PIER
TOP OF
FOOTING
EL.377.36'±

M & W Soils Engineering Inc.
Main St. Charlestown, NH 03603

TO: DUFRESNE-HENRY, INC. — ADDRESS: SOUTH BURLINGTON, VT
PROJECT NAME: BRIDGE #46 — LOCATION: NORWICH, VT
REPORT SENT TO: MIKE CHENETTE — PROJ. NO.
SAMPLES RETAINED BY M & W SOILS ENG., INC. — OUR JOB NO. 8856-02

SHEET 1 OF 1 — DATE 8/27/02 — HOLE NO. B-5 — LINE & STA. — OFFSET

GROUND WATER OBSERVATIONS: AT 15' AT IMMEDIATELY HOURS; AT ___ AT ___ HOURS

	CASING	SAMPLER	CORE BAR
Type	HSA	SS	
Size I. D.	3 1/4"	1 1/2"	
Hammer Wt.		140#	BIT
Hammer Fall		30"	

SURFACE ELEV. — DATE STARTED 8/27/02 — DATE COMPL. 8/27/02 — BORING FORMAN M.H., J.F. & S.M. — INSPECTOR M. CHENETTE — SOILS ENGR.

LOCATION OF BORING: AS MARKED - CENTER OF BRIDGE DECK

Depth	SAMPLE DEPTHS FROM-TO	TYPE OF SAMPLE	Blows per 6" on sampler		MOISTURE DENSITY OR CONSIST.	STRATA CHANGE ELEV.	FIELD SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, cond., hardness, Drilling time, seams and ect.	SAMPLE NO.	PEN	REC
						2 1/4"	ASPHALT			
						10"	CONCRETE			
5'										
							AIR BETWEEN DECK AND WATER			
10'										
15'						15'				
							WATER			
						19'				
20'	19'4" - 21'4"	SS	1	1				1	24"	19"
			1/12"							
					LOOSE		GREY FINE TO COARSE SANDS			
	23' - 25'	SS	2	1				2	24"	22"
			24	53		24'				
25'	25' - 25'1"	SS	50/1"		DENSE		GREY GRAVELLY SILTS AND FINE SANDS - TRACE OF	3	1"	1"
						25'1"	WEATHERED ROCK - REFUSAL TO SPLIT SPOON			
					VERY DENSE		WEATHERED ROCK			
						26'	REFUSAL TO AUGERS - BEDROCK OR BOULDER			
30'										

GROUND SURFACE TO 26' USED ___ CASING THEN ___

Sample Type: D-Dry C-Cored W-Washed; UP-Unfinished Piston; TP-Test Pit A-Auger V-Vane Tes; UT-Undisturbed Thinwall

Proportions Used: trace 0 to 10%; little 10 to 20%; some 20 to 35%; and 35 to 50%

140 lb. wt. x 30"-fall an 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohensive Consistancy: 0-4 Soft 30 + Hard; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff

summary: EARTH BORING 26'; ROCK CORING ___; SAMPLES 3
HOLE NO. B-5

ABUTMENT #2
TOP OF
FOOTING
EL.381.46'±

M & W Soils Engineering Inc.
Main St. Charlestown, NH 03603

TO: DUFRESNE-HENRY, INC. — ADDRESS: SOUTH BURLINGTON, VT
PROJECT NAME: BRIDGE #46 — LOCATION: NORWICH, VT
REPORT SENT TO: MIKE CHENETTE — PROJ. NO.
SAMPLES RETAINED BY M & W SOILS ENG., INC. — OUR JOB NO. 8856-02

SHEET 1 OF 1 — DATE 8/27/02 — HOLE NO. B-6 — LINE & STA. — OFFSET

GROUND WATER OBSERVATIONS: AT 15'3" AT IMMEDIATELY HOURS; AT ___ AT ___ HOURS

	CASING	SAMPLER	CORE BAR
Type	HSA	SS	
Size I. D.	3 1/4"	1 1/2"	
Hammer Wt.		140#	BIT
Hammer Fall		30"	

SURFACE ELEV. — DATE STARTED 8/27/02 — DATE COMPL. 8/27/02 — BORING FORMAN M.H., J.F. & S.M. — INSPECTOR M. CHENETTE — SOILS ENGR.

LOCATION OF BORING: AS MARKED - NORTHEAST END OF BRIDGE DECK

Depth	SAMPLE DEPTHS FROM-TO	TYPE OF SAMPLE	Blows per 6" on sampler		MOISTURE DENSITY OR CONSIST.	STRATA CHANGE ELEV.	FIELD SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, cond., hardness, Drilling time, seams and ect.	SAMPLE NO.	PEN	REC
						1 7/8"	ASPHALT			
						8"	CONCRETE			
5'										
							AIR BETWEEN DECK AND WATER			
10'										
15'						15'3"				
							WATER			
						18'				
	18'6" - 20'6"	SS	1	3				1	24"	8"
20'			19	19	MED. DENSE		GREY FINE TO COARSE SAND AND GRAVEL WITH WOOD			
	20'6" - 22'6"	SS	11	10		21'		2	24"	16"
			11	8						
	22'6" - 24'6"	SS	24	18				3	24"	18"
			7	14						
25'	25' - 27'	SS	6	5	MED. DENSE		GREY SILTY FINE GRAVEL	4	24"	17"
			2	2						
	27' - 29'	SS	3	4				5	24"	18"
			13	17		28'				
	29' - 31'	SS	32	11				6	24"	20"
30'			13	57	MED. DENSE		BROWN FINE SAND - TRACE OF WEATHERED ROCK			
						30'8"				
							WEATHERED ROCK			
						32'3"	REFUSAL TO AUGERS - BEDROCK OR BOULDER			
35'										

GROUND SURFACE TO 32'3" USED ___ CASING THEN ___

Sample Type: D-Dry C-Cored W-Washed; UP-Unfinished Piston; TP-Test Pit A-Auger V-Vane Tes; UT-Undisturbed Thinwall

Proportions Used: trace 0 to 10%; little 10 to 20%; some 20 to 35%; and 35 to 50%

140 lb. wt. x 30"-fall an 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohensive Consistancy: 0-4 Soft 30 + Hard; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff

summary: EARTH BORING 32'3"; ROCK CORING ___; SAMPLES 6
HOLE NO. B-6

ABUTMENT #1
TOP OF
FOOTING
EL.385.30'±

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

HOLE NO.: B-7 — SHEET 1 OF 1 — DATE STARTED: 04/02/03 — DATE COMPLETED: 04/03/03

PROJECT NAME: NORWICH — PROJECT NUMBER: TH2 9625
SITE NAME: BR 46 — SITE NO.: TH 3
STATION: 7+32.00 — OFFSET: 7.00
GROUND EL.: — G.W. DEPTH:

BORING CREW
CREW CHIEF: YOUNG — BORING RIG: TRUCK
DRILLER: YOUNG — BORING TYPE: WASH BORE
LOGGER: SOMERS — SAMPLE TYPE: SPLIT BARREL

DEPTH	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
0–9.1	Top of Footing BXDC, 0.0'-9.1', Concrete Footing							
10	9.1'-11.0', Gravel & Sand Rec. = 2.9'	Top of Bedrock @ 11.0'						
		RUN	REC%	RQD%	Dip°			
	Run#1: BXDC, 11.0'-14.5', Rec. = 2.9' See Geologist's Report.	1	83	0	45			
15	Run#2: BXDC, 14.5'-19.5', Rec. = 3.8' See Geologist's Report.	2	76	20	45			

Hole stopped @ 19.5'

DRILLER'S NOTES:
1. Top of footing is 13.75' from top of pavement.
2. Ground water level is 2.0' below top of footing.

GEOLOGIST'S REPORT:
Run#1: Gray quartz-biotite-garnet schist, Moderately hard, Unweathered, Appears to be cut by closely spaced joints, Poor RQD may be due to mechanical breakage during drilling.
Run#2: Gray quartz-biotite-garnet schist, Moderately hard, Unweathered, Appears to be cut by closely spaced joints, Poor RQD may be due to mechanical breakage during drilling.

PIER
TOP OF
FOOTING
EL.377.36'±

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

HOLE NO.: B-8 — SHEET 1 OF 1 — DATE STARTED: 03/27/03 — DATE COMPLETED: 04/01/03

PROJECT NAME: NORWICH — PROJECT NUMBER: TH2 9625
SITE NAME: BR 46 — SITE NO.: TH 3
STATION: 7+70.00 — OFFSET: -7.80
GROUND EL.: — G.W. DEPTH:

BORING CREW
CREW CHIEF: HOLT — BORING RIG: TRUCK
DRILLER: YOUNG — BORING TYPE: WASH BORE
LOGGER: SOMERS — SAMPLE TYPE: SPLIT BARREL

DEPTH	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
0–7.3	Top of Footing BXDC, 0.0'-7.3', Concrete Footing							
5	Run#1: BXGDC, 3.0'-8.0', Rec. = 5.0'	Top of Bedrock @ 7.3'						
	See Geologist's Report.	RUN	REC%	RQD%	Dip°			
	Run#2: BXGDC, 8.0'-10.0', Rec. = 1.9'	1	100	90	40			
10	See Geologist's Report.	2	95	65	40			
	Run#3: BXGDC, 10.0'-15.0', Rec. = 5.0' See Geologist's Report.	3	100	72	40			

Hole stopped @ 15.0'

DRILLER'S NOTES:
1. Top of footing is 21.7' from top of pavement.
2. Top of footing was beneath water surface.

GEOLOGIST'S REPORT:
Top of footing is 3.0' above beginning of Run#1.
Bottom of concrete lies directly on bedrock.
Run#1: 7.3'-8.0', Light gray quartz-sericite schist, Moderately hard, Unweathered,
Run#2: 8.0'-9.1', Light gray quartz-sericite schist, Moderately hard, Unweathered, 9.1'-10.0', Dark gray/green metavolcanic with garnet porphyroblasts, Hard, Unweathered.
Run#3: Dark gray/green metavolcanic with garnet porphyroblasts, Hard, Unweathered.

SURVEYED BY ___ DATE ___
DRAWN BY J.TOUCHETTE DATE 04/03
SQUAD LEADER C.C. BENDA
DESIGN FILE NO. /M&R/961254/m1254bor.dgn
PARM FILE ___ DATE PLOTTED $$$$DATE$$$
PROJ. NAME NORWICH
PROJ. NO. TH2 9625
SHEET 1 OF 1 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of NORWICH	Bridge No. 46
Highway No. T.H. 3	Log Sta. Surv. Sta.
TOWN HIGHWAY NO. 3 OVER OMPOMPANOOSUC RIVER	
BORING INFORMATION SHEET (4)	
Designed By S. BURBANK	Drawn By S. BURBANK
Checked By M. CHENETTE Date 12/03	Bridge Design Supervisor M. CHENETTE Date 12/03
PROJECT NORWICH	PROJECT NO. TH2-9625
DH CAD Filename: ...\Norw-bore3.dgn	Plot Date: 03/31/2004
Bridge Sheet No.	Sheet 14 of 40

DH Dufresne-Henry

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