

TRANSMITTAL

	TRANSMITTAL
Date:	March 7, 2018
Project Number:	16149
Project Name:	Watson Woods, Parsonsfield
То:	Mr. David Bower, CEO Town of Parsonsfield 634 North Rd Parsonsfield, ME 04047
From:	Rita Sawyer
Сору:	(1) Nate Wadsworth-24x36, (1) File
Enc:	Cover Letter, Soils Narrative Report, Lot Layout Septic Plans, Wastewater Disposal Test Pits and High Intensity Soils Report, Education Material for Soil Scientists, Subsurface Wastewater Rules, & Biological Rare Plant Report Drawings: C1.1 – Rev 4 C1.2 – Rev 1 C1.3 – Rev 0 D1.0 – Rev 0
Message:	
Attached are 10 S review and approv	ets of Documents, 8 sets of 11x17 drawings and 2 sets of 24x36 drawings for your al.

☐ Mailed	☐ Fax Number:
□ Delivered	No. of Pages (including cover):



File: 16149

25

March 7, 2018

Mr. David Bower, CEO Town of Parsonsfield 634 North Rd Parsonsfield, ME 04047

RE: Watson Woods

Dear David,

Attached are revised plans for Watson Woods. We have made the following changes as a result of the last meeting.

1. We have added grading to the individual house lot plans.

2. We have added a sheet showing all of the slopes greater that 20%.

3. We have added additional no cut buffers between some of the lots.

4. We have added a note, stating all buildings must be 75' from the Farm and Forest District.

5. We are including the High Intensity Soils Mapping for the lot areas.

6. We are including background on Mark Hampton and some educational materials on soils mapping.

7. We are Including a Biological Report on rare plants that may in on the site.

We believe this data plus the already submitted data on the property, respond to all of the questions raised by the Board.

If you could give this submittal to the Board members on the 20th, they can hopefully review it for the meeting on the 27th.

We are hopeful the Board can grant approval at the meeting on the 27th. Thanks for your help.

Respectfully,

Thomas S. Greer, P.E.

Walsh Engineering Associates, Inc.

cc.

Nate Wadsworth, File

Enc.

`

SOIL EVALUATION . WETLAND DELINEATIONS . SOIL SURVEYS . WETLAND PERMITTING

4643

٠ ξ

Watson Woods Hussey Road Nathan Wadsworth Parsonsfield, ME

Soil Narrative Report

DATE:

Soil Profiles observed on July 19, 2017 and August 21, 2017

BASE MAP:

Base plan provided by Pinkham & Greer Civil Engineers

scale 1 inch equals 100 feet and two foot contours in developed portion and ten foot contours in undeveloped portion of project

parcel.

GROUND CONTROL:

Soil survey boundaries located by Mark Hampton Associates, Inc. for Class A Soil Survey in developed portion and Class C in

undeveloped portion of project parcel.

Class A-High Intensity Soil Survey (Minimum Standards) Developed Portion of Project

Mapping units of 1/8 acre or less.

Scale of 1"= 100 feet or larger.

Up to 25% inclusions in mapping units of which no more than 15% may be dissimilar soils.

Ground Control —base line and test pits accurately located under the direction of a registered land surveyor or qualified engineer.

Base Map -2 foot contours with ground survey, or aerial survey with ground control

Provided:

Mapping units of 1/8 acre or less

Base map scale of 1"= 100 feet.

Up to 25 percent inclusions in mapping units of which no more than 15 percent is dissimilar soils.

Baseline information and test pits located by Mark Hampton Associates, Inc. under direction of Pinkham & Greer Civil Engineers and Maine Survey Consultants, Inc. Topographic survey with two foot contours and ground control provided.

Class C-Medium Intensity Soil Survey (Minimum Standards) Undeveloped portion of project

Mapping units of 3 acre or less.

Scale of 1"= 500 feet or larger.

Up to 25% inclusions in mapping units of which no more than 15% may be dissimilar soils.

Ground Control -as determined by mapper

Base Map -as determined by mapper

Provided:

Mapping units of 3 acre or less

Base map scale of 1"= 100 feet.

Up to 25 percent inclusions in mapping units of which no more than 15 percent is dissimilar soils.

Baseline information and test pits located by Mark Hampton Associates, Inc. under direction of Pinkham & Greer Civil Engineers and Maine Survey Consultants, Inc. Topographic survey with ten foot contours.

The accompanying soil profile descriptions, soil map, and this soil narrative report were done in accordance with the standards adopted by the Maine Association of Professional Soil Scientists, and the Maine Board of Certification of Geologists and Soil Scientists

Mark I Hampton

C.S.S. #216, L.S.E. #263

	SOIL PROFILE / CLASSIFI	CATION INFORMA	TION		DETAILED	DESCRIPTION	F Rev. 07/11
Ргојес	i Name:	Applicant Name:				(municipality):	DECT SITES
	Vaxson Werds	Nathon Woods	MATK.		Parinis		
Explor		Pit ☐ Boring ☐ Probe	Exploration				oring Probe
	organic nonzon trackness Groun	nd surface elev	*O		on thickness Death of evolu-	Ground surface ation or to refus	
● .	Texture Consistency	Color Redox Features	• 1	Texture	Consistency	Color	Redox Features
		ail:	-54	y: : U		1/2	
. 10.	<u> </u>			· · · · · · · · · · · · · · · · · · ·	COMPANIE STATE		
Che			§ 10-	44		KIT.	
₹ 8 29-		1,30 - 1,40 F	(a)	3411		-81/24	
∯ 74.		1/4/4/4		74. Nasr			
Depth below mineral soll surface (inches)	The second secon		Depth below mineral soil surface (inches)				12.6
등 30·		V.A.	30			.r	
Ē		7,		0 44 <u>-</u>			
₹ 40-			¥ 40-	- 1.54 1.05 - 74			
3			<u> </u>				
ta 50-			59 59				
Ь							
69-	Soil Classification Slope LL		60				
孟 S.E	- 11 22 12	miting Factor Groundwater	. S.E. ≨	Soil Classific	ation Stop		THE PROPERTY
\$	Profile Condition Percent	Depth Bedrock	176 I		ondition Perc	I . "	Restrictive Layer Beárock
S.S. →	2.1	Hydric Foll Group	S.S. Sα	Seriou/Phase?		☐ Hydric } ■ Non-hy	
Depth below mineral soil surface (inches)	Single Friday Priday 8	Color Redox Features	soil surface (inches)		on thickness Depth of explor Consistency	Ground surface ation or to refuse Color	
Δ							
68-			60		**	<u> </u>	
Soil Details by	Profile Condition Percent - Soil Series/Phase Narre: SKERY MANUE	rriting Factor Greundwater C	Soil Details by	Seriee/Phase)	ondition Perc		CO Prop
Sional	INVESTIGATO	R INFORMATION AND					MARK J
Signatu	Man Tamoth.	<u> </u>	Date	7/12/1/		111	#216
Name F	Printed N. W. T. Have	ur.	Cert/		ida 19:16	16/6	6719199
Title	Licensed Site Evaluator		tified Geologis		fessional Engin		CIEM

SOIL PROFILE / CLASSIFICATION INFORMATION	FORM F Rev. 67/11
OOIL PROFILE / CLASSIFICATION INFORMATION	DETAILED DESCRIPTION OF SUBSURFACE CONDITIONS AT PROJECT SITES
Project Name: Applicant Name: Without Illico Sugar To	Project Location (municipality):
THE WAY DOES TO WATE	Porsonstield
	Symbol # 556 15 Test Pit Boring Probe
" Depth of exploration or to refusal	"Depth of exploration or to refusal
	Texture Consistency Color Redox Features
For Friend Start	mid Milds 3/00
10 Santh Company 3 10-	with Essen State Comm
The form of the first of the fi	
18 28 28 28 28 28 28 28 28 28 28 28 28 28	ं क्षेत्र
₹ 3e ₹ 3e ₹ 3e	
\$ 40	
o o o o o o o o o o o o o o o o o o o	
# 50 # 50 F 50 F 50 F 50 F 50 F 50 F 50	
60	
Soil Classification Signs Limiting Earlier	Soil Classification Slope Limiting Factor Caroundwater
Profits Condition Percent Depth Bedrook	Profile Condition Percent Deoth Bedreck
S.S. Soil Series/Phase Name:	Series/Phase Name: Hydrologic
Bray tan PD Non-Hydric Solf Group	Bruten FD D Non-hydric Soil Group
Exploration Symbol # 55.7 @ Test Pit D Boring Probe Exploration	Symbol # 1556 Test Pit Boring Probe
"Organic horizon thickness Ground surface elev "O	rganic horizon thickness Ground surface elev " Depth of exploration or to refusal
"Organic horizon thickness Ground surface elev. "Organic horizon thickness Ground surface elev." "Organic horizon thickness Ground surface elev. "Organic horizon thickness el	rganic horizon thickness Ground surface elev
"Organic horizon thickness Ground surface elev "O	rganic horizon thickness Ground surface elev " Depth of exploration or to refusal
"Organic horizon thickness Ground surface elev. "Organic horizon thickness Gro	rganic horizon thickness Ground surface elev. "Depth of exploration or to refusal Texture Constatency Color Redox Features "Texture Constatency Color Redox Features "Texture Constatency Color Redox Features
"Organic horizon thickness Ground surface elev. "Organic horizon thickness Gro	rganic horizon thickness Ground surface elev. "Depth of exploration or to refusal Texture Conslatency Color Redox Features "Texture Conslatency Color Redox Features "Texture Constatency Color Redox Features "Texture Constatency Color Redox Features "Texture Constatency Color Redox Features
"Organic horizon thickness Ground surface elev. "Organic horizon thickness Gro	rganic horizon thickness Ground surface elev. Depth of exploration or to refusal Texture Conslatancy Color Redox Features Texture T
"Organic horizon thickness Ground surface elev. "Organic horizon thickness Gro	rganic horizon thickness Ground surface elev. "Depth of exploration or to refusal Texture Consistancy Color Redox Features "Texture Consistancy Color R
"Organic horizon thickness Ground surface elev. "Organic horizon thickness elev. "Organic horizon thickness elev. "Organic hor	rganic horizon thickness Ground surface elev. "Depth of exploration or to refusal Texture Consistancy Color Redox Features "Texture Fright
"Organic horizon thickness Ground surface elev. "Organic horizon thickness elev. "Organic horizon thickness elev. "Organic hor	rganic horizon thickness Ground surface elev. "Depth of exploration or to refusal Texture Consistancy Color Redox Features "Texture Consistancy Color R
"Organic horizon thickness Ground surface elev. "Organic horizon thickness Gro	rganic horizon thickness Ground surface elev. "Depth of exploration or to refusal Texture Consistancy Color Redox Features "Texture Fright
"Organic horizon thickness Ground surface elev. "Organic horizon thickness elev. "Organic horizon thickness elev. "Organic hor	rganic horizon thickness Ground surface elev. "Depth of exploration or to refusal Texture Consistancy Color Redox Features "Texture Fright
"Organic horizon thickness Ground surface elev. "Organic horizon thickness Gro	rganic horizon thickness Ground surface elev. "Depth of exploration or to refusal Texture Consistancy Color Redox Features "Texture Fright
"Organic horizon thickness Ground surface elev. "Organic horizon thickness Ground surface elev." "Organic horizon thickness Ground surface elev. "Organic horizon thickness Gr	rganic horizon thickness Ground surface elev. "Depth of exploration or to refusal Texture Consistancy Color Redox Features "Texture Fright
Texture Consistency Golor Redox Features Texture Consistency Golor Redox Features 18 19 20 30 30 30 30 30 30 30 30 30	rganic horizon thickness Ground surface elev. "Depth of exploration or to refusal Texture Consistancy Color Redox Features "Texture Fright
Texture Consistency Golor Redox Features Texture Consistency Golor Redox Features 18 20 20 30 30 30 30 30 30 30 30	rganic horizon thickness Ground surface elev. Depth of exploration or to refusal Texture Constatancy Color Redox Features
Texture Consistency Golor Redox Features Texture Consistency Golor Redox Features 18 20 20 30 30 30 30 30 30 30 30	Profile Condition Percent Ground surface elev. "Depth of exploration or to refusal Texture Constatancy Color Redox Features "Texture Color Redox Features "Textu
Texture Consistency Color Redox Features Texture Color Redox Features Textur	rganic horizon thickness Ground surface elev. "Depth of exploration or to refusal Texture Consistancy Color Redox Features "Texture Consistancy Color Redox Features "Texture Consistency Color Redox Features "Texture
Texture Consistency Color Redox Features Texture Color Redox Features Texture Color Redox Features Texture Colo	Profile Condition Percent Soll Ground Soll Group Percent Soll Group Pe
Texture Consistency Color Redox Features Texture Color Redox Features Texture Color Redox Features Texture Colo	Profile Condition Soil Classification Soil Classi
"Organic horizon thickness Ground surface elev. "Depth of exploration or to refusal Texture Consistency Color Redox Features Supplied to the supplied to th	Profile Condition Percent Soll Ground Soll Group Percent Soll Group Pe

☐ Certified Geologist

☐ Professional Engineer

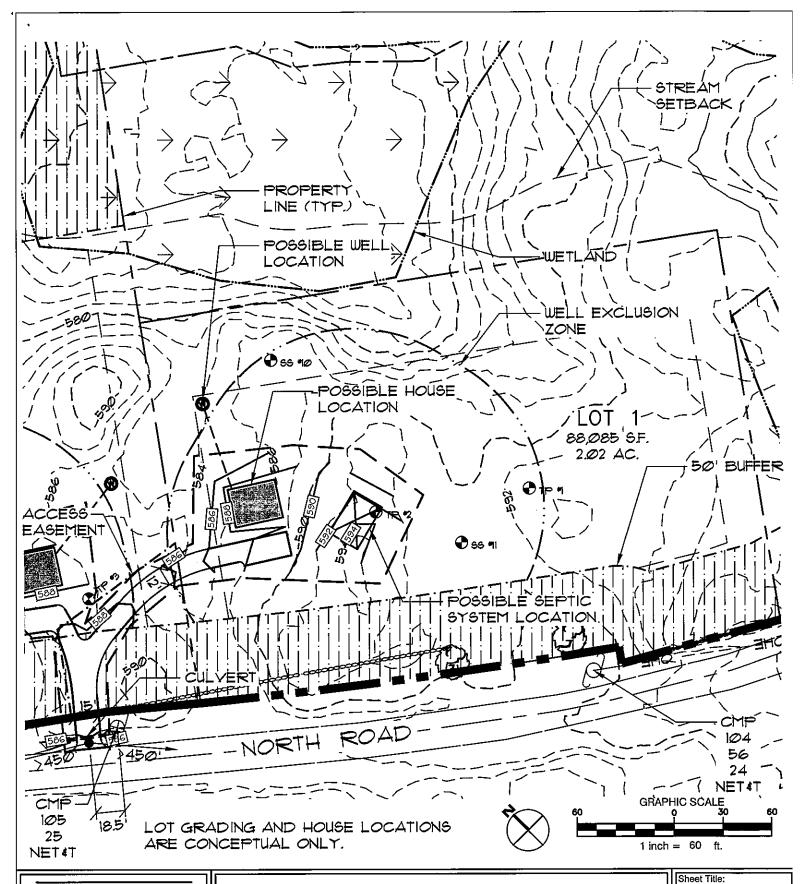
C Certified Soil Scientist

☑ Licensed Site Evaluator

SOIL PROFILE / CLASSIFICATION INFORMATION DETAILED DESCRI SUBSURFACE CONDITIONS									
Projec	Project Name: Applicant Name: Wassen Works						Project Location	(municipality):	
	ation Symbol #		Test Pit 🗆 Bo			on Symbol #	*Husansh		
	" Organic horiz	on thickness	Ground surface	elev.		" Organic horiz		Ground surface	oring □ Probe elev.
	1	·	ation or to refusa			*	Depth of explore		
•	Texture 4	Consistency	Color	Redox Features	•+	Texture	Consistency	Color	Redox Features
	hits.	100 July			-	Sallin.	Fridale	325	
(S) 18	GARA!	-	504	- CAMMA	3 10 T	Starty			
Depth below mineral soll surface (inches)	John			7.1004	Oepth below mineral soil surface (inches)	johi	is the	4,200	
1 <u>20</u> 20					28				CANCAL
28						THE	1=1	שנעי	0.00
₽ 30 Fe					<u>₹</u> 39	1,66			15/17/84
ning.									
₹ 40					<u>§</u> 48	**			
25					18 5				
5 50		***			\$ 59 				
									· · · · · · · · · · · · · · · · · · ·
69 3: S.E	Soil Classific	ation Slop	Elmiting Factor	€ Constantivator	60 - S.E.	Soli Classifi	cation Sic;	Limiting Facto	G Greundwater
Soli Details by	,∣ <u> </u>	condition Perce		Rustrictiva Layer Bedrock	Cotalls by	Frofie (Condition Perce		2 Rastrictive Layer
S.S.	Soil Series/Phase 1	tarne:	Since have de	Hydrologic	₫ s.s.	Soil Series/Phase	Name.	D Hydric	Hedrologic
(8 H	1500	Mar. Di	☐ Non-hy	dric Soil Group	3 >>	Skern	y mus	EA Non-h	ydric Soil Group
Explor	ation Symbol #_								oring
į.	" Organic boriz	on thickness	Cround audies.	_1					
			Ground surface			-		Ground surface	
	Texture		ation or to refuse			-	Depth of explor		al
•	Texture	Depth of explor	Color	a)	•	Texture		ation or to refus	
÷	,	Depth of explor	Color	a)	• +	Texture Savette	Depth of explor	ation or to refus	al
nches)	Texture	Depth of explor	Color	a)	• +	Texture Swift ktt.	Depth of explor	ation or to refus	al
ce (inches)	Texture Supply Supply	Depth of explor	Color	Redox Features	(Inches)	Texture Savette	Depth of explor	Color	al
	Texture Sportly Sportly Sportly	Depth of explor	Color	Redox Features	(Inches)	Texture Swift ktt.	Depth of exploi	Color	al
	Texture Supply Supply	Depth of explor	Color	Redox Features	(Inches)	Texture Sandy Little	Depth of explor	ation or to refus	Redox Features
	Texture Sportly Sportly Sportly	Depth of explor	Color	Redox Features	(Inches)	Texture South	Depth of exploi	ation or to refus	Redox Features
	Texture Sportly Sportly Sportly	Depth of explor	Color	Redox Features	(Inches)	Texture South	Depth of exploi	ation or to refus	Redox Features
	Texture Sportly Sportly Sportly	Depth of explor	Color	Redox Features	(Inches)	Texture South	Depth of exploi	ation or to refus	Redox Features
	Texture Sportly Sportly Sportly	Depth of explor	Color	Redox Features	(Inches)	Texture South	Depth of exploi	ation or to refus	Redox Features
h below mineral soil surface	Texture Sportly Sportly Sportly	Depth of explor	Color	Redox Features	mineral soil surface (inches)	Texture South	Depth of exploi	ation or to refus	Redox Features
	Texture South	Depth of explor	ation or to refuse	Redox Features	(Inches)	Texture Sandy Att. Sandy View	Depth of exploi	ation or to refuse Costor Costor Biggs Costor Cos	Redox Features
Depth below mineral soil surface	Texture Surely S	Depth of explore Consistency	Color Color Self-P	Redox Features Redox Features Seatures Grandwater	Depth below mineral soil surface (<i>inches</i>)	Texture South	Depth of exploi	Cotor	Redox Features
Depth below mineral soil surface	Texture South	Depth of explore Consistency C	Color Co	Redox Features Redox Features Disposition Layer Disposition Layer Disposition Layer	Depth below mineral soil surface (<i>inches</i>)	Texture Sand	Depth of exploi	Bisav	Redox Features
59 Depth below mineral soil surface value.	Soll Clearly Soll Soll Series/Phase	Depth of explore Consistency Fig. 12. Solution Slope Condition Peroverses	Color Co	Redox Features Redox Features Decomposition of the control of th	by Depth below mineral soil surface (inches) or 99 95 96 97 98 97 98 97 98 97 98 97 98 98 98 98 98 98 98 98 98 98 98 98 98	Texture Sand	Condition Perc	Bisav	Redox Features Redox Features State of the companies of
R Detalfs by Depth below mineral soil surface	Sol Cleents Sol Cleents Profile Soll Series/Prisse	Depth of explore Consistency France France Store Store Store A France M France M France	Color Co	Redox Features Redox Features Control Control	Soil Details by Depth below mineral soil surface (Inches)	Soli Clessifi Profile Soli Series/Prese Soli Series/Prese	Condition Perc	Color	Redox Features Redox Features ARE Grandele
R Detalfs by Depth below mineral soil surface	Soll Classific Soll Sollsening Soll Classific Soll Sollsening Photos	Depth of explore Consistency Francisco Some Store Condition Percentage A Part Condition Francisco Fra	Color Co	Redox Features Redox Features Decomposition of the control of th	Soil Details by Depth below mineral soil surface (Inches)	Soil Clessiff Frofile Soil Series/Free Sker	Depth of exploi	Color	Redox Features Redox Features Solidar White Solidary MP ON
Soit Details by Depth below mineral soil surface	Soll Classific Soll Sollsening Soll Classific Soll Sollsening Photos	Depth of explore Consistency France France Store Store Store A France M France M France	Color Co	Redox Features Redox Features Control Control	Soi Details by Depth below mineral soil surface (<i>inches</i>)	Sol Clearly Profile Sol Series/Phase Skeries/Phase Skeries/Phase Skeries/Phase Skeries/Phase Skeries/Phase Skeries/Phase Skeries/Phase	Depth of explor	Color	Redox Features Redox Features ARE Grandele
Soit Details by Depth below mineral soil surface	Soli General Soli Soli Soli Soli Soli Soli Soli Sol	Depth of explore Consistency Consistency Consistency State Consiste	Color Co	Redox Features Redox Features Company Manager Company	Soi Details by Depth below mineral soil surface (<i>inches</i>)	Soli Clearly Profile Soli Series/Prese Soli Cert/Lic/Reg. #	Condition Perchant	Color	Redox Features Redox Features OF Work Work Solighup APR J MP ON #216

_		SOIL PROF	ILE / CLAS	SIFICATIO	N INFORM	ATIO.	N		DETAILED	DESCRIPTION	OF
F	³ roje(d Name:		Appli	cant Name:				Project Location	ITIONS AT PRO (municipality);	DJECT SITES
Ļ		rut sa we			athan we	dswo	4	h_	Temas	i (indipendiny);	
\ E	explo.	ration Symbol #	<u>55/5</u> a	Test Pit 🗆 Bo	oring Probe	Exp	iore	ation Symbol #	59/9	Test Pit IT R	oring
'			on thickness	Ground surface ation or to refuse	elev.			" Organic horiz		Ground surface	
1			1	Color					Depth of explor	ation or to refus	al
1	•	Texture	CONTRACTOR) %() 	Redox Features	i	• -	Texture	Consistency	Color	Redox Feature
		100	77.056	M.V.		1		SANGE	Friday	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
3	10	Super				3	18-	Swell			
1	_	- han-	- FIE	\$/AG		nch	.	34.24	Frield	KIEK	_
8	29			,		9					
Depth below mineral soil surface (inches)		- States	F-1/2/2	Tylebra	OM WA	Depth below mineral soil surface (inches)	20-	22.40			Con Ma
1 20	36				9)+(1+1.)	寄			Fine	SAIR.	7 / Kin
چ ا					(7) 4 (3)	 	38-	losk.			- CATTAN
불						Ē.	ł				
₹	49					₹ 4	10-				
18						量	ŀ				
\$ 55 55	. 50-					듵.	5 0 –				
^						Å `	•				
ł	60 -					ļ .	_				
হ	S.E	Sol Classific	2	Limiting Factor	■ Groundwater	1 _	;e -↓ i.E.	Sol Classific	elion Slop	Limiting Factor	
Soil Details by	>>	Profile C	ondition Percei	17 "	Restrictive Layer Bedrock	,).⊑. >>	3_ 4]4	<u> </u>	Groundwater Restrictive Layer
2	S.S	Soil Series/Phase N	ame;	T Shide	Hydrologie		.s.	Profile C Soil Series/Phase N	ondition Perce		☐ Beeireek Hydrologic
(g	₩	516	and Min	D # Non-hyd	ric Soil Group	\ <u>\atta</u>)	Skin	MIND Y	☐ Hydric ■ Non-hy	االا
(E	(plore	ition Symbol # _	5515° B	Test Di D Doc		\geq	_				1 SOII GIBUD
_		" Organic horizo	n thickness	Ground surface	elev.			ion Symbol#_		Test Pit Bo	oring D Probe
		,	Depth of explora	tion or to refusal				* Organic horizo		Ground surface	elev.
	9	Texture						•	Denth of avolure	tion or to me.	
		- AA	Consistency	Color	Redox Features	١.	. 1			ition or to refuse	<u></u>
l		Sart	Consistency Frank	Color	1	•	+	Texture	Consistency	Color	Redox Features
<u>ر</u> ق	16-	Sarth			1		1	Texture		ition or to refuse Color	<u></u>
iches)	18-	Sorty	Frul	- Men	1	ches)		Texture Social	Consistency	Color	<u></u>
(inches)		Sarth			1	(inch		Texture	Consistency	Color	<u></u>
rface (inches)	18- 29-	Some	Frul	- Men	1			Texture Social	Consistency	Color	<u></u>
# surface (inches)	20-	Sorty	Frak Fink		1			Texture Social	Consistency FIRMU	Color	<u></u>
ed soil surface (inches)		Some	Frul	- Men	1			Texture Social Social Lives	Consistency	Color	Redox Features
ineral soil surface (inches)	20-	Sandy Sandy Sandy	Frak Fink		1			Texture Sox 36 Sox 34 Livas	Consistency FIRMU	Color	Redox Features
w mineral soil surface (inches)	20-	Sandy Sandy Sandy	Frak Fink		1			Texture Social Social Lives	Consistency FIRMU	Color	Redox Features
below mineral soil surface (inches)	29 <i>-</i> -	Sandy Sandy Sandy	Frak Fink		1			Texture Social Social Lives	Consistency FIRMU	Color	Redox Features
pth below mineral soil surface (inches)	29- 39-	Sandy Sandy Sandy	Frak Fink		1			Texture Social Social Lives	Consistency FIRMU	Color	Redox Features
Depth below mineral soil surface (inches)	29 <i>-</i> -	Sandy Sandy Sandy	Frak Fink		1	mineral soil surface		Texture Social Social Lives	Consistency FIRMU	Color	Redox Features
Depth below mineral soil surface	29 39 40	Sandy Sandy Sandy	Frak Fink		1			Texture Social Social Lives	Consistency FIRMU	Color	Redox Features
Depth below mineral soil surface	29 38 48 59	Sandy Sandy Sandy	FARL FIELD	See	Redox Features			Texture South	Consistency FIRST	Color	Redox Features
Depth below mineral soil surface	29 39 40	Soil Classification 5	Frank Fight: Sign Con Stope Con Stope	Limiting Factor	Redox Features Groupdwater Rasticke Layer	Depth below mineral soil surface		Texture Sounds Live My Live	Consistency Fig. 1	Color	Redox Features
Depth below mineral soil surface	28- 38- 48- 58- 58- 5.E.	Soil Classification 5	FIGURE Slope Sl	Limiting Factor	Redox Features Groupdwater Rapidete Layer Sedwok	Depth below mineral soil surface		Texture Solicianida Solicianida Profile Co	Consistency Fig. 1.	Color	Redax Features Commun.
etails by Depth below mineral soil surface	29- 38- 48- 59- 58- S.E.	Soil Classification of the Core	FIRMS FI	Limiting Factor C- Depth	Groundwater Rastickie Layer Bedruck Hydrologic	I Details by Depth below mineral soil surface	E. S.	Texture Solution Soli Classifica Profile Co	Consistency Consi	Color Color Limiting Factor	Redax Features CAMANA STATEMENT OF THE PROPERTY OF THE PROPE
Depth below mineral soil surface	20- 38- 48- 50- 58- 5.E.	Soil Classification Control Co	FRANK FIGURE	Limiting Factor C- , , Depth Depth Hydric	Groupdwater Groupdwater Analyticke Layer Sedwok Hydrologic C Soil Group	Soil Details by Depth below mineral soil surface	E. S.	Soil Classification Soil Savings No. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10	Consistency Consi	Color	Redax Features CAMANA STATEMENT OF THE PROPERTY OF THE PROPE
Soil Details by Depth below mineral soil surface	28- 38- 48- 58- 5.E. S.S.	Soil Classification Soil Classification Froile Cor Soil Seriou/Prase Nat SUR-14	FRANK FIGURE	Limiting Factor C- , , Depth Depth Hydric	Groundwater Rastickie Layer Bedruck Hydrologic	Soil Details by Depth below mineral soil surface		Texture Source Source Source Soil Classifica Profile Co Soil Series/Phase Na Skirll	Consistency Consi	Color Color Limiting Factor Non-hydr	Redax Features CMANUA Discontinuo Layer Sal Group
Soi Details by Depth below mineral soil surface	28- 38- 48- 58- S.E. >>	Soil Classification Soil Series/Prints Nat SURE 1	FRANK FIGURE	Limiting Factor C- , , Depth Depth Hydric	Groupdwater Groupdwater Analyticke Layer Sedwok Hydrologic C Soil Group	Soil Details by Depth below mineral soil surface		Soil Classifica Soil SeriedPhase Na Soil SeriedPh	Consistency Consi	Limiting Factor Non-hydr HAMP	Redax Features Company Compa
Soil Details by Depth below mineral soil surface	28- 38- 48- 58- 58- 5.S	Soil Classification Soil Classification Froile Cor Soil Seriou/Prase Nat SUR-14	FRANK FIGURE	Limiting Factor C- , , Depth Depth Hydric	Groupdwater Groupdwater Analyticke Layer Sedwok Hydrologic C Soil Group	Soil Details by Depth below mineral soil surface		Texture South And	Consistency FIRM TYPE Slope Condition Percent Firm Fir	Color Color Limiting Factor Non-hydr	Redax Features Company Compa
Soi Details by Depth below mineral soil surface	28- 38- 48- 58- S.E. S.S.	Soil Classification Soil Series/Prints Nat SURE 1	FIGURE FIGURE INVESTIGE INVESTIGE 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	Limiting Factor C- , , Depth Depth Hydric	Groupdwater Rediox Features Groupdwater Remirche Layer Betroit Soil Group WATION AND	Soil Details by Depth below mineral soil surface	E. S.	Soil Classifica Fronta Co Soil Series/Phase Na Soi	Consistency Consi	Limiting Factor Non-hyde HAMP	Redax Features Company Compa

			ILE / CLAS	SIFICATIO	N INFORM	ATIC	NC	SUBSI	DETAILED : URFACE COND	DESCRIPTION	OF
P	Project Name: Applicant Name: Nation Worlds Nation Alice					1		,	Project Location	(municipality):	73EC 51 E3
	Exploration Symbol 4 (617)										
# Organic horizon thickness Ground surface elev "Organic horizon thickness Ground surface elev					oring Probe						
			Depth of explora	ation or to refuse		-		_ Olganic nonz	zon thickness 'Depth of explor	Ground surface	elev
	8.	Texture	Consistency	Color	Redox Features			Texture	Consistency	Color	Redox Features
	•	500	FOME	Day!			-	Sangu	Ecoldi		Nedox Features
-	. 18.					╎		(3)			
Depth below mineral soil surface (inches)	10	- Aug H	FYLL	3MA.		Depth below mineral soff surface (inches)	10-	द्रभरोत्		Burn	
8		fr. 100.				5		10.	7/10/21	1,347.4	
1 Page	20-				Comment.	2	20-				
18 E		1,000	-17-10	12.63	COMMISSION] jg		Copely	Total	J. J.	CIN ELA
80	30-	103			District	S	38-		17m	if were	11/7×2
1 2						75 29		[[] [] [] [] [] [] [] [] [] [
Ē	49-					Ē	48.				
<u>§</u>						돌	40-				
₩ 4	. 59-					후					
2						1 8	59 –	<u> </u>			
١.	60 - S.E.	Soil Classific	ation Slope	Limiting Factor			60-	Soil Classific			
70	Ģ.E.	1_2	<u> </u>	18	D Restrictive Layer	7.	S.E.	3	Slop		de Constituentes
Soil Details	s.s		ondition Percei		Hydrologic	Soll Details by	*	Profile C	Condition Perce	nt Depth	☐ Bedrock
3	₩	SKE	UH MUS	☐ Hydric Ĵ Mi Non-hyd	` `	3	S.S.	SILEN		☐ Hydric	Hydrologic
\succeq					1 SOIL GROUP	(8)			int lamo	Non-hy	dric Soll Group
٦	фюга	ition Symbol # _ * Organic horize				E	erolq	tion Symbol#		Test Pit □ Bo	oring [] Probe
-	·		on mickness Depth of explora	Ground surface	elev	-		" Organic horiz	on thickness	Ground surface	elev
ĺ	•	Texture	Consistency	!	Redox Features		_	1	Depth of explora	1	. 1
		SWAY	Frith	Color	- Control of the control		9 –	Texture	Consistency	Color L'w (Redox Features
		24.	111110			1	J	the contract of	F1496	BULL	
(inches)	19-	Switz	Fiell	-Paes		(inches)	18-	Sarda	2'7/	77	
18		- Ex	77/8/4			100		- John	Frakla	1454	
8	28-					8	20-	74 4.			
Depth below mineral soll surface		- Cay de-	4×1-1	ila,	COM MUNC	Depth below mineral soff surface		54.04	1.	D. W.	Chimio -
쭚	30-		-1-11-1			5	30-		11/4		30764
\$		103			\$HU.	1	347				
튙	48					Ě					
<u>₹</u>						₹	40-				
표						產		······································			
å	50]	59				
_	["	ŀ				
1	69 -1	Soil Cleasifica	fino Stone	11:-101			69				
Sof Details by	S.E. ₩	3	C Boss	,480 g	Groundwater Restrictive Layer	孟	S.E.	Soil Classific	ation Slope	1	2 Stanfalgeter
3		Profile Co Soil Series/Phase N	ndition Percen		☐ Sedrook	1 1 1	>>	Profile C	ondition Period		-
75	s.s. ₩	5 Kerry		☐ Hydric	hydrologic	Soil Details by	S.S.	Soil Series/Phase N		U. Hydric	hydrologic
<u> </u>				Mon-hydr	Soft Group	<u></u>	>>	SKEUM	ann y	O Hydric CIVII 1914	ric Soil Group
Çi	not: -		INVESTIG	ATOR INFOR	MATION AND	SIGN				4:044 1 1/////3	OM -
	natun	WW.	timed					Date _ L LIO	'n	#210	1 / Km
Nar	ne Pı	inted Manus	سال ا	J				Sert/Lic/Reg. #	1061	W. Com	19 19
Title		Licensed Site	- POLICE	POTEN CONTR			_1_		(3) [5] (C	7/2C.	A STATE OF THE PARTY OF THE PAR
	4	- 니니다() (한) 	-vainstot 😝	Certified Soil So	cientist 🗆 Cer	titled	Geol	ogist 🗆 Prot	fessional Engine	er affix pro	seal



WALSH ENGINEERING ASSOCIATES, INC.

One Karen Dr., Suite 2A | Westbrook, Maine 04092 ph: 207.553.9898 | www.walsh-eng.com

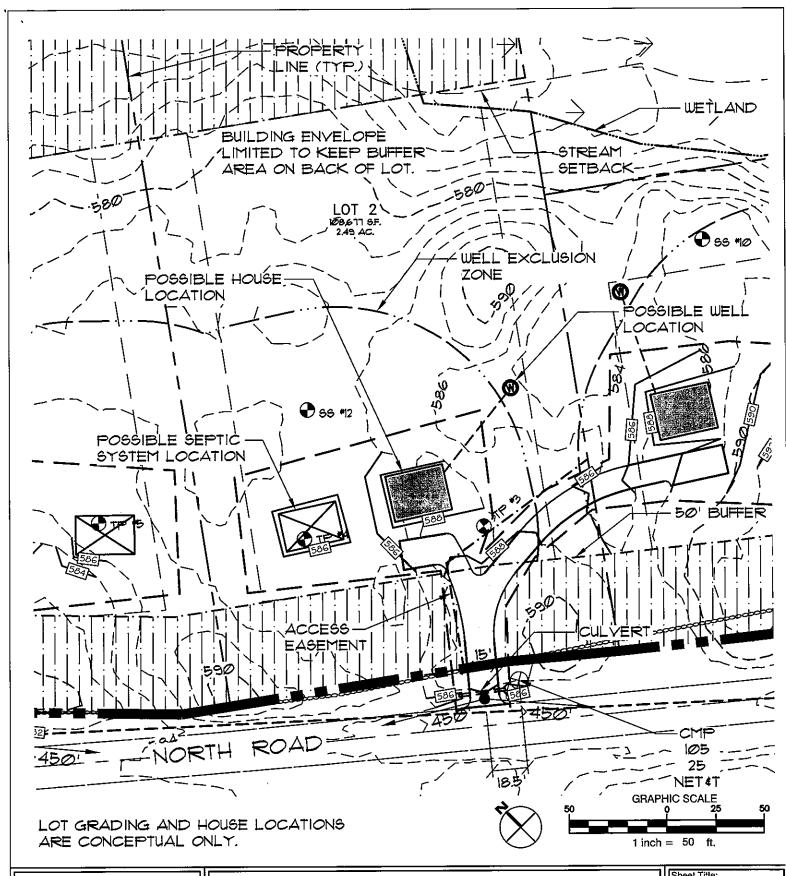
Copyright © 2018

WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD PARSONSFIELD, MAINE

_OT 1	
ob No.:	1614
ate:	1/15/1
calo:	VG CHU/M

| Job No.: 16149 |
| Date: 1/15/17 |
| Scale: AS SHOWN |
| Drawn: JWG



WALSH ENGINEERING ASSOCIATES, INC.

One Karen Dr., Suite 2A | Westbrook, Maine 04092 ph; 207.553,9898 | www.walsh-eng.com

Copyright © 2018

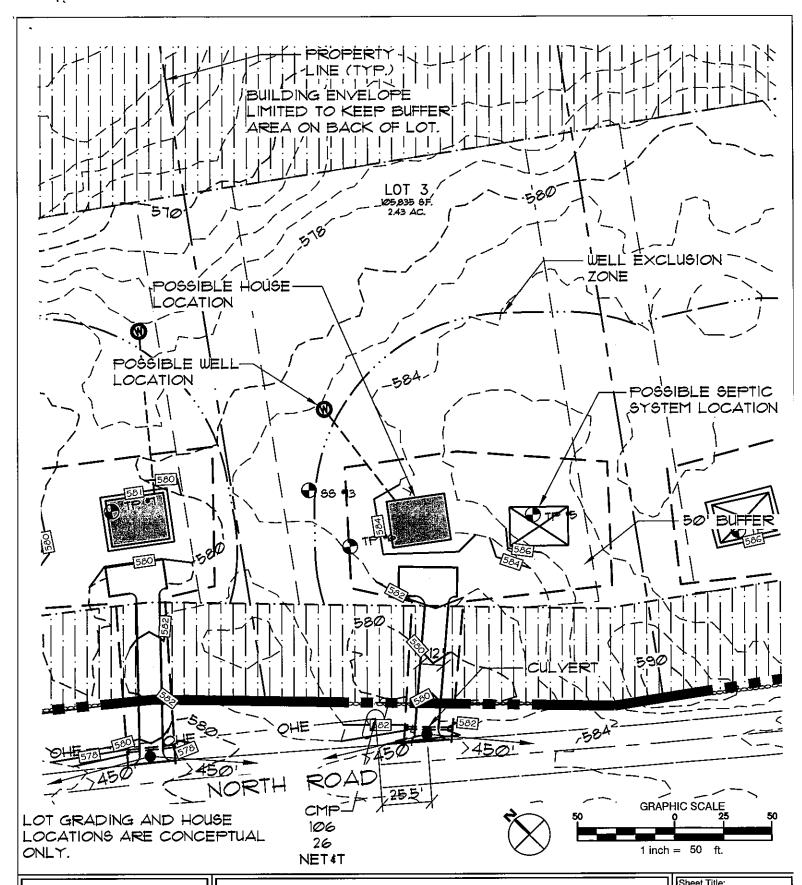
WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD PARSONSFIELD, MAINE

meet Title.	
LOT 2	
ob No.:	1614
ate:	1/15/17
cale:	AS SHOWN

Drawn: Checked: JWG

		•



WALSH ENGINEERING ASSOCIATES, INC.

One Karen Dr., Suite 2A | Westbrook, Maine 04092 ph; 207.553.9898 | www.walsh-eng.com

Copyright © 2018

WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD PARSONSFIELD, MAINE

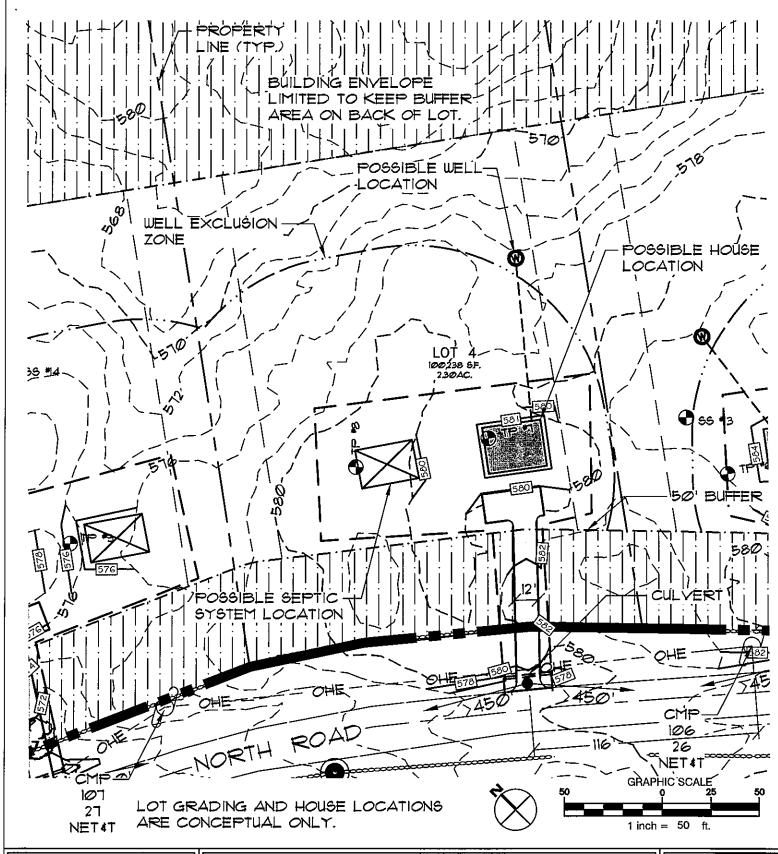
Sileet Title.	
LOT 3	
Job No.:	1614
Date:	1/15/1
Saalo:	AC CHOWN

JWG

Drawn:

Checked:

			••
			·



One Karen Dr., Suite 2A | Westbrook, Maine 04092 ph; 207.553.9898 www.walsh-eng.com

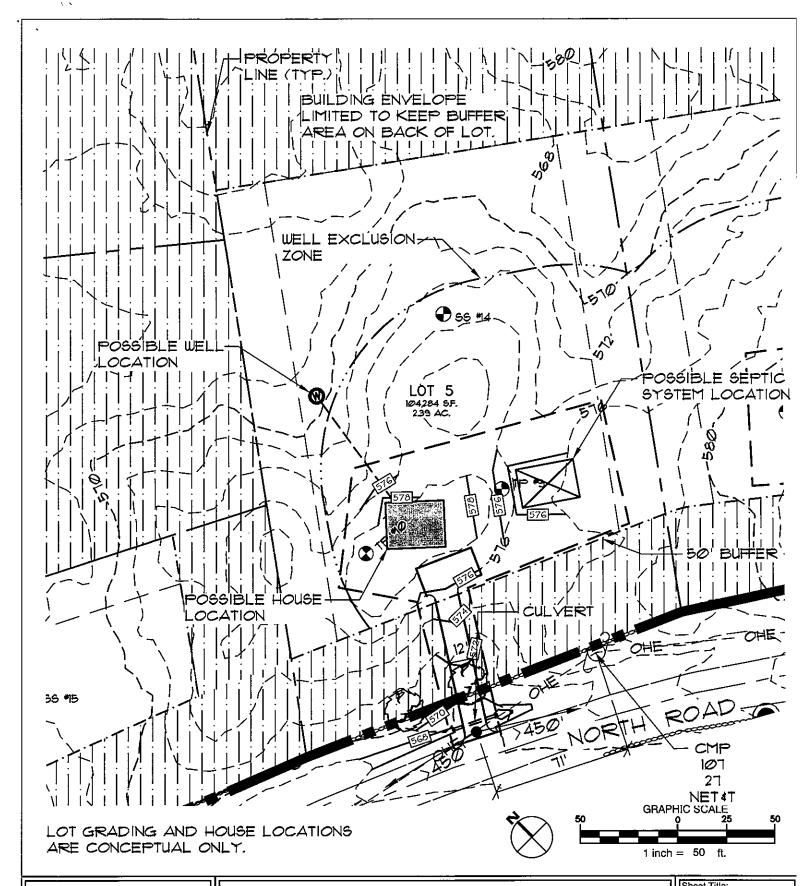
Copyright © 2018

WATSON WOODS SUBDIVISION

Sheet Title:	
LOT 4	
Job No.:	1614
Date:	1/15/1
Scale:	AS SHOWN
Drawn:	JWC

Checked:

NORTH ROAD & HUSSEY ROAD PARSONSFIELD, MAINE



Engineering associates, inc.

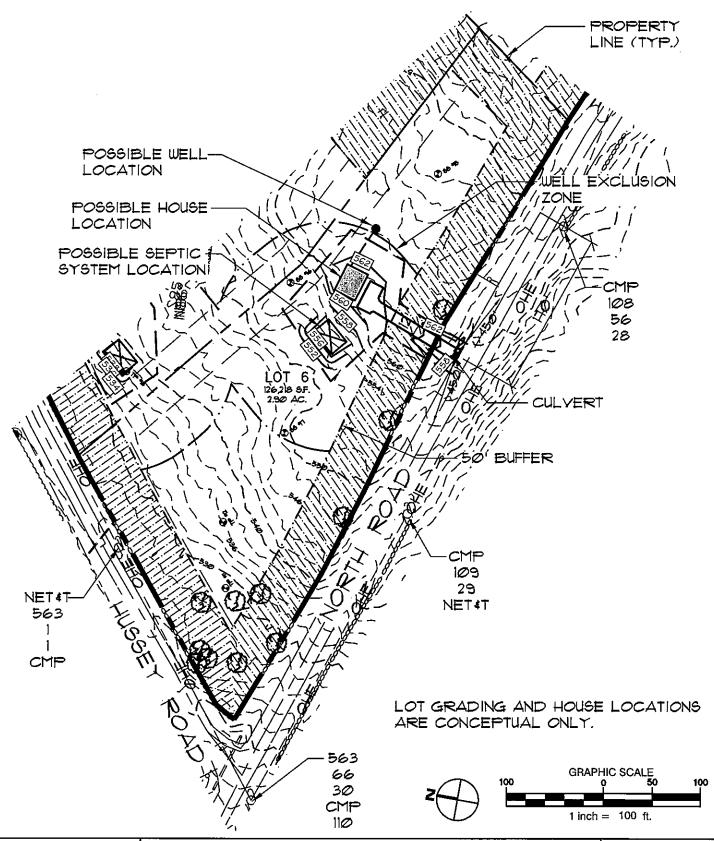
One Karen Dr., Suite 2A | Westbrook, Maine 04092 ph: 207.553.9898 | www.walsh-eng.com

Copyright @ 2018

WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD PARSONSFIELD, MAINE

Sneet Title:	
LOT 5	
Job No.:	1614
Date:	1/15/17
Scale:	AS SHOW
Drawn:	JWC
Checked:	



WALSH ENGINEERING ASSOCIATEA, INC.

One Karen Dr., Suite 2A | Westbrook, Maine 04092 ph; 207.553.9898 | www.walsh-eng.com

Copyright © 2018

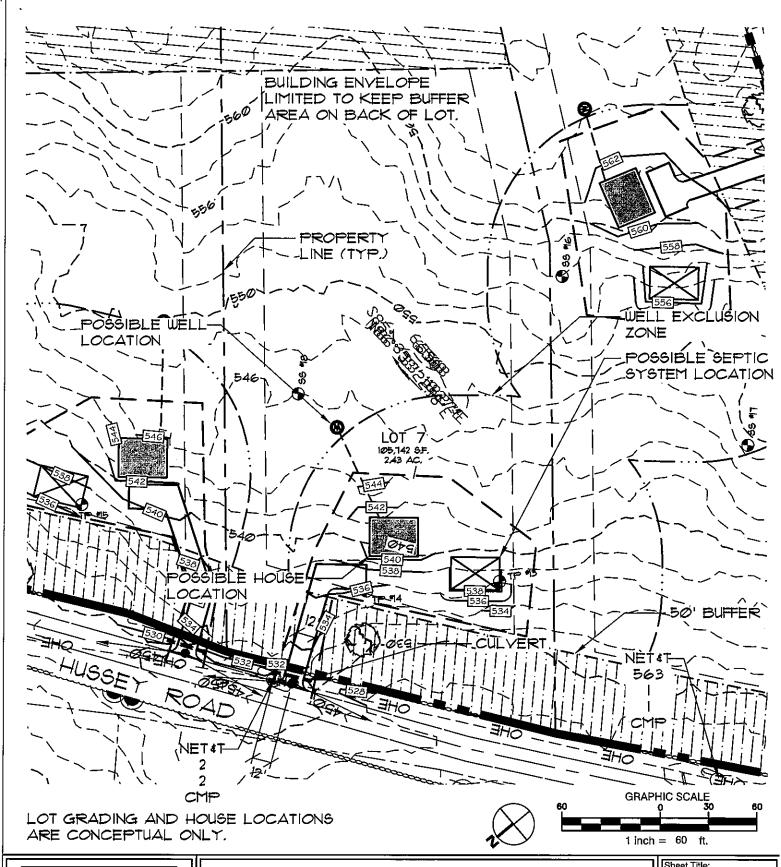
WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD PARSONSFIELD, MAINE

Sheet Title:	-
LOT 6	
Job No.:	16149
Date:	1/15/17
Scale:	AS SHOWN
Drawn:	JWG

Checked:

		<i>:</i>
		,
•		



WALSH ENGINEERING ASSOCIATES, INC.

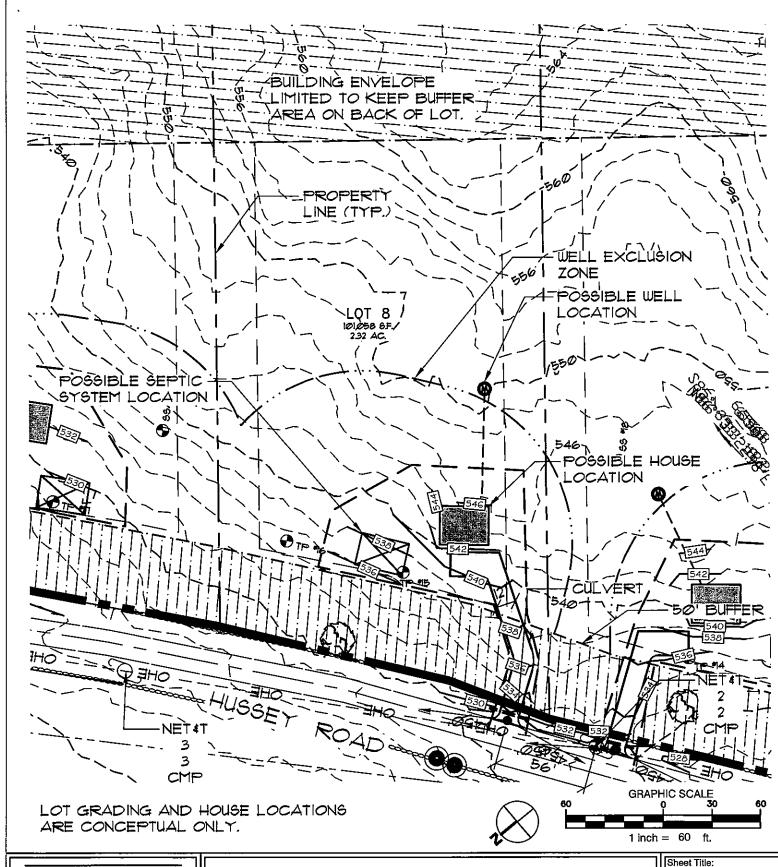
One Karen Dr., Suite 2A | Westbrook, Maine 04092 ph: 207.553.9898 | www.walsh-eng.com

53.9898 | www.walsh-eng.com Copyright © 2018 WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD PARSONSFIELD, MAINE

Sheet Title:	
LOT 7	
Job No.:	1614
Date:	1/15/1
Scale:	AS SHOWN
Orawn;	JWC
Checked:	_

		, ,



Engineering associates, incl

One Karen Dr., Suite 2A | Westbrook, Maine 04092 ph: 207.553.9898 | www.walsh-eng.com

Copyright @ 2018

WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD

Sheet Title.		
LOT 8		
Job No.:	16149	
Date:	1/15/17	
Scale:	AS SHOWN	

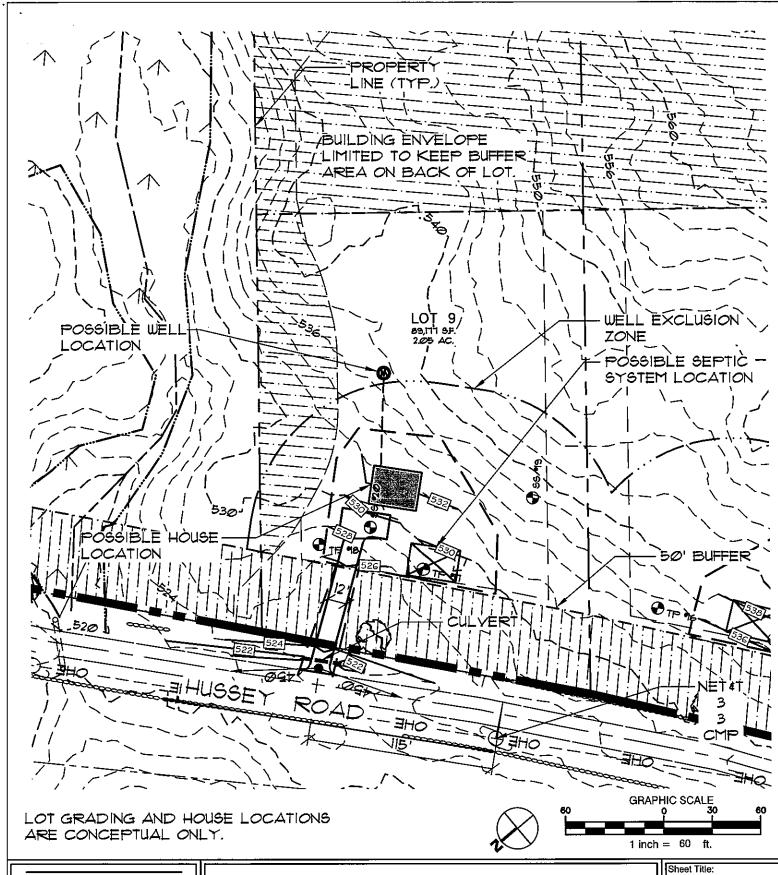
Drawn:

Checked:

JWG

PARSONSFIELD, MAINE

,			



WALSH

One Karen Dr., Suite 2A | Westbrook, Maine 04092 ph: 207.553.9898 | www.walsh-eng.com

Copyright © 2018

WATSON WOODS SUBDIVISION

NORTH ROAD & HUSSEY ROAD PARSONSFIELD, MAINE

L	(C)	1		(3)	

ob No.:	16149
ate:	1/15/17
cale:	AS SHOWN
rawn:	JWG
hockod:	



SOIL EVALUATION . WETLAND DELINEATIONS . SOIL SURVEYS . WETLAND PERMITTING

4643

March 1, 2018

Planning Board Chairman and Planning Board Members Town of Parsonsfield Parsonsfield, ME

Re: Evaluation of Test Pits for Subsurface Wastewater Disposal and High Intensity Soil Surveys

Dear Chairman and Members of the Planning Board,

I have been an active practicing Licensed Site Evaluator and Certified Soil Scientist for almost 30 years. I worked for a civil engineering company in Westbrook for 11 years before opening my own company in 1999. I am past president of both the Maine Association of Site Evaluators and the Maine Association of Professional Soil Scientists and continue to be active in both organizations.

I have attached to this letter sections from the Maine Subsurface Wastewater Disposal Rules, dated 8/15 as amended and the Maine Association of Professional Soil Scientists, Standards for Soil Survey. Each of these sections talk to the use of soil auger, hand shovels and backhoes for the evaluation of soil test pits. As you read each section you see that it is left up to the discretion of the professional to determine the means of observing and evaluating the test pits.

I hope this helps the board understand the reason why a backhoe is not required to evaluate the soils a parcel for either subsurface wastewater disposal or mapping the soil.

If I can be of anymore help, please don't hesitate to let me know.

Sincerely

Mark J. Hampton, C.S.S., L.S.E. Certified Soil Scientist #216

Licensed Site Evaluator #263

Enc.

MAINE ASSOCIATION OF PROFESSIONAL SOIL SCIENTISTS

GUIDELINES FOR MAINE CERTIFIED SOIL SCIENTISTS FOR SOIL IDENTIFICATION AND MAPPING

FEBRUARY 1995

- 1. Map units may contain dissimilar limiting individual inclusions larger than 5 acres provided that each dissimilar limiting inclusion is smaller than the minimum map unit size utilized. Dissimilar inclusions within a map unit may total more than the minimum map unit size, in the aggregate, if not contiguous.
- 2. Scale of 1 inch equals 2,000 feet or larger (e.g. $1^n = 1320^n$).
- 3. Ground control—as determined by the mapper.
- 4. Base map—as determined by the mapper.

3. Map Units and Soils Classification

The soil survey map units shall be designed according to the standards of the National Cooperative Soil Survey, and the soils shall be classified at the series level according to the current Keys to Soil Taxonomy. Soil map units are phases of soil series.

4. Map Preparation by a Maine Certified Soil Scientist

All soil surveys submitted for the public record, with the exception of Natural Resources Conservation Service soil surveys, shall be stamped and signed by a Maine Certified Soil Scientist licensed by the Maine Board of Certification for Geologists and Soil Scientists.



5. Soil Test Pit Exploration and Observations Logs

All soil survey reports shall include soil observation logs for those test pits or borings described by the soil scientist while gathering data to prepare soil maps. As a minimum, one detailed soil observation log is required for each series and

miscellaneous area named in the soil map legend. The location and number of test pits needed to properly identify and map an area of soils can vary significantly, depending on the complexity of the landscape and the purpose of the soil survey. The depth of the test pits to be logged should also be adequate to allow for complete examination and classification of the soil profiles, particularly if depth to limitations such as restrictive layers or bedrock is relevant. Test pits dug with a backhoe or by similar means are often necessary to verify subsoil and substratum characteristics.

Soil observation logs are not required for those test pits or borings that are used to verify consistency within a map unit for which detailed information is not generally gathered.

6. Accurate Soil Boundary Placement

Soil boundaries are observed throughout their length and their placement corresponds to changes in soils and/or land forms. Map unit boundary placement shall be based on soil characteristics, using observations of vegetation, landforms, and other site features as indications of changes in soil conditions.

7. Map Unit Purity

The soil(s) within an area enclosed by a map unit boundary will have a minimum of 75 percent of the soil(s) that provide the name of that map unit or similar soils. No one similar soil is greater than the named soil(s). The total amount of dissimilar soils shall not exceed 25 percent of the map unit.

8. Map Legend and Map Unit Description

The soil map legend shall include a symbol for each map unit, and the name of the map unit. Special and ad hoc symbols are used to indicate areas that will affect use and management of the soil(s), but are too small to be delineated at the mapping

10-144

Chapter 241

STATE OF MAINE

SUBSURFACE WASTEWATER DISPOSAL RULES



DEPARTMENT OF HEALTH & HUMAN SERVICES MAINE CENTER FOR DISEASE CONTROL & PREVENTION DIVISION OF ENVIRONMENTAL HEALTH 11 STATE HOUSE STATION AUGUSTA, MAINE 04333

EFFECTIVE DATE: August 3, 2015

Appropriation 014-10A-2426-012-2658

SECTION 4 DESIGN CRITERIA

A. SITE EVALUATION REQUIREMENTS

- General: The selection of a site for each system is based upon a licensed site evaluator's evaluation of those
 site characteristics that may affect the location and functioning of the system. Each system (and every part
 thereof) must be sited and designed so that, with adequate installation and maintenance, it will function in a
 satisfactory manner and will not create a nuisance or source of foulness, pose a threat to public health or safety
 or to the environment, or otherwise adversely affect the quality of surface water or groundwater.
- 2. When a site evaluation is required: The completion of a HHE-200 Form is required in order to obtain a permit for the following:
 - (a) All first-time subsurface wastewater disposal systems;
 - (b) All replacement subsurface wastewater disposal systems;
 - (c) All expanded subsurface wastewater disposal systems;
 - (d) The installation of any new subsurface wastewater disposal system component; or
 - (e) The replacement or modification of any components of an existing subsurface wastewater disposal area. Treatment tanks and other system components located outside the disposal area may be replaced in kind without a site evaluation, upon approval of page one of an HHE-200 (and all other applicable forms) by the LPI.
- 3. Suitable soil conditions: A disposal field must be located upon soils with the following minimum depths to limiting factors:
 - (a) All systems located outside the shoreland area of major water bodies/courses must be located on soils with a minimum depth to seasonal groundwater table or hydraulically restrictive horizon of 9 inches and a minimum depth to bedrock of 9 inches.
 - (b) All systems located within the shoreland area of major water bodies/courses must be located on soils with a minimum depth to seasonal groundwater table or hydraulically restrictive horizon of 15 inches and a minimum depth to bedrock of 15 inches, except as allowed in Sections 7(B) and 7(C).
- 4. Setback distances: For disposal system setback distances, see Sections 7 and 8, for first-time and replacement systems.
- 5. Soil profile and condition: The soil profile and condition used for the design of a disposal field must be based upon original soils at the site, except when the fill is considered as equivalent to original soils, as provided for in Sections 4(B)(4) and 4(B)(5). The soil profile and condition used for the design of a disposal field must be representative of the most limiting conditions beneath all disposal fields. In addition, the soil conditions beneath the down slope fill material extensions for engineered disposal areas must be evaluated and reported.
- 6. Location of the system: A system must be located entirely on property owned or controlled by the owner of the system.
 - (a) Private property: The owner of a system may locate the system or components partially or completely on other private property, provided the property owners execute an easement in perpetuity for the construction, operation, replacement, and maintenance of the system, giving the system's owner authorization to cross any land or right-of-way between the two parcels. The easement must be filed and cross-referenced in the Registry of Deeds and the municipality's office prior to issuance of a disposal system permit. The easement must provide sufficient buffer around the disposal field and fill material extensions for future replacement and maintenance of the system.

- (b) Public property: The owner of the proposed system may locate the system or components partially or completely on abutting public property, provided the entity controlling access to the property executes a letter of no objection giving the system's owner authorization for the construction, operation, replacement, and maintenance of the system.
- 7. Slope: The slope beneath a disposal field must not exceed 20 percent, interpreted as constant/average slope, unless approved by variance by the Department. The fill extension must reach the existing ground before an existing ground slope of 3:1 (33 percent) or greater, or within 100 feet horizontal distance of the disposal field.
- 8. Surface runoff: The disposal field and fill shoulders must not be subject to the accumulation of surface runoff. The property owner may utilize surface water diversions, provided they are installed as prescribed by the site evaluator. Surface water diversions cannot result in additional runoff on to abutting properties.
- 9. Existing subsurface groundwater drains: Ground that contains subsurface ground water drainage systems or the remnants of abandoned subsurface groundwater drainage systems may be unsuitable for the installation of a disposal field. If determined to be a problem this may be corrected by removing the ground water drains or permanently sealing the outlets of the groundwater drainage system.
- 10. Work Adjacent to or Within Wetlands and Waterbodies: Designs for subsurface wastewater disposal systems adjacent to or within wetlands and waterbodies, each as defined in Section 14 of these Rules, must conform to provisions of Section 12 of these Rules.

B. SOIL PROFILE DESCRIPTIONS

- General: Observation holes are used to determine the soil and site characteristics important for subsurface wastewater disposal.
- 2. Soil profile description: For each observation hole used for design purposes, the site evaluator-must describe each recognizable soil property and /or parent material, not including bedrock, critical for disposal system design. For each observation hole, the site evaluator must provide this description and document the upper and lower limits within the profile of each of the following soil properties:
 - (a) Soil texture: Soil Textural Classification;
 - (b) Soil color: Soil color name per the Munsell soil color charts or Department-approved equivalent;
 - (c) Soil consistency: Soil resistance to penetration;
 - (d) Soil profile: Soil Profile Description (1-12; See Table 4D);
 - (e) Soil conditions: Soil drainage, Limiting Factor, Hydraulically Restrictive Horizons, and Bedrock Limiting Factor (See Table 4E)
 - (f) Ground Slope: Magnitude and direction of the maximum ground slope at the observation hole.
- 3. Reporting: The site evaluator must report soil profile data on a standardized application form for a disposal system permit provided by the Department.
- 4. Filled sites: Where the surface of the ground has been raised by the addition of fill material over the original soil, the disposal field sizing factor is to be determined according to the closest matching soil profile in Table 4E. If the fill is less than 4 feet in thickness, the sizing factor is to be based upon the texture of fill or on the original soil, whichever is finer, and the depth to the most limiting soil horizon. Measurements of depths of soil layers and limiting factors are to be taken from the original ground surface except as provided for in Section 4(B)(5). If the requirements of 4(Q)(7) are satisfied, the disposal area may be sized as described in 4(Q)(7).

- Original ground surface with notes for site preparation including scarification and transitional horizon;
- Height and width of disposal field stone or proprietary devices with dimensions;
- iii. Pipes and on-center spacing with dimensions;
- iv. Depths of fill material required;
- v. Fill crown slope and shoulders with dimensions;
- vi. Limits of all fill extensions with dimensions:
- 5. Proprietary Products: To reduce the appearance of an impropriety, the Site Evaluator shall clearly indicate on the HHE-200 form or on an attachment to same, his or her relationship with a company or concern that sells or distributes proprietary devices. The intent of this Section is to ensure disclosure to the homeowner.
- Applicable Laws, Ordinances, and Regulations: The completed HHE-200 Form must conform to all
 provisions of applicable laws, ordinances, and regulations, including those administered by public water
 systems.
- 7. The LPI may authorize changes to the location(s) of treatment tanks, lift stations, building sewers, distribution boxes, drop boxes, and force mains provided that applicable minimum setback distances are maintained. Such alterations must be documented by the LPI.

B. LOCATION, DEPTH, AND MINIMUM NUMBER OF OBSERVATION HOLES

- General: Because Maine soil conditions can change dramatically within a few feet, more than one
 observation hole is often necessary to allow a site evaluator to better define the true soil conditions beneath
 a proposed disposal field. Observation holes used for design purposes must be located at representative
 points clearly within the footprints of proposed non-engineered subsurface wastewater disposal fields.
- Minimum number of observation holes: The number of observation holes must be sufficient to determine
 the soil and site characteristics beneath the entire disposal field.
- 3. Minimum depth of observation holes: The minimum depth of observation holes is based upon the soil horizons and conditions present at the site of a proposed disposal field, as follows:
 - (a) Hydraulically restrictive horizons: Observation holes must extend at least 12 inches into the hydraulically restrictive horizon to check for bedrock except that no excavation is required greater than 48 inches in depth.
 - (b) Seasonal ground water table: Observation holes must extend at least 12 inches below the seasonal ground water table to check for bedrock except no excavation is required greater than 48 inches in depth.
- 4. Dig Safe Law: The "Dig Safe Law" requires notification if other than hand tools are utilized to dig observation holes (See 23 M.R.S. § 3360-A).



STATE OF MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY

93 State House Station Augusta, Maine 04333

WALTER E. WHITCOMB COMMISSIONER

Tom Greer Pinkham and Greer, Civil Engineers

September 29, 2017

Re: Watson Woods - Small Whorled Pogonia Survey

Dear Mr. Greer:

As per your request, on September 28, 2017, Don Cameron, staff botanist with the Maine Natural Areas Program, surveyed the proposed Watson Woods subdivision site in the Town of Parsonsfield for Small Whorled Pogonia (*Isotria medeoloides*). Don is a recognized expert on the identification and ecology of this rare species.

The site is a 57 acre parcel located northeast of the intersection Rt. 160 and Hussey Road in the central part of the town. The site has been somewhat recently harvested for timber, with harvesting being heaviest in the northern portion where there was a large multi-acre clearing, and less intensive in other areas where some smaller patches of trees remained. The areas which had the highest potential for small whorled pogonia and received the most detailed survey were 1) the broad drainage that crossed the parcel from \sim the south corner toward the northwest boundary and 2) the parcel margin along the road frontage on Hussey Road. These areas still supported sufficient tree cover to provide the degree of shade that would be required by the rare small whorled pogonia as well as other common forest herbs. Other scattered patches within the harvested matrix also provided shade. These areas were mostly 50-100 feet in diameter and were also surveyed as part of the traverse through the site.

No small whorled pogonia was observed during the survey. See Map 1 on page 2 for GPS data showing survey effort. Areas with few or no GPS points were areas were no habitat was present that could have supported small whorled pogonia, i.e., the aforementioned large cleared section on the north side of the site.

Please let me know if you have any questions. Note that an invoice for services rendered will be sent under separate cover.

Sincerely,

Don Cameron, Botanist/Ecologist Maine Natural Areas Program

#93 State House Station Augusta, ME 04333-0093

(phone - 207-287-8041 / fax - 207-287-8040)

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM



PHONE: (207) 287-8044 FAX: (207) 287-8040 WWW.MAINE.GOV/DACF/MNAP

Map 1 – Survey Area – Watson Woods

Yellow dots are GPS waypoints representing survey effort from the survey performed on 9/28/2017. Areas with the highest concentration of survey effort correspond to areas at the site where there was sufficient shade to potentially support small whorled pogonia. Note that areal imagery used here is not representative of current site conditions.

