

 STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG			Boring No.: <u>B-4</u>									
		Richford BRF 0302(29) Richford, VT GeoDesign # 750-09.13			Page No.: <u>3 of 3</u>									
Boring Crew: <u>J. Leonhardt (TransTech), A. Baribault (GeoDesign)</u> Date Started: <u>9/03/13</u> Date Finished: <u>9/04/13</u> VTSPG NAD83: <u>N 909724.13 ft E 1592624.76 ft</u> Station: <u>44+58</u> Offset: <u>5' R</u> Ground Elevation: <u>437 ft</u>		Casing Type: <u>FJ</u> Sampler: <u>SS</u> I.D.: <u>4 in</u> <u>2 in</u> Hammer Wt: <u>140 lb.</u> <u>140 lb.</u> Hammer Fall: <u>30 in.</u> <u>30 in.</u> Hammer/Rod Type: <u>Auto/NWJ</u> Rig: <u>CME 550X ATV</u> $C_e = \sim 1.5$	Groundwater Observations ⁽³⁾ <table border="1"> <thead> <tr> <th>Date</th> <th>Depth (ft)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td>09/03/13</td> <td>10.0</td> <td>Wet sample</td> </tr> <tr> <td>09/04/13</td> <td>9.5</td> <td>In Casing</td> </tr> </tbody> </table>			Date	Depth (ft)	Notes	09/03/13	10.0	Wet sample	09/04/13	9.5	In Casing
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GEODESIGN BORING LOG 750-09.13 RICHFORD VTRANS.GPJ VERMONT AOT.GDT 10/9/13	Depth (ft) Strat ⁽¹⁾	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.) Core Rec. % (RQD %) Drill Rate minutes/ft Blows/ft ⁽²⁾ (N Value) ⁽²⁾ Moisture Content % Gravel % Sand % Fines % LL % PI %											
	65	Remarks: 1) Hammer efficiency correction factor is assumed. Elevation, station and offset are estimated by GeoDesign from site plans provided by VTrans and taped measurements from existing features made in the field by GeoDesign personnel. They should be considered accurate only to the degree implied by the method of location used. 2) Samples S2 and S4 were not performed in accordance with ASTM D1586, (samples taken immediately after preceding split spoon sample without first clearing the borehole with the roller bit). 3) Soil moisture descriptions may not accurately depict actual conditions due to wash and drive drilling methods. Observe brown return water to approximately 10' deep, then turning gray. 4) Drove casing to 10' deep prior to advancing borehole open hole with the roller bit to 17' deep. At 17' deep encountered gravelly soils resulting in loss of water. Drive casing to 21 feet deep (prior to sampling S10) and advance the remainder of the borehole open hole with the roller bit until beginning coring at 44' deep. 5) Encountered weathered rock in sample S15 at 44' deep. Attempted core from 44' to 49' deep with low recovery / RQD sample obtained. Cleaned hole with roller bit to 49 feet and attempted split spoon. 6) Return water light gray during rock core. Coring times inflated due to drill string oscillation leading to driller using a lower RPM drilling speed and having stop approximately 1 to 4 times per minute to correct, particularly for C2 and C3. 7) Borehole grouted with 1 bag portland cement, 1/2 bag bentonite powder, and 40 gallons water. Topped off borehole with approximately 3 inches of cold patch asphalt at the ground surface. 8) All visual descriptions are per the Burmister classification system. All lab gradations are per the AASHTO M 145 classification system.												
	70													
	75													
	80													
	85													
Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual. 2. N Values have not been corrected for hammer energy. C_e 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.														

PROJECT NAME:	RICHFORD
PROJECT NUMBER:	BRF 0302(29)
FILE NAME:	st2j158bor.dgn
PROJECT LEADER:	C. CARLSON
DESIGNED BY:	H. SALLS
BORING LOGS	7
PLOT DATE:	11-DEC-2014
DRAWN BY:	R. PELLETT
CHECKED BY:	H. SALLS
SHEET	21 OF 36