



BORING LOG

Brattleboro Bridge #9 Replacement
IM 091-1(65) BR 9

Boring No.: B-203
Page No.: 1 of 2
Pin No.: 12a026
Checked By: JAG

Boring Crew: T. Farrell (SJB), Wimet/Gilman (GeoDesign)	Type: H.S.A.	Casing: H.S.A.	Sampler: SS	Groundwater Observations (3)		
Date Started: 3/21/12 Date Finished: 3/22/12	I.D.: 4.25 in	1.38 in		Date	Depth (ft)	Notes
VTSFG NAD83: N 136376.00 ft E 1621267.00 ft	Hammer Wt: N.A.	140 lb.		03/21/12	14.0	Wet sample.
Station: 564+60 Offset: 42' L	Hammer Fall: N.A.	30 in.		03/21/12	17.3	In augers.
Ground Elevation: 236 ft	Hammer/Rod Type: Auto/AWJ					
	Rig: CME 550X ATV	CE = 1.5				

Depth (ft)	Strata(1)	CLASSIFICATION OF MATERIALS (Description)	Run (lip deg.)	Core Rec. (ROD %)	Drill Rate minutes/ft	Blows/6" (N Value)(2)	Moisture Content %	Gravel %	Sand %	Fines %
5		S1) Very loose, dark brown fine to coarse SAND, little fine to coarse Gravel, little Silt, moist. (FILL) Rec. = 1.1 ft (AASHTO M145 Classification: A-1-a) (AASHTO M145 Classification: Visual Description (Burmister).)				WOH-1-2-4 (3)	14.0	51.8	40.0	8.2
		S2) Medium dense, dark brown and blue fine to coarse SAND, some fine to coarse Gravel, little Silt, trace Root/Wood Fibers, moist. (FILL) Rec. = 1.3 ft (AASHTO M145 Classification: A-1-b) (AASHTO M145 Classification: Visual Description (Burmister).)				11-10-7- (17)	12.2	39.3	43.4	17.3
		Inferred Transition to natural Silty Gravelly Sand between 7.5' and 9'. (AASHTO M145 Classification: Field Note.)								
10		S3) Loose, gray/brown/white fine to coarse SAND, some fine to coarse Gravel, little Silt, moist. (SILTY GRAVELLY SAND) Rec. = 1.6 ft (AASHTO M145 Classification: A-1-b) (AASHTO M145 Classification: Visual Description (Burmister).)				5-5-3-4 (8)	12.8	34.4	46.2	19.4
15		S4) Very loose, brown fine to coarse SAND, trace coarse Gravel, wet (Top 2.5" and bottom 9" had coarse Sand and Gravel; middle 6.5" had no coarse Sand or Gravel). (SILTY GRAVELLY SAND) Rec. = 1.5 ft (AASHTO M145 Classification: A-2-4) (AASHTO M145 Classification: Visual Description (Burmister).)				WOH-2-1-1 (3)	22.0	16.6	54.2	29.2
20		S5) Medium dense, brown with oxidation fine to coarse SAND and fine to coarse GRAVEL, little Silt, wet. (SILTY GRAVELLY SAND) Rec. = 1.0 ft (AASHTO M145 Classification: A-1-b) (AASHTO M145 Classification: Visual Description (Burmister).)				5-11-13-11 (24)	14.0	34.0	57.3	8.7
		Inferred transition to Weathered Rock between 21' and 23.5'. (AASHTO M145 Classification: Lab Note.)								
25		S6) Refusal, Pulverized Rock Fragments. Rec. = 0.2 ft (AASHTO M145 Classification: Visual Description (Burmister).)	C1	81 (30)	3.2	50/2"				
		C1) Poor quality, moderately hard to hard, slightly weathered with moderately weathered joints (upper 23") grading into highly weathered to decomposed (bottom 6") closely jointed to fissured, gray with green and white banding PHYLLITE White Quartzite intrusion between 5" and 12" into core. Fractured surfaces show some schistosity. Jointing at ~60 to 70 degrees from horizontal. No reaction to dilute HCl.	C2	100 (31)	3.8					
		C2) Poor quality, moderately hard to hard, moderately weathered, closely jointed to fissured, gray with white banding and orange weathered zones PHYLLITE Fractured surfaces show some schistosity. Jointing at ~60 to 70 degrees from horizontal. No reaction to HCl.								

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N 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 groundwater may occur due to other factors than those present at the time measurements were made.



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Depth (ft)	Strata(1)	CLASSIFICATION OF MATERIALS (Description)	Run (lip deg.)	Core Rec. (ROD %)	Drill Rate minutes/ft	Blows/6" (N Value)(2)	Moisture Content %	Gravel %	Sand %	Fines %
35		C3) Poor quality, moderately hard to hard, moderately weathered close jointed, gray with white banding and orange weathered zones PHYLLITE Fractured surfaces show some schistosity. Jointing at ~60 to 80 degrees from horizontal. No reaction to dilute HCl.	C3	92 (35)	3.3					
		C4) Fair quality, moderately hard to hard, fresh to slightly weathered with occasional moderately weathered jointing, moderate to closely jointed, gray with white banding and orange weathering in joints PHYLLITE Fractured surfaces show some schistosity. Jointing at ~60 to 80 degrees from horizontal, no reaction to dilute HCl.	C4	100 (62)	3.1					
40		Hole stopped @ 39.5 ft								
45		Remarks: 1) Ground surface elevation estimated from a topographic site plan provided by VHB. 2) Boring shifted 10.5" south of surveyed location due to overhead wires. 3) Driller noted easier augering through inferred softer soils beginning at 7.5' deep. Inferred upper 7.5' to contain blast rock fill. 4) Driller noted an increase in auger resistance beginning at 21' deep. 5) Driller reported hollow stem auger refusal at 23.5 feet deep. Split spoon refusal at 23.6 feet deep. 6) Inserted 3" casing through augers at 20' deep and set casing to 23.5' deep to obtain rock core sample. Reamed hole to 24' with rollerbit prior to coring. 7) Core run C1 ended after 3' of penetration (at 27' deep) due to core blockage. 8) Core run C2 ended after 3.5' of penetration (at 30.5' deep) due to reaching the end of stroke on the rigs drill head. Core time only recorded for entire run due to markings washing off drill rods during coring. 9) Core run C3 ended after 4' of penetration (at 34.5' deep) due to core block. Core time from 33.5' to 34.5' deep was not recorded. 10) Core times for core run C4 were only measured over the entire run (15.7 min.) due to foot markings washing off of the drill rods. 11) Lab testing gradations reported are per AASHTO M145.								

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