TEST BORING LOG

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATERWAYS ENGINEERING	Sheet No. 1 of 1 Sheets Date Started 10-10-17 Time 12:00 Date Completed 10-10-17 Time 13:30	Hole No. DH-1 Proj. No. C08:05 DGS181-26

Project Monroe Borough Flood Protection Project

Boring Location Station 1+08A North side of Canton Av. ; Offset 0.0

Dir. of Hole: Vertical X Inclined ___ Deg. from Vert. in ___ Dir.

Boring Methods Auger & Continuous 2' Split Spoon Diam. 3.25" ID / 6.5" OD Auger, 2" Split Spoon

Drilling Contractor GeoStructures

Thickness of Overburden 19.8+ feet ; Driller Josh

Depth Drilled into Rock 0.0 feet ; Inspector Scott Cox

Total Depth of Hole 19.8 feet ; Casing Size ___ , Depth ___

Ground Elev. 785.9

Ground Water Level

Date	Depth (ft.)	Elev.
10-10-17 13:45	18.85	767.10

Depth(ft)	SAMPLE per Blows 6"	No.	Rec.	Type	C.B.	Depth (ft.)	LOG	Elev.	Description of Materials	Field Tests
	5-7	S-1	1.2/	SS		0.0-0.3			Sandy SILT: dk gray, moist, stiff	
2.0	8-4		2.0			0.3-2.0			Sandy Silty GRAVEL: gray-brown, moist, med compact, fine to coarse, angular to sub-angular gravel	
	WOH-1	S-2	0.9/	SS		2.0-4.0			Sandy SILT: brown, wet, soft/med stiff, sandstone fragments in spoon tip	
4.0	5-21		2.0			4.0-6.4			Silty Sandy GRAVEL: red-brown & gray, compact/v. compact, fine to coarse, angular to sub-rounded gravel	
	13-18	S-3	1.6/	SS		6.4-6.7			SAND with Silt & Gravel: red-brown, moist, med compact, fine to coarse sand, fine, sub-angular gravel	
6.0	34-27		2.0			6.7-7.6			Silty Sandy GRAVEL: red-brown & gray, compact/v. compact, fine to coarse, angular to sub-rounded gravel	
7.6	17-9 24-50/0.1	S-4	1.3/1.6	SS		7.6-8.0			Auger	
8.0	Auger					8.0-9.3			Sandy GRAVEL with Silt: brown, moist, v compact, fine to coarse, sub-rounded gravel, lots of spoon-width sandstone fragments	
9.3	31-48-50/0.3	S-5	1.2/1.3	SS		9.3-10.0			Auger	
10.0	Auger					10.0-10.2			Sandy GRAVEL with Silt: brown, moist, v compact, fine to coarse, sub-rounded gravel, lots of spoon-width sandstone fragments	
	17-14	S-6	1.7/	SS		10.2-12.0			Silty SAND with Gravel: gray-brown, moist, med compact/compact, med to coarse sand, mostly fine sub-angular to sub-rounded gravel (till)	
12.0	24-27		2.0			12.0-14.0			Sandy GRAVELwith Silt: brown, moist, med to v compact, fine to coarse, sub-rounded gravel, lots of spoon-width sandstone fragments	
	46-48	S-7	2.0/	SS		14.0-19.8			Silty Sandy GRAVEL: moist, except wet at 16', 18' and 19.8', v compact, sub-angular to sub-rounded gravel	
14.0	20-33		2.0							
	32-36	S-8	1.8/	SS					End of Hole at 19.8 ft.	
16.0	27-21		2.0							
	30-30	S-9	1.8/	SS						
18.0	29-28		2.0							
	29-32	S-10	1.4/	SS						
19.8	31-50/0.3		1.8							

US = Undisturbed Sample
SS = Split Spoon
K = Field Permeability (cm/sec.)
V = Vane Shear Test
PT = Pressure Test
CB = Casing Blows
RQD = Rock Quality Designation

Remarks:

Project Monroe Borough Hole No. DH-1

TEST BORING LOG

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATERWAYS ENGINEERING	Sheet No. 1 of 1 Sheets Date Started 10-10-17 Time 14:30 Date Completed 10-10-17 Time 17:00	Hole No. DH-2 Proj. No. C08:05 DGS181-26

Project Monroe Borough Flood Protection Project

Boring Location Station 1+37A South side of Canton Av. ,Offset 0.0

Dir. of Hole: Vertical X Inclined ___ Deg. from Vert. in _____ Dir.

Boring Methods Auger & Continuous 2' Split Spoon Diam. 3.25" ID / 6.5" OD Auger, 2" Split Spoon

Drilling Contractor GeoStructures

Thickness of Overburden 18.3+ feet ,Driller Josh

Depth Drilled into Rock 0.0 feet ,Inspector Scott Cox

Total Depth of Hole 18.3 feet ,Casing Size _____ ,Depth _____

Ground Elev. 785.7

Ground Water Level

Date	Depth (ft.)	Elev.
10-10-17	dry	< 767.4
17:05		

Depth(ft)	SAMPLE per Blows/6"	No.	Rec.	Type	C.B.	Depth (ft.)	LOG	Elev.	Description of Materials	Field Tests
	7-18 19-23	S-1	1.9/ 2.0	SS		0.0-0.3			Sandy SILT: dk gray, moist, stiff	
2.0						0.3-2.0			Silty Gravelly SAND: brown, dry, compact, fine to coarse, sub-angular to sub-rounded gravel	
	17-11 6-6	S-2	1.3/ 2.0	SS		2.0-3.2			Sandy GRAVEL with Silt: brown, dry, med compact, coarse sub-rounded to angular gravel	
4.0						3.2-4.0			SILT with Sand: orange-brown, moist, stiff, fine sand	
5.5	9-18 50/0.5	S-3	0.9/1.5	SS		4.0-5.5			Silty Gravelly SAND: lt brown, dry, compact, fine to coarse, sub-rounded gravel	
6.0	Auger					5.5-6.0			Auger	
	22-32 34-36	S-4	1.8/ 2.0	SS		6.0-9.6			Sandy GRAVEL with Silt: brown, dry, v compact, fine to coarse, sub-angular to sub-rounded gravel	
8.0										
9.6	26-25 37-50/0.1	S-5	1.5/1.6	SS						
10.0	Auger					9.6-12.0			Auger	
	Auger			SS		12.0-12.2			Rock Fragments	
12.0						12.2-12.7			Gravelly Silty SAND: dk red-brown, dry, v compact, (an almost completely weathered siltstone fragment)	
13.0	48-50/0.5	S-6	1.0/1.0	SS		12.7-13.0			Silty Sandy GRAVEL: red-brown & gray, moist, v compact, lots of spoon-width fragments	
14.0	Auger					13.0-14.0			Auger	
	24-21 34-50/0.5	S-7	1.8/ 2.0	SS		14.0-16.0			Silty Sandy GRAVEL: brown & red-brown, moist 14-15, wet 15-16, compact/v compact, fine to coarse rounded to sub-angular gravel (till)	
16.0	50/0.5	S-8	0.5/0.5	SS						
16.5	Auger					16.0-16.5			Same as 14-16? May be caved material.	
18.0	50/0.3	S-9	0.3/0.3	SS		16.5-18.0			Auger	
18.3						18.0-18.3			Sandstone Fragments	

End of Hole at 18.3 ft.

US = Undisturbed Sample
SS = Split Spoon
K = Field Permeability (cm/sec.)
V = Vane Shear Test
PT = Pressure Test
CB = Casing Blows
RQD = Rock Quality Designation

Remarks:

Project Monroe Borough Hole No. DH-2

TEST BORING LOG

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATERWAYS ENGINEERING	Sheet No. 1 of 1 Sheets Date Started 10-11-17 Time 09:30 Date Completed 10-11-17 Time 10:30	Hole No. DH-4 Proj. No. C08:05 DGS 181-26

Project Monroe Borough Flood Protection Project

Boring Location Station 12+40A Field corner southeast of Spruce St. ; Offset 3.0 ft. Left

Dir. of Hole: Vertical X Inclined ___ Deg. from Vert. in ___ Dir.

Boring Methods Auger & Continuous 2' Split Spoon Diam. 3.25" ID / 6.5" OD Auger, 2" Split Spoon

Drilling Contractor GeoStructures

Thickness of Overburden 10.0+ feet ; Driller Josh

Depth Drilled into Rock 0.0 feet ; Inspector Scott Cox

Total Depth of Hole 10.0 feet ; Casing Size ___ , Depth ___

Ground Elev. 776.8

Ground Water Level

Date	Depth (ft.)	Elev.
10-11-17	dry	< 766.8
10:30		

Depth(ft)	SAMPLE per Blows 6"	No.	Rec.	Type	C.B.	Depth (ft.)	LOG	Elev.	Description of Materials	Field Tests
	3-4	S-1	1.9/	SS		0.0-1.1			SILT with Sand: bown, moist, m stiff, fine to med sand	
2.0	9-16		2.0			1.1-2.0			Sandy GRAVEL with Silt: brown, dry, m compact, fine to coarse sub-rounded to rounded gravel	
	18-30	S-2	1.9/	SS		2.0-4.0			GRAVEL with Sand trace Silt?: gray-brown, dry, compact/v compact, mostly spoon-width sandstone fragments, smaller gravel is sub-round to round (outwash or alluvium), sand & silt may be crushed sandstone gravel	
4.0	21-38		2.0			4.0-6.0			SAND & GRAVEL with Silt/trace Silt: gray-brown, dry, compact, fine to coarse sand, fine to coarse rounded gravel (outwash or alluvium)	
	16-25	S-3	1.6/	SS		6.0-10.0			Sandy GRAVEL trace Silt: gray-brown & red brown, dry, compact, fine to coarse sand, fine to coarse sub-rounded to rounded gravel	
6.0	19-17		2.0							
	15-17	S-4	1.3/	SS						
8.0	19-29		2.0							
	11-12	S-5	1.6/	SS						
10.0	24-29		2.0							

End of Hole at 10.0 ft.

US = Undisturbed Sample
SS = Split Spoon
K = Field Permeability (cm/sec.)
V = Vane Shear Test
PT = Pressure Test
CB = Casing Blows
RQD = Rock Quality Designation

Remarks:
Terminated at 10 ft. Scheduled depth is 28 ft.

Project Monroe Borough Hole No. DH-4