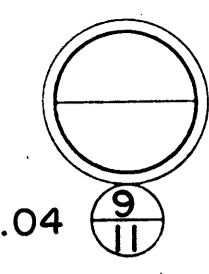


MICROFILMED  
MAY 11 1983



**LOG OF BORING**

Date Started 11/30/83 Date Completed 12/14/83 Boring No. B-27A Station & Offset 21+65 15' RT. Surface Elev. 582.5' Water Elev. 581.5' Sampler Type SS Dia. 1 3/8"

Elev.	Depth	Std. Pen. (N)	Rec. Loss	Description	Sample No.	Physical Characteristics								SHTL Class.
						% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	
582.5	0													
572.5	10	50(0.7')		GRAY STONE FRAGMENTS, GRAVEL AND SAND				V	I	S	U	A	L	
567.5	16	50(0.6')		GRAY SANDY GRAVEL	2	57	32	8	2	1	NP	NP	20	A-1-a
562.5	20	W.S.		GRAY GRAVEL AND SAND (SAND HEAVED IN CASING)	3	42	51	6	1	0	NP	NP	21	VISUAL
557.5	26	W.S.		GRAY SANDY GRAVEL (SAND HEAVED IN CASING)	4	53	38	8	1	0	NP	NP	20	VISUAL
552.5	30	W.S.		GRAY SAND (SAND HEAVED IN CASING)	5	9	52	27	7	5	NP	NP	22	VISUAL
547.5	36	W.S.		GRAY SANDY GRAVEL	6	69	28	2	1	0	NP	NP	9	VISUAL
542.5	40	W.S.		GRAY GRAVELLY SAND (SAND HEAVED IN CASING)	7	20	77	2	1	0	NP	NP	16	VISUAL
537.5	46	W.S.		GRAY GRAVELLY SAND	8	12	61	32	3	2	NP	NP	21	VISUAL
532.5	50	W.S.		GRAY GRAVELLY SAND	9	27	32	36	3	2	NP	NP	27	VISUAL
527.5	54			GRAY GRAVELLY SAND (SAND HEAVED IN CASING)										VISUAL

BOTTOM OF BORING

**LOG OF BORING**

Date Started 8-23-83 Date Completed 8-24-83 Boring No. B-28 Station & Offset 22+80 15' LT. Surface Elev. 630.8' Water Elev. \_\_\_\_\_ Sampler Type SS Dia. 1 3/8"

Elev.	Depth	Std. Pen. (N)	Rec. Loss	Description	Sample No.	Physical Characteristics								SHTL Class.
						% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	
630.8	0													
628.3	2			BROWN SANDY CLAY AND STONE FRAGMENTS										
625.8	6	27/35/50		BROWN SANDY SILT	37	12	6	11	35	36	27	10	11	A-4a
623.3	8	30/40/50		BROWN SANDY SILT	38	7	7	12	39	35	27	10	9	A-4a
620.8	10	17/35/46		BROWN GRAVELLY SANDY SILT	39	15	7	11	35	32	27	10	11	A-4a
618.3	12	16/30/44		BROWN AND GRAY SANDY SILT	40	12	10	14	31	33	25	8	11	A-4a
615.8	14	29/51		BROWN AND GRAY GRAVELLY SANDY SILT	41	19	10	16	38	17	19	4	8	A-4a
613.3	16	29/63		GRAY GRAVELLY SANDY SILT	42	15	15	18	31	21	19	5	7	A-4a
610.8	20	50(0.5')		GRAY SANDY GRAVELLY SILT	43	39	10	9	24	18	23	9	5	A-4a
605.8	26	54(0.5')		GRAY SANDY SILT	44	10	31	10	30	19	22	6	7	A-4a
600.3	30	55(0.5')		GRAY SANDY GRAVELLY SILT	45	41	9	8	26	16	21	5	4	A-4a
595.8	36	14/38		BROWN WITH GRAY CLAYEY SILT	47	0	5	6	17	72	23	9	13	A-4a
590.8	40			BOULDERS										
585.8	46	58(0.5')		BROWN SANDY GRAVEL	48	68	19	4	6	3	NP	NP	9	A-1-a
583.8	48			BOULDERS										

BOTTOM OF BORING

**LOG OF BORING**

Date Started 8-17-83 Date Completed 8-22-83 Boring No. B-29 Station & Offset 22+80 16' RT. Surface Elev. 631.7' Water Elev. 581.7' Sampler Type SS Dia. 1 3/8"

Elev.	Depth	Std. Pen. (N)	Rec. Loss	Description	Sample No.	Physical Characteristics								SHTL Class.
						% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	
631.7	0													
629.2	2													
626.7	4	11/12/13		GRAY SANDY SILT	25	5	6	11	39	39	30	9	10	A-4a
624.2	6	6/8/14		BROWN SANDY SILT	26	3	8	13	40	36	30	9	9	A-4a
621.7	10	17/20/24		BROWN SANDY SILT	27	4	8	12	41	35	26	8	10	A-4a
619.2	12	19/20/25		BROWN WITH GRAY SANDY SILT	28	7	8	13	40	32	26	6	32	A-4a
616.7	14	36/50		BROWN SANDY SILT	29	7	7	23	46	17	NP	NP	9	A-4a
614.2	16	18/28/31		BROWN SANDY SILT	30	13	8	19	36	24	24	5	9	A-4a
611.7	18	9/50		GRAY CLAYEY SILT	31	4	4	7	34	51	25	7	13	A-4a
609.2	22	25/43		GRAY SANDY GRAVELLY SILT	32	28	8	11	31	22	25	9	7	A-4a
606.7	26	50/70		GRAY SANDY GRAVELLY SILT	33	28	11	12	30	19	23	5	6	A-4a
601.7	30	35/35		GRAY SANDY GRAVELLY SILT	34	25	7	8	27	33	23	6	11	A-4a
596.7	36	13/30/50		GRAY SANDY SILT	35	2	3	34	37	24	18	5	12	A-4a
594.7	40			BOULDERS, LARGE COBBLES WITH SAND AND GRAVEL										
588.7	42			LIMESTONE AND GRANITE BOULDERS										
581.7	50	60(0.5')		GRAY SANDY GRAVEL AND COBBLES	36									VISUAL
576.7	54			GRANITE BOULDERS WITH SAND AND GRAVEL										

BOTTOM OF BORING

**LOG OF BORING**

Date Started 8-16-83 Date Completed 8-17-83 Boring No. B-30 Station & Offset 25+40 CL Surface Elev. 651.0' Water Elev. \_\_\_\_\_ Sampler Type SS Dia. 1 3/8"

Elev.	Depth	Std. Pen. (N)	Rec. Loss	Description	Sample No.	Physical Characteristics								SHTL Class.
						% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	
651.0	0													
648.5	2													
646.0	4	7/9/13		BROWN SILT AND CLAY	14	0	1	3	39	57	37	15	13	A-6a
643.5	8	10/13/18		BROWN SILT AND CLAY	15	4	3	6	36	51	36	12	19	A-4a
641.0	10	9/11/14		BROWN SANDY SILT	16	7	8	11	38	36	28	8	14	A-4a
638.5	12	9/12/22		BROWN SANDY SILT	17	4	9	13	39	35	28	9	14	A-4a
636.0	14	17/21/35		BROWN WITH GRAY SANDY SILT	18	5	8	15	43	29	27	7	10	A-4a
633.5	16	15/20/25		GRAY SANDY SILT	19	6	21	18	29	26	22	4	9	A-4a
631.0	20	21/36		GRAY SANDY SILT	20	8	6	10	38	38	23	5	9	A-4a
626.0	26	20/30		GRAY GRAVELLY SANDY SILT	22	15	7	12	38	28	23	7	9	A-4a
621.0	30	40/60		GRAY SANDY SILT	23	13	10	17	35	25	19	3	6	A-4a
616.0	36	39/78		GRAY GRAVELLY SANDY SILT	24	21	7	14	38	20	20	5	20	A-4a

BOTTOM OF BORING

**LOG OF BORING**

Date Started 8-24-83 Date Completed 8-25-83 Boring No. B-31 Station & Offset 25+00 CL Surface Elev. 653.6' Water Elev. \_\_\_\_\_ Sampler Type SS Dia. 1 3/8"

Elev.	Depth	Std. Pen. (N)	Rec. Loss	Description	Sample No.	Physical Characteristics								SHTL Class.
						% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	
653.6	0													
651.1	2													
648.6	4	3/5/8		BROWN AND GRAY SILT AND CLAY	49	0	6	8	43	43	32	11	26	A-4a
646.1	6	P.S.		GRAY SILT (GRADING ONLY 5.0'-6.3')	50	0	0	3	80	17	NP	NP	20	A-4b
643.6	8	9/11/13		GRAY SILT	51	0	2	4	83	11	NP	NP	20	A-4b
641.1	12	9/8/5		GRAY WITH BROWN SILT AND CLAY	52	0	2	2	44	52	30	11	28	A-6a
638.6	14	P.S.		GRAY CLAYEY SILT (AVERAGE OF SAMPLES)	53	0	1	1	55	43	27	9	22	A-4b
636.1	16	2/3/4		GRAY SANDY CLAY	54	5	12	4	24	55	30	11	27	A-6a
633.6	20	P.S.		GRAY SANDY SILT (NO TUBE SAMPLE RECOVERED - JAR SAMPLE)	55	7	10	14	38	31	22	6	12	A-4a
628.6	26	17/21/34		BROWN AND GRAY SANDY SILT	57	9	8	12	35	36	23	6	10	A-4a
623.6	30	26/44		GRAY SANDY SILT	58	11	7	11	38	33	24	8	9	A-4a
618.6	36	75(0.5')		GRAY SANDY SILT	59	12	10	20	43	15	NP	NP	6	A-4a

BOTTOM OF BORING

OHIO DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS - TESTING LABORATORY  
1600 WEST BROAD STREET COLUMBUS, OHIO 43223

STRUCTURE FOUNDATION INVESTIGATION  
BRIDGE NO. LAK-20-1714  
OVER GRAND RIVER  
SEC. LAK-20-17.04

BORING DATA

TYPED BY S. M. G.	CHECKED BY L. N. L.	REVIEWED BY R. D. R.	DATE 1/13/84
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