



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

BORING LOG

LUDLOW
 HES SGNL(44)
 VT-100, VT-103 TRAFFIC SIGNAL

Boring No.: B-101
 Page No.: 1 of 1
 Pin No.: 13B020
 Checked By: MLM

Boring Crew: DAIGNEAULT, GARROW, NIETO
 Date Started: 5/21/15 Date Finished: 5/21/15
 VTSPG NAD83: N 335369.08 ft E 1585369.64 ft
 Station: 266+71 Offset: -1.70
 Ground Elevation: 1036.0 ft

Casing WB Sampler SS
 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 TRACK C. = 1.34

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

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Groundwater Observations				
			Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
5		Asphalt Pavement, 0.0 ft - 0.2 ft	6-18-22-21 (40)	8.3	40.5	50.3	9.2
		A-1-b, GrSa, brn, Moist, Rec. = 0.7 ft					
		A-2-4, GrSa, brn, Moist, Rec. = 1.6 ft					
		A-1-b, SaGr, brn, Moist, Rec. = 1.5 ft, Lab Note: Broken Rock was within sample.	10-10-12-14 (23)	5.4	26.5	58.3	15.2
			12-12-13-16 (25)	4.5	47.4	41.1	11.5
Hole stopped @ 6.0 ft							

Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
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 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 LUDLOW HES SGNL(44).GPJ VERMONT AOT.GDT 6/15/15



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Boring No.: **B-102**
 Page No.: 1 of 1
 Pin No.: 13B020
 Checked By: MLM

Boring Crew: DAIGNEAULT, GARROW, NIETO
 Date Started: 5/21/15 Date Finished: 5/26/15
 VTSPG NAD83: N 335390.71 ft E 1585411.02 ft
 Station: 266+60 Offset: 43.80
 Ground Elevation: 1034.5 ft

Casing Type: WB
 Sampler Type: 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
		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 - 0.6 ft					
5		A-1-a, SaGr, brn, Moist, Rec. = 1.1 ft, Lab Note: Broken Rock was within sample.	23-28-15-12 (43)	3.1	54.4	34.6	11.0
		A-2-4, Sa, brn, Moist, Rec. = 1.4 ft, Lab Note: Broken Rock was within sample.	10-13-16-19 (29)	10.6	19.3	63.8	16.9
		A-1-b, SaGr, brn, Moist, Rec. = 1.3 ft, Cleaned out casing. Lab Note: Broken Rock was within sample.	11-11-22-19 (33)	9.0	42.3	42.2	15.5
		A-1-b, SaGr, brn, MTW, Rec. = 1.2 ft, Cleaned out casing. Lab Note: Broken Rock was within sample.	13-13-19-13 (32)	10.9	50.2	35.5	14.3
10		A-1-b, SaGr, brn, MTW, Rec. = 1.4 ft, Cleaned out casing. Lab Note: Broken Rock & Weathered Rock were within sample.	11-14-23-14 (37)	11.0	43.0	39.2	17.8
		Field Note: No Recovery	R@3.5" (R)				
		Field Note: Concrete, Cleaned out casing.					
15		Field Note: No Recovery	R@0.0" (R)				
		Field Note: Pulled casing and changed bit at 16.0 ft.					
20		Field Note: Cobbles, Cleaned out casing.					
		Visual Description: Broken Rock, gry, Moist, Rec. = 0.3 ft	R@6.0" (R)				
25		A-1-b, SiSaGr, brn, Moist, Rec. = 1.1 ft, Lab Note: Weathered Rock was within sample and broke down during gradation.	9-14-14-17 (28)	12.8	43.8	34.3	21.9
Hole stopped @ 27.0 ft							
30	Remarks: Hole collapsed at 15.0 ft.						

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LUDLOW
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VT-100, VT-103 TRAFFIC SIGNAL

Boring No.: **B-103**
Page No.: 1 of 1
Pin No.: 13B020
Checked By: MLM

Boring Crew: GARROW, NIETO
Date Started: 5/27/15 Date Finished: 5/27/15
VTSPG NAD83: N 335328.46 ft E 1585351.46 ft
Station: 266+52 Offset: -42.20
Ground Elevation: 1033.6 ft

Casing: WB
Sampler: SS
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 TRACK C_r = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
05/27/15	8.1	After drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
5		A-2-4, Sa, Lt/brn, Moist, Rec. = 1.3 ft	WH-WH-1-3 (1)	7.8	12.5	71.6	15.9
		A-2-4, Sa, Lt/brn, Moist, Rec. = 1.7 ft	2-5-4-5 (9)	9.4	15.8	68.3	15.9
10		A-1-b, GrSa, brn, Moist, Rec. = 1.6 ft, Lab Note: Burnt Coal (Cinders) were within sample.	5-6-6-9 (12)	16.6	27.6	53.2	19.2
		A-2-4, SiGrSa, brn, Moist, Rec. = 1.3 ft	5-5-5-7 (10)	20.3	28.5	47.4	24.1
		A-2-4, SiGrSa, Lt/brn, Moist, Rec. = 1.6 ft, NXDC, Cleaned out casing. Lab Note: Broken Rock & some Weathered Rock were within sample.	6-7-6 (13)	11.2	35.3	35.5	29.2
15		A-1-b, SiSaGr, Lt/brn, Moist, Rec. = 1.3 ft, Lab Note: Weathered Rock & Broken Rock were within sample.	4-7-9-24 (16)	10.6	43.4	32.7	23.9
		Field Note: NXDC, Cleaned out casing Visual Description: Severely Weathered Rock, Lt/brn, Moist, Rec. = 1.4 ft	18-22-26-26 (48)	12.4			
20		Field Note: NXDC, Cleaned out casing					
		Visual Description: Severely Weathered Rock, brn-Lt/brn, Moist, Rec. = 0.7 ft	30-R@2.5" (R)	12.7			
25		Visual Description: Small Broken Rock pieces, Dk/gry, Moist, Rec. = 0.3 ft Hole stopped @ 25.6 ft	5-R@1.0" (R)				
30		Remarks: Hole collapsed at 14.6 ft.					

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Boring No.: **B-104**
Page No.: 1 of 1
Pin No.: 13B020
Checked By: MLM

Boring Crew: DAIGNEAULT, GARROW, NIETO
Date Started: 5/20/15 Date Finished: 5/21/15
VTSPG NAD83: N 335197.58 ft E 1585362.64 ft
Station: 31+35 Offset: 0.00
Ground Elevation: 1034.4 ft

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
05/21/15	9.8	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 %
5		A-1-b, GrSa, Dk/brn, Moist, Rec. = 1.2 ft				2-4-6-8 (10)	7.4	36.0	48.5	15.5
		A-1-b, GrSa, brn, Moist, Rec. = 1.5 ft, Cleaned out casing.				4-8-11-19 (19)	8.3	30.0	53.0	17.0
		A-1-b, GrSa, gry, MTW, Rec. = 0.5 ft Field Note: Cobbles				35- R@2.5" (R)	16.1	26.1	66.6	7.3
		Visual Description: Severely Weathered Rock, brn, Moist, Rec. = 1.8 ft				11-14-16-17 (30)	13.1			
10		Lab Note, Broken Rock & Weathered Rock were within sample., brn, Moist, Rec. = 1.7 ft				9-9-10-11 (19)	15.6	39.0	36.6	24.4
		Lab Note, Lots of Severely Weathered Rock was within sample., brn, Moist, Rec. = 1.3 ft				7-7-10-10 (17)	14.5	28.5	45.7	25.8
15		Visual Description: Mostly Broken Rock, Rec. = 0.4 ft				R@5.0" (R)	10.7	52.7	29.5	17.8
20		20.0 ft - 25.0 ft, Gray, mica-SCHIST, with quartz veins. Strongly foliated. Some brown staining on joints. Moderately hard, Very slightly weathered, Good rock, NXMDC, RMR = 64	1 (40)	88 (85)	2	Top of Bedrock @ 20.0 ft				
					3					
					3					
					4					
25		25.0 ft - 29.7 ft, Gray, mica-SCHIST, with quartz veins. Strongly foliated. Some brown staining on joints throughout core. Moderately hard, Very slightly weathered, Good rock, NXMDC, RMR = 61	2 (35-40)	94 (75)	3					
					3					
					3					
					4					
30		29.7 ft - 30.0 ft, Light brown, mica-SCHIST, Very soft, Severely weathered			6					
		Hole stopped @ 30.0 ft								
35		Remarks: Hole collapsed at 20.3 ft.								

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