



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

BORING LOG

Springfield
STP CUL(47)
US-5

Boring No.: 0-163

Page No.: 1 of 2

Pin No.: 13C346

Checked By: JFW

Boring Crew: T. Farrell (SAB), G. Honey (GeoDesign)
Date Started: 2/10/15 Date Finished: 2/10/15
VTSFG INR03: N 304306.00 N E 1084084.00 N
Station: 489+04 Offset: 10' R
Ground Elevation: 340 N

Casing Sampler
Type: AUGER SS
I.D.: 4.25 in 1.38 in
Hammer Wt: N.A. 140 lb.
Hammer Fall: N.A. 30 in.
Hammer/Rod Type: Auto
Wp: ONE 500K ATV CE = 1.35

Groundwater Observations (3)

Date	Depth (ft)	Notes
02/10/15	45.0	Wet sample.
02/11/15	50.0	~1' must in auger.

Depth (ft)	Sheet (f)	CLASSIFICATION OF MATERIALS (Description)	Moisture Content (%)	Void Ratio	Groundwater Observations (3)						
					Gravel %	Sand %	Fines %	U	OC		
0		0.4' Asphalt.									
0		0.3' Possible Concrete	50.0 ⁽⁶⁾	5.2	47.3	38.2	13.5	NP	NP		
5		S1 (0.7' - 1.2'): Refusal, brown fine to coarse SAND and fine to coarse GRAVEL, little SILT, moist. Res. = 0.3 N (ASTM D145 Classification: A-1-b.)	11-7-7 ⁽¹⁴⁾	5.3	32.3	37.5	18.2	NP	NP		
10		S2 (5' - 7'): Medium dense, brown fine to coarse SAND, some fine to coarse Gravel, little SILT, moist (possible slough). Res. = 0.4 N (ASTM D145 Classification: A-1-a.)	6-9-9 ⁽¹¹⁾	14.8	31.8	37.9	30.3	NP	NP		
15		S3 (10' - 12'): Medium dense, gray SILT and fine to coarse SAND, little fine to coarse Gravel, trace Wood Chips at bottom of sample, moist. Res. = 1.0 N (ASTM D145 Classification: A-2-a.)	4-9-9 ⁽¹²⁾	18.3	7.3	38.5	54.2	NP	NP		
20		S4 (15' - 17'): Medium dense, gray-brown fine to medium SAND and SILT, moist. Res. = 1.7 N (ASTM D145 Classification: A-4.)	14-10-9 ⁽¹⁰⁾	8.9	38.2	42.1	21.7	NP	NP		
25		S5 (25' - 27'): Dense, brown fine to coarse SAND, some fine to coarse Gravel, some SILT, moist. Res. = 1.8 N (ASTM D145 Classification: A-1-b.)	17-19-20 ⁽³⁰⁾	8.8	48.7	32.3	18.8	NP	NP		
30		S7 (30' - 32'): Refusal, brown fine to coarse SAND, some fine to coarse Gravel, little SILT, moist. Stone fragments from cobbles/boulders observed in spoon shoe. Res. = 0.7 N (ASTM D145 Classification: A-1-b.)	24-28/4 ⁽⁶⁾	7.7	48.8	35.7	15.7	NP	NP		
35		S8 (35' - 37'): Refusal, brown fine to coarse SAND, some fine to coarse Gravel, some SILT, moist. Res. = 1.8 N (ASTM D145 Classification: A-1-b.)	21-22-26 ⁽¹⁶⁾	5.9	41.8	37.7	20.5	NP	NP		
40		S9 (40' - 42'): Medium dense, gray-brown SILT, some fine to medium Sand, moist. Res. = 0.1 N	8-8-7-12 ⁽¹⁵⁾								
45		S10 (45' - 47'): Medium dense, gray layered SILT, trace Clayey SILT, wet. Res. = 1.5 N (ASTM D145 Classification: A-4.)	2-9-9-9 ⁽¹⁴⁾	25.0	0.3	12.5	87.2	NP	NP		

1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. U values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made of fines 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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5		S11 (50' - 52'): Medium dense, gray layered SILT, trace fine Sand, wet. Res. = 1.2 N (ASTM D145 Classification: A-4.) Note stopped @ 52.0 N	5-9-9-9 ⁽¹⁴⁾	25.0	0.4	14.5	85.1	NP	NP		
55		Remarks: 1) U.S. Route 5 stationing, ground elevation, and coordinates shown are estimated from electronic files provided by Vtrans via email on 2/25/15 and taped measurements to existing features by GeoDesign personnel. All measurements are rounded to the nearest foot. 2) Hard grinding of WSA during advance from approximately 30 to 38 feet deep on inferred cobbles and/or boulders. 3) Borehole was backfilled with gravel/cuttings and cased patched on 2/11/15. 4) Hammer energy correction factor is assumed based on hammer type. 5) Visual sample descriptions are per Bernier classification system. Laboratory testing results shown are based on testing performed by Vtrans with the Gravel/Sand/SILT breakdown shown per ASTM D145.									

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