



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

BORING LOG

MORRISTOWN
STP SGNL(47)
VT-100 MAST ARMS

Boring No.: B-101

Page No.: 1 of 1

Pin No.: 15T047

Checked By: MJB

Boring Crew: JUDKINS, GARROW, NIETO

Date Started: 9/02/15 Date Finished: 9/02/15

VTSPG NAD83: N 749947.54 ft E 1611582.47 ft

Station: 7+458 Offset: 58.00

Ground Elevation: 670.0 ft

| | | |
|------------------|---------------|-----------------------|
| Type: | WB | SS |
| I.D.: | 4 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 | C _r = 1.34 |

Groundwater Observations

| Date | Depth (ft) | Notes |
|----------|------------|-----------------|
| 09/02/15 | 6.3 | After drilling. |
| | | |
| | | |

| Depth (ft) | Strata (1) | CLASSIFICATION OF MATERIALS (Description) | Blows/6" (N Value) | Moisture Content % | Gravel % | Sand % | Fines % |
|------------------------|--|---|--------------------|--------------------|----------|--------|---------|
| 5 | | A-2-4, GrSiSa, brn, Moist, Rec. = 1.1 ft, Lab Note: Small pieces of Wood were within sample. | 1-1-2-3 (3) | 22.8 | 21.1 | 54.9 | 24.0 |
| | | A-2-4, SiSa, brn, Moist, Rec. = 0.7 ft, Lab Note: Small pieces of Wood were within sample. | 3-5-6-6 (11) | 11.9 | 19.1 | 46.2 | 34.7 |
| 10 | | A-1-b, GrSa, brn, Moist, Rec. = 1.1 ft, Lab Note: Small pieces of Wood were within sample. | 6-6-10-19 (16) | 9.6 | 36.6 | 44.8 | 18.6 |
| | | A-2-4, SiGrSa, brn-gry, Moist, Rec. = 1.6 ft, NXDC. Lab Note: A very thin layer of clay was noticeable. Sample tested (NP). | 15-13-10-11 (23) | 11.7 | 24.6 | 52.6 | 22.8 |
| | | A-1-b, GrSa, Lt/brn-gry, Moist, Rec. = 0.7 ft | 32-16-15-36 (31) | 14.6 | 39.0 | 42.0 | 19.0 |
| 15 | | A-1-b, SaGr, brn-gry, Moist, Rec. = 1.2 ft | 33-35-R@2.5" (R) | 13.6 | 40.8 | 40.7 | 18.5 |
| | | Field Note:, NXDC, Cleaned out casing. | | | | | |
| | | A-4, Si, brn, Moist, Rec. = 0.9 ft | 11-10-10-11 (20) | 24.8 | 5.5 | 19.1 | 75.4 |
| 20 | | Field Note:, No Recovery | 4-5-6-5 (11) | | | | |
| | | | | | | | |
| 25 | | A-4, Si, brn, Moist, Rec. = 1.1 ft, NXDC. Lab Note: A trace of clay was noticeable. Sample tested (NP). | 3-2-3-3 (5) | 30.8 | 14.8 | 8.5 | 76.7 |
| Hole stopped @ 27.0 ft | | | | | | | |
| 30 | Remarks: Hole collapsed at 13.6 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 MORRISTOWN STP SGNL(47).GPJ, VERMONT, AOT.GDT, 9/16/15



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BORING LOG

**MORRISTOWN
STP SGNL(47)
VT-100 MAST ARMS**

Boring No.: **B-102**

Page No.: 1 of 1

Pin No.: 15T047

Checked By: MJB

Boring Crew: JUDKINS, GARROW, NIETO
Date Started: 9/01/15 Date Finished: 9/01/15
VTSPG NAD83: N 749989.72 ft E 1611510.79 ft
Station: 7+454 Offset: -25.00
Ground Elevation: 675.5 ft

Type: WB Sampler SS
I.D.: 4 in 1.5 in
Hammer Wt: N.A. 140 lb.
Hammer Fall: N.A. 30 in.
Hammer/Rod Type: Auto/AWJ
Rig: CME 45C SKID C_r = 1.33

Groundwater Observations

| Date | Depth (ft) | Notes |
|----------|------------|-----------------|
| 09/01/15 | 8.2 | While drilling. |

| Depth (ft) | Strata (1) | CLASSIFICATION OF MATERIALS (Description) | Blows/6" (N Value) | Moisture Content % | Gravel % | Sand % | Fines % | LL % | PI % |
|--|------------|---|--------------------|--------------------|----------|--------|---------|------|------|
| 5 | | A-1-a, SaGr, gry, Moist, Rec. = 1.0 ft, Lab Note: Lots of Broken Rock was within sample. | 5-7-10-10 (17) | 4.7 | 63.1 | 23.3 | 13.6 | | |
| | | A-1-b, GrSa, gry, Moist, Rec. = 1.5 ft, Lab Note: Asphalt Pavement and Broken Rock were within sample. | 10-9-13-10 (22) | 5.9 | 40.6 | 43.1 | 16.3 | | |
| 10 | | A-1-a, SaGr, gry, Moist, Rec. = 1.0 ft, Lab Note: Lots of Broken Rock was within sample. | 7-11-25-18 (36) | 3.0 | 66.3 | 20.4 | 13.3 | | |
| | | A-2-4, SiGrSa, brn, Moist, Rec. = 1.7 ft, Cleaned out casing. | 15-14-12-14 (26) | 10.0 | 33.0 | 35.8 | 31.2 | | |
| 15 | | A-1-b, SaGr, brn, Moist, Rec. = 0.5 ft, Lab Note: A large chunk of Wood was within sample and was removed before gradation. | 9-9-6-12 (15) | 24.2 | 46.6 | 36.8 | 16.6 | | |
| | | A-1-b, SiGrSa, brn, Moist, Rec. = 0.7 ft | 12-11-14-20 (25) | 12.4 | 30.0 | 49.7 | 20.3 | | |
| 20 | | Field Note:, Cleaned out casing. | | | | | | | |
| | | A-2-4, SaSiGr, brn, Moist, Rec. = 1.2 ft | 15-13-12-24 (25) | 11.2 | 44.0 | 25.2 | 30.8 | | |
| 25 | | Field Note:, Cleaned out casing. | | | | | | | |
| | | A-4, SaSi, brn, Moist, Rec. = 1.1 ft | 5-4-5-8 (9) | 20.1 | 0.3 | 49.1 | 50.6 | | |
| 30 | | A-2-4, Sa, brn, Moist, Rec. = 1.0 ft | 3-4-5-4 (9) | 20.3 | 10.0 | 72.2 | 17.8 | | |
| | | A-4, Si, gry-brn, Moist, Rec. = 0.7 ft | | 37.4 | | 1.8 | 98.2 | 32 | 6 |
| Hole stopped @ 27.0 ft | | | | | | | | | |
| Remarks: Hole collapsed at 15.5 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 MORRISTOWN STP SGNL(47).GPJ VERMONT AOT.GDT 9/16/15



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BORING LOG

MORRISTOWN
STP SGNL(47)
VT-100 MAST ARMS

Boring No.: B-103

Page No.: 1 of 1

Pin No.: 15T047

Checked By: MJB

Boring Crew: JUDKINS, GARROW, NIETO

Date Started: 9/03/15 Date Finished: 9/03/15

VTSPG NAD83: N 750066.88 ft E 1611575.33 ft

Station: 7+485 Offset: 30.00

Ground Elevation: 671.8 ft

| | | |
|------------------|---------------|-----------------------|
| Type: | Casing | Sampler |
| I.D.: | WB | SS |
| Hammer Wt: | 4 in | 1.5 in |
| Hammer Fall: | N.A. | 140 lb. |
| Hammer/Rod Type: | N.A. | 30 in. |
| Rig: | Auto/AWJ | |
| | CME 45C TRACK | C _r = 1.34 |

Groundwater Observations

| Date | Depth (ft) | Notes |
|----------|------------|-----------------|
| 09/03/15 | 8.5 | After drilling. |

| Depth (ft) | Strata (1) | CLASSIFICATION OF MATERIALS (Description) | Blows/6" (N Value) | Moisture Content % | Gravel % | Sand % | Fines % |
|------------------------|------------|---|--------------------|--------------------|----------|--------|---------|
| 5 | | A-1-b, SaGr, gry, Moist, Rec. = 1.3 ft, Lab Note: Grass & Roots were within sample. Broken Rock was also within sample. | 2-4-7-5 (11) | 6.7 | 44.3 | 37.0 | 18.7 |
| | | A-2-4, GrSiSa, brn, Moist, Rec. = 1.1 ft | 3-6-8-12 (14) | 10.9 | 21.7 | 44.9 | 33.4 |
| | | A-1-b, GrSa, brn-white, Moist, Rec. = 1.8 ft, NXDC, Cleaned out casing. | 14-14-28-24 (42) | 7.4 | 36.6 | 44.5 | 18.9 |
| 10 | | A-4, GrSaSi, brn, Moist, Rec. = 1.4 ft, NXDC, Cleaned out casing. | 15-15-18-30 (33) | 12.2 | 23.4 | 33.5 | 43.1 |
| | | A-2-4, SiSa, brn, Moist, Rec. = 0.6 ft | 6-18-32-34 (50) | 12.0 | 18.5 | 58.4 | 23.1 |
| 15 | | A-2-4, GrSiSa, brn-gry, Moist, Rec. = 1.5 ft | 15-18-18-15 (36) | 14.6 | 22.5 | 50.1 | 27.4 |
| | | Field Note:, NXDC, Cleaned out casing | | | | | |
| | | A-1-b, SaGr, brn, Moist, Rec. = 1.1 ft | 18-35-R@5.0" (R) | 10.8 | 42.0 | 40.4 | 17.6 |
| 20 | | Field Note:, NXDC, Cleaned out casing | | | | | |
| | | A-4, GrSaSi, brn-Lt/brn, Moist, Rec. = 0.8 ft, NXDC. Lab Note: A trace of clay was noticeable. Sample tested (NP). | 14-12-12-13 (24) | 18.9 | 20.7 | 31.5 | 47.8 |
| 25 | | A-2-4, Sa, Lt/brn, Moist, Rec. = 0.3 ft | 6-8-11-13 (19) | 16.1 | 5.5 | 76.8 | 17.7 |
| Hole stopped @ 27.0 ft | | | | | | | |
| 30 | | Remarks: Hole collapsed at 10.5 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_r 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 MORRISTOWN STP_SGNL(47).GPJ VERMONT AOT.GDT 9/16/15



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BORING LOG

MORRISTOWN
STP SGNL(47)
VT-100 MAST ARMS

Boring No.: **B-104**

Page No.: 1 of 1

Pin No.: 15T047

Checked By: MJB

Boring Crew: JUDKINS, GARROW, NIETO
Date Started: 8/31/15 Date Finished: 9/01/15
VTSPG NAD83: N 750048.84 ft E 1611653.66 ft
Station: 7+496 Offset: 45.00
Ground Elevation: 667.0 ft

Casing: WB Sampler: SS
Type: WB SS
I.D.: 4 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 C_r = 1.34

Groundwater Observations

| Date | Depth (ft) | Notes |
|----------|------------|-----------------|
| 08/31/15 | 12.8 | While drilling. |
| | | |
| | | |

| Depth (ft) | Strata (1) | CLASSIFICATION OF MATERIALS (Description) | Blows/6" (N Value) | Moisture Content % | Gravel % | Sand % | Fines % |
|------------|------------|--|--------------------|--------------------|----------|--------|---------|
| | | A-1-b, SiGrSa, brn, Moist, Rec. = 0.8 ft, Lab Note: Pieces of Wood were within sample. | 2-2-3-3 (5) | 26.2 | 33.4 | 43.6 | 23.0 |
| | | A-4, SaSi, Lt/brn, Moist, Rec. = 1.5 ft, Cleaned out casing. | 4-4-5-6 (9) | 18.5 | 10.3 | 26.0 | 63.7 |
| 5 | | A-4, SaSi, brn, Moist, Rec. = 1.4 ft | 5-12-20-17 (32) | 19.9 | 14.8 | 42.5 | 42.7 |
| | | A-2-4, SiSa, brn, Moist, Rec. = 1.0 ft, Cleaned out casing. | 12-13-11-14 (24) | 15.8 | 19.5 | 46.7 | 33.8 |
| | | A-1-b, GrSa, brn, Moist, Rec. = 0.4 ft, Cleaned out casing. | 8-10-6-11 (16) | 12.1 | 40.8 | 41.7 | 17.5 |
| 10 | | A-1-b, SaGr, gry, Moist, Rec. = 0.9 ft, Lab Note: Broken Rock was within sample. | 18-40-R@3.5" (R) | 10.5 | 43.7 | 38.0 | 18.3 |
| | | Field Note:, Cleaned out casing | | | | | |
| 15 | | A-1-b, SaGr, gry, Moist, Rec. = 1.0 ft, Lab Note: Broken Rock was within sample. | 44-40-R@3.5" (R) | 8.7 | 57.0 | 27.3 | 15.7 |
| | | Field Note:, Cleaned out casing | | | | | |
| 20 | | Field Note:, No Recovery | 5-6-5-4 (11) | | | | |
| | | | | | | | |
| 25 | | A-4, SiSa, gry, MTW, Rec. = 1.0 ft | 3-4-4-R@2.5" (8) | 22.9 | 3.1 | 61.2 | 35.7 |
| | | Field Note:, Went down with clean out barrel and broke through at 28.5 ft | | | | | |
| 30 | | Hole stopped @ 28.5 ft | | | | | |
| | | Remarks: Hole collapsed at 11.2 ft. | | | | | |

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BORING LOG 2 MORRISTOWN STP SGNL(47).GPJ VERMONT AOT.GDT 9/16/15