



STATE OF VERMONT  
AGENCY OF TRANSPORTATION  
CONSTRUCTION AND  
MATERIALS BUREAU  
CENTRAL LABORATORY

BORING LOG

WILLISTON  
CMG PARK(29)  
VT-2A PARK & RIDE

Boring No.: **B-101**

Page No.: 1 of 1

Pin No.: 05K166

Checked By: MLM

Boring Crew: JUDKINS, HOOK, NIETO

Date Started: 8/03/15 Date Finished: 8/05/15

VTSPG NAD83: N 707286.82 ft E 1478986.59 ft

Station: 41+15 Offset: -0.80

Ground Elevation: 449.43 ft

Type: H.S.A. SS  
I.D.: 3.25 in 1.5 in  
Hammer Wt: N.A. 140 lb.  
Hammer Fall: N.A. 30 in.  
Hammer/Rod Type: Auto/AWJ  
Rig: CME 55 TRACK C<sub>r</sub> = 1.46

Groundwater Observations		
Date	Depth (ft)	Notes
08/04/15	9.0	Before drilling.
08/04/15	24.9	End of day.
08/05/15	13.0	In casing over night.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
5		A-2-4, SiSa, Dk/brn, Moist, Rec. = 0.8 ft, Lab Note: Topsoil with sticks & roots.	WH-1-3-7 (4)	24.6	12.8	51.9	35.3		
		A-4, SaSi, brn, Moist, Rec. = 1.7 ft	5-5-4-5 (9)	14.5	19.4	38.4	42.2		
		A-4, GrSaSi, brn, Moist, Rec. = 1.8 ft, Lab Note: Broken Rock was within sample.	4-12-28-45 (40)	9.5	24.8	32.0	43.2		
		A-4, SaSi, gry, Dry, Rec. = 0.4 ft, Lab Note: Broken Rock was within sample.	R@5.0" (R)	7.5	13.3	32.5	54.2		
		A-4, SaSi, brn, Dry, Rec. = 0.9 ft, Lab Note: Broken Rock was within sample.	50-R@5.0" (R)	8.2	17.1	25.0	57.9		
		A-4, SaGrSi, brn, Dry, Rec. = 0.4 ft, Lab Note: Broken Rock was within sample.	R@5.0" (R)	5.6	33.7	27.6	38.7		
		A-4, GrSaSi, gry, Moist, Rec. = 0.7 ft, Lab Note: Broken Rock was within sample.	49-R@2.5" (R)	5.9	24.5	30.5	45.0		
		A-4, GrSaSi, gry, Moist, Rec. = 1.3 ft, Lab Note: Broken Rock was within sample.	19-40-R@3.5" (R)	6.7	21.0	30.7	48.3		
		A-4, GrSaSi, gry, Moist, Rec. = 1.9 ft, Lab Note: Broken Rock was within sample.	17-30-34-R@4.5" (64)	6.6	21.6	31.0	47.4		
	25		A-4, CISi, gry, Moist, Rec. = 2.0 ft	7-17-11-11 (28)	14.3	2.6	15.7	81.7	22
Hole stopped @ 27.0 ft									
30	Remarks: Hole collapsed at 10.0 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. C<sub>r</sub> is the hammer energy correction factor.  
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 WILLISTON CMG PARK(29), GPU VERMONT AOT.GDT 8/25/15



STATE OF VERMONT  
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 CENTRAL LABORATORY

BORING LOG

**WILLISTON**  
**CMG PARK(29)**  
**VT-2A PARK & RIDE**

Boring No.: **B-102**  
 Page No.: 1 of 1  
 Pin No.: 05K166  
 Checked By: MLM

Boring Crew: JUDKINS, HOOK, NIETO  
 Date Started: 8/05/15 Date Finished: 8/07/15  
 VTSPG NAD83: N 707280.53 ft E 1479036.18 ft  
 Station: 41+65 Offset: -0.60  
 Ground Elevation: 448.24 ft

Casing Sampler  
 Type: H.S.A. SS  
 I.D.: 3.25 in 1.5 in  
 Hammer Wt: N.A. 140 lb.  
 Hammer Fall: N.A. 30 in.  
 Hammer/Rod Type: Auto/AWJ  
 Rig: CME 55 TRACK C<sub>c</sub> = 1.46

Groundwater Observations		
Date	Depth (ft)	Notes
08/05/15	9.0	End of day.
08/06/15	8.7	Before drilling.
08/07/15	6.0	Inside Casing.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
5		A-4, SiSa, brn, Moist, Rec. = 1.0 ft, Lab Note: Wood & roots were within sample.	1-1-2-1 (3)	27.0	10.8	52.8	36.4
		A-4, SaSi, brn, Moist, Rec. = 1.3 ft	4-4-5-6 (9)	15.2	3.5	41.3	55.2
		A-4, SaSi, brn, Moist, Rec. = 1.6 ft, Lab Note: A small layer of clay was noticeable. Sample tested (NP).	9-21-48-R@2.5" (69)	13.9	11.2	38.5	50.3
		A-4, SaSi, brn, Moist, Rec. = 0.7 ft	31-R@5.0" (R)	8.0	11.6	36.3	52.1
10		A-4, GrSaSi, brn, Moist, Rec. = 0.9 ft	30-R@5.0" (R)	7.6	20.9	30.0	49.1
		A-2-4, SaSiGr, brn, Dry, Rec. = 0.6 ft, Lab Note: Broken Rock was within sample.	37-R@1.0" (R)	5.7	41.7	27.5	30.8
		A-4, SaSi, brn, Moist, Rec. = 1.2 ft	33-48-R@2.5" (R)	8.1	15.0	37.1	47.9
15		A-2-4, SiSaGr, brn, Moist, Rec. = 1.3 ft, Lab Note: Broken Rock was within sample.	12-40-40-R@1.0" (80)	6.2	38.7	32.6	28.7
		A-2-4, SiGrSa, brn, Moist, Rec. = 1.2 ft, Lab Note: Broken Rock was within sample.	16-49-R@3.5" (R)	6.4	34.2	40.7	25.1
25		A-4, GrSaSi, brn, Moist, Rec. = 1.2 ft, Lab Note: Broken Rock was within sample.	28-48-R@3.5" (R)	6.9	26.8	31.8	41.4
Hole stopped @ 26.3 ft							
30		Remarks: Hole collapsed at 10.4 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. C<sub>c</sub> is the hammer energy correction factor.  
 3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 WILLISTON CMG PARK(29).GPJ VERMONT AOT.GDT 8/25/15



STATE OF VERMONT  
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BORING LOG

**WILLISTON**  
**CMG PARK(29)**  
**VT-2A PARK & RIDE**

Boring No.: **B-103**

Page No.: 1 of 1

Pin No.: 05K166

Checked By: MLM

Boring Crew: JUDKINS, HOOK, HULBERT  
 Date Started: 8/10/15 Date Finished: 8/18/15  
 VTSPG NAD83: N 707272.51 ft E 1479221.47 ft  
 Station: 43+52 Offset: -49.00  
 Ground Elevation: 442.41 ft

Type: \_\_\_\_\_  
 I.D.: \_\_\_\_\_  
 Hammer Wt: \_\_\_\_\_  
 Hammer Fall: \_\_\_\_\_  
 Hammer/Rod Type: \_\_\_\_\_  
 Rig: CME 55 TRACK

Casing H.S.A. Sampler SS  
3.25 in 1.5 in  
N.A. 140 lb.  
N.A. 30 in.  
Auto/AWJ  
C<sub>r</sub> = 1.46

Groundwater Observations

Date	Depth (ft)	Notes
08/10/15		No water to depth.
08/18/15	2.2	Before drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		A-4, SiSa, Lt/brn, Moist, Rec. = 0.4 ft, Lab Note: Topsoil with small roots & sticks.	WH-1-2-2 (3)	19.6	6.9	54.7	38.4
2.5		A-4, SaSi, Lt/brn, Moist, Rec. = 1.6 ft	2-4-6-7 (10)	17.3	11.8	34.8	53.4
5.0		A-4, GrSaSi, brn, Moist, Rec. = 2.0 ft	11-16-30-48 (46)	10.0	22.2	32.0	45.8
7.5		A-4, SaSi, brn, Moist, Rec. = 1.4 ft	25-38-R@5.0" (R)	10.7	13.6	39.5	46.9
		A-4, SaSi, brn, Moist, Rec. = 0.9 ft	48-R@5.0" (R)	10.4	16.8	36.8	46.4
10.0		Hole stopped @ 8.9 ft					
12.5		Remarks: 1. Hole Collapsed at 3.5 ft. 2. Infiltration test performed at 6.0 ft.					
15.0							
17.5							

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 is the hammer energy correction factor.  
 3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 WILLISTON CMG PARK(29).GPJ VERMONT AOT.GDT 8/25/15



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BORING LOG

WILLISTON  
 CMG PARK(29)  
 VT-2A PARK & RIDE

Boring No.: **B-104**  
 Page No.: 1 of 1  
 Pin No.: 05K166  
 Checked By: MLM

Boring Crew: JUDKINS, HOOK, HULBERT  
 Date Started: 8/10/15 Date Finished: 8/18/15  
 VTSPG NAD83: N 707165.60 ft E 1479082.99 ft  
 Station: 51+43 Offset: -0.90  
 Ground Elevation: 455.76 ft

Casing Sampler  
 Type: H.S.A. SS  
 I.D.: 3.25 in 1.5 in  
 Hammer Wt: N.A. 140 lb.  
 Hammer Fall: N.A. 30 in.  
 Hammer/Rod Type: Auto/AWJ  
 Rig: CME 55 TRACK C<sub>s</sub> = 1.46

Groundwater Observations

Date	Depth (ft)	Notes
		No water to depth.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 1.2		A-4, SiSa, brn, Moist, Rec. = 1.2 ft, Lab Note: Topsoil with small roots.	WH-1-2-3 (3)	23.1	15.3	43.8	40.9
1.2 - 2.5		A-4, SaSi, orange-brn, Moist, Rec. = 1.4 ft, Lab Note: Broken Rock was within sample.	2-11-4-4 (15)	15.4	13.6	40.6	45.8
2.5 - 5.0		A-4, GrSaSi, white-brn, Moist, Rec. = 1.5 ft, Lab Note: Broken Rock was within sample.	1-7-24-34 (31)	9.3	28.5	31.1	40.4
5.0 - 7.5		A-4, SaSi, gry-brn, Moist, Rec. = 0.9 ft, Lab Note: Broken Rock was within sample.	45-R@5.0" (R)	7.8	18.5	37.6	43.9
7.5 - 9.1		A-4, SaSi, brn-Lt/brn, Moist, Rec. = 1.0 ft, Lab Note: Broken Rock was within sample.	33-48-R@1.0" (R)	8.2	17.6	37.6	44.8
9.1 - 10.0	Hole stopped @ 9.1 ft						
10.0 - 17.5	Remarks: 1. Hole Collapsed at 3.5 ft. 2. Infiltration test performed at 2.0 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. C<sub>s</sub> is the hammer energy correction factor.  
 3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 WILLISTON CMG PARK(29).GPJ VERMONT AOT.GDT 8/25/15



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BORING LOG

**WILLISTON**  
**CMG PARK(29)**  
**VT-2A PARK & RIDE**

Boring No.: **B-105**

Page No.: 1 of 1

Pin No.: 05K166

Checked By: MLM

Boring Crew: JUDKINS, HOOK, HULBERT

Date Started: 8/10/15 Date Finished: 8/12/15

VTSPG NAD83: N 707074.80 ft E 1479316.15 ft

Station: 53+93 Offset: -0.10

Ground Elevation: 454.49 ft

Type: H.S.A. SS  
I.D.: 3.25 in 1.5 in  
Hammer Wt: N.A. 140 lb.  
Hammer Fall: N.A. 30 in.  
Hammer/Rod Type: Auto/AWJ  
Rig: CME 55 TRACK C<sub>r</sub> = 1.46

Groundwater Observations

Date	Depth (ft)	Notes
08/10/15		No water to depth.
08/12/15	1.6	Before drilling.
08/12/15		NWTD, After drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/ft (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
2.5	[Hatched]	A-4, SiSa, brn, Moist, Rec. = 1.6 ft	WH-WH-2-2 (2)	24.6	9.9	51.4	38.7
		A-4, SiSa, brn, MTW, Rec. = 1.2 ft, Lab Note: Sticks & roots were within sample.	3-1-2-3 (3)	17.7	19.3	41.6	39.1
		A-4, SaSi, brn, MTW, Rec. = 1.8 ft	4-5-20-37 (25)	12.1	16.3	37.7	46.0
		A-4, SaSi, brn, Moist, Rec. = 0.8 ft, Lab Note: Broken Rock was within sample.	45-R@3.5" (R)	10.8	17.1	39.3	43.6
7.5	[Hatched]	A-4, SaSi, brn, Moist, Rec. = 1.2 ft	22-48-R@2.5" (R)	8.1	16.7	34.2	49.1
		A-4, SaSi, brn, Moist, Rec. = 0.9 ft	28-R@5.0" (R)	9.1	11.4	32.1	56.5
12.5	[Hatched]	A-4, SaSi, brn, Moist, Rec. = 0.2 ft	R@5.0" (R)	10.0	8.0	30.5	61.5
		A-4, GrSaSi, gry, Moist, Rec. = 1.2 ft, Lab Note: A small layer of clay was noticeable. Sample tested (NP).	28-47-R@2.5" (R)	7.3	20.6	29.8	49.6
15.0		Hole stopped @ 15.2 ft					
17.5		Remarks: 1. Hole Collapsed at 4.1 ft. 2. Infiltration test performed at 2.0 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. C<sub>r</sub> is the hammer energy correction factor.  
 3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 WILLISTON CMG PARK(29).GPJ VERMONT AOT.GDT 8/25/15



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BORING LOG

**WILLISTON**  
**CMG PARK(29)**  
**VT-2A PARK & RIDE**

Boring No.: **B-106**

Page No.: **1 of 1**

Pin No.: **05K166**

Checked By: **MLM**

Boring Crew: JUDKINS, HOOK, HULBERT

Date Started: 8/10/15 Date Finished: 8/18/15

VTSPG NAD83: N 707092.95 ft E 1479054.43 ft

Station: 51+43 Offset: 71.60

Ground Elevation: 463.32 ft

Type:	Casing	Sampler
I.D.:	H.S.A.	SS
Hammer Wt:	3.25 in	1.5 in
Hammer Fall:	N.A.	140 lb.
Hammer/Rod Type:	N.A.	30 in.
Rig:	Auto/AWJ	
	CME 55 TRACK	C <sub>r</sub> = 1.46

Groundwater Observations

Date	Depth (ft)	Notes
08/10/15		No water to depth.
08/18/15	2.2	Before drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		A-4, SaSi, brn, Moist, Rec. = 1.6 ft	WH-1-2-3 (3)	20.7	16.8	35.6	47.6
2.5		A-4, SaSi, brn, Moist, Rec. = 1.8 ft	4-5-7-10 (12)	13.0	13.6	38.1	48.3
5.0		A-4, SaSi, brn, Moist, Rec. = 1.6 ft, Lab Note: Broken Rock was within sample.	13-27-45-R@6.0" (72)	9.5	18.5	34.2	47.3
		Field Note:, No Recovery	R@0.0" (R)				
7.5		Visual Description:, Broken Rock, brn, Moist, Rec. = 0.1 ft	R@3.5" (R)				
10.0		Visual Description:, Broken Rock with sand, brn, Moist, Rec. = 0.1 ft	R@5.0" (R)				
		Hole stopped @ 10.4 ft					
12.5		Remarks: 1. Hole Collapsed at 2.4 ft. 2. Infiltration test performed at 7.0 ft.					
15.0							
17.5							

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 is the hammer energy correction factor.  
 3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG - 2 WILLISTON CMG PARK(29).GPJ VERMONT AOT.GDT 10/8/15



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BORING LOG

**WILLISTON**  
**CMG PARK(29)**  
**VT-2A PARK & RIDE**

Boring No.: **B-107**

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Pin No.: **05K166**

Checked By: **MLM**

Boring Crew: JUDKINS, HOOK, HULBERT

Date Started: 8/10/15 Date Finished: 8/19/15

VTSPG NAD83: N 706995.02 ft E 1479315.56 ft

Station: 54+22 Offset: 69.00

Ground Elevation: 461.88 ft

Type:	Casing	Sampler
I.D.:	H.S.A.	SS
Hammer Wt:	3.25 in	1.5 in
Hammer Fall:	N.A.	140 lb.
Hammer/Rod Type:	N.A.	30 in.
Rig:	Auto/AWJ	
	<u>CME 55 TRACK</u>	<u>C = 1.46</u>

Groundwater Observations

Date	Depth (ft)	Notes
08/18/15	2.5	Before drilling.
08/19/15	2.4	Before drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 1.0		A-1-b, GrSa, brn, Moist, Rec. = 1.0 ft, Lab Note: Topsoil with Broken Rock.	WH-1-11-5 (12)	32.5	43.0	50.3	6.7
1.0 - 2.5		A-4, SaSi, brn, Moist, Rec. = 1.9 ft, Lab Note: A thin layer of clay was noticeable. Sample tested (NP).	3-2-3-3 (5)	14.0	7.4	43.2	49.4
2.5 - 4.0		A-4, SaSi, brn, Moist, Rec. = 1.0 ft	2-3-3-11 (6)	19.4	12.6	38.5	48.9
4.0 - 5.0		A-4, SaSi, brn, MTW, Rec. = 1.0 ft		14.2	11.9	39.6	48.5
5.0 - 7.5		A-4, SaSi, brn, Moist, Rec. = 1.5 ft	20-32-R@6.0" (R)	9.9	11.9	42.9	45.2
7.5 - 10.0		A-4, GrSaSi, brn, Moist, Rec. = 1.0 ft, Lab Note: Broken Rock was within sample.	35-48-12-R@1.0" (60)	10.6	26.7	32.7	40.6
10.0 - 12.5		Field Note:, No Recovery Field Note:, BX, Boulder. Cleaned out casing	R@5.0" (R)				
12.5 - 14.0		A-4, SaSi, gry, Moist, Rec. = 0.9 ft	37-47-R@2.5" (R)	11.3	9.7	37.4	52.9
14.0 - 15.0		A-4, SaSi, gry, Moist, Rec. = 0.9 ft, Lab Note: Broken Rock was within sample.	45-R@5.0" (R)	8.7	15.0	32.6	52.4
15.0 - 17.5		Hole stopped @ 14.9 ft  Remarks: 1. Hole Collapsed at 3.9 ft. 2. Infiltration test performed at 5.0 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. C is the hammer energy correction factor.  
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 WILLISTON CMG PARK(29).GPJ VERMONT AOT.GDT 10/8/15



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**BORING LOG**

**WILLISTON  
 CMG PARK(29)  
 VT-2A PARK & RIDE**

Boring No.: **B-108**

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Pin No.: 05K166

Checked By: MLM

Boring Crew: JUDKINS, HOOK, NIETO

Date Started: 8/04/15 Date Finished: 8/07/15

VTSPG NAD83: N 706991.25 ft E 1479141.41 ft

Station: 4+65 Offset: -1.60

Ground Elevation: 467.47 ft

Type:	Casing	Sampler
I.D.:	H.S.A.	SS
Hammer Wt:	3.25 in	1.5 in
Hammer Fall:	N.A.	140 lb.
Hammer/Rod Type:	N.A.	30 in.
Rig:	Auto/AWJ	
	CME 55 TRACK	C <sub>r</sub> = 1.46

**Groundwater Observations**

Date	Depth (ft)	Notes
08/04/15	8.0	End of day.
08/06/15	8.1	Set for two days.
08/07/15	4.6	After third day.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
2.5	[Hatched Pattern]	A-4, SiSa, brn, Moist, Rec. = 1.0 ft, Lab Note: Tree roots were within sample.	WH-1-2-3 (3)	24.0	11.3	48.4	40.3
		A-4, SaSi, brn, Moist, Rec. = 1.2 ft, Lab Notes: A very small layer of clay was noticeable. Sample tested (NP). Broken Rock was within sample.	2-3-4-4 (7)	13.5	18.3	33.9	47.8
		A-4, GrSaSi, brn, Moist, Rec. = 2.0 ft, Lab Note: Broken Rock was within sample.	4-4-5-9 (9)	13.0	22.3	34.9	42.8
		A-4, GrSaSi, brn, Moist, Rec. = 1.3 ft, Lab Note: Broken Rock was within sample.	17-45-R@3.5" (R)	10.7	26.7	31.2	42.1
7.5	[Hatched Pattern]	A-4, GrSaSi, brn, Dry, Rec. = 0.7 ft, Lab Note: Broken Rock was within sample.	42-R@2.5" (R)	7.0	21.5	26.6	51.9
Hole stopped @ 8.7 ft							
10.0		Remarks: Hole collapsed at 6.0 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. C is the hammer energy correction factor.  
 3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG - 2 WILLISTON CMG PARK(29).GPJ VERMONT AOT.GDT 8/25/15



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 CONSTRUCTION AND  
 MATERIALS BUREAU  
 CENTRAL LABORATORY

BORING LOG

**WILLISTON**  
**CMG PARK(29)**  
**VT-2A PARK & RIDE**

Boring No.: **B-109**

Page No.: 1 of 1

Pin No.: 05K166

Checked By: MLM

Boring Crew: HOOK, JUDKINS, HULBERT  
 Date Started: 8/07/15 Date Finished: 8/10/15  
 VTSPG NAD83: N 706897.48 ft E 1479382.22 ft  
 Station: 7+23 Offset: -0.70  
 Ground Elevation: 469.75 ft

Casing Sampler  
 Type: H.S.A. SS  
 I.D.: 3.25 in 1.5 in  
 Hammer Wt: N.A. 140 lb.  
 Hammer Fall: N.A. 30 in.  
 Hammer/Rod Type: Auto/AWJ  
 Rig: CME 55 TRACK C = 1.46

Groundwater Observations

Date	Depth (ft)	Notes
08/07/15		No water observed.
08/10/15	16.8	Before drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
5		A-4, SaSi, brn, Moist, Rec. = 1.4 ft, Lab Note: Sticks and Roots were within sample.	WH-1-1-3 (2)	21.6	6.4	38.0	55.6
10		A-4, GrSaSi, brn, Moist, Rec. = 2.0 ft, Lab Note: Broken Rock was within sample.	11-13-25-36 (38)	7.3	27.1	34.3	38.6
15		A-4, SaSi, gry, Moist, Rec. = 1.3 ft, Lab Note: Broken Rock was within sample.	20-40-R@4.5" (R)	7.5	12.6	30.9	56.5
20		A-4, GrSaSi, gry, Moist, Rec. = 1.2 ft, Lab Note: Broken Rock was within sample.	34-49-R@2.5" (R)	6.3	24.9	27.3	47.8
25		A-4, SaSi, gry, Moist, Rec. = 0.2 ft	31-R@0" (R)	7.8	12.7	30.4	56.9
30		A-4, SaSi, gry, Moist, Rec. = 1.6 ft, Lab Note: A thin layer of Clay was noticeable. Sample tested (NP). Broken Rock was within sample.	14-36-34-R@1" (70)	7.8	15.7	25.9	58.4
35		A-4, GrSaSi, gry, MTW, Rec. = 1.3 ft, Lab Note: A thin layer of Clay was noticeable. Sample tested (NP).	20-35-40-R@3.5" (75)	8.4	23.7	28.4	47.9
Hole stopped @ 29.8 ft							
Remarks: Hole Collapsed at 7.0 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. C. is the hammer energy correction factor.  
 3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 WILLISTON CMG PARK(29)\_GPI VERMONT AOT.GDT 9/29/15



STATE OF VERMONT  
 AGENCY OF TRANSPORTATION  
 CONSTRUCTION AND  
 MATERIALS BUREAU  
 CENTRAL LABORATORY

BORING LOG

**WILLISTON**  
**CMG PARK(29)**  
**VT-2A PARK & RIDE**

Boring No.: **B-110**

Page No.: 1 of 1

Pin No.: 05K166

Checked By: MLM

Boring Crew: JUDKINS, HOOK, NIETO

Date Started: 7/31/15 Date Finished: 8/04/15

VTSPG NAD83: N 706666.99 ft E 1479347.52 ft

Station: 20+92 Offset: 2.80

Ground Elevation: 487.01 ft

Type:	Casing	Sampler
I.D.:	H.S.A.	SS
Hammer Wt:	3.25 in	1.5 in
Hammer Fall:	N.A.	140 lb.
Hammer/Rod Type:	N.A.	30 in.
Rig:	Auto/AWJ	
	CME 55 TRACK	C <sub>r</sub> = 1.46

Groundwater Observations

Date	Depth (ft)	Notes
08/03/15	3.0	Before drilling.
08/04/15	3.5	Augers removed.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
2.5    5.0   7.5	[Hatched Pattern]	A-4, GrSaSi, blk-brn, Moist, Rec. = 0.8 ft, Lab Note: Removed tree roots before gradation.	WH-WH-1-1 (1)	36.2	25.9	36.8	37.3
		A-4, SiSa, blk-brn, Moist, Rec. = 1.4 ft, Lab Note: Broken Rock was within sample.	3-3-3-3 (6)	13.1	17.8	45.8	36.4
		A-4, SiSa, brn, Moist, Rec. = 2.0 ft, Lab Note: Broken Rock was within sample.	3-21-29-40 (50)	11.0	16.5	46.7	36.8
		A-4, SiSa, brn, Moist, Rec. = 1.5 ft, Lab Note: Broken Rock was within sample.	20-39-41-R@0.0" (80)	12.5	13.5	49.8	36.7
		A-4, GrSiSa, brn, Moist, Rec. = 1.3 ft, Lab Note: Broken Rock & small Concrete pieces were within sample.	18-49-R@3.5" (R)	6.8	23.0	40.5	36.5
10.0		Hole stopped @ 9.3 ft					
12.5		Remarks: Hole collapsed at 3.8 ft.					
15.0							
17.5							

Notes:  
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 3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 WILLISTON CMG PARK(29).GPJ VERMONT AOT.GDT 10/8/15