



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

BORING LOG

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

Boring No.: B-302
 Page No.: 1 of 1
 Pin No.: 12a026
 Checked By: JFW

Boring Crew: Joshua Gilman (GeoDesign), Tom Farrell (SJB)
 Date Started: 8/15/12 Date Finished: 8/15/12
 VTSPG NAD83: N 136336.00 ft E 1621293.00 ft
 Station: 564+52 Offset: 4' R
 Ground Elevation: 235 ft

Casing Sampler
 Type: FJ
 I.D.: 4 in
 Hammer Wt: 140 lb. N.A.
 Hammer Fall: 30 in. N.A.
 Hammer/Rod Type: Auto/NWJ
 Rig: CME 550X ATV CE = 1.5

Groundwater Observations (3)		
Date	Depth (ft)	Notes

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (ROD %)	Blows/6" (N Value)(2)	Moisture Content %	Gravel %	Sand %	Fines %
5	x x	Inferred to be Fill based on soil samples from nearby Boring B-204							
10		Inferred to be Silty Sand based on soil samples from nearby Boring B-204							
15									
20		C1) Good quality, hard, slightly weathered, closely jointed, gray with white banding PHYLLITE. C2) Fair quality, hard, moderately weathered, closely jointed, gray with white banding PHYLLITE.	C1 C2	100 (88) 100 (68)					
25		Hole stopped @ 23.0 ft							
30		Remarks: 1) Soil boring location and elevation shown are surveyed by VHB. 2) No groundwater observations were made due to wash-drive drilling method. 3) Soil strata is inferred from B-204 located 5 feet northeast of B-302. No soil samples were taken from Boring B-302. 4) Casing and roller bit refusal at 5.5 feet deep on inferred cobble. Driller offset approximately 3 feet northwest to resume advance. 5) Driller advanced to 9 feet deep with 4.25" I.D. hollow stem auger through cobbles and boulders, then resumed advance with 4" flush-joint casing. 6) Driller noted casing refused at 14 feet deep. Driller advanced roller bit to 16 feet deep through inferred weathered bedrock prior to attempting C1. 7) 3" I.D. inclinometer casing installed to 23 feet deep with grout mix consisting of approximately 1.5 bags of cement (94# bag), 10# of bentonite, and 25 gallons of water. Length of casing installed was 24'-1 1/4" with 15" stick-up. (~3" of stickup removed at time of crosshole seismic testing).							
35									
40									
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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.

GEODESIGN BORING LOG 750-09.6 BRATTLEBORO BR 9 SEISMIC VTRANS FORMAT.GPJ VERMONT AOT.GDT 12/2/13