

VT		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>1 of 3</u>		Pin No.: <u>12j158</u>						
		Checked By: <u>JFW</u>		Groundwater Observations ⁽³⁾								
Boring Crew: J. Leonhardt (TransTech), A. Baribault (GeoDesign)		Type: <u>FJ</u>	Casing: <u>SS</u>	Date	Depth (ft)	Notes						
Date Started: <u>9/03/13</u> Date Finished: <u>9/04/13</u>		I.D.: <u>4 in</u>	Sampler: <u>2 in</u>									
VTSPG NAD83: <u>N 909724.13 ft E 1592624.76 ft</u>		Hammer Wt: <u>140 lb.</u>	Blows/6" (N Value) ⁽²⁾	09/03/13	10.0	Wet sample						
Station: <u>44+58</u> Offset: <u>5' R</u>		Hammer Fall: <u>30 in.</u>	Moisture Content %	09/04/13	9.5	In Casing						
Ground Elevation: <u>437 ft</u>		Hammer/Rod Type: <u>Auto/NWJ</u>	Gravel %									
		Rig: <u>CME 550X ATV</u>	Sand %									
			Fines %									
			LL %									
			PI %									
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Cone Rec. % (RQD %)	Drill Rate (minutes/ft)	Blows/6" (N Value) ⁽²⁾	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
		6" Asphalt										
5		S1 (0.5' to 2'): Medium dense, tan fine to coarse SAND, little fine Gravel, little Silt, slightly moist. (Roadbase Fill) Rec. = 1.08 ft (AASHTO M145 Classification: A-1-b.)				8-15-14 (29)	4.7	29.3	51.9	18.8	NP	NP
		S2 (2' to 4'): Medium dense, brown fine to coarse SAND, some fine to coarse Gravel, some Silt, moist. (Subbase Fill) Rec. = 1.0 ft (AASHTO M145 Classification: A-1-b.)				11-9-7-6 (16)	8.0	42.5	35.7	21.8	NP	NP
		S3 (4' to 6'): Loose, brown fine to coarse SAND, some Silt, little fine Gravel, moist. (Possible Fill) Rec. = 0.67 ft (AASHTO M145 Classification: A-2-4.)				3-2-3-2 (5)	16.0	26.1	52.5	21.4	NP	NP
		S4 (6' to 8'): Loose, brown and gray fine to coarse SAND, some Silt, trace fine Gravel, very moist. (Possible Fill) Rec. = 1.08 ft (AASHTO M145 Classification: A-2-4.)				4-3-1-3 (4)	23.2	8.5	59.4	32.1	NP	NP
10		S5 (9' to 11'): Loose, gray SILT, little fine to coarse Sand, trace fine Gravel (concentrated in top of sample), wet. (Silt / Sand) Rec. = 1.17 ft (AASHTO M145 Classification: A-4.)				3-3-2-4 (5)	25.1	9.6	4.2	86.2	22	1
		S6 (11' to 13'): Medium dense, gray SILT, some Clayey Silt, trace fine Sand, wet. (Silt / Sand) Rec. = 1.67 ft (AASHTO M145 Classification: A-4.)				4-6-5-6 (11)	27.9		1.3	98.7	25	6
15		S7 (14' to 16'): Loose, gray SILT and Clayey SILT (laminated), trace fine Sand, wet. (Silt / Sand) Rec. = 1.67 ft (AASHTO M145 Classification: A-4.)				3-4-3-3 (7)	28.9		1.0	99.0	24	5
		S8A (16' to 17') - Upper 8" of S8: Medium dense, gray SILT, trace Clayey Silt, trace fine Sand, wet. (Silt / Sand) Rec. = 1.0 ft (AASHTO M145 Classification: A-4.)				3-2-8-10 (10)	27.4		2.7	97.3	22	2
		S8B (17' to 18') - Lower 4" of S8: Medium dense, gray fine to coarse SAND, some Silt, some fine Gravel, wet. (Glacial Till) (AASHTO M145 Classification: A-2-4.)					9.9	41.0	30.6	28.4	NP	NP
20		S9 (19' to 21'): Dense, gray fine to coarse SAND, some fine to coarse Gravel, some Silt, moist to wet. (Glacial Till) Rec. = 1.33 ft (AASHTO M145 Classification: A-2-4.)				9-16-20-26 (36)	9.3	35.3	34.2	30.5	NP	NP
		S10 (21' to 23'): Very dense, gray/green fine to coarse SAND and SILT, some fine Gravel, moist to wet. (Glacial Till) Rec. = 1.25 ft (AASHTO M145 Classification: A-2-4.)				24-29-27-28 (56)	10.0	32.7	32.0	35.3	NP	NP
25		S11 (24' to 24.4'): Refusal, gray SILT and fine to coarse SAND, some fine to coarse Gravel, moist to wet. (Glacial Till) Rec. = 0.42 ft (AASHTO M145 Classification: A-4.)				80/5.5" (R)	9.1	29.7	32.5	37.8	NP	NP
		S12 (29' to 29.4'): Refusal, gray SILT and fine to coarse Sand, trace fine Gravel, moist. (Glacial Till) Rec. = 0.42 ft				80/5.5" (R)	9.7	14.4	33.8	51.8	NP	NP

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.

BOTTOM OF FOOTING
ELEV 420.00

GEODESIGN BORING LOG 750-09.13 RICHFORD VTRANS.GPJ VERMONT AOT.GDT 10/09/13

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		Richford BRF 0302(29) Richford, VT GeoDesign # 750-09.13		Page No.: <u>2 of 3</u>		Pin No.: <u>12j158</u>						
		Checked By: <u>JFW</u>		Groundwater Observations								
Boring Crew: J. Leonhardt (TransTech), A. Baribault (GeoDesign)		Type: <u>FJ</u>	Casing: <u>SS</u>	Date	Depth (ft)	Notes						
Date Started: <u>9/03/13</u> Date Finished: <u>9/04/13</u>		I.D.: <u>4 in</u>	Sampler: <u>2 in</u>									
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Station: <u>44+58</u> Offset: <u>5' R</u>		Hammer Fall: <u>30 in.</u>	Moisture Content %	09/04/13	9.5	In Casing						
Ground Elevation: <u>437.0 ft</u>		Hammer/Rod Type: <u>Auto/NWJ</u>	Gravel %									
		Rig: <u>CME 550X ATV</u>	Sand %									
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Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Cone Rec. % (RQD %)	Drill Rate (minutes/ft)	Blows/6" (N Value) ⁽²⁾	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
		(AASHTO M145 Classification: A-4.)										
35		S13 (34' to 34.3'): Refusal, gray SILT, some fine to coarse Sand, some fine to coarse Gravel (fractured, platelike), moist. (Glacial Till) Rec. = 0.33 ft (AASHTO M145 Classification: A-4.)				80/4" (R)	9.3	29.0	26.9	44.1	NP	NP
40		S14 (39' to 39.2'): Refusal, gray and white SILT, some fine to coarse Gravel, some fine to coarse Sand, moist. (Glacial Till) Rec. = 0.25 ft (AASHTO M145 Classification: A-4.)				100/3" (R)	8.9	36.5	24.0	39.5	NP	NP
45		S15 (44' to 44.2'): Refusal, gray WEATHERED PHYLLITE. C1 (44' to 49'): Very poor quality, gray to greenish-gray, fine-grained weathered to extremely weathered (majority of core washed away) PHYLLITE, fracture angle estimated at 70 to 90 degrees.	C1	25 (0)	2.5	100/2" (R)						
					4.3							
					3							
					3							
					2							
50		S16 (49' to 49.1'): Refusal, gray WEATHERED PHYLLITE with highly weathered zones. C2 (49' to 54'): Fair quality, greenish-gray fine grained, slightly to moderately weathered PHYLLITE, fracture angle approximately 45 to 70 degrees.	C2	78 (50)	3.5	100/1" (R)						
					2							
					3.8							
					3.5							
					4							
55		C3 (54' to 59'): Poor quality, greenish-gray fine grained, moderately weathered PHYLLITE, fracturing approximately 70 to 90 degrees.	C3	80 (25)	3							
					3.5							
					5							
					7							
					6							
		Hole stopped @ 59.0 ft										

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PROJECT NAME:	RICHFORD
PROJECT NUMBER:	BRF 0302(29)
FILE NAME:	s12j158bor.dgn
PROJECT LEADER:	C. CARLSON
DESIGNED BY:	H. SALLS
BORING LOGS 6	
PLOT DATE:	11-DEC-2014
DRAWN BY:	R. PELLETT
CHECKED BY:	H. SALLS
SHEET	20 OF 36