



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

BORING NUMBER: B-301  
 SHEET 1 of 1  
 DATE STARTED: 6/01/09  
 DATE COMPLETED: 6/01/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 113+35.90  
 OFFSET: -45.00  
 VTSPG NAD83: N 620624.70 ft E 1638383.56 ft

PROJECT NUMBER: FECC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 593.61 ft  
 GROUNDWATER DEPTH: 10.5 ft 6/01/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-4, SiSa, brn, Moist, Rec. = 1.4 ft	6	24.2	1.3	52.2	46.5
		A-4, SaSi, gry, MTW, Rec. = 1.5 ft	2	46.3	0.0	38.6	61.4
		A-4, Si with Little Organics (11.9%), gry, MTW, Rec. = 1.8 ft	1	68.2	0.2	16.0	83.8
10		A-4, SaSi, gry, MTW, Rec. = 1.7 ft	4	34.9	2.5	38.8	58.7
		A-1-b, SaGr, gry, Wet, Rec. = 0.8 ft	12	24.0	41.4	39.8	18.8
		A-1-b, GrSa, gry, Wet, Rec. = 0.9 ft	10	26.1	21.3	64.2	14.5
15		A-2-4, Sa, brn, Wet, Rec. = 1.4 ft	1	31.6	3.0	78.8	18.2
20		A-2-4, SiSa, brn, Wet, Rec. = 1.2 ft	1	33.9	3.7	70.7	25.6
25		A-2-4, SiSa, brn, Wet, Rec. = 1.2 ft	3	27.1	1.2	73.6	25.2
25		Hole stopped @ 25.0 ft					
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LOG OF BORING BARRE CITY FECC F 026-1(34).GPJ VT AOT.GDT 8/19/09



STATE OF VERMONT  
 AGENCY OF TRANSPORTATION  
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 SUBSURFACE INFORMATION

BORING NUMBER: B-302  
 SHEET 1 of 1  
 DATE STARTED: 6/01/09  
 DATE COMPLETED: 6/01/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 113+42.40  
 OFFSET: 57.00  
 VTSPG NAD83: N 620555.26 ft E 1638310.77 ft

PROJECT NUMBER: FEGC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 592.84 ft  
 GROUNDWATER DEPTH: 5.0 ft 6/01/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-4, SiSa, brn, Moist, Rec. = 1.2 ft	3	17.1	3.8	60.3	35.9
		A-2-4, Sa, brn, Wet, Rec. = 1.8 ft	3	26.9	0.2	88.8	11.0
		A-2-4, Sa, brn, Wet, Rec. = 1.2 ft	5	24.8	9.3	79.6	11.1
10		A-1-b, SaGr, blk, Wet, Rec. = 0.9 ft	11	19.8	44.1	40.7	15.2
		A-1-b, GrSa, blk, Wet, Rec. = 0.8 ft	7	24.8	33.5	47.7	18.8
		A-2-4, Sa with pieces of Wood, blk, Wet, Rec. = 1.4 ft	1	35.0	13.0	67.3	19.7
15		A-2-4, SiSa, blk, Wet, Rec. = 1.7 ft	7	30.0	1.3	75.5	23.2
20		A-2-4, Sa, blk, Wet, Rec. = 1.1 ft	16	25.0	13.7	69.2	17.1
		A-2-4, Sa, blk, Wet, Rec. = 1.5 ft	14	19.5	18.9	64.3	16.8
25		Hole stopped @ 25.0 ft					
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LOG OF BORING BARRE CITY FEGC F 026-1(34).GPJ VT\_AOT.GDT 8/19/09



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

BORING NUMBER: B-304  
 SHEET 1 of 1  
 DATE STARTED: 6/03/09  
 DATE COMPLETED: 6/03/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 114+55.50  
 OFFSET: 47.50  
 VTSPG NAD83: N 620475.76 ft E 1638382.96 ft

PROJECT NUMBER: FECC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 594.14 ft  
 GROUNDWATER DEPTH: 13.2 ft 6/03/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-4, SaSi, brn, Moist, Rec. = 1.5 ft	3	21.3	0.4	42.6	57.0
		A-2-4, SiSa, brn, Moist, Rec. = 1.3 ft	4	17.2	0.1	75.1	24.8
		A-2-4, Sa, brn, Wet, Rec. = 1.6 ft	2	28.3	0.0	83.5	16.5
10		A-2-4, Sa, blk-brn, Wet, Rec. = 1.3 ft	3	30.1	1.4	84.4	14.2
		A-1-b, GrSa, blk, Wet, Rec. = 1.1 ft	37	18.2	41.8	48.5	9.7
		A-1-b, GrSa, brn, Wet, Rec. = 2.0 ft	25	12.8	40.3	48.9	10.8
15		Visual Classification, SaGr, brn, Wet, Rec. = 0.9 ft, Sample had oxidized staining with a slight odor of possible septic.	19				
20		A-4, SaSi, gry, Wet, Rec. = 1.0 ft	3	26.8	0.1	28.2	71.7
		A-4, Si, gry, Wet, Rec. = 1.0 ft	7	29.4	0.3	16.6	83.1
25		Hole stopped @ 25.0 ft					
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LOG OF BORING BARRE CITY FECC F 026-1(34).GPJ VT\_AOT.GDT 8/19/09



STATE OF VERMONT  
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BORING NUMBER: B-305  
 SHEET 1 of 1  
 DATE STARTED: 6/08/09  
 DATE COMPLETED: 6/08/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 23+80.30  
 OFFSET: -26.90  
 VTSPG NAD83: N 620810.69 ft E 1638669.32 ft

PROJECT NUMBER: FEGC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 595.74 ft  
 GROUNDWATER DEPTH: 10.2 ft 6/08/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-2-4, SiSa, brn, Moist, Rec. = 0.7 ft	22	12.0	19.6	59.0	21.4
		A-4, SaSi, blk, MTW, Rec. = 1.7 ft	3	41.9	0.1	44.7	55.2
		A-2-4, SiSa, blk, MTW, Rec. = 2.0 ft	1	36.4	0.0	67.8	32.2
10		A-2-4, SiSa with Trace of Organics (5.3%), blk, Wet, Rec. = 2.0 ft	1	60.5	0.2	66.3	33.5
		A-2-4, SiGrSa, blk, Wet, Rec. = 0.5 ft	4	38.1	23.0	56.9	20.1
		A-2-4, GrSiSa, blk, Wet, Rec. = 1.1 ft	WH	34.0	22.8	41.9	35.3
15		A-2-4, SiSa, brn, Wet, Rec. = 0.3 ft	4	40.0	0.1	79.8	20.1
20		A-2-4, Sa, brn, Wet, Rec. = 2.0 ft	7	28.3	7.2	78.3	14.5
25		A-2-4, Sa, brn, Wet, Rec. = 2.0 ft	17	29.3	3.7	80.6	15.7
25		Hole stopped @ 25.0 ft					
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LOG OF BORING BARRE CITY FEGC F 026-1(34).GPJ VT\_AOT.GDT 8/19/09



STATE OF VERMONT  
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BORING NUMBER: B-306  
 SHEET 1 of 1  
 DATE STARTED: 6/02/09  
 DATE COMPLETED: 6/02/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 24+45.10  
 OFFSET: 34.50  
 VTSPG NAD83: N 620810.24 ft E 1638752.33 ft

PROJECT NUMBER: FECC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 596.19 ft  
 GROUNDWATER DEPTH: 8.1 ft 6/02/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-1-b, GrSa, brn, Moist, Rec. = 0.8 ft	9	6.9	38.5	44.6	16.9
		A-4, SiSa, blk, Moist, Rec. = 1.6 ft	3	44.4	8.7	47.4	43.9
		A-4, SiSa, blk, MTW, Rec. = 1.3 ft	4	25.9	2.4	52.7	44.9
10		A-2-4, SiSa, blk, Wet, Rec. = 1.0 ft	3	33.8	0.8	65.7	33.5
		A-2-4, GrSa, blk, Wet, Rec. = 1.1 ft	8	26.3	25.8	59.6	14.6
		A-2-4, SiSa, blk, Wet, Rec. = 1.4 ft	3	34.7	11.4	56.0	32.6
15		A-2-4, SiSa, blk, Wet, Rec. = 0.4 ft	1	69.7	4.8	70.6	24.6
20		A-1-b, Sa, brn, Wet, Rec. = 2.0 ft	38	16.4	19.6	71.3	9.1
25		A-2-4, Sa, brn, Wet, Rec. = 1.8 ft	25	20.3	19.8	61.8	18.4
25		Hole stopped @ 25.0 ft					

LOG OF BORING BARRE CITY FECC F 026-1(34).GPJ VT\_AOT.GDT 8/19/09



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BORING NUMBER: B-307  
 SHEET 1 of 1  
 DATE STARTED: 6/04/09  
 DATE COMPLETED: 6/04/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 138+72.80  
 OFFSET: 36.50  
 VTSPG NAD83: N 618667.78 ft E 1640006.91 ft

PROJECT NUMBER: FECC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 606.47 ft  
 GROUNDWATER DEPTH: 13.2 ft 6/04/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-4, SaSi, blk, Moist, Rec. = 1.5 ft	18	13.2	15.7	39.3	45.0
		A-1-b, GrSa, brn, Moist, Rec. = 1.2 ft	20	6.3	41.5	43.6	14.9
		A-1-b, GrSa, brn, Moist, Rec. = 1.2 ft, Broken Granite pieces were within sample.	21	5.4	42.5	44.7	12.8
10		A-4, Si, gry, MTW, Rec. = 1.1 ft	10	24.6	1.2	9.9	88.9
		A-4, Si, brn, MTW, Rec. = 1.0 ft	11	27.4	2.6	10.0	87.4
		A-4, Si, brn, Wet, Rec. = 1.1 ft	13	25.7	3.7	15.2	81.1
15		A-4, SiSa, brn, Wet, Rec. = 1.7 ft	15	22.4	6.0	51.6	42.4
20		A-1-b, GrSa, brn, Wet, Rec. = 2.0 ft	29	12.8	37.2	52.5	10.3
		A-2-4, Sa, brn, Wet, Rec. = 2.0 ft	36	16.5	15.4	65.5	19.1
25		Hole stopped @ 25.0 ft					
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LOG OF BORING BARRE CITY FECC F 026-1(34).GPJ VT\_AOT.GDT 8/19/09



STATE OF VERMONT  
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 SUBSURFACE INFORMATION

BORING NUMBER: B-308  
 SHEET 1 of 1  
 DATE STARTED: 6/09/09  
 DATE COMPLETED: 6/09/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 139+47.70  
 OFFSET: -35.00  
 VTSPG NAD83: N 618689.75 ft E 1640115.79 ft

PROJECT NUMBER: FECC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 608.4 ft  
 GROUNDWATER DEPTH: 15.5 ft 6/09/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-1-b, SiGrSa, blk, Moist, Rec. = 1.1 ft	10	9.7	30.8	49.0	20.2
		A-1-b, GrSa, blk, Moist, Rec. = 1.0 ft	9	10.7	32.1	51.5	16.4
		A-4, Si, brn, MTW, Rec. = 1.2 ft	8	31.1	0.5	5.5	94.0
10		A-4, Si, brn, MTW, Rec. = 1.4 ft	7	29.8	1.6	6.8	91.6
		A-4, Si, gry, MTW, Rec. = 1.4 ft	5	31.7	3.3	7.5	89.2
		A-4, Si, gry, MTW, Rec. = 1.6 ft	6	29.3	6.6	6.4	87.0
15		A-4, Si, gry, MTW, Rec. = 1.2 ft	6	30.7	3.7	5.2	91.1
20		A-4, Si, gry, MTW, Rec. = 1.4 ft	8	28.4	0.0	10.0	90.0
25		A-2-4, Sa, gry, Wet, Rec. = 2.0 ft	4	19.3	3.5	79.7	16.8
		Hole stopped @ 25.0 ft					

LOG OF BORING BARRE CITY FECC F 026-1(34).GPI VT AOT.GDT 8/19/09



STATE OF VERMONT  
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 MATERIALS & RESEARCH SECTION  
 SUBSURFACE INFORMATION

BORING NUMBER: B-309  
 SHEET 1 of 1  
 DATE STARTED: 6/16/09  
 DATE COMPLETED: 6/16/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 600+79.10  
 OFFSET: 55.60  
 VTSPG NAD83: N 618611.91 ft E 1639982.14 ft

PROJECT NUMBER: FECC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 605.82 ft  
 GROUNDWATER DEPTH: 12.9 ft 6/16/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-2-4, SiSa, blk, Moist, Rec. = 1.4 ft	6	14.9	4.5	66.3	29.2
		A-4, GrSiSa, blk, Moist, Rec. = 1.1 ft	23	13.5	21.4	41.3	37.3
		Visual Classification, GrSa, blk, Moist, Rec. = 0.4 ft, Insufficient sample for testing.	26				
10		A-1-b, GrSa, blk, Moist, Rec. = 0.9 ft	12	7.5	39.3	45.4	15.3
		A-1-b, GrSa, blk, MTW, Rec. = 1.1 ft	5	16.2	23.0	60.3	16.7
		A-1-b, GrSa, blk, Wet, Rec. = 1.6 ft	11	20.3	20.8	64.6	14.6
15		A-1-b, GrSa, blk, Wet, Rec. = 1.3 ft	20	17.2	39.0	53.0	8.0
20		A-1-b, GrSa, blk, Wet, Rec. = 1.4 ft	44	19.1	32.3	55.0	12.7
		A-1-b, GrSa, blk, Wet, Rec. = 1.8 ft	28	14.6	38.3	49.3	12.4
25		Hole stopped @ 25.0 ft					
30		DRILLER'S NOTES: 1. Duplex drilling 11.0 ft to 17.0 ft.					
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LOG OF BORING BARRE CITY FECC F 026-1(34).GPJ VT\_AOT.GDT 8/19/09



STATE OF VERMONT  
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 SUBSURFACE INFORMATION

BORING NUMBER: B-310  
 SHEET 1 of 1  
 DATE STARTED: 6/10/09  
 DATE COMPLETED: 6/10/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 602+52.00  
 OFFSET: -40.00  
 VTSPG NAD83: N 618438.13 ft E 1640086.47 ft

PROJECT NUMBER: FECC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 608.78 ft  
 GROUNDWATER DEPTH: 16.2 ft 6/10/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-1-b, SiGrSa, blk, Moist, Rec. = 1.1 ft	17	13.4	25.3	49.9	24.8
		A-1-b, GrSa, blk, Moist, Rec. = 1.2 ft	18	9.8	32.5	48.5	19.0
		A-1-b, SiGrSa, blk, Moist, Rec. = 1.1 ft	15	6.9	39.3	39.7	21.0
10		A-1-b, SiSaGr, blk, Moist, Rec. = 1.0 ft	19	7.1	48.6	31.3	20.1
		A-1-a, SaGr, blk, Moist, Rec. = 1.3 ft	71	5.4	55.4	31.1	13.5
		A-1-b, SaGr, blk, MTW, Rec. = 1.2 ft	14	7.7	49.0	36.1	14.9
15		A-1-a, SaGr, blk, Wet, Rec. = 0.6 ft	11	15.0	59.9	28.0	12.1
20		A-1-b, Sa, brn, Wet, Rec. = 1.0 ft	46	21.2	17.7	66.8	15.5
25		Hole stopped @ 22.0 ft					
30		DRILLER'S NOTES: 1. Could not penetrate further.					
35							
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LOG OF BORING BARRE CITY FECC F 026-1(34).GPJ VT\_AOT.GDT 8/19/09



STATE OF VERMONT  
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 SUBSURFACE INFORMATION

BORING NUMBER: B-311  
 SHEET 1 of 1  
 DATE STARTED: 6/10/09  
 DATE COMPLETED: 6/10/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 603+37.20  
 OFFSET: 29.50  
 VTSPG NAD83: N 618345.62 ft E 1640038.95 ft

PROJECT NUMBER: FECC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 609.99 ft  
 GROUNDWATER DEPTH: 16.5 ft 6/10/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		Field Note: No Recovery. Appears to be sand	15				
		A-2-4, SiSa, Dk/brn, Moist, Rec. = 1.4 ft	4	17.7	6.5	66.9	26.6
		A-2-4, SiSa, Dk/brn, Moist, Rec. = 1.5 ft	4	12.9	0.7	65.8	33.5
10		A-4, SaSi, brn, Moist, Rec. = 1.6 ft	6	21.6	0.0	49.3	50.7
		A-3, Sa, brn, Moist, Rec. = 1.5 ft	6	10.2	0.7	89.9	9.4
		A-2-4, SiGrSa, blk, MTW, Rec. = 1.2 ft	4	18.9	25.1	53.7	21.2
15		A-1-b, SiGrSa, blk, MTW, Rec. = 1.2 ft	16	11.9	34.5	44.7	20.8
20		A-1-b, SiGrSa, brn, Wet, Rec. = 1.6 ft	20	18.9	39.7	39.8	20.5
		A-1-b, GrSa, brn, Wet, Rec. = 1.7 ft	22	16.9	37.8	46.4	15.8
25		Hole stopped @ 25.0 ft					
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LOG OF BORING BARRE CITY FECC F 026-1(34).GPJ VT\_AOT.GDT 8/19/09



STATE OF VERMONT  
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 SUBSURFACE INFORMATION

BORING NUMBER: B-312  
 SHEET 1 of 1  
 DATE STARTED: 6/02/09  
 DATE COMPLETED: 6/02/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 112+12.60  
 OFFSET: 39.50  
 VTSPG NAD83: N 620673.75 ft E 1638249.89 ft

PROJECT NUMBER: FECC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 593.97 ft  
 GROUNDWATER DEPTH: 13.8 ft 6/02/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-2-4, GrSa, brn, Moist, Rec. = 1.3 ft	8	7.2	26.8	58.5	14.7
		A-4, SaSi, brn, Moist, Rec. = 1.5 ft	4	31.2	0.4	25.7	73.9
		A-4, SaSi, blk, Moist, Rec. = 1.7 ft	4	34.6	1.9	41.6	56.5
10		A-4, SaSi, gry, MTW, Rec. = 1.7 ft	3	32.7	0.2	29.0	70.8
		A-4, SiSa, gry, MTW, Rec. = 1.5 ft, Wood pieces were within sample.	7	31.6	1.0	62.1	36.9
		A-2-4, GrSa, blk, Wet, Rec. = 1.5 ft	12	25.1	20.6	64.4	15.0
15		No Recovery, 15.0 ft - 17.0 ft	14				
20		A-2-4, Sa, brn, Wet, Rec. = 1.7 ft	2	30.6	4.7	82.5	12.8
		A-2-4, SiSa, brn, Wet, Rec. = 1.6 ft	WH	30.7	2.1	65.2	32.7
25		Hole stopped @ 25.0 ft					
30							
35							
40							
45							

LOG OF BORING BARRE CITY FECC F 026-1(34).GPJ VT\_AOT.GDT 8/19/09



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

BORING NUMBER: B-313  
 SHEET 1 of 1  
 DATE STARTED: 6/03/09  
 DATE COMPLETED: 6/03/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 11+49.70  
 OFFSET: -37.30  
 VTSPG NAD83: N 620431.03 ft E 1638287.17 ft

PROJECT NUMBER: FECC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 593.2 ft  
 GROUNDWATER DEPTH: 13.0 ft 6/03/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-4, SaSi, brn, Moist, Rec. = 1.5 ft	4	23.9	0.3	35.2	64.5
		A-2-4, SiSa, brn, Moist, Rec. = 1.3 ft	4	18.5	0.0	78.9	21.1
		A-2-4, GrSa, brn, Wet, Rec. = 1.2 ft	6	18.7	26.6	58.1	15.3
10		A-1-b, SaGr, brn, Wet, Rec. = 1.1 ft	31	16.3	41.7	39.8	18.5
		A-1-b, GrSa, blk, Wet, Rec. = 1.7 ft	13	17.9	32.0	56.5	11.5
		A-2-4, SiSa, brn, Wet, Rec. = 2.0 ft	6	28.9	2.9	63.7	33.4
15		A-4, Si, gry, Wet, Rec. = 1.3 ft	5	31.0	1.3	12.5	86.2
20		A-4, SaSi, gry, Wet, Rec. = 1.4 ft	2	30.2	0.0	36.2	63.8
		A-4, SiSa, gry, Wet, Rec. = 0.9 ft	2	28.5	0.6	55.8	43.6
25		Hole stopped @ 25.0 ft					
30							
35							
40							
45							

LOG OF BORING BARRE CITY FECC F 026-1(34).GPI VT\_AOT.GDT 8/19/09



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

BORING NUMBER: B-314  
 SHEET 1 of 1  
 DATE STARTED: 5/27/09  
 DATE COMPLETED: 5/29/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 21+66.00  
 OFFSET: -37.90  
 VTSPG NAD83: N 620675.28 ft E 1638500.23 ft

PROJECT NUMBER: FECC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 593.44 ft  
 GROUNDWATER DEPTH: 4.9 ft 5/27/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-4, SaSi, Dk/brn, Moist, Rec. = 1.8 ft	4	35.4	2.2	26.8	71.0
		A-2-4, SiSa, gry, MTW, Rec. = 1.5 ft	WH	26.7	0.0	74.7	25.3
		A-1-b, GrSa, gry-brn, Wet, Rec. = 0.9 ft	2	24.0	23.7	66.7	9.6
10		A-1-b, GrSa, brn, Wet, Rec. = 0.8 ft	4	23.3	22.3	66.1	11.6
		A-1-a, SaGr, brn, Wet, Rec. = 0.9 ft	16	15.3	54.5	36.1	9.4
		A-2-4, Sa, brn, Wet, Rec. = 1.3 ft	8	25.5	17.8	66.7	15.5
15		A-2-4, SiSa, brn, Wet, Rec. = 0.8 ft	10	31.5	0.4	73.1	26.5
20		A-4, SiSa, brn, Wet, Rec. = 1.0 ft	5	29.0	3.1	50.8	46.1
		A-2-4, Sa, brn, Wet, Rec. = 2.0 ft	1	28.7	0.2	82.1	17.7
25		Hole stopped @ 25.0 ft					
30							
35							
40							
45							

LOG OF BORING BARRE CITY FECC F 026-1(34).GPJ VT\_AOT.GDT 8/19/09



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

BORING NUMBER: B-315  
 SHEET 1 of 1  
 DATE STARTED: 6/09/09  
 DATE COMPLETED: 6/09/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 137+63.20  
 OFFSET: -26.60  
 VTSPG NAD83: N 618792.25 ft E 1639974.53 ft

PROJECT NUMBER: FECC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 604.28 ft  
 GROUNDWATER DEPTH: 12.0 ft 6/09/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-2-4, SiSa, brn, Moist, Rec. = 0.4 ft	9	10.9	6.4	61.5	32.1
		A-4, SiSa, brn, Moist, Rec. = 1.2 ft	5	13.6	2.9	57.2	39.9
		A-2-4, GrSa, brn, Moist, Rec. = 1.1 ft	6	7.2	24.0	62.8	13.2
10		A-1-b, SaGr, brn, Moist, Rec. = 1.0 ft	8	11.0	54.7	28.5	16.8
		A-2-4, GrSa, brn, MTW, Rec. = 1.2 ft	13	18.8	27.2	57.5	15.3
		A-1-b, SiGrSa, brn, Wet, Rec. = 1.3 ft	7	27.3	28.0	50.7	21.3
15		A-2-4, Sa, brn, Wet, Rec. = 1.2 ft	5	25.3	14.7	72.0	13.3
20		A-1-b, Sa, brn, Wet, Rec. = 2.0 ft	9	19.2	19.9	70.4	9.7
		A-1-b, Sa, brn, Wet, Rec. = 2.0 ft	7	19.5	2.3	89.3	8.4
25		Hole stopped @ 25.0 ft					
30							
35							
40							
45							

LOG OF BORING BARRE CITY FECC F 026-1(34).GPJ VT AOT.GDT 8/19/09



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

BORING NUMBER: B-316  
 SHEET 1 of 1  
 DATE STARTED: 6/11/09  
 DATE COMPLETED: 6/11/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 137+56.00  
 OFFSET: 33.00  
 VTSPG NAD83: N 618759.86 ft E 1639925.08 ft

PROJECT NUMBER: FEGC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 603.39 ft  
 GROUNDWATER DEPTH: 11.2 ft 6/11/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-2-4, SiSa, blk, Moist, Rec. = 1.1 ft	6	12.9	19.3	51.6	29.1
		A-1-b, SiGrSa, blk, Moist, Rec. = 0.7 ft	6	8.0	28.9	49.2	21.9
		A-4, SiSa, blk, MTW, Rec. = 1.8 ft, Decayed Wood was within sample.	4	36.6	6.0	47.6	46.4
10		A-2-4, SiSa, blk, Wet, Rec. = 2.0 ft, Decayed Wood was within sample.	2	37.6	1.4	68.3	30.3
		A-4, SiSa, blk, Wet, Rec. = 1.0 ft	13	30.3	3.1	56.4	40.5
		A-2-4, GrSiSa, blk, Wet, Rec. = 1.6 ft	39	27.8	23.2	47.2	29.6
15		A-2-4, SiSa, blk, Wet, Rec. = 1.4 ft	6	24.3	4.8	70.3	24.9
20		A-2-4, Sa, blk, Wet, Rec. = 2.0 ft	4	18.2	13.3	67.9	18.8
		A-2-4, Sa, blk, Wet, Rec. = 2.0 ft	26	18.0	4.8	76.6	18.6
25		Hole stopped @ 25.0 ft					
30							
35							
40							
45							

LOG OF BORING BARRE CITY FEGC F 026-1(34).GPJ VT\_AOT.GDT 8/19/09



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

BORING NUMBER: B-318  
 SHEET 1 of 1  
 DATE STARTED: 6/05/09  
 DATE COMPLETED: 6/05/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 601+54.50  
 OFFSET: -40.80  
 VTSPG NAD83: N 618533.52 ft E 1640071.19 ft

PROJECT NUMBER: FEGC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 607.69 ft  
 GROUNDWATER DEPTH: 11.7 ft 6/05/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-1-b, SaGr, brn, Moist, Rec. = 1.1 ft	19	7.1	45.7	37.4	16.9
		A-4, SaGrSi, Dk/brn, MTW, Rec. = 1.0 ft	18	15.5	27.1	26.6	46.3
		A-4, Si, brn, MTW, Rec. = 1.2 ft	11	26.0	4.8	6.9	88.3
10		A-4, Si, brn, Wet, Rec. = 1.3 ft	8	28.5	2.1	6.2	91.7
		A-4, Si, brn, Wet, Rec. = 1.2 ft	8	29.7	3.2	7.7	89.1
		A-4, Si, brn, Wet, Rec. = 1.2 ft	10	27.4	2.8	11.8	85.4
15		A-4, Si, brn, Wet, Rec. = 1.4 ft	10	26.4	2.8	18.9	78.3
20		A-2-4, Sa, brn, Wet, Rec. = 1.3 ft	8	22.5	0.9	87.8	11.3
		A-3, Sa, brn, Wet, Rec. = 1.2 ft	12	22.8	0.5	90.7	8.8
25		Hole stopped @ 25.0 ft					
30							
35							
40							
45							

LOG OF BORING BARRE CITY FEGC F 026-1(34).GPJ VT\_AOT.GDT 8/19/09



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

BORING NUMBER: B-319  
 SHEET 1 of 1  
 DATE STARTED: 6/18/09  
 DATE COMPLETED: 6/18/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 601+67.40  
 OFFSET: 32.00  
 VTSPG NAD83: N 618511.07 ft E 1639999.84 ft

PROJECT NUMBER: FECC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 607.58 ft  
 GROUNDWATER DEPTH: 14.2 ft 6/18/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-2-4, SiSa, brn, Moist, Rec. = 1.6 ft	4	15.1	3.8	64.6	31.6
		A-2-4, SiSa, brn, Moist, Rec. = 1.5 ft	5	11.9	0.0	73.1	26.9
		A-4, SiSa, brn-gry, Moist, Rec. = 1.6 ft	5	19.7	0.4	58.7	40.9
10		A-1-b, GrSa, blk, Moist, Rec. = 1.3 ft	18	13.4	32.2	50.3	17.5
		A-1-b, GrSa, blk, Moist, Rec. = 0.9 ft	33	12.9	38.9	44.5	16.6
		Visual Classification, Gr Sa, gry, MTW, Rec. = 0.6 ft	35				
15		A-1-b, SaGr, gry, Wet, Rec. = 0.5 ft	26	13.3	56.9	24.7	18.4
20		A-1-b, GrSa, blk, Wet, Rec. = 1.1 ft	22	20.6	36.4	44.9	18.7
		A-1-b, SiGrSa, blk, Wet, Rec. = 1.2 ft	21	19.8	36.6	43.3	20.1
25		Hole stopped @ 25.0 ft					
30							
35							
40							
45							

LOG OF BORING BARRE CITY FECC F 026-1(34).GPJ VT\_AOT.GDT 8/19/09



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

BORING NUMBER: B-320  
 SHEET 1 of 1  
 DATE STARTED: 6/08/09  
 DATE COMPLETED: 6/08/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 22+31.00  
 OFFSET: -43.00  
 VTSPG NAD83: N 620721.36 ft E 1638547.99 ft

PROJECT NUMBER: FECC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 594.69 ft  
 GROUNDWATER DEPTH: 10.2 ft 6/08/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-2-4, Sa, brn, Moist, Rec. = 1.3 ft	4	21.2	18.0	65.3	16.7
		A-4, SaSi with Trace of Organics (4.2%), blk, Moist, Rec. = 1.5 ft	2	42.1	0.1	34.8	65.1
		A-4, SaSi, blk, Moist, Rec. = 1.5 ft	4	26.0	0.6	45.1	54.3
10		A-2-4, GrSa, brn, Wet, Rec. = 0.6 ft	13	20.7	30.4	56.3	13.3
		A-1-b, GrSa, brn, Wet, Rec. = 1.4 ft	15	20.7	29.9	57.1	13.0
		A-1-b, GrSa, brn, Wet, Rec. = 2.0 ft	22	17.1	27.2	64.1	8.7
15		A-2-4, GrSa, brn, Wet, Rec. = 1.1 ft	17	30.0	22.5	59.3	18.2
20		A-2-4, SiSa, brn, Wet, Rec. = 0.7 ft	2	28.5	11.6	65.3	23.1
		A-2-4, SiSa, brn, Wet, Rec. = 1.4 ft	2	29.0	4.3	75.3	20.4
25		Hole stopped @ 25.0 ft					
30							
35							
40							
45							

LOG OF BORING BARRE CITY FECC F 026-1(34).GPJ VT\_AOT.GDT 8/19/09



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

BORING NUMBER: B-321  
 SHEET 1 of 1  
 DATE STARTED: 6/17/09  
 DATE COMPLETED: 6/17/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 14+65.00  
 OFFSET: 77.00  
 VTSPG NAD83: N 620516.26 ft E 1638035.67 ft

PROJECT NUMBER: FECC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 592.26 ft  
 GROUNDWATER DEPTH: See Notes  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: AUGER TRUCK  
 BORING TYPE: AUGER  
 SAMPLE TYPE: AUGER  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-2-4, SiSa, blk, Moist		11.2	11.0	60.2	28.8
		A-2-4, Sa, blk, Moist		14.2	1.5	82.4	16.1
10		A-2-4, Sa, gry, MTW, Small Wood pieces were within sample.		25.4	0.3	79.8	19.9
10		Hole stopped @ 10.0 ft					
15		DRILLER'S NOTES: 1. No Ledge to depth. 2. No Water to 8.0 ft. 3. Hole collapsed at 8.0 ft.					
20							
25							
30							
35							
40							
45							

LOG OF BORING BARRE CITY FECC F 026-1(34).GPJ VT\_AOT.GDT 8/19/09



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

BORING NUMBER: B-322  
 SHEET 1 of 1  
 DATE STARTED: 7/02/09  
 DATE COMPLETED: 7/02/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 423+05.00  
 OFFSET: -37.00  
 VTSPG NAD83: N 619357.72 ft E 1640396.98 ft

PROJECT NUMBER: FECC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 613.57 ft  
 GROUNDWATER DEPTH: 11.9 ft 7/02/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-2-4, GrSiSa, brn, Moist, Rec. = 0.9 ft	4	21.4	30.5	37.0	32.5
		A-4, SaSi, brn, Moist, Rec. = 1.0 ft	2	24.2	14.0	35.8	50.2
		A-4, SaSi, brn, Moist, Rec. = 0.4 ft	2	22.1	12.6	31.6	55.8
10		Visual Classification, GrSiSa, brn, MTW, Rec. = 0.1 ft, Insufficient sample for testing.	6	19.4			
		A-1-b, GrSa, brn, Wet, Rec. = 0.8 ft	39	14.4	38.9	44.1	17.0
		A-2-4, SiGrSa, brn, Wet, Rec. = 0.7 ft	39	19.7	31.1	43.4	25.5
15		A-1-b, GrSa, brn, Wet, Rec. = 1.5 ft	16	18.3	26.6	56.2	17.2
20		A-4, SaGrSi, brn, MTW, Rec. = 1.3 ft	86	15.4	32.0	30.7	37.3
Hole stopped @ 21.5 ft							
25		DRILLER'S NOTES: 1. Drilled to ledge or boulder.					
30							
35							
40							
45							

LOG OF BORING BARRE CITY FECC F 026-1(34).GPJ VT\_AOT.GDT 8/19/09



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

BORING NUMBER: B-323  
 SHEET 1 of 1  
 DATE STARTED: 7/01/09  
 DATE COMPLETED: 7/01/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 707+00.00  
 OFFSET: 28.00  
 VTSPG NAD83: N 619301.54 ft E 1640360.83 ft

PROJECT NUMBER: FECC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 609.72 ft  
 GROUNDWATER DEPTH: 8.8 ft 7/01/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
5		A-4, SaSi, brn, Moist, Rec. = 1.6 ft	5	18.3	6.6	43.1	50.3
		A-2-4, SiSa, brn, Moist, Rec. = 1.6 ft	5	13.8	9.1	59.7	31.2
		A-2-4, SiSa, brn, Moist, Rec. = 1.0 ft	19	13.5	17.7	51.7	30.6
10		A-2-4, SiSa, brn, MTW, Rec. = 1.3 ft	6	26.9	10.4	67.3	22.3
		A-2-4, SiSa, brn, Wet, Rec. = 0.7 ft	14	26.9	5.6	74.1	20.3
15		A-3, Sa, brn, Wet, Rec. = 1.5 ft	9	27.4	0.1	91.5	8.4
		A-3, Sa, brn, Wet, Rec. = 2.0 ft	4	27.5	0.0	93.4	6.6
20		A-4, SiSa, brn, Wet, Rec. = 0.9 ft	35	36.9	0.5	60.4	39.1
		A-2-4, SiGrSa, brn, Wet, Rec. = 0.7 ft	R	24.4	26.4	49.9	23.7
25		Hole stopped @ 23.7 ft					
		DRILLER'S NOTES: 1. Drilled to ledge or boulder.					

LOG OF BORING BARRE CITY FECC F 026-1(34).GPJ VT\_AOT.GDT 8/19/09



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

BORING NUMBER: B-324  
 SHEET 1 of 1  
 DATE STARTED: 6/30/09  
 DATE COMPLETED: 6/30/09

PROJECT NAME: BARRE CITY  
 SITE NAME: US-302  
 STATION: 421+97.00  
 OFFSET: 40.00  
 VTSPG NAD83: N 619328.22 ft E 1640298.96 ft

PROJECT NUMBER: FECC F 026-1(34)  
 SITE NUMBER:  
 GROUND ELEVATION: 607.78 ft  
 GROUNDWATER DEPTH: 4.0 ft 6/30/09  
 PROJECT PIN NUMBER: 85B010

BORING CREW  
 CREW CHIEF: GARROW  
 DRILLER: GARROW  
 LOGGER: MAHMUTOVIC

BORING RIG: LARGE SKID RIG w/AUTO HAMMER  
 BORING TYPE: HOLLOW STEM AUGER  
 SAMPLE TYPE: SPLIT BARREL  
 CHECKED BY: CAA

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
			RUN	REC (%)	RQD (%)	Dip (deg)	Drill Rate (min/ft)
2.5							
4.0		A-2-4, GrSiSa, brn, Moist, Rec. = 1.4 ft	2	13.6	22.9	45.6	31.5
5.0		A-1-b, SiGrSa, brn, Moist, Rec. = 1.2 ft	9	9.8	37.5	41.2	21.3
6.5		A-1-b, SiGrSa, brn, Moist, Rec. = 1.1 ft	9	11.7	36.1	42.1	21.8
7.5		A-1-b, GrSa, brn, Wet, Rec. = 1.0 ft	13	22.9	39.0	41.9	19.1
8.5		A-2-4, SiSa, brn, Wet, Rec. = 0.4 ft	R	30.5	14.0	62.3	23.7
11.8		Meta-Limestone, (Geologist's determination), BXDC, 11.8 ft - 14.8 ft				11.8 ft	10
12.5							10
13.5							10
14.8		Hole stopped @ 14.8 ft					
17.5							

LOG OF BORING BARRE CITY FECC F 026-1(34).GPI VT AOT.GDT 8/19/09



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

BORING LOG

BARRE CITY  
FEGC F026-1(34)

Boring No.: B-401

Page No.: 1 of 1

Pin No.: 85B010

Checked By: TDE

Boring Crew: PORTER, GARROW, HOLT

Date Started: 3/02/11 Date Finished: 3/03/11

VTSPG NAD83: N 620499.08 ft E 1638041.55 ft

Station: 14+82 Offset: 126.00

Ground Elevation: \_\_\_\_\_

Casing Type: H.S.A. Sampler: SS  
I.D.: 4.25 in 1.5 in  
Hammer Wt: N.A. 140 lb.  
Hammer Fall: N.A. 30 in.  
Hammer/Rod Type: Auto/AWJ  
Rig: CME 45C TRACK CE = 1.34

Groundwater Observations

Date	Depth (ft)	Notes
03/03/11	9.32	9:00AM

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 5.0		No sampling performed, 0.0 ft - 5.0 ft					
5.0		A-4, SiSa, brn, Moist, Rec. = 1.5 ft	2-2-3-2 (5)	24.0	1.9	50.8	47.3
7.5		A-2-4, Sa, brn, Moist, Rec. = 1.3 ft	3-3-3-3 (6)	16.1	2.7	84.3	13.0
10.0		A-2-4, Sa, gry-brn, Wet, Rec. = 0.6 ft	2-3-1 (4)	28.4	0.6	83.9	15.5
10.5		Hole stopped @ 10.5 ft					
12.5		Remarks: Water levels were taken through hollow stem auger one day after drilling.					
15.0							
17.5							

BORING LOG 2 BARRE CITY FEGC F026-1(34).GPJ VERMONT AOT.GDT 3/9/11

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.



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

BORING LOG

BARRE CITY  
 FEGC F026-1(34)

Boring No.: B-402

Page No.: 1 of 1

Pin No.: 85B010

Checked By: TDE

Boring Crew: PORTER, GARROW, HOLT  
 Date Started: 3/02/11 Date Finished: 3/03/11  
 VTSPG NAD83: N 620543.10 ft E 1638038.66 ft  
 Station: 15+6.5 Offset: 162.64  
 Ground Elevation: \_\_\_\_\_

Casing Type: H.S.A. Sampler: SS  
 I.D.: 4.25 in 1.5 in  
 Hammer Wt: N.A. 140 lb.  
 Hammer Fall: N.A. 30 in.  
 Hammer/Rod Type: Auto/AWJ  
 Rig: CME 45C TRACK CE = 1.34

Groundwater Observations		
Date	Depth (ft)	Notes
03/02/11	9.38	1:30PM
03/03/11	9.32	9:00AM

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 5.0		No sampling performed, 0.0 ft - 5.0 ft					
5.0		A-4, SiSa, brn, Moist, Rec. = 1.4 ft	3-3-3-3 (6)	22.4		55.2	44.8
7.5		A-4, SiSa, brn, Moist, Rec. = 1.3 ft	1-2-2-2 (4)	28.1	1.5	56.0	42.5
10.0		A-2-4, SiSa, gry-brn, Wet, Rec. = 0.9 ft	1-2-2 (4)	38.9	1.3	70.0	28.7
10.5		Hole stopped @ 10.5 ft					
12.5		Remarks: Water levels were taken through hollow stem auger immediately after drilling and again one day after drilling.					
15.0							
17.5							

BORING LOG 2 BARRE CITY FEGC F026-1(34).BPJ VERMONT AOT.GDT 3/9/11

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.



GZA  
GeoEnvironmental, Inc.  
Engineers and Scientists

Barre City F EGC F 026-1(34)

Barre, Vermont

Boring No.: OH 6

Page: 1 of 1

File No.: 04.0029010.00

Check: DGL

Contractor: New Hampshire Boring, Inc.  
Foreman: Walter Hoeckele  
Logged by: Mirsad Alihodzic  
Date Start/Finish: 7-22-09 / 7-22-09  
Boring Location: See Plan  
GS Elev.: \_\_\_\_\_ Datum: \_\_\_\_\_

Auger/  
Casing      Sampler  
Type: HSA      SS  
I.D.: 2.25 in      1.37 in  
Hammer Wt.: \_\_\_\_\_ 140 lb  
Hammer Fall: \_\_\_\_\_ 30 in  
Rig / Other: Diedrich D-50 Truck Rig

GROUNDWATER READINGS				
Date	Time	Depth	Casing	Stab
7/22/09	09:43	16.0 ft	19 ft (HSA)	5 min.

Depth (ft)	Sample Information					Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
	No.	Pen./Rec. (in)	Depth (ft)	Blows (/6")	Field Test Data (ppm)				
0.5						ASPHALT			No Equipment Installed
5	S-1A S-1B	24/ 22	4.0- 6.0	2-3 6-16	0.0	S-1A (4 to 4.5 feet): Loose, gray to brown, SILT, trace fine Sand with traces of root fibers and topsoil. S-1B (4.5 to 6 feet): Loose, gray, SILT, little fine Sand.	SANDY SILT	1	
10	S-2	24/ 4	9.0- 11.0	9-6 26-29	0.0	Dense, gray, SILT, little fine Sand.			
15	S-3	24/ 18	14.0- 16.0	7-6 6-6	0.0	Stiff, gray, Clayey SILT, trace fine Sand.			
20	S-4	24/ 24	19.0- 21.0	4-5 6-6	0.0	Stiff, gray, Clayey SILT, trace fine Sand.	CLAYEY SILT		
25	S-5	24/ 20	24.0- 26.0	5-7 7-9	0.4	Stiff, gray, Clayey SILT, trace fine Sand.			
26.0						Bottom of boring at 26.0 feet below ground surface. No refusal.		2	

SOIL BL WELL 04.0029010.00 - BARRE, VT JULY LOGS.GPJ GZA\_NH.GBT 8/19/09

**REMARKS**

- Soil samples were screened for total volatile organic compounds (VOCs) by ECS personnel.
- Drill cuttings were disposed of down borehole and on site per ECS personnel. ECS personnel field screened soil during drilling and deemed the soil as clean.

All depth measurements are approximate. Stratification lines represent approximate boundary between soil types, transitions may be gradual. 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.

Boring No.: OH 6



GZA  
GeoEnvironmental, Inc.  
Engineers and Scientists

Barre City F EGC F 026-1(34)

Barre, Vermont

Boring No.: TS 3

Page: 1 of 1

File No.: 04.0029010.00

Check: DGL

Contractor: New Hampshire Boring, Inc.  
Foreman: Walter Hoeckele  
Logged by: Mirsad Alihodzic  
Date Start/Finish: 7-21-09 / 7-21-09  
Boring Location: See Plan  
GS Elev.: \_\_\_\_\_ Datum: \_\_\_\_\_

Auger/  
Casing                      Sampler  
Type: HSA                      SS  
I.D.: 2.25 in                      1.37 in  
Hammer Wt.: \_\_\_\_\_ 140 lb  
Hammer Fall: \_\_\_\_\_ 30 in  
Rig / Other: Diedrich D-50 Truck Rig

GROUNDWATER READINGS				
Date	Time	Depth	Casing	Stab
7/21/09	13:04	5.6 ft	10 ft (HSA)	5 min.

Depth (ft)	Sample Information					Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
	No.	Pen./Rec. (in)	Depth (ft)	Blows (/6")	Field Test Data (ppm)				
0.5						ASPHALT			No Equipment Installed
5	S-1	24/19	4.0-6.0	4-2 2-2	555	Very loose, gray, SILT, little fine Sand. Petroleum odor.		1	
10	S-2	24/13	9.0-11.0	14-9 9-12	100	Medium dense, gray, SILT, little fine Sand. Petroleum odor.			
15	S-3	24/16	14.0-16.0	21-8 5-5	18.8	Medium dense, gray, SILT, little fine Sand. Petroleum odor.	13.1 ft COBBLE 13.7 ft	2	
20	S-4	24/15	19.0-21.0	1-3 3-3	1.8	Loose, gray to brown, SILT, little fine Sand. Petroleum odor.	SANDY SILT		
25	S-5	24/20	24.0-26.0	6-4 4-5	16.3	Loose, gray to brown, Silt, little fine Sand. Petroleum odor.			
						Bottom of boring at 26.0 feet below ground surface. No refusal.	26.0 ft	3 4	

SOIL BL WELL 04.0029010.00 - BARRE, VT - JULY LOGS.DPJ GZA\_NH.GDT 8/19/09

- REMARKS**
- Soil samples were screened for total volatile organic compounds (VOCs) by ECS personnel.
  - Cobble encountered from 13.1 feet to 13.7 feet below ground surface.
  - Drilling soil cuttings were collected into a drum and left on site as directed by ECS personnel on site. Borehole backfilled with filter sand per ECS direction.
  - Per ECS direction, augers were washed with a soap and water solution and the decon water was disposed of on site.

All depth measurements are approximate. Stratification lines represent approximate boundary between soil types, transitions may be gradual. 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.

Boring No.: TS 3