



STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING LOG

Hyde Park Bridge #42
STP CULV (26)

Boring No.: B-1

Page No.: 1 of 2

Pin No.:

Checked By: DTH

Boring Crew: J. Wimet (GeoDesign), J. Leonhardt (TransTech)

Date Started: 8/13/12 Date Finished: 8/14/12

VTSPG NAD83: N 762699.00 ft E 1612208.00 ft

Station: 2+84 Offset: 14' R

Ground Elevation: 635.0 ft

Type:	Casing		Sampler	Groundwater Observations		
	FJ	SS		Date	Depth (ft)	Notes
I.D.:	4 in	1.38 in				
Hammer Wt:	140 lb.	140 lb.		08/13/12	12.0	Wet soil.
Hammer Fall:	30 in.	30 in.		08/14/12	21.0	In casing (overnight).
Hammer/Rod Type:	Auto/NWJ					
Rig:	CME 75 TRACK	CE - 1.43				

Depth (ft)	Strata (f)	CLASSIFICATION OF MATERIALS (Description)	Run (Op deg.)	Core Rec. Z (ft)	Drill Rate (min/ft)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
0		Asphalt, 0.0 ft - 0.2 ft										
5		Visual Description (Burmister), S1 (0.5'-2'): Medium dense, brown fine to coarse SAND, some fine Gravel, little Silt, slightly moist, (AASHTO M145 Classification: A-1-b) Rec. - 1.0 ft				9-12-14 (26)		37.3	39.3	11.6		
		Visual Description (Burmister), S2 (2'-4'): Medium dense, S2A - Top 6": Similar to S1, (AASHTO M145 Classification: A-1-b) S2B - Bottom 18": Brown fine SAND and SILT, slightly moist, (AASHTO M145 Classification: A-4), Rec. - 2.0 ft				2-5-4-4 (9)					29	6
10		Visual Description (Burmister), S3 (5'-7'): S3A - Top 17": Loose, brown fine SAND, some Silt, slightly moist, (AASHTO M145 Classification: A-2-4) S3B - Bottom 4": Medium, gray finely parted SILT & CLAY, moist, (AASHTO M145 Classification: A-4), Rec. - 1.75 ft				10-10-14 (24)	4.1	25.3	48.4	13.8		
		Visual Description (Burmister), S4 (7'-9'): Loose, S4A - Top 17": Gray SILT, trace Clayey Silt, trace fine Sand, moist, S4B - Bottom 3": Brown SILT and fine SAND, slightly moist, Rec. - 1.67 ft, (AASHTO M145 Classification: A-4)				14-12 (24)	10.6	0.9	61.9	37.1		
15		Visual Description (Burmister), S5 (10'-12'): Medium dense, brown fine SAND and SILT, moist, Rec. - 2.0 ft				7-8-7-6 (15)	16.5					
		Visual Description (Burmister), S6 (12'-14'): S6A - Top 6": Loose, brown fine SAND and SILT, wet, S6B - Bottom 12": Medium, gray finely parted Clayey SILT, trace fine Sand, moist, Rec. - 1.5 ft, (AASHTO M145 Classification: A-4)				2-3-2-9 (5)	22.7	0.6	48.7	50.1		
20		Visual Description (Burmister), S7 (15'-17'): Medium dense, alternating 3" to 6" layers of brown fine SAND and gray SILT, trace Clayey Silt, moist (silt layers) to wet (sand layers), Rec. - 1.33 ft, (AASHTO M145 Classification: A-4)				8-9-5-4 (14)	22.2		30.9	69.1		
		Visual Description (Burmister), S8 (17'-19'): Medium dense, gray finely parted Clayey SILT, trace fine Sand, trace Organic Fibers, moist to wet, Rec. - 1.33 ft, (AASHTO M145 Classification: A-4)				4-4-6-8 (10)	25.9		4.2	95.8		
25		Visual Description (Burmister), S9 (20'-22'): Loose, brown and gray with occasional black partings Clayey SILT, some fine Sand, trace Silt & Clay, trace Organic Fibers, slight Organic Odor, wet, Rec. - 1.33 ft				6-4-5-5 (9)	24.7					
		Visual Description (Burmister), S10 (22'-24'): Medium dense, gray finely parted SILT, little Clayey Silt, trace Silty Clay partings, trace fine Sand, trace (-) Organic Fibers, wet, Rec. - 1.33 ft, (AASHTO M145 Classification: A-4)				2-5-6-7 (11)	25.9		6.5	93.5	26	3
30		Visual Description (Burmister), S11 (25'-27'): Medium dense, S11A - Top 14": Grayish brown Clayey SILT, little fine Sand, trace Organic Fibers, wet, S11B - Bottom 1": Gray SILT and fine to medium SAND, little (-) fine Gravel, wet, Rec. - 1.25 ft, (AASHTO M145 Classification: A-4)				5-6-6-15 (12)	25.9		7.0	93.0		
		Visual Description (Burmister), S12 (30'-32'): Loose, gray to grayish brown SILT, some finely parted Clayey SILT, little fine to medium Sand, trace fine Gravel, trace Organic Fibers, wet, Rec. - 0.83 ft, (AASHTO M145 Classification: A-4)				6-4-3-4 (7)	19.7	9.3	23.4	60.2		
35		Visual Description (Burmister), S13 (35'-36'): Refusal, brownish gray fine to coarse SAND and fine GRAVEL, some Silt, wet, (AASHTO M145 Classification: A-1-b) Rec. - 0.42 ft				9-5-0	11.3	47.7	26.5	20.2		
		Field Note: Inferred weathered rock. 37.0 ft - 42.0 ft, (C1) Fair quality, hard, fresh with occasional decayed abscesses up to 1/4" in diameter in top 12" of core, close to moderately jointed, gray with occasional white intrusions PHYLLITE. Moderate reaction to dilute HCl in white intrusions only. Graphite sheen noticeable on fractured surfaces. Fractured surfaces range widely from horizontal to near vertical. 42.0 ft - 43.1 ft, (C2) Excellent quality, slightly weathered with moderately weathered jointing, hard, closely jointed gray with white intrusions PHYLLITE. Moderate reaction to dilute HCl in white portions. Jointing at approximately 70 degrees from horizontal with occasional horizontal seams. 43.1 ft - 47.0 ft, (3) Fair quality, slightly to moderately weathered, hard, close to moderately jointed, gray PHYLLITE with white intrusions (Quartz and other minerals). Occasional white intrusions have a moderate reaction to HCl (non-quartz portions). Jointing typically between 70 degrees from horizontal to vertical with occasional horizontal fractures and joints. Hole stopped @ 47.0 ft										
40		Top of Bedrock @ 37.0 ft	C1	100 (73)								
			C2	100 (100)	15							
			C3	85 (57)	7.5							
45					7.5							
					7.5							
					7.5							

Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.



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BORING LOG

Hyde Park Bridge #42
STP CULV (26)

Boring No.: B-1

Page No.: 2 of 2

Pin No.:

Checked By: DTH

Boring Crew: J. Wimet (GeoDesign), J. Leonhardt (TransTech)

Date Started: 8/13/12 Date Finished: 8/14/12

VTSPG NAD83: N 762699.00 ft E 1612208.00 ft

Station: 2+84 Offset: 14' R

Ground Elevation: 635.0 ft

Type:	Casing		Sampler	Groundwater Observations		
	FJ	SS		Date	Depth (ft)	Notes
I.D.:	4 in	1.38 in				
Hammer Wt:	140 lb.	140 lb.		08/13/12	12.0	Wet soil.
Hammer Fall:	30 in.	30 in.		08/14/12	21.0	In casing (overnight).
Hammer/Rod Type:	Auto/NWJ					
Rig:	CME 75 TRACK	CE - 1.43				

Depth (ft)	Strata (f)	CLASSIFICATION OF MATERIALS (Description)	Run (Op deg.)	Core Rec. Z (ft)	Drill Rate (min/ft)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
55		Classification: A-4) Visual Description (Burmister), S12 (30'-32'): Loose, gray to grayish brown SILT, some finely parted Clayey SILT, little fine to medium Sand, trace fine Gravel, trace Organic Fibers, wet, Rec. - 0.83 ft, (AASHTO M145 Classification: A-4)										
60		Visual Description (Burmister), S13 (35'-36'): Refusal, brownish gray fine to coarse SAND and fine GRAVEL, some Silt, wet, (AASHTO M145 Classification: A-1-b) Rec. - 0.42 ft										
65		Field Note: Inferred weathered rock. 37.0 ft - 42.0 ft, (C1) Fair quality, hard, fresh with occasional decayed abscesses up to 1/4" in diameter in top 12" of core, close to moderately jointed, gray with occasional white intrusions PHYLLITE. Moderate reaction to dilute HCl in white intrusions only. Graphite sheen noticeable on fractured surfaces. Fractured surfaces range widely from horizontal to near vertical. 42.0 ft - 43.1 ft, (C2) Excellent quality, slightly weathered with moderately weathered jointing, hard, closely jointed gray with white intrusions PHYLLITE. Moderate reaction to dilute HCl in white portions. Jointing at approximately 70 degrees from horizontal with occasional horizontal seams. 43.1 ft - 47.0 ft, (3) Fair quality, slightly to moderately weathered, hard, close to moderately jointed, gray PHYLLITE with white intrusions (Quartz and other minerals). Occasional white intrusions have a moderate reaction to HCl (non-quartz portions). Jointing typically between 70 degrees from horizontal to vertical with occasional horizontal fractures and joints. Hole stopped @ 47.0 ft										
70		Remarks: 1) Ground surface elevation, coordinates, and stationing are estimated from an electronic site plan provided by TY Lin and taped measurements in the field. 2) Augered to 6" deep prior to sampling S1. 3) Noted a wet layer in at the top of the spoon in sample S6 at 12' deep. Let stabilize for 15 minutes and check water level in borehole. Borehole dry to 14'. Infer wet zone to be perched water within the fill soils. 4) Used 3.25" I.D. hollow stem augers (HSA) to 15' deep. Switch from HSA's to 4" O.D. flush joint casing after sampling S7 at 15' deep. 5) Driller notes loss of water while drilling from 33' deep. Infer due to reaching bottom of clayey silt fill soils. 6) Advance roller bit through inferred weathered rock from 36' to 37' deep. 7) Note black graphite sheen on wash water throughout coring. 8) Core run C2 was stopped after 13" of penetration at 43.1' deep due to core blockage. 9) SPT N-values were performed according to ASTM D1586. 10) Lab testing gradations reported are per AASHTO M145.										
75												
80												
85												
90												
95												

Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
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Boring Crew: J. Wimet (GeoDesign), J. Leonhardt (TransTech)
Date Started: 8/14/12 Date Finished: 8/15/12
VTSPG NAD83: N 762609.00 ft E 1612324.00 ft
Station: 4+28 Offset: 15' L
Ground Elevation: 634.0 ft

Type: FJ SS
I.D.: 4 in 1.38 in
Hammer Wt: 140 lb. 140 lb.
Hammer Fall: 30 in. 30 in.
Hammer/Rod Type: Auto/NWJ
Rig: CME 75 TRACK CE - 1.43

Casing			Sampler			Groundwater Observations		
Date	Depth (ft)	Notes	Date	Depth (ft)	Notes	Date	Depth (ft)	Notes
08/14/12	16.5	Wet soil.						
08/15/12	24.5	In casing overnight.						

Depth (ft)	Strata (ft)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. z (ft)	Drill Rate (min/ft)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
0	0.0	Asphalt, 0.0 ft - 0.2 ft										
5	0.2 - 1.08	Visual Description (Burmister), S1 (0.5'-2'): Medium dense, brown fine to coarse SAND and fine to coarse GRAVEL, trace (+) Silt, dry, (AASHTO M145 Classification: A-1-a) Rec. - 1.08 ft				18-11-14 (25)	2.8	42.1	37.2	8.2		
10	1.08 - 2.4	Visual Description (Burmister), S2 (2'-4'): Medium dense, light brown fine SAND, some Silt, trace fine Gravel, slightly moist, Rec. - 1.58 ft, (AASHTO M145 Classification: A-2-4)				2-2-2-3 (4)	6.8	1.3	72.4	26.3		
15	2.4 - 4.4	Visual Description (Burmister), S3 (5'-7'): Very loose, light brown fine to medium SAND, some Silt, slightly moist, Rec. - 1.5 ft, (AASHTO M145 Classification: A-2-4)				1-1-2-3 (3)	5.2	0.4	74.0	25.6	31	3
20	4.4 - 5.4	Visual Description (Burmister), S4 (7'-9'): Very loose, S4A - Top 7": similar to S3. (AASHTO M145 Classification A-2-4) S4B - Bottom 8": Soft, gray Clayey SILT, trace Clay & Silt partings, moist, (AASHTO M145 Classification A-4), Rec. - 1.25 ft				1-2-2-5 (4)	29.1		4.5	95.5	30	5
25	5.4 - 6.4	Visual Description (Burmister), S5 (10'-12'): Very loose, gray SILT, little (-) Clayey Silt, very moist, Rec. - 1.5 ft, (AASHTO M145 Classification: A-4)				5-4-4-4 (8)	8.4					
30	6.4 - 7.4	Visual Description (Burmister), S6 (12'-14'): Loose, light brown fine SAND, some (-) Silt, slightly moist, Rec. - 1.75 ft				1-4-3-6 (7)	28.8		12.5	87.5		
35	7.4 - 10.4	Visual Description (Burmister), S7 (15'-17'): Loose, gray-brown to gray SILT, little Clayey Silt, trace fine Sand, very moist to wet at tip, Rec. - 1.58 ft, (AASHTO M145 Classification: A-4)				3-6-4-5 (10)	28.7		6.6	93.4	30	11
40	10.4 - 12.4	Visual Description (Burmister), S8 (17'-19'): Medium dense gray with occasional brown mottling Clayey Silt, trace (+) fine Sand, trace Silty Clay seams up to 1/2" thick, wet, Rec. - 1.17 ft, (AASHTO M145 Classification: A-6)				9-16-14-50 (30)	21.9		13.0	87.0		
45	12.4 - 14.4	Visual Description (Burmister), S9 (20'-22'): Dense, S9A - Top 6": Grayish brown finely parted SILT, trace Clayey Silt, trace fine Sand, wet. S9B - Bottom 10": Light brown SILT and fine to medium SAND, little fine to coarse Gravel, wet. Coarse Gravel stuck in tip, Rec. - 1.33 ft, (AASHTO M145 Classification: A-4)				19-12-14-16 (26)	12.6	18.6	32.6	37.8		
50	14.4 - 17.4	Visual Description (Burmister), S10 (22'-24'): Medium dense, grayish brown SILT, some fine to medium Sand, little fine Gravel, wet, Rec. - 1.25 ft				24-50/3"	10.5	19.1	33.0	36.7		
55	17.4 - 25.75	Visual Description (Burmister), S11 (25'-25.75'): Refusal, gray SILT and fine to medium SAND, little fine Gravel, wet, Rec. - 0.5 ft, (AASHTO M145 Classification: A-4)				12-10-5-50/4" (45)	10.4		31.0	42.4	23.3	
60	25.75 - 32.0	Visual Description (Burmister), S12 (30'-31.8') Medium dense, S12A - Top 11": Gray fine to medium SAND, some Silt, some fine Gravel, wet, Rec. - 1.25 ft, (AASHTO M145 Classification: A-2-4) S12B - Bottom 4": Gray				Top of Bedrock @ 32.0 ft						

Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
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Boring Crew: J. Wimet (GeoDesign), J. Leonhardt (TransTech)
Date Started: 8/14/12 Date Finished: 8/15/12
VTSPG NAD83: N 762609.00 ft E 1612324.00 ft
Station: 4+28 Offset: 15' L
Ground Elevation: 634.0 ft

Type: FJ SS
I.D.: 4 in 1.38 in
Hammer Wt: 140 lb. 140 lb.
Hammer Fall: 30 in. 30 in.
Hammer/Rod Type: Auto/NWJ
Rig: CME 75 TRACK CE - 1.43

Casing			Sampler			Groundwater Observations		
Date	Depth (ft)	Notes	Date	Depth (ft)	Notes	Date	Depth (ft)	Notes
08/14/12	16.5	Wet soil.						
08/15/12	24.5	In casing overnight.						

Depth (ft)	Strata (ft)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. z (ft)	Drill Rate (min/ft)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
55	55 - 58	DECOMPOSED ROCK, foliated, (AASHTO M145 Classification: A-1-b) 32.0 ft - 34.8 ft, (C1) Fair quality, highly to moderately weathered, moderately hard to hard, fractured (top 10") to close jointed, gray with white intrusions PHYLLITE. Moderate reaction to dilute HCl in white intrusions, jointing near vertical with occasional horizontal beds.										
60	58 - 60	34.8 ft - 38.0 ft, (C2) Fair quality, slightly weathered with moderately weathered jointing, moderately hard to hard, close to moderately jointed, gray with white and occasional green PHYLLITE. With occasional white Quartzite intrusions. Moderate reaction to dilute HCl in white non-quartzite intrusions. Jointing at near vertical with occasional moderately weathered horizontal seams.										
65	60 - 65	38.0 ft - 40.3 ft, (C3) Good quality, slightly to moderately weathered with moderately weathered joints, moderately hard to hard, closely jointed, gray with white and occasional green PHYLLITE. With occasional white Quartzite intrusions. Moderate reaction to dilute HCl in occasional white non-quartzite intrusions. Jointing at near vertical with occasional near horizontal seams (possible driller breaks).										
70	65 - 70	40.3 ft - 42.0 ft, (C4) Poor quality, slightly to moderately weathered, moderately hard to hard, closely jointed, gray with green and white PHYLLITE. Occasional moderate reaction to dilute HCl in white intrusions. Jointing near vertical.										
75	70 - 75	Hole stopped @ 42.0 ft										
80	75 - 80	Remarks: 1) Ground surface elevation, coordinates, and stationing are estimated from an electronic site plan provided by TY Lin and taped measurements in the field. 2) Augered to 6" deep prior to sampling S1. 3) Auger grinding from 2' to 2.5' on inferred cobble or boulder. 4) Used 3.25" I.D. hollow stem augers (HSA) to 15' deep. Switch from HSA's to 4" O.D. flush joint casing after sampling S7 at 15' deep. 5) Driller attempted to advance boring open hole below 20' deep through dense silt. Noted approximately 12" of heave at 25' deep. Driller drove casing to 25' deep and cleared with the roller bit prior to taking sample S11. 6) Clean hole with roller bit and telescope 3" casing to 32' deep prior to coring. 7) Core run C1 was stopped after 33" of penetration at 34.8' deep due to core block. 8) Ended core run C2 at 38' due to core block. Recovered lost portion of C1 when coring C2 (39" penetration with 42" recovery). 9) Ended core run C3 at 40.3' deep due to core block. 10) SPT N-values were performed according to ASTM D1586. 11) Lab testing gradations reported are per AASHTO M145.										

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BORING LOG (EDITED): 888-04-2 HYDE PARK BRIDGE, VERMONT AOT.GDT 10/12/12

BORING LOG (EDITED): 888-04-2 HYDE PARK BRIDGE, VERMONT AOT.GDT 10/12/12



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BORING LOG

Hyde Park Bridge #42
 STP CULV (26)

Boring No.: B-3 (OW)

Page No.: 1 of 1

Pin No.:

Checked By: DTH

Boring Crew: J. Wimett (GeoDesign), J. Leonhardt (TransTech)
 Date Started: 8/16/12 Date Finished: 8/16/12
 VTSPG NAD83: N 762732.00 ft E 1612226.00 ft
 Station: 2+71 Offset: 21' L
 Ground Elevation: 636.0 ft

Casing Type: FJ
 Sampler Type: SS
 I.D.: 4 in / 1.38 in
 Hammer Wt: 140 lb. / 140 lb.
 Hammer Fall: 30 in. / 30 in.
 Hammer/Rod Type: Auto/NWJ
 Rig: CME 75 TRACK CE = 1.43

Groundwater Observations

Date	Depth (ft)	Notes
08/16/12	12.0	Wet soil.
08/16/12	19.5	In well (1.5 hr)
08/16/12	19.5	In well (4 hrs).

Depth (ft)	Strata (t)	CLASSIFICATION OF MATERIALS (Description)	Well Diagram	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
Top of Well Elevation: 636.0 ft										
5	XXX	Visual Description (Burmister), S1 (0'-2'): Medium dense, brown fine to coarse SAND, some fine to coarse Gravel, little (-) Silt, moist, Rec. = 1.08 ft, (AASHTO M145 Classification: A-1-b)		2-5-6-10 (11)	5.0	44.3	47.0	8.7		
5	XXX	Visual Description (Burmister), S2 (5'-7'): Medium dense, brown fine SAND and SILT, moist, Rec. = 0.92 ft, (AASHTO M145 Classification: A-4)		7-6-6-5 (12)	11.7	0.3	61.9	37.8		
10	XXX	Visual Description (Burmister), S3 (10'-12'): Loose, gray SILT, some Clayey Silt, trace fine Sand, very moist, Rec. = 1.0 ft, (AASHTO M145 Classification: A-4)		3-3-3-4 (6)	28.5	4.8	3.4	91.8	29	4
15	XXX	Visual Description (Burmister), S4 (15'-17'): Very loose, gray SILT, little Clayey Silt, trace Silty Clay, trace fine Sand, wet, Rec. = 1.08 ft, (AASHTO M145 Classification: A-4)		3-2-2-2 (4)	30.4	0.9	8.6	90.5	23	2
20	XXX	Visual Description (Burmister), S5 (20'-22'): Loose, gray-brown grading to gray with occasional black spots SILT, little fine Sand, trace fine Gravel, trace Organic Fibers, occasional layering towards bottom of sample, very moist, Rec. = 1.33 ft, (AASHTO M145 Classification: A-4)		6-4-5-3 (9)	23.8	4.6	21.8	73.6		
25	XXX	Visual Description (Burmister), S6 (25'-27'): Medium dense, gray fine to medium SAND and SILT, some fine Gravel, wet, (AASHTO M145 Classification: A-2-4) Rec. = 1.17 ft		1-5-5-4 (10)	10.7	29.1	38.4	32.5		
30	XXX	Visual Description (Burmister), S7 (30'-32'): Medium dense, gray fine to medium SAND and fine to coarse GRAVEL, little Silt, wet, (AASHTO M145 Classification: A-1-b) Rec. = 0.83 ft		18-10-12-16 (22)	8.0	54.5	30.7	14.8		
35	XXX	Visual Description (Burmister), S8 (35'-35.8') Refusal, fine to coarse SAND, some fine to coarse Gravel, little (+) Silt, wet, Rec. = 0.83 ft, (AASHTO M145 Classification: A-1-b)		38-50/4"	11.7	36.9	43.0	20.1		
40	XXX	Visual Description (Burmister), S9 (38'-38.1'): Refusal, gray WEATHERED ROCK, wet. Rec. = 0.08 ft	50/1"							
Hole stopped @ 38.1 ft Roller bit refusal in inferred bedrock.										
Remarks: 1) Ground surface elevation, coordinates, and stationing are estimated from an electronic site plan provided by TY Lin and taped measurements in the field and taped measurements in the field. 2) Infer natural soils at 22' based on slight increase in roller bit resistance. 3) Increase in rig chatter noted beginning at 28' deep through denser soils. 4) Infer cobble or small boulder from 33.5' to 34' deep based on roller bit resistance. 5) Infer top of bedrock at 36.5'. Roller bit into rock to 38' deep. 6) SPT N-values were performed according to ASTM D1586. 7) Lab testing gradations reported are per AASHTO M145.										

Notes:
 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
 2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
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BROGIN LOG (EDITED) 888-04.2 HYDE PARK.GPJ VERMONT AOT.GDT 10/12/12



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SUBSURFACE INFORMATION

BORING LOG

Hyde Park Bridge #42
STP CULV (26)

Boring No.: B-4

Page No.: 1 of 1

Pin No.:

Checked By: DTH

Boring Crew: J. Wimett (GeoDesign), J. Leonhardt (TransTech)
Date Started: 8/16/12 Date Finished: 8/16/12
VTSPG NAD83: N 762589.00 ft E 1612302.00 ft
Station: 4+29 Offset: 15' R
Ground Elevation: 633.0 ft

Casing: H.S.A. Sampler: SS
Type: I.D.: 3.25 in 1.38 in
Hammer Wt: N.A. 140 lb.
Hammer Fall: 30 in. 30 in.
Hammer/Rod Type: Auto/AWJ
Rig: CME 75 TRACK CE = 1.43

Groundwater Observations

Date	Depth (ft)	Notes
08/16/12	15.0	Wet soil.
08/16/12	25.7	In augers (30 min)
08/16/12	25.0	In augers (70 min)

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
0	X X X	Asphalt, 0.0 ft - 0.3 ft							
5	X X X	Visual Description (Burmister), S1 (0.5'-2'): Medium dense, brown fine to coarse SAND, some (-) fine to coarse Gravel, little (-) Silt, slightly moist, (AASHTO M145 Classification: A-1-b) Rec. = 1.08 ft	11-14-15 (29)	3.5	35.6	51.5	12.9		
5	X X X	Visual Description (Burmister), S2 (5'-7'): Very loose, light brown fine SAND, little Silt, slightly moist, Rec. = 1.42 ft, (AASHTO M145 Classification: A-2-4)	3-3-1-2 (4)	6.7	1.6	78.7	19.7		
10	X X X	Visual Description (Burmister), S3 (10'-12'): Loose gray SILT, trace brown fine Sand (concentrated in one 3" seam), trace Silty Clay, moist (sand) to very moist (silt/clay), Rec. = 1.58 ft, (AASHTO M145 Classification: A-4)	2-4-5-4 (9)	22.2		4.6	95.4	23	2
15	X X X	Visual Description (Burmister), S4 (15'-17'): Loose, gray and brown SILT, trace fine Sand, very moist to wet (perched), Rec. = 1.42 ft, (AASHTO M145 Classification: A-4)	2-2-3-3 (5)	26.5		5.1	94.9		
20	X X X	Visual Description (Burmister), S5 (20'-22'): Medium dense, olive brown SILT, little fine Sand, little fine Gravel, wet, Rec. = 0.67 ft, (AASHTO M145 Classification: A-4)	4-6-6-10 (12)	19.0	20.7	12.5	66.8		
25	X X X	Field Note, Inferred Gravelly Sandy Silt. Rec. = 1.0 ft	9-16-52 (68)	6.2	63.8	24.3	11.9		
30	X X X	Visual Description (Burmister), S6 (25'-26.5'): Refusal, dark gray DECOMPOSED ROCK (fine to coarse Gravel and fine to coarse Sand), wet, (AASHTO M145 Classification: A-1-a) Visual Description (Burmister), S7 (27'-27.2'): Refusal, dark gray pulverized and fractured WEATHERED ROCK (fine to coarse Sand and fine to coarse Gravel), wet, Rec. = 0.21 ft, (AASHTO M145 Classification: A-1-a) Hole stopped @ 27.2 ft HSA refusal in inferred bedrock.	50/2.5	10.9	62.0	29.3	8.7		
35		Remarks: 1) Ground surface elevation, coordinates, and stationing are estimated from an electronic site plan provided by TY Lin and topped measurements in the field. 2) Augered to 6" deep prior to sampling S1. 3) Note consistent auger grinding and rig chatter below 23' deep through inferred gravelly sandy silt soils 4) Infer top of weathered rock at 25.5' based on auger resistance. 5) Hollow stem auger refusal at 27' deep on inferred bedrock. 6) SPT N-values were performed according to ASTM D1586. 7) Lab testing gradations reported are per AASHTO M145.							

Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.