BORING LOG B-513

GZA GeoEnvironmental, Inc. *Engineers and Scientists*

Bennington Bypass North
Bennington, Vermont

Boring No.: B-513
Page: 1 of 3
File No.: 15634.16
Check: DGL

Contractor: Geologic-Earth Exploration
Foreman: Charlie O'Donnell
Logged by: L. Charest
Date Start/Finish: 7-18-06 / 7-20-06
Boring Location: NB 6+305.9, 13.6m R
GS Elev.: 251.82m Datum: NAVD88

	Auger/ Casing	Sampler
Type:	ODEX	SS
I.D.:	108 mm	35 mm
Hammer Wt.:	NA	63.5 kg
Hammer Fall:	NA	0.76 m
Rig Type:	CME750 ATV	

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab
Not	measured			

Depth (m)	Sample Information: No.	Pen./ Rec. (m)	Depth (m)	Blows (/0.15m)	N Value	Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
						Advanced borehole through nested cobbles and boulders from 0 to 2.74 meters (0 to 9 feet) below the surface using an ODEX hammer.	FLUVIAL		No Equipment Installed
	S-1	0.61/ 0.20	2.74- 3.35	28-23 17-11	40	Hard, light brown, Clayey SILT, some Gravel, little fine to coarse Sand with white, Clayey Silt seams. (A-4)	2.74m		
5	S-2	0.61/ 0.51	4.27- 4.88	9-17 18-20	35	Hard, light brown, Clayey SILT, some fine to medium Sand with white, Clayey Silt lenses. (A-4)	LACUSTRINE		
	S-3	0.61/ 0.08	5.79- 6.40	20-30 37-52	67	Hard, light brown, Clayey SILT, little Gravel with white, Clayey Silt lenses. (A-4)			
	S-4	0.61/ 0.25	7.32- 7.92	10-16 39-100	55	Hard, light brown, Clayey SILT, some fine to medium Sand, trace Gravel with white, Clayey Silt lenses. (A-4)	8.36m		
	S-5	0.46/ 0.41	8.84- 9.30	50-72 119/152 mm	72 119/152 mm	Very dense, brown, GRAVEL, some fine to coarse Sand, trace Silt. (A-1-a)	GRAVEL 9.75m LACUSTRINE		

REMARKS

SOIL BL WELL 500 SERIES.GPJ GZA_ML.GDT 12/4/06

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.

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BORING LOG B-513 (CONT'D)

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	S-6	0.46/ 0.00	10.36- 10.82	31-72 90/152 mm	72 90/152 mm	No recovery. Rock lodged in tip of spoon.			
	S-7	0.61/ 0.61	11.89- 12.50	28-40 66-110	106	Hard, light brown, Clayey SILT, little fine Sand, trace Gravel with white, Clayey Silt lenses. (A-4)			
	S-8	0.61/ 0.61	13.41- 14.02	21-44 52-92	96	Hard, light brown, Clayey SILT, little fine Sand, trace Gravel with white, Clayey Silt lenses and brown, Silt lenses and seams. (A-4)			
15	S-9	0.61/ 0.61	14.94- 15.54	21-31 52-58	83	Hard, light brown, Clayey SILT, trace fine Sand, trace Gravel with white, Clayey Silt lenses and seams. (A-4)	LACUSTRINE		
	S-10	0.61/ 0.61	16.46- 17.07	15-33 51-71	84	Hard, light brown, Clayey SILT with white, Clayey Silt lenses and dark brown, Silt seams. (A-4)			
	S-11	0.61/ 0.61	17.98- 18.59	10-23 63-36	86	Very dense, light brown, SILT, little fine to medium Sand, little Gravel with white, Clayey Silt lenses and brown, Silt seams. (A-4)			
20	S-12	0.53/ 0.48	19.51- 20.04	24-44 60-100/76 mm	104	Very dense, light brown, SILT, little fine Sand with white, Clayey Silt lenses and seams and dark brown, Clay & Silt lenses. (A-4)			
	S-13	0.61/ 0.51	21.03- 21.64	27-55 75-70	130	Very dense, light brown, SILT, little fine Sand with white, Clayey Silt lenses and seams and dark brown, Clay & Silt lenses. (A-4)			

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	S-14	0.41/ 0.38	22.56- 22.96	54-49 100/102 mm	49 100/102 mm	Very dense, light brown, SILT, little fine to medium Sand, trace Gravel with white, Clayey Silt lenses. (A-4)	LACUSTRINE		
	S-15	0.61/ 0.51	24.08- 24.69	27-46 82-82	128	Very dense, light brown, SILT, trace fine Sand with white, Clayey Silt lenses. (A-4)			
25						Bottom of boring at 24.69 meters (81 feet) below ground surface. No refusal.	24.69m		
30									

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* BOTTOM OF DRILLED SHAFT, RAMP D, PIER 2 - EL. 224.250

TVGA CONSULTANTS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BENNINGTON	Bridge No. BI5, BI5N, BI5S
Highway No. VT RTE 279	Log Sta. / Surv. Sta.
VT ROUTE 279 & RAMPS OVER ROARING BRANCH OF WALLOOMSAC RIVER	
BORING LOGS (SHEET 32 OF 33)	
Designed By GZA	Drawn By L.R. DELL
Checked By GZA Date 06/08	Bridge Design Supervisor K.M. WOJTKOWSKI Date 06/08
PROJECT BENNINGTON	PROJECT NO. AC NH 019-1(51)
TVGA CAD Drawing No. BL32.dgn	Date 02/02/2009
Bridge Sheet No. BR238	Sheet 225 of 367