



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

BORING LOG

WATERBURY
 FECC F013-4(13)
 US-2 ROADWAY

Boring No.: B-101

Page No.: 1 of 1

Pin No.: 85B006

Checked By: CEE

Boring Crew: DAIGNEAULT, JUDKINS, HALL

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

VTSPG NAD83: N 671053.91 ft E 1572653.72 ft

Station: 37+39.5 Offset: -12.50

Ground Elevation: 417.41 ft

Type: H.S.A. Sampler SS
 I.D.: 4.25 in 3 in
 Hammer Wt: N.A. 140 lb.
 Hammer Fall: N.A. 30 in.
 Hammer/Rod Type: Auto/AWJ
 Rig: CME 45C SKID C_c = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
08/14/13		No water to depth.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.83 ft					
2.5		A-1-a, SaGr, brn, Moist, Rec. = 0.9 ft	45-62-54-30	2.4	57.6	33.2	9.2
		A-1-a, SaGr, brn, Moist, Rec. = 1.2 ft	19-26-28-22	2.6	51.9	35.4	12.7
5.0		A-1-b, SaGr, brn, Moist, Rec. = 1.4 ft	10-14-22-16	5.6	46.6	39.1	14.3
7.5		A-2-4, SiSa, brn, Moist, Rec. = 1.6 ft	10-6-6-11	12.1	17.0	62.3	20.7
		A-1-b, GrSa, brn, Moist, Rec. = 1.5 ft	10-15-14-20	4.2	43.9	46.8	9.3
10.0		A-1-a, SaGr, brn, Moist, Rec. = 1.8 ft	23-12-18-20	4.3	51.0	40.1	8.9
12.5		Hole stopped @ 12.0 ft					
15.0		Remarks: 1. Driller's used a 3.0 inch split spoon sampler. 2. Hole collapsed at 11.6 ft.					
17.5							

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

BORING LOG 2 WATERBURY FECC F013-4(13).GPJ VERMONT AOT.GDT 10/24/13



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BORING LOG

WATERBURY
 FEGC F013-4(13)
 US-2 ROADWAY

Boring No.: **B-102**

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Pin No.: 85B006

Checked By: CEE

Boring Crew: DAIGNEAULT, JUDKINS, HALL
 Date Started: 8/14/13 Date Finished: 8/14/13
 VTSPG NAD83: N 670823.66 ft E 1572761.61 ft
 Station: 39+95.3 Offset: 5.20
 Ground Elevation: 419.21 ft

Casing H.S.A. Sampler SS
 I.D.: 4.25 in 3 in
 Hammer Wt: N.A. 140 lb.
 Hammer Fall: N.A. 30 in.
 Hammer/Rod Type: Auto/AWJ
 Rig: CME 45C SKID C_s = 1.34

Groundwater Observations		
Date	Depth (ft)	Notes
08/14/13		No water to depth.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.73 ft					
2.5		A-1-a, SaGr, brn, Moist, Rec. = 1.5 ft	74-57-46-38	3.6	45.3	42.5	12.2
		A-1-b, SiGrSa, brn, Moist, Rec. = 1.6 ft	14-12-6-9	11.7	35.2	39.3	25.5
5.0		A-2-4, GrSiSa, brn, Moist, Rec. = 1.6 ft	5-5-6-5	15.5	25.7	38.8	35.5
7.5		A-2-4, SiSa, brn, Moist, Rec. = 1.6 ft	5-4-3-6	16.6	4.6	60.0	35.4
10.0		A-4, SiSa, brn, Moist, Rec. = 1.7 ft	5-7-5-5	22.2	0.2	50.2	49.6
12.5		A-4, SaSi, brn, Moist, Rec. = 1.5 ft, Lab Note: A very thin layer of material with clay characteristics was noticed within sample. Tested: (NP)	5-3-9-26	38.6	7.4	20.3	72.3
		A-1-a, SaGr, brn, Moist, Rec. = 0.5 ft		7.3	61.2	34.9	3.9
		A-1-b, SaGr, brn, MTW, Rec. = 0.4 ft	14-15-17-12	12.5	49.0	36.4	14.6
15.0		A-1-b, SiSaGr, brn, Wet, Rec. = 1.6 ft	11-6-6-6	13.7	56.5	23.4	20.1
17.5		Hole stopped @ 17.0 ft					
		Remarks: 1. Driller's used a 3.0 inch split spoon sampler. 2. Hole collapsed at 13.0 ft.					

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

BORING LOG 2 WATERBURY FEGC F013-4(13).GPJ VERMONT AOT.GDT 10/24/13



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BORING LOG

WATERBURY
FEGC F013-4(13)
US-2 ROADWAY

Boring No.: **B-103**

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Pin No.: 85B006

Checked By: CEE

Boring Crew: DAIGNEAULT, JUDKINS, HALL
Date Started: 8/15/13 Date Finished: 8/15/13
VTSPG NAD83: N 670389.74 ft E 1573030.38 ft
Station: 45+06.0 Offset: 5.20
Ground Elevation: 427.51 ft

Casing H.S.A. Sampler SS
I.D.: 4.25 in 3 in
Hammer Wt: N.A. 140 lb.
Hammer Fall: N.A. 30 in.
Hammer/Rod Type: Auto/AWJ
Rig: CME 45C SKID C_s = 1.34

Groundwater Observations

Date	Depth (ft)	Notes

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 0.6		Asphalt Pavement, 0.0 ft - 0.6 ft					
0.6 - 1.0		Concrete, 0.6 ft - 1.0 ft					
1.0 - 2.5		A-2-4, GrSaSi, brn, Moist, Rec. = 1.4 ft	8-10-9-15	16.5	30.2	34.8	35.0
2.5 - 5.0		A-2-4, SiSaGr, brn, Moist, Rec. = 0.8 ft	16-12-10-11	12.0	41.5	29.9	28.6
5.0 - 7.5		Field Note:, No Recovery	25-18-12-8				
7.5 - 10.0		A-1-b, SiSaGr, brn, Moist, Rec. = 0.5 ft	13-13-17-18	7.5	56.8	23.1	20.1
10.0 - 12.5		A-4, SaSi, brn, Moist, Rec. = 0.9 ft	25-15-17-20	22.4	13.6	27.2	59.2
12.5 - 15.0		A-4, Si, brn, Moist, Rec. = 0.4 ft	17-13-15-21	25.2	0.4	18.6	81.0
15.0 - 17.5		A-2-4, SiSa, brn, Moist, Rec. = 0.6 ft		13.4	6.7	70.7	22.6
17.5 - 19.0		A-1-b, GrSa, brn, Moist, Rec. = 2.0 ft	10-31-42-49	4.9	38.0	54.4	7.6
19.0 - 20.5		A-2-4, SiSa, brn, Moist, Rec. = 0.5 ft	22-29-25-41	14.5	14.3	54.1	31.6
20.5 - 22.0		A-1-a, SaGr, brn-white, Moist, Rec. = 0.5 ft		3.2	52.4	37.7	9.9
22.0 - 23.5		A-1-a, SaGr, rust, Moist, Rec. = 0.8 ft, Lab Note: Sample was rusty-orange in color.		6.4	58.6	32.4	9.0
23.5 - 17.5		Hole stopped @ 17.0 ft					
		Remarks: 1. Driller's used a 3.0 inch split spoon sampler. 2. Hole collapsed at 16.4 ft.					

Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C is the hammer energy correction factor.
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BORING LOG 2 WATERBURY FEGC F013-4(13).GPJ VERMONT AOT.GDT 10/24/13



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BORING LOG

WATERBURY
 FEGC F013-4(13)
 US-2 ROADWAY

Boring No.: B-104

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Pin No.: 85B006

Checked By: CEE

Boring Crew: DAIGNEAULT, JUDKINS, HALL
 Date Started: 8/15/13 Date Finished: 8/15/13
 VTSPG NAD83: N 669992.46 ft E 1573302.44 ft
 Station: 49+87.5 Offset: 0.80
 Ground Elevation: 441.03 ft

Type: H.S.A. Sampler SS
 I.D.: 4.25 in 3 in
 Hammer Wt: N.A. 140 lb.
 Hammer Fall: N.A. 30 in.
 Hammer/Rod Type: Auto/AWJ
 Rig: CME 45C SKID C = 1.34

Groundwater Observations

Date	Depth (ft)	Notes

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 0.78		Asphalt Pavement, 0.0 ft - 0.78 ft					
2.5		A-1-b, GrSa, brn, Moist, Rec. = 2.0 ft	12-14-11-3	2.0	32.8	60.4	6.8
		A-1-b, GrSa, brn, Moist, Rec. = 0.5 ft	1-2-1-6	2.1	27.8	65.4	6.8
5.0		A-1-b, GrSa, brn, Moist, Rec. = 0.5 ft, Lab Note: Pieces of Concrete were within sample.		9.7	40.0	48.6	11.4
		A-1-b, GrSa, brn, Moist, Rec. = 0.4 ft, Lab Note: A small amount of Concrete was within sample.		8.9	44.1	48.0	7.9
		A-2-4, SiGrSa, red-brn, Moist, Rec. = 0.6 ft, Lab Note: Brick & Concrete were within sample. A large piece of Brick & Concrete was removed before gradation.		15.6	25.5	52.4	22.1
		A-2-4, SiSa, brn, Moist, Rec. = 1.0 ft, Lab Note: Pieces of Concrete were within sample.		16.3	19.1	59.5	21.4
7.5		Hole stopped @ 7.0 ft Hit a water line.					
10.0		Remarks: 1. Driller's used a 3.0 inch split spoon sampler. 2. Hit a water line at 7.0 ft.					
12.5							
15.0							
17.5							

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

BORING LOG 2 WATERBURY FEGC F013-4(13).GPJ VERMONT AOT.GDT 10/24/13



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BORING LOG

WATERBURY
FEGC F013-4(13)
US-2 ROADWAY

Boring No.: **B-105**

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Pin No.: **85B006**

Checked By: **CEE**

Boring Crew: JUDKINS, GARROW
Date Started: 8/19/13 Date Finished: 8/20/13
VTSPG NAD83: N 669589.68 ft E 1573606.26 ft
Station: 54+91.9 Offset: -8.70
Ground Elevation: 423.17 ft

Casing: H.S.A. Sampler: SS
I.D.: 4.25 in 3 in
Hammer Wt: N.A. 140 lb.
Hammer Fall: N.A. 30 in.
Hammer/Rod Type: Auto/AWJ
Rig: CME 45C SKID C = 1.34

Groundwater Observations		
Date	Depth (ft)	Notes
08/20/13	12.8	AM

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
0.0 - 0.45		Asphalt Pavement, 0.0 ft - 0.45 ft							
2.5		A-2-4, GrSiSa, brn, Moist, Rec. = 1.0 ft	20-18-18-20	10.4	20.5	54.6	24.9		
		A-1-a, SaGr, brn, Moist, Rec. = 0.7 ft		3.4	54.5	35.6	9.9		
		A-2-4, SiGrSa, brn, Moist, Rec. = 1.3 ft	18-12-12-14	9.7	29.9	49.7	20.4		
5.0		A-1-b, SiSaGr, brn, Moist, Rec. = 1.3 ft	26-12-10-10	10.9	42.2	36.8	21.0		
		Visual Description: Mostly Decayed Wood with a small amount of Fine sand & silt, brn, Moist, Rec. = 0.7 ft		60.5					
7.5		A-1-a, SaGr, brn, Moist, Rec. = 0.7 ft, Lab Note: Decayed Wood was within sample.	10-10-7-7	10.6	55.3	29.5	15.2		
		A-2-4, SiSa, brn, Moist, Rec. = 1.3 ft, Lab Note: Decayed Wood was within sample.		26.7	0.1	65.2	34.7		
10.0		A-4, SiSa, brn, Moist, Rec. = 1.5 ft, Lab Note: Lots of Wood was within sample.	WH-1-2-2	60.8	11.2	45.8	43.0		
		A-4, Si, gry, Moist, Rec. = 2.0 ft, Lab Note: Wood was within sample.	2-2-2-3	39.6	0.1	10.8	89.1	33	2
12.5		A-2-4, SiGrSa, brn, Moist, Rec. = 0.5 ft, Lab Note: Wood was within sample.	2-6-32-39	23.9	28.9	50.6	20.5		
		A-2-4, SiSa, brn, Moist, Rec. = 0.8 ft, Lab Note: Wood was within sample.		35.8	14.3	65.3	20.4		
15.0		A-1-a, SaGr, gry, MTW, Rec. = 0.7 ft		7.8	68.5	26.0	5.5		
		A-1-a, SaGr, brn, MTW, Rec. = 1.7 ft	17-25-19-15	9.1	62.5	30.5	7.0		
17.5		Hole stopped @ 17.0 ft							
		Remarks: 1. Driller's used a 3.0 inch split spoon sampler. 2. Hole collapsed at 11.6 ft.							

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

BORING LOG 2 WATERBURY FEGC F013-4(13).GPJ VERMONT AOT.GDT 10/24/13



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BORING LOG

WATERBURY
 FEGC F013-4(13)
 US-2 ROADWAY

Boring No.: B-106

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Pin No.: 85B006

Checked By: CEE

Boring Crew: GARROW, HALL, STAAB

Date Started: 8/21/13 Date Finished: 8/21/13

VTSPG NAD83: N 669188.22 ft E 1573896.99 ft

Station: 59+87.6 Offset: -8.40

Ground Elevation: 425.74 ft

Type: H.S.A. Sampler SS
 I.D.: 4.25 in 3 in
 Hammer Wt: N.A. 140 lb.
 Hammer Fall: N.A. 30 in.
 Hammer/Rod Type: Auto/AWJ
 Rig: CME 45C SKID C_r = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
		No water to depth.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.58 ft					
		Concrete, 0.58 ft - 1.0 ft					
2.5		A-4, SaSi, brn, Moist, Rec. = 0.9 ft, Lab Note: Lots of Wood was within sample.	16-11-8-8	21.6	6.9	42.8	50.3
5.0		A-2-4, SiSa, brn, Moist, Rec. = 1.5 ft, Lab Note: Wood was within sample.	7-5-3-3	14.8	0.2	65.1	34.7
7.5		A-2-4, Sa, brn, Moist, Rec. = 1.6 ft	6-5-3-4	10.4	11.3	74.2	14.5
10.0		A-2-4, Sa, brn, Moist, Rec. = 1.8 ft	2-3-2-2	15.7		82.0	18.0
12.5		A-1-b, Sa, brn, Moist, Rec. = 1.6 ft	4-5-8-12	8.6	17.8	75.7	6.5
12.5		A-1-a, SaGr, brn, Moist, Rec. = 1.6 ft	6-13-20-21	2.7	58.8	38.2	3.0
15.0		Hole stopped @ 14.0 ft					
17.5		Remarks: 1. Driller's used a 3.0 inch split spoon sampler. 2. Hole collapsed at 7.6 ft.					

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

BORING LOG 2 WATERBURY FEGC F013-4(13).GPJ VERMONT AOT.GDT 10/24/13



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BORING LOG

WATERBURY
 FEGC F013-4(13)
 US-2 ROADWAY

Boring No.: B-107

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Pin No.: 85B006

Checked By: CEE

Boring Crew: GARROW, HALL, STAAB
 Date Started: 8/21/13 Date Finished: 8/21/13
 VTSPG NAD83: N 668780.49 ft E 1574193.34 ft
 Station: 64+91.5 Offset: -8.20
 Ground Elevation: 427.79 ft

Type: H.S.A. SS
 I.D.: 4.25 in 3 in
 Hammer Wt: N.A. 140 lb.
 Hammer Fall: N.A. 30 in.
 Hammer/Rod Type: Auto/AWJ
 Rig: CME 45C SKID C_r = 1.34

Groundwater Observations		
Date	Depth (ft)	Notes
		No water to depth.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.57 ft					
		Concrete, 0.57 ft - 1.07 ft					
2.5		A-4, SiSa, brn, Moist, Rec. = 2.0 ft	7-6-5-5	12.9	11.1	49.3	39.6
5.0		A-2-4, SiSa, brn, Moist, Rec. = 1.9 ft	3-5-4-3	10.0		71.1	28.9
7.5		A-3, Sa, brn, Moist, Rec. = 1.7 ft	3-3-7-8	6.1	0.7	91.1	8.2
10.0		A-1-b, GrSa, brn, Moist, Rec. = 1.8 ft	7-13-13-18	2.4	42.4	54.6	3.0
12.5		A-1-a, SaGr, brn, Moist, Rec. = 1.1 ft	10-15-14-15	1.7	56.8	39.8	3.4
12.5		A-1-a, SaGr, brn, Moist, Rec. = 1.4 ft	10-13-28-35	1.5	67.1	30.1	2.8
15.0		Hole stopped @ 14.0 ft					
17.5		Remarks: 1. Driller's used a 3.0 inch split spoon sampler. 2. Hole collapsed at 6.9 ft.					

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

BORING LOG 2 WATERBURY FEGC F013-4(13).GPJ VERMONT AOT.GDT 10/24/13



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BORING LOG

WATERBURY
 FEGC F013-4(13)
 US-2 ROADWAY

Boring No.: B-108
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 Pin No.: 85B006
 Checked By: CEE

Boring Crew: GARROW, HALL, STAAB
 Date Started: 8/22/13 Date Finished: 8/22/13
 VTSPG NAD83: N 668373.43 ft E 1574492.78 ft
 Station: 69+96.9 Offset: -15.10
 Ground Elevation: 427.04 ft

Type: H.S.A. SS
 I.D.: 4.25 in 3 in
 Hammer Wt: N.A. 140 lb.
 Hammer Fall: N.A. 30 in.
 Hammer/Rod Type: Auto/AWJ
 Rig: CME 45C SKID C_r = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
		No water to depth.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.8 ft					
2.5		A-1-a, SaGr, brn, Moist, Rec. = 0.6 ft	10-20-22-20	4.0	61.3	29.6	9.1
		A-2-4, SiSa, brn, Moist, Rec. = 1.4 ft		8.1	15.7	59.4	24.9
		A-2-4, SiSa, brn, Moist, Rec. = 2.0 ft	7-6-6-5	10.7		72.1	27.9
5.0		A-3, Sa, brn, Moist, Rec. = 2.0 ft	3-3-4-3	7.0		91.5	8.5
7.5		A-2-4, Sa, brn, Moist, Rec. = 2.0 ft	3-4-4-5	8.8	0.2	86.4	13.4
10.0		A-3, Sa, brn, Moist, Rec. = 2.0 ft	2-3-5-4	8.1	0.9	90.1	9.0

Hole stopped @ 11.0 ft

Remarks:
 1. Driller's used a 3.0 inch split spoon sampler.
 2. Hole collapsed at 6.2 ft.

Notes:
 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
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BORING LOG 2 WATERBURY FEGC F013-4(13).GPJ VERMONT AOT.GDT 10/24/13



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WATERBURY
FEGC F013-4(13)
US-2 ROADWAY

Boring No.: B-109
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 Pin No.: 85B006
 Checked By: CEE

Boring Crew: GARROW, HALL, STAAB
 Date Started: 8/22/13 Date Finished: 8/22/13
 VTSPG NAD83: N 667966.20 ft E 1574770.05 ft
 Station: 74+89.4 Offset: -2.80
 Ground Elevation: 428.96 ft

Casing H.S.A. Sampler SS
 I.D.: 4.25 in 3 in
 Hammer Wt: N.A. 140 lb.
 Hammer Fall: N.A. 30 in.
 Hammer/Rod Type: Auto/AWJ
 Rig: CME 45C SKID C = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
		No water to depth.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.68 ft					
		Concrete, 0.68 ft - 1.38 ft					
2.5		A-2-4, SiSa, brn, Moist, Rec. = 2.0 ft	6-6-8-7	8.5	1.9	73.8	24.3
5.0		A-2-4, SiSa, brn, Moist, Rec. = 2.0 ft	1-3-2-4	11.1	5.9	66.0	28.1
7.5		A-4, SiSa, brn, Moist, Rec. = 2.0 ft	2-2-2-2	16.9	1.7	57.7	40.6
		A-4, SiSa, brn, Moist, Rec. = 1.7 ft	1-2-4-5	20.4	1.1	67.3	31.6
10.0		A-1-a, SaGr, brn, Moist, Rec. = 0.3 ft	2-10-17-19	4.0	68.8	28.5	2.7
		A-1-a, SaGr, brn, Moist, Rec. = 1.7 ft		3.1	57.1	39.6	3.3
12.5		Hole stopped @ 12.0 ft					
15.0		Remarks: 1. Driller's used a 3.0 inch split spoon sampler. 2. Hole collapsed at 6.2 ft.					
17.5							

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

BORING LOG 2 WATERBURY FEGC F013-4(13).GPJ VERMONT AOT.GDT 10/24/13



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BORING LOG

WATERBURY
 FEGC F013-4(13)
 US-2 ROADWAY

Boring No.: **B-110**

Page No.: 1 of 1

Pin No.: 85B006

Checked By: CEE

Boring Crew: GARROW, HALL, STAAB
 Date Started: 8/22/13 Date Finished: 8/22/13
 VTSPG NAD83: N 667561.67 ft E 1575059.91 ft
 Station: 79+86.9 Offset: -12.70
 Ground Elevation: 426.55 ft

Type: H.S.A. SS
 I.D.: 4.25 in 3 in
 Hammer Wt: N.A. 140 lb.
 Hammer Fall: N.A. 30 in.
 Hammer/Rod Type: Auto/AWJ
 Rig: CME 45C SKID C_r = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
		No water to depth.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.56 ft					
2.5		Visual Description: Mostly Broken Concrete with Gravel & Sand, gry-brn, Moist, Rec. = 0.5 ft	42-38-32-24	8.5	53.9	35.4	10.7
		A-2-4, SiSa, brn, Moist, Rec. = 1.5 ft		8.5	17.6	55.0	27.4
		A-4, Si, brn, Moist, Rec. = 0.5 ft	3-5-4-6	26.6		15.7	84.3
		A-4, SiSa, brn, Moist, Rec. = 1.5 ft		15.4		56.4	43.6
5.0		A-4, SaSi, brn, Moist, Rec. = 0.1 ft	1-3-3-4	21.5	0.2	21.1	78.7
		A-4, SiSa, brn, Moist, Rec. = 1.9 ft		15.4		56.7	43.3
7.5		A-4, SaSi, brn, Moist, Rec. = 2.0 ft	2-3-3-3	20.5		47.4	52.6
10.0		A-2-4, Sa, brn, Moist, Rec. = 2.0 ft	2-2-2-2	12.7	0.5	84.6	14.9
		A-2-4, GrSa, brn, Moist, Rec. = 0.5 ft	R@6.0"	11.2	32.9	55.0	12.1
12.5		Hole stopped @ 11.5 ft CNPF					
15.0		Remarks: 1. Driller's used a 3.0 inch split spoon sampler. 2. Hole collapsed at 6.8 ft.					
17.5							

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

BORING LOG 2 WATERBURY FEGC F013-4(13).GPJ VERMONT AOT.GDT 10/24/13



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BORING LOG

WATERBURY
 FEGC F013-4(13)
 US-2 ROADWAY

Boring No.: B-111

Page No.: 1 of 1

Pin No.: 85B006

Checked By: CEE

Boring Crew: GARROW, STAAB
 Date Started: 8/24/13 Date Finished: 8/24/13
 VTSPG NAD83: N 667206.76 ft E 1575410.60 ft
 Station: 84+89.8 Offset: -3.00
 Ground Elevation: 424.76 ft

Casing H.S.A. Sampler SS
 I.D.: 4.25 in 3 in
 Hammer Wt: N.A. 140 lb.
 Hammer Fall: N.A. 30 in.
 Hammer/Rod Type: Auto/AWJ
 Rig: CME 45C SKID C = 1.34

Groundwater Observations		
Date	Depth (ft)	Notes
08/24/13	14.0	While drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 0.56		Asphalt Pavement, 0.0 ft - 0.56 ft					
0.56 - 1.12		Concrete, 0.56 ft - 1.12 ft					
1.12 - 2.5		A-1-b, GrSa, brn, Moist, Rec. = 0.8 ft	9-18-17-13	5.3	30.4	54.3	15.3
2.5 - 5.0		A-4, SaSi, brn-gry, Moist, Rec. = 1.1 ft		19.0	0.9	41.0	58.1
5.0 - 7.5		A-2-4, SiSa, brn, Moist, Rec. = 0.8 ft	7-10-6-8	8.3	14.3	58.8	26.9
7.5 - 10.0		A-4, Si, gry, Moist, Rec. = 1.0 ft		24.6		13.6	86.4
10.0 - 12.5		A-4, Si, gry, Moist, Rec. = 1.8 ft	2-7-6-4	25.3		14.2	85.8
12.5 - 15.0		A-4, SaSi, gry, MTW, Rec. = 1.3 ft	2-2-3-4	23.8		30.1	69.9
15.0 - 17.5		A-2-4, Sa, brn, Moist, Rec. = 0.6 ft		16.1		85.3	14.7
17.5 - 19.0		A-4, SaSi, gry, Moist, Rec. = 0.2 ft	3-6-18-40	20.1	0.1	33.2	66.7
19.0 - 20.6		A-3, Sa, brn, Moist, Rec. = 1.0 ft		16.4	0.1	91.4	8.5
20.6 - 22.2		A-1-a, SaGr, red, Moist, Rec. = 0.8 ft, Lab Note: Sample was Reddish to Dark Orange in color.		8.2	50.2	45.0	4.8
22.2 - 24.8		A-1-a, SaGr, red, Moist, Rec. = 1.0 ft, Lab Note: Sample was Dark Red in color.	26-54	4.9	68.2	27.4	4.4
24.8 - 26.4		A-1-a, SaGr, red-brn, Moist, Rec. = 1.2 ft, Lab Note: Sample was Orange/Red in color.	10-14-13-13	9.4	60.8	34.1	5.1
26.4 - 16.0		Hole stopped @ 16.0 ft					
17.5		Remarks: 1. Driller's used a 3.0 inch split spoon sampler. 2. Hole collapsed at 10.6 ft.					

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

BORING LOG 2 WATERBURY FEGC F013-4(13).GPJ VERMONT AOT.GDT 10/24/13



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BORING LOG

WATERBURY
 FEGC F013-4(13)
 US-2 ROADWAY

Boring No.: **B-112**

Page No.: 1 of 1

Pin No.: 85B006

Checked By: CEE

Boring Crew: GARROW, STAAB
 Date Started: 8/23/13 Date Finished: 8/23/13
 VTSPG NAD83: N 666926.98 ft E 1575733.31 ft
 Station: 89+16.9 Offset: -6.00
 Ground Elevation: 426.28 ft

Type: H.S.A. SS
 I.D.: 4.25 in 3 in
 Hammer Wt: N.A. 140 lb.
 Hammer Fall: N.A. 30 in.
 Hammer/Rod Type: Auto/AWJ
 Rig: CME 45C SKID C = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
		No water to depth.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.54 ft					
2.5	x x x x x x x x x x x x	Lab Note, Crushed Stone Fill, brn, Moist, Rec. = 1.3 ft	17-34-24-24	2.7	73.6	20.9	5.5
		A-4, SiSa, brn, Moist, Rec. = 1.1 ft	9-10-11-3	11.6	0.3	61.3	38.4
		A-3, Sa, brn, Moist, Rec. = 0.7 ft		2.9	15.9	77.8	6.3
5.0		A-1-a, SaGr, brn, Moist, Rec. = 1.9 ft	6-12-12-16	1.8	55.3	40.9	3.8
7.5		A-1-a, SaGr, brn, Moist, Rec. = 1.5 ft	6-13-15-16	2.8	57.0	38.5	4.5
10.0		A-1-a, SaGr, brn, Moist, Rec. = 1.6 ft	7-18-18-25	2.9	63.7	32.5	3.8

Hole stopped @ 11.0 ft

Remarks:
 1. Driller's used a 3.0 inch split spoon sampler.
 2. Hole collapsed at 5.2 ft.

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

BORING LOG 2 WATERBURY FEGC F013-4(13).GPJ VERMONT AOT.GDT 10/24/13



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BORING LOG

WATERBURY
 FEGC F013-4(13)
 US-2 ROADWAY

Boring No.: B-113

Page No.: 1 of 1

Pin No.: 85B006

Checked By: CEE

Boring Crew: GARROW, HALL
 Date Started: 8/29/13 Date Finished: 8/29/13
 VTSPG NAD83: N 670004.99 ft E 1573325.78 ft
 Station: 49+91.0 Offset: -25.40
 Ground Elevation: 441.11 ft

Type: H.S.A. SS
 I.D.: 4.25 in 1.5 in
 Hammer Wt: N.A. 140 lb.
 Hammer Fall: N.A. 30 in.
 Hammer/Rod Type: Auto/AWJ
 Rig: CME 55 TRACK C = 1.46

Groundwater Observations

Date	Depth (ft)	Notes
		No water to depth.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Concrete, 0.0 ft - 0.57 ft					
		A-1-b, GrSa, brn, Moist, Rec. = 1.2 ft	5-6-4-6 (10)	6.7	41.4	43.4	15.2
		A-4, SiSa, brn, Moist, Rec. = 1.7 ft	4-4-3-4 (7)	11.5	0.2	63.1	36.7
5		A-3, Sa, brn, Moist, Rec. = 1.2 ft	3-3-6-6 (9)	4.0	18.1	76.8	5.1
		A-1-a, SaGr, brn, Moist, Rec. = 1.0 ft	2-9-9-10 (18)	2.8	53.2	38.6	8.2
10		A-1-a, SaGr, brn, Moist, Rec. = 1.5 ft	7-12-16-19 (28)	3.1	52.7	37.1	10.2
		A-1-a, SaGr, brn, Moist, Rec. = 1.1 ft	12-16-16-17 (32)	2.6	55.4	35.3	9.3
		Visual Description:, GrSa, brn, Moist, Rec. = 0.5 ft, Insufficient sample for testing.	6-6-7-6 (13)	3.1			
15		A-4, Si, brn, Moist, Rec. = 1.2 ft	5-3-4-3 (7)	28.9	3.0	5.0	92.0
20		A-4, Si, gry, MTW, Rec. = 1.5 ft	2-3-3-2 (6)	28.5	0.5	8.1	91.4
25		A-4, Si, gry, Wet, Rec. = 1.1 ft	2-5-4-4 (9)	29.1	0.3	5.3	94.4
		Hole stopped @ 27.0 ft					
30		Remarks: 1. Hole collapsed at 6.0 ft.					

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

BORING LOG 2 WATERBURY FEGC F013-4(13).GPJ VERMONT AOT.GDT 10/24/13



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BORING LOG

WATERBURY
 FECC F013-4(13)
 US-2 ROADWAY

Boring No.: **B-114**

Page No.: 1 of 1

Pin No.: 85B006

Checked By: CEE

Boring Crew: GARROW, JUDKINS
 Date Started: 8/28/13 Date Finished: 8/28/13
 VTSPG NAD83: N 669934.32 ft E 1573321.14 ft
 Station: 50+45.5 Offset: 19.80
 Ground Elevation: 440.52 ft

Type: H.S.A. SS
 I.D.: 4.25 in 1.5 in
 Hammer Wt: N.A. 140 lb.
 Hammer Fall: N.A. 30 in.
 Hammer/Rod Type: Auto/AWJ
 Rig: CME 45C SKID C_r = 1.34

Groundwater Observations

Date	Depth (ft)	Notes

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
0.0 - 0.37		Concrete, 0.0 ft - 0.37 ft							
0.37 - 0.67		A-2-4, SiSa, brn, Moist, Rec. = 0.3 ft	WH-WH-WH-2 (WH)	16.1	8.6	70.9	20.5		
0.67 - 0.97		A-4, SaSi, brn, Moist, Rec. = 0.3 ft	2-4-5-5 (9)	24.0	6.5	38.0	55.5		
0.97 - 1.27		A-2-4, SiSa, brn, Moist, Rec. = 1.6 ft	2-4-2-3 (6)	12.1	0.7	69.2	30.1		
1.27 - 1.57		A-3, Sa, brn, Moist, Rec. = 1.6 ft	4-4-4-4 (8)	5.1	1.0	92.1	6.9		
1.57 - 1.87		A-2-4, SiSa, brn, Moist, Rec. = 1.7 ft	3-7-11-29 (18)	4-4-4-4 (8)	14.8	0.7	73.0	26.3	
1.87 - 2.17		A-2-4, SiSa, brn, Moist, Rec. = 0.6 ft	3-7-11-29 (18)	12.5	0.6	74.0	25.4		
2.17 - 2.47		A-2-4, Sa, brn, Moist, Rec. = 0.8 ft, Broken Rock was within sample.	2-4-4-10 (8)	18.5	16.6	69.5	13.9		
2.47 - 2.77		A-1-a, SaGr, brn, Moist, Rec. = 1.2 ft, Broken Rock was within sample.	3-3-2-3 (5)	3.6	63.3	30.6	6.1		
2.77 - 3.07		A-1-a, SaGr, brn, Moist, Rec. = 0.4 ft	3-3-2-3 (5)	4.5	52.0	32.9	15.1	41	14
3.07 - 3.37		A-7-6, SiCl, brn, Moist, Rec. = 1.2 ft		37.4		1.4	98.6		
3.37 - 3.67		A-6, SiCl, gry, MTW, Rec. = 1.6 ft		38.8	6.3	9.7	84.0	40	16
3.67 - 3.97		A-6, GrSiCl, gry, MTW		24.5	43.3	7.8	48.9	39	15
3.97 - 4.27		A-6, SiCl, gry, MTW, Rec. = 0.5 ft	1-4-4-7 (8)	29.9	11.9	7.3	80.8	37	12
4.27 - 4.57		A-4, Si, gry, MTW, Rec. = 1.0 ft		22.5		18.2	81.8		
4.57 - 5.57									
5.57 - 6.57									
6.57 - 7.57									
7.57 - 8.57									
8.57 - 9.57									
9.57 - 10.57									
10.57 - 11.57									
11.57 - 12.57									
12.57 - 13.57									
13.57 - 14.57									
14.57 - 15.57									
15.57 - 16.57									
16.57 - 17.57									
17.57 - 18.57									
18.57 - 19.57									
19.57 - 20.57									
20.57 - 21.57									
21.57 - 22.57									
22.57 - 23.57									
23.57 - 24.57									
24.57 - 25.57									
25.57 - 26.57									
26.57 - 27.0									
27.0 - 28.0		Hole stopped @ 27.0 ft							
28.0 - 29.0		Hole stopped @ 27.0 ft							
29.0 - 30.0		Hole stopped @ 27.0 ft							
30.0 - 31.0		Hole stopped @ 27.0 ft							
31.0 - 32.0		Hole stopped @ 27.0 ft							
32.0 - 33.0		Hole stopped @ 27.0 ft							
33.0 - 34.0		Hole stopped @ 27.0 ft							
34.0 - 35.0		Hole stopped @ 27.0 ft							
35.0 - 36.0		Hole stopped @ 27.0 ft							
36.0 - 37.0		Hole stopped @ 27.0 ft							
37.0 - 38.0		Hole stopped @ 27.0 ft							
38.0 - 39.0		Hole stopped @ 27.0 ft							
39.0 - 40.0		Hole stopped @ 27.0 ft							
40.0 - 41.0		Hole stopped @ 27.0 ft							
41.0 - 42.0		Hole stopped @ 27.0 ft							
42.0 - 43.0		Hole stopped @ 27.0 ft							
43.0 - 44.0		Hole stopped @ 27.0 ft							
44.0 - 45.0		Hole stopped @ 27.0 ft							
45.0 - 46.0		Hole stopped @ 27.0 ft							
46.0 - 47.0		Hole stopped @ 27.0 ft							
47.0 - 48.0		Hole stopped @ 27.0 ft							
48.0 - 49.0		Hole stopped @ 27.0 ft							
49.0 - 50.0		Hole stopped @ 27.0 ft							

Remarks:
 1. Hole collapsed at 7.0 ft.

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

BORING LOG 2 WATERBURY FECC F013-4(13).GPJ VERMONT AOT.GDT 10/24/13



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BORING LOG

WATERBURY
 FEGC F013-4(13)
 US-2 ROADWAY

Boring No.: **B-115**

Page No.: 1 of 1

Pin No.: 85B006

Checked By: CEE

Boring Crew: GARROW, HALL
 Date Started: 8/26/13 Date Finished: 8/26/13
 VTSPG NAD83: N 668853.49 ft E 1574153.24 ft
 Station: 64+08.9 Offset: -18.10
 Ground Elevation: 428.15 ft

Type: H.S.A. SS
 I.D.: 4.25 in 1.5 in
 Hammer Wt: N.A. 140 lb.
 Hammer Fall: N.A. 30 in.
 Hammer/Rod Type: Auto/AWJ
 Rig: CME 45C SKID C_s = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
08/26/13	17.2	While drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.89 ft					
		A-2-4, SiSa, brn, Moist, Rec. = 0.8 ft	3-9-9-5 (18)	10.1	15.7	52.8	31.5
		A-2-4, SiGrSa, brn, Moist, Rec. = 0.7 ft	3-4-4-2 (8)	8.5	25.9	49.3	24.8
5		A-2-4, SiSa, brn, Moist, Rec. = 1.1 ft	1-2-2-2 (4)	10.1	0.3	77.9	21.8
		A-2-4, SiSa, brn, Moist, Rec. = 1.2 ft	1-2-2-1 (4)	8.9	2.0	75.7	22.3
10		A-2-4, SiSa, brn, Moist, Rec. = 1.4 ft	2-1-2-2 (3)	9.9	0.6	79.1	20.3
		A-3, Sa, brn, Moist, Rec. = 1.4 ft	2-2-1-2 (3)	9.3	0.1	90.5	9.4
		Visual Description:, SaGr, brn, Moist, Rec. = 0.15 ft, Insufficient sample for testing.	7-18-18-19 (36)				
15		A-1-a, SaGr, brn, Moist, Rec. = 1.2 ft	9-13-17-13 (30)	2.9	55.6	35.4	9.0
20		A-1-b, SaGr, brn, Wet, Rec. = 0.9 ft	4-13-17-17 (30)	12.8	46.2	41.4	12.4
25		A-4, SaSi, gry, Wet, Rec. = 1.4 ft	1-3-5-4 (8)	25.5	2.0	27.0	71.0
		Hole stopped @ 27.0 ft					
30		Remarks: 1. Hole collapsed at 12.6 ft.					

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

BORING LOG 2 WATERBURY FEGC F013-4(13).GPJ VERMONT AOT.GDT 10/24/13



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BORING LOG

WATERBURY
 FEGC F013-4(13)
 US-2 ROADWAY

Boring No.: B-116

Page No.: 1 of 1

Pin No.: 85B006

Checked By: CEE

Boring Crew: GARROW, HALL, STAAB

Date Started: 9/03/13 Date Finished: 9/03/13

VTSPG NAD83: N 668841.52 ft E 1574181.37 ft

Station: 64+35.1 Offset: -34.00

Ground Elevation: 429.12 ft

Type: H.S.A. SS
 I.D.: 4.25 in 1.5 in
 Hammer Wt: N.A. 140 lb.
 Hammer Fall: N.A. 30 in.
 Hammer/Rod Type: Auto/AWJ
 Rig: CME 55 TRACK C_s = 1.46

Groundwater Observations

Date	Depth (ft)	Notes
09/03/13	21.6	While drilling.
09/05/13	18.5	From top of well.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Well Diagram	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
5	[Diagonal lines]	A-2-4, GrSiSa, brn, Moist, Rec. = 0.9 ft	[Well Diagram]	2-3-4-2 (7)	9.2	22.3	52.5	25.2
		A-2-4, SiSa, brn, Moist, Rec. = 0.5 ft		WH-WH-1-1 (1)	9.7	19.1	49.1	31.8
		A-4, SiSi, brn, Moist, Rec. = 1.7 ft		1-2-2-2 (4)	13.1	2.6	61.0	36.4
10	[Diagonal lines]	A-2-4, Sa, brn, Moist, Rec. = 1.4 ft	[Well Diagram]	2-1-2-2 (3)	8.0	4.4	77.7	17.9
		A-3, Sa, brn, Moist, Rec. = 1.4 ft		1-1-1-1 (2)	6.5	0.7	89.4	9.9
		A-2-4, SiSa, brn, Moist, Rec. = 1.3 ft		1-2-1-1 (3)	12.6	0.3	74.6	25.1
		A-2-4, Sa, brn, Moist, Rec. = 1.5 ft		1-2-1-5 (3)	8.3	0.7	85.8	13.5
15	[Diagonal lines]	Visual Description: SaGr, brn, Moist, Rec. = 0.2 ft, Material similar as 14-16 ft., Insufficient sample for testing.	[Well Diagram]	3-12-11-13 (23)	3.2	53.4	36.9	9.7
		A-1-a, SaGr, brn, Moist, Rec. = 1.3 ft						
20	[Diagonal lines]	A-1-a, SaGr, brn, Wet, Rec. = 0.8 ft	[Well Diagram]	2-3-2-2 (5)	14.2	58.3	31.1	10.6
25	[Diagonal lines]	A-1-b, SaGr, brn, Wet, Rec. = 0.3 ft	[Well Diagram]	2-3-4-3 (7)	16.4	44.0	41.2	14.8
		A-4, Si, gry, Wet, Rec. = 0.9 ft			28.3	1.1	6.0	92.9
Hole stopped @ 27.0 ft								
30		Remarks: 1. Installed one 1.5 inch Monitoring Well. 2. Well goes to 25.0 feet with 5 feet of screen from 20.0 to 25.0 feet. 3. Top of Well is at ground surface.						

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

BORING LOG 2 WATERBURY FEGC F013-4(13).GPJ VERMONT AOT.GDT 10/24/13



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

BORING LOG

WATERBURY
FEGC F013-4(13)
US-2 ROADWAY

Boring No.: B-117
Page No.: 1 of 1
Pin No.: 85B006
Checked By: CEE

Boring Crew: GARROW, HALL
Date Started: 8/27/13 Date Finished: 8/27/13
VTSPG NAD83: N 668767.12 ft E 1574154.84 ft
Station: 64+80.2 Offset: 30.90
Ground Elevation: 427.94 ft

Casing H.S.A. Sampler SS
Type: H.S.A. SS
I.D.: 4.25 in 1.5 in
Hammer Wt: N.A. 140 lb.
Hammer Fall: N.A. 30 in.
Hammer/Rod Type: Auto/AWJ
Rig: CME 45C SKID C_c = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
08/27/13	17.0	While drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		A-4, SiSa, brn, Moist, Rec. = 0.2 ft	WH-WH-WH-1 (WH)	18.8	12.4	44.9	42.7
		A-4, SiSa, brn, Moist, Rec. = 0.6 ft	WH-WH-2-2 (2)	13.6		56.8	43.2
5		A-2-4, SiSa, brn, Moist, Rec. = 1.7 ft	3-2-2-3 (4)	11.3	0.2	70.9	28.9
		A-2-4, SiSa, brn, Moist, Rec. = 1.6 ft	1-3-2-3 (5)	11.8	8.1	68.1	23.8
10		A-1-b, GrSa, brn, Moist, Rec. = 1.0 ft	4-8-10-9 (18)	5.1	31.9	57.2	10.9
		A-1-b, SaGr, brn, Moist, Rec. = 1.2 ft	5-8-9-13 (17)	2.8	45.5	44.8	9.7
		A-1-a, SaGr, brn, Moist, Rec. = 1.1 ft	4-5-9-11 (14)	2.3	58.9	32.8	8.3
15		A-1-a, SaGr, brn, Moist, Rec. = 1.1 ft	7-14-13-18 (27)	2.2	57.6	34.0	8.4
20		A-1-a, SaGr, brn, Wet, Rec. = 0.8 ft	4-7-6-8 (13)	12.9	54.4	37.9	7.7
25		A-1-b, SaGr, brn, Wet, Rec. = 0.3 ft	5-8-6-8 (14)	13.3	43.7	42.8	13.5
		A-4, Si, gry, Wet, Rec. = 0.1 ft		29.2	0.4	19.4	80.2
Hole stopped @ 27.0 ft							
30		Remarks: 1. Hole collapsed at 9.4 ft.					

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



STATE OF VERMONT
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BORING LOG

WATERBURY
 FECC F013-4(13)
 US-2 ROADWAY

Boring No.: B-118

Page No.: 1 of 1

Pin No.: 85B006

Checked By: CEE

Boring Crew: GARROW, HALL, STAAB

Date Started: 9/03/13 Date Finished: 9/03/13

VTSPG NAD83: N 667739.64 ft E 1574891.87 ft

Station: 77+45.1 Offset: 25.50

Ground Elevation: 428.37 ft

Casing: H.S.A. Sampler: _____
 I.D.: 4.25 in
 Hammer Wt: N.A. N.A.
 Hammer Fall: N.A. N.A.
 Hammer/Rod Type: AWJ
 Rig: CME 45C SKID C = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
09/03/13		No water to depth.
09/05/13		No water to depth.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Well Diagram	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 12.5		Field Note:, SiSa, brn, Moist						
12.5 - 15.0		Field Note:, Cobbles & Gravel, brn, Moist						
15.0 - 17.5		Hole stopped @ 15.0 ft CNPF, TLOB						
17.5 - 20.0		Remarks: 1. Installed one 1.5 inch Monitoring Well. 2. Well goes to 15.0 feet with 5 feet of screen from 10.0 to 15.0 feet. 3. Top of Well is at ground surface.						

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

BORING LOG 2 WATERBURY FECC F013-4(13).GPJ VERMONT AOT.GDT 10/24/13



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

BORING LOG

WATERBURY
FEGC F013-4(13)
US-2 ROADWAY

Boring No.: **B-119**

Page No.: 1 of 1

Pin No.: 85B006

Checked By: CEE

Boring Crew: GARROW, JUDKINS, STAAB
 Date Started: 9/04/13 Date Finished: 9/04/13
 VTSPG NAD83: N 669671.57 ft E 1573507.56 ft
 Station: 53+67.6 Offset: 23.20
 Ground Elevation: 423.58 ft

Casing Sampler
 Type: H.S.A.
 I.D.: 4.25 in
 Hammer Wt: N.A. N.A.
 Hammer Fall: N.A. N.A.
 Hammer/Rod Type: AWJ
 Rig: CME 45C SKID C_e = 1.34

Groundwater Observations		
Date	Depth (ft)	Notes
09/04/13	22.9	While drilling.
09/05/13	12.5	From top of well.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Well Diagram	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0-5		Field Note: GrSiSa, brn, Moist						
5-10		Field Note: SaSi, brn-gry, MTW						
10-23		Field Note: SaSi, gry, MTW						
23-25		Field Note: SaSi, gry, Wet						

Hole stopped @ 25.0 ft

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

BORING LOG 2 WATERBURY FEGC F013-4(13).GPJ VERMONT AOT.GDT 10/24/13



STATE OF VERMONT
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 MATERIALS & RESEARCH SECTION
 SUBSURFACE INFORMATION

BORING LOG

WATERBURY
FEGC F013-4(13)
US-2 ROADWAY

Boring No.: B-120
 Page No.: 1 of 1
 Pin No.: 85B006
 Checked By: CEE

Boring Crew: GARROW, JUDKINS, STAAB
 Date Started: 9/04/13 Date Finished: 9/04/13
 VTSPG NAD83: N 670968.48 ft E 1572643.57 ft
 Station: 38+13.2 Offset: 30.60
 Ground Elevation: 417.92 ft

Casing Sampler
 Type: H.S.A.
 I.D.: 4.25 in
 Hammer Wt: N.A. N.A.
 Hammer Fall: N.A. N.A.
 Hammer/Rod Type: AWJ
 Rig: CME 45C SKID C = 1.34

Groundwater Observations		
Date	Depth (ft)	Notes
09/04/13	14.9	While drilling.
09/05/13	13.2	From top of well.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Well Diagram	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
5		Field Note: SiGrSa, brn, Moist						
10		Field Note: GrSaSi, brn, MTW						
15		Field Note: SaSi, brn, Wet						
25		Hole stopped @ 25.0 ft						
30		Remarks: 1. Installed one 1.5 inch Monitoring Well. 2. Well goes to 19.1 feet with 5 feet of screen from 14.1 to 19.1 feet. 3. Top of Well is at ground surface.						

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

BORING LOG 2 WATERBURY FEGC F013-4(13).GPJ VERMONT AOT.GDT 10/24/13