PROJECT: HAN-75-14.39	DRILLING FIRM / OPERATOR: DLZ / ALAN	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 841+10.8, 42.2' RT	EXPLORATION ID B-031-0-13
TYPE: ROADWAY WIDENING	SAMPLING FIRM / LOGGER: PGI / W. NAJJAR	HAMMER: CME AUTOMATIC	ALIGNMENT: IR-75 BASELINE	
PID: 87005 BR ID:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 1/6/12	ELEVATION: 779.7 (MSL) EOB: 10.0 ft.	PAGE 1 OF 1
START: 8/22/13 END: 8/22/13	SAMPLING METHOD: SPT	ENERGY RATIO (%): 70.6	COORD: 41.036293670, 83.672691490	

MATERIAL DESCRIPTION AND NOTES	ELEV. 779.7	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
TOPSOIL (2" THICK)	779.5																	
STIFF, BROWN, **SILTY CLAY**, SOME SAND, LITTLE STONE FRAGMENTS, FILL, DAMP	777.3	1	5 6 7	15	56	SS-1	4.5+	19	7	15	29	30	34	18	16	13	A-6b (7)	
STIFF, BROWN, **SILT AND CLAY**, SOME SAND, TRACE STONE FRAGMENTS, WITH SANDY SILT LAYER, DAMP	774.9	2																
		3																
		4	5 3 5	9	61	SS-2	4.00	6	10	16	39	29	29	17	12	17	A-6a (7)	
HARD, BROWN AND GRAY TO GRAY, **SANDY SILT**, SOME CLAY, TRACE STONE FRAGMENTS, DAMP		5																
		6																
		7	5 14 19	39	100	SS-3	4.5+	-	-	-	-	-	-	-	-	10	A-4a (V)	
		8																
@8.5'; GRAY, WITH INTERBEDDED SAND LAYERS	769.7	9	8 15 11	31	94	SS-4	4.5+	-	-	-	-	-	-	-	-	11	A-4a (V)	
	EOB	10																

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING OR UPON COMPLETION OF DRILLING OPERATIONS.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: HAN-75-14.39	DRILLING FIRM / OPERATOR: DLZ / ALAN	DRILL RIG: CME 750X ATV	STATION / OFFSET: 845+27.6, 9.4' LT
TYPE: ROADWAY WIDENING	SAMPLING FIRM / LOGGER: PGI / K. JONES	HAMMER: CME AUTOMATIC	ALIGNMENT: IR-75 BASELINE
PID: 87005 BR ID:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 1/6/12	ELEVATION: 780.1 (MSL) EOB: 9.0 ft.
START: 8/6/13 END: 8/6/13	SAMPLING METHOD: SPT	ENERGY RATIO (%): 67.1	COORD: 41.037438520, 83.672868320

EXPLORATION ID B-032-0-13

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 780.1	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
ASPHALT PAVEMENT (4.5" THICK)	779.7																	
CONCRETE PAVEMENT (11" THICK)	778.8	1																
GRAY STONE FRAGMENTS WITH SAND, BASE MATERIAL (3" THICK)	778.6																	
MEDIUM DENSE, DARK BROWN, **NON-PLASTIC SANDY SILT**, TRACE STONE FRAGMENTS, FILL, MOIST	777.1	2	16 8 7	17	33	SS-1	4.5+	6	22	25	31	16	NP	NP	NP	23	A-4a (2)	
STIFF, GREENISH GRAY, **SILTY CLAY**, LITTLE SAND, TRACE STONE FRAGMENTS, FILL, MOIST	775.6	3 4	4 4 6	11	72	SS-2	3.50	1	2	14	37	46	40	19	21	20	A-6b (12)	
MEDIUM STIFF, BROWN, **SILT AND CLAY**, LITTLE SAND, TRACE STONE FRAGMENTS, FILL, MOIST	774.1	5 6	3 3 4	8	39	SS-3	2.50	-	-	-	-	-	-	-	-	20	A-6a (V)	
VERY LOOSE, BROWN, **NON-PLASTIC SILT**, TRACE SAND, WET	772.6	W 7	2 2 1	3	100	SS-4	--	-	-	-	-	-	-	-	-	34	A-4b (V)	
MEDIUM DENSE, LIGHT GRAY, **COARSE AND FINE SAND**, SOME FINES, WET	771.1	8	1 5 6	12	100	SS-5	--	-	-	-	-	-	-	-	-	26	A-3a (V)	
		EOB 9																

NOTES: GROUNDWATER WAS ENCOUNTERED AT 6.5' DURING DRILLING AND WAS DRY UPON COMPLETION OF DRILLING OPERATIONS.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

Boring Number	Sample Number	Depth (ft)	Water Content %	Liquid Limit %	Plastic Limit %	Plast. Index	Specific Gravity	Agg. %	Coarse Sand %	Fine Sand %	Silt %	Silt&Clay Comb. %	Clay %	Soil Description	Class. Symbol
B-026-0-13	SS-8	18.5	14											DARK BROWN SILT AND CLAY, LITTLE SAND, TRACE STONE FRAGMENTS (FILL)	A-6a (V)
B-026-0-13	SS-9	23.5	13											BROWN SILT AND CLAY, LITTLE SAND, TRACE STONE FRAGMENTS (FILL)	A-6a (V)
B-026-0-13	SS-10	28.5	19											BROWN, MOTTLED GRAY SILTY CLAY, LITTLE SAND, TRACE STONE FRAGMENTS	A-6b (V)
B-026-0-13	SS-11	33.5	20	39	23	16		0	0	0	37	100	63	GRAY SILTY CLAY	A-6b (10)
B-026-2-13	SS-1	1.0	21											BROWN SANDY SILT, SOME CLAY, TRACE STONE FRAGMENTS, TRACE ROOTS (FILL)	A-4a (V)
B-026-2-13	SS-2	3.5	23											DARK BROWN SANDY SILT, SOME CLAY, TRACE STONE FRAGMENTS (FILL)	A-4a (V)
B-026-2-13	ST-3	5.5	17											BROWN AND GRAY SANDY SILT, SOME CLAY, TRACE STONE FRAGMENTS (FILL)	A-4a (V)
B-026-2-13	ST-4	7.5	14	23	15	8		4	8	16	56	72	16	BROWN AND GRAY PLASTIC SILT, SOME SAND, LITTLE CLAY, TRACE STONE FRAGS	A-4b (7)
B-026-2-13	SS-5	10.0	15											DARK BROWN PLASTIC SILT, SOME CLAY, SOME SAND, TRACE STONE FRAGMENTS (FILL)	A-4b (V)
B-026-2-13	ST-6	12.0												NO RECOVERY	
B-026-2-13	ST-7	14.0	16											BROWN PLASTIC SILT, SOME CLAY, LITTLE SAND, TRACE STONE FRAGMENTS	A-4b (V)
B-026-2-13	SS-8	16.0	14											BROWN PLASTIC SILT, SOME CLAY, LITTLE SAND, TRACE STONE FRAGMENTS	A-4b (V)
B-027-0-13	SS-1	1.0	16											BROWN SANDY SILT, SOME CLAY, LITTLE STONE FRAGMENTS (FILL)	A-4a (V)
B-027-0-13	SS-2	3.5	19											BROWN SILT AND CLAY, LITTLE SAND, TRACE STONE FRAGMENTS (FILL)	A-6a (V)
B-027-0-13	SS-3	6.0	13											BROWN SANDY SILT, SOME CLAY, TRACE STONE FRAGMENTS (FILL)	A-4a (V)
B-027-0-13	SS-4	8.5	16											BROWN AND GRAY SANDY SILT, SOME CLAY, TRACE STONE FRAGMENTS (FILL)	A-4a (V)
B-027-0-13	SS-5	11.0	22	38	18	20		2	4	13	38	81	42	BROWN, MOTTLED GRAY SILTY CLAY, LITTLE SAND, TRACE STONE FRAGMENTS	A-6b (12)
B-027-0-13	SS-6	13.5	13											BROWN PLASTIC SILT, "AND" CLAY, TRACE STONE FRAGMENTS	A-4b (V)
B-027-0-13	SS-7	16.0	11											GRAY PLASTIC SILT, "AND" CLAY, TRACE SAND	A-4b (V)
B-027-0-13	SS-8	18.5	17	27	19	8		1	0	1	56	98	43	GRAY PLASTIC SILT, "AND" CLAY, TRACE SAND	A-4b (8)
B-027-0-13	SS-9	21.0	14											GRAY PLASTIC SILT, "AND" CLAY, TRACE SAND	A-4b (V)
B-027-2-13	SS-1	1.0	22	38	20	18		2	4	22	33	72	39	BROWN SILTY CLAY, SOME SAND, TRACE STONE FRAGMENTS	A-6b (11)
B-027-2-13	ST-2	3.5	16	31	19	12		6	8	19	37	67	30	BROWN SILT AND CLAY, SOME SAND, TRACE STONE FRAGMENTS (FILL)	A-6a (7)
B-027-2-13	SS-3	5.5	16											BROWN SANDY SILT, SOME CLAY, LITTLE STONE FRAGMENTS	A-4a (V)
B-027-2-13	SS-4	8.5	13											BROWN SANDY SILT, SOME CLAY, LITTLE STONE FRAGMENTS	A-4a (V)
B-027-2-13	SS-5	11.0	16											GRAY, NON-PLASTIC SILT, TRACE SAND	A-4b (V)
B-027-2-13	SS-6	13.5	7											GRAY, NON-PLASTIC SANDY SILT, SOME STONE FRAGMENTS	A-4a (V)
B-028-0-13	SS-1	1.5	12	28	16	12		2	6	18	25	74	49	DARK BROWN SILT AND CLAY, SOME SAND, TRACE STONE FRAGMENTS (FILL)	A-6a (9)
B-028-0-13	SS-2	3.0	19	38	22	16		1	4	18	41	77	36	DARK BROWN SILTY CLAY, SOME SAND, TRACE STONE FRAGMENTS (FILL)	A-6b (10)

Pro Geotech, Inc.

TR.-TRACE, BR.-BROWN, LI.-LITTLE,
S/F-STONE FRAGMENTS, SO.-SOME,
RB-ROADBASE, NP-NON-PLASTIC,
POSS-POSSIBLE, MOD-MODERATELY

Summary of Laboratory Results

Client: PARSONS BRINKERHOFF
Project: HAN-75-14.39 Roadway
Location: FINDLAY, HANCOCK COUNTY, OHIO
PID Number: 87005

Boring Number	Sample Number	Depth (ft)	Water Content %	Liquid Limit %	Plastic Limit %	Plast. Index	Specific Gravity	Agg. %	Coarse Sand %	Fine Sand %	Silt %	Silt&Clay Comb. %	Clay %	Soil Description	Class. Symbol
B-028-0-13	SS-3	4.5	22											BLACK SILTY CLAY, LITTLE SAND, TRACE STONE FRAGMENTS (FILL)	A-6b (V)
B-028-0-13	SS-4	6.0	20											GREENISH GRAY SILTY CLAY, LITTLE SAND, TRACE STONE FRAGMENTS	A-6b (V)
B-029-0-13	SS-1	2.0	19	35	23	12		6	12	22	39	60	21	DARK BROWN SILT AND CLAY, SOME SAND, TRACE STONE FRAGMENTS (FILL)	A-6a (6)
B-029-0-13	SS-2	3.5	21	NP	NP	NP		40	26	17	14	17	3	BROWN STONE FRAGMENTS WITH SAND, LITTLE FINES (FILL)	A-1-b (0)
B-029-0-13	SS-3	5.0	17											BROWN SILT AND CLAY, LITTLE SAND, TRACE STONE FRAGMENTS	A-6a (V)
B-029-0-13	SS-4	6.5	13											BROWN SANDY SILT, SOME CLAY, TRACE STONE FRAGMENTS	A-4a (V)
B-030-0-13	SS-1	1.0	12	38	15	23		14	10	17	33	59	26	BROWN SILTY CLAY, SOME SAND, LITTLE STONE FRAGMENTS (FILL)	A-6b (10)
B-030-0-13	SS-2	3.5	12	23	15	8		8	8	17	43	67	24	BROWN SANDY SILT, SOME CLAY, TRACE STONE FRAGMENTS	A-4a (6)
B-030-0-13	SS-3	6.0	12											BROWN SANDY SILT, SOME CLAY, TRACE STONE FRAGMENTS	A-4a (V)
B-030-0-13	SS-4	8.5	11											DARK GRAY SANDY SILT, SOME CLAY, TRACE STONE FRAGMENTS	A-4a (V)
B-031-0-13	SS-1	1.0	13	34	18	16		19	7	15	29	59	30	BROWN SILTY CLAY, SOME SAND, LITTLE STONE FRAGMENTS (FILL)	A-6b (7)
B-031-0-13	SS-2	3.5	17	29	17	12		6	10	16	39	68	29	BROWN SILT AND CLAY, SOME SAND, TRACE STONE FRAGS, W/ SANDY SILT LAYER	A-6a (7)
B-031-0-13	SS-3	6.0	10											BROWN AND GRAY SANDY SILT, SOME CLAY, TRACE STONE FRAGMENTS	A-4a (V)
B-031-0-13	SS-4	8.5	11											GRAY SANDY SILT, SOME CLAY, TRACE STONE FRAGS W/ INTERBED SAND LAYERS	A-4a (V)
B-032-0-13	SS-1	1.5	23	NP	NP	NP		6	22	25	31	47	16	DARK BROWN NON-PLASTIC SANDY SILT, TRACE STONE FRAGMENTS (FILL)	A-4a (2)
B-032-0-13	SS-2	3.0	20	40	19	21		1	2	14	37	83	46	GREENISH GRAY SILTY CLAY, LITTLE SAND, TRACE STONE FRAGMENTS (FILL)	A-6b (12)
B-032-0-13	SS-3	4.5	20											BROWN SILT AND CLAY, LITTLE SAND, TRACE STONE FRAGMENTS (FILL)	A-6a (V)
B-032-0-13	SS-4	6.0	34											BROWN, NON-PLASTIC SILT, TRACE SAND	A-4b (V)
B-032-0-13	SS-4	7.5	26											LIGHT GRAY COARSE AND FINE SAND, SOME FINES	A-3a (V)
B-033-0-13	SS-1	2.0	19	36	26	10		8	15	26	36	51	16	DARK BROWN SANDY SILT, LITTLE CLAY, TRACE STONE FRAGMENTS (FILL)	A-4a (3)
B-033-0-13	SS-2	3.5	17	34	17	17		1	3	14	42	82	40	BROWN SILTY CLAY, LITTLE SAND, TRACE STONE FRAGMENTS	A-6b (11)
B-033-0-13	SS-3	5.0	22											BROWN SILTY CLAY, LITTLE SAND, TRACE STONE FRAGMENTS	A-6b (V)
B-033-0-13	SS-4	6.5	26											BROWN COARSE AND FINE SAND, LITTLE FINES	A-3a (V)
B-034-0-13	SS-1	1.0	18	38	16	22		7	5	15	31	73	42	BROWN SILTY CLAY, LITTLE SAND, TRACE STONE FRAGMENTS (FILL)	A-6b (12)
B-034-0-13	SS-2	3.5	25	39	21	18		0	0	4	27	95	68	BROWN SILTY CLAY, TRACE SAND	A-6b (11)
B-034-0-13	SS-3	6.0	20											BROWN COARSE AND FINE SAND, TRACE FINES	A-3a (V)
B-034-0-13	SS-4	8.5	11											GRAY SANDY SILT, SOME CLAY, TRACE STONE FRAGMENTS	A-4a (V)
B-034-1-13	SS-1	1.0	24	NP	NP	NP		14	21	25	29	40	11	BROWN NON-PLASTIC SANDY SILT, LITTLE STONE FRAGMENTS (FILL)	A-4a (1)
B-034-1-13	SS-2	3.5	19	38	18	20		2	5	16	35	77	42	BROWN SILTY CLAY, SOME SAND, TRACE STONE FRAGMENTS	A-6b (12)

Pro Geotech, Inc.

TR.-TRACE, BR.-BROWN, LI.-LITTLE, S/F-STONE FRAGMENTS, SO.-SOME, RB-ROADBASE, NP-NON-PLASTIC, POSS-POSSIBLE, MOD-MODERATELY

Summary of Laboratory Results

Client: PARSONS BRINKERHOFF
Project: HAN-75-14.39 Roadway
Location: FINDLAY, HANCOCK COUNTY, OHIO
PID Number: 87005

SULFATE CONTENT TEST RESULTS

Determining Sulfate Content in Soils - Colorimetric Method
TxDOT TEX-145-E

Project:	HAN-75-14.96
PID:	87005
Proj. No.:	G13011G
Report Date:	10/28/2013
Technician:	S.P.

Sample	Station	Offset or Lanes	Dilution Ratio (1:20)	Dilution Ratio (1:10)	Readings			Average Reading	Sulfate Concentration (ppm)
					1	2	3		
B-001-0-13	745+51.4	44.5' RT	20	10	50.5	41.62	59.66	50.59	10119
B-002-0-13	749+60.3	32.4' RT	20	1	55.66	58.11	48.55	54.11	1082
B-003-0-13	754+55.7	29.0' LT	20	10	58.73	71.35	61.6	63.89	12779
B-004-0-13	758+05.1	97.2' RT	20	10	66.7	80.08	75.69	74.16	14831
B-005-0-13	761+87.8	37.1' RT	20	1	44.06	40.99	46.23	43.76	875
B-006-0-13	765+98.5	16.5' RT	20	1	89.44	94.18	100.8	94.81	1896
B-007-0-13	770+17.5	23.1' LT	20	10	22.07	29.70	14.69	22.15	4431
B-008-0-13	773+78.3	7.4' LT	20	1	27.19	40.53	24.86	30.86	617
B-009-0-13	779+15.0	12.3' RT	20	1	26.76	23.93	17.50	22.73	455
B-010-0-13	782+35.6	5.0' RT							
B-011-0-13	785+91.6	10.9' RT							
B-012-0-13	789+90.4	17.7' LT							
B-013-0-13	793+83.6	20.7' LT	20	1	38.66	35.19	52.90	42.25	845
B-014-0-13	797+77.1	34.9' RT							
B-016-0-13	804+79.5	29.6' LT							
B-021-0-13	811+13.0	4.8' RT	20	1	74.16	69.95	69.72	71.28	1426
B-025-1-13	815+36.6	207.6' LT							
B-026-0-13	820+01.2	36.1' LT	20	1	55.86	55.74	57.92	56.51	1130
B-027-0-13	825+00.6	43.7' RT	20	1	38.49	41.87	40.60	40.32	806
B-028-0-13	829+05.1	9.3' LT	20	1	49.03	50.47	52.61	50.70	1014
B-029-0-13	833+01.0	8.1' RT	20	1	23.57	21.32	20.05	21.65	433
B-030-0-13	836+21.1	44.7' LT	20	1	26.38	29.92	28.14	28.15	563
B-031-0-13	841+10.8	42.2' RT	20	1	20.31	21.69	28.61	23.54	471
B-032-0-13	845+27.6	9.4' LT	20	1	7.68	10.32	6.34	8.11	162
B-033-0-13	849+13.6	7.9' RT	20	1	8.13	13.51	12.18	11.27	225
B-034-0-13	853+21.1	8.9' RT	20	1	42.51	43.92	46.89	44.44	889
B-034-1-13	854+68.2	5.5' LT	20	1	28.15	31.00	29.19	29.45	589
B-035-0-13	857+24.7	43.2' RT	20	1	41.84	18.05	24.68	28.19	564
B-035-1-13	857+77.7	13.0' LT	20	1	30.53	31.63	34.08	32.08	642
B-035-2-13	858+77.1	6.6' RT	20	1	28.22	27.74	31.67	29.21	584
B-036-0-13	860+69.5	11.6' LT	20	1	52.47	33.79	38.29	41.52	830
B-036-1-13	865+00.0	8.1' LT	20	1	34.31	37.49	38.31	36.70	734
B-037-0-13	864+87.8	7.7' RT	20	1	6.14	7.53	6.50	6.72	134
B-037-1-13	865+13.1	2.2' RT	20	1	10.42	10.43	10.36	10.40	208
B-038-0-13	869+08.4	11.8' RT	20	1	22.34	24.94	28.47	25.25	505

Sample	Station	Offset or Lanes	Dilution Ratio (1:20)	Dilution Ratio (1:10)	Readings			Average Reading	Sulfate Concentration (ppm)
					1	2	3		
B-038-1-13	869+47.7	17.7' LT	20	1	39.45	34.72	45.54	39.90	798
B-039-0-13	873+16.7	75.4' RT	20	1	43.55	41.31	39.09	41.32	826
B-040-0-13	877+14.2	11.2' LT	20	1	10.47	13.87	19.30	14.55	291
B-041-0-13	881+15.3	7.6' RT	20	1	17.58	18.65	17.52	17.92	358
B-042-0-13	885+07.9	44.4' LT	20	1	44.58	44.62	47.28	45.49	910
B-043-0-13	889+24.1	53.8' RT	20	1	15.42	13.50	15.16	14.69	294
B-044-0-13	892+90.7	45.2' LT	20	1	32.09	24.36	25.29	27.25	545
B-049-0-13	902+96.5	34.8' LT	20	1	9.63	9.42	8.66	9.24	185
B-050-0-13	905+34.8	34.5' RT	20	1	16.76	26.97	14.09	19.27	385
B-053-0-13	918+00.6	34.4' LT	20	1	17.49	19.20	16.96	17.88	358
B-054-0-13	922+32.1	35.1' RT	20	1	39.76	25.30	28.20	31.09	622
B-056-0-13	930+01.2	25.4' RT	20	1	5.68	12.78	10.14	9.53	191
B-057-0-13	933+84.0	16.9' LT	20	1	25.82	33.92	34.46	31.40	628
B-061-0-13	949+86.7	18.6' LT	20	1	28.43	31.79	31.05	30.42	608
B-062-0-13	953+92.6	29.4' RT	20	1	5.07	3.42	5.73	4.74	95
B-063-0-13	957+94.6	18.8' RT	20	1	42.05	43.69	39.25	41.66	833
B-064-0-13	961+94.7	29.0' LT	20	1	17.29	12.83	18.71	16.28	326
B-066-0-13	97014.3	28.9' RT	20	1	25.67	25.91	26.20	25.93	519
B-067-0-13	974+15.7	17.5' RT	20	1	35.97	35.60	35.11	35.56	711
B-068-0-13	977+98.9	28.0' LT							
B-078-0-13	739+94.9	7.5' RT	20	1	56.69	50.15	49.87	52.24	1045
B-079-0-13	743+86.8	11.6' LT	20	10	22.01	26.39	26.21	24.87	4974
B-080-0-13	747+86.3	10.1' RT							
B-081-0-13	751+98.7	8.3' LT	20	1	15.97	12.79	17.29	15.35	307
B-082-0-13	756+10.5	41.3' RT	20	1	27.76	32.59	29.91	30.09	602
B-088-0-13	763+79.9	33.7' RT	20	1	98.11	101.00	106.80	101.97	2039

Subgrade Analysis

V. 12.00 12/30/11

Global Options		
320	R&R	Option
206	CS	Option
	LS	No
	LKD	Option
206	Depth	12

Design CBR **7**

Total Borings	95
PID	87005
Location	HAN-75-14.39, FINDLAY, OH

Classification Counts by Sample

R	1a	1b	3	3a	2-4	2-5	2-6	2-7	4a	4b	5	6a	6b	7-5	7-6	8a	8b
13	7	12	1	8	4	0	1	0	65	4	0	97	65	0	25	0	0
4%	2%	4%	0%	3%	1%		0%		22%	1%		32%	22%		8%		
4%	11%								85%								

	N_{60}	N_{60L}	LL	PL	PI	% Silt	Clay	P 200	M	M_{OPT}	GI
Average	20.4	12.2			14.6		30.4		16.5	13.5	7.02
Maximum	137	30	57	29	30	52	77	98	47	26	19
Minimum	4	4	18	12	2	7	3	6	5	6	0

Surface Class		
2-5	0	
4b	0	
5	0	
7-5	0	
7-6	6	6%
8a	0	
8b	0	
R	0	

% Borings	
N_{60L}<= 5	4%
<=10	38%
>=20	5%
M+	62%
R	14%

% Surface	
22%	
0%	22%

UC @ Surface
15.3
0
0

Rig	ER
A	67
B	70
C	71
D	80
E	82
F	85
G	60
H	86

#	B #	Boring Location	Boring Depth	To	Cut Fill	Subgrade Depth	To	n_2	n_3	N	Rig	N_{60}	N_{60L}	LL	PL	PI	% Silt	% Clay	P 200	M	M_{OPT}	Ohio DOT Class	GI	Comments	Problem w/ Class	Problem w/ MN	UC Class	UC MN	Analysis
1	B-001-0-13	745+51.30, 44.45' RT	1.5	3.0	-1.9	-0.4	1.1	10	11	21	A	23		26	14	12	33	19	52	12	14	6a	4						
		IR-75 BASELINE	3.0	4.5		1.1	2.6	13	16	29		32		18	14	4	34	21	55	7	10	4a	4						
			4.5	6.0		2.6	4.1	9	8	17		19								8	10	4a	5						
													19																
2	B-002-0-13	749+60.32, 32.43' RT	1.0	2.5	-1.9	-0.9	0.6	6	12	18	B	21		23	13	10	49	18	67	11	10	4a	6						
		IR-75 BASELINE	3.5	5.0		1.6	3.1	8	11	19		22		22	17	5	45	27	72	14	12	4a	7						
			6.0	7.5		4.1	5.6	6	6	12		14								16	10	4a	5	Excessive Moisture		MN		12	OK
													14																
3	B-003-0-13	754+55.67, 29.02' LT	1.0	2.5	-1.6	-0.6	0.9	8	14	22	B	26		26	17	9	41	28	69	10	12	4a	7						
		IR-75 BASELINE	3.5	5.0		1.9	3.4	9	13	22		26								12	10	4a	5						
			5.0	7.5		3.4	5.9	5	7	12		14		25	16	9	38	36	74	15	11	4a	8	Excessive Moisture		MN		12	OK
													14																
4	B-004-0-13	758+26.50, 74.17' LT	1.0	2.5	-1.6	-0.6	0.9	5	8	13	B	15		25	16	9	47	29	76	14	11	4a	8						
		IR-75 BASELINE	3.5	5.0		1.9	3.4	11	13	24		28		26	16	10	31	27	58	11	11	4a	5						
			6.0	7.5		4.4	5.9	6	6	12		14								16	14	6a	8						
													14																
5	B-005-0-13	761+87.79, 37.13' RT	1.5	1.9	-1.9	-0.4	0.0	50		50	A	56		NP	NP	NP		7	7	10	6	1a	0						
		IR-75 BASELINE	3.0	4.5		1.1	2.6	6	9	15		17		28	17	11	40	33	73	14	14	6a	8						
			4.5	6.0		2.6	4.1	5	6	11		12								16	14	6a	8						
													12																
6	B-006-0-13	765+98.51, 16.48' RT	1.0	2.5	-0.7	0.4	1.9	8	10	18	B	21		29	17	12	35	31	66	11	14	6a	7						
		IR-75 BASELINE	3.5	5.0		2.9	4.4	4	3	7		8		38	26	12	46	27	73	17	21	6a	8	Weak Soil		N		18	Unstable Soil
			6.0	7.0		5.4	6.4	5	50	55		64								24	14	6a		Excessive Moisture		M			
			7.0	7.3		6.4	6.7						8									R		Bedrock	BR		24		
7	B-007-0-13	770+17.46, 23.13' LT	1.5	3.0	-3.2	-1.7	-0.2	12	26	38	A	42		19	13	6	20	18	38	6	10	4a	1						
		IR-75 BASELINE	3.0	4.5		-0.2	1.3	19	12	31		35		25	17	8	11	30	41	11	12	4a	1						
			4.5	6.0		1.3	2.8	10	9	19		21								12	10	4a	5						
			6.0	7.5		2.8	4.3	8	9	17		19	19							17	10	4a	5	Excessive Moisture		M			Unstable Soil
8	B-008-0-13	773+78.27, 7.38' LT	1.0	2.5	-3.9	-2.9	-1.4	4	6	10	A	11		24	16	8	32	23	55	12	11	4a	4	Weak Soil		N		14	OK
		IR-75 BASELINE	2.5	4.0		-1.4	0.1	8	7	15		17		26	16	10	42	27	69	13	11	4a	7						
			4.0	5.5		0.1	1.6	13	9	22		25								8	10	4a	5						
			5.5	7.0		1.6	3.1	4	6	10		11	11							22	16	6b	10	Weak Soil		N		14	Unstable Soil
9	B-009-0-13	779+14.97, 12.31' RT	1.5	1.8	-1.2	0.3	0.6	50		50	A	56								9									
		IR-75 BASELINE	2.0	3.5		0.8	2.3	30	25	55		62		NP	NP	NP	45	4	49	15	11	4a	3						
			3.5	5.0		2.3	3.8	17	25	42		47		23	12	11	32	19	51	11	10	4a	4						
			5.0	6.5		3.8	5.3	6	7	13		15	15							18	14	6a	8						
10	B-010-0-13	782+35.61, 5.00' RT	0.5	2.0	-0.8	-0.3	1.2	15	20	35	C	41		25	16	9	31	18	49	11	11	4a	3						
		IR-75 BASELINE	2.0	3.5		1.2	2.7	8	14	22		26		20	12	8	21	17	38	8	10	4a	1						
			4.5	6.0		3.7	5.2	9	10	19		22								13	10	4a	5						
													22																
11	B-011-0-13	785+91.58, 10.87' RT	1.5	3.0	0.0	1.5	3.0	8	5	13	A	15		NP	NP	NP	12	13	25	20	6	1b	0	Excessive Moisture		M			OK
		IR-75 BASELINE	3.0	4.5		3.0	4.5	5	9	14		16		27	16	11	37	26	63	12	14	6a	6						
			4.5	6.0		4.5	6.0	6	11	17		19								17	14	6a	8						
													15																

	Boring					Subgrade		Standard Penetration						Physical Characteristics						Moisture		Class		Comments	Problem		Undercuts		Analysis
#	B #	Boring Location	Depth	To	Cut Fill	Depth	To	n_2	n_3	N	Rig	N_{60}	N_{60L}	LL	PL	PI	% Silt	% Clay	P 200	M	M_{OPT}	Ohio DOT	GI		w/ Class	w/ MN	UC Class	UC MN	
12	B-012-0-13	789+90.38, 17.65' LT	1.0	1.5	11.0	12.0	12.5	50		50	D	67								23	16	6b		Excessive Moisture		M			
		IR-75 BASELINE	1.5	1.8		12.5	12.8						30									R		Bedrock	BR		24		OK
13	B-013-0-13	793+83.61, 20.71' LT	1.0	2.5	11.0	12.0	13.5	32	30	62	B	73								6	6	1a							
		IR-75 BASELINE	3.5	5.0		14.5	16.0	7	6	13		15		37	29	8	38	34	72	13		4a							
			6.0	7.5		17.0	18.5	7	9	16		19	15	33	20	13	41	35	76	16	15	6a	9						
14	B-014-0-13	797+77.14, 34.85' RT	1.0	2.5	3.8	4.8	6.3	3	4	7	E	10		40	21	19	30	39	69	19	16	6b	10	Weak Soil		N		15	OK
		IR-75 BASELINE	3.5	5.0		7.3	8.8	3	3	6		8		38	19	19	37	37	74	21	16	6b		Weak Soil		N		18	OK
			6.0	7.5		9.8	11.3	3	4	7		10	8							21	14	6a		Weak Soil		N		15	OK
15	B-015-0-13	801+61.66, 32.92' RT	1.0	2.5	3.2	4.2	5.7	4	6	10	E	14		40	19	21	36	40	76	18	16	6b	12						
		IR-75 BASELINE	3.5	5.0		6.7	8.2	3	4	7		10		38	19	19	25	40	65	17	16	6b		Weak Soil		N		15	OK
			6.0	7.5		9.2	10.7	2	2	4		5	5							17	14	6a		Weak Soil		N		27	OK
16	B-016-0-13	804+79.49, 29.55' LT	1.0	2.5	21.9	22.9	24.4	3	5	8	D	11								28	14	6a		Weak Soil		N		14	OK
		IR-75 BASELINE	3.5	5.0		25.4	26.9	3	5	8		11		39	20	19	38	42	80	23	16	6b	12	Weak Soil		N		14	OK
			6.0	7.5		27.9	29.4	1	2	3		4	4							24	16	6b		Weak Soil		N		30	OK
17	B-021-0-13	811+13.01, 4.75' RT	1.5	3.0	9.0	10.5	12.0	6	7	13	B	15		33	21	12	25	19	44	14	16	6a							
		IR-75 BASELINE	3.5	5.0		12.5	14.0	5	7	12		14		29	16	13	38	33	71	14	14	6a							
			6.0	7.5		15.0	16.5	7	5	12		14	14							15	14	6a							
18	B-025-1-13	815+36.57, 207.59' LT	1.0	2.5	33.5	34.5	36.0	5	9	14	D	19				12				22	16	6b		Excessive Moisture		M			OK
		IR-75 BASELINE	3.5	5.0		37.0	38.5	6	7	13		17		25	17	8	37	35	72	14	12	4a							
			6.0	7.5		39.5	41.0	4	5	9		12	12							19	10	4b		Silt soil	4b	MN	36	12	OK
19	B-118-0-13	819+31.83, 45.04' RT	1.5	3.0	2.5	4.0	5.5	4	5	9	E	12								22	14	6a	8	Both		MN		12	OK
		IR-75 BASELINE	3.5	5.0		6.0	7.5	4	6	10		14								14	14	6a							
			6.0	7.5		8.5	10.0	6	7	13		18	12							19	11	4a		Excessive Moisture		M			OK
20	B-026-0-13	820+01.19, 36.05' LT	1.0	2.5	2.0	3.0	4.5	9	10	19	B	22		31	29	2	20	5	25	16	6	1b	0	Excessive Moisture		M			OK
		IR-75 BASELINE	3.5	5.0		5.5	7.0	6	8	14		16		28	18	10	39	32	71	13	13	4a							
			6.0	7.5		8.0	9.5	7	8	15		18	16							9	10	4a							
21	B-026-2-13	822+18.71, 92.20' RT	1.0	2.5	18.2	19.2	20.7	6	6	12	D	16								21	10	4a		Excessive Moisture		M			OK
		IR-75 BASELINE	3.5	5.0		21.7	23.2	2	3	5		7								23	10	4a		Weak Soil		N		21	OK
			5.5	7.5		23.7	25.7						7							17	10	4a		Excessive Moisture		M		12	OK
22	B-027-0-13	825+00.61, 43.72' RT	1.0	2.5	2.6	3.6	5.1	5	5	10	C	12								16	10	4a	5	Both		MN		12	OK
		IR-75 BASELINE	3.5	5.0		6.1	7.6	5	6	11		13								19	14	6a		Excessive Moisture		MN		12	OK
			6.0	7.5		8.6	10.1	12	8	20		24	12							13	10	4a							
23	B-027-2-13	826+44.16, 73.62' RT	1.0	2.5	6.5	7.5	9.0	3	4	7	D	9								22	18	7-6		Weak Soil		N		16	OK
		IR-75 BASELINE	3.5	5.5		10.0	12.0													16	18	7-6							
			5.5	7.0		12.0	13.5	4	5	9		12	9							16	10	4a		Both		MN		12	OK
24	B-028-0-13	829+05.07, 9.32' LT	1.5	3.0	-1.0	0.5	2.0	12	12	24	A	27		28	16	12	25	49	74	12	14	6a	9						
		IR-75 BASELINE	3.0	4.5		2.0	3.5	8	10	18		20		38	22	16	41	36	77	19	17	6b	10						
			4.5	6.0		3.5	5.0	8	9	17		19	19							22	16	6b	10	Excessive Moisture		M			OK
25	B-029-0-13	833+01.02, 8.13' RT	2.0	3.5	-1.0	1.0	2.5	8	20	28	C	33		35	23	12	39	21	60	19	18	6a	6						
		IR-75 BASELINE	3.5	5.0		2.5	4.0	6	4	10		12		NP	NP	NP	14	3	17	21	6	1b	0	Excessive Moisture		MN		---	Unstable Soil
			5.0	6.5		4.0	5.5	8	4	12		14	12							17	14	6a	8						
26	B-030-0-13	836+21.08, 44.67' LT	1.0	2.5	0.2	1.2	2.7	6	10	16	B	19		38	15	23	33	26	59	12	16	6b	10						
		IR-75 BASELINE	3.5	5.0		3.7	5.2	10	10	20		23		23	15	8	43	24	67	12	10	4a	6						
			6.0	7.5		6.2	7.7	10	20	30		35	19							12	10	4a							
27	B-031-0-13	841+10.79, 42.22' RT	1.0	2.5	0.0	1.0	2.5	6	7	13	C	15		34	18	16	29	30	59	13	16	6b	7						
		IR-75 BASELINE	3.5	5.0		3.5	5.0	3	5	8		9		29	17	12	39	29	68	17	14	6a	7	Weak Soil		N		16	OK
			5.0	7.5		5.0	7.5	14	19	33		39	9							10	10	4a	5						

	Boring					Subgrade		Standard Penetration						Physical Characteristics						Moisture		Class		Comments	Problem		Undercuts		Analysis
#	B #	Boring Location	Depth	To	Cut Fill	Depth	To	n_2	n_3	N	Rig	N_{60}	N_{60L}	LL	PL	PI	% Silt	% Clay	P 200	M	M_{OPT}	Ohio DOT	GI		w/ Class	w/ MN	UC Class	UC MN	
28	B-032-0-13	845+27.59, 9.42' LT	1.5	3.0	-1.9	-0.4	1.1	8	7	15	A	17		NP	NP	NP	31	16	47	23	11	4a	2	Excessive Moisture		M			Unstable Soil
		IR-75 BASELINE	3.0	4.5		1.1	2.6	4	6	10		11		40	19	21	37	46	83	20	16	6b	12	Weak Soil		N		14	Unstable Soil
			4.5	6.0		2.6	4.1	3	4	7		8	8							20	14	6a	8	Weak Soil		N		18	Unstable Soil
29	B-033-0-13	849+13.60, 7.93' RT	2.0	3.5	-2.6	-0.6	0.9	12	5	17	C	20		36	26	10	35	16	51	19		4a	3						
		IR-75 BASELINE	3.5	5.0		0.9	2.4	3	3	6		7		34	17	17	42	40	82	17	16	6b	11	Weak Soil		N		21	Unstable Soil
			5.0	6.5		2.4	3.9	4	3	7		8	7							22	16	6b	10	Weak Soil		N		18	Unstable Soil
30	B-034-0-13	853+21.08, 8.92' RT	1.0	2.5	-2.6	-1.6	-0.1	4	5	9	B	11		38	16	22	31	42	73	18	16	6b	12	Weak Soil		N		14	
		IR-75 BASELINE	3.5	5.0		0.9	2.4	5	6	11		13		39	21	18	27	68	95	25	16	6b	11	Weak Soil		MN		12	Unstable Soil
			6.0	7.5		3.4	4.9	2	4	6		7	7							20	8	3a	0	Weak Soil		N		---	OK
31	B-034-1-13	854+68.15, 5.46' LT	1.0	2.5	-3.7	-2.7	-1.2	6	11	0	D	23		NP	NP	NP	29	11	40	24	11	4a	1	Excessive Moisture		M			OK
		SR 12 RAMP B BASELINE	3.5	5.0		-0.2	1.3	5	5	10		13		38	18	20	34	43	77	19	16	6b	12						
			6.0	7.5		2.3	3.8	2	4	6		8	8							21	16	6b	10	Weak Soil		N		18	Unstable Soil
32	B-035-0-13	857+24.68, 43.20' RT	1.0	2.5	-1.0	0.0	1.5	4	5	9	B	11		27	14	13	40	31	71	18	14	6a	8	Weak Soil		N		14	Unstable Soil
		IR-75 BASELINE	3.5	5.0		2.5	4.0	5	6	11		13		29	17	12	42	25	67	20	14	6a	7	Excessive Moisture		MN		12	Unstable Soil
			6.0	7.5		5.0	6.5	2	4	6		7	7							13	8	3a	0	Weak Soil		N		---	
33	B-035-1-13	857+77.68, 13.02' LT	1.0	2.5	-1.8	-0.8	0.7	4	6	10	B	12		26	13	13	34	43	77	17	14	6a	9						
		SR 12 RAMP A BASELINE	3.5	5.0		1.7	3.2	6	5	11		13		NP	NP	NP	33	15	48	15	11	4a	3	Excessive Moisture		MN		12	Unstable Soil
			6.0	7.5		4.2	5.7	7	6	13		15	12							18	10	4b		Silt soil	4b	M	36		
34	B-035-2-13	858+77.12, 6.63' RT	1.5	3.0	-3.2	-1.7	-0.2	5	5	10	D	13		31	26	5	24	13	37	22	21	4a	0						
		SR 12 RAMP B BASELINE	3.5	5.0		0.3	1.8	4	6	10		13		36	19	17	32	41	73	19	16	6b	10						
			6.0	7.5		2.8	4.3	6	7	13		17	13							16	16	6b	10						
35	B-036-0-13	860+69.46, 11.58' LT	1.5	3.0	-1.9	-0.4	1.1	15	7	22	A	25		NP	NP	NP		6	6	9	6	1a	0						
		IR-75 BASELINE	3.0	4.5		1.1	2.6	4	4	8		9		NP	NP	NP	20	7	27	26	8	3a	0	Weak Soil		N		---	OK
			4.5	6.0		2.6	4.1	3	3	6		7	7							20	16	6b	10	Weak Soil		N		21	Unstable Soil
36	B-036-1-13	864+99.99, 8.13' LT	1.0	2.5	-0.2	0.8	2.3	6	6	12	B	14		32	17	15	20	20	40	13	14	6a	2						
		SR 12 RAMP C BASELINE	3.5	5.0		3.3	4.8	6	5	11		13		33	20	13	30	28	58	12	15	6a	6						
			6.0	7.5		5.8	7.3	6	7	13		15	13							17	14	6a							
37	B-037-0-13	864+87.84, 7.74' RT	2.0	3.5	-2.6	-0.6	0.9	5	5	10	F	14		37	20	17	10	19	29	16	10	2-6	1	Excessive Moisture		MN		12	Unstable Soil
		IR-75 BASELINE	3.5	5.0		0.9	2.4	5	6	11		16		27	17	10	34	34	68	15	12	4a	7						
			6.0	7.5		3.4	4.9	4	4	8		11	11							13	10	4a	5	Weak Soil		N		14	OK
38	B-037-1-13	865+13.05, 2.24' RT	1.0	2.5	-2.1	-1.1	0.4	7	5	12	D	16		32	18	14	21	19	40	15	14	6a	2						
		SR 12 RAMP D BASELINE	3.5	5.0		1.4	2.9	5	8	13		17		32	17	15	22	24	46	13	14	6a	4						
			6.0	7.5		3.9	5.4	4	6	10		13	13							14	14	6a	8						
39	B-038-0-13	869+08.39, 11.75' RT	1.0	2.5	-2.3	-1.3	0.3	9	6	15	B	18		33	18	15	27	25	52	14	14	6a	5						
		IR-75 BASELINE	3.5	5.0		1.3	2.8	2	4	6		7		32	17	15	23	24	47	16	14	6a	4	Weak Soil		N		21	Unstable Soil
			6.0	7.5		3.8	5.3	9	11	20		23	7							14	10	4a	5						
40	B-038-1-13	869+47.68, 17.67' LT	1.0	2.5	-1.0	0.0	1.5	16	7	23	D	31								9	14	6a	8						
		SR 12 RAMP D BASELINE	3.5	5.0		2.5	4.0	4	4	8		11		28	15	13	21	27	48	15	14	6a	4	Weak Soil		N		14	OK
			6.0	7.5		5.0	6.5	4	5	9		12	11	26	16	10	29	27	56	13	11	4a	4						
41	B-039-0-13	873+16.69, 57.40' RT	1.5	3.0	-0.5	1.0	2.5	13	16	29	D	39								7	6	1a	0						
		IR-75 BASELINE	3.5	5.0		3.0	4.5	4	5	9		12		36	18	18	24	31	55	20	16	6b	7	Both		MN		12	OK
			6.0	7.5		5.5	7.0	4	5	9		12	12	34	17	17	30	40	70	18	16	6b	10						
42	B-040-0-13	877+14.24, 11.21' LT	1.5	3.0	-1.9	-0.4	1.1	12	12	24	A	27								20	16	6b	10						
		IR-75 BASELINE	3.0	4.5		1.1	2.6	5	4	9		10		39	21	18	37	37	74	24	16	6b	11	Weak Soil		N		15	Unstable Soil
			4.5	6.0		2.6	4.1	3	5	8		9	9	42	16	26	31	50	81	22	18	7-6	15	Weak Soil		N		16	Unstable Soil
43	B-041-0-13	881+15.29, 7.63' RT	2.0	3.5	-1.9	0.1	1.6	8	7	15	F	21		30	17	13	26	37	63	15	14	6a	7						
		IR-75 BASELINE	3.5	5.0		1.6	3.1	6	5	11		16		29	19	10	31	24	55	16	14	4a	4						
			6.0	7.5		4.1	5.6	10	12	22		31	16							19	14	6a	8						

PROJECT: HAN-75-14.39	DRILLING FIRM / OPERATOR: DLZ / ALAN	DRILL RIG: CME 750X ATV	STATION / OFFSET: 829+05.1, 9.3' LT
TYPE: ROADWAY WIDENING	SAMPLING FIRM / LOGGER: PGI / F.BUSHER	HAMMER: CME AUTOMATIC	ALIGNMENT: IR-75 BASELINE
PID: 87005 BR ID:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 1/6/12	ELEVATION: 785.4 (MSL) EOB: 7.5 ft.
START: 8/6/13 END: 8/6/13	SAMPLING METHOD: SPT	ENERGY RATIO (%): 67.1	COORD: 41.032985630, 83.672908190

EXPLORATION ID B-028-0-13

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MATERIAL DESCRIPTION AND NOTES	ELEV. 785.4	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
ASPHALT PAVEMENT (4.5" THICK)	785.0																	
CONCRETE PAVEMENT (11' THICK)	784.1	1																
VERY STIFF, DARK BROWN, **SILT AND CLAY**, SOME SAND, TRACE STONE FRAGMENTS, FILL, DAMP	782.4	2	20 12 12	27	89	SS-1	4.5+	2	6	18	25	49	28	16	12	12	A-6a (9)	
VERY STIFF, DARK BROWN TO BLACK, **SILTY CLAY**, SOME TO LITTLE SAND, TRACE STONE FRAGMENTS, FILL, DAMP		3	5 8 10	20	100	SS-2	4.5+	1	4	18	41	36	38	22	16	19	A-6b (10)	
@4.5'; BLACK, LITTLE SAND	779.4	4 5	5 8 9	19	100	SS-3	4.00	-	-	-	-	-	-	-	-	22	A-6b (V)	
STIFF, GREENISH GRAY, **SILTY CLAY**, LITTLE SAND, TRACE STONE FRAGMENTS, DAMP	777.9	6 7	4 5 6	12	100	SS-4	2.50	-	-	-	-	-	-	-	-	20	A-6b (V)	
		EOB																

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING OR UPON COMPLETION OF DRILLING OPERATIONS.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: HAN-75-14.39	DRILLING FIRM / OPERATOR: DLZ / ALAN	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 833+01.0, 8.1' RT
TYPE: ROADWAY WIDENING	SAMPLING FIRM / LOGGER: PGI / K. JONES	HAMMER: CME AUTOMATIC	ALIGNMENT: IR-75 BASELINE
PID: 87005 BR ID:	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 1/6/12	ELEVATION: 783.5 (MSL) EOB: 8.0 ft.
START: 8/14/13 END: 8/14/13	SAMPLING METHOD: SPT	ENERGY RATIO (%): 70.6	COORD: 41.034071940, 83.672835110

EXPLORATION ID B-029-0-13

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
	783.5																	
ASPHALT PAVEMENT (5" THICK)	783.1																	
CONCRETE PAVEMENT (11" THICK)	782.2	1																
GRAY STONE FRAGMENTS WITH SAND, BASE MATERIAL (6" THICK)	781.4																	
HARD, DARK BROWN, **SILT AND CLAY**, SOME SAND, TRACE STONE FRAGMENTS, FILL, DAMP	780.0	2	5 8 20	33	100	SS-1	4.5+	6	12	22	39	21	35	23	12	19	A-6a (6)	
MEDIUM DENSE, BROWN, **STONE FRAGMENTS WITH SAND**, LITTLE FINES, FILL, MOIST TO WET	778.5	3	12 6 4	12	28	SS-2	--	40	26	17	14	3	NP	NP	NP	21	A-1-b (0)	
STIFF, BROWN, **SILT AND CLAY**, LITTLE SAND, TRACE STONE FRAGMENTS, DAMP	777.0	4	5 8 4	14	67	SS-3	4.5+	-	-	-	-	-	-	-	-	17	A-6a (V)	
VERY STIFF, BROWN, **SANDY SILT**, SOME CLAY, TRACE STONE FRAGMENTS, DAMP	775.5	5	5 7 10	20	67	SS-4	4.5+	-	-	-	-	-	-	-	-	13	A-4a (V)	
	EOB	6 7 8																

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING OR UPON COMPLETION OF DRILLING OPERATIONS.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: HAN-75-14.39	DRILLING FIRM / OPERATOR: DLZ / JOHN	DRILL RIG: CME 55 TRUCK	STATION / OFFSET: 836+21.1, 44.7' LT	EXPLORATION ID B-030-0-13
TYPE: ROADWAY WIDENING	SAMPLING FIRM / LOGGER: PGI / W. NAJJAR	HAMMER: CME AUTOMATIC	ALIGNMENT: IR-75 BASELINE	
PID: 87005 BR ID:	DRILLING METHOD: 2.25" HSA	CALIBRATION DATE: 6/13/13	ELEVATION: 780.7 (MSL) EOB: 10.0 ft.	PAGE 1 OF 1
START: 7/15/13 END: 7/15/13	SAMPLING METHOD: SPT	ENERGY RATIO (%): 70.2	COORD: 41.034951330, 83.673018540	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL
TOPSOIL (2" THICK)	780.5																	
VERY STIFF, BROWN, **SILTY CLAY**, SOME SAND, LITTLE STONE FRAGMENTS, FILL, DAMP	780.7	1	6 6 10	19	44	SS-1	4.5+	14	10	17	33	26	38	15	23	12	A-6b (10)	
		2																
	777.2	3																
VERY STIFF TO HARD, BROWN, **SANDY SILT**, SOME CLAY, TRACE STONE FRAGMENTS, DAMP		4	6 10 10	23	72	SS-2	4.5+	8	8	17	43	24	23	15	8	12	A-4a (6)	
		5																
@6.0'; HARD		6	4 10 20	35	89	SS-3	4.5+	-	-	-	-	-	-	-	-	12	A-4a (V)	
		7																
		8																
@8.5'; VERY STIFF, DARK GRAY		9	6 8 8	19	100	SS-4	4.5+	-	-	-	-	-	-	-	-	11	A-4a (V)	
	770.7	EOB 10																

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING OR UPON COMPLETION OF DRILLING OPERATIONS.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS