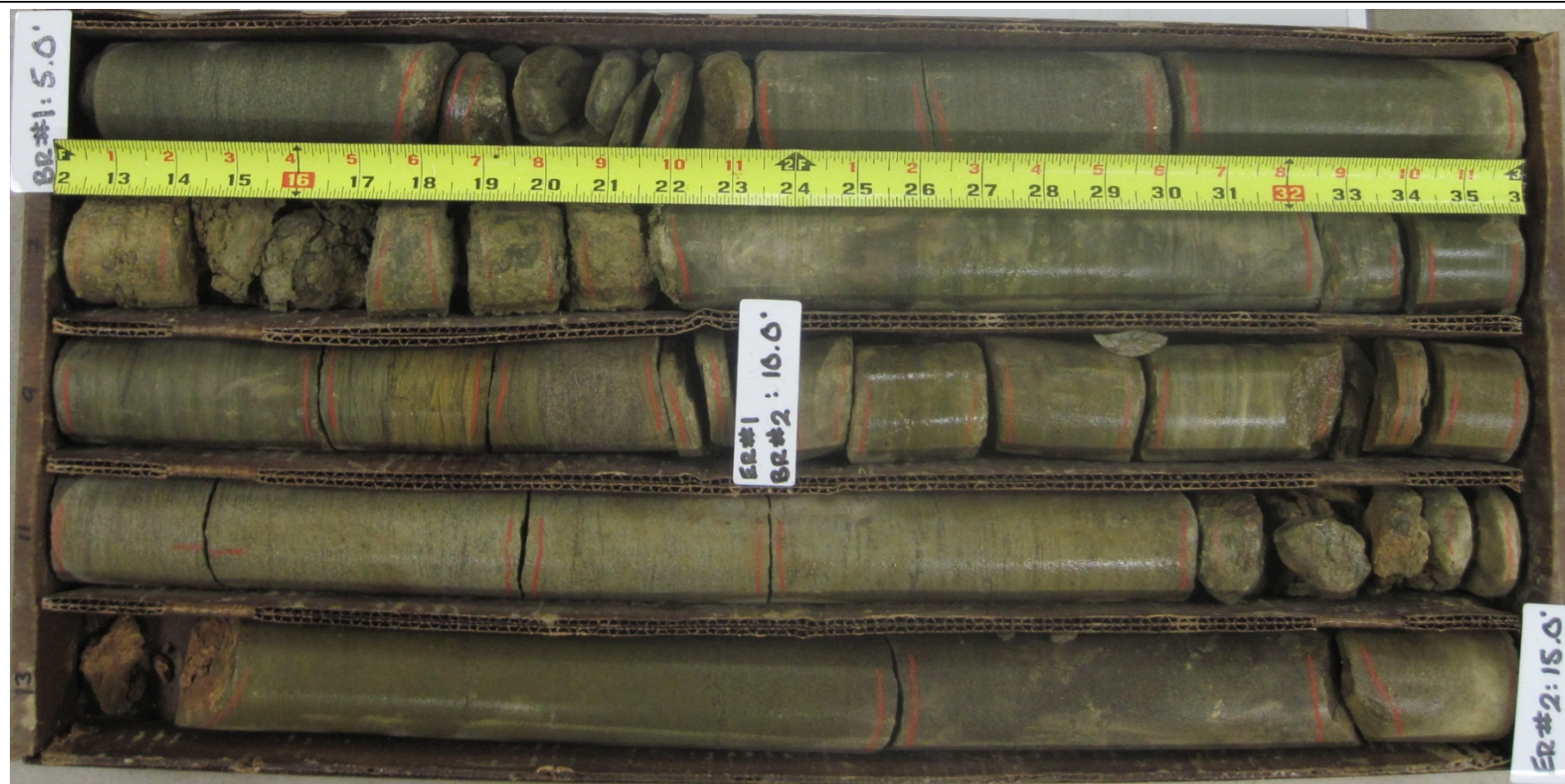
PROJECT: <u>LAW-775-8.77</u>	DRILLING FIRM / OPERATOR: <u>ODOT / KINNEY</u>	DRILL RIG: <u>ACKER REBEL XL</u>	STATION / OFFSET: <u>469+36, 152' LT.</u>	EXPLORATION ID
TYPE: <u>ROADWAY</u>	SAMPLING FIRM / LOGGER: <u>ODOT / LEWIS</u>	HAMMER: <u>ACKER AUTOMATIC</u>	ALIGNMENT: <u>CL SR 775</u>	B-009-0-24
PID: <u>118778</u> SFN: _____	DRILLING METHOD: <u>3.25" HSA</u>	CALIBRATION DATE: <u>11/7/23</u>	ELEVATION: <u>688.9 (MSL)</u> EOB: <u>45.0 ft.</u>	PAGE
START: <u>8/12/24</u> END: <u>8/15/24</u>	SAMPLING METHOD: <u>NQ2</u>	ENERGY RATIO (%): <u>90*</u>	LAT / LONG: <u>38.541662, -82.391818</u>	1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	HOLE SEALED
								GR	CS	FS	SI	CL	LL	PL	PI			
BROWN SANDY CLAY (6")	688.4	TR																
<b>SANDSTONE</b> , BROWN, SEVERELY WEATHERED, FINE TO MEDIUM GRAINED, AUGERED WITHOUT SAMPLING.	688.4	1																
		2																
		3																
		4																
		5																
<b>SANDSTONE</b> , OLIVE BROWN, HIGHLY TO MODERATELY WEATHERED, MODERATELY STRONG TO STRONG, FINE TO MEDIUM GRAINED, VERY THIN TO THIN BEDDED, MICACEOUS, ARGILLACEOUS, JOINT, HIGHLY TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; BLOCKY, GOOD; RQD 49%, REC 97%. @ 5.5' - 7.0'; Id2 = 96.3%; TYPE I @ 6.6' - 6.9'; <b>γ</b> = 159 pcf; Qu = 4,160 psi	683.9	6																
		7																
		8	52		98	NQ2-1										CORE		
		9																
		10																
		11																
		12	63		95	NQ2-2										CORE		
		13																
		14																
		15																
  @ 11.0' - 13.0'; Id2 = 97.5%; TYPE I @ 11.3' - 11.6'; <b>γ</b> = 161 pcf; Qu = 9,375 psi  @13.3'; LOST WATER RETURN         @15.2' - 16.8'; S <sub>c</sub> = 4,190 psi	672.1	16																
		17																
		18																
		19																
		20																
<b>SILTSTONE</b> , OLIVE BROWN, HIGHLY TO MODERATELY WEATHERED, SLIGHTLY STRONG, LAMINATED TO VERY THIN BEDDED, MICACEOUS, JOINT, HIGHLY FRACTURED TO FRACTURED, NARROW, SLIGHTLY ROUGH; BLOCKY, FAIR; RQD 13%, REC 59%. @17.0' - 20.0'; S <sub>c</sub> = 2,233 psi @ 17.0' - 20.0'; Id2 = 93.9%; TYPE II @18.8'; LOST WATER RETURN	665.6	21																
		22																
		23																
		24																
		25																
<b>SHALE</b> , DARK GRAY, HIGHLY WEATHERED, VERY WEAK, LAMINATED, JOINT, HIGHLY FRACTURED TO FRACTURED, NARROW, SLIGHTLY ROUGH; BLOCKY, FAIR; RQD 57%, REC 100%. @ 23.3' - 25.0'; Id2 = 2.4%; TYPE III @ 23.9' - 24.1'; <b>γ</b> = 141 pcf; Qu = 13 psi	663.9	26	0		54	NQ2-5										CORE		
		27																
		28	21		100	NQ2-6										CORE		
		29	33		50	NQ2-7										CORE		
		30																
		31																
		32																
		33	50		100	NQ2-8										CORE		
		34																
		35																
<b>SANDSTONE</b> , OLIVE BROWN, MODERATELY WEATHERED, SLIGHTLY STRONG, FINE TO COARSE GRAINED, VERY THIN TO THIN BEDDED, MICACEOUS, JOINT, MODERATELY TO SLIGHTLY FRACTURED, NARROW, SLIGHTLY ROUGH; BLOCKY, GOOD; RQD 88%, REC 100%. @ 36.0' - 37.7'; Id2 = 92.7%; TYPE I @ 37.1' - 37.4'; <b>γ</b> = 150 pcf; Qu = 2,953 psi	653.0	36																
		37																
		38	73		97	NQ2-9										CORE		
		39																
		40																
<b>SANDSTONE</b> , OLIVE BROWN AND DARK GRAY, MODERATELY WEATHERED, MODERATELY STRONG, FINE TO MEDIUM GRAINED, VERY THIN TO THIN BEDDED, MICACEOUS, JOINT, MODERATELY TO SLIGHTLY FRACTURED, NARROW, SLIGHTLY ROUGH; BLOCKY, GOOD; RQD 93%, REC 100%. @42.7' - 45.0'; CONTAINS SHALE STRINGERS @ 43.8' - 44.3'; Id2 = 93.9%; TYPE I @ 44.3' - 44.6'; <b>γ</b> = 152 pcf; Qu = 4,401 psi	647.3	41																
		42																
		43	92		100	NQ2-10										CORE		
		44																
		45																
	643.9	EOB																

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. S<sub>c</sub> = POINT LOAD STRENGTH VALUES AS PER ASTM D 5731.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: TREMIED 75 GAL. BENTONITE GROUT

B-009-0-24



Run #:	Depth		Recovery		RQD	
NQ2-1	5.0'	10.0'	59/60	98%	31/60	52%
NQ2-2	10.0'	15.0'	57/60	95%	38/60	63%

LAW-775-8.77 PID 118778



B-009-0-24



Run #:	Depth		Recovery		RQD	
NQ2-3	15.0'	20.0'	58/60	97%	10/60	17%
NQ2-4	20.0'	25.0'	30/60	50%	12/60	20%

LAW-775-8.77 PID 118778



B-009-0-24



Run #:	Depth		Recovery		RQD	
NQ2-5	25.0'	27.0'	13/24	54%	0/24	0%
NQ2-6	27.0'	29.0'	24/24	100%	5/24	21%
NQ2-7	29.0'	30.0'	6/12	50%	4/12	33%
NQ2-8	30.0'	35.0'	60/60	100%	30/60	50%

LAW-775-8.77 PID 118778



ER #4: 46.0'

BR #10

ER #10: 46.0'

Run #:	Depth		Recovery		RQD	
NQ2-9	35.0'	40.0'	58/60	97%	44/60	73%
NQ2-10	40.0'	45.0'	60/60	100%	55/60	92%
LAW-775-8.77 PID 118778						

Date Started 10/17/01  
Date Completed 10/17/01  
Boring No. 5

LOG OF BORING  
Sampler Type SS Dia. 2"  
Coring Length: 55.0 ft. Dia. 2" 468+10,  
Station & Offset 457+85.5, 90.0' Lt. 81.5' Lt. Surface Elev. 669.0

B-005-0-01

Elev. (ft)	Depth (ft)	Std. Pen. /R.Q.D.	Rec. (ft)	Loss (ft)	Description	Sample No.	Physical Characteristics									
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	WC	ODOT Class	
669.0	0															
	1				Silt With Clay, brown, moist, stiff, (Visual)											
667.0	2				Top of Rock											
	3	50+			Shale, brown (Augered)	1									NR	
	4															
664.0	5				Begin Core											
	6				Shale, brown to gray, silty, laminated, soft, to moderately hard											
	7	76	2.5	0.0												SDI=96
	8															
	9															
	10															
	11															
657.2	12															SDI=91
	13	0	5.0	0.0	Sandstone, brown, medium grained, partially friable, moderately hard to hard											
	14															
	15															
	16															
	17	100	5.0	0.0												
	18															
	19															
	20															
	21															
	22															
	23															
	24															
	25															
	26															
	27	98	10.0	0.0												
	28															
	29															
	30															

LOG OF BORING (CONTINUED)

Boring No. 5 (Cont.) Station & Offset 457+85.5, 90.0' Lt. 468+10,  
81.5' Lt. Surface Elev. 669.0

Elev. (ft)	Depth (ft)	Std. Pen. /R.Q.D.	Rec. (ft)	Loss (ft)	Description	Sample No.	Physical Characteristics									
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	WC	ODOT Class	
	30				Sandstone, brown, medium grained, partially friable, moderately hard to hard											
	31															
	32															
	33															
	34															
	35															
	36															
	37	96	10.0	0.0												
	38															
	39															
	40															
	41															
	42															
	43															
	44															
	45															
	46															
622.2	47	98	10.0	0.0	Shale, gray, silty, laminated, moderately hard										SDI=87	
	48															
	49															
	50															
	51														SDI=39	
	52															
	53															
	54															
613.8	55				Sandstone, gray, medium grained, partially friable, hard											
	56															
	57	85	10.0	0.0												
	58															
610.0	59				Shale, gray, silty, laminated, moderately hard											
609.0	60	76	2.5	0.0												
Bottom of Boring																

Bottom of Boring

ELEVATION INFORMATION BASED ON INTERPOLATED TOPOGRAPHIC INFORMATION FROM THE ORIGINAL 2002 SITE PLAN AND NOT FROM SURVEY DATA.



Date Started 10/16/01  
Date Completed 10/16/01  
Boring No. 8

LOG OF BORING  
Sampler Type SS Dia. 2"  
Coring Length: 55.0 ft. Dia. 2" 472+96.  
Station & Offset 462+90, 100.3' Lt. 103.5' Lt. Surface Elev. 662.5

B-008-0-01

Elev. (ft)	Depth (ft)	Std. Pen. /R.Q.D.	Rec. (ft)	Loss (ft)	Description	Sample No.	Physical Characteristics									ODOT Class
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	WC		
662.5	0															
	1				Silt With Clay, brown, moist, stiff, (Visual)											
660.5	2				Top of Rock											
	3	15/50			Shale, gray to reddish gray (Augered)	1									15	
	4															
657.5	5				Begin Core											
	6				Shale, brown to reddish gray, silty, laminated, soft to moderately hard											SDI=83
	7															
	8	0	2.5	0.0												
	9															
	10															
	11															
	12															
650.0	13	50	5.0	0.0												
	14				Sandstone, brown, gray and red medium to fine grained, partially friable, hard											
	15															
	16															
	17															
	18	86	4.9	0.1												
	19															
	20															
	21															
	22															
	23															
	24															
	25															
	26															
	27															
	28	100	10.0	0.0												
	29															
	30															

LOG OF BORING (CONTINUED)

Boring No. 8 (Cont.) Station & Offset 462+90, 100.3' Lt. 472+96, 103.5' Lt. Surface Elev. 662.5

Elev. (ft)	Depth (ft)	Std. Pen. /R.Q.D.	Rec. (ft)	Loss (ft)	Description	Sample No.	Physical Characteristics									ODOT Class	
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	WC			
	30				Sandstone, brown, gray and red, medium to fine grained, partially friable, hard												
	31																
	32																
	33																
	34																
	35																
	36																
	37																
	38	100	10.0	0.0													
	39																
	40																
	41																
	42																
	43																
	44																
	45																
616.7	46				Shale, gray, silty, laminated, soft to moderately hard												
	47																
	48	95	10.0	0.0													SDI=86
	49																
	50																SDI=14
	51																
	52																
	53																
	54																
	55																
	56																
	57																
	58	75	10.0	0.0													
	59																
602.5	60	75	2.5	0.0													

Bottom of Boring

ELEVATION INFORMATION BASED ON INTERPOLATED TOPOGRAPHIC INFORMATION FROM THE ORIGINAL 2002 SITE PLAN AND NOT FROM SURVEY DATA.

DESIGN AGENCY  
FULLER, MOSSBARGER, INC.  
SCOTT & MAY, ENGINEERS, INC.  
CINCINNATI, OHIO

DATE  
12/01

CHECKED  
B.D.B.

REVISED

DRAWN  
M.S.J.

CHECKED  
S.A.H.

STATE ROUTE 775 LANDSLIDE

LAW-775-0.00

9/9