



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

BORING LOG
Boring No.: B-212
Page No.: 1 of 2
Pin No.: 12a026
Checked By: JAG

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

Boring Crew: J. Leonhardt (TransTech), B. Marshall (GeoDesign)
Date Started: 3/28/12 Date Finished: 3/29/12
VTSFG NAD83: N 136884.00 ft E 1621848.00 ft
Station: 572+31 Offset: 0.00
Ground Elevation: 318 ft

Casing Sampler
Type: FJ SS
I.D.: 4 in 1.38 in
Hammer Wt: 140 lb. 140 lb.
Hammer Fall: 30 in. 30 in.
Hammer/Rod Type: Auto/AWJ
Rig: CME 75 TRACK CE = 1.43

Groundwater Observations (3)
Date Depth Notes
03/29/12 15.5 In casing overnight.

Depth (ft)	Strat(1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. (ROD %)	Drill Rate (minutes/ft)	Blows/6" (N Value)(2)	Moisture Content %	Gravel %	Sand %	Fines %
5	X X X	S1) Top 2": Very loose, dark brown topsoil. Bottom 4": fine to medium SAND, little Silt, trace fine Gravel, trace Roots. (FILL) Rec. = 0.5 ft (AASHTO M145 Classification: A-4) (AASHTO M145 Classification: Visual Description (Burmister).)				1-2-1-1 (3)	16.0	18.2	45.7	36.1
		S2) Loose, brown fine to medium SAND, little fine to coarse Gravel, little Silt. (FILL) Rec. = 0.2 ft (AASHTO M145 Classification: A-1-b) (AASHTO M145 Classification: Visual Description (Burmister).)				2-3-3-9 (6)	14.3	38.5	41.0	20.5
		Inferred Silty Sand from 1956 boring data between 6.5' and 9'. (AASHTO M145 Classification: Field Note.)								
10	X X X	C1) Very poor quality, hard, moderately weathered, fissured to closely jointed, gray with white banding and orange weathering in joints PHYLLITE Fractured surfaces show some schistosity. Jointing at ~70 to 80 degrees from horizontal. No reaction to dilute HCl.	C1	93 (0)	4					
		C2) Very poor quality, hard, moderately weathered, fissured to closely jointed, gray with white banding and orange weathering in joints PHYLLITE Fractured surfaces show some schistosity. Jointing at ~60 to 70 degrees from horizontal. No reaction to dilute HCl.	C2	100 (0)	5					
15	X X X	C3) Very poor quality, hard, moderately weathered, fissured to closely jointed, gray with white banding and orange weathering in joints PHYLLITE Upper 13" of core shows some schistosity. Jointing at ~70 degrees from horizontal. No reaction to dilute HCl.	C3	100 (0)	6					
		C4) Very poor quality, hard, moderately weathered, shattered to closely jointed, gray with white banding and orange weathering in joints PHYLLITE Fractured surfaces show some schistosity. Jointing at ~80 to 90 degrees from horizontal. No reaction to dilute HCl.	C4	100 (0)	5	7				
20	X X X	C5) Very poor quality, hard, moderately weathered, shattered to closely jointed, gray with white banding PHYLLITE Jointing at ~80 to 90 degrees from horizontal in upper 25" and at ~40 to 50 degrees from horizontal lower 16". White Quartzite intrusions from 33" to 41" in the core. No reaction to dilute HCl.	C5	100 (0)	8					
					6					
					9					
					7					
					11					
25		Hole stopped @ 24.0 ft								

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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		Remarks: 1) Boring location offset 14' north of surveyed stake location. 2) Fill thickness inferred from 1956 record drawings for the original bridge construction and increased blow counts observed at 6.5' deep. Soil matrix of natural soils is inferred from boring B-211 and those shown on the 1956 record drawings for the original bridge construction. 3) Casing refusal at 8.5' deep. Driller advanced roller bit then casing into rock to 9' deep prior to coring. 4) Upon completion of exploration, borehole was backfilled with bentonite cement grout. 5) Lab testing gradations reported are per AASHTO M145.								
35										
40										
45										
50										
55										

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GEODESIGN BORING LOG: BRATTLEBORO IM 091-1(65) BR 9 VTRANS FORMAT.CPJ VERMONT AOT.GDT 12/2/13

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