

**PRELIMINARY SUBDIVISION PLAN
APPLICATION
TO TOWN OF WINDHAM**

FOR

**BABBIDGE FARMS
SUBDIVISION**

PREPARED FOR

**SEBAGO HEIGHTS, LLC
97A EXCHANGE STREET, SUITE 304
PORTLAND, ME 04101**

PREPARED BY

DM ROMA
CONSULTING ENGINEERS

**59 HARVEST HILL ROAD
WINDHAM, ME 04062**

JULY 3, 2017

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Project Name: BABBIDGE FARMS SUBDIVISION

Tax Map: 13 **Lot:** 44

Estimated square footage of building(s): 17 SINGLE FAMILY DWELLINGS ON 17 LOTS

If no buildings proposed, estimated square footage of total development/disturbance:
7.8 ACRES OF DEVELOPED AREA FOR ROADWAY AND LOTS

Contact Information

1. Applicant

Name: SEBAGO HEIGHTS, LLC

Mailing Address: 97A EXCHANGE STREET, SUITE 304, PORTLAND, ME 04101

Telephone: (207) 772 - 2127 Fax: (207) 871 - 9695 E-mail: GREG@MULKERINREALESTATE.COM

2. Record owner of property

(Check here if same as applicant)

Name:

Mailing Address:

Telephone:

Fax:

E-mail:

3. Contact Person/Agent (if completed and signed by applicant's agent, provide written documentation of authority to act on behalf of applicant)

Name: DUSTIN ROMA, PE

Company Name: DM ROMA CONSULTING ENGINEERS

Mailing Address: 59 HARVEST HILL ROAD, WINDHAM, ME 04062

Telephone: (207) 310 - 0506

Fax:

E-mail: DUSTIN@DMROMA.COM

I certify all the information in this application form and accompanying materials is true and accurate to the best of my knowledge.

Dustin M Roma 7-3-17
Signature Date

Preliminary Plan - Major Subdivision: Submission Requirements			
A. Mandatory Written Information	Applicant	Staff	
1	A fully executed and signed application form	X	
2	Evidence of payment of the application and escrow fees	X	
3	Proposed name of the subdivision	X	
4	Verification of right, title, or interest in the property, and any abutting property, by deed, purchase and sales agreement, option to purchase, or some other proof of interest.	X	
5	Copy of the most recently recorded deed for the parcel, along with a copy of all existing deed restrictions, easements, rights-of-way, or some other proof of interest	X	
6	Copy of any existing or proposed covenants or deed restrictions intended to cover all or part of the lots or dwellings in the subdivision	X	
7	Copy of any existing or proposed easements on the property	X	
8	Name, registration number and seal of the Maine Licensed Professional Land Surveyor who conducted the survey	X	
9	Name, registration number and seal of any other licensed professional of the state who prepared the plan (if applicable)	X	
10	An indication of the type of sewage disposal to be used in the subdivision	X	
	i. If connecting to public sewer, provide a letter from Portland Water District stating the District has the capacity to collect and treat the waste water	N/A	
	ii. If using subsurface waste water disposal systems (septic), submit test pit analyses prepared by a Maine Licensed Site Evaluator or Certified Soil Scientist. Test pit locations must be shown on a map.	X	
11	Indicate type of water supply system(s) to be used in the subdivision.	X	
12	If connecting to public water, submit a written statement from the Portland Water District indicating there is adequate supply and pressure for the subdivision.	X	
13	Names and addresses of the record owner, applicant, and adjoining property owners	X	
14	An acceptable title opinion proving right of access to the proposed subdivision or site for any property proposed for development on or off of a private way or private road.	N/A	
15	The name and contact information for the road association who's private way or road is used to access the subdivision.	N/A	

Applicant Staff

16	Financial Capacity.	X	
	i. Estimated costs of development, and itemization of major costs	X	
	ii. Financing - provide one of the following:	X	
	a. Letter of commitment to fund from financial institution, governmental agency, or other funding agency	--	
	b. Annual corporate report with explanatory material showing availability of liquid assets to finance development	--	
	c. Bank statement showing availability of funds if personally financing development	--	
	d. Cash equity commitment	--	
	e. Financial plan for remaining financing	--	
	f. Letter from financial institution indicating an intention to finance	X	
	iii. If a corporation, Certificate of Good Standing from the Secretary of State	X	
17	Technical Capacity	X	
	i. A statement of the applicant's experience and training related to the nature of the development, including developments receiving permits from the Town.	X	
	ii. Resumes or similar documents showing experience and qualifications of full-time, permanent or temporary staff contracted with or employed by the applicant who will design the development.	X	

B. Mandatory Plan Information			
1	Name of subdivision, date and scale	X	
2	Stamp of the Maine License Professional Land Surveyor that conducted the survey, including at least one copy of original stamped seal that is embossed and signed	X	
3	Stamp with date and signature of the Maine Licensed Professional Engineer that prepared the plans.	X	
4	North arrow identifying all of the following: Grid North, Magnetic North, declination between Grid and Magnetic, and whether Magnetic or Grid bearings were used in the plan design	X	
5	Location map showing the subdivision within the municipality	X	
6	Vicinity plan showing the area within 250 feet, to include:	X	
	i. approximate location of all property lines and acreage of parcels	X	
	ii. locations, widths, and names of existing, filed, or proposed streets, easements or building footprints	X	
	iii. location and designations of any public spaces	X	
	iv. outline of proposed subdivision, together with its street system and indication of future probably street system, if the proposed subdivision encompasses only part of the applicants entire property.	X	
7	Standard boundary survey of parcel, including all contiguous land in common ownership within the last 5 years	X	
8	Proposed lot lines with approximate dimensions and area of each lot.	X	
9	Contour lines at 2-foot intervals, or at intervals required by the Board, showing elevations in relation to the required datum.	X	
		Applicant	Staff

10	Typical cross sections of the proposed grading for roadways, sidewalks, etc., including width, type of pavement, elevations, and grades.	X	
11	Wetland areas shall be delineated on the survey. If none, please note.	X	
12	Number of acres within the proposed subdivision, location of property lines, existing buildings, vegetative cover type, specimen trees, if present, and other essential existing physical features.	X	
13	Rivers, streams, and brooks within or adjacent to the proposed subdivision. If any portion of the proposed subdivision is located in the direct watershed of a great pond, note which great pond.	X	
14	Zoning district in which the proposed subdivision is located, and the location of any zoning boundaries affecting the subdivision.	X	
15	Location & size of existing and proposed sewers, water mains, culverts, bridges, and drainage ways on or adjacent to the property to be subdivided. The Board may require this information to be depicted via cross-section, plan or profile views.	X	
16	Location, names, and present width of existing streets, highways, easements, building lines, parks, and other open spaces on or adjacent to the subdivision	X	
17	Location and widths of any streets, public improvements, or open space within the subdivision (if any) shown on the official map and the comprehensive plan	N/A	
18	All parcels of land proposed to be dedicated to public use and the conditions of such dedication.	X	
19	Location of any open space to be preserved or common areas to be created, and general description of proposed ownership, improvement, and management	X	
20	Approximate location of treeline after development	X	
21	Delineate boundaries of any flood hazard areas and the 100-year flood elevation as depicted on the Town's Flood Insurance Rate Map	X	
22	Show any areas within or adjacent to the proposed subdivision which have been identified by the Maine Department of Inland Fisheries and Wildlife "Beginning with Habitat project maps or within the Comprehensive Plan..	X	
23	Show areas within or adjacent to the proposed subdivision which are either listed on or eligible for the National Register of Historic Places, or have been identified in the comprehensive plan or by the Maine Historic Preservation Commission as sensitive or likely to contain such sites	N/A	
24	Erosion & Sedimentation control plan, prepared in accordance with MDEP Stormwater Law Chapter 500 Basic Standards, and the MDEP Maine Erosion and Sediment Control Best Management Practices, published March 2003.	X	
25	Stormwater management plan, prepared by a Maine Licensed Professional Engineer in accordance with the most recent edition of Stormwater Management for Maine: BMPS Technical Design Manual, published by the MDEP 2006.	X	

C. Submission information for which a waiver may be granted.		Applicant	Staff
1	High-intensity soil survey by a Certified Soil Scientist	WAIVER	
2	Landscape Plan	WAIVER	
3	Hydrogeologic assessment - required if i) subdivision is not served by public sewer and <u>either</u> any part of the subdivision is over a sand and gravel aquifer <u>or</u> has an average density of more than one dwelling unit per 100,000 square feet, or ii) where site considerations or development design indicate greater potential of adverse impacts on groundwater quality.	WAIVER	
	a) map showing basic soil types	--	
	b) depth to the water table at representative points	--	
	c) Drainage conditions throughout the subdivision	--	
	d) data on existing ground water quality	--	
	e) analysis and evaluation of the effect of the subdivision on groundwater	--	
	f) map showing location of any subsurface wastewater disposal systems and drinking water wells within the subdivision & within 200 feet of the subdivision boundaries.	--	
4	Estimate of the amount and type of vehicular traffic to be generated on a daily basis and at peak hours	X	
5	Traffic Impact Analysis for subdivisions involving 28 or more parking spaces or projected to generate more than 140 vehicle trips per day.	X	
6	If any portion of the subdivision is in the direct watershed of a great pond,	X	
	i) phosphorous impact analysis and control plan	X	
	ii) long term maintenance plan for all phosphorous control measures	X	
	iii) contour lines at an interval of 2 feet	X	
	iv) delineate areas with sustained slopes greater than 25% covering more than one acre	X	

**TOWN OF WINDHAM
SUBDIVISION & SITE PLAN APPLICATION**

Performance and Design Standards Waiver Request Form

(Section 808 – Site Plan Review, Waivers)
(Section 908 – Subdivision Review, Waivers)

For each waiver request from the Performance and Design Standards detailed in Section 811 or Section 911 of the Town of Windham Land Use Ordinance, as applicable, please submit a separate completed copy of this waiver request form.

Subdivision or Project Name: BABBIDGE FARMS SUBDIVISION

Tax Map: 13 **Lot:** 44

Waivers are requested from the following Performance and Design Standards (add rows as necessary):

Ordinance Section	Standard	Mark which waiver this form is for
910-C-1-C-1	HIGH INTENSITY SOIL SURVEY	X
910-C-1-C-2	LANDSCAPING PLAN	X
910-C-1-C-3	HYDROGEOLOGIC ASSESSMENT	X
NOTE: SEE APPLICATION NARRATIVE FOR SUPPORTING INFORMATION		

- a. Describe how a waiver from the standard indicated above will improve the ability of the project to take the property’s pre-development natural features into consideration. Natural features include, but are not limited to, topography, location of water bodies, location of unique or valuable natural resources, relation to abutting properties or land uses. Attach a separate sheet if necessary.

(continued next page)

Ordinance Section: 910-C-1-C-1, 910-C-1-C-2, 910-C-1-C-3

b. Will the waiver have an impact on any of the following criteria?

	Yes	No
Water or air pollution		X
Light pollution or glare		X
Water supply		X
Soil erosion		X
Traffic congestion or safety		X
Pedestrian safety or access		X
Supply of parking		X
Sewage disposal capacity		X
Solid waste disposal capacity		X
Scenic or natural beauty, aesthetics, historic sites, or rare or irreplaceable natural areas		X
Flooding or drainage issues on abutting properties		X
The Town's ability to provide the subdivision with public safety services (if subdivision)		X

If granting the waiver will result in an impact on any of the criteria above, please provide more detail below.

PROJECT NARRATIVE

SECTION 1 – FULLY EXECUTED AND SIGNED APPLICATION FORM

See attached application form.

SECTION 2 – EVIDENCE OF PAYMENT OF THE APPLICATION AND ESCROW FEES

Major Subdivision Preliminary Plan 1-10 Lots = \$1,300
Plus \$300 for each additional lot over 10 = $\$300 \times 7 = \$2,100$
Review Escrow = \$4,000

SECTION 3 – PROPOSED NAME OF SUBDIVISION

Babbidge Farms Subdivision

SECTION 4 – TITLE, RIGHT, OR INTEREST

Sebago Heights, LLC is the applicant and owner of the property.

SECTION 5 – DEED, EXISTING DEED RESTRICTIONS, EASEMENTS, RIGHTS-OF-WAY

See deeds in Attachment C.

SECTION 6 – COVENANTS OR DEED RESTRICTIONS

Several of the proposed lots will include deed restrictions related to stormwater buffers and clearing limits. A homeowners association will be formed to manage common stormwater facilities. Copies of deeds and HOA documents will be submitted with the final plan.

SECTION 7 – EASEMENTS

Refer to attached Deed and Boundary Survey for easements of record.

SECTION 8 – LICENSED PROFESSIONAL LAND SURVEYOR

Professional Land Surveyor – William Shippen PLS#2118 of Survey, Incorporated in Windham. William Shippen performed the boundary survey for the parcel and will be responsible for sealing the final subdivision plan.

SECTION 9 – LICENSED PROFESSIONAL ENGINEER

Professional Civil Engineer – Dustin M. Roma PE#12131 of D M Roma Consulting Engineers.

SECTION 10 –SEWER DISPOSAL

The soils were investigated for septic suitability by James Logan, CSS, LSE of Longview Partners, LLC. Test pit locations have been superimposed onto the Subdivision Plan, and copies of the test pit logs are attached indicating suitable soils exist on all proposed lots.

SECTION 11 – WATER SUPPLY SYSTEM

The project will be served by an extension of the public water main from Falmouth Road. A letter from the Portland Water District indicating their ability to serve the project is attached.

SECTION 12 – WRITTEN STATEMENT FROM PORTLAND WATER DISTRICT

See Attachment D.

SECTION 13 –ADJOINING PROPERTY OWNERS

See Attachment E.

SECTION 14 – RIGHT OF ACCESS TO SUBDIVISION OFF OF A PRIVATE ROAD

Not Applicable

SECTION 15 – NAME AND CONTACT INFORMATION FOR ROAD ASSOCIATION

Not Applicable

SECTION 16 – FINANCIAL CAPACITY

A letter indicating the applicant's financial capacity is contained in Attachment F. The total estimated cost for the proposed improvements are as follows:

Water Main and Services:	\$90,000
New Roadway Construction:	\$170,000
Stormwater & Erosion Control:	\$50,000
Total Cost Estimate:	\$310,000

SECTION 17 – TECHNICAL CAPACITY

The applicants have completed numerous similar projects, including the 91-lot Sebago Heights project in North Windham. The applicant has retained the services of design professionals to assist in the development of this project as follows:

Longview Partners, LLC – Licensed Site Evaluators and Soil Scientists
Survey, Incorporated – Licensed Land Surveyor
DM Roma Consulting Engineers – Licensed Professional Civil Engineer

SUBMISSION INFORMATION FOR WHICH A WAIVER MAY BE GRANTED

SECTION 1 – HIGH-INTENSITY SOIL SURVEY

Waiver requested. Test pits have been conducted to show that suitable soils exist on each lot to support a wastewater disposal system. There are no proposed wells to be located on the property and all lots will be served by public water. There are no known existing wells located between the property and McIntosh Brook.

SECTION 2 – LANDSCAPE PLAN

Waiver requested. In lieu of a landscaping plan, we have added a note to the Subdivision Plan that requires street trees at an interval not to exceed 50 feet and the preservation of trees for a 5-year period.

SECTION 3 – HYDROGEOLOGIC ASSESSMENT

Waiver requested. There are no proposed wells to be located on the property and the project will be served by public water. We are not aware of any existing public or private wells located between the property and McIntosh Brook.

SECTION 4 – VEHICULAR TRAFFIC ASSESSMENT ON DAILY BASIS AND AT PEAK TIME

Based on the Institute of Transportation Engineers Manual (9th edition) the project is expected to generate approximately 170 average daily trips consisting of 17 AM Peak Hour trip-ends and 17 PM Peak Hour trip-ends of the generator. The roadway intersection has been proposed in a location that provides adequate vehicle sight distance in both directions. There are no traffic signals or significant roadway intersections within proximity to the project that would be impacted by the proposed roadway intersection or additional vehicle traffic associated with the project.

SECTION 5 – TRAFFIC IMPACT ANALYSIS

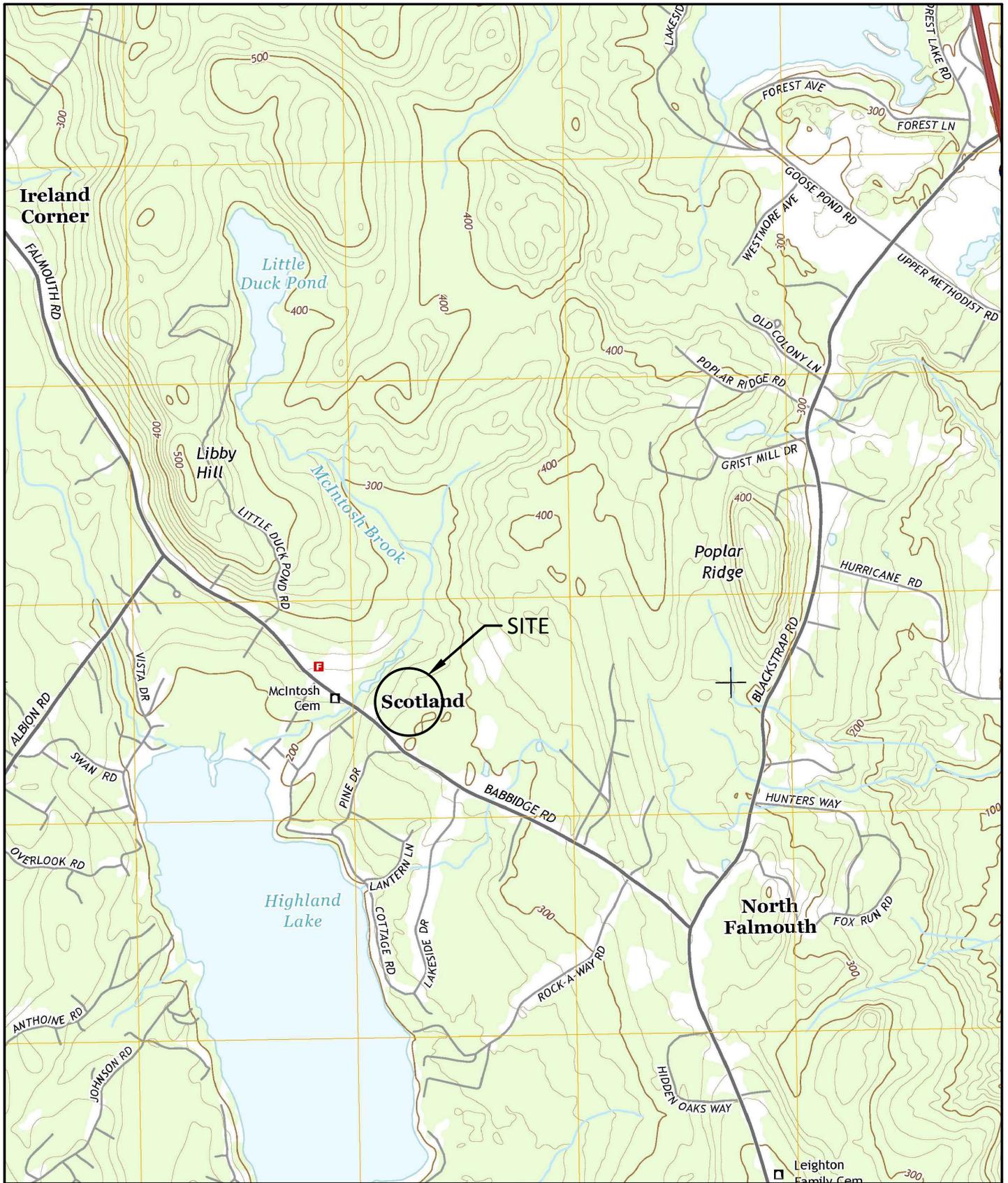
See Section 4.

SECTION 6 – DIRECT WATERSHED OF A GREAT POND

The project is tributary to McIntosh Brook, which flows from Little Duck Pond to Highland Lake. Highland Lake is classified as a great pond. We have designed a Stormwater Management plan to meet the Maine Department of Environmental Protection Phosphorus Standards as defined in MDEP Chapter 500. Copies of the applicable calculation sheets are contained in Attachment J.

ATTACHMENT A

PROJECT LOCATION MAP



VICINITY MAP

BABBIDGE FARMS SUBDIVISION
 FALMOUTH ROAD, WINDHAM, MAINE

FOR:
 SEBAGO HEIGHTS, LLC

SCALE: 1"=2000'
 DATE: 4-17-2017
 JOB NUMBER: 15024

DM ROMA

CONSULTING ENGINEERS

59 HARVEST HILL RD
 WINDHAM, ME 04062
 (207) 310 - 0506

ATTACHMENT B

SOILS MAPS AND TEST PIT LOGS FOR SEPTIC SYSTEMS/STORMWATER STRUCTURES

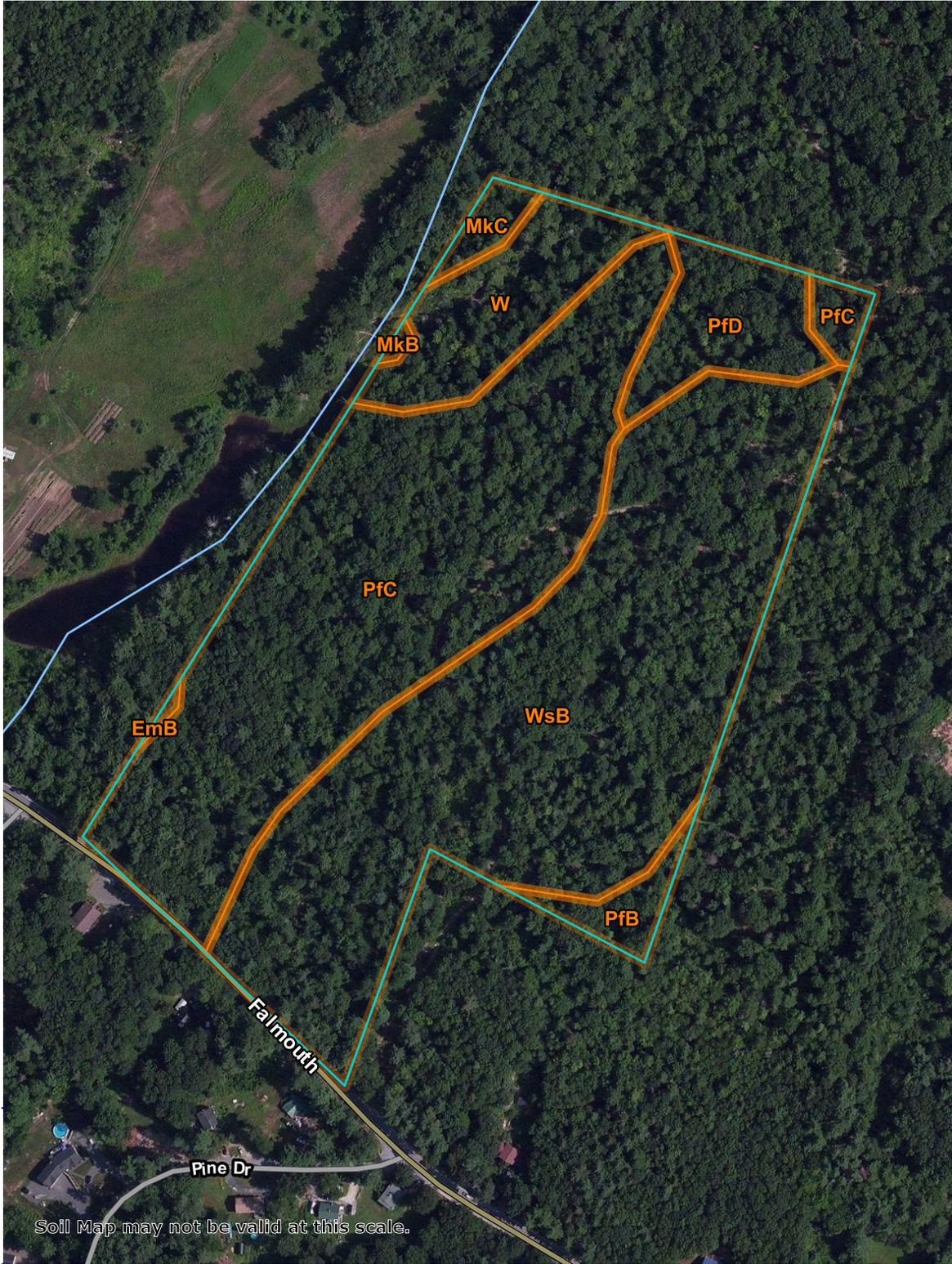
Soil Map—Cumberland County and Part of Oxford County, Maine
(Babbidge Farms Subdivision)

70° 21' 16" W

70° 20' 53" W

43° 47' 39" N

43° 47' 39" N



43° 47' 17" N

43° 47' 17" N

70° 21' 16" W

70° 20' 53" W



Map Scale: 1:3,310 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

4/17/2017
Page 1 of 3

Map Unit Legend

Cumberland County and Part of Oxford County, Maine (ME005)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
EmB	Elmwood fine sandy loam, 0 to 8 percent slopes	0.0	0.1%
MkB	Merrimac fine sandy loam, 3 to 8 percent slopes	0.0	0.2%
MkC	Merrimac fine sandy loam, 8 to 15 percent slopes	0.3	1.2%
PfB	Paxton very stony fine sandy loam, 3 to 8 percent slopes	0.5	1.9%
PfC	Paxton very stony fine sandy loam, 8 to 15 percent slopes	10.4	38.4%
PfD	Paxton very stony fine sandy loam, 15 to 25 percent slopes	1.5	5.7%
W	Water	2.0	7.2%
WsB	Woodbridge very stony fine sandy loam, 0 to 8 percent slopes	12.2	45.2%
Totals for Area of Interest		27.0	100.0%

Cumberland County and Part of Oxford County, Maine

PfC—Paxton very stony fine sandy loam, 8 to 15 percent slopes

Map Unit Composition

Paxton and similar soils: 86 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Landform: Drumlinoid ridges

Landform position (two-dimensional): Backslope, shoulder

Landform position (three-dimensional): Nose slope, crest

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Coarse-loamy lodgment till derived from mica schist

Typical profile

Oa - 0 to 2 inches: highly decomposed plant material

H1 - 2 to 8 inches: fine sandy loam

H2 - 8 to 20 inches: fine sandy loam

H3 - 20 to 65 inches: fine sandy loam

Properties and qualities

Slope: 8 to 15 percent

Percent of area covered with surface fragments: 1.6 percent

Depth to restrictive feature: 18 to 40 inches to densic material

Natural drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat):

Moderately low to moderately high (0.06 to 0.60 in/hr)

Depth to water table: About 30 to 42 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: C

Hydric soil rating: No

Data Source Information

Soil Survey Area: Cumberland County and Part of Oxford County, Maine

Survey Area Data: Version 12, Sep 15, 2016

Cumberland County and Part of Oxford County, Maine

WsB—Woodbridge very stony fine sandy loam, 0 to 8 percent slopes

Map Unit Composition

Woodbridge and similar soils: 85 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodbridge

Setting

Landform: Till plains

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Crest, side slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Coarse-loamy lodgment till derived from mica schist

Typical profile

Oa - 0 to 2 inches: highly decomposed plant material

H1 - 2 to 5 inches: fine sandy loam

H2 - 5 to 22 inches: fine sandy loam

H3 - 22 to 65 inches: fine sandy loam

Properties and qualities

Slope: 0 to 8 percent

Percent of area covered with surface fragments: 1.6 percent

Depth to restrictive feature: 16 to 36 inches to densic material

Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat):

Moderately low to moderately high (0.06 to 0.60 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: C

Hydric soil rating: No

Data Source Information

Soil Survey Area: Cumberland County and Part of Oxford County, Maine

Survey Area Data: Version 12, Sep 15, 2016

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering

Town, City, Plantation: **WINDHAM** Street, Road Subdivision: **FALMOUTH ROAD** Owner's Name: **DM ROMA**

TP1-36 BY BACKHOE

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP1** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
STONY		DARK BROWN	
FINE SANDY	FLIABLE	YELLOWISH BROWN	
LOAM	SOMEWHAT FIRM	OLIVE BROWN	FEW, FAINT
	FIRM	OLIVE BROWN	COMMON, DISTINCT
LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**, Slope **z**, Limiting Factor **16"**, Ground Water, Restrictive Layer, Bedrock, Pit Depth

DIXFIELD

Observation Hole **TP2** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
STONY		DK. BROWN	
FINE SANDY	FLIABLE	YELLOWISH BROWN	
LOAM	SOMEWHAT FIRM	LT. OLIVE BROWN	FEW, FAINT
	FIRM	OLIVE BROWN	COMMON, DISTINCT
LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**, Slope **z**, Limiting Factor **16"**, Ground Water, Restrictive Layer, Bedrock, Pit Depth

SKEARY

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP3** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
STONY		DARK BROWN	
FINE SANDY	FLIABLE	DR. YELL. BROWN	
LOAM	SOMEWHAT FIRM	OL. BROWN	FEW, FAINT
	FIRM	LT. OLIVE BROWN	COMMON, DISTINCT
LIMIT OF EXCAVATION @ 52"			

Soil Classification: Profile **3**, Condition **C**, Slope **z**, Limiting Factor **22"**, Ground Water, Restrictive Layer, Bedrock, Pit Depth

DIXFIELD/SKEARY

Observation Hole **TP4** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
FINE SANDY		DARK YELLOWISH	
LOAM	FLIABLE	BROWN	
		YELL. BR.	
		LT. OLIVE BROWN	FEW, FAINT
		OLIVE BROWN	COMMON, DISTINCT
LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**, Slope **z**, Limiting Factor **18"**, Ground Water, Restrictive Layer, Bedrock, Pit Depth

DIXFIELD

James Hogan
Site Evaluator Signature / SOIL SCIENTIST

237/213
SE / CSSH

6/30/16
Date

Longview Partners, LLC
6 Second Street
Buxton, ME 04093
207-693-8799

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering

Town, City, Plantation

WINDHAM

Street, Road Subdivision

FALMOUTH ROAD

(FOR)

Owner's Name

DM ROMA

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP 5** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0			DARK	
0-10	STONY		YELLOWISH BROWN	
10-20	FINE SANDY	FRIABLE	YELLOWISH BROWN	
20-30	LOAM		LT. OLIVE BROWN	FEW, FAINT
30-40		SOMEWHAT FIRM	OLIVE BROWN	COMMON, DISTINCT
40-50		FIRM		
50	LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**
Slope: _____ %
Limiting Factor: **20"**
 Ground Water Restrictive Layer
 Bedrock
 Pit Depth

DIXFIELD

Observation Hole **TP 6** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0			DARK YELL BROWN	
0-10	GRAVELLY		YELLOWISH BROWN	
10-20	FINE SANDY	FRIABLE	OLIVE BROWN	FEW, FAINT
20-30	LOAM		OLIVE BROWN	COMMON, DISTINCT
30-40		SOMEWHAT FIRM		
40-50		FIRM		
50	LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**
Slope: _____ %
Limiting Factor: **14"**
 Ground Water Restrictive Layer
 Bedrock
 Pit Depth

DIXFIELD

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP 7** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0			DARK	
0-10	STONY		YELLOWISH BROWN	
10-20	FINE SANDY	FRIABLE	YELLOWISH BROWN	
20-30	LOAM		OLIVE BROWN	COMMON
30-40	GRAVELLY LOAMY SAND	FIRM	BROWN	FAINT
40-50	SAND			
50	LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**
Slope: _____ %
Limiting Factor: **22"**
 Ground Water Restrictive Layer
 Bedrock
 Pit Depth

Observation Hole **TP 8** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0			DK. BROWN	
0-10	STONY		DARK YELLOWISH BROWN	
10-20	FINE SANDY	FRIABLE	YELLOWISH BROWN	
20-30	LOAM		OLIVE BROWN	FEW, FAINT
30-40	GRAVELLY LOAMY SAND	FIRM	OLIVE GRAY	COMMON, DISTINCT
40-50	SAND			
50	LIMIT OF EXCAVATION @ 51"			

Soil Classification: Profile **3**, Condition **C**
Slope: _____ %
Limiting Factor: **20"**
 Ground Water Restrictive Layer
 Bedrock
 Pit Depth

SKERRY

James Logan
Site Evaluator Signature / SOIL SCIENTIST

237
SE - /CSSH

6/30/16
Date

Longview Partners, LLC
6 Second Street
Buxton, ME 04093
207-693-8799

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering

Town, City, Plantation
WINDHAM

Street, Road, Subdivision
FALMOUTH ROAD

Owner's Name
DM ROMA

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP 9** Test Pit Boring
3-4" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
STONY		VERY DK BROWN	
FINE	FRIABLE	DK.	COMMON
SANDY LOAM		GRAYISH BROWN	DISTINCT
STONY		OLIVE	MANY,
SANDY LOAM	FIRM	GRAY	PROMINENT
LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **E**, Slope **z**, Limiting Factor **26"**, Ground Water, Restrictive Layer, Bedrock, Pit Depth

BRAYTON

Observation Hole **TP10** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
STONY		DARK	
FINE		YELLOWISH	
SANDY LOAM	FRIABLE	BROWN	
STONY	SOMEWHAT MIXED	LT. OLIVE BROWN	FEW, FAINT
LOAMY	FIRM		
SAND	FIRM	LIGHT	COMMON
SAND (IN LENSES)		OLIVE	DISTINCT
		BROWN	
LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**, Slope **z**, Limiting Factor **19"**, Ground Water, Restrictive Layer, Bedrock, Pit Depth

SKERRY

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP 11** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
STONY		DK. BROWN	
FINE	FRIABLE	DARK	
SANDY LOAM		YELLOWISH BROWN	
		Y. BROWN	
GRAVELLY LOAMY	SOMEWHAT FIRM	LT. OLIVE BROWN	FEW, FAINT
SAND	FIRM	OLIVE	COMMON
SAND			DISTINCT
LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**, Slope **z**, Limiting Factor **16"**, Ground Water, Restrictive Layer, Bedrock, Pit Depth

SKERRY

Janice Logan
Site Evaluator Signature / SOIL SCIENTIST

237 / 213
SE / CSSA

6/30/16
Date

Longview Partners, LLC
6 Second Street
Buxton, ME 04093
207-693-8799

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering

Town, City, Plantation
WINDHAM

Street, Road, Subdivision
FALMOUTH ROAD

(For) Owner's Name
DM ROMA

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP13** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0	STONY		DK. BROWN	
	FINE		DARK	
10	SANDY LOAM	FRILABLE	YELLOWISH BROWN	
20	GRAVELLY LOAMY SAND	SOMEWHAT FIRM	MIXED YELLOWISH BROWN	MANY, FAINT
30	GRAVELLY LOAMY SAND	FIRM	OLIVE BROWN	COMMON FAINT
40	SAND			
50	SAND			

LIMIT OF EXCAVATION

Soil Classification Profile 3	Slope C	Limiting Factor 19"	<input checked="" type="checkbox"/> Ground Water <input type="checkbox"/> Restrictive Layer <input type="checkbox"/> Bedrock <input type="checkbox"/> Pit Depth
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SKERRY

Observation Hole **TP14** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0	STONY		DARK YELL	
	FINE		BROWN	
10	SANDY LOAM	FRILABLE	YELLOWISH BROWN	
20	FINE SANDY LOAM	FIRM	OLIVE BROWN	COMMON, FAINT
30	GRAVELLY LOAMY SAND	FIRM	OLIVE BROWN	COMMON, FAINT
40	SAND			
50	SAND			

LIMIT OF EXCAVATION

Soil Classification Profile 3	Slope C	Limiting Factor 16"	<input checked="" type="checkbox"/> Ground Water <input type="checkbox"/> Restrictive Layer <input type="checkbox"/> Bedrock <input type="checkbox"/> Pit Depth
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DIXFIELD

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP15** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0	STONY		DK. BROWN	
	FINE		DARK YELL	
10	SANDY LOAM	FRILABLE	BROWN	
	GRAVELLY LOAMY SAND	SOMEWHAT FIRM	YELLOWISH BROWN	FEW, FAINT
20	GRAVELLY LOAMY SAND	FIRM	LIGHT OLIVE BROWN	COMMON, DISTINCT
30	SAND			
40	SAND			
50	SAND			

LIMIT OF EXCAVATION

Soil Classification Profile 3	Slope C	Limiting Factor 16"	<input checked="" type="checkbox"/> Ground Water <input type="checkbox"/> Restrictive Layer <input type="checkbox"/> Bedrock <input type="checkbox"/> Pit Depth
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SKERRY

James Logan
Site Evaluator Signature / SOIL SCIENTIST

Observation Hole **TP16** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0	MUCKY		BLACK	
10	PEAT	FRILABLE		
20	STONY		DK GRAYSH BROWN	
30	FINE SANDY LOAM	FIRM	OLIVE	
40	SAND			
50	SAND			

LIMIT OF EXCAVATION

Soil Classification Profile 3	Slope E	Limiting Factor 0"	<input checked="" type="checkbox"/> Ground Water <input type="checkbox"/> Restrictive Layer <input type="checkbox"/> Bedrock <input type="checkbox"/> Pit Depth
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PEACHAM

237/213 6/30/16
SE / CSS# Date

Longview Partners, LLC
6 Second Street
Buxton, ME 04093
207-693-8799

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering

Town, City, Plantation
WINDHAM

Street, Road Subdivision
FALMOUTH ROAD

Owner's Name
DM ROMA

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP17** ■ Test Pit □ Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0	STONY		DARK BROWN	
	FINE		DARK	
10	SANDY LOAM	FRIABLE	YELLOWISH BROWN	
20		SOMEWHAT FIRM	YELLOWISH BROWN	FEW FAINT
30	GRAVELLY LOAMY SAND	FIRM	OLIVE BROWN	COMMONLY DISTINCT
40	SAND			
50	LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**
Slope: _____ %
Limiting Factor: **21**"
 Ground Water
 Restrictive Layer
 Bedrock
 Pit Depth

SKERRY

Observation Hole **TP18** ■ Test Pit □ Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0	STONY		DARK	
	FINE		YELLOWISH	
10	SANDY LOAM	FRIABLE	BROWN	
20			LT. OL. BR.	FEW FAINT
30	GRAVELLY LOAMY SAND	FIRM	OLIVE GRAY	COMMONLY DISTINCT
40	SAND			
50	LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**
Slope: _____ %
Limiting Factor: **18**"
 Ground Water
 Restrictive Layer
 Bedrock
 Pit Depth

SKERRY

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP19** ■ Test Pit □ Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0	STONY		DARK BROWN	
	FINE	FRIABLE	DARK	
10	SANDY LOAM		YELLOWISH BROWN	
20	LOAMY SAND	SOMEWHAT FIRM	MIXED YEL. BR.	FEW FAINT
30	GRAVELLY LOAMY SAND	FIRM	OLIVE BROWN	COMMONLY DISTINCT
40	SAND			
50	LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**
Slope: _____ %
Limiting Factor: **18**"
 Ground Water
 Restrictive Layer
 Bedrock
 Pit Depth

SKERRY

Observation Hole **TP20** ■ Test Pit □ Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0	STONY		DK. BROWN	
	FINE		DARK	
10	SANDY LOAM	FRIABLE	YELLOWISH BROWN	
20	LOAMY SAND	SOMEWHAT FIRM	LT. OLIVE BROWN	FEW FAINT
30	GRAVELLY LOAMY SAND	FIRM	OLIVE GRAY	COMMONLY DISTINCT
40	SAND			
50	LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**
Slope: _____ %
Limiting Factor: **21**"
 Ground Water
 Restrictive Layer
 Bedrock
 Pit Depth

SKERRY

James Lopez
Site Evaluator Signature / SOIL SCIENTIST

237/213 6/30/16
SE / CSSH Date

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering

Town, City, Plantation
WINDHAM

Street, Road Subdivision
FALMOUTH ROAD

(FOL) Owner's Name
DM ROMA

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole TP21 Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0	STONY		DARK BROWN	
	FINE SANDY LOAM	FRIABLE	DARK YELLOWISH BROWN	
10	LOAMY SAND	SOMEWHAT FIRM	MIXED YEL. BR.	FEW FAINT
20	GRAVELLY LOAMY SAND	FIRM	OLIVE BROWN	COMMON, DISTINCT
30	SAND		OLIVE GRAY	
40				
50	LIMIT OF EXCAVATION			
Soil Classification Profile <u>3</u> Condition <u>C</u>		Slope %	Limiting Factor <u>15"</u>	<input checked="" type="checkbox"/> Ground Water <input type="checkbox"/> Restrictive Layer <input type="checkbox"/> Bedrock <input type="checkbox"/> Pit Depth

SKERRY

Observation Hole TP22 Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0	SANDY LOAM		DARK	
10	GRAVELLY LOAMY SAND	FRIABLE	YELLOWISH BROWN	
20	GRAVELLY LOAMY SAND	SOMEWHAT FIRM	MIXED YEL. BR.	FEW FAINT
30	GRAVELLY LOAMY SAND	FIRM	OLIVE BROWN	COMMON, DISTINCT
40	SAND			
50	LIMIT OF EXCAVATION			
Soil Classification Profile <u>3</u> Condition <u>C</u>		Slope %	Limiting Factor <u>17"</u>	<input checked="" type="checkbox"/> Ground Water <input type="checkbox"/> Restrictive Layer <input type="checkbox"/> Bedrock <input type="checkbox"/> Pit Depth

SKERRY

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole TP23 Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0	GRAVELLY		DARK	
10	FINE SANDY LOAM	FRIABLE	YELLOWISH BROWN	
20	SANDY LOAM	SOMEWHAT FIRM	LIGHT OLIVE BROWN	FEW FAINT
30	LOAMY SAND	FIRM	OLIVE GRAY	COMMON, DISTINCT
40				
50	LIMIT OF EXCAVATION			
Soil Classification Profile <u>3</u> Condition <u>C</u>		Slope %	Limiting Factor <u>19"</u>	<input checked="" type="checkbox"/> Ground Water <input type="checkbox"/> Restrictive Layer <input type="checkbox"/> Bedrock <input type="checkbox"/> Pit Depth

Observation Hole TP24 Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0	FINE SANDY LOAM		DARK	
10	LOAMY SAND	FRIABLE	YELLOWISH BROWN	
20	SANDY LOAM	SOMEWHAT FIRM	LIGHT OLIVE BROWN	FEW FAINT
30	LOAMY SAND	FIRM	OLIVE GRAY	COMMON, DISTINCT
40	SAND			
50	LIMIT OF EXCAVATION @ 55"			
Soil Classification Profile <u>3</u> Condition <u>C</u>		Slope %	Limiting Factor <u>20"</u>	<input checked="" type="checkbox"/> Ground Water <input type="checkbox"/> Restrictive Layer <input type="checkbox"/> Bedrock <input type="checkbox"/> Pit Depth

James Logan
Site Evaluator Signature / SOIL SCIENTIST

DIXFIELD

237/213
SE - /CSH

6/30/16
Date

DIXFIELD / SKERRY (VARIANT)

Longview Partners, LLC
6 Second Street
Buxton, ME 04093
207-693-8799

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering

Town, City, Plantation
WINDHAM

Street, Road Subdivision
FALMOUTH ROAD

(F02)
Owner's Name
DM ROMA

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP 25** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
STONY SANDY LOAM		DARK BROWN	
	FRIABLE	DARK YELLOWISH BROWN	
STONY LOAMY SAND		YELLOWISH BROWN	
GRAVELLY LOAMY SAND	SOMEWHAT FIRM	OLIVE BROWN	FEW FAINT
SAND & SAND	FIRM	OLIVE GRAY	COMMON, DISTINCT
LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**, Slope **z**, Limiting Factor **14"**.
 Ground Water
 Restrictive Layer
 Bedrock
 Pit Depth

SKERRY

Observation Hole **TP 26** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
FINE SANDY LOAM		DK BROWN	
	FRIABLE	DARK YELLOWISH BROWN	
GRAVELLY LOAMY SAND		YELLOWISH BROWN	FEW FAINT
GRAVELLY LOAMY SAND	FIRM	LIGHT OLIVE BROWN	COMMON, DISTINCT
LOAMY SAND & SAND		OLIVE BROWN	
LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**, Slope **z**, Limiting Factor **10"**.
 Ground Water
 Restrictive Layer
 Bedrock
 Pit Depth

SKERRY

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP 27** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
FINE SANDY LOAM		LT. GRAY (ALBIC)	
	FRIABLE	DARK YELLOWISH BROWN	
GRAVELLY LOAMY SAND	SOMEWHAT FIRM	LIGHT OLIVE BROWN	FEW FAINT
GRAVELLY LOAMY SAND & SAND	FIRM	OLIVE GRAY	COMMON, DISTINCT
LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**, Slope **z**, Limiting Factor **10"**.
 Ground Water
 Restrictive Layer
 Bedrock
 Pit Depth

SKERRY

Observation Hole **TP 28** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
STONY FINE SANDY LOAM		DK. BROWN	
	FRIABLE	DARK YELLOWISH BROWN	
GRAVELLY LOAMY SAND	SOMEWHAT FIRM	LIGHT OLIVE BROWN	FEW FAINT
GRAVELLY LOAMY SAND & SAND	FIRM	OLIVE GRAY	COMMON, DISTINCT
LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**, Slope **z**, Limiting Factor **19"**.
 Ground Water
 Restrictive Layer
 Bedrock
 Pit Depth

SKERRY

James Logan
Site Evaluator Signature / SOIL SCIENTIST

237/213
SE - /CSS#

6/30/16
Date

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering

Town, City, Plantation
WINDHAM

Street, Road Subdivision
FALMOUTH ROAD

(FOR) Owner's Name
DM ROMA

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP 29** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
		LT GRAY (ALBIC)	
FINE SANDY LOAM		DARK BROWN	
	FRILABLE	YELLOWISH BROWN	
		OLIVE BROWN	COMMON FAINT
VERY FINE SANDY LOAM		OLIVE	COMMON
	FIRM		DISTINCT
LIMIT OF EXCAVATION			

Soil Classification Profile **318 C** Condition **C** Slope **15%** Limiting Factor **15"** Ground Water Restrictive Layer Bedrock Pit Depth

DIXFIELD (w/ NICHOLVILLE INCLUSIONS)

Observation Hole **TP 30** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
		DARK BROWN	
FINE SANDY LOAM		DARK BROWN	
	FRILABLE	YELLOWISH BROWN	
		OLIVE BROWN	COMMON FAINT
LOAMY FINE SAND		OLIVE	COMMON
	FIRM		DISTINCT
LIMIT OF EXCAVATION			

Soil Classification Profile **9 C** Condition **C** Slope **15%** Limiting Factor **15"** Ground Water Restrictive Layer Bedrock Pit Depth

NICHOLVILLE

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP 31** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
		DARK BROWN	
GRAVELLY FINE SANDY LOAM		DARK BROWN	
	FRILABLE	YELLOWISH BROWN	
		LIGHT OL BROWN	FEW FAINT
GRAVELLY SANDY LOAM		OLIVE	COMMON
	FIRM		FAINT
LIMIT OF EXCAVATION			

Soil Classification Profile **3 C** Condition **C** Slope **18%** Limiting Factor **18"** Ground Water Restrictive Layer Bedrock Pit Depth

DIXFIELD
James Logan
Site Evaluator Signature / SOIL SCIENTIST

Observation Hole **TP 32** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
		DARK BROWN	
SPONY FINE SANDY LOAM		DARK BROWN	
	FRILABLE	YELLOWISH BROWN	
		OL. BR.	FEW FAINT
SPONY SANDY LOAM		OLIVE	COMMON
	FIRM		DISTINCT
LIMIT OF EXCAVATION			

Soil Classification Profile **3 C** Condition **C** Slope **18%** Limiting Factor **18"** Ground Water Restrictive Layer Bedrock Pit Depth

DIXFIELD
237/213 6/30/16
SE / CSS# Date

Longview Partners, LLC
6 Second Street
Buxton, ME 04093
207-693-8799

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering

Town, City, Plantation
WINDHAM

Street, Road Subdivision
FALMOUTH ROAD

Owner's Name
DM ROMA

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP 33** ■ Test Pit □ Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0			DARK	
			YELLOWISH	
			BROWN	
10	STONY	FRIABLE	YELLOWISH	
	FINE		BROWN	
20	SANDY	SOMEWHAT FIRM	LIGHT OLIVE BR.	FEW, FAINT
	LOAM			
30		FIRM	OLIVE	COMMON, DISTINCT
40				
50	LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**, Slope **7%**, Limiting Factor **18**.
 Ground Water Restrictive Layer
 Bedrock
 Pit Depth

DIXFIELD

Observation Hole **TP 34** ■ Test Pit □ Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0	STONY		DARK BROWN	
10	FINE SANDY LOAM	FRIABLE	DARK YELLOWISH BROWN	
20	GRAVELLY SANDY LOAM	SOMEWHAT FIRM	OLIVE BROWN	FEW, FAINT
30	LOAMY SAND	FIRM	OLIVE	COMMON, DISTINCT
40				
50	LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**, Slope **7%**, Limiting Factor **17**.
 Ground Water Restrictive Layer
 Bedrock
 Pit Depth

SKERRY/DIXFIELD

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP 35** ■ Test Pit □ Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0	STONY		DK. BROWN	
	SANDY LOAM	FRIABLE	DK. YEL. BR.	
10			YELLOWISH BROWN	
			OL. BROWN	FEW, DISTINCT
20	GRAVELLY LOAMY SAND	SOMEWHAT FIRM	OLIVE	COMMON, DISTINCT
30	SAND			
40	SAND			
50	LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**, Slope **7%**, Limiting Factor **15**.
 Ground Water Restrictive Layer
 Bedrock
 Pit Depth

SKERRY

Observation Hole **TP 36** ■ Test Pit □ Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0	FINE SANDY LOAM	FRIABLE	DARK BROWN	
10			DEEP YELLOWISH BROWN	
20	LOAMY SAND	SOMEWHAT FIRM	OL. OL. BROWN	FEW FAINT
30	FINE SAND	FIRM	OLIVE	COMMON, DISTINCT
40	SILT	FIRM		
50	LIMIT OF EXCAVATION			

Soil Classification: Profile **8**, Condition **C**, Slope **7%**, Limiting Factor **16**.
 Ground Water Restrictive Layer
 Bedrock
 Pit Depth

NICHOLVILLE

James Logan
Site Evaluator Signature / SOIL SCIENTIST

237/213 6/30/16
SE - C.S.S.H Date

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering

Town, City, Plantation
WINDHAM

Street, Road, Subdivision
FALMOUTH ROAD

Owner's Name
DM ROMA

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP 37** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0	STONY		DARK BROWN	
5	FINE		DARK	
10	SANDY	FILABLE	YELLOWISH	
15	LOAM		BROWN	
20				
25	STONY	SOMENHAT	LT. OLIVE	FEW, FAINT
30	LOAMY	FIRM	BROWN	
35	SANDY	TO	TO	
40	SAND	FIRM	OLIVE BROWN	
45				
50				

Soil Classification: Profile **3**, Condition **C**, Slope **2%**, Limiting Factor **12"**, Ground Water, Restrictive Layer, Bedrock, Pit Depth

SKERRY

Observation Hole **TP 38** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0			DK. BROWN	
5	FINE			
10	SANDY	FILABLE	YELLOWISH	
15			BROWN	
20	LOAM			FEW FAINT
25		SOMENHAT	LIGHT	COMMON
30		FIRM	OLIVE	FAINT
35		TO	BROWN	
40		FIRM		
45				
50				

Soil Classification: Profile **3**, Condition **C**, Slope **2%**, Limiting Factor **17"**, Ground Water, Restrictive Layer, Bedrock, Pit Depth

DIXFIELD

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP 39** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0			DK. BROWN	
5	STONY		DARK	
10	FINE	FILABLE	YELLOWISH	
15	SANDY		BROWN	
20	LOAM		YELLOWISH BROWN	
25	STONY		LIGHT	FEW FAINT
30	SANDY	SOMENHAT	OLIVE BROWN	COMMON
35	LOAM	FIRM	OLIVE BROWN	DISTINCT
40		TO		
45		FIRM		
50				

Soil Classification: Profile **3**, Condition **C**, Slope **2%**, Limiting Factor **19"**, Ground Water, Restrictive Layer, Bedrock, Pit Depth

DIXFIELD

Observation Hole **TP 40** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0			DK. BROWN	
5	GRAVELLY		LT. GRAY (OLIVE)	
10	FINE	FILABLE	DARK	
15	SANDY		YELLOWISH	
20	LOAM		BROWN	
25			YELLOWISH	
30			BROWN	FEW, FAINT
35	GRAVELLY	SOMENHAT	LIGHT	COMMON
40	SANDY	FIRM	OLIVE	FAINT
45	LOAM	TO	BROWN	
50		FIRM		

Soil Classification: Profile **3**, Condition **C**, Slope **2%**, Limiting Factor **17"**, Ground Water, Restrictive Layer, Bedrock, Pit Depth

DIXFIELD

James Logan
Site Evaluator Signature / **SAL SCIENTIST**

237/213
SE - **ICSSH**

7/11/16
Date

Longview Partners, LLC
6 Second Street
Buxton, ME 04093
207-693-8799

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering

Town, City, Plantation
WINDHAM

Street, Road, Subdivision
FALMOUTH ROAD

Owner's Name
DM ROMA

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP 41** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
		DARK BROWN	
GRAVELLY		DARK BROWN	
FINE	FRIABLE	YELLOWISH BROWN	
SANDY		YELLOWISH BROWN	
LOAM		BROWN	
	SOMewhat	LIGHT OLIVE	FEW, FAINT
	FIRM	BROWN	COMMON
	TO		FAINT
	FIRM		

Soil Classification: Profile **3**, Condition **C**, Slope **20%**, Limiting Factor **20"**. Ground Water, Restrictive Layer, Bedrock, Pit Depth.

DIXFIELD

Observation Hole **TP 42** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
		DARK BROWN	
STONY		BROWN	
FINE	FRIABLE	YELLOWISH BROWN	
SANDY		BROWN	
LOAM		BROWN	FEW, FAINT
	SOMewhat	LIGHT OLIVE	COMMON
	FIRM	BROWN	DISTINCT
	TO		
	FIRM		

Soil Classification: Profile **3**, Condition **C**, Slope **20%**, Limiting Factor **20"**. Ground Water, Restrictive Layer, Bedrock, Pit Depth.

DIXFIELD

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP 43** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
		DARK BROWN	
STONY		BROWN	
FINE	FRIABLE	YELLOWISH BROWN	
SANDY		BROWN	FEW, FAINT
LOAM		MIXED DK Y. BROWN	COMMON
	SOMewhat	OLIVE	FAINT
	FIRM	BROWN	
	TO		
	FIRM		

Soil Classification: Profile **3**, Condition **C**, Slope **16%**, Limiting Factor **16"**. Ground Water, Restrictive Layer, Bedrock, Pit Depth.

DIXFIELD

Observation Hole **TP 44** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
		DARK BROWN	
STONY		BROWN	
FINE	FRIABLE	YELLOWISH BROWN	
SANDY		BROWN	
LOAM		BROWN	FEW, FAINT
	SOMewhat	OLIVE	COMMON
	FIRM	BROWN	FAINT
	TO		
	FIRM		

Soil Classification: Profile **3**, Condition **C**, Slope **16%**, Limiting Factor **16"**. Ground Water, Restrictive Layer, Bedrock, Pit Depth.

SILENTLY

James Logan
Site Evaluator Signature / SOIL SCIENTIST

237/213
SE - ICSS#

7/11/16
Date

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering

Town, City, Plantation
WINDHAM

Street, Road, Subdivision
FALMOUTH ROAD

Owner's Name
DM ROMA

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP 45** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0			DK. BROWN	
5	FINE SANDY LOAM	FRIABLE	DARK YELLOWISH BROWN	
10			YELLOWISH BROWN	
15			YELLOWISH BROWN	FEW FAINT
20	SANDY LOAM	SOMEWHAT FIRM TO FIRM	OLIVE BROWN	COMMON
25				DISTINCT
30				
40				
50				

Soil Classification: Profile **3**, Condition **C**, Slope **10**%, Limiting Factor **10**"

Ground Water Restrictive Layer
 Bedrock
 Pit Depth

DIXFIELD

Observation Hole **TP 46** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0			DK BROWN	
5	FINE SANDY LOAM	FRIABLE	DARK YELLOWISH BROWN	
10			YELLOWISH BROWN	
15			BROWN	FEW FAINT
20	GRAVELLY LOAMY SAND	SOMEWHAT FIRM TO FIRM	MIXED OLIVE BROWN	COMMON
25				DISTINCT
30				
40				
50				

Soil Classification: Profile **3**, Condition **C**, Slope **17**%, Limiting Factor **17**"

Ground Water Restrictive Layer
 Bedrock
 Pit Depth

SKERRY

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP 47** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0			DK. BROWN	
5	FINE SANDY LOAM	FRIABLE	DARK YELLOWISH BROWN	
10			YELLOWISH BROWN	
15	LOAMY SAND	SOMEWHAT FIRM	YEL. BR.	FEW FAINT
20	GRAVELLY LOAMY SAND	FIRM	OLIVE BROWN	COMMON
25				DISTINCT
30				
40				
50				

Soil Classification: Profile **3**, Condition **C**, Slope **10**%, Limiting Factor **10**"

Ground Water Restrictive Layer
 Bedrock
 Pit Depth

SKERRY

Observation Hole **TP 48** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0			DARK	
5	FINE SANDY LOAM	FRIABLE	YELLOWISH BROWN	
10			BROWN	
15			YEL. B.	FEW FAINT
20	GRAVELLY LOAMY SAND	SOMEWHAT FIRM	YELLOWISH BROWN	COMMON
25				DISTINCT
30				
40				
50				

Soil Classification: Profile **3**, Condition **C**, Slope **16**%, Limiting Factor **16**"

Ground Water Restrictive Layer
 Bedrock
 Pit Depth

SKERRY

James Logan

Site Evaluator Signature / SOIL SCIENTIST

237/213 SE • /CSSH

7/11/16 Date

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering

Town, City, Plantation
WINDHAM

Street, Road, Subdivision
FALMOUTH ROAD

(F04) Owner's Name
DM ROMA

TP 100-111 BY BACKHOE

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole TP100 Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Observation Hole TP101 Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0			DARK BROWN	
5	STONY			
10	FINE	FRILABLE	DARK YELL. BROWN	
15	SANDY			
20	LOAM		OLIVE BROWN	COMMON, FAINT
25	STONY			COMMON
30	LOAMY FIRM		OLIVE	DISTINCT
35	SAND		GRAY	
40	SAND			SATURATED
45				
50	LIMIT OF EXCAVATION @ 72"			

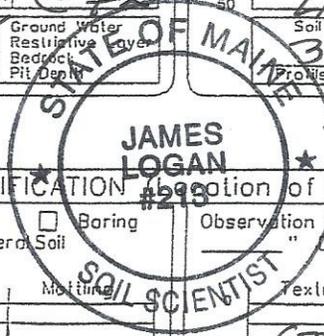
Soil Classification: Profile 3 Condition C Slope 15% Limiting Factor 15" Ground Water Restrictive Layer Bedrock Pit Depth

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0			DK. BROWN	
5	STONY			
10	FINE		DARK YELLOWISH BROWN	
15	SANDY	FRILABLE		
20	LOAM		YELLOWISH BROWN	
25			BROWN	FEW, FAINT
30	STONY		OLIVE BROWN	COMMON
35	LOAMY FIRM			DISTINCT
40	SAND			
45	SAND		OLIVE GRAY	
50				
55	LIMIT OF EXCAVATION			

Soil Classification: Profile 3 Condition C Slope 20% Limiting Factor 20" Ground Water Restrictive Layer Bedrock Pit Depth

SKERRY

SKERRY



SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole TP102 Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Observation Hole TP103 Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0			DARK BROWN	
5	STONY			
10	FINE	FRILABLE	DARK YELLOWISH BROWN	
15	SANDY			
20	LOAM		YELL. BR.	FEW, FAINT
25			OLIVE BROWN	
30	STONY			COMMON
35	LOAMY FIRM		OLIVE	DISTINCT
40	SAND			
45	SAND			
50				
55	LIMIT OF EXCAVATION			

Soil Classification: Profile 3 Condition C Slope 15% Limiting Factor 15" Ground Water Restrictive Layer Bedrock Pit Depth

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0			VERY DK. BROWN	
5	STONY			
10	FINE	FRILABLE	DK. YELL. BROWN	
15	SANDY		MIXED	COMMON
20	LOAM		YELL. BR.	FAINT
25	STONY		OLIVE	
30	LOAMY FIRM		BROWN	COMMON
35	SAND			DISTINCT
40	SAND		OLIVE GRAY	FAINT H ₂ O
45				
50				
55	LIMIT OF EXCAVATION - REFUSAL IN Boulders...			

Soil Classification: Profile 3 Condition D Slope 10% Limiting Factor 10" Ground Water Restrictive Layer Bedrock Pit Depth

SKERRY

COLONEL

James Logan
Site Evaluator Signature / SOIL SCIENTIST

237/213 6/26/17
SE # / CSS# Date

Longview Partners, LLC
6 Second Street
Buxton, ME 04093
207-693-8799

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering

Town, City, Plantation
WINDHAM

Street, Road, Subdivision
FALMOUTH ROAD

Owner's Name
DM ROMA

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP104** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Observation Hole **TP105** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0	STONY		DARK BROWN	
5	FINE		DARK BROWN	
10	SANDY LOAM	FRIABLE	YELLOWISH BROWN	
20			YELLOWISH BROWN	FEW, FAINT
25	STONY LOAM		OLIVE BROWN	COMMON
30	SAND	FIRM	BROWN	DISTINCT
40	SAND			
50	LIMIT OF EXCAVATION			

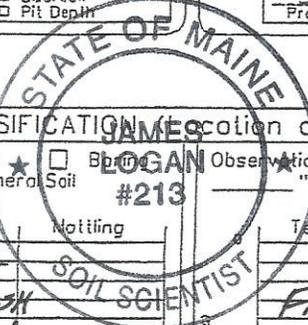
Soil Classification: Profile **3**, Condition **C**, Slope **%**, Limiting Factor **20**.
 Ground Water
 Restrictive Layer
 Bedrock
 Pit Depth

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0	STONY		DK. BROWN	
5	FINE		DARK BROWN	
10	SANDY LOAM	FRIABLE	YELLOWISH BROWN	
20			YELLOWISH BROWN	FEW, FAINT
25	STONY LOAM	FIRM	OLIVE BROWN	COMMON, DISTINCT
30	SAND			
40	SAND			
50	LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**, Slope **%**, Limiting Factor **18**.
 Ground Water
 Restrictive Layer
 Bedrock
 Pit Depth

SKERRY

SKERRY



SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP106** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Observation Hole **TP107** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0	COBBLY		DARK BROWN	
5	FINE		YELLOWISH BROWN	
10	SANDY LOAM	FRIABLE	BROWN	
15	LOAMY SAND		YELLOWISH BROWN	
20	COARSE SAND & GRAVEL		BROWN	FEW, FAINT
30	VERY FINE SAND	FIRM	OLIVE GRAY	COMMON, DISTINCT
40	SANDY LOAM			
50	LIMIT OF EXCAVATION			

Soil Classification: Profile **3/7**, Condition **C**, Slope **%**, Limiting Factor **22**.
 Ground Water
 Restrictive Layer
 Bedrock
 Pit Depth

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0			DARK BROWN	
5	FINE		DARK BROWN	
10	SANDY LOAM	FRIABLE	YELLOWISH BROWN	
20			LT. OLIVE BROWN	FEW, FAINT
30	COARSE SAND		OLIVE BROWN	
40	GRAVELLY LOAM	FIRM	OLIVE	COMMON, DISTINCT
50	SAND			FINE
55	LIMIT OF EXCAVATION 1120			

Soil Classification: Profile **3/8**, Condition **C**, Slope **%**, Limiting Factor **15**.
 Ground Water
 Restrictive Layer
 Bedrock
 Pit Depth

ATYPICAL

ATYPICAL

James Logan
Site Evaluator Signature / SOIL SCIENTIST

237/213
SE - /CSS#

6/26/17
Date

ATYPICAL (USE LARGE SIZE RATING)

Longview Partners, LLC
6 Second Street
Buxton, ME 04093
207-693-8799

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering

Town City Plantation
WINDHAM

Street, Road Subdivision
FALMOUTH ROAD

(FORM) Owner's Name
DM ROMA

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP108** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Observation Hole **TP109** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
STONY		DK. BROWN	
FINE		DARK	
SANDY	FRIABLE	YELLOWISH	
LOAM		BROWN	
		YELLOW	
		OLIVE BROWN	FEW FAINT
STONY		LIGHT	COMMON
LOAMY	FIRM	OLIVE	COMMON
SANDY		BROWN	FAINT
SAND			
LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**, Slope **%**, Limiting Factor **19**.
 Ground Water
 Restrictive Layer
 Bedrock
 Pit Depth

Texture	Consistency	Color	Mottling
STONY		DARK	
FINE		YELLOWISH	
SANDY		BROWN	
LOAM	FRIABLE	YELLOWISH	
		BROWN	
LOAMY		LIGHT	FEW
SANDY		OLIVE	
SAND		BROWN	FAINT
		OLIVE	COMMON
VERY FINE	FIRM	GRAY	DISTINCT
SANDY			
LOAM			
LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**, Slope **%**, Limiting Factor **20**.
 Ground Water
 Restrictive Layer
 Bedrock
 Pit Depth

SKENLY

JAMES LOGAN

ATYPICAL

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole **TP110** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Observation Hole **TP111** Test Pit Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
STONY		LT. GRAY (MOIST)	
FINE		DARK	
SANDY	FRIABLE	YELLOWISH	
LOAM		BROWN	
		YELLOWISH	
		BROWN	
STONY		LIGHT	COMMON
LOAMY	FIRM	OLIVE	FAINT
SANDY		BROWN	
SAND			
LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**, Slope **%**, Limiting Factor **21**.
 Ground Water
 Restrictive Layer
 Bedrock
 Pit Depth

Texture	Consistency	Color	Mottling
STONY		DARK BROWN	
FINE		DARK	
SANDY	FRIABLE	YELLOWISH	
LOAM		BROWN	
		YELLOWISH	
		BROWN	FEW, FAINT
STONY		LIGHT	COMMON
LOAMY	FIRM	OLIVE	DISTINCT
SANDY		BROWN	
SAND			
LIMIT OF EXCAVATION			

Soil Classification: Profile **3**, Condition **C**, Slope **%**, Limiting Factor **22**.
 Ground Water
 Restrictive Layer
 Bedrock
 Pit Depth

SKENLY

SKENLY

James Logan
Site Evaluator Signature / SOIL SCIENTIST

237/213 01/26/17
SE / CSS# Date

ATTACHMENT C

PROPERTY DEEDS

**QUITCLAIM DEED
WITH COVENANT**
(Maine Statutory Short Form)
(Released)

Know all persons by these presents that, we, **JAMES R. PHILLIPS**, of New Smyrna Beach, Volusia County, Florida, with a mailing address of 127 Club House Blvd., New Smyrna Beach, FL 32168, and **BONITA L. AUSTIN**, of Westbrook, Cumberland County, Maine, with a mailing address of 622 Brook Street, Westbrook, ME 04092, and **BETH A. AUSTIN** of Windham, Cumberland County, Maine, having a mailing address of 7 Falmouth Road, Windham, ME 04092, and **GEORGE R. AUSTIN** of Saco, York County, Maine, with a mailing address of 29 Glenhaven Circle East, Saco, ME 04072 and **JESSICA L. LUCE (fka AUSTIN)** of Portland, Cumberland County, Maine, with a mailing address of 63 Morning Street, Apt. 2, Portland, ME 04102, (the Grantors herein), in consideration of one dollar (\$1.00) and other valuable considerations paid by **Sebago Heights, LLC, its successors and assigns** (the Grantee herein), the receipt whereof we do hereby acknowledge, do hereby **remise, release, bargain, sell and convey, and forever quitclaim** unto the said **Sebago Heights, LLC, its successors and assigns**, all of their interest, in and to the following real property located in **Windham**, Cumberland County, Maine, bounded and described in the attached Exhibit A.

Meaning and intending to convey all of our right, title and interest in and to the properties listed on the attached Exhibit A.

Also hereby conveying all rights, easements, privileges and appurtenances belonging to the premises hereinabove described.

Witness our hands and seals this 30 day of the month of March, 2017

*Signed Sealed and Delivered
in the presence of*

Ronald E. Bellinger
Witness

JRM
Witness

JRM
Witness

JR Phillips
JAMES R. PHILLIPS

Bonita Austin
BONITA L. AUSTIN

Beth Austin
BETH A. AUSTIN

[Signature]
Witness

[Signature]
GEORGE R. AUSTIN

[Signature]
Witness

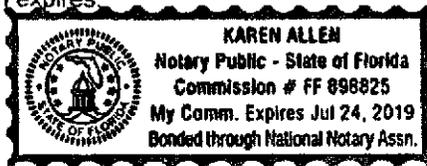
[Signature]
JESSICA L. LUCE

State of Florida
County of Volusia ss.

March 24th . 2017

Then personally appeared the above named **JAMES R. PHILLIPS**, and acknowledged the foregoing instrument to be his free act and deed.

My commission expires:



[Signature]
Notary Public/Attorney-at-Law
Karen Allen
Printed Name

State of Maine
County of Cumberland, ss.

March 30 . 2017

Then personally appeared the above named **BONITA L. AUSTIN** and acknowledged the foregoing instrument to be her free act and deed.

My commission expires:

[Signature]
Notary Public/Attorney-at-Law
LAURENCE L. MINOJA
MBA 5525
Printed Name

State of Maine
County of Cumberland, ss.

March 30 . 2017

Then personally appeared the above named **BETH A. AUSTIN**, and acknowledged the foregoing instrument to be her free act and deed.

My commission expires:

[Signature]
Notary Public/Attorney-at-Law
LAURENCE L. MINOJA
MBA 5525
Printed Name

State of Maine
County of Cumberland, ss.

March 30, 2017

Then personally appeared the above named **GEORGE R. AUSTIN** and acknowledged the foregoing instrument to be his free act and deed.

My commission expires:

[Signature]
Notary Public/Attorney-at-Law
LAWRENCE P. MINOR
MAR 31 2015 Printed Name

State of Maine
County of Cumberland, ss.

March 30, 2017

Then personally appeared the above named **JESSICA L. LUCE**, acknowledged the foregoing instrument to be her free act and deed..

My commission expires:

[Signature]
Notary Public/Attorney-at-Law
LAWRENCE P. MINOR
MAR 31 2015 Printed Name

EXHIBIT A

Grantors: Austins, et al

Grantee: Sebago Heights, LLC its successors and assigns

A certain lot or parcel of land located, and partially abutting the northeast side line of the Falmouth Road in the Town of Windham, Cumberland County, State of Maine, being further bounded and described as follows:

To get to the Point of Beginning, commence at a found 5/8" capped rebar located in the apparent northeasterly sideline of the Falmouth Road;

Thence N 35° 17' 06" e a distance of 13.24 feet to a point, with said point also being the westerly corner of land now or formerly of Randall K and Beth Austin (CCRD 33259/317), the southerly corner of the herein conveyed parcel and the true Point of Beginning;

Thence N 43° 31' 35" W and along the northeasterly side line of the Falmouth Road for a distance of 13.95 feet to a point;

Thence continuing along the northeasterly sideline of the Falmouth Road a distance of 286.07 to a point;

Thence continuing along the northeasterly side line of the Falmouth Road a distance of 270.32 feet to a point;

Thence N 23° 36' 11" E and across other land of the Grantors a distance of 243.96 feet to a point;

Thence N 33° 15' 50" E a distance of 1,007.98 feet to a point;

Thence N 88° 01' 42" E a distance of 365.02 feet to a point;

Thence S 64° 26' 51" E for a distance of 325.15 feet to a point;

Thence S 05° 04' 52" W for a distance of 346.18 feet, to a point; (Reference Point A - see below) on an old woods road;

Thence on a curve to the southeast, with said curve having an arc radius of 556.00 feet, an arc length of 64.13 feet and a chord of N 19° 48' 32" W - 60.69 feet to a point;

Thence S 76° 59' 59" E to a point on the Town of Windham/Town of Falmouth town Line;

Thence S 13° 00' 01" W and along said Town Line a distance of 795.31 feet to a point;

Thence N 88° 33' 34" W a distance of 221.04 feet to a point;

Thence S 52° 10' 50" W a distance of 51.60 feet to a point, with said point also being the easterly corner of land now or formerly of Randall K. and Beth Austin (CCRD 212046/253);

Thence N 57° 52' 52" W and along land of Austin (CCRD 21046/253) a distance of 201.90 feet to a found iron pipe with said pipe also marking other land of Randall K. Austin and Beth Austin (CCRD 33259/317);

Thence continuing along land of Austin N 43° 24' 23" W a distance of 150.04 feet to a point;

Thence S 35° 17' 06" W a distance of 382.11 feet to a point on the northeasterly side line of the Falmouth Road with said point also being the Point of Beginning.

Said described parcel containing 29.72 acres, more or less.

Reserving to the Grantors herein and others, a fifty (50) foot wide access and egress easement for passage by foot or vehicle as well as for utilities on, over and/o beneath the easement area and all other uses for which a town way may be used, being bounded and described as follows:

To get to the point of beginning, commence at a found 5/8" capped rebar located near the apparent northeastern sideline of the Falmouth Road;

Thence N 35° 17' 06" E for a distance of 13.24 feet to a point, with said point also marking the westerly corner of land now or formerly of Randall K. and Beth Austin (33259/317);

Thence N 43° 31' 35" W along the side line of the Falmouth Road a distance of 13.95 feet to a point;

Thence N 45° 47' 31" W continuing along the Falmouth Road a distance of 60.82 to a point, with said point also being the POINT OF BEGINNING;

Thence N 46° 28' 25" E and across land of the Grantors for a distance of 530.76 feet to the southwesterly side of an old woods road as shown on the below referenced Boundary Survey;

Thence in a northwesterly direction along the southwesterly side line of said woods road to a point;

Thence S 46° 28' 25" W for a distance of 560.03 feet, to a point on the northeasterly side line of the Falmouth Road;

Thence S 45° 47' 31" E along the Falmouth Road a distance of 50.04 feet to a point with said point also being the Point of Beginning for this easement.

Also subject to a 50 foot wide access and egress easement in favor of George B. Hinman, of near or even date herewith, as well as for utilities on, over and/o beneath the easement area and all other uses for which a town way may be used with its centerline following the centerline of an old woods road beginning at the point where the above easement's northeasterly terminus meets the southwesterly side line of the old woods road as described immediately above and as shown on the below referenced Boundary Survey. The woods road tends northerly and northeasterly until it connects Reference Point A mentioned above.

For a more complete and detailed description of the premises further reference is made to a Boundary Survey entitled "Boundary Survey, Falmouth Road, Windham, Maine of Babbidge Farms for Sebago Heights, LLC" by Survey, Inc., PO Box 210, Windham, ME 04062 dated August 2016 and revised through January 25, 2017 (Job No. 16009) Sheet 1. Said Boundary Survey is to be recorded in the Cumberland County Registry of Deeds. Said survey, including all of the drawings, notes, plan references, and all other information found thereon is hereby incorporated herein by reference thereto.

Being a portion of the premises conveyed to these Grantors by deed dated April 19, 2016 and recorded in the Cumberland County Registry of Deeds in Book 33063, Page 56.

Beth A. Austin gains her 1/6th interest in the above premises by virtue of a deed from Randall K. Austin to Beth A. Austin (his wife) dated, and delivered, January 23, 2017 and recorded in the Cumberland County Registry of Deeds in Book 33889, Page 226.

ATTACHMENT D

ABILITY TO SERVE LETTER FROM PORTLAND WATER DISTRICT



Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

June 21, 2017

Jayson Haskell
DM Roma Consulting Engineers
59 Harvest Hill Road
Windham, ME 04062

Re: 15 Falmouth Rd, WI
Ability to Serve with PWD Water

Dear Mr. Haskell:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on May 17, 2017. Based on the information provided per plans dated 6/2/17, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter constitutes approval of the water system as currently designed. Any changes affecting the approved water system will require further review and approval by PWD.**

Conditions of Service

The following conditions of service apply:

- The District can confirm that the existing water system in Falmouth Road has the capacity to serve the additional eighteen (18) single family house lots within the Babbidge Farms Subdivision in Windham.
- An 8" water main extension will be required for the project, from the connection point at Falmouth Road to the end of the subdivision.

Prior to construction, the owner or contractor will need to make an appointment to complete a service application form and pay all necessary fees. The appointment shall be requested through MEANS@pwd.org or by calling 207-774-5961 ext. 3199. Please allow (3) business days to process the service application paperwork. PWD will guide the applicant through the new development process during the appointment.

Existing Site Service

According to District records, the project site does not currently have existing water service.



Water System Characteristics

According to District records, there is an 12-inch diameter DI water main on the south side of Falmouth Road and a public fire hydrant located 250 feet from the site. Recent flow data is not available in this area. The most recent static pressure reading was 45 psi.

Public Fire Protection

The installation of a new public hydrant to be accepted into the District water system will be required.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project.

Private Fire Protection Water Needs

You have indicated that this project will not require water service to provide private fire protection to the site.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District

A handwritten signature in black ink, appearing to read 'Robert A. Bartels', written in a cursive style.

Robert A. Bartels, P.E.
Senior Project Engineer

ATTACHMENT E

LIST OF ABUTTING PROPERTY OWNERS

LIST OF ABUTTING LANDOWNERS

BABBIDGE FARMS SUBDIVISION, WINDHAM, MAINE

Map	Lot	Owner & Address
13	44	George B. Hinman 26 Lackey Street Westborough, MA 01581
13	44-B	Randal K. Austin Beth Austin 7 Falmouth Road Windham, ME 04062
31	13	Covenant Family Fellowship 75 Bishop Street Portland, ME 04103
31	35	Stephen R Bennett, Jr. Deborah G Bennett 9 Pine Drive Windham, ME 04062
31	35-B	Michael Christman 20 Falmouth Road Windham, ME 04062

ATTACHMENT F

LETTER OF FINANCIAL CAPACITY



January 19, 2016

Town of Windham
Planning Department
8 School Road
Windham, ME 04062

Re: Babbidge Farms, LLC – 17 lot residential subdivision

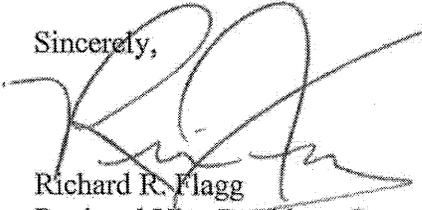
To Whom It May Concern:

After review of the information presented to Norway Savings Bank, I believe the above referenced borrowers are financially capable of completing the proposed development of a 17-lot residential subdivision on land located on Falmouth Road in Windham.

Although this letter should not be construed to be a commitment to lend funds, Ms. Mulkerin and Mr. McCormack (owners of Babbidge Farms, LLC) have been customers of Norway Savings Bank since 2004 and they have always performed as agreed. Having worked with these developers for many years, Ms. Mulkerin and Mr. McCormack have a proven track record of real estate development.

I trust this letter meets the needs for which it is written, but should there be additional questions, please don't hesitate to call me at (207) 482-7902.

Sincerely,



Richard R. Flagg
Regional Vice President, Commercial Lending

ATTACHMENT G

CORPORATION CERTIFICATE OF GOOD STANDING



MAINE

Department of the Secretary of State
Bureau of Corporations, Elections and Commissions

Corporate Name Search

Information Summary

[Subscriber activity report](#)

This record contains information from the CEC database and is accurate as of: **Mon May 01 2017 15:26:34**. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
SEBAGO HEIGHTS, LLC	20041890DC	LIMITED LIABILITY COMPANY (DOMESTIC)	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
02/17/2004	N/A	MAINE

Other Names (A=Assumed ; F=Former)

NONE

Clerk/Registered Agent

NICHOLAS J. MORRILL
PO BOX 4510
PORTLAND, ME 04112

[Back to previous screen](#)

[New Search](#)

Click on a link to obtain additional information.

List of Filings

[View list of filings](#)

Obtain additional information:

Additional Addresses

[Plain Copy](#)

[Certified copy](#)

Certificate of Existence [\(more info\)](#)

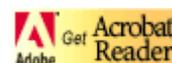
[Short Form without amendments](#)

[Long Form with amendments](#)

[\(\\$30.00\)](#)

[\(\\$30.00\)](#)

You will need Adobe Acrobat version 3.0 or higher in order to view PDF files.



ATTACHMENT H

FLOOD INSURANCE RATE MAP



APPROXIMATE SCALE



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

TOWN OF
WINDHAM, MAINE
CUMBERLAND COUNTY

PANEL 30 OF 35
(SEE MAP INDEX FOR PANELS NOT PRINTED)

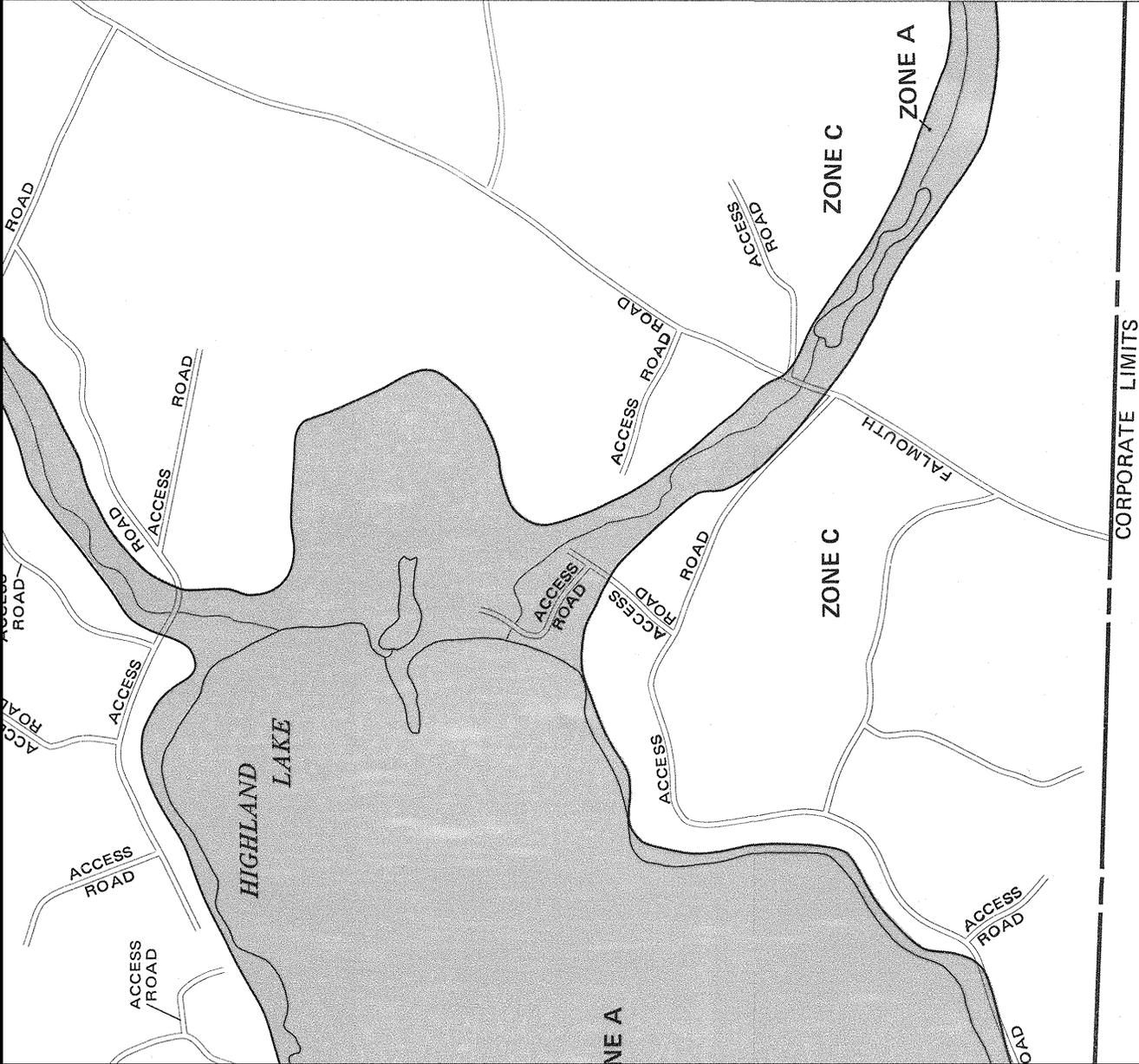
COMMUNITY-PANEL NUMBER
230189 0030 B

EFFECTIVE DATE:
SEPTEMBER 2, 1981



federal emergency management agency
federal insurance administration

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps, check the FEMA Flood Map Store at www.msc.fema.gov





APPROXIMATE SCALE



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

TOWN OF
WINDHAM, MAINE
CUMBERLAND COUNTY

PANEL 35 OF 35
(SEE MAP INDEX FOR PANELS NOT PRINTED)

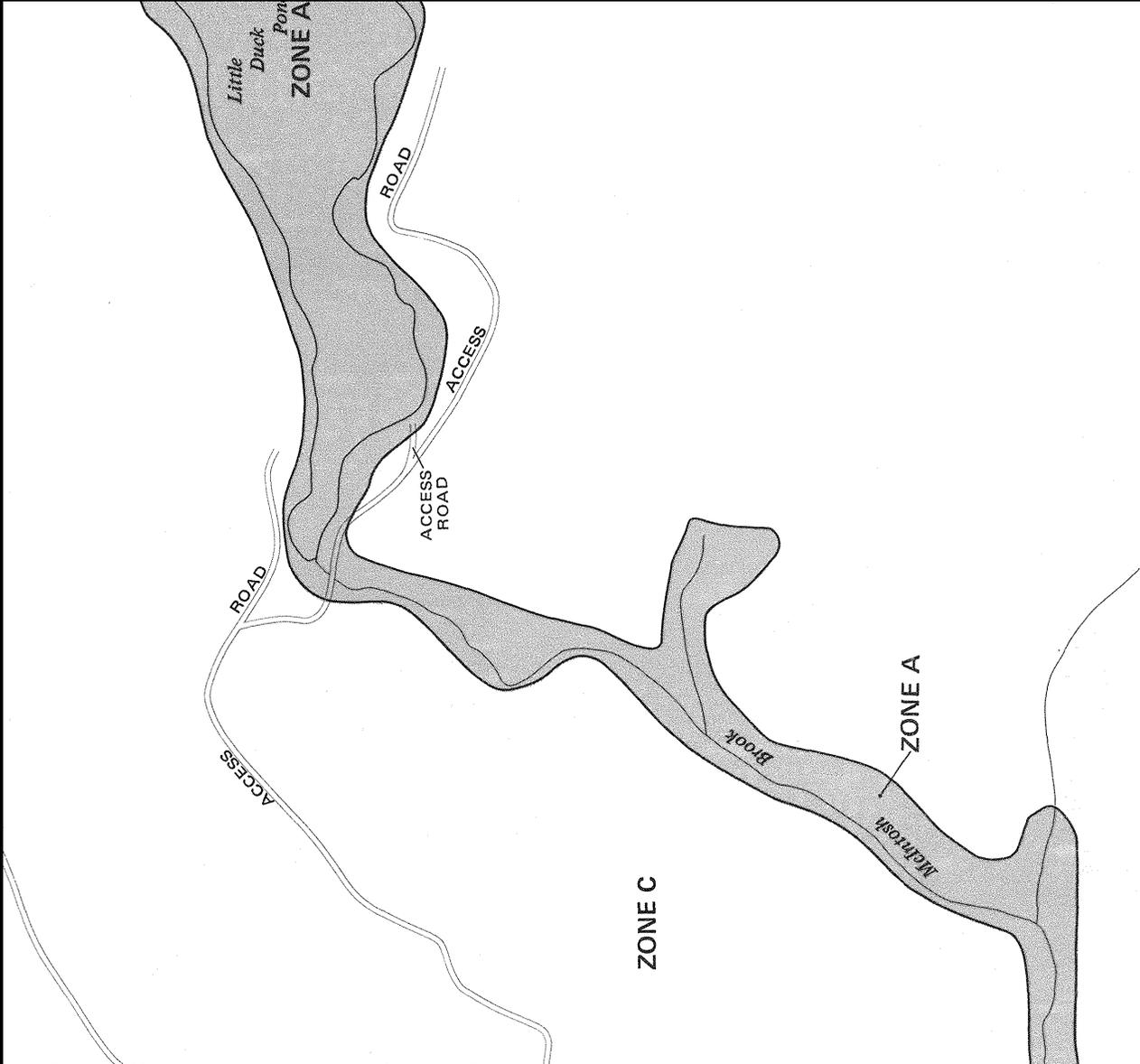
COMMUNITY-PANEL NUMBER
230189 0035 B

EFFECTIVE DATE:
SEPTEMBER 2, 1981



federal emergency management agency
federal insurance administration

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps, check the FEMA Flood Map Store at www.msc.fema.gov

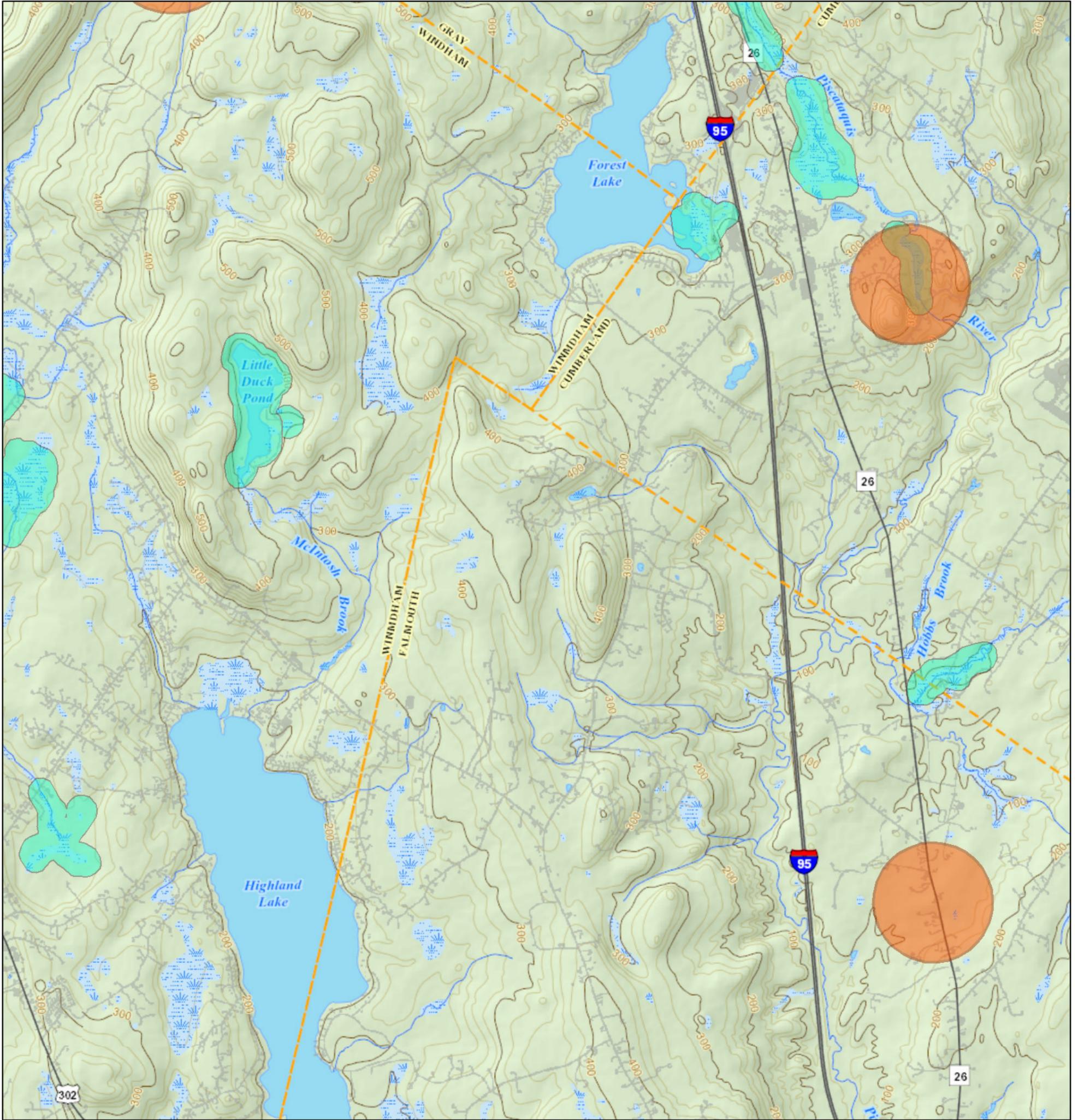


CORPORATE LIMITS

ATTACHMENT I

ENVIRONMENTAL SCREENING REPORTS

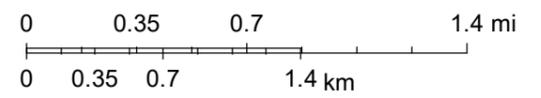
Beginning With Habitat



July 3, 2017

-  ETSC Animal Habitat Buffers
-  Inland Wading Bird and Waterfowl Habitat

1:36,112





MARK HAMPTON ASSOCIATES, INC.

SOIL EVALUATION • WETLAND DELINEATIONS • SOIL SURVEYS • WETLAND PERMITTING

4494

June 13, 2016

Mr. Greg McCormack
Sebago Heights LLC
97A Exchange Street Suite 304
Portland, ME 04101

Re: Vernal Pool Assessment, 130+ acre parcel Falmouth Road Windham, ME

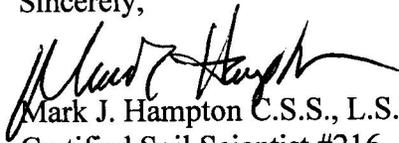
Dear Greg,

I have completed a vernal pool assessment during this breeding season, on the 130+- acre parcel of land located on Falmouth Road Windham, ME. The vernal pool assessment was conducted in accordance with Chapter 335 Significant Wildlife Habitat, Section 9 Significant Vernal Pools for the Maine Department of Environmental Protection. This section outlines the definition of a vernal pool as well as the requirements of a vernal pool to meet the definition of significance as related to the number of amphibian egg masses counted during the breeding season.

I found a couple of vernal pools on the property. The vernal pools did not have enough egg masses to meet the threshold for a significant vernal pool as defined above. The vernal pools are located in the middle of a drainage which flows across the site from south to north toward McIntosh Brook. I have completed the vernal pool assessment forms and have included them with this letter. I can forward these to Maine Inland Fisheries and Wildlife once you have reviewed the information.

If you have any questions or require additional information, please contact me.

Sincerely,


Mark J. Hampton C.S.S., L.S.E.
Certified Soil Scientist #216
Licensed Site Evaluator #263

Enc.

ATTACHMENT J

STORMWATER MANAGEMENT REPORT AND MAINTENANCE PLAN

STORMWATER MANAGEMENT REPORT

BABBIDGE FARMS SUBDIVISION FALMOUTH ROAD WINDHAM, MAINE

A. Narrative

Sebago Heights, LLC is proposing to develop property located on Falmouth Road in Windham as a 17-lot residential subdivision. The project site is identified as Lot 44 on the Town of Windham Assessors Map 13. This lot is approximately 29.7 acres and is located in the Farm zoning district.

The project will consist of 17 single-family residential lots including the construction of approximately 1,750 linear feet of roadway, utilities and stormwater infrastructure. In general, the site drains northwesterly to McIntosh Brook which runs along the northwesterly property boundary. McIntosh Brook crosses Falmouth Road and eventually discharges to Highland Lake which has been defined by the Maine Department of Environmental Protection (MDEP) as a Lake Most at Risk from New Development.

B. Alterations to Land Cover

The 29.7-acre lot is currently an undeveloped wooded lot with the exception of a gravel road extending through the property. The proposed roadway will generate approximately 47,200 square feet (1.08 acres) of impervious area while the proposed lot development is estimated to generate an additional 44,935 square feet (1.03 acres) totaling approximately 92,135 square feet (2.11 acres) of new impervious area. The proposed development will be permitted as a 17-lot residential subdivision on a less than 30-acre lot which does not require MDEP Site Location of Development Act approval but because the project is in a Lake Watershed Most at Risk from New Development and will generate more than 20,000 square feet of new impervious surface, it will require a Chapter 500 Stormwater Permit. The project will be reviewed under the Chapter 500 Basic and Phosphorous Standards.

The site is moderately sloped, draining northwesterly to McIntosh Brook although there are natural slopes greater than 3:1 forming the channels. Soils on the property were determined utilizing the Medium Intensity Soil Maps for Cumberland County, Maine published by the Natural Resources Conservation Service.

Soils Label	Soils Name	HSG
EmB	Elmwood fine sandy loam	B/D
MkB, MkC	Merrimac fine sandy loam	A
PfB, PfC, PfD	Paxton very stony fine sandy loam	C
WsB	Woodbridge very stony fine sandy loam	C/D

C. Methodology and Modeling Assumptions

The proposed stormwater management system has been designed utilizing Best Management Practices to maintain existing drainage patterns while providing stormwater quality improvement measures. The goal of the storm drainage system design is to remove potential

stormwater pollutants from runoff generated by the development while providing attenuation of the peak rates of runoff leaving the site.

D. Basic Standards

The project is required by the Town and the MDEP to provide permanent and temporary Erosion Control Best Management Practices. These methods are outlined in detail in the plan set.

E. Phosphorous Standard

The MDEP requires that any project under review of the Chapter 500 Stormwater Management standards and is within a Watershed of a Lake Most at Risk from New Development, it must meet the Phosphorous Standards. To reduce the property's phosphorous export, the stormwater infrastructure includes the construction of three underdrained filter basins, five bioretention cells and forested buffers.

The calculations were prepared for this standard and indicated that with the use of the proposed stormwater BMP's, the project's stormwater infrastructure has reduced the site's phosphorous export by approximately 71%. To mitigate for the phosphorous that does leave the site, a compensation fee of \$10,931 will be paid. The calculations related to the Phosphorous Standard and the BMP sizing calculations have been included as an attachment to this report.

F. Flooding Standard

The project has been designed to maintain pre-development peak flow rates for the 2, 10 and 25-year storm recurrence frequencies in the post development condition as shown in the following table.

SP-1	Pre-Development (cfs)			Post-Development (cfs)		
	2-YR	10-YR	25-YR	2-YR	10-YR	25-YR
	26.99	62.84	94.95	25.08	62.68	88.34

G. Maintenance of common facilities or property

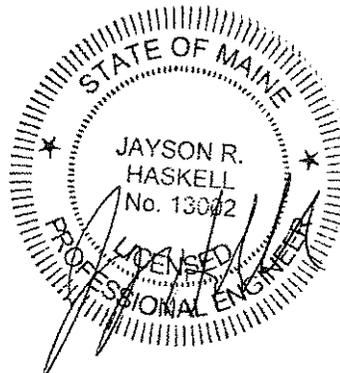
The property owner will be responsible for the maintenance of the stormwater facilities until an association is created. Enclosed within this submission is an Inspection, Maintenance and Housekeeping Plan for the project.

Prepared by:

DM ROMA CONSULTING ENGINEERS

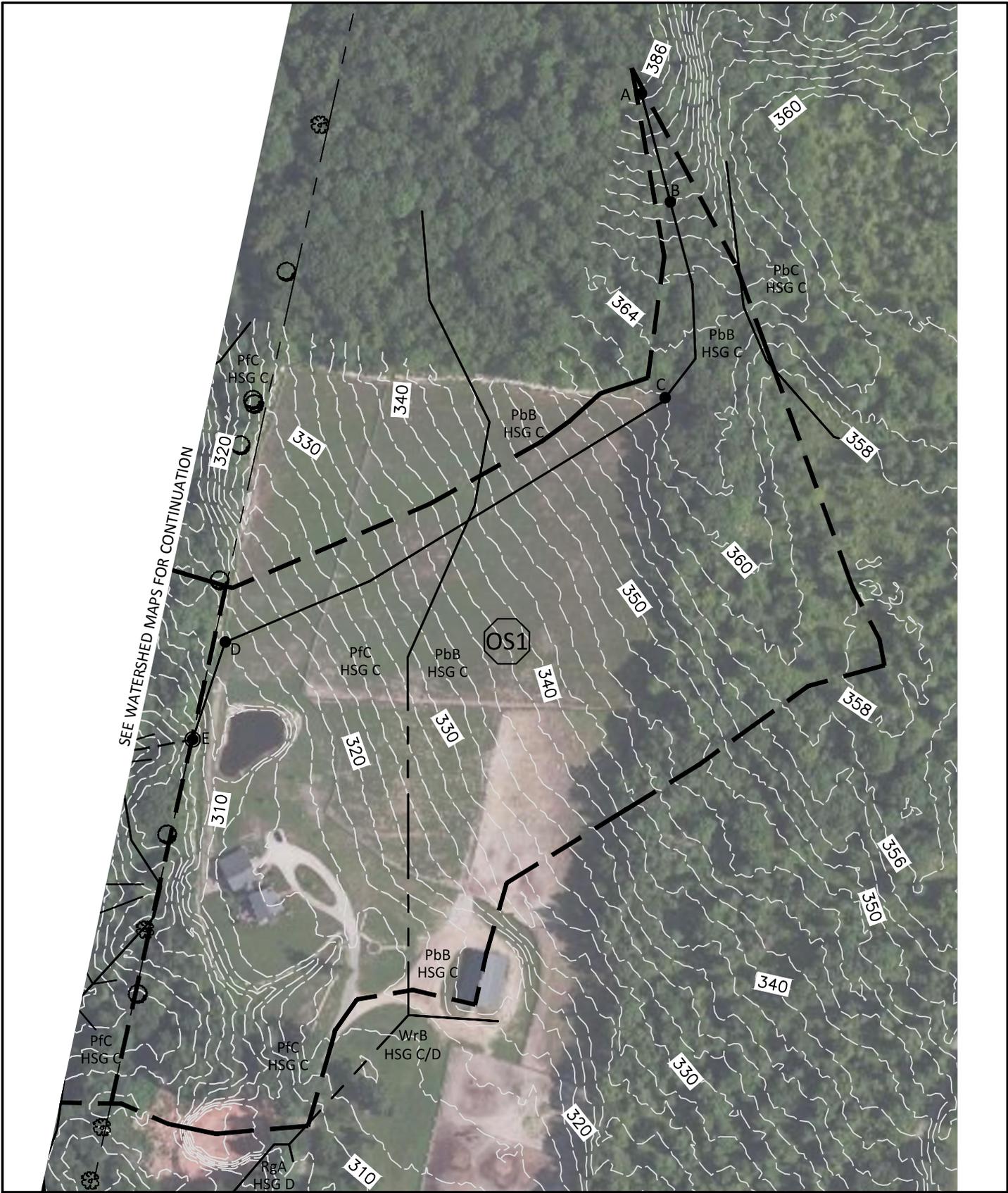


Jayson R. Haskell, P.E.
Project Manager



ATTACHMENT 1

OFFSITE WATERSHED MAP



OFFSITE WATERSHED MAP

BABBIDGE FARMS SUBDIVISION
WINDHAM, MAINE

FOR RECORD OWNER:
SEBAGO HEIGHTS, LLC
97A EXCHANGE STREET, SUITE 304
PORTLAND, MAINE

SCALE: 1"=180'
DATE: 5-25-2017
JOB NUMBER: 15024

DM ROMA

CONSULTING ENGINEERS

59 HARVEST HILL RD
WINDHAM, ME 04062
(207) 310 - 0506

ATTACHMENT 2

PHOSPHOROUS CALCULATIONS

Worksheet 1 - PPB calculations

Project Name: BABBIDGE FARMS SUBDIVISION

Lake Watershed: HIGHLAND LAKE

Town: WINDHAM

Standard Calculations

Watershed per acre phosphorus budget (Appendix C)	PAPB	0.027	lbs P/acre/year
Total acreage of development parcel:	TA	29.73	acres
NWI wetland acreage:	WA	4	acres
Steep slope acreage:	SA	0	acres
Project acreage: $A = TA - (WA + SA)$	A	25.73	acres
Project Phosphorus Budget: $PPB = P \times A$	PPB	0.69471	lbs P/year

Small Watershed Adjustment

If Project Acreage (A) is greater than the threshold acreage for the small watershed threshold (SWT, from pertinent lake and town info in the table in Appendix C), calculate an alternative PPB using the analysis below and use this value if it is less than the the Standard Calculation PPB.

Small Watershed Threshold (Appendix C):	SWT	189	acres
Project acreage:	A	29.73	acres
Allowable increase in town's share of annual phosphorus load to lake (Appendix C):	FC		lbs P/year
Area available for development (Appendix C):	AAD		acres
Ratio of A to AAD ($R=A/AAD$)	R	N/A	

Project Phosphorus Budget

If $R < 0.5$, $PPB = [(FC \times R)/2] + [FC/4]$	PPB	N/A	lbs P/year
If $R > 0.5$, $PPB = FC \times R$	PPB	N/A	lbs P/year

Worksheet 2

Pre-PPE and Post-PPE Calculations

Calculate phosphorus export from development for before and after treatment
 Use as many sheets as needed for each development type (commercial, roads, residential lots, etc.)

Project name: BABBIDGE FARM SUBDIVISION

Development type: RESIDENTIAL

Sheet # 1 **OF** 1

Land Surface Type or Lot #(s) with description	Acres or # of lots	Export Coefficient from Table 3.1 Table 3.2	Pre-treatment Algal Av. P Export (lbs P/year)	Treatment Factor for BMP(s) from Chapter 6	Post-treatment Algal Av. P Export (lbs P/year)	Description of BMPs
Subdivision Road-Treated	0.335	1.25	0.41875	0.32	0.134	Low Export - Filter Basin 1
Subdivision Road-Treated	0.309	1.25	0.38625	0.18	0.069525	Low Export - Filter Basin 2
Subdivision Road-Treated	0.385	1.25	0.48125	0.34	0.163625	Low Export - Filter Basin 3
Subdivision Road-Untreated	0.033	1.25	0.04125	1	0.04125	Low Export
Ditches & Ponds-D-Treated	0.437	0.4	0.1748	0.32	0.055936	Low Export - Filter Basin 1
Ditches & Ponds-C-Treated	0.142	0.3	0.0426	0.18	0.007668	Low Export - Filter Basin 2
Ditches & Ponds-D-Treated	0.308	0.4	0.1232	0.18	0.022176	Low Export - Filter Basin 2
Ditches & Ponds-C-Treated	0.133	0.3	0.0399	0.34	0.013566	Low Export - Filter Basin 3
Ditches & Ponds-D-Treated	0.225	0.4	0.09	0.34	0.0306	Low Export - Filter Basin 3
Road Slopes-C-Treated	0.065	0.3	0.0195	0.2	0.0039	Low Export to Forested Buffer 1
Road Slopes-C-Treated	0.025	0.3	0.0075	0.2	0.0015	Low Export to Forested Buffer 2
Road Slopes-D-Treated	0.03	0.4	0.012	0.33	0.00396	Low Export to Forested Buffer 3
Ditches & Ponds-C-Untreated	0.143	0.3	0.0429	1	0.0429	Low Export - No Treatment
Ditches & Ponds-D-Untreated	0.2	0.4	0.08	1	0.08	Low Export - No Treatment
Lot 1 - D - Treated	1	0.23	0.23	0.19	0.0437	With Restrictions to Bioretention Cell

Lot 2 - D - Treated	1	0.23	0.23	0.23	0.24	0.0552	With Restrictions to Bioretention Cell
Lot 3 - D - Treated	1	0.23	0.23	0.23	0.3	0.069	With Restrictions to Bioretention Cell
Lot 4 - D - Treated	1	0.23	0.23	0.23	0.28	0.0644	With Restrictions to Bioretention Cell
Lots 5 & 6 - C - Treated	2	0.15	0.15	0.3	0.2	0.06	With Restrictions to Forested Buffer 1
Lot 7 - C - Treated	1	0.15	0.15	0.15	0.15	0.0225	With Restrictions-Driveway to Buffer 1-Treated Bio Cell
Lot 8 - C - Treated	1	0.15	0.15	0.15	0.2	0.03	With Restrictions to Forested Buffer 2
Lots 9 & 10 - D - Treated	2	0.18	0.18	0.36	0.33	0.1188	With Restrictions to Forested Buffer 3
Lots 11 thru 13 - D - Treated	3	0.23	0.23	0.69	0.34	0.2346	With Restrictions, No Buffer, to Filter Basins 3
Lots 14 thru 16 - D - Treated	3	0.23	0.23	0.69	0.18	0.1242	With Restrictions, No Buffer, to Filter Basins 2
Lot 17 - C - Treated	1	0.2	0.2	0.2	0.32	0.064	With Restrictions, No Buffer, to Filter Basin 1
		Total Pre-PPE (lbs P/year)	Total Pre-PPE (lbs P/year)	5.4199	Total PostPPE (lbs P/year)	1.557006	

Appendix D: Worksheet 3 - Mitigation credit

Project name: BABBIDGE FARMS SUBDIVISION

Development type: RESIDENTIAL

Sheet # 1 OF 1

Mitigation credit when a pre-existing source is being eliminated

Mitigation Source Area Land Use	Acres	Export Coefficient (lbs P/acre/year)	Modifier	Pre-treatment Historical P Export (lbs P/year)	Treatment Factor for Historical BMP(s) (1.0 if no BMPs)	Historical P Export (lbs P/year)	Treatment Factor for New BMP(s)	Mitigation Credit (lbs P/year)	Comments
Existing Gravel Road	0.104	1.75	0.5	0.091	1	0.091		0.091	
			0.5	0	1	0		0	
			0.5	0	1	0		0	
Total source elimination mitigation credit (SEC)								0.091	lbs P/year

Mitigation credit when a pre-existing source is treated by a new BMP

Mitigation Source Area Land Use	Acres	Export Coefficient (lbs P/acre/year)	Modifier	Pre-treatment Historical P Export (lbs P/year)	Treatment Factor for Historical BMP(s) (1.0 if no BMPs)	Historical P Export (lbs P/year)	Treatment Factor for New BMP(s) Chapter 6	Mitigation Credit (lbs P/year)	Comments
Falmouth Road	0.131	1.75	0.5	0.114625	1	0.114625	1 - 0.38	0.0710675	Filter Basin 1
			0.5	0	1	0	1 -	0	
			0.5	0	1	0	1 -	0	
Total source treatment mitigation credit (STC)								0.0710675	lbs P/year

TOTAL MITIGATION CREDIT (SEC + STC) 0.1620675 lbs P/year

WORKSHEET 4 - PROJECT PHOSPHORUS EXPORT SUMMARY

Summarizing the project's algal available phosphorus export (PPE)

Project Name:

Project Phosphorus Budget - Worksheet 1	PPB	0.69	lbs P/year
Total Pre-Treatment Phosphorus Export - Worksheet 2	Pre-PPE	5.42	lbs P/year
Total Post-Treatment Phosphorus Export - Worksheet 2	Post-PPE	1.56	lbs P/year
Total Phosphorus Mitigation Credit - Worksheet 3	TMC	0.16	lbs P/year
Project Phosphorus Export (Post-PPE - TMC)	PPE	1.39	lbs P/year

Is the Project Phosphorus Export \leq the Project Phosphorus Budget? (PPE \leq PPB)

*If YES, PPE is less than or equal to PPB and the project meets its phosphorus budget.
If NO, PPE is greater than PPB, more reduction in phosphorus export is required or the payment of a compensation fee may be an option*

NO

The amount of phosphorus that needs further treatment or compensation

0.70 lbs P/year

Has Project Phosphorus Export been sufficiently reduced?

Is (Pre-PPE - Post-PPE)/Pre-PPE greater than 0.60?

*If YES, in some watersheds the compensation fee is an available option.
If NO, more treatment must be provided. PPE must be further reduced.*

YES

*The post-treatment phosphorus export must be less than 40% of the pre-treatment export (Post-PPE < 0.4*Pre-PPE)*

71.27 %

If the project is located in a watershed that is eligible for a compensation fee (or is a residential subdivision with buffers), a compensation fee may be appropriate as follows:

If Project Export has been reduced by greater than 60% and less than 75%, \$25,000 per pound minus \$833 per 1% Percent Export

\$10,931

If Project Export has been reduced by greater than 75%, \$12,500 per pound minus \$500 per 1% Project Export

ATTACHMENT 3

BMP SIZING CALCULATIONS

Filter Basin FB-1

Tributary Impervious Area= 27,735 sf (WS-10 & 11 Impervious)
Tributary Landscaped Area= 35,615 sf (WS-10 & 11 Landscaped Area)

Water Quality Volume (WQV) Calculation

WQV (Required) = $1.0 \times \text{Impervious Area} + 0.4 \times \text{Landscaped Area}$

WQV (Required) = 3,498 cf

Stage Storage Volume

Elevation	Area (sf)	Storage (cf)
268	2,525	0
270	4,775	7,300
272	6,760	18,835

Outlet Elevation = 269.50
Storage Volume Provided = 4,416 cf > Required
Total Storage Volume Provided=

Filter Bottom Calculation

Filter Area (Required) = $5\% \times \text{Impervious Area} + 2\% \times \text{Landscaped Area}$

Filter Area Required = 2,099 sf

Filter Area Provided = 2,525 sf > Required

Treatment Factor (Phosphorous Calculations)

TF = $0.4 \times (\text{WQV-Required} / \text{WQV-Provided})$

TF = 0.32

Filter Basin FB-2

Tributary Impervious Area= 17,180 sf (WS-20 & 21 Impervious)
Tributary Landscaped Area= 47,580 sf (WS-20 & 21 Landscaped Area)

Water Quality Volume (WQV) Calculation

WQV (Required) = $1.0 \times \text{Impervious Area} + 0.4 \times \text{Landscaped Area}$

WQV (Required) = 3,018 cf

Stage Storage Volume

Elevation	Area (sf)	Storage (cf)
272.5	1,980	0
274	3,620	4,200
276	5,675	13,495

Outlet Elevation = 274.00
Storage Volume Provided = 4,200 cf > Required
Total Storage Volume Provided=

Filter Bottom Calculation

Filter Area (Required) = $5\% \times \text{Impervious Area} + 2\% \times \text{Landscaped Area}$

Filter Area Required = 1,811 sf

Filter Area Provided = 1,980 sf > Required

Filter Basin 2 Treatment Factor (Phosphorous Calculations)

TF = $0.4 \times (\text{WQV-Required} / \text{WQV-Provided})$

TF = 0.29

Runoff then Tributary to Forested Stormwater Buffer 4

Stormwater Buffer 5 Treatment Factor: 0.40 (See Buffer Sizing Calculations)

BMPs in Series Treatment Factor Calculation

TF(combined) = $\text{TF}(\text{FB2}) * \text{TF}(\text{Buffer})^{0.5}$

TF(combined)= 0.18

Filter Basin FB-3

Tributary Impervious Area= 19,450 sf (WS-30&31 Impervious)
Tributary Landscaped Area= 47,565 sf (WS-30&31 Landscaped Area)

Water Quality Volume (WQV) Calculation

WQV (Required) = 1.0"xImpervious Area + 0.4"xLandscaped Area

WQV (Required) = 3,206 cf

Stage Storage Volume

Elevation	Area (sf)	Storage (cf)
273	1,950	0
274	2,515	2,233
276	3,860	8,608

Outlet Elevation = 274.50
Storage Volume Provided = 3,826 cf > Required
Total Storage Volume Provided=

Filter Bottom Calculation

Filter Area (Required) = 5%xImpervious Area + 2%xLandscaped Area

Filter Area Required = 1,924 sf

Filter Area Provided = 1,950 sf > Required

Treatment Factor (Phosphorous Calculations)

TF = 0.4 (WQV-Required / WQV-Provided)

TF = 0.34

Bioretention Cell BR-1

Tributary Impervious Area= 0 sf (WS-12 Impervious)
Tributary Landscaped Area= 7,585 sf (WS-12 Landscaped Area)

Water Quality Volume (WQV) Calculation

WQV (Required) = 1.0"xImpervious Area + 0.4"xLandscaped Area

WQV (Required) = 253 cf

Stage Storage Volume

Elevation	Area (sf)	Storage (cf)
270.5	270	0
272	1,360	1,223

Storage From Filter Media (1/3 Filter Volume)= 135 cf

Outlet Elevation = 271.00

Storage Volume Above Media= 408 cf

Total Storage Volume Provided= 543 cf > Required

Filter Bottom Calculation

Filter Area (Required) = 7% \times Impervious Area + 3% \times Landscaped Area

Filter Area Required = 228 sf

Filter Area Provided = 270 sf > Required

Treatment Factor (Phosphorous Calculations)

TF = 0.4 (WQV-Required / WQV-Provided)

TF = 0.19

Bioretention Cell BR-2

Tributary Impervious Area= 1,270 sf (WS-13 Impervious)
Tributary Landscaped Area= 7,865 sf (WS-13 Landscaped Area)

Water Quality Volume (WQV) Calculation

WQV (Required) = 1.0"xImpervious Area + 0.4"xLandscaped Area

WQV (Required) = 368 cf

Stage Storage Volume

Elevation	Area (sf)	Storage (cf)
276.5	395	0
278	1,310	1,279

Storage From Filter Media (1/3 Filter Volume)= 198 cf
Outlet Elevation = 277.00
Storage Volume Above Media= 426 cf
Total Storage Volume Provided= 624 cf > Required

Filter Bottom Calculation

Filter Area (Required) = 7%Impervious Area + 3%Landscaped Area

Filter Area Required = 325 sf

Filter Area Provided = 395 sf > Required

Treatment Factor (Phosphorous Calculations)

TF = 0.4 (WQV-Required / WQV-Provided)

TF = 0.24

Bioretention Cell BR-3

Tributary Impervious Area= 1,305 sf (WS-22 Impervious)
Tributary Landscaped Area= 8,575 sf (WS-22 Landscaped Area)

Water Quality Volume (WQV) Calculation

WQV (Required) = 1.0"xImpervious Area + 0.4"xLandscaped Area

WQV (Required) = 395 cf

Stage Storage Volume

Elevation	Area (sf)	Storage (cf)
277	405	0
278	870	638

Storage From Filter Media (1/3 Filter Volume)= 203 cf
Outlet Elevation = 277.50
Storage Volume Above Media= 319 cf
Total Storage Volume Provided= 521 cf > Required

Filter Bottom Calculation

Filter Area (Required) = 7%xImpervious Area + 3%xLandscaped Area

Filter Area Required = 349 sf

Filter Area Provided = 405 sf > Required

Treatment Factor (Phosphorous Calculations)

TF = 0.4 (WQV-Required / WQV-Provided)

TF = 0.30

Bioretention Cell BR-4

Tributary Impervious Area= 775 sf (WS-23 Impervious)
Tributary Landscaped Area= 6,585 sf (WS-23 Landscaped Area)

Water Quality Volume (WQV) Calculation

WQV (Required) = 1.0"xImpervious Area + 0.4"xLandscaped Area

WQV (Required) = 284 cf

Stage Storage Volume

Elevation	Area (sf)	Storage (cf)
277	310	0
278	710	510

Storage From Filter Media (1/3 Filter Volume)= 155 cf
Outlet Elevation = 277.50
Storage Volume Above Media= 255 cf
Total Storage Volume Provided= 410 cf > Required

Filter Bottom Calculation

Filter Area (Required) = 7%xImpervious Area + 3%xLandscaped Area

Filter Area Required = 252 sf

Filter Area Provided = 310 sf > Required

Treatment Factor (Phosphorous Calculations)

TF = 0.4 (WQV-Required / WQV-Provided)

TF = 0.28

Bioretention Cell BR-5

Tributary Impervious Area= 0 sf (WS-33 Impervious)
Tributary Landscaped Area= 3,290 sf (WS-33 Landscaped Area)

Water Quality Volume (WQV) Calculation

WQV (Required) = 1.0"xImpervious Area + 0.4"xLandscaped Area

WQV (Required) = 110 cf

Stage Storage Volume

Elevation	Area (sf)	Storage (cf)
271.8	240	0
272	320	56
273	745	588

Storage From Filter Media (1/3 Filter Volume)= 120 cf
Outlet Elevation = 272.30
Storage Volume Above Media= 216 cf
Total Storage Volume Provided= 336 cf > Required

Filter Bottom Calculation

Filter Area (Required) = 7%xImpervious Area + 3%xLandscaped Area

Filter Area Required = 99 sf

Filter Area Provided = 240 sf > Required

Treatment Factor (Phosphorous Calculations)

TF = 0.4 (WQV-Required / WQV-Provided)

TF = 0.13

TF= 0.15 (Min. TF for Filter BMPs)

Buffer Calculations

All proposed buffers are classified as buffer downgradient of a single family residential lot unless noted

Forested Stormwater Buffer 1

Test Pit: TP-39
Soil: Dixfield
Class: Stony fine sandy loam
HSG: C/D
Required Buffer Length: 50 ft
Provided Buffer Length: 100 ft

Treatment Factor (Phosphorous Calculations)

TF = 0.4 (L-Required / L-Provided)

TF = 0.20

Forested Stormwater Buffer 2

Test Pit: TP-37
Soil: Skerry
Class: Stony fine sandy loam
HSG: C
Required Buffer Length: 50 ft
Provided Buffer Length: 100 ft

Treatment Factor (Phosphorous Calculations)

TF = 0.4 (L-Required / L-Provided)

TF = 0.20

Forested Stormwater Buffer 3

Test Pit: TP-35
Soil: Skerry
Class: Stony sandy loam
HSG: C
Required Buffer Length: 50 ft
Provided Buffer Length: 60 ft

Treatment Factor (Phosphorous Calculations)

TF = 0.4 (L-Required / L-Provided)

TF = 0.33

Forested Stormwater Buffer 4 (with Level Lip Spreader)

Test Pit: TP-39
Soil: Dixfield
Class: Stony fine sandy loam
HSG: C/D
Buffer Length= 150 ft
Berm Length Per Acre Impervious = 90 ft
Berm Length Per Acre Landscape = 30 ft
Required Berm Length: 68 ft
Provided Berm Length: 68 ft

Treatment Factor (Phosphorous Calculations)

TF = 0.4 (L-Required / L-Provided)

TF = 0.40

INSPECTION, MAINTENANCE, AND HOUSEKEEPING PLAN

BABBIDGE FARMS SUBDIVISION WINDHAM, MAINE

Responsible Party

Owner: Sebago Heights, LLC
 97A Exchange Street, Suite 304
 Portland, Maine 04101

The owners are responsible for the maintenance of all stormwater management structures and related site components and the keeping of a maintenance log book with service records until such time that a homeowner's association is created. Records of all inspections and maintenance work performed must be kept on file with the owner and retained for a minimum of five years. The maintenance log will be made available to the Town and Maine Department of Environmental Protection (MDEP) upon request. At a minimum, the maintenance of stormwater management systems will be performed on the prescribed schedule.

The procedures outlined in this plan are provided as a general overview of the anticipated practices to be utilized on this site. In some instances, additional measures may be required due to unexpected conditions. *The Maine Erosion and Sedimentation Control BMP and Stormwater Management for Maine: Best Management Practices* Manuals published by the MDEP should be referenced for additional information.

During Construction

- 1. Inspection and Corrective Action:** It is the contractor's responsibility to comply with the inspection and maintenance procedures outlined in this section. Inspection shall occur on all disturbed and impervious areas, erosion control measures, material storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. These areas shall be inspected at least once a week as well as 24 hours before and after a storm event and prior to completing permanent stabilization measures. A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct the inspections.
- 2. Maintenance:** Erosion controls shall be maintained in effective operating condition until areas are permanently stabilized. If best management practices (BMPs) need to be repaired, the repair work should be initiated upon discovery of the problem but no later than the end of the next workday. If BMPs need to be maintained or modified, additional BMPs are necessary, or other corrective action is needed, implementation must be completed within seven calendar days and prior to any rainfall event.

- 3. Documentation:** A report summarizing the inspections and any corrective action taken must be maintained on site. The log must include the name(s) and qualifications of the person making the inspections; the date(s) of the inspections; and the major observations about the operation and maintenance of erosion and sedimentation controls, materials storage areas, and vehicle access points to the parcel. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and location(s) where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken. The log must be made accessible to MDEP staff, and a copy must be provided upon request. The owner shall retain a copy of the log for a period of at least three years from the completion of permanent stabilization.

Houskeeping

- 1. Spill prevention:** Controls must be used to prevent pollutants from construction and waste materials on site to enter stormwater, which includes storage practices to minimize exposure of the materials to stormwater. The site contractor or operator must develop, and implement as necessary, appropriate spill prevention, containment, and response planning measures.
- 2. Groundwater protection:** During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials. Any project proposing infiltration of stormwater must provide adequate pre-treatment of stormwater prior to discharge of stormwater to the infiltration area, or provide for treatment within the infiltration area, in order to prevent the accumulation of fines, reduction in infiltration rate, and consequent flooding and destabilization.
- 3. Fugitive sediment and dust:** Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control, but other water additives may be considered as needed. A stabilized construction entrance (SCE) should be included to minimize tracking of mud and sediment. If off-site tracking occurs, public roads should be swept immediately and no less than once a week and prior to significant storm events. Operations during dry months, that experience fugitive dust problems, should

wet down unpaved access roads once a week or more frequently as needed with a water additive to suppress fugitive sediment and dust.

4. **Debris and other materials:** Minimize the exposure of construction debris, building and landscaping materials, trash, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials to precipitation and stormwater runoff. These materials must be prevented from becoming a pollutant source.
5. **Excavation de-watering:** Excavation de-watering is the removal of water from trenches, foundations, coffer dams, ponds, and other areas within the construction area that retain water after excavation. In most cases the collected water is heavily silted and hinders correct and safe construction practices. The collected water removed from the ponded area, either through gravity or pumping, must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved by the Department.
6. **Authorized Non-stormwater discharges:** Identify and prevent contamination by non-stormwater discharges. Where allowed non-stormwater discharges exist, they must be identified and steps should be taken to ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge. Authorized non-stormwater discharges are:
 - (a) Discharges from firefighting activity;
 - (b) Fire hydrant flushings;
 - (c) Vehicle washwater if detergents are not used and washing is limited to the exterior of vehicles (engine, undercarriage and transmission washing is prohibited);
 - (d) Dust control runoff in accordance with permit conditions and Appendix (C)(3);
 - (e) Routine external building washdown, not including surface paint removal, that does not involve detergents;
 - (f) Pavement washwater (where spills/leaks of toxic or hazardous materials have not occurred, unless all spilled material had been removed) if detergents are not used;
 - (g) Uncontaminated air conditioning or compressor condensate;
 - (h) Uncontaminated groundwater or spring water;
 - (i) Foundation or footer drain-water where flows are not contaminated;
 - (j) Uncontaminated excavation dewatering (see requirements in Appendix C(5));
 - (k) Potable water sources including waterline flushings; and
 - (l) Landscape irrigation.
7. **Unauthorized non-stormwater discharges:** Approval from the MDEP does not authorize a discharge that is mixed with a source of non-stormwater, other than those discharges

in compliance with Section 6 above. Specifically, the MDEP's approval does not authorize discharges of the following:

- (a) Wastewater from the washout or cleanout of concrete, stucco, paint, form release oils, curing compounds or other construction materials;
- (b) Fuels, oils or other pollutants used in vehicle and equipment operation and maintenance;
- (c) Soaps, solvents, or detergents used in vehicle and equipment washing; and
- (d) Toxic or hazardous substances from a spill or other release.

Post construction

- 1. Inspection and Corrective Action:** All measures must be maintained by the owner in effective operating condition. A person with knowledge of erosion and stormwater control, including the standards and conditions of the permit, shall conduct the inspections. The following areas, facilities, and measures must be inspected, and identified deficiencies must be corrected. Areas, facilities, and measures other than those listed below may also require inspection on a specific site.
 - A. Vegetated Areas:** Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after heavy rains to identify active or potential erosion problems. Replant bare areas or areas with sparse growth. Where rill is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows.
 - B. Ditches, Swales, and Open Channels:** Inspect ditches, swales, and other open channels in the spring, late fall, and after heavy rains to remove any obstructions to flow, remove accumulated sediments and debris, control vegetative growth that could obstruct flow, and repair any erosion of the ditch lining. Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity. Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable. If the ditch has a riprap lining, replace riprap on areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged. The channel must receive adequate routine maintenance to maintain capacity and prevent or correct any erosion of the channel's bottom or side slopes.
 - C. Culverts:** Inspect culverts in the spring, late fall, and after heavy rains to remove any obstructions to flow; remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit; and to repair any erosion damage at the culvert's inlet and outlet.

- D. Buffers:** Wooded buffers must remain fully wooded and have no disturbance to the duff layer. Vegetation in non-wooded buffers may not be cut more than three times per year, and may not be cut shorter than six inches. Stormwater runoff should enter the buffer as sheet flow, and any observed channelization of flows or erosion should be corrected immediately. Activities that may result in disturbance of the duff layer are prohibited in a buffer.
- E. Underdrained Filter Basin and Bioretention Cell:** Basin should be inspected semi-annually and following major storm events for the first year and every six months thereafter. The basin should drain within 48 hours following a one-inch storm and if a larger storm fills the system to overflow, it shall drain within 36 to 60 hours. If ponding exceeds 48 hours, the top of the filter bed must be rototilled to reestablish the soil's filtration capacity. If water ponds on the surface of the bed for more than 72 hours, the top several inches of the filter shall be replaced with fresh material. Inspect for debris and sediment build up in the forebay and basin and remove as needed. Mowing of the basin can only occur semi-annually to a height of no less than 6 inches utilizing a hand-held string trimmer or push-mower. Any bare areas or erosion rills shall be repaired with new filter media or sandy loam then seeded and mulched. The basin should also be inspected annually for destabilization of side slopes, embankment settling and other signs of structural failure.
- F. Roofline Dripedge:** The dripedges should be inspected semi-annually and following major storm events for the first year and every six months thereafter. The reservoir crushed stone should drain within 48 hours following a one-inch storm and if a larger storm fills the system to overflow, it shall drain within 36 to 60 hours. If ponding exceeds 48 hours, the stone reservoir course shall be removed and the filter bed be rototilled to reestablish the soil's filtration capacity. If water ponds in the reservoir course for more than 72 hours, the top several inches of the filter shall be replaced with fresh material. Inspect for debris and sediment build up at surface and remove as needed. The dripedges are part of the stormwater management plan and cannot be paved over or altered in anyway.
- G. Outlet Structure:** Inspect and, if required, clean out structures at least once a year, preferably in early spring. Clean out must include the removal and legal disposal of any accumulated sediments and debris at the bottom of the basin, at any inlet grates, at any inflow channels to the basin, and at any pipes between basins. If the basin outlet is designed to trap floatable materials, then remove the floating debris and any floating oils (using oil-absorptive pads).
- H. Regular Maintenance:** Clear accumulations of winter sand along roadway once a year, preferably in the spring. Accumulations on pavement may be removed by pavement sweeping. Accumulations of sand along pavement shoulders may be

removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader.

- I. **Documentation:** Keep a log (report) summarizing inspections, maintenance, and any corrective actions taken. The log must include the date on which each inspection or maintenance task was performed, a description of the inspection findings or maintenance completed, and the name of the inspector or maintenance personnel performing the task. If a maintenance task requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed after removal. The log must be made accessible to Town staff upon request. The permittee shall retain a copy of the log for a period of at least five years from the completion of permanent stabilization. Attached is a sample log.

Re-certification

Submit a certification of the following to the MDEP within three months of the expiration of each five-year interval from the date of issuance of the permit.

- (a) **Identification and repair of erosion problems.** All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.
- (b) **Inspection and repair of stormwater control system.** All aspects of the stormwater control system have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the system, or portions of the system.
- (c) **Maintenance.** The erosion and stormwater maintenance plan for the site is being implemented as written, or modifications to the plan have been submitted to and approved by the Department, and the maintenance log is being maintained.

Municipalities with separate storm sewer systems regulated under the Maine Pollutant Discharge Elimination System (MPDES) Program may report on all regulated systems under their control as part of their required annual reporting in lieu of separate certification of each system. Municipalities not regulated by the MPDES Program, but that are responsible for maintenance of permitted stormwater systems, may report on multiple stormwater systems in one report.

Duration of Maintenance

Perform maintenance as described.

MAINTENANCE LOG

BABBIDGE FARMS SUBDIVISION WINDHAM, MAINE

The following stormwater management and erosion control items shall be inspected and maintained as prescribed in the Maintenance Plan with recommended frequencies as identified below. The owner is responsible for keeping this maintenance log on file for a minimum of five years and shall provide a copy to the Town and MDEP upon request. Inspections are to be performed by a qualified third party inspector and all corrective actions shall be performed by personnel familiar with stormwater management systems and erosion controls.

Maintenance Item	Maintenance Event	Date Performed	Responsible Personnel	Comments
Vegetated Areas	Inspect slopes and embankments early in Spring.			
Ditches, swales, and other open channels	Inspect after major rainfall event producing 1" of rain in two hours.			
	Inspect for erosion or slumping & repair			
	Mowed at least annually.			
Culverts	Inspect semiannually and after major rainfall.			
	Repair erosion at inlet or outlet of pipe.			
	Repair displaced riprap.			
	Clean accumulated sediment in culverts when >20% full.			
Buffers	Inspect for erosion and channelized flow semiannually.			
	Remove accumulated sediment semiannually.			
	Inspect vegetation cover and reestablish as needed.			

MAINTENANCE LOG
BABBIDGE FARMS SUBDIVISION
WINDHAM, MAINE

Maintenance Item	Maintenance Event	Date Performed	Responsible Personnel	Comments
Underdrained Filter Basin, Bioretention Cells, And Roofline Dripedges	Check after each rainfall event to ensure that pond drains within 24-48 hours.			
	Replace top several inches of filter if pond does not drain within 72 hours.			
	Mow grass no more than twice a year to no less than 6 inches in height.			
	Inspect semi-annually for erosion or sediment accumulation and repair as necessary.			
Outlet Structure	Inspect to ensure that structure is properly draining.			
	Remove accumulated sediment semiannually.			
	Inspect grates/inlets and remove debris as needed.			
Regular Maintenance	Clear accumulation of winter sand in paved areas annually.			