

**SOIL CLASSIFICATION**

**AASHTO**

A1	GRAVEL AND SAND
A2	SILTY OR CLAYEY GRAVEL AND SAND
A3	FINE SAND
A4	SILTY SOIL - LOW COMPRESSIBILITY
A5	SILTY SOIL - HIGHLY COMPRESSIBLE
A6	CLAYEY SOIL - LOW COMPRESSIBILITY
A7	CLAYEY SOIL - HIGHLY COMPRESSIBLE

**ROCK QUALITY DESIGNATION**

R.Q.D. (%)	ROCK DESCRIPTION
<25	VERY POOR
25 to 50	POOR
51 to 75	FAIR
76 to 90	GOOD
>90	EXCELLENT

**SHEAR STRENGTH**

UNDRAINED SHEAR STRENGTH IN P.S.F.	CONSISTENCY
<250	VERY SOFT
250-500	SOFT
500-1000	MED. STIFF
1000-2000	STIFF
2000-4000	VERY STIFF
>4000	HARD

**CORRELATION GUIDE OF "N" TO DENSITY /CONSISTENCY**

DENSITY (GRANULAR SOILS)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	N	DESCRIPTIVE TERM
<5	VERY LOOSE	<2	VERY SOFT
5-10	LOOSE	2-4	SOFT
11-24	MED. DENSE	5-8	MED. STIFF
25-50	DENSE	9-15	STIFF
>50	VERY DENSE	16-30	VERY STIFF
		31-60	HARD
		>60	VERY HARD

**COMMONLY USED SYMBOLS**

▼	WATER ELEVATION
⊕	STANDARD PENETRATION BORING
⊗	AUGER BORING
⊙	ROD SOUNDING
S	SAMPLE
N	STANDARD PENETRATION TEST
	BLOW COUNT PER FOOT FOR: 2" O.D. SAMPLER 1 1/2" I.D. SAMPLER
	HAMMER WEIGHT OF 140 LBS. HAMMER FALL OF 30"
VS	FIELD VANE SHEAR TEST
US	UNDISTURBED SOIL SAMPLE
B	BLAST
DC	DIAMOND CORE
MD	MUD DRILL
WA	WASH AHEAD
HSA	HOLLOW STEM AUGER
AX	CORE SIZE 1 1/8"
BX	CORE SIZE 1 1/2"
NX	CORE SIZE 2 1/8"
M	DOUBLE TUBE CORE BARREL USED
LL	LIQUID LIMIT
PL	PLASTIC LIMIT
PI	PLASTICITY INDEX
NP	NON PLASTIC
W	MOISTURE CONTENT (DRY WGT. BASIS)
D	DRY
M	MOIST
MTW	MOIST TO WET
W	WET
SAT	SATURATED
BO	BOULDER
GR	GRAVEL
SA	SAND
SI	SILT
CL	CLAY
HP	HARDPAN
LE	LEDGE
NLTD	NO LEDGE TO DEPTH
CNPF	CAN NOT PENETRATE FURTHER
TLOB	TO LEDGE OR BOULDER
NR	NO RECOVERY
REC.	RECOVERY
%REC.	PERCENT RECOVERY
RQD	ROCK QUALITY DESIGNATION
CBR	CALIFORNIA BEARING RATIO
<	LESS THAN
>	GREATER THAN
R	REFUSAL (N>100)

**COLOR**

blk	BLACK	pnk	PINK
blu	BLUE	pu	PURPLE
brn	BROWN	rd	RED
dk	DARK	tn	TAN
gry	GRAY	wh	WHITE
gn	GREEN	yel	YELLOW
lt	LIGHT	mlt	MULTICOLORED
or	ORANGE		



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

BORING NUMBER: B-2 INC#2  
SHEET 1 of 1  
DATE STARTED: 8/30/05  
DATE COMPLETED: 9/08/05

PROJECT NAME: WOLCOTT  
SITE NAME: RT. 15  
STATION: 3+01.22  
OFFSET: 35.36  
VTSPG: N 754367.11 ft E 1633563.59 ft

PROJECT NUMBER: RT. 15 SLIDE  
SITE NUMBER: SLIDE AREA  
GROUND ELEVATION: 681.3 ft  
GROUNDWATER DEPTH: 6.5 ft 9/02/05  
PROJECT PIN NUMBER: 04X507

BORING CREW  
CREW CHIEF: TALLMAN  
DRILLER: TALLMAN  
LOGGER: PORTER

BORING RIG: LAG TRACK RIG  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL  
CHECKED BY: DLG

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
Top of Well Elevation: 684.0 ft								
	XXXX	Fill Material, 0.0 ft - 4.0 ft, put into place 08/29/05 for the drill rig. Inclinator casing is 2.5 ft. above ground level.						
5	XXXX	Visual Class: A-2-4, Si Sa Gr with roots and wood material, brn, Moist, Rec. = 0.9 ft, 4.0 ft - 6.0 ft		11	34.1			
	XXXX	A-4, SiSa, brn, Moist, Rec. = 1.0 ft		3	26.9	1.8	51.7	46.5
10	XXXX	Visual Class: A-2-4, Sa with broken rock material, brn, Moist, Rec. = 0.6 ft, 8.0 ft - 10.0 ft		19	18.4			
	XXXX	A-1-b, GrSa, brn, Moist, Rec. = 1.0 ft		17	14.6	42.3	43.2	14.5
	XXXX	A-2-4, SiSa, brn-gry, MTW, Rec. = 0.5 ft		3	26.4	7.3	66.6	26.1
15	XXXX	A-2-4, SiSa, brn-gry, MTW, Rec. = 0.1 ft		7	37.7	11.3	59.0	29.7
	XXXX	A-4, GrSaSi, gry, Moist, Rec. = 1.4 ft		25	10.5	27.3	36.3	36.4
	XXXX	A-4, SaSi HP, gry, Moist, Rec. = 1.7 ft		90	10.5	12.0	41.2	46.8
20	XXXX	A-4, GrSaSi HP, gry, Moist, Rec. = 1.3 ft		R	7.7	29.8	33.4	36.8
25	XXXX	A-4, SaSi HP, gry, Moist, Rec. = 1.5 ft		R	8.9	9.5	36.3	54.2
30	XXXX	A-4, SaSi HP, gry, Moist, Rec. = 1.5 ft		R	9.1	7.5	40.0	52.5
35	XXXX	A-4, SaSi HP, gry, Moist, Rec. = 1.7 ft		97	15.6	9.8	24.4	65.8
Hole stopped @ 37.0 ft								
40		DRILLER'S NOTES: 1. Inclinator #2 was installed. 2. There is 34.5 ft. of Inclinator casing in ground. 3. There is 2.5 ft. of Inclinator casing above ground.						

LOG OF BORING WOLCOTT RT.15 SLIDE (P.1) VT DOT 12/14/06

**DEFINITIONS (AASHTO)**

- BEDROCK (LEDGE)** - ROCK IN ITS NATIVE LOCATION OF INDEFINITE THICKNESS.
- BOULDER** - A ROCK FRAGMENT WITH AN AVERAGE DIMENSION >12 INCHES.
- COBBLE** - ROCK FRAGMENTS WITH AN AVERAGE DIMENSION BETWEEN 3 AND 12 INCHES.
- GRAVEL** - ROUNDED PARTICLES OF ROCK <3" AND > 0.075" (#10 SIEVE).
- SAND** - PARTICLES OF ROCK < 0.075" (#10 SIEVE) AND > 0.0029" (#200 SIEVE).
- SILT** - SOIL < 0.0029" (#200 SIEVE), NON OR SLIGHTLY PLASTIC AND EXHIBITS NO STRENGTH WHEN AIR-DRIED.
- CLAY** - FINE GRAINED SOIL, EXHIBITS PLASTICITY WHEN MOIST AND CONSIDERABLE STRENGTH WHEN AIR-DRIED.
- VARVED** - ALTERNATE LAYERS OF SILT AND CLAY.
- HARDPAN** - EXTREMELY DENSE SOIL, CEMENTED LAYER, NOT SOFTENED WHEN WET.
- MUCK** - SOFT ORGANIC SOIL (CONTAINING > 10% ORGANIC MATERIAL).
- MOISTURE CONTENT** - WEIGHT OF WATER DIVIDED BY DRY WEIGHT OF SOIL.
- FLOWING SAND** - GRANULAR SOIL SO SATURATED (LOOSE) THAT IT FLOWS INTO DRILL CASING DURING EXTRACTION OF WASH ROD.
- STRIKE** - ANGLE FROM MAGNETIC NORTH TO LINE OF INTERSECTION OF BED WITH A HORIZONTAL PLANE.
- DIP** - INCLINATION OF BED WITH A HORIZONTAL PLANE.



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

BORING NUMBER: B-3 INC#3  
SHEET 1 of 1  
DATE STARTED: 9/13/05  
DATE COMPLETED: 9/16/05

PROJECT NAME: WOLCOTT  
SITE NAME: RT. 15  
STATION: 3+96.21  
OFFSET: 35.26  
VTSPG: N 754347.53 ft E 1633658.39 ft

PROJECT NUMBER: RT. 15 SLIDE  
SITE NUMBER: SLIDE AREA  
GROUND ELEVATION: 684.37 ft  
GROUNDWATER DEPTH: 4.0 ft 9/15/05  
PROJECT PIN NUMBER: 04X507

BORING CREW  
CREW CHIEF: TALLMAN  
DRILLER: TALLMAN  
LOGGER: PORTER

BORING RIG: LAG TRACK RIG  
BORING TYPE: WASH BORE  
SAMPLE TYPE: SPLIT BARREL  
CHECKED BY: DLG

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
Top of Well Elevation: 685.91 ft								
	XXXX	Visual Class: Topsoil, brn-gry, Moist, 0.0 ft - 0.4 ft, There is 2.5 ft. of inclinometer casing above ground level.		R	17.4			
	XXXX	Boulder, Rec. = 0.4 ft, 0.4 ft - 2.0 ft		12				
	XXXX	Broken Rock, possible Fill, Rec. = 0.5 ft, 2.0 ft - 4.0 ft		5				
5	XXXX	Visual Class: A-1-b, Sa Gr, gry-brn, Moist, Rec. = 0.3 ft, 4.0 ft - 6.0 ft, Insufficient sample for testing.		4				
	XXXX	No Recovery, 6.0 ft - 8.0 ft						
10	XXXX	A-2-4, GrSiSa, brn, MTW, Rec. = 1.6 ft		2	18.6	20.4	48.9	30.7
	XXXX	A-2-4, GrSiSa, brn-gry, MTW, Rec. = 1.0 ft		5	20.1	25.0	42.4	32.6
	XXXX	No Recovery, 12.0 ft - 14.0 ft						
15	XXXX	A-2-4, SiSa, brn-gry, MTW, Rec. = 2.0 ft		8	20.0	13.5	55.7	32.8
	XXXX	A-2-4, SiSa, brn-gry, Moist, Rec. = 0.8 ft		78	20.6	7.8	64.5	27.7
	XXXX	Visual Class: Broken Rock fragments, gry, 16.8 ft - 17.0 ft						
	XXXX	A-1-b, SaGr, gry, Moist, Rec. = 0.6 ft		23	10.1	48.2	35.5	18.3
20	XXXX	A-1-b, SiGrSa, gry, Moist, Rec. = 0.8 ft		7	10.7	35.8	40.3	23.9
	XXXX	A-4, GrSaSi HP, gry, Moist, Rec. = 0.5 ft		20	10.5	32.1	32.2	35.7
	XXXX	A-4, GrSaSi HP, gry, Moist, Rec. = 1.3 ft		46	9.4	27.0	33.5	39.5
25	XXXX	A-4, GrSiSa HP, gry, Moist, Rec. = 1.6 ft		41	10.7	22.8	39.7	37.5
	XXXX	A-2-4, SiGrSa HP, gry, Moist, Rec. = 1.8 ft		69	9.2	35.5	35.5	29.0
30	XXXX	A-4, SaSi HP, gry, Moist, Rec. = 1.9 ft		90	8.4	16.6	37.6	45.8
	XXXX	A-4, SaSi HP, gry, Moist, Rec. = 1.4 ft		R	9.9	16.2	35.6	48.2
35	XXXX	A-2-4, GrSiSa HP, gry, Moist, Rec. = 1.5 ft		R	9.6	28.7	39.4	31.9
40	XXXX	A-4, SaSi HP, gry, Moist, Rec. = 1.5 ft		R	9.1	16.1	38.3	45.6
Hole stopped @ 41.5 ft								
45		DRILLER'S NOTES: 1. Inclinator #3 was installed. 2. There is 39.9 ft. of Inclinator casing in ground. 3. There is 2.5 ft. of Inclinator casing above ground.						

LOG OF BORING WOLCOTT RT.15 SLIDE (P.1) VT DOT 12/14/06

**GENERAL NOTES**

- THE SUBSURFACE EXPLORATIONS SHOWN HEREIN WERE MADE BETWEEN AND BY THE AGENCY.
- SOIL AND ROCK CLASSIFICATIONS, PROPERTIES AND DESCRIPTIONS ARE BASED ON ENGINEERING INTERPRETATION FROM AVAILABLE SUBSURFACE INFORMATION BY THE AGENCY AND MAY NOT NECESSARILY REFLECT ACTUAL VARIATIONS IN SUBSURFACE CONDITIONS THAT MAY BE ENCOUNTERED BETWEEN INDIVIDUAL BORING OR SAMPLE LOCATIONS.
- OBSERVED WATER LEVELS AND/OR CONDITIONS INDICATED ARE AS RECORDED AT THE TIME OF EXPLORATION AND MAY VARY ACCORDING TO THE PREVAILING RAINFALL, METHODS OF EXPLORATION AND OTHER FACTORS.
- ENGINEERING JUDGEMENT WAS EXERCISED IN PREPARING THE SUBSURFACE INFORMATION PRESENTED HEREIN. ANALYSIS AND INTERPRETATION OF SUBSURFACE DATA WAS PERFORMED AND INTERPRETED FOR AGENCY DESIGN AND ESTIMATING PURPOSES. PRESENTATION OF THE INFORMATION IN THE CONTRACT IS INTENDED TO PROVIDE THE CONTRACTOR ACCESS TO THE SAME DATA AVAILABLE TO THE AGENCY. THE SUBSURFACE INFORMATION IS PRESENTED IN GOOD FAITH AND IS NOT INTENDED AS A SUBSTITUTE FOR PERSONAL INVESTIGATION, INDEPENDENT INTERPRETATION, INDEPENDENT ANALYSIS OR JUDGEMENT BY THE CONTRACTOR.

PROJECT NAME: WOLCOTT  
PROJECT NUMBER: STP 030-2(22)

FILE NAME: d07b096bdr.dgn  
PROJECT LEADER: JLS  
DESIGNED BY: DLG/MBL  
BORING LOG SHEET 2

PLOT DATE: 11-SEP-2007  
DRAWN BY: MBL  
CHECKED BY: SDM  
SHEET 5 OF 22