



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

BORING LOG

HUNTINGTON
BF 0211(32)
TH-1 BR-8

Boring No.: **B-102**

Page No.: 1 of 1

Pin No.: 13J080

Checked By: MLM

Boring Crew: DAIGNEAULT, JUDKINS, HOOK

Date Started: 9/05/14 Date Finished: 9/05/14

VTSPG NAD83: N 642892.67 ft E 1520036.77 ft

Station: 11+51 Offset: 6.30

Ground Elevation: 792.3 ft

Type: WB SS
I.D.: 4 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 = 1.33

Groundwater Observations

Date	Depth (ft)	Notes
09/05/14	7.0	After drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RCD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.98 ft								
		A-2-4, SiSa, brn, Moist, Rec. = 1.3 ft				7-6-3-4 (9)	15.4	16.1	53.4	30.5
		A-2-4, SiSa, brn, Moist, Rec. = 1.6 ft				6-5-4-3 (9)	14.4	16.6	60.0	23.4
5		A-1-b, GrSa, brn, Moist, Rec. = 1.1 ft, Lab Note: Broken Rock was within sample.				1-3-4-6 (7)	15.5	42.1	43.8	14.1
		A-1-a, SaGr, brn, Moist, Rec. = 1.6 ft, Lab Note: Broken Rock was within sample.				9-15-18-31 (33)	4.7	57.8	32.6	9.6
10		A-1-a, SaGr, brn-white, Moist, Rec. = 1.4 ft, Lab Note: Broken Rock was within sample.				17-20-27-19 (47)	4.3	57.6	29.5	12.9
		A-1-b, SiSaGr, brn, Moist, Rec. = 0.7 ft, Lab Note: Broken Rock was within sample.				13-17-12-9 (29)	12.9	51.1	25.9	23.0
		A-4, Si, brn, Moist, Rec. = 0.3 ft				8-8-8-9 (16)	21.6	19.5	15.5	65.0
15		A-4, SaSi, brn, MTW, Rec. = 0.9 ft				4-5-4-4 (9)	19.3	16.9	40.4	42.7
		A-4, SaSi, brn, MTW, Rec. = 0.9 ft				2-3-5-5 (8)	19.4	16.9	33.3	49.8
20		A-1-b, SiSaGr, red-brn, Moist, Rec. = 0.7 ft, Lab Note: Broken Rock was within sample.				11-13-17-7 (30)	13.2	43.3	36.0	20.7
25		A-1-b, GrSa, brn, Moist, Rec. = 1.2 ft, Lab Note: Broken Rock was within sample.				12-14-22-25 (36)	11.1	33.7	53.9	12.4
30		A-2-4, SiGrSa, brn, Moist, Rec. = 1.1 ft, Lab Note: Broken Rock was within sample.				26-27-33-R@1.0" (60)	12.9	31.9	45.8	22.3
35		34.4 ft - 39.4 ft, Gray, Muscovite-chlorite-biotite-feldspar-quartz Metagraywacke, and schist with lenses of quartz. Hard, Unweathered, Good rock, NXMDC, RMR = 72	1 (25)	72 (30)	5	Top of Bedrock @ 34.4 ft				
					5					
					5					
					5					
40		39.4 ft - 44.4 ft, Gray, Muscovite-chlorite-biotite-feldspar-quartz Metagraywacke, and schist with lenses of quartz. Hard, Unweathered, Very good rock, NXMDC, RMR = 84	2 (25)	94 (94)	5					
					6					
					5					
					5					
45		Hole stopped @ 44.4 ft			6					
		Remarks: 1. Offsets were taken from the proposed centerline, not existing.								

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 HUNTINGTON BF 0211(32).GPJ VERMONT AOT.GDT 9/11/14



STATE OF VERMONT
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BORING LOG

HUNTINGTON
 BF 0211(32)
 TH-1 BR-8

Boring No.: **B-103**

Page No.: 1 of 1

Pin No.: 13J080

Checked By: MLM

Boring Crew: DAIGNEAULT, JUDKINS
 Date Started: 9/04/14 Date Finished: 9/04/14
 VTSPG NAD83: N 643015.89 ft E 1520099.77 ft
 Station: 12+89 Offset: 0.90
 Ground Elevation: 795.8 ft

Casing: WB Sampler: SS
 I.D.: 4 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 = 1.33

Groundwater Observations

Date	Depth (ft)	Notes
09/04/14	6.1	After drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.77 ft								
5		A-1-b, SaGr, brn, Moist, Rec. = 1.2 ft				11-10-7-5 (17)	7.5	45.8	42.2	12.0
		A-1-b, SiGrSa, brn, Moist, Rec. = 1.1 ft				4-2-3-4 (5)	15.9	35.4	43.8	20.8
		A-1-b, GrSa, brn, Moist, Rec. = 0.7 ft				3-2-3-2 (5)	11.1	45.3	46.4	8.3
		A-1-b, Sa, brn, Moist, Rec. = 0.2 ft				3-3-3-4 (6)	10.8	18.5	65.4	16.1
		A-1-b, GrSa, brn, Moist, Rec. = 0.5 ft				5-4-3-3 (7)	6.5	35.4	52.7	11.9
		A-1-b, GrSa, brn, Moist, Rec. = 0.6 ft				3-2-2-3 (4)	14.3	36.1	46.6	17.3
15		A-4, SiSa, gry, Moist, Rec. = 0.1 ft	1 (50)	78 (78)	5	R@1.0"	12.0	15.3	48.6	36.1
		13.1 ft - 18.1 ft, Gray, Muscovite-chlorite-biotite-feldspar-quartz Metagraywacke, and schist with lenses of quartz. Hard, Unweathered, Very good rock, NXMDC, RMR = 81				Top of Bedrock @ 13.1 ft				
20		18.1 ft - 23.1 ft, Gray, Muscovite-chlorite-biotite-feldspar-quartz Metagraywacke, and schist with lenses of quartz. Hard, Unweathered, Very good rock, NXMDC, RMR = 84	2 (50)	94 (94)	5					
						6				
						5				
						5				
25		Hole stopped @ 23.1 ft								
		Remarks: 1. Hole collapsed at 8.2 ft. 2. Offsets were taken from the proposed centerline, not existing.								

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 HUNTINGTON BF 0211(32).GPJ VERMONT AOT.GDT 9/11/14



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BORING LOG

HUNTINGTON
 BF 0211(32)
 TH-1 BR-8

Boring No.: **B-104**

Page No.: 1 of 1

Pin No.: 13J080

Checked By: MLM

Boring Crew: DAIGNEAULT, JUDKINS, HOOK
 Date Started: 9/09/14 Date Finished: 9/09/14
 VTSPG NAD83: N 642991.15 ft E 1520110.94 ft
 Station: 12+72 Offset: 21.90
 Ground Elevation: 794.3 ft

Casing Sampler
 Type: WB SS
 I.D.: 4 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 = 1.33

Groundwater Observations

Date	Depth (ft)	Notes
09/09/14	2.8	After drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	
5		A-1-b, GrSa, Dk/brn, Moist, Rec. = 1.1 ft				2-3-5-6 (8)	5.4	44.6	45.9	9.5	
		A-1-a, SaGr, brn-gry, Moist, Rec. = 0.8 ft, Lab Note: Lots of Broken Rock was within sample.				41-R@4.5" (R)	1.7	56.8	28.9	14.3	
		A-1-a, SaGr, brn, Moist, Rec. = 0.7 ft, Lab Note: Lots of Broken Rock was within sample.				3-4-6-7 (10)	11.0	50.5	39.7	9.8	
		Field Note: No Recovery, Cleaned out casing.				5-3-2-1 (5)					
		A-4, GrSiSa, brn, MTW, Rec. = 0.1 ft, Lab Note: Broken Rock was within sample.				1-1-2-2 (3)	18.2	22.8	39.6	37.6	
10		Field Note: No Recovery				3-3-1-1 (4)					
		A-2-4, SiSa, brn, MTW, Rec. = 1.1 ft				WH-WH-R@2.5" (R)	27.6	4.5	66.9	28.6	
15		13.2 ft - 18.2 ft, Gray, Muscovite-chlorite-biotite-feldspar-quartz Metagraywacke, and schist with lenses of quartz. Hard, Unweathered, Very good rock, NXMDC, RMR = 84	1 (25)	100 (100)	7	Top of Bedrock @ 13.2 ft					
					7						
						8					
						10					
						9					
20		18.2 ft - 23.2 ft, Gray, Muscovite-chlorite-biotite-feldspar-quartz Metagraywacke, and schist with lenses of quartz. Hard, Unweathered, Very good rock, NXMDC, RMR = 84	2 (25)	98 (98)	6						
					6						
						6					
						6					
25	Hole stopped @ 23.2 ft										
	Remarks: 1. Hole collapsed at 6.9 ft. 2. Offsets were taken from the proposed centerline, not existing.										

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 HUNTINGTON BF 0211(32).GPJ VERMONT AOT.GDT 9/11/14



STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

HUNTINGTON
BF 0211(32)
TH-1 BR-8

Boring No.: B-205
Page No.: 1 of 1
Pin No.: 13J080
Checked By: MLM

Boring Crew: GARROW, JUDKINS
Date Started: 7/07/15 Date Finished: 7/08/15
VTSPG NAD83: N 642978.94 ft E 1520096.10 ft
Station: 12+55 Offset: 13.30
Ground Elevation: 794.4 ft

Casing Type: WB Sampler: SS
I.D.: 4 in 1.5 in
Hammer Wt: N.A. 140 lb.
Hammer Fall: N.A. 30 in.
Hammer/Rod Type: Auto/AWJ
Rig: CME 45C TRACK C_r = 1.34

Groundwater Observations		
Date	Depth (ft)	Notes
07/08/15		No water to 13 ft.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	Groundwater Observations			
											Date	Depth (ft)	Notes	
		Asphalt Pavement, 0.0 ft - 1.0 ft												
5		A-2-4, SiGrSa, brn, Moist, Rec. = 0.9 ft				5-5-5-5 (10)	12.9	29.9	45.2	24.9				
		A-1-b, SiGrSa, brn, Moist, Rec. = 0.6 ft, Cleaned out with roller cone.				5-4-3-3 (7)	12.6	37.3	40.5	22.2				
		A-2-4, SiGrSa, brn, Moist, Rec. = 0.5 ft, Cleaned out with roller cone.				3-3-2-3 (5)	13.3	33.7	38.5	27.8				
		A-1-b, SiGrSa, brn, Moist, Rec. = 0.9 ft, Cleaned out with roller cone.				3-3-3-3 (6)	16.8	37.5	38.9	23.6				
10		A-2-4, SiGrSa, brn, Moist, Rec. = 0.9 ft				4-3-2-2 (5)	18.6	27.1	46.3	26.6				
		A-4, SaSi, brn-gry, Moist, Rec. = 0.9 ft, Lab Note: Large Wood chunks were within sample.				4-3-1-2 (4)	35.5	8.7	43.6	47.7				
15		Visual Description: Wood pieces & chunks with silty sand, Dk/gry, Moist, Rec. = 0.2 ft				2-3-2-R@1.0" (5)	71.0							
		14.6 ft - 19.6 ft, Gray, Muscovite-biotite-chlorite-albite-quartz SCHIST, with joints that are rust stained. Hard, Very slightly weathered, Good rock, NXMDC, RMR = 68	1 (30)	100 (87)	3								Top of Bedrock @ 14.6 ft	
20		19.6 ft - 24.6 ft, Gray, Muscovite-biotite-chlorite-albite-quartz SCHIST, Hard, Unweathered, Very good rock, NXMDC, RMR = 84			4									
				4										
				3										
				3										
25		Hole stopped @ 24.6 ft			3									
				3										
				3										
				3										

Remarks:
1. Hole collapsed at 18.4 ft.
2. Offsets were taken from the proposed centerline, not existing.

Notes:
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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 HUNTINGTON BF 0211(32).GPJ VERMONT AOT.GDT 7/15/15



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BORING LOG

HUNTINGTON
BF 0211(32)
TH-1 BR-8

Boring No.: **B-206**

Page No.: 1 of 1

Pin No.: 13J080

Checked By: MLM

Boring Crew: GARROW, JUDKINS
Date Started: 7/07/15 Date Finished: 7/07/15
VTSPG NAD83: N 642990.35 ft E 1520086.14 ft
Station: 12+60 Offset: -0.70
Ground Elevation: 794.1 ft

Casing Type: WB Sampler: SS
I.D.: 4 in 1.5 in
Hammer Wt: N.A. 140 lb.
Hammer Fall: N.A. 30 in.
Hammer/Rod Type: Auto/AWJ
Rig: CME 45C TRACK C = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
07/07/15	14.6	While drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 1.0 ft								
		A-1-b, GrSa, brn, Moist, Rec. = 0.7 ft				11-14-10-10 (24)	7.5	36.2	46.4	17.4
		Field Note:, Cleaned out with roller cone								
5		A-1-b, GrSa, brn, Moist, Rec. = 0.8 ft				5-4-6-6 (10)	14.2	41.3	42.2	16.5
		Field Note:, Cleaned out with roller cone								
10		A-1-b, SaGr, brn, Moist, Rec. = 0.8 ft, Lab Note: Broken Rock was within sample.				7-6-6-6 (12)	11.3	56.7	28.1	15.2
		Field Note:, NXDC, Cleaned out casing								
15		Field Note:, No Recovery				R@0.0" (R)				
		16.0 ft - 21.0 ft, Gray, Muscovite-biotite-chlorite-albite-quartz SCHIST, Hard, Very slightly weathered, Good rock, NXMDC, RMR = 71	1 (35-40)	92 (96)	3					
					3					
					4					
					3					
					3					
20		21.0 ft - 26.0 ft, Gray, Muscovite-biotite-chlorite-albite-quartz SCHIST, Hard, Unweathered, Good rock, NXMDC, RMR = 79	2 (20)	100 (100)	3					
					4					
					4					
					3					
					3					
		Hole stopped @ 26.0 ft								
		Remarks: 1. Hole collapsed at 15.4 ft. 2. Offsets were taken from the proposed centerline, not existing.								

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 HUNTINGTON BF 0211(32).GPJ VERMONT AOT.GDT 7/15/15



STATE OF VERMONT
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CENTRAL LABORATORY

BORING LOG

HUNTINGTON
BF 0211(32)
TH-1 BR-8

Boring No.: **B-208**

Page No.: 1 of 1

Pin No.: 13J080

Checked By: MLM

Boring Crew: DAIGNEAULT, GARROW, NIETO
Date Started: 7/06/15 Date Finished: 7/06/15
VTSPG NAD83: N 643030.44 ft E 1520089.09 ft
Station: 12+98 Offset: -15.80
Ground Elevation: 792.9 ft

Type: _____
I.D.: _____
Hammer Wt: _____
Hammer Fall: _____
Hammer/Rod Type: _____
Rig: _____

Casing: WB Sampler: SS
4 in 1.5 in
N.A. 140 lb.
N.A. 30 in.
Auto/AWJ
C_c = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
07/06/15	13.2	After drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	
5		A-1-a, SaGr, brn, Moist, Rec. = 0.6 ft, Lab Note: Lots of Broken Rock was within sample.				1-2-2-4 (4)	8.1	60.6	28.1	11.3	
		A-1-b, SaGr, brn-gry, Moist, Rec. = 0.6 ft, Lab Note: Lots of Broken Rock was within sample.				15-3-3-3 (6)	8.4	51.0	35.1	13.9	
		A-1-a, SaGr, brn, Moist, Rec. = 0.3 ft, NXDC, Cleaned out casing. Lab Note: Lots of Broken Rock was within sample.				3-2-1-3 (3)	12.7	61.2	31.0	7.8	
		A-1-a, Gr, brn-gry, Moist, Rec. = 0.3 ft, NXDC, Cleaned out casing. Lab Note: Very clean (washed) sample.				2-2-1-2 (3)	6.7	86.5	12.5	1.0	
10		A-2-4, SiSa, brn, Moist, Rec. = 0.4 ft, NXDC, Cleaned out casing.				4-1-1-1 (2)	25.5	16.3	53.6	30.1	
		A-1-a, SaGr, brn-gry, Moist, Rec. = 0.4 ft, NXDC, Cleaned out casing. Lab Note: Lots of Broken Rock was within sample.				3-4-6-10 (10)	8.6	63.1	27.8	9.1	
		A-1-a, SaGr, rust-gry, Moist, Rec. = 0.9 ft, NXDC, Cleaned out casing. Lab Note: Lots of Broken Rock was within sample.				16-15-9-13 (24)	11.0	62.6	27.9	9.5	
15		A-1-b, SaGr, gry, Moist, Rec. = 1.1 ft, NXDC, Cleaned out casing. Lab Note: Lots of Broken Rock was within sample.				29-40-R@3.5" (R)	10.5	55.3	28.8	15.9	
		Field Note: NXDC, Cleaned out casing									
20		16.0 ft - 18.0 ft, Gray, Muscovite-biotite-chlorite-albite-quartz SCHIST, Hard, Unweathered, Good rock, NXMDC, RMR = 68	1 (20)	40 (78)	3						
		18.0 ft - 22.0 ft, Gray, Muscovite-biotite-chlorite-albite-quartz SCHIST, Hard, Unweathered, Good rock, NXMDC, RMR = 79	2 (20-25)	78 (100)	3						
25		22.0 ft - 26.0 ft, Gray, Muscovite-biotite-chlorite-albite-quartz SCHIST, Hard, Unweathered, Good rock, NXMDC, RMR = 71	3 (20-25)	80 (100)	4						

Hole stopped @ 26.0 ft

Remarks:
1. Hole collapsed at 4.5 ft.
2. Offsets were taken from the proposed centerline, not existing.

Notes:
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BORING LOG 2 HUNTINGTON BF 0211(32).GPJ VERMONT AOT.GDT 7/15/15