DESIGN MEMORANDUM

To: Nick Foster, P.E., District 03 Planning and Engineering

FROM: P. Paul Painter, Office of Geotechnical Engineering

DATE: April 2, 2020

SUBJECT: MED-3-15.05, PID 109232 Geotechnical Data Memo

Pursuant to your request, the Office of Geotechnical Engineering has completed a limited geotechnical exploration. This Geotechnical Data Memo provides the following items:

1. General project information and summary
2. Boring logs
3. Geotechnical Bulletin 1 (GB-1) Plan Subgrades spreadsheet

Additionally, a geotechnical basemap has been prepared in OpenRoads presenting the geotechnical boring locations.

HISTORICAL RECORDS

Historical borings were obtained from ODOT Transportation Information Mapping System (TIMS) for MED-3-14.95/17.20 completed in 1962 and MED-3-17.46 Supplement completed in 1962. Boring of these projects were for the relocation of the SR3 to its current alignment associated with the construction of IR71. The results of these explorations indicated that the majority of the area contains cohesive soils in the A-4, A-6 and A-7-6 ranges at subgrade elevations including frost susceptible silts. These borings are not shown within this exploration for clarity.

GEOLOGY

The project area is found within the glaciated Killbuck-Glaciated Pittsburgh Plateau. This region is characterized by ridges and flat uplands with low to moderate topographic relief. Thin glacial deposits are dissected by steep valleys. The soil survey for Medina County indicates that silt loam soils are present within the project area with the majority being Ellsworth Silt Loam, Rittman Silt Loam and Mahoning Silt Loam. The vicinity of the IR 71 and SR 3 interchange the soils are predominately from the Undorthents Loamy soils. The glacially deposited soils are predominately underlain by sandstone with minor shale bedrock from the Cuyahoga Formation of Mississippian Age. At the eastern terminus of the project, Pennsylvanian Aged Allegheny and Pottsville Groups Undivided is first present with anticipated bedrock consisting of either sandstone, shale, claystone, or coal.

RECONNAISSANCE

Field reconnaissance was completed by personnel from the Office of Geotechnical Engineering (OGE) on April 29, 2019. The topography within the project area is variable from low relief at the start or west side of the project, to moderate with variable embankment heights and cuts in the middle and end or east side. The existing pavement was noted as being in fair condition with cracking and several areas of pavement patching. Several areas of full depth repairs along the outer edge of the roadway were noted. In the vicinity of Old Weymouth Rd (CR32), the ditches and areas adjacent to the shallow embankments were noted as being wet. The cut slope further east, in the vicinity of the Heartland Community Church,

was noted as having minor sloughing within the apparent high silt content soils within the cut slopes. Poor drainage was also noted within the ditches. In the vicinity of the Remsen/Foskett/SR 3 interchange the area was noted as having a shallow embankment with wet foundation soils. An area immediately east of Frantz Rd was noted as having wet embankment foundation soils and an area of patching in the northbound lane. The ditches within the area of the IR 71/SR 3 interchange were noted as being wet. The off-ramp from IR71 northbound the SR 3 was noted as having soft wet foundation soils. The embankment supporting northbound SR3 immediately east of the ramp was noted as having significant erosion.

The adjacent land use was noted as being variable across the project. The western portion of the project area is a mix of park lane, rural residential, agricultural occasional commercial and wooded lot. Within the center of the project the area is predominately wooded and rural residential lots. The eastern portion of the project area is a mix of rural residential, agricultural, with occasional commercial and wooded lots.

SUBSURFACE EXPLORATION

Forty-two (42) borings, B-001-0-19 through B-038-0-18, B-027-1, B-029-1 and B-029-2, were completed between May 20 and 22 with a truck mounted CME 75 rotary drill, and on May 28 and 29, 2019 with a CME 55 truck mounted rotary drill. The borings were completed using 3 1/2 -inch solid flight augers to advance the borings through the soil. Disturbed samples were collected in accordance with the Standard Penetration Test (AASHTO T206) at continuous intervals for the full depth of the borings. The hammer system used was calibrated on June 1, 2017 with an average drill rod energy ratio (ER) of 85% for the CME 75 and on April 2, 2018 with an average drill rod energy ratio (ER) of 87% for the CME 55.

Additionally, three (3) wildcat dynamic cone penetration (DCP) soundings were completed in difficult access areas.

EXPLORATION FINDINGS

B-001-0 through B-038-0 and B-021-1 were completed along mainline of SR 3 within the existing pavement. The pavement encountered was a composite with an asphalt wearing surface, concrete base and aggregate base. The asphalt ranged in thickness between 3.0 and 7 inches, the concrete base ranged between 7.5 and 9 inches in thickness and the aggregate base ranged between 2 and 10 inches. Borings completed within the area of full depth patching typically encountered 12 inches of asphalt underlain by 6 inches of aggregate base. B-027-1, completed within the ramp from southbound IR 71 to SR 3, encountered 12 inches of asphalt underlain by 6 inches of aggregate base. B-029-1 and B-029-2, completed within the ramp from northbound IR 71 to SR 3, encountered 10 inches of concrete underlain by 8 inches of base and 4 inches of asphalt, 9 inches of concrete and 5 inches of aggregate base, respectively.

Beneath the pavement the borings predominately encountered cohesive soils consisting of Sandy Silt (A-4a), Silt and Clay (A-6a) which had highly variable consistency ranging from medium stiff to hard and were typically either damp or moist in condition. To minor extent cohesive soils consisting of Silt (A-4b),

Silty Clay (A-6b), and Clay (A-7-6) were encountered. Moderately organic soil was encountered in B-023-0. Unsuitable soils classified as Silt (A-4b) was encountered 3 feet below subgrade in B-016-0. Overall 65% of the subgrade soils were identified as unstable due to either strength or moisture contents. B-012 encountered auger refusal at a depth of 5.3 feet. Seepage was encountered during drilling in B-004, B-009, B-014 and water was noted at completion in B-011, B-016, B-021-1 and B-035. The remaining borings were noted as being dry.

DCP soundings were completed at the inlet and outlet of the agricultural culvert MED-3-15.384, which is scheduled for removal. The soundings revealed that the upper soils are very soft to soft becoming stiffer with depth.

An additional DCP sounding was completed within the area of the proposed embankment widening along the ramp from northbound SR 71 to SR 3. The sounding indicated very soft to medium stiff soil near surface to an approximate depth of 6 feet. Hand auger samples were taken in the upper 3.5 feet. Slightly organic Silt and Clay (A-6a) was encountered from the ground surface to 1.5 feet underlain by gray and brown mottled Clay (A-7-6) which was moderately organic. At 3.0 feet the hand auger encountered brown and gray mottled Silt (A-4b) which was slightly organic and wet. The hole continued to collapse with depth and was terminated at 3.5 feet.

Sulfate Content Testing per Supplement 1122 was completed on samples from each subgrade boring. Over 95 percent of the samples had sulfate contents less than 1,000 parts per million (PPM). One sample had a value greater than 3,000 PPM.

If you have any questions, please feel free to contact either myself at 614-351-2867, or Steve Taliaferro, at 614-351-2873.

Thank you,

PPP

pc: Reading File, File

Attachments: Boring Logs, GB-1 Spreadsheet

BORING LOGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 94+34, 5' RT.
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1026.4 (ft) EOB: 7.5 ft.
START: 5/20/19 END: 5/20/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.172336, -81.814980

EXPLORATION ID B-001-0-19

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 1026.4	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
ASPHALT (4.75"), CONCRETE (8.5") & BASE 10"	1024.5	1																	
STIFF TO VERY STIFF, GRAYISH BROWN AND GRAY, **SANDY SILT**, LITTLE CLAY, TRACE GRAVEL AND STONE FRAGMENTS, DAMP	1021.9	2 3 4	5 3 4	10	28	SS-1	1.00	-	-	-	-	-	-	-	-	8	A-4a (V)	-	
		5 6	7 8 6	20	50	SS-2	2.00	6	10	31	34	19	18	14	4	12	A-4a (4)	150	
MEDIUM STIFF, BROWN AND GRAY, **SILT AND CLAY**, "AND" SAND, LITTLE GRAVEL AND STONE FRAGMENTS, MOIST	1018.9	7	1 3 5	11	33	SS-3	0.50	18	9	28	22	23	27	15	12	19	A-6a (3)	130	
		EOB	4 5 6	16	72	SS-4	0.50	-	-	-	-	-	-	-	-	14	A-6a (V)	-	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 12.5 LB. BENTONITE CHIPS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / LEWIS	DRILL RIG: CME 55 TRUCK	STATION / OFFSET: 98+31, 6' LT.	EXPLORATION ID B-002-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 4/2/18	ELEVATION: 1029.4 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/29/19 END: 5/29/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 87	LAT / LONG: 41.173426, -81.815022	

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)	SO4 ppm	BACK FILL
ASPHALT (4"), CONCRETE (9") & BASE (5")	1029.4																		
	1027.9	1																	
STIFF, BROWN, **SANDY SILT**, SOME CLAY, TRACE GRAVEL, MOIST		2	1 2 3	7	50	SS-1	2.00	7	12	19	30	32	24	15	9	16	A-4a (5)	150	
@3.0'; LITTLE CLAY, DAMP		3 4	4 8 7	22	56	SS-2	1.50	9	28	26	22	15	21	15	6	11	A-4a (0)	160	
@4.5'; MOIST		5	4 5 6	16	72	SS-3	1.50	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
@6.0'; MEDIUM STIFF		6	3 2 2	6	89	SS-4A	0.50	-	-	-	-	-	-	-	-	19	A-4a (V)	-	
@7.0'; STIFF	1021.9	7 EOB				SS-4B	2.00	-	-	-	-	-	-	-	-	15	A-4a (V)	-	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 101+80, 7' RT.
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1026.9 (ft) EOB: 7.5 ft.
START: 5/20/19 END: 5/20/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.174383, -81.814973

EXPLORATION ID B-003-0-19

PAGE 1 OF 1

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)	SO4 ppm	HOLE SEALED
ASPHALT (4.75"), CONCRETE (7.5") & BASE (6")	1026.9																		
	1025.4																		
VERY STIFF TO HARD, BROWN, **SILT AND CLAY**, SOME GRAVEL AND STONE FRAGMENTS, LITTLE SAND, DAMP @3.0'; TRACE GRAVEL AND STONE FRAGMENTS, MOIST		1 2 3 4 5 6 7	2 5 13	26	78	SS-1	4.00	28	6	11	26	29	28	17	11	12	A-6a (4)	290	
			8 11 11	31	67	SS-2	4.00	7	5	10	37	41	30	17	13	16	A-6a (9)	170	
			5 9 11	28	89	SS-3	4.00	-	-	-	-	-	-	-	-	17	A-6a (V)	-	
	1019.4	EOB	6 10 12	31	100	SS-4	4.00	-	-	-	-	-	-	-	-	18	A-6a (V)	-	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 12.5 LB. BENTONITE CHIPS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 106+10, 7' RT.
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1020.5 (ft) EOB: 7.5 ft.
START: 5/20/19 END: 5/20/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.175554, -81.814827

EXPLORATION ID B-004-0-19

PAGE 1 OF 1

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)	SO4 ppm	HOLE SEALED
ASPHALT (7"), CONCRETE (9") & BASE (2")	1020.5																		
	1019.0																		
STIFF, GRAYISH BROWN, **SILT AND CLAY**, SOME SAND, LITTLE GRAVEL AND STONE FRAGMENTS, MOIST			1 1 6	10	33	SS-1	2.00	12	6	16	29	37	28	15	13	16	A-6a (7)	230	
@3.5'; VERY STIFF, LITTLE SAND		W 1016.5	3 7 7	20	56	SS-2	2.00	13	6	12	30	39	30	16	14	15	A-6a (8)	190	
			4 7 9	23	50	SS-3	2.50	-	-	-	-	-	-	-	-	16	A-6a (V)	-	
	1013.0	EOB	3 6 10	23	61	SS-4	4.00	-	-	-	-	-	-	-	-	17	A-6a (V)	-	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 12.5 LB. BENTONITE CHIPS

STANDARD ODOT LOG W/ SULFATE (8.5 X 11) - OH DOT GDT - 4/2/20 12:09 - X:\GINT\PROJECTS\2019 COMPLETE\600647.GPJ

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / LEWIS	DRILL RIG: CME 55 TRUCK	STATION / OFFSET: 110+12, 6' LT.	EXPLORATION ID B-005-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 4/2/18	ELEVATION: 1015.4 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/29/19 END: 5/29/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 87	LAT / LONG: 41.176614, -81.814442	

MATERIAL DESCRIPTION AND NOTES	ELEV. 1015.4	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
ASPHALT (4.5"), CONCRETE (9") & BASE (5.5")	1013.8	1																	
STIFF, BROWN AND GRAY, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL, MOIST		2	2 2 2	6	22	SS-1	1.50	-	-	-	-	-	-	-	-	17	A-6a (V)	-	
@3.0'; VERY STIFF	1010.9	3 4	1 3 5	12	50	SS-2	2.50	6	9	15	31	39	31	17	14	19	A-6a (9)	<100	
VERY STIFF, DARK GRAY, **SANDY SILT**, LITTLE CLAY, LITTLE GRAVEL, DAMP		5	9 7 8	22	44	SS-3	2.50	13	13	22	32	20	26	19	7	16	A-4a (3)	110	
@6.0'; GRAY AND BROWN MOTTLED, "AND" CLAY, TRACE GRAVEL, MOIST	1007.9	6 7 EOB	3 6 8	20	67	SS-4	2.50	6	7	12	38	37	27	17	10	16	A-4a (8)	-	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

WILDCAT DYNAMIC CONE LOG

The Ohio Department of Transportation
Office of Geotechnical Engineering
1600 West Broad Street, Columbus, Ohio 43223

PROJECT NUMBER: 109232
DATE STARTED: 06-03-2019
DATE COMPLETED: 06-03-2019

HOLE #: D-005-1-19
CREW: P. Painter & A. Chudzik
PROJECT: MED-3-15.05
LAT/LONG: 41.176894, -81.814073
LOCATION: Medina County Ohio

SURFACE ELEVATION: 1002.1
WATER ON COMPLETION: None Observed
HAMMER WEIGHT: 35 lbs.
CONE AREA: 10 sq. cm

DEPTH	BLOWS PER 10 cm	RESISTANCE Kg/cm²	GRAPH OF CONE RESISTANCE 0 50 100 150	N'	TESTED CONSISTENCY NON-COHESIVE	TESTED CONSISTENCY COHESIVE
-	0	0.0		0	VERY LOOSE	VERY SOFT
-	1	4.4	•	1	VERY LOOSE	VERY SOFT
- 1 ft	1	4.4	•	1	VERY LOOSE	VERY SOFT
-	5	22.2	••••••	6	LOOSE	MEDIUM STIFF
-	7	31.1	•••••••••	8	LOOSE	MEDIUM STIFF
- 2 ft	7	31.1	•••••••••	8	LOOSE	MEDIUM STIFF
-	11	48.8	••••••••••••••	13	MEDIUM DENSE	STIFF
-	12	53.3	••••••••••••••••	15	MEDIUM DENSE	STIFF
- 3 ft	13	57.7	•••••••••••••••••	16	MEDIUM DENSE	VERY STIFF
- 1 m	13	57.7	•••••••••••••••••	16	MEDIUM DENSE	VERY STIFF
-						
- 4 ft						
-						
-						
- 5 ft						
-						
-						
- 6 ft						
-						
- 2 m						
- 7 ft						
-						
-						
- 8 ft						
-						
-						
- 9 ft						
-						
-						
- 3 m 10 ft						
-						
-						
-						
- 11 ft						
-						
-						
- 12 ft						
-						
-						
- 4 m 13 ft						

WILDCAT DYNAMIC CONE LOG

The Ohio Department of Transportation
Office of Geotechnical Engineering
1600 West Broad Street, Columbus, Ohio 43223

PROJECT NUMBER: 109232
DATE STARTED: 06-03-2019
DATE COMPLETED: 06-03-2019

HOLE #: D-005-2-19
CREW: P. Painter & A. Chudzik
PROJECT: MED-3-15.05
LAT/LONG: 41.175993, -81.814316
LOCATION: Medina County Ohio

SURFACE ELEVATION: 1006.4
WATER ON COMPLETION: None Observed
HAMMER WEIGHT: 35 lbs.
CONE AREA: 10 sq. cm

DEPTH	BLOWS PER 10 cm	RESISTANCE Kg/cm²	GRAPH OF CONE RESISTANCE 0 50 100 150	N'	TESTED CONSISTENCY NON-COHESIVE	TESTED CONSISTENCY COHESIVE
-	1	4.4	•	1	VERY LOOSE	VERY SOFT
-	1	4.4	•	1	VERY LOOSE	VERY SOFT
- 1 ft	3	13.3	•••	3	VERY LOOSE	SOFT
-	5	22.2	••••••	6	LOOSE	MEDIUM STIFF
-	6	26.6	•••••••	7	LOOSE	MEDIUM STIFF
- 2 ft	7	31.1	•••••••••	8	LOOSE	MEDIUM STIFF
-	4	17.8	•••••	5	LOOSE	MEDIUM STIFF
-	4	17.8	•••••	5	LOOSE	MEDIUM STIFF
- 3 ft	5	22.2	••••••	6	LOOSE	MEDIUM STIFF
- 1 m	5	22.2	••••••	6	LOOSE	MEDIUM STIFF
-	3	11.6	•••	3	VERY LOOSE	SOFT
- 4 ft	6	23.2	••••••	6	LOOSE	MEDIUM STIFF
-	15	57.9	••••••••••••••••	16	MEDIUM DENSE	VERY STIFF
-	22	84.9	••••••••••••••••••••••••	24	MEDIUM DENSE	VERY STIFF
- 5 ft						
-						
-						
- 6 ft						
-						
- 2 m						
- 7 ft						
-						
-						
- 8 ft						
-						
-						
- 9 ft						
-						
-						
- 3 m 10 ft						
-						
-						
-						
- 11 ft						
-						
-						
- 12 ft						
-						
-						
- 4 m 13 ft						

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / LEWIS	DRILL RIG: CME 55 TRUCK	STATION / OFFSET: 114+07, 8' LT.	EXPLORATION ID B-006-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 4/2/18	ELEVATION: 1009.6 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/28/19 END: 5/28/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 87	LAT / LONG: 41.177566, -81.813748	

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)	SO4 ppm	BACK FILL
ASPHALT (4"), CONCRETE (9.5") & BASE (5.5")	1009.6																		
VERY STIFF TO HARD, BROWN AND GRAY MOTTLED, **SILT AND CLAY**, LITTLE SAND, TRACE GRAVEL, DAMP TO MOIST	1008.0	1	1 4 8	17	56	SS-1	4.00	5	6	12	36	41	28	17	11	17	A-6a (8)	<100	
		2	2 10 13	33	78	SS-2	4.00	7	5	12	38	38	29	17	12	13	A-6a (9)	280	
@4.5'; GRAYISH BROWN		3	6 8 12	29	78	SS-3	4.00	-	-	-	-	-	-	-	-	16	A-6a (V)	-	
@6.0'; GRAY		4	7 11 18	42	100	SS-4	4.50	-	-	-	-	-	-	-	-	15	A-6a (V)	-	
	1002.1	5																	
		EOB 6																	
		7																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 118+11, 9' RT.	EXPLORATION ID B-007-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1002.1 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/20/19 END: 5/20/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.178383, -81.812755	

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)	SO4 ppm	BACK FILL
ASPHALT (4"), CONCRETE (9") & BASE (9")	1002.1																		
	1000.3					SS-1A	-	-	-	-	-	-	-	-	-	5		-	
VERY STIFF, GRAY, **SANDY SILT**, "AND"CLAY, TRACE GRAVEL AND STONE FRAGMENTS, MOIST		1	1 2 4	9	89	SS-1B	2.50	5	5	11	38	41	25	15	10	16	A-4a (8)	510	
@3.0'; STIFF		2 3 4	2 4 5	13	72	SS-2	2.00	2	7	12	40	39	24	15	9	16	A-4a (8)	420	
		5	3 5 5	14	100	SS-3	2.00	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
@6.0'; VERY STIFF	994.6	6 EOB 7	4 5 6	16	100	SS-4	2.00	-	-	-	-	-	-	-	-	16	A-4a (V)	-	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 12.5 LB. BENTONITE CHIPS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / LEWIS	DRILL RIG: CME 55 TRUCK	STATION / OFFSET: 122+10, 10' LT.	EXPLORATION ID B-008-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 4/2/18	ELEVATION: 995.9 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/28/19 END: 5/28/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 87	LAT / LONG: 41.179210, -81.811803	

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)	SO4 ppm	BACK FILL
ASPHALT (3.5"), CONCRETE (8.5") & BASE (6")	995.9																		
	994.4	1																	
VERY STIFF, GRAYISH BROWN, **SILT AND CLAY**, LITTLE SAND, TRACE GRAVEL, MOIST		2	1 3 8	16	39	SS-1	3.00	4	3	9	45	39	29	17	12	19	A-6a (9)	540	
@3.0'; STIFF, GRAY		3	2 4 7	16	28	SS-2	1.50	8	3	10	47	32	30	19	11	20	A-6a (8)	190	
@4.5'; BROWN AND GRAY MOTTLED		4 5	2 6 8	20	50	SS-3	1.50	5	5	11	42	37	30	18	12	16	A-6a (9)	140	
@6.0'; HARD		6	5 11 11	32	67	SS-4	4.00	-	-	-	-	-	-	-	-	15	A-6a (V)	-	
	988.4	7 EOB																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 126+07, 9' RT.	EXPLORATION ID B-009-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 992.0 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/20/19 END: 5/20/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.179963, -81.810758	

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)	SO4 ppm	BACK FILL
ASPHALT (6"), CONCRETE (7") & BASE (5")	992.0																		
	990.5																		
VERY STIFF, BROWN, **SANDY SILT**, "AND" CLAY, TRACE GRAVEL AND STONE FRAGMENTS, DAMP	989.0		2 2 9	16	50	SS-1	2.50	2	5	11	44	38	26	16	10	15	A-4a (8)	190	
VERY STIFF, BROWN, **SILT AND CLAY**, LITTLE SAND, TRACE GRAVEL AND STONE FRAGMENTS, DAMP TO MOIST			3 7 9	23	78	SS-2	3.50	1	5	10	41	43	30	17	13	17	A-6a (9)	170	
			3 7 12	27	67	SS-3	3.50	-	-	-	-	-	-	-	-	15	A-6a (V)	-	
		W 985.5	5 6 9	21	56	SS-4	3.50	-	-	-	-	-	-	-	-	20	A-6a (V)	-	
	984.5	EOB																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 12.5 LB. BENTONITE CHIPS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / LEWIS	DRILL RIG: CME 55 TRUCK	STATION / OFFSET: 130+06, 8' LT.	EXPLORATION ID B-010-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 4/2/18	ELEVATION: 991.7 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/28/19 END: 5/28/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 87	LAT / LONG: 41.180789, -81.809803	

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)	SO4 ppm	BACK FILL
ASPHALT (4"), CONCRETE (9") & BASE (5")	991.7																		
	990.2																		
VERY STIFF, GRAYISH BROWN, **SILT AND CLAY**, LITTLE SAND, TRACE GRAVEL AND STONE FRAGMENTS, MOIST	988.7		1 4 11	22	28	SS-1	3.00	7	6	11	35	41	27	15	12	15	A-6a (9)	330	
VERY STIFF, BROWN MOTTLED WITH GRAY, **SANDY SILT**, "AND" CLAY, TRACE GRAVEL AND STONE FRAGMENTS, DAMP			2 11 12	33	50	SS-2	2.50	6	6	11	34	43	28	18	10	14	A-4a (8)	260	
			2 4 7	16	44	SS-3	2.00	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
			3 6 7	19	44	SS-4	2.00	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
	984.2	EOB																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 134+04, 9' RT.	EXPLORATION ID B-011-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 993.2 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/20/19 END: 5/20/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.181548, -81.808762	

MATERIAL DESCRIPTION AND NOTES	ELEV. 993.2	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
ASPHALT (12") & BASE (6")	991.7	1																	
STIFF, GRAYISH BROWN, **SILT AND CLAY**, LITTLE SAND, TRACE GRAVEL AND STONE FRAGMENTS, MOIST		2	3 3 3	9	44	SS-1	1.00	6	6	12	35	41	25	14	11	15	A-6a (8)	<100	
@3.0'; VERY STIFF, LITTLE STONE FRAGMENTS AND ASPHALT FRAGMENTS		3	2 4 8	17	56	SS-2	3.00	17	6	12	30	35	28	15	13	15	A-6a (7)	1200	
▽ 988.7		4																	
@4.5'; BROWN AND GRAY MOTTLED		5	4 4 5	13	56	SS-3	2.50	-	-	-	-	-	-	-	-	15	A-6a (V)	-	
		6																	
	985.7	7 EOB	4 6 7	18	67	SS-4	2.50	-	-	-	-	-	-	-	-	13	A-6a (V)	-	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. WATER APPEARS TO BE FROM AGGREGATE BASE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 12.5 LB. BENTONITE CHIPS

STANDARD ODOT LOG W/ SULFATE (8.5 X 11) - OH DOT.GDT - 4/2/20 12:09 - X:\GINT\PROJECTS\2019 COMPLETE\600647.GPJ

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / LEWIS	DRILL RIG: CME 55 TRUCK	STATION / OFFSET: 137+99, 8' LT.	EXPLORATION ID B-012-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 4/2/18	ELEVATION: 994.8 (ft) EOB: 5.3 ft.	PAGE 1 OF 1
START: 5/28/19 END: 5/28/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 87	LAT / LONG: 41.182365, -81.807815	

MATERIAL DESCRIPTION AND NOTES	ELEV. 994.8	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
ASPHALT (4.5"), CONCRETE (8.5") & BASE (9")	993.0					SS-1A	-	-	-	-	-	-	-	-	-	5		-	
VERY STIFF, GRAY AND BROWN, **SANDY SILT**, SOME CLAY, LITTLE GRAVEL AND STONE FRAGMENTS, DAMP	991.8		1 3 3	9	22	SS-1B	2.50	16	6	9	34	35	25	15	10	6	A-4a (7)	3500	
VERY STIFF, GRAY AND BROWN, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL AND STONE FRAGMENTS, DAMP TO MOIST @4.5' - 5.3'; AUGER REFUSAL ON CONCRETE	989.5	EOB	3 4 9	19	56	SS-2	2.00	7	8	13	32	40	29	17	12	17	A-6a (8)	180	
			20 50/3"	-	44	SS-3	4.50	-	-	-	-	-	-	-	-	9	A-6a (V)	-	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 141+79, 8' RT.	EXPLORATION ID B-013-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 996.4 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/20/19 END: 5/20/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.183090, -81.806823	

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)	SO4 ppm	BACK FILL
ASPHALT (4.5"), CONCRETE (9") & BASE (4.5")	996.4																		
	994.9	1																	
STIFF, GRAYISH BROWN, **SANDY SILT**, SOME CLAY, TRACE GRAVEL AND STONE FRAGMENTS, DAMP TO MOIST		2	3 1 2	4	17	SS-1	1.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
@3.0'; VERY STIFF, GRAY		3	1 3 6	13	28	SS-2	3.50	9	6	15	41	29	22	14	8	12	A-4a (7)	370	
@4.5'; STIFF		4	5 4 4	11	33	SS-3	1.00	7	7	15	45	26	20	14	6	13	A-4a (7)	380	
@6.0'; MEDIUM STIFF		5	2 3 3	9	83	SS-4	0.50	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
	988.9	6																	
	EOB	7																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / LEWIS	DRILL RIG: CME 55 TRUCK	STATION / OFFSET: 145+76, 8' LT.	EXPLORATION ID B-014-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 4/2/18	ELEVATION: 997.9 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/28/19 END: 5/28/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 87	LAT / LONG: 41.183907, -81.805869	

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)	SO4 ppm	BACK FILL
ASPHALT (5"), CONCRETE (8") & BASE (5")	997.9																		
	996.4	1																	
VERY STIFF, BROWN, **SANDY SILT**, "AND" CLAY, TRACE GRAVEL AND STONE FRAGMENTS, DAMP		2	1 5 11	23	33	SS-1	3.50	4	3	5	46	42	28	19	9	17	A-4a (8)	190	
@3.0'; HARD, BROWN AND GRAY MOTTLED, SOME CLAY, LITTLE GRAVEL AND STONE FRAGMENTS		3	5 14 15	42	44	SS-2	4.00	12	6	11	40	31	25	18	7	14	A-4a (7)	210	
@4.5'; VERY STIFF		4																	
		5	5 6 10	23	56	SS-3	4.00	-	-	-	-	-	-	-	-	17	A-4a (V)	-	
W 991.9		6																	
		7	8 8 9	25	56	SS-4	4.00	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
	990.4	EOB																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATE (8.5 X 11) - OH DOT GDT - 4/2/20 12:09 - X:\GINT\PROJECTS\2019 COMPLETE\600647.GPJ

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 149+77, 8' RT.	EXPLORATION ID B-015-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1000.1 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/20/19 END: 5/20/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.184675, -81.804822	

MATERIAL DESCRIPTION AND NOTES	ELEV. 1000.1	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
ASPHALT (12") & BASE (6")	998.6	1																	
STIFF, BROWN AND GRAY, **SANDY SILT**, "AND" CLAY, TRACE GRAVEL AND STONE FRAGMENTS, DAMP		2	3 3 7	14	28	SS-1	2.00	3	2	6	49	40	25	15	10	14	A-4a (8)	<100	
@3.0'; VERY STIFF, SOME CLAY		3	6 10 14	34	72	SS-2	3.50	7	5	13	41	34	24	14	10	12	A-4a (8)	510	
		4																	
		5	5 8 11	27	78	SS-3	3.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
		6																	
	992.6	7	6 9 12	30	78	SS-4	2.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
		EOB																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / LEWIS	DRILL RIG: CME 55 TRUCK	STATION / OFFSET: 153+72, 8' LT.	EXPLORATION ID B-016-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 4/2/18	ELEVATION: 1004.6 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/28/19 END: 5/28/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 87	LAT / LONG: 41.185490, -81.803877	

MATERIAL DESCRIPTION AND NOTES	ELEV. 1004.6	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
ASPHALT (4"), CONCRETE (8") & BASE (6")	1003.1	1																	
VERY STIFF, BROWN AND GRAY MOTTLED, **SANDY SILT**, SOME CLAY, TRACE GRAVEL AND STONE FRAGMENTS, DAMP	1001.6	2, 3	1 4 6	15	33	SS-1	2.50	8	12	19	36	25	23	16	7	15	A-4a (5)	180	
HARD, BROWN AND GRAY MOTTLED, **SILT**, SOME CLAY, LITTLE SAND, TRACE GRAVEL AND STONE FRAGMENTS, DAMP	1000.1	4	3 12 10	32	44	SS-2	4.00	6	3	8	50	33	23	16	7	15	A-4b (8)	180	
VERY STIFF, BROWN AND GRAY MOTTLED, **SANDY SILT**, SOME CLAY, TRACE GRAVEL AND STONE FRAGMENTS, DAMP		5	4 9 12	30	67	SS-3	4.00	9	9	13	43	26	23	17	6	15	A-4a (7)	-	
@6.0'; GRAY	997.1	∇ 998.1 6, 7, EOB	4 6 9	22	39	SS-4	4.00	-	-	-	-	-	-	-	-	14	A-4a (V)	-	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. WATER APPEARS TO BE FROM AGGREGATE BASE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 157+70, 7' RT.	EXPLORATION ID B-017-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1010.6 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/20/19 END: 5/20/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.186251, -81.802839	

MATERIAL DESCRIPTION AND NOTES	ELEV. 1010.6	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
ASPHALT (4"), CONCRETE (9") & BASE (5")	1009.1	1																	
STIFF, BROWN, **SILT AND CLAY**, LITTLE SAND, LITTLE GRAVEL AND STONE FRAGMENTS, MOIST		2	1 2 2	6	28	SS-1	1.50	14	5	12	32	37	25	13	12	15	A-6a (8)	260	
@3.0'; VERY STIFF	1006.1	3	1 3 3	9	44	SS-2	3.00	10	5	13	33	39	26	15	11	16	A-6a (8)	210	
VERY STIFF, GRAYISH BROWN, **SANDY SILT**, LITTLE CLAY, LITTLE STONE FRAGMENTS, DAMP		4	4 12 15	38	100	SS-3A	3.00	17	3	16	44	20	21	16	5	15	A-4a (6)	-	
@5.5'; BROWN AND GRAY, SOME STONE FRAGMENTS WITH ASPHALT FRAGMENTS		5				SS-3B	3.00	-	-	-	-	-	-	-	-	11	A-4a (V)	-	
	1003.1	6	5 9 15	34	100	SS-4	3.00	25	9	16	33	17	24	16	8	14	A-4a (3)	-	
		EOB 7																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 161+93, 10' LT.	EXPLORATION ID B-018-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1016.6 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/22/19 END: 5/22/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.187125, -81.801823	

MATERIAL DESCRIPTION AND NOTES	ELEV. 1016.6	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
ASPHALT (3.5"), CONCRETE (9") & BASE (5.5")	1015.1	1																	
VERY STIFF, BROWN AND GRAY MOTTLED, **SANDY SILT**, SOME STONE FRAGMENTS, SOME CLAY, MOIST	1013.6	2 3	1 6 7	18	28	SS-1	3.50	23	7	15	34	21	22	13	9	13	A-4a (4)	160	
VERY STIFF, BROWN AND GRAY MOTTLED, **SILT AND CLAY**, LITTLE SAND, TRACE STONE FRAGMENTS, MOIST @4.5'; STIFF		4 5	2 5 7	17	83	SS-2	2.00	8	5	12	42	33	28	16	12	17	A-6a (9)	180	
		6	4 5 5	14	67	SS-3	2.00	-	-	-	-	-	-	-	-	17	A-6a (V)	-	
	1009.1	7 EOB	2 3 3	9	78	SS-4	1.50	5	4	9	43	39	30	17	13	21	A-6a (9)	-	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 165+67, 7' RT.	EXPLORATION ID B-019-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1022.3 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/20/19 END: 5/20/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.187823, -81.800826	

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)	SO4 ppm	BACK FILL
ASPHALT (4"), CONCRETE (9") & BASE (5")	1022.3																		
	1020.8	1																	
STIFF, GRAY WITH BROWN, **SILT AND CLAY**, LITTLE SAND, LITTLE GRAVEL AND STONE FRAGMENTS, MOIST	1019.3	2	2 3 2	7	39	SS-1	1.50	15	5	12	39	29	29	17	12	18	A-6a (7)	240	
VERY STIFF, BROWN AND GRAY MOTTLED, **SILTY CLAY**, LITTLE SAND, TRACE GRAVEL, MOIST		3	1 2 3	7	56	SS-2	2.50	1	2	8	48	41	40	18	22	21	A-6b (13)	160	
		4																	
		5	3 6 6	17	83	SS-3	2.50	-	-	-	-	-	-	-	-	20	A-6b (V)	-	
		6																	
	1014.8	7	3 5 7	17	89	SS-4	2.00	-	-	-	-	-	-	-	-	20	A-6b (V)	-	
		EOB																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 170+40, 14' LT.	EXPLORATION ID B-020-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1029.2 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/22/19 END: 5/22/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.188764, -81.799638	

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)	SO4 ppm	BACK FILL
ASPHALT (3"), CONCRETE (6") & BASE (9")	1029.2	1																	
	1027.7																		
VERY STIFF, BROWN, **SANDY SILT**, SOME CLAY, LITTLE STONE FRAGMENTS, DAMP		2	2 3 7	14	39	SS-1	2.50	11	8	13	39	29	24	15	9	14	A-4a (7)	220	
		3																	
		4	5 6 8	20	72	SS-2	2.50	13	6	13	41	27	24	15	9	14	A-4a (7)	160	
@4.5'; BROWN AND GRAY		5	6 10 11	30	100	SS-3	3.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
		6																	
	1021.7	7 EOB	4 7 11	26	28	SS-4	2.00	-	-	-	-	-	-	-	-	13	A-4a (V)	-	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 12.5 LB. BENTONITE CHIPS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 174+27, 8' RT.	EXPLORATION ID B-021-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1035.0 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/21/19 END: 5/21/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.189432, -81.798540	

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)	SO4 ppm	BACK FILL
ASPHALT (3.75"), CONCRETE (8.25") & BASE (6")	1035.0																		
MEDIUM DENSE, BROWN, **GRAVEL**, TRACE SAND, BOTTOM OF SPOON BLOCKED BY A LARGE GRAVEL, DAMP	1033.5	1	2 4 4	11	11	SS-1	-	-	-	-	-	-	-	-	-	1	A-1-a (V)	-	
VERY STIFF, BROWN AND GRAY, **SILT AND CLAY**, SOME SAND, LITTLE STONE FRAGMENTS, WITH ROOTS, DAMP	1032.0	2	5 6 6	17	22	SS-2	2.00	17	10	14	30	29	29	16	13	14	A-6a (6)	100	
MEDIUM STIFF, BROWN AND GRAY, **SANDY SILT**, SOME CLAY, LITTLE STONE FRAGMENTS, DAMP TO MOIST	1030.5	3	2 2 4	9	67	SS-3	0.50	13	9	21	34	23	26	16	10	15	A-4a (4)	<100	
	1027.5	4	2 2 3	7	50	SS-4	0.50	-	-	-	-	-	-	-	-	19	A-4a (V)	-	
		EOB 5																	
		6																	
		7																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 175+48, 7' RT.
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1036.7 (ft) EOB: 7.5 ft.
START: 5/21/19 END: 5/21/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.189650, -81.798212

EXPLORATION ID B-021-1-19

PAGE 1 OF 1

MATERIAL DESCRIPTION AND NOTES	ELEV. 1036.7	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
ASPHALT (3.25"), CONCRETE (9") & BASE (5.75")	1035.2	1																	
STIFF, GRAYISH BROWN, **SANDY SILT**, SOME CLAY, LITTLE GRAVEL, MOIST		2	1 1 2	4	33	SS-1	2.00	12	7	15	38	28	25	16	9	16	A-4a (6)	170	
@3.0'; NOT ENOUGH MATERIAL TO TEST	1032.2	3 4	2 3 3	9	11	SS-2	1.00	-	-	-	-	-	-	-	-	20	A-4a (V)	-	
VERY STIFF, GRAYISH BROWN, **SILT AND CLAY**, LITTLE SAND, LITTLE STONE FRAGMENTS, MOIST		5	2 9 11	28	67	SS-3	2.00	15	4	12	37	32	29	17	12	19	A-6a (8)	110	
@6.0'; VERY STIFF	▽ 1030.2	6	6 6 7	18	11	SS-4	4.00	-	-	-	-	-	-	-	-	21	A-6a (V)	-	
	1029.2	7 EOB																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. WATER APPEARS TO BE FROM AGGREGATE BASE.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 12.5 LB. SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 178+25, 8' LT.	EXPLORATION ID B-022-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1041.0 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/22/19 END: 5/22/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.190174, -81.797477	

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)	SO4 ppm	BACK FILL
ASPHALT (4.5"), CONCRETE (9") & BASE (4.5")	1041.0																		
	1039.5	1																	
STIFF, BROWN, **SANDY SILT**, SOME CLAY, TRACE GRAVEL AND STONE FRAGMENTS, DAMP	1038.0	2	1 1 3	6	33	SS-1	2.00	7	6	12	41	34	26	17	9	16	A-4a (8)	170	
STIFF, BROWN, **SILT AND CLAY**, LITTLE SAND, TRACE GRAVEL AND STONE FRAGMENTS, MOIST		3	1 2 4	9	44	SS-2	2.00	7	6	13	36	38	30	17	13	18	A-6a (9)	250	
@4.5'; VERY STIFF		4	4 4 4	11	44	SS-3	4.00	-	-	-	-	-	-	-	-	16	A-6a (V)	-	
@6.0'; GRAY AND BROWN MOTTLED	1033.5	5	2 5 6	16	56	SS-4	3.00	-	-	-	-	-	-	-	-	22	A-6a (V)	-	
		6 EOB																	
		7																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 182+27, 7' LT.	EXPLORATION ID B-023-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1044.7 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/22/19 END: 5/22/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.190864, -81.796338	

MATERIAL DESCRIPTION AND NOTES	ELEV. 1044.7	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
ASPHALT (5"), CONCRETE (8.5") & BASE (4.5")	1043.2	1																	
STIFF TO VERY STIFF, GRAYISH BROWN, **SILT AND CLAY**, LITTLE SAND, LITTLE GRAVEL AND STONE FRAGMENTS, WITH ROOTS, MOIST @3.0'; BROWN AND GRAY, MODERATELY ORGANIC (LOI = 4.8%) WITH ROOTS	1040.2	2 3 4	1 1 2 2 3 5	4 11	33 72	SS-1 SS-2	1.50 2.50	11 13	4 3	11 13	35 39	39 32	29 33	17 21	12 12	18 23	A-6a (9) A-6a (8)	210 110	
STIFF, BROWN AND GRAY MOTTLED, **SILT AND CLAY**, LITTLE SAND, TRACE STONE FRAGMENTS, WITH ROOTS, DAMP @6.0'; VERY STIFF, TRACE STONE FRAGMENTS	1037.2	5 6 7	3 4 8 4 7 10	17 24	100 83	SS-3 SS-4	1.00 3.00	- 6	- 5	- 11	- 38	- 40	- 29	- 18	- 11	19 16	A-6a (V) A-6a (8)	- -	
	EOB																		

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 185+50, 36' RT.	EXPLORATION ID B-024-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1045.8 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/21/19 END: 5/21/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.191308, -81.795312	

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)	SO4 ppm	BACK FILL
ASPHALT (5"), CONCRETE (8") & BASE (5")	1045.8	1																	
	1044.3																		
STIFF, BROWN AND GRAY MOTTLED, **SANDY SILT**, SOME CLAY, LITTLE GRAVEL AND STONE FRAGMENTS, DAMP		2	3 5 8	18	56	SS-1	1.50	14	6	12	34	34	27	18	9	15	A-4a (7)	250	
@3.0'; VERY STIFF, BROWN		3	4 6 8	20	78	SS-2	4.00	12	6	14	40	28	25	18	7	15	A-4a (7)	130	
@4.5'; BROWN AND GRAY, TRACE STONE FRAGMENTS, MOIST		4	8 14 14	40	100	SS-3	4.00	9	10	18	35	28	23	15	8	15	A-4a (6)	-	
@6.0'; VERY STIFF, GRAY, LITTLE STONE FRAGMENTS, DAMP		5	5 6 9	21	67	SS-4	2.50	20	7	13	39	21	19	14	5	12	A-4a (5)	-	
	1038.3	6 EOB																	
		7																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 189+52, 8' RT.	EXPLORATION ID B-025-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1045.6 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/22/19 END: 5/22/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.192018, -81.794194	

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)	SO4 ppm	BACK FILL
ASPHALT (5"), CONCRETE (9") & BASE (5")	1045.6	1																	
	1044.0																		
VERY STIFF, GRAYISH BROWN, **SILT AND CLAY**, LITTLE SAND, TRACE STONE FRAGMENTS, DAMP		2	2 3 7	14	39	SS-1	3.00	7	7	11	36	39	28	17	11	14	A-6a (8)	190	
@3.0'; LITTLE STONE FRAGMENTS		3																	
		4	4 6 10	23	61	SS-2	2.50	13	7	12	33	35	27	16	11	14	A-6a (7)	140	
@4.5'; HARD		5																	
	1039.6		6 11 16	38	89	SS-3	4.00	-	-	-	-	-	-	-	-	14	A-6a (V)	-	
VERY STIFF, GRAY, **SANDY SILT**, "AND" CLAY, TRACE STONE FRAGMENTS, DAMP		6																	
	1038.1	7	8 10 10	28	89	SS-4	3.50	8	9	10	35	38	25	15	10	13	A-4a (8)	-	
		EOB																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 192+56, 38' RT.	EXPLORATION ID B-026-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1044.4 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/21/19 END: 5/21/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.192434, -81.793229	

MATERIAL DESCRIPTION AND NOTES	ELEV. 1044.4	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
ASPHALT (5"), CONCRETE (9") & BASE (4")	1042.9	1																	
HARD, GRAY, **SANDY SILT**, SOME CLAY, TRACE GRAVEL AND STONE FRAGMENTS, DAMP		2	5 7 17	34	67	SS-1	4.00	4	6	14	42	34	23	14	9	10	A-4a (8)	530	
		3	9 10 10	28	78	SS-2	4.50	9	6	13	40	32	23	14	9	9	A-4a (7)	670	
@4.5'; VERY STIFF		4																	
		5	6 7 7	20	67	SS-3	4.00	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
		6																	
	1036.9	7 EOB	3 6 7	18	67	SS-4	2.00	-	-	-	-	-	-	-	-	14	A-4a (V)	-	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 12.5 LB. BENTONITE CHIPS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 195+86, 12' LT.
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1043.4 (ft) EOB: 7.5 ft.
START: 5/22/19 END: 5/22/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.193068, -81.792355

EXPLORATION ID B-027-0-19

PAGE 1 OF 1

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)	SO4 ppm	BACK FILL
ASPHALT (5"), CONCRETE (9") & BASE (4")	1043.4																		
	1041.9	1																	
VERY STIFF, GRAY, **SANDY SILT**, SOME CLAY, LITTLE GRAVEL AND STONE FRAGMENTS, DAMP		2	3 8 12	28	22	SS-1	4.00	-	-	-	-	-	-	-	-	10	A-4a (V)	-	
		3	8 7 7	20	44	SS-2	4.00	16	11	15	33	25	22	14	8	11	A-4a (5)	550	
		4	5 5 6	16	78	SS-3	2.50	14	14	17	35	20	19	14	5	11	A-4a (4)	540	
		5	4 6 9	21	56	SS-4	2.50	-	-	-	-	-	-	-	-	10	A-4a (V)	-	
	1035.9	6 EOB																	
		7																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 12.5 LB. BENTONITE CHIPS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / LEWIS	DRILL RIG: CME 55 TRUCK	STATION / OFFSET: 197+20, 212' LT.	EXPLORATION ID B-027-1-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 4/2/18	ELEVATION: 1040.6 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/29/19 END: 5/29/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 87	LAT / LONG: 41.193729, -81.792377	

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)	SO4 ppm	BACK FILL
ASPHALT (12") & BASE (6")	1040.6																		
	1039.1	1																	
VERY STIFF, GRAY, **SANDY SILT**, "AND" CLAY, TRACE STONE FRAGMENTS, DAMP		2	4 4 8	17	61	SS-1	2.50	10	8	11	35	36	26	16	10	12	A-4a (7)	2500	
		3	2 3 5	12	67	SS-2	2.50	6	7	11	37	39	25	17	8	16	A-4a (8)	720	
		4																	
		5	2 3 6	13	56	SS-3	2.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
		6																	
	1033.1	7	2 4 5	13	100	SS-4	2.50	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
		EOB																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 200+32, 55' RT.
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1046.4 (ft) EOB: 7.5 ft.
START: 5/21/19 END: 5/21/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.193624, -81.790891

EXPLORATION ID B-028-0-19

PAGE 1 OF 1

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)	SO4 ppm	BACK FILL
ASPHALT (3"), CONCRETE (9") & BASE (6")	1046.4	1																	
	1044.9																		
VERY STIFF, GRAYISH BROWN, **SILT AND CLAY**, LITTLE SAND, LITTLE GRAVEL AND STONE FRAGMENTS, DAMP		2	1 4 4	11	39	SS-1	2.50	10	5	12	34	39	30	16	14	14	A-6a (9)	260	
@3.0'; REDDISH BROWN		3	4 5 7	17	56	SS-2	4.00	15	7	13	31	34	28	16	12	15	A-6a (7)	220	
@4.5'; STIFF		4 5	4 7 7	20	89	SS-3	1.50	-	-	-	-	-	-	-	-	15	A-6a (V)	-	
@6.0'; HARD, BROWN AND GRAY		6 7	6 9 14	33	67	SS-4	4.50	-	-	-	-	-	-	-	-	12	A-6a (V)	-	
	1038.9	EOB																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 12.5 LB. BENTONITE CHIPS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 203+67, 8' LT.	EXPLORATION ID B-029-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1052.0 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/22/19 END: 5/22/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.194299, -81.790029	

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)	SO4 ppm	BACK FILL
ASPHALT (5"), CONCRETE (9") & BASE (4")	1052.0																		
	1050.5	1																	
STIFF, GRAYISH BROWN, **SILT AND CLAY**, LITTLE SAND, TRACE GRAVEL AND STONE FRAGMENTS, MOIST	1049.0	2	2 2 5	10	50	SS-1	2.00	9	6	12	39	34	26	15	11	15	A-6a (8)	230	
VERY STIFF, GRAYISH BROWN, **SANDY SILT**, SOME CLAY, LITTLE GRAVEL AND STONE FRAGMENTS, DAMP TO MOIST		3	5 8 11	27	67	SS-2	4.00	15	5	12	35	33	25	15	10	13	A-4a (7)	190	
		4																	
		5	6 7 7	20	67	SS-3	4.00	-	-	-	-	-	-	-	-	16	A-4a (V)	-	
		6																	
	1044.5	7 EOB	3 7 9	23	56	SS-4	4.00	-	-	-	-	-	-	-	-	14	A-4a (V)	-	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / LEWIS	DRILL RIG: CME 55 TRUCK	STATION / OFFSET: 204+65, 102' RT.
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 4/2/18	ELEVATION: 1053.4 (ft) EOB: 7.5 ft.
START: 5/29/19 END: 5/29/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 87	LAT / LONG: 41.194207, -81.789508

EXPLORATION ID B-029-1-19

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)	SO4 ppm	BACK FILL
CONCRETE (10") & BASE (8")	1053.4	1																	
	1051.9																		
VERY STIFF, GRAYISH BROWN, **SILT AND CLAY**, SOME SAND, TRACE GRAVEL AND STONE FRAGMENTS, DAMP TO MOIST		2	4 4 4	12	56	SS-1	3.00	9	8	13	34	36	26	14	12	15	A-6a (8)	190	
@3.0'; BROWN AND GRAY MOTTLED, LITTLE SAND, LITTLE GRAVEL AND STONE FRAGMENTS		3 4	3 3 3	9	39	SS-2	3.00	14	6	10	34	36	28	16	12	15	A-6a (8)	280	
@4.5'; STIFF		5	2 2 3	7	72	SS-3	1.50	-	-	-	-	-	-	-	-	16	A-6a (V)	-	
@6.0'; VERY STIFF		6	2 3 4	10	56	SS-4	2.50	-	-	-	-	-	-	-	-	18	A-6a (V)	-	
	1045.9	7 EOB																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / LEWIS	DRILL RIG: CME 55 TRUCK	STATION / OFFSET: 204+08, 232' RT.	EXPLORATION ID B-029-2-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 4/2/18	ELEVATION: 1049.9 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/29/19 END: 5/29/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 87	LAT / LONG: 41.193825, -81.789405	

MATERIAL DESCRIPTION AND NOTES	ELEV. 1049.9	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
ASPHALT (4"), CONCRETE (9") & BASE (5")	1048.4	1																	
VERY STIFF, GRAYISH BROWN, **SILT AND CLAY**, SOME GRAVEL AND STONE FRAGMENTS, SOME SAND, MOIST		2	3 4 4	12	22	SS-1	3.00	-	-	-	-	-	-	-	-	13	A-6a (V)	-	
@3.0'; BROWN, LITTLE GRAVEL AND STONE FRAGMENTS, LITTLE SAND		3 4	3 3 3	9	44	SS-2	2.50	23	10	12	27	28	26	14	12	17	A-6a (5)	330	
		5	1 2 7	13	33	SS-3	2.50	11	6	10	32	41	30	16	14	17	A-6a (9)	290	
@6.0'; STIFF	1042.4	6 7 EOB	2 2 4	9	67	SS-4	1.50	-	-	-	-	-	-	-	-	19	A-6a (V)	-	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

WILDCAT DYNAMIC CONE LOG

The Ohio Department of Transportation
Office of Geotechnical Engineering
1600 West Broad Street, Columbus, Ohio 43223

PROJECT NUMBER: 109232
DATE STARTED: 06-03-2019
DATE COMPLETED: 06-03-2019

HOLE #: D-029-3-19
CREW: P. Painter & A. Chudzik
PROJECT: MED-3-15.05
LAT/LONG: 41.193848, -81.789216
LOCATION: Medina County Ohio

SURFACE ELEVATION: 1030.4
WATER ON COMPLETION: 9"
HAMMER WEIGHT: 35 lbs.
CONE AREA: 10 sq. cm

DEPTH	BLOWS PER 10 cm	RESISTANCE Kg/cm²	GRAPH OF CONE RESISTANCE 0 50 100 150	N'	TESTED CONSISTENCY NON-COHESIVE	COHESIVE
-	1	4.4	•	1	VERY LOOSE	VERY SOFT
-	2	8.9	••	2	VERY LOOSE	SOFT
- 1 ft	4	17.8	•••••	5	LOOSE	MEDIUM STIFF
-	5	22.2	••••••	6	LOOSE	MEDIUM STIFF
-	5	22.2	••••••	6	LOOSE	MEDIUM STIFF
- 2 ft	3	13.3	•••	3	VERY LOOSE	SOFT
-	2	8.9	••	2	VERY LOOSE	SOFT
-	2	8.9	••	2	VERY LOOSE	SOFT
- 3 ft	2	8.9	••	2	VERY LOOSE	SOFT
- 1 m	7	31.1	•••••••••	8	LOOSE	MEDIUM STIFF
-	2	7.7	••	2	VERY LOOSE	SOFT
- 4 ft	3	11.6	•••	3	VERY LOOSE	SOFT
-	3	11.6	•••	3	VERY LOOSE	SOFT
-	3	11.6	•••	3	VERY LOOSE	SOFT
- 5 ft	4	15.4	••••	4	VERY LOOSE	SOFT
-	5	19.3	•••••	5	LOOSE	MEDIUM STIFF
-	3	11.6	•••	3	VERY LOOSE	SOFT
- 6 ft	5	19.3	•••••	5	LOOSE	MEDIUM STIFF
-	9	34.7	•••••••••	9	LOOSE	STIFF
- 2 m	16	61.8	••••••••••••••••	17	MEDIUM DENSE	VERY STIFF
- 7 ft	8	27.4	•••••••	7	LOOSE	MEDIUM STIFF
-	11	37.6	•••••••••	10	LOOSE	STIFF
-	16	54.7	••••••••••••••	15	MEDIUM DENSE	STIFF
- 8 ft	17	58.1	••••••••••••••••	16	MEDIUM DENSE	VERY STIFF
-	15	51.3	••••••••••••••	14	MEDIUM DENSE	STIFF
-						
- 9 ft						
-						
-						
- 3 m 10 ft						
-						
-						
-						
- 11 ft						
-						
-						
- 12 ft						
-						
-						
- 4 m 13 ft						

Hand Auger Samples Collected:

0.0' - 1.5': BROWN, **SILT AND CLAY**, LITTLE SAND, LITTLE GRAVEL AND STONE FRAGMENTS, SLIGHTLY ORGANIC (LOI = 3.6%), MOIST

G%: 15 CS%: 5 FS%: 12 ML%: 32 CL%: 36 LL: 31 PL: 17 PI: 14 M%: 20

1.5' - 3.0': GRAY AND BROWN MOTTLED, **CLAY**, "AND" SILT, SOME GRAVEL AND STONE FRAGMENTS, MODERATELY ORGANIC (LOI = 5.1%), MOIST TO WET

G%: 23 CS%: 1 FS%: 9 ML%: 40 CL%: 27 LL: 42 PL: 23 PI: 19 M%: 40

3.0' - 3.5': BROWN AND GRAY MOTTLED, **SILT**, SOME CLAY, LITTLE SAND, TRACE GRAVEL AND STONE FRAGMENTS, SLIGHTLY ORGANIC (LOI = 2.1%) WITH ROOTS, WET

G%: 4 CS%: 0 FS%: 14 ML%: 59 CL%: 23 LL: 27 PL: 18 PI: 9 M%: 32

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 208+39, 37' RT.	EXPLORATION ID B-030-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1065.2 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/21/19 END: 5/21/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.194943, -81.788536	

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)	SO4 ppm	BACK FILL
ASPHALT (4"), CONCRETE (9") & BASE (5")	1065.2																		
	1063.7	1																	
VERY STIFF, GRAYISH BROWN, **SILT AND CLAY**, LITTLE SAND, LITTLE GRAVEL AND STONE FRAGMENTS, MOIST	1062.2	2	2 2 4	9	39	SS-1	2.50	16	6	12	32	34	25	14	11	14	A-6a (7)	180	
VERY STIFF, GRAY WITH BROWN, **SANDY SILT**, SOME CLAY, LITTLE GRAVEL AND STONE FRAGMENTS, DAMP		3	3 6 6	17	28	SS-2	4.00	-	-	-	-	-	-	-	-	13	A-4a (V)	-	
@4.5'; GRAY		4																	
		5	3 3 3	9	39	SS-3	4.00	18	6	12	32	32	24	14	10	13	A-4a (6)	690	
@6.0'; MOIST		6																	
	1057.7	7	2 5 9	20	28	SS-4	1.00	-	-	-	-	-	-	-	-	15	A-4a (V)	-	
		EOB																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 12.5 LB. BENTONITE CHIPS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 211+75, 7' RT.
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1075.9 (ft) EOB: 7.5 ft.
START: 5/22/19 END: 5/22/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.195544, -81.787602

EXPLORATION ID B-031-0-19

PAGE 1 OF 1

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)	SO4 ppm	BACK FILL
ASPHALT (4.5"), CONCRETE (9") & BASE (4.5")	1075.9																		
	1074.4	1																	
MEDIUM STIFF, GRAY, **SANDY SILT**, "AND" CLAY, LITTLE GRAVEL AND STONE FRAGMENTS, MOIST	1072.9	2	1 1 3	6	33	SS-1	0.50	17	4	10	33	36	25	15	10	17	A-4a (7)	520	
STIFF, GRAY WITH BROWN, **SILT AND CLAY**, LITTLE SAND, TRACE GRAVEL AND STONE FRAGMENTS, MOIST		3	2 2 2	6	33	SS-2	1.50	10	5	13	34	38	26	15	11	16	A-6a (8)	250	
@4.5'; VERY STIFF, GRAY		4	4 5 6	16	56	SS-3	4.00	-	-	-	-	-	-	-	-	14	A-6a (V)	-	
@6.0'; GRAY AND BROWN MOTTLED, LITTLE GRAVEL AND STONE FRAGMENTS	1068.4	5	11 8 7	21	67	SS-4	2.00	17	5	9	31	38	34	19	15	22	A-6a (9)	-	
		6																	
		7 EOB																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 216+34, 50' RT.	EXPLORATION ID B-032-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1092.1 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/21/19 END: 5/21/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.196175, -81.786150	

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)	SO4 ppm	BACK FILL
ASPHALT (5"), CONCRETE (9") & BASE (4")	1092.1																		
	1090.6	1																	
STIFF, BROWN, **SANDY SILT**, "AND" CLAY, TRACE GRAVEL AND STONE FRAGMENTS, DAMP	1089.1	2	2 2 3	7	39	SS-1	2.00	7	4	10	42	37	24	16	8	15	A-4a (8)	220	
VERY STIFF, GRAY WITH BROWN, **SILTY CLAY**, LITTLE GRAVEL AND STONE FRAGMENTS, TRACE SAND, DAMP TO MOIST		3	3 6 6	17	33	SS-2	3.00	-	-	-	-	-	-	-	-	15	A-6b (V)	-	
@4.5'; BROWN AND GRAY MOTTLED		4	3 4 9	18	67	SS-3	2.00	15	2	6	31	46	35	17	18	20	A-6b (11)	150	
@6.0'; BROWN		5																	
	1084.6	6	6 9 14	33	89	SS-4	2.00	-	-	-	-	-	-	-	-	15	A-6b (V)	-	
		EOB 7																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 220+31, 9' LT.	EXPLORATION ID B-033-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1107.8 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/22/19 END: 5/22/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.196938, -81.785096	

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)	SO4 ppm	BACK FILL
ASPHALT (5"), CONCRETE (9") & BASE (4")	1107.8																		
	1106.3	1																	
STIFF, BROWN, **SILT AND CLAY**, TRACE SAND, TRACE GRAVEL AND STONE FRAGMENTS, DAMP	1104.8	2	1 3 5	11	56	SS-1	2.00	3	2	4	41	50	32	19	13	18	A-6a (9)	300	
STIFF, BROWN, **SILTY CLAY**, LITTLE GRAVEL AND STONE FRAGMENTS, TRACE SAND, DAMP		3	2 3 7	14	67	SS-2	2.00	11	1	3	27	58	40	24	16	21	A-6b (10)	280	
@4.5'; VERY STIFF, MOIST		4	4 7 10	24	78	SS-3	3.50	-	-	-	-	-	-	-	-	24	A-6b (V)	-	
	1100.3	5 EOB	5 8 10	26	78	SS-4	1.50	-	-	-	-	-	-	-	-	20	A-6b (V)	-	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 224+30, 11' RT.	EXPLORATION ID B-034-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1123.6 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/21/19 END: 5/21/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.197526, -81.783872	

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)	SO4 ppm	BACK FILL
ASPHALT (5"), CONCRETE (9") & BASE (4")	1123.6	1																	
	1122.1																		
VERY STIFF, GRAYISH BROWN, **CLAY**, SOME SILT, SOME GRAVEL AND STONE FRAGMENTS, TRACE SAND, MOIST		2	1 3 6	13	33	SS-1	4.00	21	1	2	21	55	44	20	24	20	A-7-6 (14)	380	
@3.0'; GRAYISH BROWN AND GRAY MOTTLED		3	4 5 8	18	56	SS-2	3.00	17	0	2	26	55	41	19	22	20	A-7-6 (13)	330	
		4																	
		5	6 8 10	26	78	SS-3	3.00	-	-	-	-	-	-	-	-	21	A-7-6 (V)	-	
@6.0'; BROWN		6	5 9 16	35	100	SS-4	4.00	-	-	-	-	-	-	-	-	21	A-7-6 (V)	-	
	1116.1	7 EOB																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATE (8.5 X 11) - OH DOT.GDT - 4/2/20 12:09 - X:\GINT\PROJECTS\2019 COMPLETE\600647.GPJ

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 228+28, 7' LT.
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1139.5 (ft) EOB: 7.5 ft.
START: 5/22/19 END: 5/22/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.198197, -81.782729

EXPLORATION ID B-035-0-19

PAGE 1 OF 1

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)	SO4 ppm	BACK FILL
ASPHALT (5"), CONCRETE (9") & BASE (4")	1139.5																		
	1138.0																		
VERY STIFF, GRAY AND GRAYISH BROWN MOTTLED, **SILT AND CLAY**, SOME STONE FRAGMENTS, LITTLE SAND, MOIST @3.0'; DAMP			1 2 2	6	22	SS-1	3.00	-	-	-	-	-	-	-	-	17	A-6a (V)	-	
@4.5'; BROWN, SOME SAND			2 3 26	41	44	SS-2	4.00	23	7	11	29	30	31	17	14	16	A-6a (6)	360	
			5 26 11	52	44	SS-3	2.00	33	11	12	24	20	33	19	14	16	A-6a (3)	670	
@6.0'; SOFT		▽ 1132.5	2 1 1	3	44	SS-4	0.50	24	10	12	29	25	32	17	15	26	A-6a (6)	-	
	1132.0	EOB																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 12.5 LB. BENTONITE CHIPS

STANDARD ODOT LOG W/ SULFATE (8.5 X 11) - OH DOT.GDT - 4/2/20 12:09 - X:\GINT\PROJECTS\2019 COMPLETE\600647.GPJ

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 232+25, 7' RT.	EXPLORATION ID B-036-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1155.6 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/21/19 END: 5/21/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.198795, -81.781520	

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)	SO4 ppm	BACK FILL
ASPHALT (5"), CONCRETE (9") & BASE (4")	1155.6																		
	1154.1	1																	
MEDIUM STIFF, BROWN, **SANDY SILT**, SOME CLAY, LITTLE GRAVEL AND STONE FRAGMENTS, MOIST		2	1 1 3	6	50	SS-1	0.50	11	6	15	39	29	23	15	8	16	A-4a (7)	280	
@3.0'; VERY STIFF, TRACE GRAVEL AND STONE FRAGMENTS		3	4 7 8	21	100	SS-2	3.00	6	7	13	40	34	24	16	8	15	A-4a (8)	180	
		4	5 9 14	33	78	SS-3	2.50	-	-	-	-	-	-	-	-	14	A-4a (V)	-	
@6.0'; HARD, LITTLE GRAVEL AND STONE FRAGMENTS, DAMP	1148.1	5	6 11 16	38	100	SS-4	4.00	17	16	15	28	24	25	22	3	12	A-4a (3)	-	
		EOB 6																	
		7																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 236+23, 7' LT.
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1171.5 (ft) EOB: 7.5 ft.
START: 5/21/19 END: 5/21/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.199458, -81.780370

EXPLORATION ID B-037-0-19

PAGE 1 OF 1

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)	SO4 ppm	BACK FILL
ASPHALT (5"), CONCRETE (9") & BASE (4")	1171.5																		
	1170.0	1																	
HARD, BROWN, **SANDY SILT**, SOME CLAY, TRACE GRAVEL AND STONE FRAGMENTS, DAMP	1168.5	2	1 3 10	18	33	SS-1	4.50	8	7	13	38	34	26	16	10	12	A-4a (7)	290	
HARD, BROWN AND GRAY, **SILT AND CLAY**, LITTLE SAND, TRACE GRAVEL AND STONE FRAGMENTS, DAMP @4.5'; VERY STIFF		3	5 6 6	17	33	SS-2	4.50	7	6	14	39	34	27	16	11	14	A-6a (8)	150	
		4	3 5 4	13	44	SS-3	4.00	-	-	-	-	-	-	-	-	15	A-6a (V)	-	
		5	2 11 16	38	89	SS-4	3.50	-	-	-	-	-	-	-	-	15	A-6a (V)	-	
	1164.0	6																	
		EOB 7																	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

PROJECT: MED-3-15.05	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 75 TRUCK	STATION / OFFSET: 240+92, 7' LT.	EXPLORATION ID B-038-0-19
TYPE: ROADWAY	SAMPLING FIRM / LOGGER: ODOT / BRODIE	HAMMER: CME AUTOMATIC	ALIGNMENT: CENTERLINE OF SR 3	
PID: 109232 SFN:	DRILLING METHOD: 3.5" SSA	CALIBRATION DATE: 6/1/17	ELEVATION: 1188.7 (ft) EOB: 7.5 ft.	PAGE 1 OF 1
START: 5/21/19 END: 5/21/19	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85	LAT / LONG: 41.200200, -81.778981	

MATERIAL DESCRIPTION AND NOTES	ELEV. 1188.7	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	BACK FILL
ASPHALT (7"), CONCRETE (5") & BASE (6")	1187.2	1																	
VERY STIFF, BROWN, **SILT AND CLAY**, LITTLE SAND, TRACE STONE FRAGMENTS, MOIST	1185.7	2	2 2 3	7	44	SS-1	4.00	9	6	12	33	40	27	15	12	18	A-6a (8)	260	
MEDIUM STIFF, BROWN, **SANDY SILT**, SOME GRAVEL AND STONE FRAGMENTS, SOME CLAY, MOIST	1184.2	3 4	3 3 4	10	100	SS-2	0.50	24	9	12	34	21	24	15	9	17	A-4a (4)	170	
VERY STIFF, BROWN, **SILT AND CLAY**, LITTLE STONE FRAGMENTS, LITTLE SAND, DAMP		5 6	5 8 10	26	83	SS-3	2.50	18	7	8	39	28	29	17	12	15	A-6a (7)	-	
	1181.2	7 EOB	7 14 18	45	89	SS-4	3.00	-	-	-	-	-	-	-	-	14	A-6a (V)	-	

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS. HOLE DRY UPON COMPLETION.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH SOIL CUTTINGS

STANDARD ODOT LOG W/ SULFATE (8.5 X 11) - OH DOT.GDT - 4/2/20 12:09 - X:\GINT\PROJECTS\2019 COMPLETE\600647.GPJ

GEOTECHNICAL BULLETIN 1 (GB1)

PLAN SUBGRADES SPREADSHEET

OHIO DEPARTMENT OF TRANSPORTATION

OFFICE OF GEOTECHNICAL ENGINEERING

PLAN SUBGRADES
Geotechnical Bulletin GB1

MED-3-15.05
PID 109232
Pavement Replacement/Rubblize and Roll MED SR 3 - 15.05 (0.1 miles north of Fenn Road) to 17.84 (0.06 miles south of Odessa Rd)

ODOT - OGE

Prepared By: Stephen Taliaferro
Date prepared: Tuesday, July 30, 2019

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NO. OF BORINGS: 42

#	Boring ID	Alignment	Station	Offset	Dir	Drill Rig	ER	Boring EL.	Proposed Subgrade EL	Cut Fill
1	B-001-0-19	Centerline of SR 3	94+34	5	Rt	CME 75 Truck \06	85	1026.4	1024.9	1.5 C
2	B-002-0-19	Centerline of SR 3	98+31	6	Lt	CME 55 Truck \08	87	1029.4	1027.9	1.5 C
3	B-003-0-19	Centerline of SR 3	101+80	7	Rt	CME 75 Truck \06	85	1026.9	1025.4	1.5 C
4	B-004-0-19	Centerline of SR 3	106+10	7	Rt	CME 75 Truck \06	85	1020.5	1019.0	1.5 C
5	B-005-0-19	Centerline of SR 3	110+12	6	Lt	CME 55 Truck \08	87	1015.4	1013.9	1.5 C
6	B-006-0-19	Centerline of SR 3	114+07	8	Lt	CME 55 Truck \08	87	1009.6	1008.1	1.5 C
7	B-007-0-19	Centerline of SR 3	118+11	9	Rt	CME 75 Truck \06	85	1002.1	1000.6	1.5 C
8	B-008-0-19	Centerline of SR 3	122+10	10	Lt	CME 55 Truck \08	87	995.9	994.4	1.5 C
9	B-009-0-19	Centerline of SR 3	126+07	9	Rt	CME 75 Truck \06	85	992.0	990.5	1.5 C
10	B-010-0-19	Centerline of SR 3	130+06	8	Lt	CME 55 Truck \08	87	991.7	990.2	1.5 C
11	B-011-0-19	Centerline of SR 3	134+04	9	Rt	CME 75 Truck \06	85	993.2	991.7	1.5 C
12	B-012-0-19	Centerline of SR 3	137+99	8	Lt	CME 55 Truck \08	87	994.8	993.3	1.5 C
13	B-013-0-19	Centerline of SR 3	141+79	8	Rt	CME 75 Truck \06	85	996.4	994.9	1.5 C
14	B-014-0-19	Centerline of SR 3	145+76	8	Lt	CME 55 Truck \08	87	997.9	996.4	1.5 C
15	B-015-0-19	Centerline of SR 3	149+77	8	Rt	CME 75 Truck \06	85	1000.1	998.6	1.5 C
16	B-016-0-19	Centerline of SR 3	153+72	8	Lt	CME 55 Truck \08	87	1004.6	1003.1	1.5 C
17	B-017-0-19	Centerline of SR 3	157+70	7	Rt	CME 75 Truck \06	85	1010.6	1009.1	1.5 C
18	B-018-0-19	Centerline of SR 3	161+93	10	Lt	CME 75 Truck \06	85	1016.6	1015.1	1.5 C
19	B-019-0-19	Centerline of SR 3	165+67	7	Rt	CME 75 Truck \06	85	1022.3	1020.8	1.5 C
20	B-020-0-19	Centerline of SR 3	170+40	14	Lt	CME 75 Truck \06	85	1029.2	1027.7	1.5 C
21	B-021-0-19	Centerline of SR 3	174+27	8	Rt	CME 75 Truck \06	85	1035.0	1033.5	1.5 C
22	B-021-1-19	Centerline of SR 3	175+48	7	Rt	CME 75 Truck \06	85	1036.7	1035.2	1.5 C
23	B-022-0-19	Centerline of SR 3	178+25	8	Lt	CME 75 Truck \06	85	1041.0	1039.5	1.5 C
24	B-023-0-19	Centerline of SR 3	182+27	7	Lt	CME 75 Truck \06	85	1044.7	1043.2	1.5 C
25	B-024-0-19	Centerline of SR 3	185+50	36	Rt	CME 75 Truck \06	85	1045.8	1044.3	1.5 C
26	B-025-0-19	Centerline of SR 3	189+52	8	Rt	CME 75 Truck \06	85	1045.6	1044.1	1.5 C
27	B-026-0-19	Centerline of SR 3	192+56	38	Rt	CME 75 Truck \06	85	1044.4	1042.9	1.5 C
28	B-027-0-19	Centerline of SR 3	195+86	12	Lt	CME 75 Truck \06	85	1043.4	1041.9	1.5 C
29	B-027-1-19	Centerline of SR 3	197+20	212	Lt	CME 55 Truck \08	87	1040.6	1039.1	1.5 C
30	B-028-0-19	Centerline of SR 3	200+32	55	Rt	CME 75 Truck \06	85	1046.4	1044.9	1.5 C
31	B-029-0-19	Centerline of SR 3	203+67	8	Lt	CME 75 Truck \06	85	1052.0	1050.5	1.5 C
32	B-029-1-19	Centerline of SR 3	204+65	102	Rt	CME 55 Truck \08	87	1053.4	1051.9	1.5 C
33	B-029-2-19	Centerline of SR 3	204+08	232	Rt	CME 55 Truck \08	87	1049.9	1048.4	1.5 C
34	B-030-0-19	Centerline of SR 3	208+39	37	Rt	CME 75 Truck \06	85	1065.2	1063.7	1.5 C
35	B-031-0-19	Centerline of SR 3	211+75	7	Rt	CME 75 Truck \06	85	1075.9	1074.4	1.5 C
36	B-032-0-19	Centerline of SR 3	216+34	50	Rt	CME 75 Truck \06	85	1092.1	1090.6	1.5 C
37	B-033-0-19	Centerline of SR 3	220+31	9	Lt	CME 75 Truck \06	85	1107.8	1106.3	1.5 C
38	B-034-0-19	Centerline of SR 3	224+30	11	Rt	CME 75 Truck \06	85	1123.6	1122.1	1.5 C
39	B-035-0-19	Centerline of SR 3	228+28	7	Lt	CME 75 Truck \06	85	1139.5	1138.0	1.5 C
40	B-036-0-19	Centerline of SR 3	232+25	7	Rt	CME 75 Truck \06	85	1155.6	1154.1	1.5 C
41	B-037-0-19	Centerline of SR 3	236+23	7	Lt	CME 75 Truck \06	85	1171.5	1170.0	1.5 C
42	B-038-0-19	Centerline of SR 3	240+92	7	Lt	CME 75 Truck \06	85	1188.7	1187.2	1.5 C

OHIO DEPARTMENT OF TRANSPORTATION

Subgrade Analysis

V. 14.5 1/18/2019

#	Boring	Sample	Sample Depth		Subgrade Depth		Standard Penetration		HP (tsf)	Physical Characteristics						Moisture		Ohio DOT		Sulfate Content (ppm)	Problem		Excavate and Replace (Item 204)		Recommendation (Enter depth in inches)
			From	To	From	To	N_{60}	N_{60L}		LL	PL	PI	% Silt	% Clay	P200	M_C	M_{OPT}	Class	GI		Unsuitable	Unstable	Unsuitable	Unstable	
1	B	SS-1	1.5	3.0	0.0	1.5	10		1							8	10	A-4a	8			HP		**12"**	
	001-0	SS-2	3.0	4.5	1.5	3.0	20		2	18	14	4	34	19	53	12	10	A-4a	4	150					
	19	SS-3	4.5	6.0	3.0	4.5	11		0.5	27	15	12	22	23	45	19	14	A-6a	3	130					
		SS-4	6.0	7.5	4.5	6.0	16	10	0.5							14	14	A-6a	10						
2	B	SS-1	1.5	3.0	0.0	1.5	7		2	24	15	9	30	32	62	16	10	A-4a	5	150		N_{60} & Mc		**15"**	
	002-0	SS-2	3.0	4.5	1.5	3.0	22		1.5	21	15	6	22	15	37	11	10	A-4a	0	160		HP			
	19	SS-3	4.5	6.0	3.0	4.5	16		1.5							15	10	A-4a	8						
		SS-4A	6.0	7.0	4.5	5.5	6	6	0.5							19	10	A-4a	8						
3	B	SS-1	1.5	3.0	0.0	1.5	26		4	28	17	11	26	29	55	12	14	A-6a	4	290					
	003-0	SS-2	3.0	4.5	1.5	3.0	31		4	30	17	13	37	41	78	16	14	A-6a	9	170					
	19	SS-3	4.5	6.0	3.0	4.5	28		4							17	14	A-6a	10						
		SS-4	6.0	7.5	4.5	6.0	31	26	4							18	14	A-6a	10						
4	B	SS-1	1.5	3.0	0.0	1.5	10		2	28	15	13	29	37	66	16	14	A-6a	7	230		N_{60}		**12"**	
	004-0	SS-2	3.0	4.5	1.5	3.0	20		2	30	16	14	30	39	69	15	14	A-6a	8	190					
	19	SS-3	4.5	6.0	3.0	4.5	23		2.5							16	14	A-6a	10						
		SS-4	6.0	7.5	4.5	6.0	23	10	4							17	14	A-6a	10						
5	B	SS-1	1.5	3.0	0.0	1.5	6		1.5							17	14	A-6a	10			HP & Mc		**18"**	
	005-0	SS-2	3.0	4.5	1.5	3.0	12		2.5	31	17	14	31	39	70	19	14	A-6a	9	100		N_{60} & Mc			
	19	SS-3	4.5	6.0	3.0	4.5	22		2.5	26	19	7	32	20	52	16	14	A-4a	3	110					
		SS-4	6.0	7.5	4.5	6.0	20	6	2.5	27	17	10	38	37	75	16	12	A-4a	8						
6	B	SS-1	1.5	3.0	0.0	1.5	17		4	28	17	11	36	41	77	17	14	A-6a	8	100		Mc			
	006-0	SS-2	3.0	4.5	1.5	3.0	33		4	29	17	12	38	38	76	13	14	A-6a	9	280					
	19	SS-3	4.5	6.0	3.0	4.5	29		4							16	14	A-6a	10						
		SS-4	6.0	7.5	4.5	6.0	42	17	4.5							15	14	A-6a	10						
7	B	SS-1A	1.5	1.8	0.0	0.3	9									5						N_{60}		**12"**	
	007-0	SS-1B	1.8	3.0	0.3	1.5	9		2.5	25	15	10	38	41	79	16	10	A-4a	8	510		N_{60} & Mc		**12"**	
	19	SS-2	3.0	4.5	1.5	3.0	13		2	24	15	9	40	39	79	16	10	A-4a	8	420		N_{60} & Mc			
		SS-3	4.5	6.0	3.0	4.5	14	9	2							17	10	A-4a	8						
8	B	SS-1	1.5	3.0	0.0	1.5	16		3	29	17	12	45	39	84	19	14	A-6a	9	540		Mc			
	008-0	SS-2	3.0	4.5	1.5	3.0	16		1.5	30	19	11	47	32	79	20	14	A-6a	8	190		HP & Mc			
	19	SS-3	4.5	6.0	3.0	4.5	20		1.5	30	18	12	42	37	79	16	14	A-6a	9	140					
		SS-4	6.0	7.5	4.5	6.0	32	16	4							15	14	A-6a	10						
9	B	SS-1	1.5	3.0	0.0	1.5	16		2.5	26	16	10	44	38	82	15	11	A-4a	8	190		Mc			
	009-0	SS-2	3.0	4.5	1.5	3.0	23		3.5	30	17	13	41	43	84	17	14	A-6a	9	170		Mc			
	19	SS-3	4.5	6.0	3.0	4.5	27		3.5							15	14	A-6a	10						
		SS-4	6.0	7.5	4.5	6.0	21	16	3.5							20	14	A-6a	10						

OHIO DEPARTMENT OF TRANSPORTATION

Subgrade Analysis

V. 14.5 1/18/2019

#	Boring	Sample	Sample Depth		Subgrade Depth		Standard Penetration		HP (tsf)	Physical Characteristics						Moisture		Ohio DOT		Sulfate Content (ppm)	Problem		Excavate and Replace (Item 204)		Recommendation (Enter depth in inches)
			From	To	From	To	N_{60}	N_{60L}		LL	PL	PI	% Silt	% Clay	P200	M_C	M_{OPT}	Class	GI		Unsuitable	Unstable	Unsuitable	Unstable	
10	B	SS-1	1.5	3.0	0.0	1.5	22		3	27	15	12	35	41	76	15	14	A-6a	9	330					
	010-0	SS-2	3.0	4.5	1.5	3.0	33		2.5	28	18	10	34	43	77	14	13	A-4a	8	260					
	19	SS-3	4.5	6.0	3.0	4.5	16		2							17	10	A-4a	8						
		SS-4	6.0	7.5	4.5	6.0	19	16	2							17	10	A-4a	8						
11	B	SS-1	1.5	3.0	0.0	1.5	9		1	25	14	11	35	41	76	15	14	A-6a	8	100		HP			**12"**
	011-0	SS-2	3.0	4.5	1.5	3.0	17		3	28	15	13	30	35	65	15	14	A-6a	7	1200					
	19	SS-3	4.5	6.0	3.0	4.5	13		2.5							15	14	A-6a	10						
		SS-4	6.0	7.5	4.5	6.0	18	9	2.5							13	14	A-6a	10						
12	B	SS-1A	1.5	1.8	0.0	0.3	9									5						N_{60}			**12"**
	012-0	SS-1B	1.8	3.0	0.3	1.5	9		2.5	25	15	10	34	35	69	6	10	A-4a	7	3500		N_{60}			**12"**
	19	SS-2	3.0	4.5	1.5	3.0	19		2	29	17	12	32	40	72	17	14	A-6a	8	180		Mc			
		SS-3	4.5	5.3	3.0	3.8	50	9	4.5							9	14	A-6a	10						
13	B	SS-1	1.5	3.0	0.0	1.5	4		1.5							14	10	A-4a	8			HP & Mc			**24"**
	013-0	SS-2	3.0	4.5	1.5	3.0	13		3.5	22	14	8	41	29	70	12	10	A-4a	7	370					
	19	SS-3	4.5	6.0	3.0	4.5	11		1	20	14	6	45	26	71	13	10	A-4a	7	380					
		SS-4	6.0	7.5	4.5	6.0	9	4	0.5							15	10	A-4a	8						
14	B	SS-1	1.5	3.0	0.0	1.5	23		3.5	28	19	9	46	42	88	17	14	A-4a	8	190		Mc			
	014-0	SS-2	3.0	4.5	1.5	3.0	42		4	25	18	7	40	31	71	14	13	A-4a	7	210					
	19	SS-3	4.5	6.0	3.0	4.5	23		4							17	10	A-4a	8						
		SS-4	6.0	7.5	4.5	6.0	25	23	4							16	10	A-4a	8						
15	B	SS-1	1.5	3.0	0.0	1.5	14		2	25	15	10	49	40	89	14	10	A-4a	8	100		N_{60} & Mc			**12"**
	015-0	SS-2	3.0	4.5	1.5	3.0	34		3.5	24	14	10	41	34	75	12	10	A-4a	8	510					
	19	SS-3	4.5	6.0	3.0	4.5	27		3.5							14	10	A-4a	8						
		SS-4	6.0	7.5	4.5	6.0	30	14	2.5							16	10	A-4a	8						
16	B	SS-1	1.5	3.0	0.0	1.5	15		2.5	23	16	7	36	25	61	15	11	A-4a	5	180		Mc			
	016-0	SS-2	3.0	4.5	1.5	3.0	32		4	23	16	7	50	33	83	15	11	A-4b	8	180	A-4b	Mc			
	19	SS-3	4.5	6.0	3.0	4.5	30		4	23	17	6	43	26	69	15	12	A-4a	7						
		SS-4	6.0	7.5	4.5	6.0	22	15	4							14	10	A-4a	8						
17	B	SS-1	1.5	3.0	0.0	1.5	6		1.5	25	13	12	32	37	69	15	14	A-6a	8	260		HP			**18"**
	017-0	SS-2	3.0	4.5	1.5	3.0	9		3	26	15	11	33	39	72	16	14	A-6a	8	210		N_{60}			
	19	SS-3A	4.5	5.5	3.0	4.0	38		3	21	16	5	44	20	64	15	11	A-4a	6						
		SS-3B	5.5	6.0	4.0	4.5		6	3							11	10	A-4a	8						
18	B	SS-1	1.5	3.0	0.0	1.5	18		3.5	22	13	9	34	21	55	13	10	A-4a	4	160		Mc			
	018-0	SS-2	3.0	4.5	1.5	3.0	17		2	28	16	12	42	33	75	17	14	A-6a	9	180		Mc			
	19	SS-3	4.5	6.0	3.0	4.5	14		2							17	14	A-6a	10						
		SS-4	6.0	7.5	4.5	6.0	9	9	1.5	30	17	13	43	39	82	21	14	A-6a	9						

OHIO DEPARTMENT OF TRANSPORTATION

Subgrade Analysis

V. 14.5 1/18/2019

#	Boring	Sample	Sample Depth		Subgrade Depth		Standard Penetration		HP (tsf)	Physical Characteristics						Moisture		Ohio DOT		Sulfate Content (ppm)	Problem		Excavate and Replace (Item 204)		Recommendation (Enter depth in inches)
			From	To	From	To	N_{60}	N_{60L}		LL	PL	PI	% Silt	% Clay	P200	M_C	M_{OPT}	Class	GI		Unsuitable	Unstable	Unsuitable	Unstable	
19	B	SS-1	1.5	3.0	0.0	1.5	7		1.5	29	17	12	39	29	68	18	14	A-6a	7	240		HP & Mc		**15"**	
	019-0	SS-2	3.0	4.5	1.5	3.0	7		2.5	40	18	22	48	41	89	21	16	A-6b	13	160		N_{60} & Mc			
	19	SS-3	4.5	6.0	3.0	4.5	17		2.5							20	16	A-6b	16						
		SS-4	6.0	7.5	4.5	6.0	17	7	2							20	16	A-6b	16						
20	B	SS-1	1.5	3.0	0.0	1.5	14		2.5	24	15	9	39	29	68	14	10	A-4a	7	220		N_{60} & Mc		**12"**	
	020-0	SS-2	3.0	4.5	1.5	3.0	20		2.5	24	15	9	41	27	68	14	10	A-4a	7	160		Mc			
	19	SS-3	4.5	6.0	3.0	4.5	30		3.5							14	10	A-4a	8						
		SS-4	6.0	7.5	4.5	6.0	26	14	2							13	10	A-4a	8						
21	B	SS-1	1.5	3.0	0.0	1.5	11									1	6	A-1-a	0						
	021-0	SS-2	3.0	4.5	1.5	3.0	17		2	29	16	13	30	29	59	14	14	A-6a	6	100					
	19	SS-3	4.5	6.0	3.0	4.5	9		0.5	26	16	10	34	23	57	15	11	A-4a	4	100					
		SS-4	6.0	7.5	4.5	6.0	7	7	0.5							19	10	A-4a	8						
22	B	SS-1	1.5	3.0	0.0	1.5	4		2	25	16	9	38	28	66	16	11	A-4a	6	170		N_{60} & Mc		**24"**	
	021-1	SS-2	3.0	4.5	1.5	3.0	9		1							20	10	A-4a	8			HP & Mc			
	19	SS-3	4.5	6.0	3.0	4.5	28		2	29	17	12	37	32	69	19	14	A-6a	8	110					
		SS-4	6.0	7.5	4.5	6.0	18	4	4							21	14	A-6a	10						
23	B	SS-1	1.5	3.0	0.0	1.5	6		2	26	17	9	41	34	75	16	12	A-4a	8	170		N_{60} & Mc		**18"**	
	022-0	SS-2	3.0	4.5	1.5	3.0	9		2	30	17	13	36	38	74	18	14	A-6a	9	250		N_{60} & Mc			
	19	SS-3	4.5	6.0	3.0	4.5	11		4							16	14	A-6a	10						
		SS-4	6.0	7.5	4.5	6.0	16	6	3							22	14	A-6a	10						
24	B	SS-1	1.5	3.0	0.0	1.5	4		1.5	29	17	12	35	39	74	18	14	A-6a	9	210		HP & Mc		**24"**	
	023-0	SS-2	3.0	4.5	1.5	3.0	11		2.5	33	21	12	39	32	71	23	16	A-6a	8	110		N_{60} & Mc			
	19	SS-3	4.5	6.0	3.0	4.5	17		1							19	14	A-6a	10						
		SS-4	6.0	7.5	4.5	6.0	24	4	3	29	18	11	38	40	78	16	14	A-6a	8						
25	B	SS-1	1.5	3.0	0.0	1.5	18		1.5	27	18	9	34	34	68	15	13	A-4a	7	250		HP		**12"**	
	024-0	SS-2	3.0	4.5	1.5	3.0	20		4	25	18	7	40	28	68	15	13	A-4a	7	130					
	19	SS-3	4.5	6.0	3.0	4.5	40		4	23	15	8	35	28	63	15	10	A-4a	6						
		SS-4	6.0	7.5	4.5	6.0	21	18	2.5	19	14	5	39	21	60	12	10	A-4a	5						
26	B	SS-1	1.5	3.0	0.0	1.5	14		3	28	17	11	36	39	75	14	14	A-6a	8	190					
	025-0	SS-2	3.0	4.5	1.5	3.0	23		2.5	27	16	11	33	35	68	14	14	A-6a	7	140					
	19	SS-3	4.5	6.0	3.0	4.5	38		4							14	14	A-6a	10						
		SS-4	6.0	7.5	4.5	6.0	28	14	3.5	25	15	10	35	38	73	13	10	A-4a	8						
27	B	SS-1	1.5	3.0	0.0	1.5	34		4	23	14	9	42	34	76	10	10	A-4a	8	530					
	026-0	SS-2	3.0	4.5	1.5	3.0	28		4.5	23	14	9	40	32	72	9	10	A-4a	7	670					
	19	SS-3	4.5	6.0	3.0	4.5	20		4							14	10	A-4a	8						
		SS-4	6.0	7.5	4.5	6.0	18	18	2							14	10	A-4a	8						

OHIO DEPARTMENT OF TRANSPORTATION

Subgrade Analysis

V. 14.5 1/18/2019

#	Boring	Sample	Sample Depth		Subgrade Depth		Standard Penetration		HP (tsf)	Physical Characteristics						Moisture		Ohio DOT		Sulfate Content (ppm)	Problem		Excavate and Replace (Item 204)		Recommendation (Enter depth in inches)
			From	To	From	To	N_{60}	N_{60L}		LL	PL	PI	% Silt	% Clay	P200	M_C	M_{OPT}	Class	GI		Unsuitable	Unstable	Unsuitable	Unstable	
28	B	SS-1	1.5	3.0	0.0	1.5	28		4							10	10	A-4a	8						
	027-0	SS-2	3.0	4.5	1.5	3.0	20		4	22	14	8	33	25	58	11	10	A-4a	5	550					
	19	SS-3	4.5	6.0	3.0	4.5	16		2.5	19	14	5	35	20	55	11	10	A-4a	4	540					
		SS-4	6.0	7.5	4.5	6.0	21	16	2.5							10	10	A-4a	8						
29	B	SS-1	1.5	3.0	0.0	1.5	17		2.5	26	16	10	35	36	71	12	11	A-4a	7	2500					
	027-1	SS-2	3.0	4.5	1.5	3.0	12		2.5	25	17	8	37	39	76	16	12	A-4a	8	720		N_{60} & Mc			
	19	SS-3	4.5	6.0	3.0	4.5	13		2.5							16	10	A-4a	8						
		SS-4	6.0	7.5	4.5	6.0	13	12	2.5							16	10	A-4a	8						
30	B	SS-1	1.5	3.0	0.0	1.5	11		2.5	30	16	14	34	39	73	14	14	A-6a	9	260		N_{60}		12"	
	028-0	SS-2	3.0	4.5	1.5	3.0	17		4	28	16	12	31	34	65	15	14	A-6a	7	220					
	19	SS-3	4.5	6.0	3.0	4.5	20		1.5							15	14	A-6a	10						
		SS-4	6.0	7.5	4.5	6.0	33	11	4.5							12	14	A-6a	10						
31	B	SS-1	1.5	3.0	0.0	1.5	10		2	26	15	11	39	34	73	15	14	A-6a	8	230		N_{60}		12"	
	029-0	SS-2	3.0	4.5	1.5	3.0	27		4	25	15	10	35	33	68	13	10	A-4a	7	190		Mc			
	19	SS-3	4.5	6.0	3.0	4.5	20		4							16	10	A-4a	8						
		SS-4	6.0	7.5	4.5	6.0	23	10	4							14	10	A-4a	8						
32	B	SS-1	1.5	3.0	0.0	1.5	12		3	26	14	12	34	36	70	15	14	A-6a	8	190					
	029-1	SS-2	3.0	4.5	1.5	3.0	9		3	28	16	12	34	36	70	15	14	A-6a	8	280		N_{60}			
	19	SS-3	4.5	6.0	3.0	4.5	7		1.5							16	14	A-6a	10						
		SS-4	6.0	7.5	4.5	6.0	10	7	2.5							18	14	A-6a	10						
33	B	SS-1	1.5	3.0	0.0	1.5	12		3							13	14	A-6a	10						
	029-2	SS-2	3.0	4.5	1.5	3.0	9		2.5	26	14	12	27	28	55	17	14	A-6a	5	330		N_{60} & Mc			
	19	SS-3	4.5	6.0	3.0	4.5	13		2.5	30	16	14	32	41	73	17	14	A-6a	9	290					
		SS-4	6.0	7.5	4.5	6.0	9	9	1.5							19	14	A-6a	10						
34	B	SS-1	1.5	3.0	0.0	1.5	9		2.5	25	14	11	32	34	66	14	14	A-6a	7	180		N_{60}		12"	
	030-0	SS-2	3.0	4.5	1.5	3.0	17		4							13	10	A-4a	8			Mc			
	19	SS-3	4.5	6.0	3.0	4.5	9		4	24	14	10	32	32	64	13	10	A-4a	6	690					
		SS-4	6.0	7.5	4.5	6.0	20	9	1							15	10	A-4a	8						
35	B	SS-1	1.5	3.0	0.0	1.5	6		0.5	25	15	10	33	36	69	17	10	A-4a	7	520		HP & Mc		24"	
	031-0	SS-2	3.0	4.5	1.5	3.0	6		1.5	26	15	11	34	38	72	16	14	A-6a	8	250		HP			
	19	SS-3	4.5	6.0	3.0	4.5	16		4							14	14	A-6a	10						
		SS-4	6.0	7.5	4.5	6.0	21	6	2	34	19	15	31	38	69	22	14	A-6a	9						
36	B	SS-1	1.5	3.0	0.0	1.5	7		2	24	16	8	42	37	79	15	11	A-4a	8	220		N_{60} & Mc		15"	
	032-0	SS-2	3.0	4.5	1.5	3.0	17		3							15	16	A-6b	16						
	19	SS-3	4.5	6.0	3.0	4.5	18		2	35	17	18	31	46	77	20	16	A-6b	11	150					
		SS-4	6.0	7.5	4.5	6.0	33	7	2							15	16	A-6b	16						

OHIO DEPARTMENT OF TRANSPORTATION

Subgrade Analysis

V. 14.5 1/18/2019

#	Boring	Sample	Sample Depth		Subgrade Depth		Standard Penetration		HP (tsf)	Physical Characteristics						Moisture		Ohio DOT		Sulfate Content (ppm)	Problem		Excavate and Replace (Item 204)		Recommendation (Enter depth in inches)
			From	To	From	To	N_{60}	N_{60L}		LL	PL	PI	% Silt	% Clay	P200	M_C	M_{OPT}	Class	GI		Unsuitable	Unstable	Unsuitable	Unstable	
37	B	SS-1	1.5	3.0	0.0	1.5	11		2	32	19	13	41	50	91	18	14	A-6a	9	300		N_{60} & Mc		**12"**	
	033-0	SS-2	3.0	4.5	1.5	3.0	14		2	40	24	16	27	58	85	21	19	A-6b	10	280					
	19	SS-3	4.5	6.0	3.0	4.5	24		3.5							24	16	A-6b	16						
		SS-4	6.0	7.5	4.5	6.0	26	11	1.5							20	16	A-6b	16						
38	B	SS-1	1.5	3.0	0.0	1.5	13		4	44	20	24	21	55	76	20	18	A-7-6	14	380					
	034-0	SS-2	3.0	4.5	1.5	3.0	18		3	41	19	22	26	55	81	20	18	A-7-6	13	330					
	19	SS-3	4.5	6.0	3.0	4.5	26		3							21	18	A-7-6	16						
		SS-4	6.0	7.5	4.5	6.0	35	13	4							21	18	A-7-6	16						
39	B	SS-1	1.5	3.0	0.0	1.5	6		3							17	14	A-6a	10			N_{60} & Mc		**18"**	
	035-0	SS-2	3.0	4.5	1.5	3.0	41		4	31	17	14	29	30	59	16	14	A-6a	6	360					
	19	SS-3	4.5	6.0	3.0	4.5	52		2	33	19	14	24	20	44	16	14	A-6a	3	670					
		SS-4	6.0	7.5	4.5	6.0	3	3	0.5	32	17	15	29	25	54	26	14	A-6a	6						
40	B	SS-1	1.5	3.0	0.0	1.5	6		0.5	23	15	8	39	29	68	16	10	A-4a	7	280		HP & Mc		**24"**	
	036-0	SS-2	3.0	4.5	1.5	3.0	21		3	24	16	8	40	34	74	15	11	A-4a	8	180		Mc			
	19	SS-3	4.5	6.0	3.0	4.5	33		2.5							14	10	A-4a	8						
		SS-4	6.0	7.5	4.5	6.0	38	6	4	25	22	3	28	24	52	12	17	A-4a	3						
41	B	SS-1	1.5	3.0	0.0	1.5	18		4.5	26	16	10	38	34	72	12	11	A-4a	7	290					
	037-0	SS-2	3.0	4.5	1.5	3.0	17		4.5	27	16	11	39	34	73	14	14	A-6a	8	150					
	19	SS-3	4.5	6.0	3.0	4.5	13		4							15	14	A-6a	10						
		SS-4	6.0	7.5	4.5	6.0	38	13	3.5							15	14	A-6a	10						
42	B	SS-1	1.5	3.0	0.0	1.5	7		4	27	15	12	33	40	73	18	14	A-6a	8	260		N_{60} & Mc		**15"**	
	038-0	SS-2	3.0	4.5	1.5	3.0	10		0.5	24	15	9	34	21	55	17	10	A-4a	4	170		HP & Mc			
	19	SS-3	4.5	6.0	3.0	4.5	26		2.5	29	17	12	39	28	67	15	14	A-6a	7						
		SS-4	6.0	7.5	4.5	6.0	45	7	3							14	14	A-6a	10						

PID: PID 109232

County-Route-Section: MED-3-15.05
No. of Borings: 42

Geotechnical Consultant: ODOT - OGE
Prepared By: Stephen Taliaferro
Date prepared: 7/30/2019

Chemical Stabilization Options		
320	Rubblize & Roll	No
206	Cement Stabilization	Option
	Lime Stabilization	No
206	Depth	14''

Excavate and Replace Stabilization Options	
Global Geotextile Override(N60L):	18''
Override(HP):	24''
Global Geogrid Override(N60L):	12''
Override(HP):	18''

Design CBR	7

% Samples within 6 feet of subgrade			
$N_{60} \leq 5$	2%	HP ≤ 0.5	6%
$N_{60} < 12$	28%	0.5 < HP ≤ 1	4%
$12 \leq N_{60} < 15$	11%	1 < HP ≤ 2	26%
$N_{60} \geq 20$	42%	HP > 2	63%
M+	24%		
Rock	0%		
Unsuitable	1%		

Excavate and Replace at Surface	
Average	0''
Maximum	0''
Minimum	0''

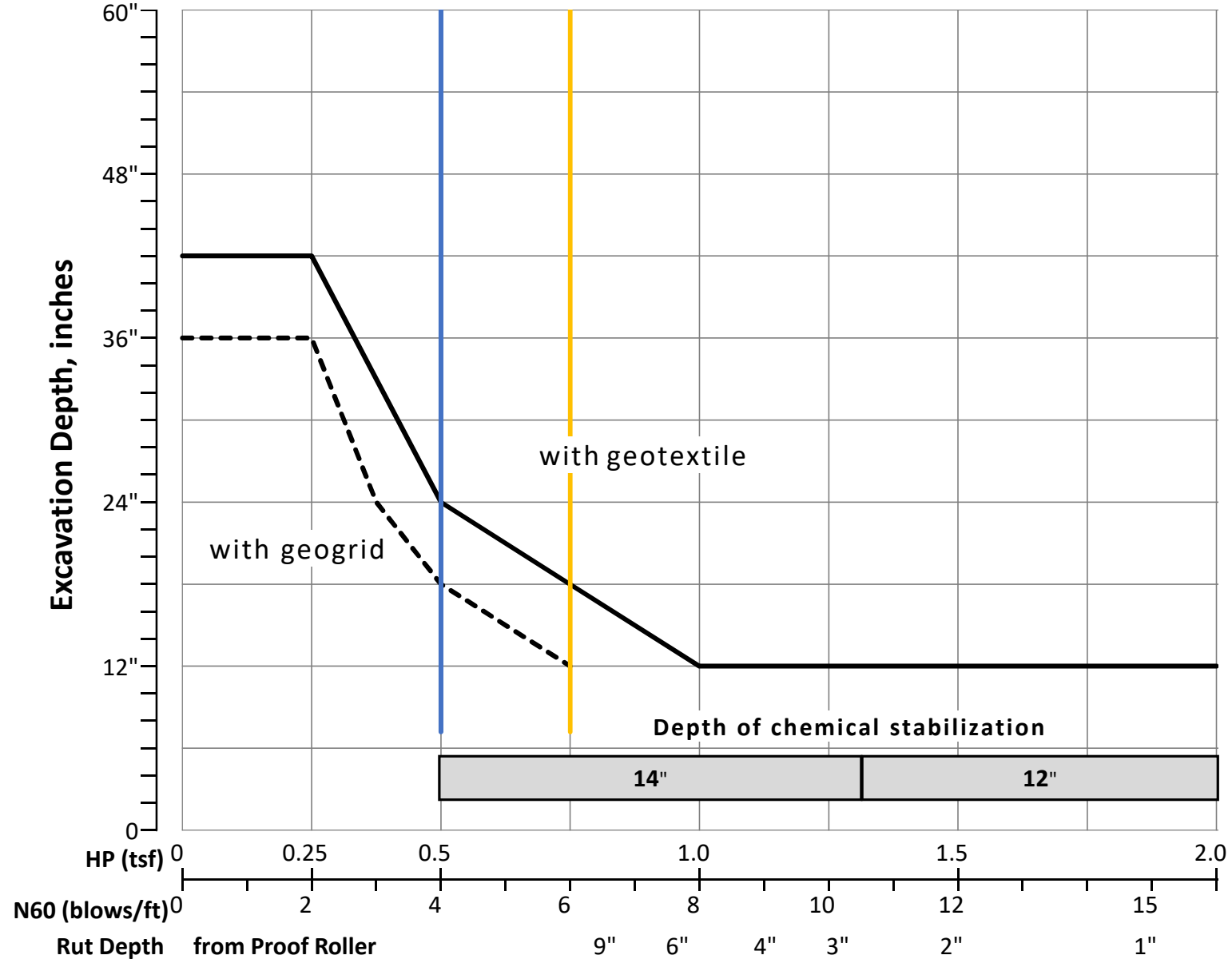
% Proposed Subgrade Surface	
Unstable & Unsuitable	67%
Unstable	65%
Unsuitable	1%

	N_{60}	N_{60L}	HP	LL	PL	PI	Silt	Clay	P 200	M_C	M_{OPT}	GI
Average	19	11	2.68	27	16	11	36	34	70	15	13	8
Maximum	52	26	4.50	44	24	24	50	58	91	26	19	16
Minimum	3	3	0.50	18	13	3	21	15	37	1	6	0

Classification Counts by Sample

ODOT Class	Rock	A-1-a	A-1-b	A-2-4	A-2-5	A-2-6	A-2-7	A-3	A-3a	A-4a	A-4b	A-5	A-6a	A-6b	A-7-5	A-7-6	A-8a	A-8b	Totals
Count	0	1	0	0	0	0	0	0	0	74	1	0	77	9	0	4	0	0	166
Percent	0%	1%	0%	0%	0%	0%	0%	0%	0%	45%	1%	0%	46%	5%	0%	2%	0%	0%	100%
% Rock|Granular|Cohesive	0%	45%									55%								100%
Surface Class Count	0	1	0	0	0	0	0	0	0	38	1	0	39	3	0	2	0	0	84
Surface Class Percent	0%	1%	0%	0%	0%	0%	0%	0%	0%	45%	1%	0%	46%	4%	0%	2%	0%	0%	100%

GB1 Figure B – Subgrade Stabilization



OVERRIDE TABLE

Calculated Average	New Values	Check to Override
2.68	0.50	☑ HP
10.79	6.00	☑ N60L

Average HP
Average N_{60L}

The subgrade analysis workbook consists of five worksheets. Each worksheet functions independently. In all of the worksheets the fields are color coded as follows:

- Every yellow highlighted field indicates a field to be entered by the user.
- Every salmon field is to indicate a problem/issue.
- Every gray or green field is a heading/informational field.

IMPORTANT: The sequence of filling out the data needs to be followed as outlined below:

1. Cover Sheet: this worksheet is designed for the purpose of entering the project information. Enter all the following fields:

County-Route-Section	This includes the county, route, section number assigned to the project.
PID	the Project Identification Number
Project Description	See Cover Sheet for list of example details
Geotechnical Consultant	The Geotechnical Consultant performing the analysis.
Prepared By	The preparer of the subgrade analysis
Date prepared	The date the analysis is performed.
Contact Information	Name, address, telephone #, and email address
No. of Borings	Enter the total number of borings within the alignment that is being analyzed.

2. Boring Logs Entry Worksheet: this worksheet has a programming code that will run in the background every time the sheet is activated and will make the sheet unresponsive for less than a minute. The code is designed to read the total number of borings from the cover sheet and generate the needed number of fields.
   a. All yellow highlighted fields are user's entry.
   b. ODOT has developed a text table export from gINT *(GB 1 Borings Log Entry Tab)* that will allow for copy and paste of all highlighted fields with the exception of proposed subgrade elevation. The designer must provide a proposed subgrade elevation in order for the spreadsheet to function properly.
   c. The Cut/Fill field is a calculated field that, based on the difference between the boring elevation and the proposed subgrade elevation, will highlight the cell either gray and adds the letter "C" to the end in a cut situation or highlights the cell in light purple and adds the letter "F" to the end in a fill situation.
   d. Every duplicate boring ID will be highlighted in salmon background and red text.
   e. **IMPORTANT**: After entering all the borings' information, the user must click "Add Subgrade Analysis Entry Fields" button. This will generate all the required fields in the "Subgrade Analysis" Worksheet.

3. Subgrade Analysis Worksheet:
   a. The boring number and boring ID is read from the "Boring Logs Entry Worksheet" excluding every boring that has six feet or more of fill.
   b. All yellow highlighted fields are to be entered by the user and salmon highlighted fields indicates a problem or issue.
   c. Every sample that has a Sulfate Content greater than or equal to 3000 will be highlighted in light salmon background. Every sample that has a Sulfate Content greater than or equal to 8000 will be highlighted in darker salmon background. Note the revised sulfate criteria in GB1 issued July 20, 2018.

d. Unsuitable/Unstable:

i. Unsuitable samples that are within 3 feet of the top of subgrade will be highlighted with salmon background and the class will be showing in this field.

ii. Unstable Samples that are within 3 feet of top of subgrade will be highlighted with salmon background and text to indicate the problem as follows:

Criterion	Stabilization Need Check	Text displayed in the field
A-1-a, A-1-b, A-3, or A-3a Soil Class	No Stabilization is needed	
HP ≥ 1.875	No Stabilization is needed	
N_{60} ≥ 15	No Stabilization is needed	
1.875 ≥ HP ≥ 1.5 and M_c≥ Opt. M_c+3	Unstable Subgrade	HP & Mc
15 ≥ N_{60} ≥ 12 and M_c≥ Opt. M_c+3	Unstable Subgrade	N_{60} & Mc
HP ≤ 1.5	Unstable Subgrade	HP
N_{60} ≤ 12	Unstable Subgrade	N_{60}

iii. The field is formulated to check for HP first and check for N_{60} second.

e. Excavate and Replace (Item 204) is going to be calculated based on the subgrade depth for each sample indicating an unsuitable or unstable problem.

f. Recommendation:

i. Geotextile Option is calculated and rounded to a multiple of 3 inches based on the subgrade depth for every sample indicating an unsuitable or unstable problem.

ii. GEOGRID Option is only offered in case of unstable subgrade problem and if the geotextile option indicates the need to excavate greater than 12 inches.

PLEASE NOTE: The Problem, Excavate & Replace, and Recommendation Fields are the responsibility of the Designer. These fields are being enhanced to attempt to capture the ODOT philosophy regarding the GB1 stabilization chart, but are considered still under development. If there are discrepancies between the spreadsheet output and the GB1 chart - the chart governs in conjunction with engineering judgement. Please contact Steve Taliaferro at stephen.taliaferro@dot.ohio.gov if you have any questions.

PLEASE NOTE: It is the Designer's responsibility to identify the most representative data when samples have been separated into multiple specimen (say 1.5 to 2.3 feet and 2.3 to 3.0 feet). The spreadsheet is not capable at this time of addressing this issue within a direct data export from gINT.

4. Results Summary:
All fields in this sheet are password protected and are either calculated or read from the other worksheets.

5. Graph Worksheet:
This worksheet is designed to read the average N_{60L} and the average HP from the Cover Sheet and plot a blue line for Average HP and orange line for Average N_{60L} on GB1 Figure B – Subgrade Stabilization. The Override Table can be used to enter HP and/or N_{60L} values that are different than the calculated averages. The Override values will change the global undercut recommendation in the Results Summary.