# SOIL BORING LOGS

GEODESIGN INCORPORATED
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## BORING LOG

Project Name: Shelburne-South Burlington NH EGC 019-4(19)

Boring No.: B-209
Page No.: 1 of 1
File No.: 750-03.8
Checked By: RSA

Boring Company: M&W Soils Engineering
Foreman: Mike Hitchcock
GeoDesign Rep.: Aaron Humphrey
Date Started: September 9, 2002 Date Finished: September 9, 2002
N. Coordinate: E. Coordinate:
Ground Surface Elevation (feet): 150.3
Station: 40555 Offset: 58.0 ft L

| | Casing: | Sampler: |
|---|---|---|
| Type: | H.S.A. | SS |
| I.D./O.D.: | 3.25 in. | 2.0 in. |
| Hammer Wt.: | NA | 140 lbs |
| Hammer Fall: | NA | 30 in. |
| Rig Type: | Acker Soil Mex | |
| Other: | Truck mounted | |

| Groundwater Observations | | | |
|---|---|---|---|
| Date and Time | Depth (ft) | Elevation (ft) | Notes |
| ▽ 9/9/02 5:15 PM | 12.0 | 138.3 | open hole |
| ▽ 9/10/02 3:45 PM | 9.0 | 141.3 | open hole |

| Depth (ft) | Casing Blows/ft | Sample Information: Number | Type | Penetration (inches) | Recovery (inches) | Depth (ft) | Blows / 6 inch Interval: 0 - 6 | 6 - 12 | 12 - 18 | 18 - 24 | Coring Time (min./ft) | PID Result | Sample Description (Classification System: Burmister) | Symbol | Strata Description: Elevation & Depth (feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | SS | 24.0 | 1.0 | 0.0 | 1 | 3 | 5 | 5 | | - | S-1) No recovery (2 sample attempts). See remark 0-2'. | | CLAY and SILT (Fill) |
| | | 2 | SS | 24.0 | 15.0 | 2.0 | 6 | 6 | 7 | 7 | | - | S-2) Stiff, brown SILT and CLAY, little fine to medium Sand, dry. | | |
| 5 | | 3 | SS | 24.0 | 13.0 | 4.0 | 7 | 8 | 8 | 17 | | - | S-3) Stiff, gray SILT and CLAY, some brown fine to medium Sand, moist. | | 144.3 |
| | | 4 | SS | 24.0 | 17.0 | 6.0 | 15 | 17 | 17 | 22 | | - | S-4) Dense, brown fine to medium SAND, some Silt, moist. | | 6.0 SILT and SAND (Possible Fill) |
| | | 5 | SS | 24.0 | 17.0 | 8.0 | 17 | 27 | 45 | 54 | | - | S-5) Similar to S-4, except very dense. | | ▽ 140.3 |
| 10 | | | | | | | | | | | | | | | 10.0 CLAY and SILT |
| | | | | | | | | | | | | | | | ▽ |
| 15 | | 6 | SS | 24.0 | 13.0 | 14.0 | 11 | 15 | 22 | 13 | | - | S-6) Hard, gray varved SILT and CLAY, trace fine to medium Sand, trace coarse Gravel, moist. | | |
| | | 7 | SS | 24.0 | 18.0 | 18.0 | 19 | 32 | 31 | 40 | | - | S-7) Hard, gray varved SILT and CLAY, moist. | | 130.3 |
| 20 | | | | | | | | | | | | | | | 20.0 Bottom of Borehole at 20.0 ft |
| 25 | | | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | | | |

Remarks:
(0): Boring performed at proposed VAOT staked boring location. Groundsurface elevation and station/offset based on VAOT survey data.
(0-2'): No SS sample recovery after 2 sampling attempts. Offset 2' from boring and SS sampled from 0-2' - blow/6" interval, 3-7-9-12, recovery 4", Loose, brown fine to medium SAND, little Silt, trace Root Fibers, trace fine Gravel.
(10'): Depth of strata change based on observed higher drilling resistance.
(20'): Groundwater was not observed during drilling. Borehole was left open for groundwater observations until the end of drilling on 09/11/02.

Notes: 1) Soil Samples screened in the field using a thermal Environmental Systems Model 580S Photoionization Detector. The meter was calibrated relative to a benzene-in-air standard. ND = None Detected, - = Sample Not Screened
2) Stratification Lines Represent Approximate Boundary Between Material Types, Transitions May Be Gradual.
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. AC = After Coring Rock
4) Sample Type Coding: A = Auger; C = Core; PS = Piston Sampler; SS = Split Barrel (Split Spoon); ST = Shelby Tube; V = Vane
5) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

Boring No.: **B-209**

OFFICES LOG WL 750-03.8.GPJ GEODSGN.GDT 1/22/03

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## BORING LOG

Project Name: Shelburne-South Burlington NH EGC 019-4(19)

Boring No.: B-210
Page No.: 1 of 1
File No.: 750-03.8
Checked By: RSA

Boring Company: M&W Soils Engineering
Foreman: Mike Hitchcock
GeoDesign Rep.: Aaron Humphrey
Date Started: September 10, 2002 Date Finished: September 10, 2002
N. Coordinate: E. Coordinate:
Ground Surface Elevation (feet): 154.5
Station: 40576 Offset: 58.0 ft R

| | Casing: | Sampler: |
|---|---|---|
| Type: | H.S.A. | SS |
| I.D./O.D.: | 3.25 in. | 2.0 in. |
| Hammer Wt.: | NA | 140 lbs |
| Hammer Fall: | NA | 30 in. |
| Rig Type: | Acker Soil Mex | |
| Other: | Truck mounted | |

| Groundwater Observations | | | |
|---|---|---|---|
| Date and Time | Depth (ft) | Elevation (ft) | Notes |
| ▽ 9/10/02 4:30 PM | 8.5 | 146.0 | open hole |
| ▽ 9/11/02 2:20 PM | 7.5 | 147.0 | open hole |

| Depth (ft) | Casing Blows/ft | Sample Information: Number | Type | Penetration (inches) | Recovery (inches) | Depth (ft) | Blows / 6 inch Interval: 0 - 6 | 6 - 12 | 12 - 18 | 18 - 24 | Coring Time (min./ft) | PID Result | Sample Description (Classification System: Burmister) | Symbol | Strata Description: Elevation & Depth (feet) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | SS | 24.0 | 16.0 | 0.0 | 7 | 9 | 9 | 9 | | - | S-1) Top 1"- TOPSOIL. Bottom 15" - Medium dense, gray brown fine to coarse SAND, some Silt, some fine Gravel, dry. | | SILT and SAND (Fill) |
| | | 2 | SS | 24.0 | 0.0 | 2.0 | 16 | 5 | 6 | 6 | | - | S-2) Similar to S-1. See remark 2-4'. | | 150.5 |
| 5 | | 3 | SS | 21.0 | 21.0 | 4.0 | 6 | 5 | 6 | 6 | | - | S-3) Stiff, brown-gray Clayey SILT, moist. | | 4.0 CLAY and SILT |
| | | 4 | SS | 24.0 | 17.0 | 6.0 | 7 | 6 | 5 | 7 | | - | S-4) Stiff, brown Silty CLAY, laminated, moist. | | ▽ ▽ |
| | | 5 | SS | 24.0 | 22.0 | 8.0 | 7 | 9 | 7 | 8 | | - | S-5) Similar to S-4, except very stiff. | | 144.5 |
| 10 | | | | | | | | | | | | | | | |
| | | 6 | SS | 24.0 | 14.0 | 10.0 | 12 | 13 | 14 | 15 | | - | S-6) Medium dense, gray SILT and fine SAND, moist. | | 10.0 SILT and SAND |
| 15 | | 7 | SS | 24.0 | 18.0 | 14.0 | 8 | 8 | 10 | 13 | | - | S-7) Similar to S-6. | | |
| | | 8 | SS | 24.0 | 21.0 | 18.0 | 10 | 15 | 17 | 14 | | - | S-8) Similar to S-6, except dense. | | 134.5 |
| 20 | | | | | | | | | | | | | | | 20.0 Bottom of Borehole at 20.0 ft |
| 25 | | | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | | | |

Remarks:
(0'): Groundsurface elevation based on hand level survey from proposed VAOT staked boring location. Location is estimated from site plan based on locations taped from proposed VAOT staked boring location and plotted by GeoDesign.
(2-4'): No SS sample recovery after 2 sampling attempts. Offset 2' from boring and SS sampled from 2-4'. Sample Description based on offset sample.
(20'):Groundwater was not observed during drilling. Borehole was left open for groundwater observations until the end of drilling on 09/11/02.

Notes: 1) Soil Samples screened in the field using a thermal Environmental Systems Model 580S Photoionization Detector. The meter was calibrated relative to a benzene-in-air standard. ND = None Detected, - = Sample Not Screened
2) Stratification Lines Represent Approximate Boundary Between Material Types, Transitions May Be Gradual.
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Boring No.: **B-210**

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SHELBURNE – SOUTH BURLINGTON

SURVEYED BY V.S.C. INC. DATE
DRAWN BY E.A.A. INC. DATE
TRACED BY E.A.A. INC. DATE

PROJECT NH-EGC-019-4(28)
SOIL BORING DRAWING NO. 3
SHEET NO. 227 OF 283

DATUM
VERTICAL NGVD 1929
HORIZONTAL NAD 1927

4/4/03