



BORING LOG

Highgate RD 1448 (45)  
(GeoDesign #730-08.16)  
Bridge #25, Highgate, VT

Boring No.: 0-101  
Page No.: 1 of 2  
Pin No.: P00171  
Checked By: JFW/SJK

Boring Crew: J. Barrowbridge (CCO), A. Barthelet (GeoDesign)  
Date Started: 8/18/14 Date Finished: 8/18/14  
VTSFG INOBS: N 085191.00 N E 1514017.00 N  
Station: 12+17 Offset: -0.00  
Ground Elevation: 221 N

Casing Sampler  
Type: H.S.A. SS  
I.D.s: 3.25 in 1.38 in  
Hammer Mt: H.A. 140 lb.  
Hammer Fall: H.A. 30 in.  
Hammer/Red Type: Safety/MUJ  
Rig: CMT 43C 200 CE = 1

Groundwater Observations (3)

Date	Depth (ft)	Notes
08/18/14		None observed.

Depth (ft)	Strat(1)	CLASSIFICATION OF INTERIALS (Description)	S <sub>u</sub> (kPa)	S <sub>v</sub> (kPa)	S <sub>u</sub> (lb/ft <sup>2</sup> )	S <sub>v</sub> (lb/ft <sup>2</sup> )	Penetration (lb/ft)	Penetration (lb/ft)	Penetration (lb/ft)	Penetration (lb/ft)	Penetration (lb/ft)	Penetration (lb/ft)	Penetration (lb/ft)	Penetration (lb/ft)	Penetration (lb/ft)	
																Penetration (lb/ft)
2.5		S1 (0.5'-2'): Sand, light brown fine to coarse S&SB, little fine to coarse Gravel, little SH, mat. (RWD BNC) (ASHMO W145 Classification: A-1-b.) Res. = 1.2 N			27-18-17 (35)	5.1	31.2	51.3	17.5							
5.0		S2 (2'-6'): Medium dense, brown and light brown fine to coarse Sand, little fine Gravel, trace SH, mat. (RWD BNC) Res. = 1.1 N (ASHMO W145 Classification: A-1-b.)			11-8-7-6 (15)	4.5	27.0	63.3	9.7							
7.5		S3 (4'-6'): Loose, brown with orange and tan mottling (possible layering) fine to coarse Sand, some SH, little fine Gravel, mat. (FLL) Res. = 1.2 N (ASHMO W145 Classification: A-2-4.)			4-3-2-3 (7)	15.0	19.0	35.3	25.7							
10.0		S4 (6'-8'): Medium dense, brown fine to medium Sand, some SH, little fine Gravel, trace wood (decayed), mat. (FLL) Res. = 0.3 N (ASHMO W145 Classification: A-2-4.)			2-3-7-13 (16)	10.0	10.0	50.7	24.4							
12.5		S5 (8'-8.5'): Refusal, no recovery. Res. = 0.0 N C1) Very poor quality, moderately hard, slightly weathered, gray with white bedding, fine-grained SLATE. Fracturing approximately horizontal to 30 degrees.	C1	44 (0)	0.13 (0)											
15.0		Inferred Soil Below Abutment														
17.5		Wet stopped @ 13.2 N Terminated in boulder/abutment RM.														

Notes: 1. Stratification lines represent approximate boundary between material types. Variation may be greater.  
2. If 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 ground-water may occur due to other factors than those present at the time measurements were made.



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22.5		REMARKS: 1) Auger grinding from 6.5 to 8.0 feet deep with more significant grinding/shatter between 7.5 and 8.0 feet deep. 2) Shad observed in auger cuttings during advance between 8 and 8.5 feet deep. 3) Switch to 4" FJ casing in the same borehole. Casing refusal @ 7.5 feet. 4) Clear borehole with the roller bit and advance casing to 8.2 feet prior to attempting core. 5) Much water return brown during casing with water less noted at approximately 5gpm during advance. 6) Complete loss of return for ~30 seconds at 9.5 feet deep. Return began at approximately 10.5' deep, light gray-brown in color. 7) Note total loss of water between 12 and 13.2 feet deep. 8) Remove core barrel and advance roller bit to 12 feet with a total loss of water during advance. Observed water flowing from face of stone abutment. Inferred that core was from boulder/part of abutment. Abandoned borehole. 9) Rock core obtained using a 10"-size rock core barrel.														
25.0																
27.5																
30.0																
32.5																
35.0																
37.5																

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