

THESE DRAWINGS SHALL NOT BE UTILIZED BY ANY PERSON, FIRM OR CORPORATION WITHOUT THE SPECIFIC WRITTEN PERMISSION OF FREEMAN COMPANIES, LLC

APPENDIX A

TEST BORING LOGS

Driller:	M	. St. J	ohn			Co	onne	cticu	t DOT Borii	ng Report	Hole No.: S-1	(OW)	
Inspecto		. Ta	-		Т	own:		Willin			Stat./Offset:	· /	
Enginee		. Whe	tten			roject		0160-	•		Northing:		
Start Da		-8-18				oute N		I-84 V	Vest Bound		Easting:		
Finish D	Date: 1	-8-18			В	ridge N	No.:	0216	9		Surface Elevation:	577.2	
Project	Descript	ion: F	Replac	ceme	nt of	of Bridge No. 02169, I-84 and Ramp over Lower Ruby Brook							
Casing	Size/Typ	e: 4-ir	n. Cas	sing	s	Sampler Type/Size: 1-3/8 inch ID Core Barre						NX	
	er Wt.: 14		Fall:	-		lamme							
Ground	water Ob	servat	ions:	@2	1ft afte	er 5 da	ays, 2	2.5 ft	after 16 days	1/24/18, @22.2 f	t. after 38 days		
			S	SAMP	PLES				- <u></u>				(f)
E	. o								lize tion	D.4	terial Description		) n
th (t	ple)N/∈		Blow Sam			i) i	i.	% (	era ta crip	IVIE	and Notes		atic
Depth (ft)	Sample Type/No.	р	er 6 i		s	Pen. (in.)	Rec. (in.)	RQD	Generalized Strata Description				Elevation (ft)
	S-1	66				6	4		Topsoil		, some silt, trace c-f (	gravel	F
									Fill	Concrete encour			$\vdash$
											2.		-575
-										Concrete encour	ntered at 3.5ft		F
_										í á l			
5-										o'V			
	S-2	10	14	13	32	24	10						Γ
	3-2	10	14	15	52	24	10			Brown c-r SAND	, some c-f gravel, so	me slit	-
							R			)*			-570
-													$\vdash$
-									0				F
10-						$\left( \right)$							L
	S-3	28	45	35	45	24	8.	5		Brown c-f SAND	, some silt, trace c-f g	aravel	
	00	20		00	10			(V)		BIOWIT C-I SAIND		graver	
							$\sim$						-565
							$\mathbf{P}$						-
					C	5	•						-
15-						$\boldsymbol{\rho}$							_
	S-4	15	40	50	20	24	4			Brown c-f SAND	and c-f GRAVEL, tra	ace silt	L
											.,		ECO
													-560
													F
													+
20-	S-5	51	100			12	6			Orange brown c-	f SAND, some silt, tr	ace m-f	+
+	0-0	51	100						Glacial Till		red cobbles/boulders		L
													- 555
													555
													F
1													F
25—		Samn	ار ک	<u>ne</u> . (	s = s	nlit Sr		C = C	ore IIP-IIn	disturbed Distor	V = Vane Shear	Test	
						• •					$v = varie Sriear  \cdot 35\%, And = 35 -$		
Total Pe	Total Penetration in						ES: I	nstalle	d Observation \	Well		She	
	Earth: 55ft Rock: 10ft											1 of	
No. of		N	o. of			-							
Soil Sar	mples: 1	1 Co	ore Ru	ins: 2	2							SM-001-M F	REV. 1/02

Driller:M. St. JohnConnecticut DOT Boring ReportHole No.:S-1 (OW)Inspector:T. TaTown:WillingtonStat./Offset:Engineer:N. WhettenProject No.:0160-0150Northing:	
Start Date: 1-8-18 Route No.: I-84 West Bound Easting:	
Finish Date: 1-8-18 Bridge No.: 02169 Surface Elevation: 577.2	
Project Description: Replacement of Bridge No. 02169, I-84 and Ramp over Lower Ruby Brook	
Casing Size/Type: 4-in. Casing Sampler Type/Size: 1-3/8 inch ID Core Barrel Type: NX	
Hammer Wt.: 140lb Fall: 30in. Hammer Wt.: 140lb Fall: 30in.	
Groundwater Observations: @21ft after 5 days, 22.5 ft after 16 days 1/24/18, @22.2 ft. after 38 days	
	<u> </u>
Number     Number     Number     Number       Image: Strata     Image: Strata     Image: Strata     Image: Strata       Image: Strata     Image: Strata     Image: Strata	Elevation (ft)
Depth (ff)Depth (ff)Depth (ff)Depth (ff)Type/NoNoNoNoSample and NotesNoNoSample ber 0 excription and NotesNoDescription and NotesNo	atio
and Notes	eva
	Ξ
25 S-6 115 6 3 Glacial Till Brown c-f SAND, some c-f gravel, trace silt, with	
(con't) inferred cobbles/boulders	
	-550
30 Brown c-f SAND and SILT, trace c-f gravel, with	
inferred cobbles/boulders	
	-545
35 Gravier & SAND and SILT trace of gravel with	
35 S-8 48 50/2" 8 6 Gray c-f SAND and SILT, trace c-f gravel, with inferred cobbles/boulders	
	-540
40 Gray c-f SAND, some silt, little c-f gravel, seam	
S-9 67 50/4" 10 8 of coarse sand interbedded, with inferred cobbles/boulders	
	-535
Easier drilling from 42ft to 45ft	
45	
S-10 20 22 30 39 24 4 Brown to gray f SAND, some silt, little c-f gravel	
	E00
	-530
50 Sample Type: S = Split Speen C = Care UB = Undicturbed Pieten V = Vane Sheer Test	
Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%	
Total Penetration in     NOTES: Installed Observation Well     Sheet	
Earth: 55ft Rock: 10ft	
No. of No. of	
Soil Samples: 11 Core Runs: 2 SM-001-M RE	V. 1/02

Driller: M	I. St. John	Co	onne	cticu	t DOT Borii	ng Report	Hole No.: S-1 (OW)	
-		Town:		Willin	gton	•	Stat./Offset:	
· · ·		Project I		0160-	•		Northing:	
		Route N		I-84 V	Vest Bound		Easting:	
Finish Date: 1-	-8-18	Bridge N	No.:	02169	Ð		Surface Elevation: 577.2	
Project Descripti	ion: Replacement of	f Bridge	No.	02169	, I-84 and Rai	np over Lower R	uby Brook	
Casing Size/Typ	e: 4-in. Casing	Sample	r Type	/Size:	1-3/8 inch ID		Core Barrel Type: NX	
Hammer Wt.: 14	40lb Fall: 30in.	Hamme	r Wt.:	140lb	Fall: 30in.			
Groundwater Ob	oservations: @21ft at	fter 5 da	ays, 2	2.5 ft	after 16 days	1/24/18, @22.2 f	t. after 38 days	
	SAMPLES	5	1	1				E)
Depth (ft) Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Ма	terial Description and Notes	Elevation (ft)
50	60 50/5"	11	0		Glacial Till (con't)	No recovery. Inf	erred cobbles/boulders	-
55 - - - - - - - - - - - - - - - - - -		60	26	0	Weathered Bedrock Bedrock	brownish gray, m quartz seams, fo thin, primary joint foliation, open, w	moderately to highly weathered, hedium grained GNEISS w liation shallow dipping & very ts shallow dipping parallel to reathered, 1-2 in spaced igh angle joints perpendicular to	525     520 
C-2 - - - 65		60	39	0	50	moderately weat grained GNEISS dipping, primary	oderately strong, fresh to hered, gray, fine to medium , foliation shallow to moderately joints moderately dipping on, tight to open, fresh, 1-3 in	- 515 - -
		0,-	)`			END OF BORIN	G 65ft	_ 510 _
70								_
								— 505 — —
							V = Vane Shear Test 35%, And = 35 - 50%	
Total Penetration	n in	NOT	ES: I	nstalle	d Observation \	Vell	She	
Earth: 55ft	Rock: 10ft						3 0	f 3
No. of Soil Samples: 1	No. of 1 Core Runs: 2						SM-001-M	REV. 1/02

Driller: T. Roe	Conn	ecticu	ıt DOT Boriı	ng Report Hole No.: S-2				
Inspector: T. Ta	Town:	Willin	igton	Stat./Offset:	Stat./Offset:			
Engineer: N. Whetten	Project No.:		-0150	Northing:				
Start Date: 1-10-18	Route No.:	I-84 \	Nest Bound	Easting:				
Finish Date: 1-11-18	Bridge No.:	0216	9	Surface Elevation:	579.3			
Project Description: Replacemen	t of Bridge No	of Bridge No. 02169, I-84 and Ramp over Lower Ruby Brook						
Casing Size/Type: 4-in. Casing	Sampler Typ	Sampler Type/Size: 1-3/8 inch ID Core Barrel Type						
Hammer Wt.: 300lb Fall: 30in.	Hammer Wt	: 140lb	Fall: 30in.					
Groundwater Observations: @201	t ATD							
SAMPL	ES	1	- <u>p</u>		Ê			
(t) t) t) t) t) t) t) t) t) t)	Pen. (in.) Rec. (in.)	RQD %	Generalized Strata Description	Material Description and Notes	Elevation (ft)			
0			Topsoil					
– S-1 25 25 16 2	26 24 16		Fill	Topsoil (3") Brown c-f SAND some c-f gravel, littl	e silt			
S-2 29 100/4"	10 5			Brown to gray c-f SAND and c-f GRA silt	VEL, some			
5					-575			
	16 16			Brown to gray c-f SAND, some m-f g	ravel, some – –			
S-4 27 47 50/2"	14 10			Brown to gray c-f SAND, some c-f gra	avel, little			
			0					
10					-570			
	39 24 18		0	Brown/tan c-f GRAVEL and c-f SANE	D, little silt			
		12						
		Y						
15		·			- 565			
- S-6 10 7 12	32 24 16				41			
				Brown c-f SAND, some m-f gravel, lit				
					-			
					-			
					-560			
20					Ļ			
– S-7 16 15 17 1	24 24 12			Brown c-f SAND, some c-f gravel, so	me silt			
			Glacial Till	Change drilling effort at 23 ft				
					- 555			
25								
				disturbed Piston V = Vane Shear %, Some = 20 - 35%, And = 35 -				
Total Penetration in	NOTES:				Sheet			
Earth: 28ft Rock: 10ft					1 of 2			
No. of No. of Soil Samples: 8 Core Runs: 2					SM-001-M REV. 1/0			

Driller:	т	. Roe	Co	onne	cticu	t DOT Borii	ng Report	Hole No.: S-2	
Inspect		. Ta	Town:		Willin	gton	<u> </u>	Stat./Offset:	
Engine	er: N	. Whetten	Project I	No.:	0160-	-		Northing:	
Start Da	ate: 1-	-10-18	Route N	lo.:	I-84 V	Vest Bound		Easting:	
Finish D	Date: 1-	-11-18	Bridge N	lo.:	02169	9		Surface Elevation: 579.3	
Project	Descript	ion: Replacement of	of Bridge	No.	02169	, I-84 and Rai	mp over Lower R	Ruby Brook	
Casing	Size/Typ	e: 4-in. Casing	Sampler	г Туре	/Size:	1-3/8 inch ID		Core Barrel Type: NX	
Hamme	er Wt.: 30	00lb Fall: 30in.	Hamme	r Wt.:	140lb	Fall: 30in.			
Ground	water Ob	oservations: @20ft A					[		
-		SAMPLE	S			р с			(H)
Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Ma	iterial Description and Notes	Elevation (ft)
25-	S-8	70 75 60/3"	15	10		Glacial Till		, some silt, trace m-f gravel, with	_
	S-8 C-1	70 75 60/3"	15 60 60	10 33 60	17 80	(con't) Weathered Bedrock Bedrock	inferred cobbles/ Top of rock Strong to modera weathered, brow GNEISS, foliation primary joints ste planar, open, mo spaced, one steep joint, co opposite direction Very strong, fres foliation steeply dippin tight, slightly to n spaced several seconda	boulders ately strong, slightly to highly nish gray, medium grained n steeply dipping & very thin, eeply dipping parallel to foliation, derately weathered, 2-8 in open, slightly weathered, dipping	- - - - - - - - - - 545 - -
40			• •				END OF BORIN	V = Vane Shear Test	/540 
		•			0%, L	_ittle = 10 - 20	%, Some = 20 -	- 35%, And = 35 - 50%	
	enetratio		NOT	ES:				She 2 o	
Earth: 2	28ft	Rock: 10ft							—
No. of Soil Sa	mples: 8	No. of Core Runs: 2						SM-001-M	REV. 1/02

Driller:	Г. Roe	Conn	ecticu	ıt DOT Boriı	ng Report Hole No.:	S-3 (OW)	
	Г. Та	Town:	Willin	igton	Stat./Offse	( )	
Engineer: N	N. Whetten	Project No.:		-0150	Northing:		
Start Date: 1	I-11-18	Route No.:	I-84 E	East Bound	Easting:		
Finish Date: 1	I-19-18	Bridge No.:	0216	9	Surface El	evation: 579.5	
Project Descrip	tion: Replacement of	of Bridge No					
Casing Size/Ty	pe: 4-in. Casing	Sampler Ty	el Type: NX				
Hammer Wt.: 3	300lb Fall: 30in.	Hammer W	.: 140lb	Fall: 30in.			
Groundwater O	bservations: @17.2	ft, after 5 da	ıys 1/24	/18, @19.5 ft.	after 27 days		
	SAMPLE	S					E
Depth (ft) Sample Type/No.	Blows on Sampler per 6 inches	Pen. (in.)	RQD %	Generalized Strata Description	Material Desc and Note		Elevation (ft)
0				Topsoil	Topsoil (6")		-
- S-1	14 11 12 23	24 18	3	Fill	Brown c-f SAND, little c-f gra	avel, little silt	_
- S-2	28 32 24 19	24 12	2		Brown c-f SAND and c-f GR	AVEL, little silt	-
5	-						-575 -
- S-3	13 10 24 29 				Brown c-f SAND, some c-f g		-
	37 70 50/3"	15 12			Brown c-f SAND, some silt, l inferred cobbles	illie c-i gravel, with	-
10							-570
10 - S-5	18 15 12 15	24 16		20	Brown c-f SAND, some c-f g	ravel, little silt	_
			17				-
15			) Í				- 565
- S-6	12 29 60 61	24 10	)	Glacial Till	Brown c-f SAND, some c-f g	ravel, little silt	-
C-1a	_	18 6	NA		Cored from 17.5ft to 21.5 ft. through boulder from 17.5 ft Encountered weathered bed	to 19 ft.	-
20- _ C-1b		30 18	3 0	Weathered Bedrock	Moderately strong to weak, r completely weathered, mediu GNEISS, foliation steeply dip fractured	um grained brown	—560 —
	-			Bedrock	Roller bitted ahead to 22ft to	continue coring.	-
		60 38	3 0		Moderately strong to weak, r completely weathered, media		_ 555
		• •			ndisturbed Piston V = Vane %, Some = 20 - 35%, An		
Total Penetration	on in	NOTES	Installe	d Observation \	Vell	She	
Earth: 22ft	Rock: 5ft					1 0	f 2
No. of Soil Samples: 6	No. of					SM-001-M	REV. 1/02

Driller:	Т	Roe	Co	onne	cticu	t DOT Borii	ng Report	Hole No.: S-3 (	(WC	
Inspect	or: T	. Ta	Town:		Willin	gton		Stat./Offset:	,	
Engine	er: N	. Whetten	Project	No.:	0160-	-0150		Northing:		
Start D	ate: 1-	-11-18	Route N	lo.:	I-84 E	East Bound		Easting:		
Finish I	Date: 1-	-19-18	Bridge I	No.:	02169	9		Surface Elevation: 5	579.5	
Project	Descript	ion: Replacement	of Bridge	e No. (	02169	), I-84 and Rai	mp over Lower R	uby Brook		
Casing	Size/Typ	e: 4-in. Casing	Sample	r Type	/Size:	1-3/8 inch ID		Core Barrel Type: N	Х	
	er Wt.: 30		Hamme							
Ground	lwater Ob	oservations: @17.2		5 days	s 1/24	/18, @19.5 ft.	after 27 days		I	
Depth (ft)	Sample Type/No.	SAMPLE Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Ma	terial Description and Notes	Elevation (ft)	בופעמויטיו ויין
25-						Bedrock (con't)	GNEISS, foliation fractured	n steeply dipping, extr	emely	
30					1		END OF BORING		-   - - - - - - 54 - - - - - - - - -	15
40			0	910					54 - - - 53 - -	
50-			• •					V = Vane Shear T 35%, And = 35 - {		30
Total P	enetratio	n in	NOT	ES: I	nstalle	d Observation \	Well		Sheet	
Earth:	22ft	Rock: 5ft							2 of 2	
No. of		No. of								
Soil Sa	mples: 6	Core Runs: 3							SM-001-M REV. 1	/02

Driller:	Т	. Roe				Co	onne	cticu	t DOT Borii	ng Report	Hole No.: S-4		
Inspecto		. Ta			Т	own:		Willin	gton	-	Stat./Offset:		
Engineer	r: N	. Whet	ten		P	roject	No.:	0160-	-		Northing:		
Start Dat		-9-18				oute N		I-84 E	East Bound		Easting:		
Finish Da	ate: 1	-9-18			В	ridge I	No.:	02169	9		Surface Elevation:	580	
Project D	Descript	ion: R	eplac	cemer	nt of	Bridge	e No.	02169	), I-84 and Rai	np over Lower R	uby Brook		
Casing S	Size/Typ	e: 4-in	. Cas	sing	S	ample	r Type	e/Size:	1-3/8 inch ID		Core Barrel Type:	NX	
Hammer	Wt.: 3	00lb	Fall:	30in.				140lb					
Groundw	vater Ob	oservati	ons:										
			S	AMPL	ES				_ ס				Ê
	Sample Type/No.		Blow Sam er 6 ii		i	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Ma	terial Description and Notes		Elevation (ft)
0	S-1	41	31	32	35	24	18		Topsoil Fill	Topsoil (3") Brown c-f SAND	, some c-f gravel, litt	le silt	— 580 —
	S-2	32	45 1	00/2''		14	10			Brown white c-f S with inferred cob	SAND, some c-f grav bles	el, little silt,	-
5	<u>S-3</u>	100/4''	ı			4	4		Weathered Bedrock Bedrock	, N.	nd SILT, trace m-f g		575 
- - 10-	C-1					60	42	19	Sedrock	weathered, brow GNEISS, foliation primary joint set planar, tight to op 1-6 in spacing Several joints mo	ately strong, moderai nish gray, medium g n moderately dipping mod dipping parallel pen, slightly to mod v oderately dipping, pla foliation, tight to hea	rained , v thin, to foliation, veathered anar,	- - 570
_ _ 15—	C-2					60	53	27	0	joints, planar, op Very strong, sligh medium grained above, primary jo	nere present, severa en, mod weathered, htly weathered to fres GNEISS, foliation sin bint set moderately d h to slightly weathere	rust staining sh, gray, milar to ipping,	- - - - 565
_				•						END OF BORIN	G 16ft		
													L
													500
20—													-560
-													F
-													$\vdash$
_													-
4													F
25													555
		•				• •					V = Vane Shear 35%, And = 35 -		200
Total Pe	netratio	n in				NOT	ES: (	Offset 4	4 times and met	with auger refusal	at similar depths	She	
Earth: 61	ft	Rock:	10ft									1 of	1
No. of		No	. of	_		1							
Soil Sam	ples: 3	Co	re Ru	ıns: 2								SM-001-M F	REV. 1/02

Driller:	M.	St. Jo	ohn			Co	onne	cticu	t DOT Borii	ng Report	Hole No.: S-5	
Inspector:	Τ.				Т	own:		Willin	gton		Stat./Offset:	
Engineer:	N.	Whet	ten		P	roject l		0160-	-		Northing:	
Start Date:	1-9	9-18			R	oute N	lo.:	I-84 E	East Bound Or	n Ramp	Easting:	
Finish Date	e: 1-9	9-18			В	ridge N	lo.:	02169	9		Surface Elevation: 580.4	
Project De	scriptic	on: R	eplac	eme	ent of	Bridge	No.	02169	), I-84 and Rai	mp over Lower R	luby Brook	
Casing Siz	e/Type	e: 4-in	. Cas	sing	S	ample	г Туре	/Size:	1-3/8 inch ID		Core Barrel Type: NX	
Hammer W	vt.: 30	0lb	Fall: 3	30in.	н	lamme	r Wt.:	140lb	Fall: 30in.			
Groundwat	ter Obs	servati	ons:						-			
			S	AMF	PLES				_ ס			£
<b>f</b>	Ö		Dlow			-	÷		Generalized Strata Description	Ma	terial Description	Elevation (ft)
th (			Blow: Sam			Ë.	i	% (	iera Ita crip	With a	and Notes	/atic
Depth (ft)	Type/No.		er 6 ir		S	Pen. (in.)	Rec. (in.)	RQD	Gen Stra Des			
	~											
	6-1	68	31	30	27	24	6		Topsoil Fill	Topsoil (4")		-580
	1-0	00	51	50	21	24	0			Brown c-r SAND	and c-f GRAVEL, little silt	-
										Drown to top of	SAND and SILT, trace m-f	-
	5-2	30	32	41	45	24	8			gravel	SAND and SILT, trace II-I	-
5			100			10	_			Brown to tan c-f	SAND, some silt, trace m-f	-575
	5-3	44	100			12	5			gravel		575
										Provento top o f	SAND, some m-f gravel, little	
	5-4	53 5	50/3''		50/3''	9	6		Glaciofluvial	silt, with inferred	cobbles/boulders	
										) ·		-
												-
10 5	6-5	55 5	50/1''			7	6		0	Brown c-f SAND cobbles/boulders	and SILT, with inferred	-570
										cobbles/boulders	<b>)</b>	
-									S			
								ドレ	•			
15		100/2"				2				Brown to tan c-f	SAND and SILT, little m-f grave	I,  -
	6-6	100/2				K			Glacial Till	with inferred cob	bles/boulders	-565
						$\mathbf{N}$						-
												-
												-
20-			o			10	_					_ E60
	6-7	55	95			12	8			Brown c-f SAND	, some silt, little m-f gravel	-560
												F
												-
												-
												-
25		om-l	о Т. <i></i>		<u> </u>	nlit Cr		c = c		diaturbad Diatar	V - Vono Shoor Toot	
		•	• •			• •					V = Vane Shear Test - 35%, And = 35 - 50%	
Total Pene						NOT						neet
Earth: 30fl		Rock:	10ft									of 2
No. of		No	. of			1						
Soil Sampl	les: 8	Co	re Ru	ins: 2	2						SM-001-N	1 REV. 1/02

Driller:	M. St. John	Со	nne	cticu	t DOT Borii	ng Report	Hole No.: S-5		
	Т. Та	Town:		Willin	gton	-	Stat./Offset:		
Engineer:	N. Whetten	Project N			0150		Northing:		
Start Date:	1-9-18	Route No	o.:	I-84 E	ast Bound Or	n Ramp	Easting:		
Finish Date:	1-9-18	Bridge N	0.:	02169	9		Surface Elevation: 5	80.4	
Project Descri	iption: Replacement of	of Bridge	No. (	)2169	, I-84 and Ra	mp over Lower R	uby Brook		
Casing Size/T	ype: 4-in. Casing	Sampler	Туре	/Size:	1-3/8 inch ID		Core Barrel Type: N	x	
Hammer Wt.:	300lb Fall: 30in.	Hammer							
Groundwater	Observations:					-			
	SAMPLE	S			p_				E
Depth (ft) Sample Tvpe/No.	Blows on Sampler per 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Ма	terial Description and Notes		Elevation (ft)
25 S-8	60 100/1"	7	0		Glacial Till	No recovery. Inf	erred cobbles/boulders	3	
30 		60 60	47	33	(con't) Weathered Bedrock Bedrock	Weathered bedre Very strong to m gray, fine to med moderately dippi moderately dippi open, fresh to m spacing. several high ang tight to partially f Very strong to m medium grained dipping, very thir dipping parallel t	od strong, slightly wea ium grained GNEISS, ng, very thin, primary j ng parallel to foliation, oderately weathered, 2 le joints, moderately w nealed perpendicular to od strong, fresh, gray, GNEISS, foliation moder o foliation, tight to open hered, 3-10 inch spaci	thered, foliation oints tight to 2-8 inch eathered, o foliation fine to derately ately n, fresh to	- - - - - - - - - - - - - - - - - - -
45- - - - - - - - - - - - - - - - - - -	Proportions Used: tion in Rock: 10ft No. of		1 - 10			ndisturbed Piston	V = Vane Shear T		2

Driller:	М	. St. John		C	onne	ecticu	t DOT Borii	ng Report	Hole No.: S-6 (	OW)	
Inspector:		Та		Town:		Willin	gton		Stat./Offset:	- /	
Engineer:	N	. Whetten		Project	No.:	0160-	0150		Northing:		
Start Date	: 1-	9-18		Route I	No.:	I-84 E	East Bound Or	n Ramp	Easting:		
Finish Dat		11-18		Bridge		02169			Surface Elevation:	579.9	
Project De	escripti	on: Repl	acement	of Bridg	e No.						
Casing Siz	ze/Typ	e: 4-in. C	asing	Sample	er Type	e/Size:	1-3/8 inch ID		Core Barrel Type: N	IX	
Hammer V	Vt.: 30	00lb Fall	: 30in.	Hamme	er Wt.:	140lb	Fall: 30in.				
Groundwa	ter Ob	servations			3 days	s 1/24/	18, @6.1 ft af	ter 35 days			
			SAMPLE	S	1	1	р <sub>б</sub> ц				(£
	Type/No.	Sa	ws on mpler 6 inches	Pen. (in.)	Rec. (in.)	RQD %	Generalized Strata Description	Ma	terial Description and Notes		Elevation (ft)
0							Topsoil	Topsoil (4")			-
							Fill				-
	S-1	30 14	18 4 <sup>-</sup>	1 24	10			Brown c-f SAND	, some silt, little c-f gr	avel	-
	S-2	50/4''		4	3			Brown c-f SAND	, some silt, trace c-f g	ravel	_
5	S-3	36 50/3	3"	9	5		Glaciofluvial	Brown to gray o- gravel	f SAND, some silt, litt	le c-f	—575 —
10-	C-1			60	24	20	, ¢	Multiple refusals from 6 ft to 11 ft	, tried coring. Cored b	oulder	- -  570
- (	C-2			24	22	21	0	Cored from 11 ft times. Roller bitte	to 13 ft. Core barrel j ed to 13 ft	ammed 2	-
	C-3			48	8	0			ped multiple times. Co ed cobbles and bould		_ 565 _
20	S-4	21 43	50/4''	16	6		Glacial Till	Inferred cobbles/	and SILT, trace m-f g boulders. Recovered		_ _ 560
								from wash at top	portion of spoon.		
25—		•		• •					V = Vane Shear - 35%, And = 35 -		⊥—555
Total Pene	etratio	n in		NO	TES:	Installe	d Observation \	Vell		Shee	
Earth: 35f	ft	Rock: 10 <sup>-</sup>	ft							1 of	2
No. of Soil Samp		No. of								SM-001-M R	EV. 1/02

Driller: M. St. John	Conne	ecticu	t DOT Borii	ng Report	Hole No.: S-6 (OW)	
Inspector: T. Ta	Town:	Willin			Stat./Offset:	
Engineer: N. Whetten	Project No.:	0160-	-		Northing:	
Start Date: 1-9-18	Route No.:		East Bound Or	n Ramp	Easting:	
Finish Date: 1-11-18	Bridge No.:	02169		•	Surface Elevation: 579.9	
Project Description: Replacement of		02169	), I-84 and Rai	mp over Lower R	uby Brook	
Casing Size/Type: 4-in. Casing	Sampler Type	e/Size:	1-3/8 inch ID		Core Barrel Type: NX	
Hammer Wt.: 300lb Fall: 30in.	Hammer Wt.:	140lb	Fall: 30in.			
Groundwater Observations: @6.8 ft		s 1/24/	18, @6.1 ft af	ter 35 days		
SAMPLE	S					(£
Depth (II) Depth (III) Depth (III) Depth (III) Depth (III) Depth (III) Depth (IIII) Depth (IIIII) Depth (IIIII) Depth (IIII) Depth (IIII) Depth (IIII) Depth (IIII) Depth (IIII) Depth (IIII) Depth (IIIII) Depth (IIII) Depth (IIIII) Depth (IIIII) Depth (IIIII) Depth (IIII) Depth (IIII) Depth (IIII) Depth (IIII) Depth (IIIII) Depth (IIII) Depth	Pen. (in.) Rec. (in.)	RQD %	Generalized Strata Description	Ma	iterial Description and Notes	Elevation (ft)
25 S-5 28 63	12 10		Glacial Till (con't)	Gray c-f SAND a	nd SILT	-
			0	P		_ _ 550
S-6 31 66 50/1"	13 12			Gray SILT, some	⊧ f-sand	
			Weathered Bedrock Bedrock	Weathered bedro		- 545 
	60 3	0		to 40 ft to continu	ft, minimal recovery. Roller-bit le core run. Recovered core as highly weathered as other	_ _ 540
C-5	60 12	0			to 45 ft. Low recovery. red bedrock caused core barrel mes	535
				END OF BORIN	G 45ft	_ 555
50						
Sample Type: S =					V = Vane Shear Test 35%, And = 35 - 50%	
Total Penetration in	NOTES:	Installe	d Observation \	Well	She	
Earth: 35ft Rock: 10ft					2 of	f 2
No. of No. of Soil Samples: 6 Core Runs: 5					SM-001-M	REV. 1/02

Driller: T. Roe					Connecticut DOT Boring Report					Hole No.: S-7		
						own:		Willington			Stat./Offset:	
						Project	No.:	0160-0150			Northing:	
Start Da	Start Date: 1-3-18 Ro						lo.:	I-84 West Bound			Easting:	
Finish Date: 1-8-18 Br						Bridge <b>I</b>	No.:	02169			Surface Elevation: 573.8	
Project	Descript	ion: F	Repla	iceme	ent of	Bridge No. 02169, I-84 and Ramp over Lower Ruby Brook					luby Brook	
Casing Size/Type: 4-in. Casing Sa						Sample	mpler Type/Size: 1-3/8 inch ID				Core Barrel Type: NX	
								140lb Fall: 30in.				
Ground	water Ob	servat	tions:	@2	1.5ft a	after 5	days					
			5	SAM	PLES			_	- O			Elevation (ft)
Depth (ft)	Sample Type/No.	Blows on Sampler per 6 inches			. (in.)	Rec. (in.)	% (	Generalized Strata Description	Material Description and Notes			
	Sam Type					Pen.	Rec					
0-						_			Topsoil	Topsoil (4")		
_	S-1	51	41	21	1	24	20		Fill	Brown c-f SAND	_	
_	S-2	18	56	58	55	24	12			Brown c-f SAND	, some c-f gravel, little silt	-
_												-570
5-										2.4		+
_	S-3	16	13	14	17	24	18			Brown to c-f SAN	ND, little c-f gravel, little silt	_
_								R				-
_	S-4	34	41	74	85	24	16			Drown of SAND	little of group. little silt	
	0-4	54	- 1	17	00	27				BIOWIT C-I SAND	, little c-f gravel, little silt	-565
									0			
10—												
_	S-5	15	16	19	12	24	14	0	5		, little c-f gravel, little silt f SAND, little m-f gravel, trace	
-								NV		silt		
_							$\sim$					
_						6	$\mathbb{N}$					-560
15-						<b>N</b> -	<b>)</b> `					-
_	S-6	5	6	6	8	24	6				f SAND, little m-f gravel, trace	-
_										silt		-
_												-
												-555
00												L
20—	-		_			_	_					
	S-7	1	0	1	4	24	0			No recovery; c-f	Sand, little m-f sand from wash	
									Glacial Till	Lost water at 22	ft	Γ
_										LUSI WAIGI AL ZZ		F
_												-550
25—												
		•	-	•		• •					V = Vane Shear Test 35%, And = 35 - 50%	
Total Penetration in						NOT	ES:	Sh	eet			
Earth: 42ft Rock: 0ft												of 2
No. of												
Soil Samples: 10 Core Runs: 0 SI									SM-001-M	REV. 1/02		

Driller:	т	. Roe	Co	onne	cticu	t DOT Borii	ng Report	Hole No.: S-7			
Inspecto					Willington			Stat./Offset:			
Enginee	er: N	. Whetten	Project	No.:	0160-0150			Northing:			
Start Da				lo.:	I-84 V	Vest Bound		Easting:			
Finish D	Finish Date: 1-8-18				02169			Surface Elevation: 573.8			
Project	Descript	ion: Replacement	of Bridge	e No.	02169	), I-84 and Rai	mp over Lower R	Ruby Brook			
Casing	Size/Typ	e: 4-in. Casing	Sample	r Type	e/Size: 1-3/8 inch ID			Core Barrel Type: NX			
Hamme	er Wt.: 30	00lb Fall: 30in.	Hamme	er Wt.:	140lb	Fall: 30in.					
Ground	water Ob	oservations: @21.5f		days		ſ				_	
		SAMPLE	S	1		ק ר				(tt)	
(£	, Ö	Blows on		(in.)		alize	Ma	terial Description		uo	
th (	e/Ne	Sampler	ii	i.	% (	nera ita crip		and Notes		Elevation (ft)	
Depth (ft)	Sample Type/No.	per 6 inches	Pen. (in.)	Rec.	RQD	Generalized Strata Description				Шè	
25-	S-8	100/5"	5	2		Glacial Till	Brown c-f SAND	and of GRAVEL, littl	e silt with		
		100/5	5	2		(con't)	inferred cobbles/	boulders	e Siit, with	_	
								X			
							00			EAE	
_							G.V			-545	
30-	S-6 /	100/3''	3	2			Brown c-f SAND inferred cobbles/	, some c-f gravel, son	ne silt, with		
								boulders		-	
						N	$\mathbf{P}$			-	
										-	
						NO)				-540	
					1 (	$\sim$					
35	S-10 /	100/4"	4	3	1	$\mathbf{\hat{z}}$	Orange brown c- with inferred cob	f SAND, little c-f grav bles/boulders	el, little silt,		
-				1	$\wedge$						
-				0						-	
										-	
			<b>O</b>			Weathered	Weathered bedro	ock		-535	
40-						Bedrock				-	
										_	
								0			
							END OF BORIN	G 42ft			
-										-530	
45—										F	
										$\vdash$	
										-	
										-	
										-525	
50											
Proportions Used: Trace = $1 - 10\%$ , Little = $10 - 20\%$ , Some = $20 - 35\%$ , And = $35 - 50\%$											
Total Penetration in				TES:			She				
Earth: 42ft Rock: 0ft									2 of	2	
No. of Soil Sar	No. of No. of Soil Samples: 10 Core Runs: 0									SM-001-M REV. 1/02	