



July 23, 2018

Amanda Lessard, Town Planner
Town of Windham
8 School Road
Windham, ME 04062

**Re: Preliminary Major Subdivision Plan Application-Response to Review Comments
Highland Woods Subdivision
Chris Wilson - Applicant**

Dear Amanda:

On behalf of the applicant, Chris Wilson, DM Roma Consulting Engineers has reviewed the project review comments you shared with me via email on June 13, 2018 and the comments provided by the Town Engineer in an email dated June 14, 2018. In response to your comments, we have revised the plans as necessary and provided the additional information as discussed during the Planning Board meeting and in your comments including an excavation estimate associated with the road and lot development in the rear of the property, a Traffic Study prepared by Traffic Solutions and a Nitrate Assessment prepared by Summit Geoengineering Services. Also included in the Nitrate Assessment are the test pit logs for review.

We had a discussion with Jon Earle with respect to the high intensity soil survey requirement and agreed that it would be reasonable to defer this requirement to Phase 2 when it will be required for the Maine Department of Environmental Protection permitting. Upon your review of this information, please let us know if you have any questions or require any additional information.

Sincerely,

DM ROMA CONSULTING ENGINEERS

Dustin M. Roma

Dustin M. Roma, P.E.
President

HIGHLAND WOODS
ESTIMATES OF EXCAVATION QUANTITIES

AutoCAD Cut and Fill Estimate (Existing Grade VS. Finished Grade)

Cut (CY)	Fill (CY)	
64,890	1,100	63,790 CY Net Cut

Strip/Grub Volume

Surface Area of Volume Calculation =	347,110 sf
Total Depth of Road Section =	1.00 ft
Strip Volume =	12,856 CY

Road Section

Roadway Surface Area =	20,700 sf
Total Depth of Road Section =	2.33 ft
Volume of Road Section =	1,789 CY

Filter Basin Section

Basin Bottom Surface Area =	4,643 sf
Total Depth of Filter Section =	2.50 ft
Volume of Filter Section =	430 CY

Summary

	Cut (CY)	Fill (CY)
Existing Grade vs. Finished Grade	64,890	1,100
Strip Volume	12,856	
Road Section Volume	1,789	
Filter Basin Section Volume	430	
	79,965	1,100
Total	78,865	CY Net Cut



Traffic Solutions
William J. Bray, P.E.
235 Bancroft Street
Portland, ME 04102
(207) 774-3603
(207) 400-6890 mobile
trafficsolutions@maine.rr.com

July 22, 2018

Traffic Assessment

For Proposed

Highland Woods Residential Subdivision

Windham, Maine

INTRODUCTION

Chris Wilson is proposing a twenty-two lot (22) residential subdivision on a 38.43-acre parcel of property located on the east side of Highland Cliff Road in the Town of Windham. Access will be provided with construction of a new town road that intersects Highland Cliff Road south of the Land of Nod Road.

This document determines daily and peak hour trip generation of the proposed project for both peak commuter time periods, examines current roadway safety trends in the general vicinity of the proposed project, and reviews vehicle sight distance.

SITE TRAFFIC

Site Trip Generation: Daily and peak hour trip generation was determined for the proposed project based upon trip tables presented in the ninth edition of the Institute of Transportation Engineers (ITE) “**TRIP GENERATION**” handbook. The ITE publication provides numerous land use categories and the average volume of trips generated by each category.

The following trip rate was used to calculate trip generation for the proposed project:

Land Use #210 – Single-Family Detached Housing

Weekday	= 9.52 trips per dwelling unit
AM Peak Hour	= 0.75 trips per dwelling unit
PM Peak Hour	= 1.00 trips per dwelling unit

Accordingly, the proposed 22 single-family homes can be expected to generate a total of 209 trips during a typical weekday; 17 trips in the morning peak hour and 22 trips in the evening peak hour.

Site Trip Distribution: The Institute of Transportation Engineers handbook also provides the following directional distribution rates for a single-family home:

AM Peak Hour	= 25% enter site and 75% exit site
PM Peak Hour	= 63% enter site and 37% exit site

Based upon the noted directional distribution patterns, 13 trips during the morning peak hour and 8 trips in the evening peak hour will exit the site and the remaining trips (4 AM trip and 14 PM trips) will enter the site.

EXISTING SAFETY CONDITIONS

The Maine Department of Transportation's (MaineDOT) Accident Records Section provided the latest three-year (2015 through 2017) crash data for the full length of Highland Cliff Road between Pope Road and the end of the road, a distance of approximately 3.67 miles. Their report is presented as follows:

2015 -2017 Traffic Accident Summary

<u>Location</u>	<u>Total Crashes</u>	<u>Critical Rate Factor</u>
1. Highland Cliff Road @ Pope Road	1	1.11
2. Highland Cliff Road btw. Montgomery Road and Alweber Road	2	0.77
3. Highland Cliff Road btw. Canada Hill Road and Alweber Road	1	0.63

The MaineDOT considers any roadway intersection or segment a high crash location if both of the following criteria are met:

- ***8 or more accidents***
- ***A Critical Rate Factor greater than 1.00***

As the data presented in the chart shows, there are no high crash locations within the defined study area.

SIGHT DISTANCE

The Maine Department of Transportation's Highway Entrance and Driveway Rules require the following sight distances for a non-mobility roadway:

Sight Distance Standards

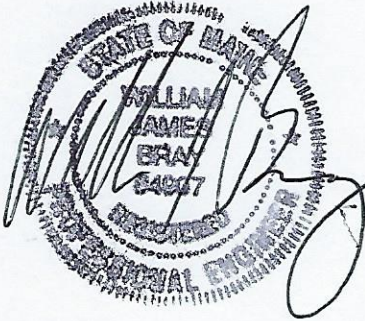
Speed Limit	Sight Distance
25 mph	200 feet
30	250
35	305
40	360
45	425
50	495
55	570

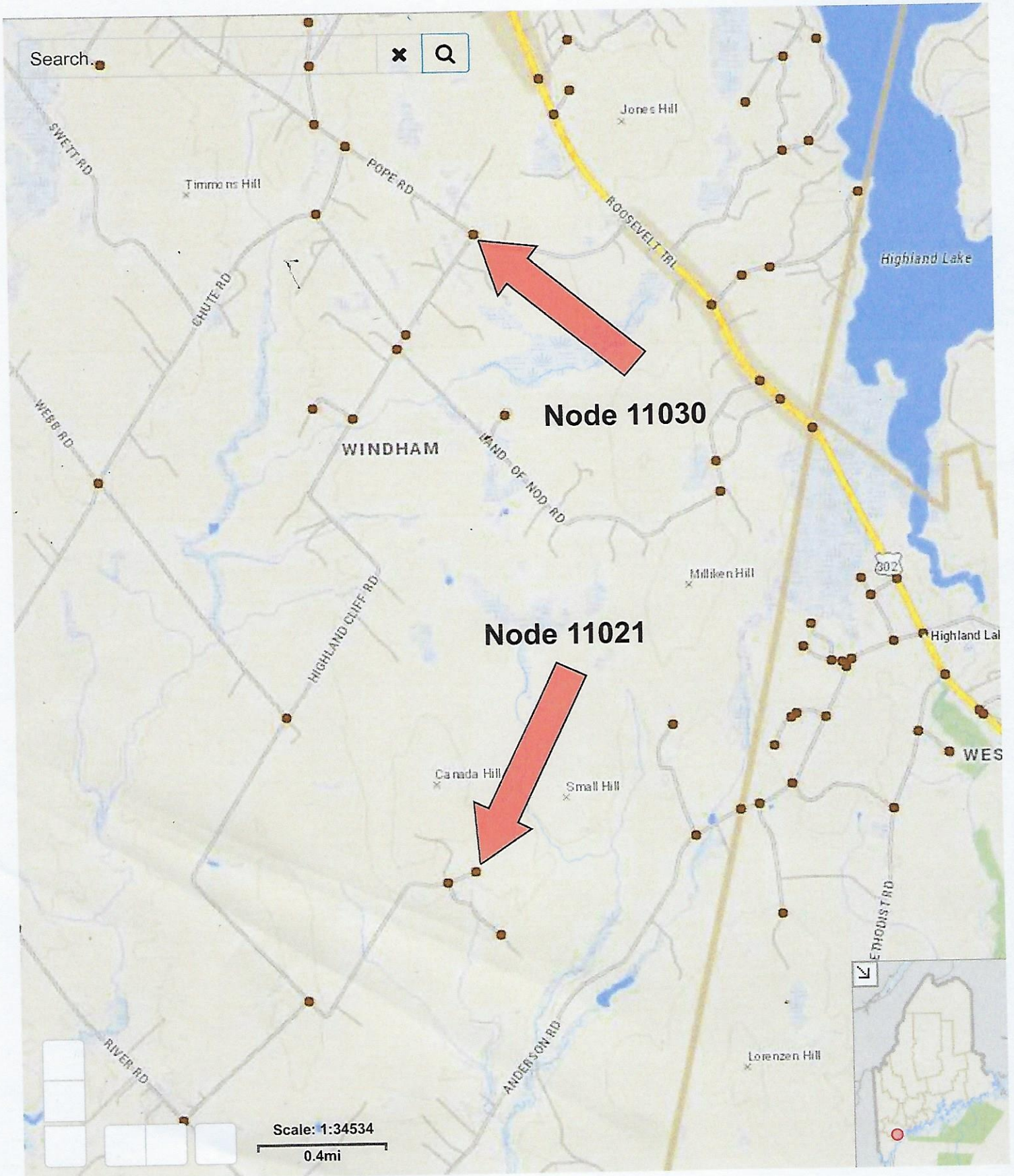
Highland Cliff Road is presently posted at 35mph, which requires an unobstructed sight distance of 305 feet. Field measurements were determined for both directions of travel from the proposed road entrance onto Highland Cliff Road consistent with MaineDOT's standard practices. A clear line-of-sight in excess of 400-feet was measured both left and right from the centerline of the proposed subdivision road.

CONCLUSIONS

- The 22-lot residential subdivision can be expected to generate **209** daily trips; seventeen (**17**) trips in the morning peak hour and **22** trips during the afternoon peak commuter hour.

- The Maine Department of Transportation's most recent three-year (2014 to 2016) accident safety audit shows a total of 4 vehicle crashes have been reported for the full length of Highland Cliff Road.
- Vehicle sightlines measured in both directions from the proposed subdivision entrance onto Highland Cliff Road exceeds, by a considerable distance, the non-mobility highway sight distance standard for a posted speed limit of 35mph.





Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

☒ Crash Summary I ☐ Section Detail ☒ Crash Summary II ☐ 1320 Public ☐ 1320 Private ☐ 1320 Summary

REPORT DESCRIPTION

Windham
Highland Cliff Rd. from Pope Rd. to End of Highland Cliff Rd.

REPORT PARAMETERS

Year 2015, Start Month 1 through Year 2017 End Month: 12

Route: 0500712

Start Node: 11030
End Node: 11021

Start Offset: 0
End Offset: 0

☐ Exclude First Node
☐ Exclude Last Node

Crash Summary I

Nodes																	
Node	Route - MP	Node Description	U/R	Total Crashes	K	A	B	C	PD	Injury	Percent Annual M Ent-Veh	Crash Rate	Critical Rate	CRF			
11030	0500712 - 0	Int of HIGHLAND CLIFF RD, POPE RD	1	1	0	0	0	0	1	0.0	0.545	0.61	0.55	1.11			
											Statewide Crash Rate:	0.13					
11028	0500712 - 0.37	Int of HERMAN COBB RD, HIGHLAND CLIFF RD	1	0	0	0	0	0	0	0.0	0.507	0.00	0.55	0.00			
											Statewide Crash Rate:	0.13					
11027	0500712 - 0.43	Int of HIGHLAND CLIFF RD, LAND OF NOD RD	1	0	0	0	0	0	0	0.0	0.466	0.00	0.56	0.00			
											Statewide Crash Rate:	0.13					
19540	0500712 - 0.67	Int of HIGHLAND CLIFF RD, TUCKER DR	1	0	0	0	0	0	0	0.0	0.260	0.00	0.54	0.00			
											Statewide Crash Rate:	0.13					
11025	0500712 - 1.80	Int of HIGHLAND CLIFF RD, MONTGOMERY RD	1	0	0	0	0	0	0	0.0	0.190	0.00	0.48	0.00			
											Statewide Crash Rate:	0.13					
11020	0500712 - 2.90	Int of AL WEBER RD, HIGHLAND CLIFF RD	1	0	0	0	0	0	0	0.0	0.202	0.00	0.50	0.00			
											Statewide Crash Rate:	0.13					
18152	0500712 - 3.58	Int of CANADA HILL RD, HIGHLAND CLIFF RD	1	0	0	0	0	0	0	0.0	0.062	0.00	-0.39	0.00			
											Statewide Crash Rate:	0.13					
11021	0500712 - 3.67	End of HIGHLAND CLIFF RD	1	0	0	0	0	0	0	0.0	0.006	0.00	-20.63	0.00			
											Statewide Crash Rate:	0.13					
Study Years: 3.00			NODE TOTALS:											2.238	0.15	0.42	0.36

Crash Summary I

Sections																	
Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	Section U/R	Total Crashes	K	A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
11028	11030	184838	0 - 0.37	0500712 - 0	0.37	1	0	0	0	0	0	0	0.0	0.00192	0.00	662.78	0.00
				RD INV 05 00712												Statewide Crash Rate: 232.07	
11027	11028	184835	0 - 0.06	0500712 - 0.37	0.06	1	0	0	0	0	0	0	0.0	0.00026	0.00	995.79	0.00
				RD INV 05 00712												Statewide Crash Rate: 232.07	
11027	19540	184837	0 - 0.24	0500712 - 0.43	0.24	1	0	0	0	0	0	0	0.0	0.00078	0.00	828.43	0.00
				RD INV 05 00712												Statewide Crash Rate: 232.07	
11025	19540	184831	0 - 1.13	0500712 - 0.67	1.13	1	0	0	0	0	0	0	0.0	0.00197	0.00	657.80	0.00
				RD INV 05 00712												Statewide Crash Rate: 232.07	
11020	11025	184822	0 - 1.10	0500712 - 1.80	1.10	1	2	0	0	0	1	1	50.0	0.00115	578.55	754.87	0.00
				RD INV 05 00712												Statewide Crash Rate: 232.07	
11020	18152	184824	0 - 0.68	0500712 - 2.90	0.68	1	1	0	0	0	0	0	0.0	0.00061	548.16	876.77	0.00
				RD INV 05 00712												Statewide Crash Rate: 232.07	
11021	18152	2036610	0 - 0.09	0500712 - 3.58	0.09	1	0	0	0	0	0	0	0.0	0.00001	0.00	-8261.08	0.00
				RD INV 05 00712												Statewide Crash Rate: 232.07	
Study Years: 3.00					3.67		3	0	0	0	1	1	33.3	0.00670	149.16	483.92	0.31
Grand Totals:					3.67		4	0	0	0	1	2	25.0	0.00670	198.88	522.41	0.38

July 23, 2018

Summit #18243

Dustin Roma, P.E.
DM Roma Consulting Engineers
PO Box 1116
Windham, ME 04062

Reference: Nitrate-Nitrogen Assessment
Proposed Highland Woods Subdivision
Highland Cliff Road, Windham, Maine

Dear Dustin:

Summit Geoengineering Services (SGS) performed this nitrate-nitrogen assessment to estimate the groundwater quality impact caused by the proposed subsurface wastewater disposal systems for the Highland Wood Subdivision. The proposed residential cluster subdivision consists of twenty-two lots on approximately 40-acres of forestland located on the east side of Highland Cliff Road in Windham, Maine. A site location map showing the site and vicinity is provided as Attachment 1.

Information used for our evaluation includes a subdivision plan provided by DM Roma Consulting Engineers (DM Roma), soils test pit logs, and published geologic maps and literature. The subdivision plan includes the location of property lines, nearby off-site drinking water wells, wetlands, existing grade contours, and soil test pits. Soil test pit logs by Alex A. Finamore (LSE #391) are provided as Attachment 2.

Disposal Fields and Water Wells

Each of the house lots will be developed with a 3-bedroom home served by an individual on-site drilled bedrock well and a subsurface wastewater disposal field (septic system). The septic system and well on each lot will be permitted and constructed in accordance with the State of Maine Subsurface Wastewater Disposal Rules (10-144 CMR 241) and the Well Drillers and Pump Installer Rules (10-144A CMR 232).

Proposed disposal fields shown on the subdivision plan include conventional stone bed and plastic chamber disposal fields with a design flow of 270 gallons per day. Stone bed disposal fields measuring 15 feet by 45 feet are proposed at locations on sandy (5C) soils. Plastic chamber disposal fields measuring 15 to 21 feet wide and 38 feet long are proposed at locations on silty (7C/8C) soils. Disposal fields constructed with plastic chambers (or similar proprietary devices) are approximately half the size of a stone bed and are proposed for lots where silty soils are present to maximize the area on each lot meeting the standard 100-foot setback from proposed disposal fields.

Site Setting

Surface water drainage is generally from east to west from a topographic high on the eastern property boundary toward Colley Wright Brook located 0.3 miles east of Highland Cliff Road. Review of Maine Geological Survey maps¹ indicate the surficial geology at the site and vicinity is mapped as an end-moraine complex, and no mapped significant sand and gravel aquifers are located within approximately 3 miles of the property. End moraine complexes consist of coarse gravel, sand, till and silt that was deposited at or near the ice front of a retreated marine-based glacier.

Soil test pit logs show that sand and loamy sand soils underly the hill on the east side of the property, and fine sandy loam soils with a silt loam hardpan are present at lower elevations on the western portions of the property.

Based on a review of soil test pit logs, geological maps, surface topography, and observations made during the site visit, the silty surficial materials occurring at lower elevations of the property likely extend beneath the sandy outwash deposits located on the hill on the east side of the property. A portion of this outwash deposit has been excavated on the property to the north to the elevation roughly coincident with the broad forested wetland in the center of the site.

Based on our understanding of site geology and topography, the shallow groundwater flow direction is estimated to be downhill and toward wetland areas. The hydraulic gradient in areas underlain by fine sandy loam to silt loam soils (i.e., the western half of the site) is estimated to be half of the average topographic gradient upgradient/downgradient of the disposal field. The hydraulic gradient in areas underlain by sandy soils (i.e., the eastern half of the site) is estimated to be 0.01 (1%) based on best professional judgment.

Nitrate-Nitrogen Assessment

A nitrate-nitrogen assessment was performed to estimate the distance from the disposal fields at which the concentration in groundwater would reach the Federal National Primary Drinking Water Standard and the Maine Maximum Exposure Guideline of 10 milligrams nitrogen per liter (mg-N/L). The average concentration of nitrate in septic tank effluent discharged from the disposal field used in this assessment is 40 mg-N/L.² Septic tank effluent will drain to the disposal field and infiltrate downward through unsaturated soil until a permanent or seasonally perched groundwater table is encountered. Thereupon flow is lateral and hydraulically downgradient.

The distance at which groundwater downgradient of the disposal field reaches 10 mg-N/L (plume length) was estimated using a three-dimensional analytical solution^{3,4} for a point source in a uniform flow field. Variables used for the calculations include the permeability and effective porosity of soils, groundwater seepage velocity, and the daily mass of nitrate-nitrogen applied to groundwater. No

¹ <https://www.maine.gov/dacf/mgs/pubs/index.shtml>

² MEDEP, Site Location of Development Permit Application (October 2015) Section 17.B.2.(a).

³ Baetsle, L.H. (1969), Migration of Radionuclides in Porous Media; Progress in Nuclear Energy, Series SIL, Health Physics. Pergamon Press, pp. 707-730.

⁴ Chang, et al. (1998). Utilizing Baetsle's Equation to Model the Fate and Transport of MTBE in Groundwater, Proceedings of the Petroleum Hydrocarbons and Organic Chemicals in Ground Water Prevention, Detection, and Remediation Conference, Houston, TX.

allowance for nitrogen removal by soil microbes, vegetation or sorption is included in the plume length calculations as a conservative measure.

The three-dimensional analytical solution was adapted to simulate a 40-foot-long linear source area (disposal field) by assuming the direction of groundwater flow is perpendicular to the length of the field and calculating the additive effects of injecting nitrate-nitrogen into groundwater at 5-point sources located 10 feet apart along the downgradient side of the disposal field. For each point source, the steady state nitrate concentration was calculated for a regularly-spaced grid of points (point cloud) extending 5 feet apart along the plume center line to a distance of 300 feet, and at points located 5 feet apart extending cross gradient from the plume center line to a distance of 125 feet. The additive effects of each point source were then calculated by superimposing the point clouds, adding concentration values, and using data for points along the plume center line to determine the estimated plume length. In areas where disposal fields are located in close proximity and downgradient/upgradient from one another, the additive effects of multiple linear sources were simulated using the same methodology. The 10 mg-N/L nitrate plume lengths were calculated based on an assumed background nitrate concentration of 2 mg-N/L.

The treatment capacity of wetlands to remove nitrogen from groundwater through plant uptake and microbial activity is significant. Research⁵ into the capacity of planted and unplanted wetlands to remove nitrogen show nitrogen removal rates in excess of 95% for planted wetlands and removal rates of 25% to 36% in unplanted (natural) wetlands. Using the 25% nitrate removal rate in Lin et. al. (2002) a wetland area nitrate removal rate of 0.0825 grams per square meter is calculated. The wetland area required to treat the daily mass of nitrate associated with a septic system serving a 3-bedroom home is calculated to be 5,335 square feet. In instances where the nitrate plume for a disposal field intersects a mapped wetland area prior the reaching 10 mg-N/L, the wetland's capacity to provide nitrate removal was evaluated.

The permeability of site soils was estimated using values listed in the Cumberland County Soil Survey.⁶ The permeability of fine sandy loam to silt loam soils is estimated to be 0.8 feet per day (ft/day) based on the range of permeabilities for Buxton silt loam (0.4 to 4.0 ft/day). The permeability of sandy soils is estimated to be 4 ft/day based on the range of permeabilities for Deerfield loamy sand (4.0 to > 12.6 ft/day). The effective porosity for the fine sandy loam to silt loam soils, and the sandy soils, is estimated based on published⁷ average values for silt (0.18) and fine sand (0.21).

The table below summarizes the results of our nitrate-nitrogen assessment. It includes the calculated estimated 10 mg-N/L plume length for each disposal field, notes regarding calculation methods for specific lots, along with proposed disposal field size and soils information at each location.

⁵ Lin, et. al. (2002), Effects of macrophytes and external carbon sources on nitrate removal from groundwater in constructed wetlands. *Environmental Pollution*, v. 119, pp. 413-420.

⁶ USDA Soil Conservation Services (1974), *Soil Survey of Cumberland County, Maine*.

⁷ Fetter, C.W. (1994). *Applied Hydrogeology*, 3rd Edition, Prentice Hall

Lot Nos.	10 mg-N/L Plume Length	Disposal Field Size / Type	Soil Profile & Drainage Condition
1	94 feet	21' x 38' Plastic Chambers	8C
2	130 feet downslope of Lot 1 disposal field (see Note 1)	21' x 38' Plastic Chambers	8C
3		21' x 38' Plastic Chambers	8/7C
4		21' x 38' Plastic Chambers	8C
5, 6, 7		21' x 38' Plastic Chambers	8C
8,9,10,11, 12	Ends at Wetland Boundary (see Note 2)	15' x 45' Stone Bed	5C or 7C
13	70 feet	15' x 45' Stone Bed	5C
14	70 feet	15' x 38' Plastic Chambers	5/7C
15	94 feet	21' x 38' Plastic Chambers	7/8C
16	70 feet	15' x 45' Stone Bed	5C or 7C
17, 18, 19, 20, 21, 22	70 feet	15' x 45' Stone Bed	5C

Notes:

1. The Lot 1 disposal field is directly downgradient of the disposal fields on Lots 2 and 3. The additive effects posed by the layout were simulated using three linear source areas spaced along the plume center line at distances approximated using the proposed layout.
2. Approximately 20,000 square feet of wetland is present downgradient of the disposal fields on lots 5 and 6, while the area of wetland downgradient of the disposal fields on the remaining lots indicated above far exceeds the 5,335 square feet of wetland required to treat a single three-bedroom septic system. The nitrate plumes for these systems are shown as terminating at the wetland boundary.
3. Soil test pit information is not available for the proposed disposal fields for Lots 8, 9, 10, 11, 12 and 16. The soils are assumed to be either 5C or 7C soils based on best professional judgment. Disposal fields depicted on the subdivision plan are based on an assumed 5C (sand) soil profile.

Water Supply Wells

SGS recommends that water supply wells for each lot be drilled bedrock wells installed outside of the well exclusion area shown on the enclosed subdivision plan prepared by DM Roma (Attachment C). The well exclusion area includes the 10 mg-N/L plume area associated with each disposal field and 100-foot setback area around each disposal field. The well exclusion zones are approximate, as the location and size/type of disposal fields constructed may vary from those shown.

There are areas on each lot located outside of the well exclusion zone(s) shown. However, the area for placement of a water supply well meeting the 100-foot disposal field setback is relatively small on several lots (e.g. Lots 1 and 7). In the event that a water supply well needs to be installed within a well exclusion area (< 100 feet from a disposal field), it shall be located outside the 10 mg-N/L plumes shown and topographically cross gradient or upgradient of the other proposed disposal field areas shown. Furthermore, the length of casing below the ground surface shall be increased in accordance with reduced setback criteria listed in Maine Subsurface Wastewater Rules (the same criteria are listed in the Maine Well Driller and Pump Installer Rules). Unless there is no reasonable alternative, significant changes to the proposed disposal field locations should not be made to avoid conflicts during subdivision build out.

Conclusion:

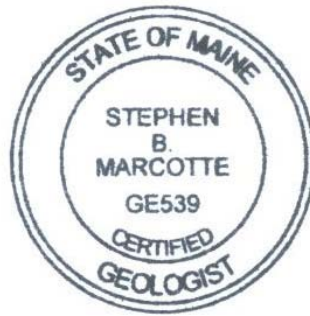
The proposed subsurface wastewater disposal systems will not result in an increase of nitrate-nitrogen above 10 mg/L in groundwater at the property boundary.

Our findings are based on our interpretation of site conditions and the information provided to us. If there are changes in lot layout, proposed septic system design flows, or significant changes in disposal field size, we request the opportunity to review the changes and conduct further analysis as necessary to confirm the changes do not alter our conclusions.

Sincerely yours,
Summit Geoengineering Services



Stephen B. Marcotte, P.G.
Senior Geologist

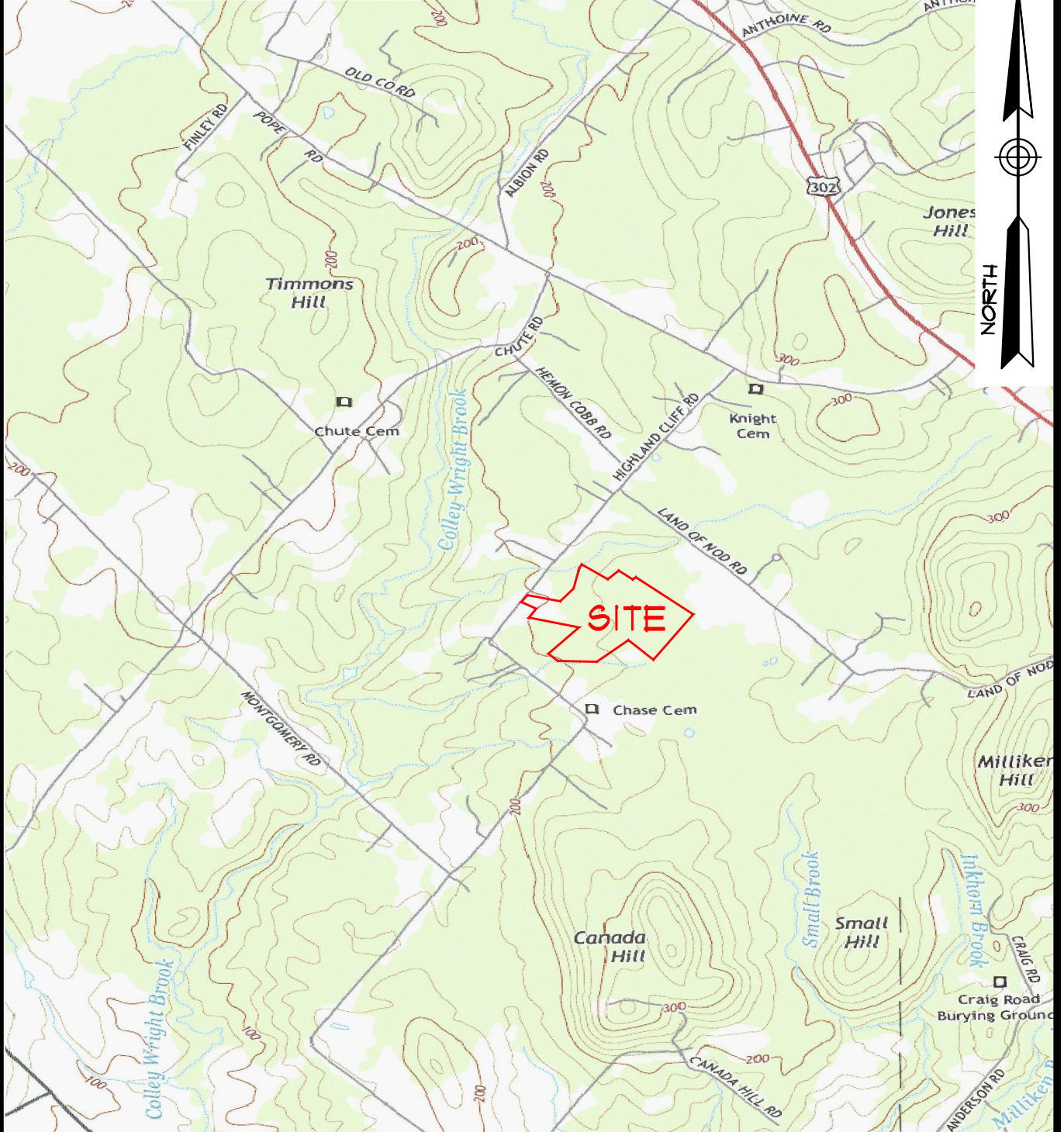


Enclosures

Attachment 1: Site Location Map

PLAN REFERENCE

USGS TOPOGRAPHIC MAP FOR GORHAM,
MAINE 7.5-MINUTE QUADRANGLE



SITE LOCATION PLAN HIGHLAND WOOD SUBDIVISION

HIGHLAND CLIFF ROAD - WINDHAM, ME
PREPARED FOR

DM ROMA CONSULTING ENGINEERS

DATE: 7-23-2018	DRAWN BY: SBM	CHECKED BY: WMP
JOB: 18243	SCALE: 1" = 2000'	FILE: 18243 MAP

145 LISBON ST. - SUITE 101
LEWISTON, ME 04240
Tel.: (207) 576-3313

173 PLEASANT STREET
ROCKLAND, ME 04841
Tel.: (207) 318-7761

SUMMIT
GEOENGINEERING SERVICES
www.summitgeoeng.com

Attachment 2: Soil Test Pit Logs

FORM F

SOIL PROFILE/CLASSIFICATION INFORMATION

Detailed Description of Subsurface Conditions at Project Sites

Project Name:

Annie's Way Subdivision

Applicant Name:

MTR Development, LLC

Project Location (municipality):

Windham

SOIL DESCRIPTION AND CLASSIFICATION

Exploration Symbol:

TP-1

☒

Test Pit

☐

Boring

0 " Depth of Organic Horizon Above Mineral Soil

Texture

Consistency

Color

Mottling

VERY FINE SANDY LOAM

FRIABLE

DARK BROWN

NONE OBSERVED

SILT LOAM

YELLOWISH BROWN

SOMEWHAT FIRM

GRAYISH BROWN

FEW, FINE, & FAINT

COMMON, MEDIUM, & DISTINCT

LIMIT OF EXCAVATION = 30"

hydic

non-hydric

Slope %

0-3

Limiting factor

18"

ground water

restrictive layer

bedrock

c.s.s.

Soil Series / phase name:

Drainage Class

Hydrologic Group

L.S.E.

Soil Classification:

8

C

Profile

Soil Condition

SOIL DESCRIPTION AND CLASSIFICATION

Exploration Symbol:

TP-3

☒

Test Pit

☐

Boring

0 " Depth of Organic Horizon Above Mineral Soil

Texture

Consistency

Color

Mottling

VERY FINE SANDY LOAM

FRIABLE

DARK BROWN

NONE OBSERVED

SILT LOAM

DARK YELLOWISH BROWN

LOAMY SAND

GRAYISH BROWN

COMMON, MEDIUM, & DISTINCT

LIMIT OF EXCAVATION = 37"

hydic

non-hydric

Slope %

0-3

Limiting factor

25"

ground water

restrictive layer

bedrock

c.s.s.

Soil Series / phase name:

Drainage Class

Hydrologic Group

L.S.E.

Soil Classification:

8/7

C

Profile

Soil Condition

SOIL DESCRIPTION AND CLASSIFICATION

Exploration Symbol:

TP-2

☒

Test Pit

☐

Boring

0 " Depth of Organic Horizon Above Mineral Soil

Texture

Consistency

Color

Mottling

VERY FINE SANDY LOAM

FRIABLE

DARK BROWN

NONE OBSERVED

YELLOWISH BROWN

SILT LOAM

LIGHT OLIVE BROWN

SOMEWHAT FIRM

GRAYISH BROWN

FEW, FINE, & FAINT

LIMIT OF EXCAVATION = 30"

hydic

non-hydric

Slope %

0-3

Limiting factor

19"

ground water

restrictive layer

bedrock

c.s.s.

Soil Series / phase name:

Drainage Class

Hydrologic Group

L.S.E.

Soil Classification:

8

C

Profile

Soil Condition

SOIL DESCRIPTION AND CLASSIFICATION

Exploration Symbol:

TP-4

☒

Test Pit

☐

Boring

0 " Depth of Organic Horizon Above Mineral Soil

Texture

Consistency

Color

Mottling

VERY FINE SANDY LOAM

FRIABLE

DARK BROWN

NONE OBSERVED

YELLOWISH BROWN

SILT LOAM

LIGHT OLIVE BROWN

SOMEWHAT FIRM

GRAYISH BROWN

FEW, FINE, & FAINT

LIMIT OF EXCAVATION = 30"

hydic

non-hydric

Slope %

0-3

Limiting factor

24"

ground water

restrictive layer

bedrock

c.s.s.

Soil Series / phase name:

Drainage Class

Hydrologic Group

L.S.E.

Soil Classification:

8

C

Profile

Soil Condition

Professional Endorsements (as applicable)

C.S.S.

signature:


Date:

name printed/typed:

Lic.#:

L.S.E.

signature:



Date:

6/8/18

name printed/typed:

Alexander A. Finamore

Lic.#:

391

SOIL PROFILE/CLASSIFICATION INFORMATION

Detailed Description of Subsurface Conditions at Project Sites


Project Name:	Applicant Name:	Project Location (municipality):
Annie's Way Subdivision	MTR Development, LLC	Windham

SOIL DESCRIPTION AND CLASSIFICATION				
Exploration Symbol: <u>TP-5</u> <input checked="" type="checkbox"/>		Test Pit <input type="checkbox"/>		Boring
<u>0</u> " Depth of Organic Horizon Above Mineral Soil				
0	Texture	Consistency	Color	Mottling
1	FINE SANDY LOAM	FRIABLE	DARK BROWN	NONE OBSERVED
2				
3				
4				
5				
6			DARK YELLOWISH BROWN	
7				
8				
9				
10				
12				
14				
17			BROWN	
18				
20	SILT LOAM		GRAY	COMMON, MEDIUM, & DISTINCT
26				
30				
	LIMIT OF EXCAVATION = 30"			
40				
48				
50				
60				
<input type="checkbox"/>	hydric	Slope %	Limiting factor	<input checked="" type="checkbox"/> ground water
<input checked="" type="checkbox"/>	non-hydric	<u>0-3</u>	<u>17"</u>	<input type="checkbox"/> restrictive layer
				<input type="checkbox"/> bedrock

C.S.S.	Soil Series / phase name:	_____	_____
		Drainage Class	Hydrologic Group
L.S.E.	Soil Classification:	<u>8</u>	<u>C</u>
		Profile	Soil Condition

SOIL DESCRIPTION AND CLASSIFICATION					
Exploration Symbol: <u>TP-7</u>		<input checked="" type="checkbox"/> Test Pit	<input type="checkbox"/> Boring		
<u>0</u> " Depth of Organic Horizon Above Mineral Soil					
DEPTH BELOW MINERAL SOIL SURFACE (Inches)	0	Texture	Consistency	Color	Mottling
	1	VERY FINE SANDY LOAM	FRIABLE	DARK BROWN	NONE OBSERVED
	2				
	3				
	4				
	5			DARK YELLOWISH BROWN	
	6				
	7				
	8				
	9				
	10				
	12				
	15				
	16	SILT LOAM			
	18				
	20				
	25				
25		FIRM	GRAY	COMMON, MEDIUM, & DISTINCT	
30					
LIMIT OF EXCAVATION = 30"					
37					
40					
48					
50					
60					
<input type="checkbox"/> hydric <input checked="" type="checkbox"/> non-hydric	Slope % <u>0-3</u>	Limiting factor <u>18"</u>	<input checked="" type="checkbox"/> ground water <input type="checkbox"/> restrictive layer <input type="checkbox"/> bedrock		

C.S.S.	Soil Series / phase name:	_____	_____
		Drainage Class	Hydrologic Group
L.S.E.	Soil Classification:	<u>8</u>	<u>C</u>
		Profile	Soil Condition

Professional Endorsements (as applicable)		
C.S.S.	signature:	Date:
	name printed/typed:	Lic.#:
L.S.E.	signature: 	Date: 6/8/18
	name printed/typed: Alexander A. Finamore	Lic.#: 391

SOIL DESCRIPTION AND CLASSIFICATION				
Exploration Symbol: <u>TP-6</u>		<input checked="" type="checkbox"/> Test Pit	<input type="checkbox"/> Boring	
<u>0</u> " Depth of Organic Horizon Above Mineral Soil				
0	Texture	Consistency	Color	Mottling
1	VERY FINE SANDY LOAM	FRIABLE	DARK BROWN	NONE OBSERVED
2				
3				
4				
5			BROWN	
6				
7				
8				
9				
10				
12				
13				
16				
18	SILT LOAM			
20		FIRM	GRAY	COMMON, MEDIUM, & DISTINCT
30				
LIMIT OF EXCAVATION = 30"				
40				
50				
60				
<input type="checkbox"/> hydric <input checked="" type="checkbox"/> non-hydric	Slope % <u>0-3</u>	Limiting factor <u>18"</u>	<input checked="" type="checkbox"/> ground water <input type="checkbox"/> restrictive layer <input type="checkbox"/> bedrock	

C.S.S.	Soil Series / phase name:	_____	_____
		Drainage Class	Hydrologic Group
L.S.E.	Soil Classification:	8	C
		Profile	Soil Condition

SOIL DESCRIPTION AND CLASSIFICATION				
Exploration Symbol: TP-8 <input checked="" type="checkbox"/> Test Pit <input type="checkbox"/> Boring		0 " Depth of Organic Horizon Above Mineral Soil		
0	Texture	Consistency	Color	Mottling
1	SILT LOAM	FRIABLE	DARK BROWN	NONE OBSERVED
2				
3				
4				
5	FINE SANDY LOAM		BROWN	
6				
7				
8				
9				
10				
12				
14				
16			DARK YELLOWISH BROWN	
18				
20				
22				
24	LOAMY SAND		LIGHT YELLOWISH BROWN	
26				
28				
30				
32				
34				
36				
38				
LIMIT OF EXCAVATION = 34"				
40				
48				
50				
60				
<input type="checkbox"/> hydric <input checked="" type="checkbox"/> non-hydric		Slope % <u>0-3</u>	Limiting factor <u>>34"</u>	<input type="checkbox"/> ground water <input type="checkbox"/> restrictive layer <input type="checkbox"/> bedrock

C.S.S.	Soil Series / phase name:	_____	_____
		Drainage Class	Hydrologic Group
L.S.E.	Soil Classification:	<u>7</u>	<u>C</u>
		Profile	Soil Condition


SOIL PROFILE/CLASSIFICATION INFORMATION

Detailed Description of Subsurface Conditions at Project Sites

Project Name:	Applicant Name:	Project Location (municipality):
Annie's Way Subdivision	MTR Development, LLC	Windham

SOIL DESCRIPTION AND CLASSIFICATION				
Exploration Symbol: <u>TP-9</u> <input checked="" type="checkbox"/> Test Pit <input type="checkbox"/> Boring		0 " Depth of Organic Horizon Above Mineral Soil		
0	Texture	Consistency	Color	Mottling
1	FINE SANDY LOAM	FRIABLE	DARK BROWN	NONE OBSERVED
2				
3				
4				
5				
6				
7				
8				
9				
10				
12				
14				
16				
18				
20				
22	LOAMY SAND	LOOSE	LIGHT YELLOWISH BROWN	
24				
26				
28				
30				
LIMIT OF EXCAVATION = 30"				
32				
34				
36				
38				
40				
42				
44				
46				
48				
50				
52				
54				
56				
58				
60				
<input type="checkbox"/> hydric <input checked="" type="checkbox"/> non-hydric	Slope % <u>0-3</u>	Limiting factor <u>>30"</u>	<input type="checkbox"/> ground water <input type="checkbox"/> restrictive layer <input type="checkbox"/> bedrock	
C.S.S.	Soil Series / phase name:		Drainage Class	Hydrologic Group
L.S.E.	Soil Classification:	<u>5</u> Profile	<u>C</u> Soil Condition	

SOIL DESCRIPTION AND CLASSIFICATION					
Exploration Symbol: TP-11		<input checked="" type="checkbox"/> Test Pit	<input type="checkbox"/> Boring		
0" Depth of Organic Horizon Above Mineral Soil					
DEPTH BELOW MINERAL SOIL SURFACE (Inches)	0	Texture	Consistency	Color	Mottling
	1	SANDY LOAM	FRIABLE	DARK BROWN	NONE OBSERVED
	2				
	3				
	4				
	5			BROWN	
	6				
	7				
	8				
	9				
	10				
	12			DARK YELLOWISH BROWN	
	15				
	16				
	18				
	20				
	25	LOAMY FINE SAND		LIGHT YELLOWISH BROWN	
	30				
	LIMIT OF EXCAVATION = 30"				
	37				
40					
48					
50					
60					
<input type="checkbox"/> hydric <input checked="" type="checkbox"/> non-hydric		Slope % 0-3	Limiting factor >30"	<input type="checkbox"/> ground water <input type="checkbox"/> restrictive layer <input type="checkbox"/> bedrock	
C.S.S.	Soil Series / phase name:		Drainage Class	Hydrologic Group	
L.S.E.	Soil Classification:		Profile	Soil Condition	

Professional Endorsements (as applicable)		
C.S.S.	signature:	Date:
	name printed/taped:	Lic.#:
L.S.E.	signature: 	Date: 6/8/18
	name printed/taped: Alexander A. Finamore	Lic.#: 391

SOIL DESCRIPTION AND CLASSIFICATION				
Exploration Symbol: <u>TP-10</u> <input checked="" type="checkbox"/>		Test Pit <input type="checkbox"/>		Boring
<u>0</u> " Depth of Organic Horizon Above Mineral Soil				
0	Texture	Consistency	Color	Mottling
1	FINE SANDY LOAM	FRIABLE	DARK BROWN	NONE OBSERVED
2				
3				
4				
5				
6				
7				
8				
9				
10				
12				
13				
16				
18				
20				
	LOAMY SAND	LOOSE	LIGHT YELLOWISH BROWN	
30				
LIMIT OF EXCAVATION = 30"				
40				
50				
60				
<input type="checkbox"/> hydric <input checked="" type="checkbox"/> non-hydric	Slope % <u>0-3</u>	Limiting factor <u>>30"</u>	<input type="checkbox"/> ground water <input checked="" type="checkbox"/> restrictive layer <input type="checkbox"/> bedrock	
C.S.S.	Soil Series / phase name: _____			
	Drainage Class _____		Hydrologic Group _____	
L.S.E.	Soil Classification: <u>5</u> Profile _____		<u>C</u> Soil Condition _____	

SOIL DESCRIPTION AND CLASSIFICATION			
Exploration Symbol: TP-12 <input checked="" type="checkbox"/>		Test Pit <input type="checkbox"/> Boring	
0" Depth of Organic Horizon Above Mineral Soil			
0	Texture	Consistency	Color
1	SANDY LOAM	FRIABLE	DARK BROWN
2			
3			
4			
5			
6			BROWN
7			
8			
9			
10			
11			
14	LOAMY FINE SAND		LIGHT YELLOWISH BROWN
16			
18			
20			
22			
30			
34	LIMIT OF EXCAVATION = 30"		
40			
48			
50			
60			
<input type="checkbox"/> hydric <input checked="" type="checkbox"/> non-hydric		Slope % 0-3	Limiting factor >30"
			<input type="checkbox"/> ground water <input type="checkbox"/> restrictive layer <input type="checkbox"/> bedrock
C.S.S.	Soil Series / phase name:		Drainage Class Hydrologic Group
L.S.E.	Soil Classification:	5 Profile	C Soil Condition

SOIL PROFILE/CLASSIFICATION INFORMATION


Detailed Description of Subsurface Conditions at Project Sites

Project Name:	Applicant Name:	Project Location (municipality):
Annie's Way Subdivision	MTR Development, LLC	Windham

[illegible]

SOIL DESCRIPTION AND CLASSIFICATION					
DEPTH BELOW MINERAL SOIL SURFACE (Inches)	Exploration Symbol: <u>TP-14</u> <input checked="" type="checkbox"/> Test Pit <input type="checkbox"/> Boring				
	<u>1</u> " Depth of Organic Horizon Above Mineral Soil				
	0	Texture	Consistency	Color	Mottling
	1	LOAM	FRIABLE	DARK BROWN	NONE OBSERVED
	2				
	3				
	4				
	5				
	6				
	7	FINE SANDY LOAM		BROWN	
	8				
	9				
	10				
	12				
	14				
	16				
	19				
	20	MEDIUM SAND		GRAYISH BROWN	FEW, FINE, & FAINT
30					
	LIMIT OF EXCAVATION = 30"				
40					
50					
60					
	<input type="checkbox"/> hydric <input checked="" type="checkbox"/> non-hydric	Slope % <u>0-3</u>	Limiting factor <u>19"</u>	<input checked="" type="checkbox"/> ground water <input type="checkbox"/> restrictive layer <input type="checkbox"/> bedrock	
C.S.S.	Soil Series / phase name: _____ Drainage Class _____ Hydrologic Group _____				
L.S.E.	Soil Classification: <u>5/7</u> <u>C</u> Profile Soil Condition _____				
SOIL DESCRIPTION AND CLASSIFICATION					
DEPTH BELOW MINERAL SOIL SURFACE (Inches)	Exploration Symbol: <u>TP-16</u> <input checked="" type="checkbox"/> Test Pit <input type="checkbox"/> Boring				
	<u>0</u> " Depth of Organic Horizon Above Mineral Soil				
	0	Texture	Consistency	Color	Mottling
	1	SANDY LOAM	FRIABLE	DARK BROWN	NONE OBSERVED
	2				
	3				
	4				
	5				
	6			DARK YELLOWISH BROWN	
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	18				
	20			LIGHT YELLOWISH BROWN	
	22				
24					
	MEDIUM SAND	LOOSE			
30					
	LIMIT OF EXCAVATION = 30"				
34					
40					
48					
50					
60					
	<input type="checkbox"/> hydric <input checked="" type="checkbox"/> non-hydric	Slope % <u>0-3</u>	Limiting factor <u>>30"</u>	<input type="checkbox"/> ground water <input type="checkbox"/> restrictive layer <input type="checkbox"/> bedrock	
C.S.S.	Soil Series / phase name: _____ Drainage Class _____ Hydrologic Group _____				
L.S.E.	Soil Classification: <u>5</u> <u>C</u> Profile Soil Condition _____				

Professional Endorsements (as applicable)

C.S.S.	signature:	Date:
	name printed/typed:	Lic.#:
L.S.E.	signature: 	Date: 6/8/18
	name printed/typed: Alexander A. Finamore	Lic.#: 391


SOIL PROFILE/CLASSIFICATION INFORMATION

Detailed Description of Subsurface Conditions at Project Sites

Project Name:	Applicant Name:	Project Location (municipality):
Annie's Way Subdivision	MTR Development, LLC	Windham

SOIL DESCRIPTION AND CLASSIFICATION					
DEPTH BELOW MINERAL SOIL SURFACE (inches)	Exploration Symbol:	<u>TP-17</u>	<input checked="" type="checkbox"/> Test Pit	<input type="checkbox"/> Boring	
	<u>1</u> " Depth of Organic Horizon Above Mineral Soil				
	0	Texture	Consistency	Color	Mottling
	1	SANDY LOAM	FRIABLE	DARK BROWN	NONE OBSERVED
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	14				
	16	LOAMY FINE SAND		BROWN	
	18				
	20				
	22				
	26	LOAMY SAND		YELLOWISH BROWN	
28					
30					
32					
LIMIT OF EXCAVATION = 30"					
40					
48					
50					
60					
<input type="checkbox"/> hydric <input checked="" type="checkbox"/> non-hydric	Slope % <u>0-3</u>	Limiting factor <u>>30"</u>	<input type="checkbox"/> ground water <input type="checkbox"/> restrictive layer <input type="checkbox"/> bedrock		
C.S.S.	Soil Series / phase name:		Drainage Class	Hydrologic Group	
L.S.E.	Soil Classification:	<u>5</u> Profile	<u>C</u> Soil Condition		

SOIL DESCRIPTION AND CLASSIFICATION					
Exploration Symbol: TP-19		<input checked="" type="checkbox"/> Test Pit	<input type="checkbox"/> Boring		
0" Depth of Organic Horizon Above Mineral Soil					
DEPTH BELOW MINERAL SOIL SURFACE (Inches)	0	Texture	Consistency	Color	Mottling
	1	LOAM	FRIABLE	DARK BROWN	NONE OBSERVED
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9	LOAMY FINE SAND		BROWN	
	10				
	12				
	15				
	16				
	19				
	20	LOAMY SAND		YELLOWISH BROWN	
	25				
	30				
LIMIT OF EXCAVATION = 30"					
37					
40					
48					
50					
60					
<input type="checkbox"/> hydric	Slope %	Limiting factor	<input type="checkbox"/> ground water <input type="checkbox"/> restrictive layer <input type="checkbox"/> bedrock		
<input checked="" type="checkbox"/> non-hydric					
		0-3	>30"		
c.s.s.	Soil Series / phase name:		Drainage Class	Hydrologic Group	
L.S.E.	Soil Classification:		Profile	Soil Condition	

Professional Endorsements (as applicable)		
C.S.S.	signature:	Date:
	name printed/typed:	Lic.#:
L.S.E.	signature: 	Date: 6/8/18
	name printed/typed: Alexander A. Finamore	Lic.#: 391

SOIL DESCRIPTION AND CLASSIFICATION				
Exploration Symbol: <u>TP-18</u> <input checked="" type="checkbox"/>		Test Pit <input type="checkbox"/>		Boring
<u>1</u> " Depth of Organic Horizon Above Mineral Soil				
0	Texture	Consistency	Color	Mottling
1	SANDY LOAM	FRIABLE	DARK BROWN	NONE OBSERVED
2				
3				
4				
5				
6				
7				
8				
9				
10				
12				
14				
16	LOAMY FINE SAND		BROWN	
19				
20				
	LOAMY SAND		YELLOWISH BROWN	
30				
LIMIT OF EXCAVATION = 30"				
40				
50				
60				
<input type="checkbox"/> hydric <input checked="" type="checkbox"/> non-hydric	Slope % <u>0-3</u>	Limiting factor <u>>30"</u>	<input type="checkbox"/> ground water <input type="checkbox"/> restrictive layer <input type="checkbox"/> bedrock	
C.S.S. Soil Series / phase name: _____				
Drainage Class _____ Hydrologic Group _____				
L.S.E. Soil Classification: <u>5</u> <u>C</u>				
Profile _____ Soil Condition _____				

SOIL DESCRIPTION AND CLASSIFICATION				
Exploration Symbol: TP-20 <input checked="" type="checkbox"/>		Test Pit <input type="checkbox"/>		Boring
0" Depth of Organic Horizon Above Mineral Soil				
0	Texture	Consistency	Color	Mottling
1	SANDY LOAM	FRIABLE	DARK BROWN	NONE OBSERVED
2				
3				
4				
5				
6				
7				
8				
9	LOAMY FINE SAND		BROWN	
10				
11				
12				
13				
16				
18				
20	LOAMY SAND		YELLOWISH BROWN	
22				
24				
26				
28				
30				
32				
34	LIMIT OF EXCAVATION = 30"			
36				
38				
40				
42				
44				
46				
48				
50				
52				
54				
56				
58				
60				
62				
64				
66				
68				
70				
72				
74				
76				
78				
80				
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84				
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212				
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SOIL PROFILE/CLASSIFICATION INFORMATION


Detailed Description of Subsurface Conditions at Project Sites

Project Name:	Applicant Name:	Project Location (municipality):
Annie's Way Subdivision	MTR Development, LLC	Windham

SOIL DESCRIPTION AND CLASSIFICATION				
DEPTH BELOW MINERAL SOIL SURFACE (Inches)	Exploration Symbol:	<u>TP-21</u>	<input checked="" type="checkbox"/> Test Pit	<input type="checkbox"/> Boring
	<u>1</u> " Depth of Organic Horizon Above Mineral Soil			
	Texture	Consistency	Color	Mottling
	SANDY LOAM	FRIABLE	DARK BROWN	NONE OBSERVED
	LOAMY FINE SAND		BROWN	
	LOAMY SAND		YELLOWISH BROWN	
	LIMIT OF EXCAVATION = 30"			
	<input type="checkbox"/> hydric	Slope %	Limiting factor	<input type="checkbox"/> ground water
<input checked="" type="checkbox"/> non-hydric	<u>0-3</u>	<u>>30"</u>	<input type="checkbox"/> restrictive layer	
			<input type="checkbox"/> bedrock	
C.S.S.	Soil Series / phase name:		Drainage Class	Hydrologic Group
L.S.E.	Soil Classification:		<u>5</u>	<u>C</u>
	Profile	Soil Condition		
SOIL DESCRIPTION AND CLASSIFICATION				
DEPTH BELOW MINERAL SOIL SURFACE (Inches)	Exploration Symbol:	<u>TP-FB1</u>	<input checked="" type="checkbox"/> Test Pit	<input type="checkbox"/> Boring
	<u>0</u> " Depth of Organic Horizon Above Mineral Soil			
	Texture	Consistency	Color	Mottling
	LOAM	FRIABLE	DARK BROWN	NONE OBSERVED
	FINE SANDY LOAM		BROWN	
	SILT LOAM	FIRM	GRAY	FEW, FINE, & FAINT
LIMIT OF EXCAVATION = 40"				
<input type="checkbox"/> hydric	Slope %	Limiting factor	<input checked="" type="checkbox"/> ground water	
<input checked="" type="checkbox"/> non-hydric	<u>3-8</u>	<u>26"</u>	<input checked="" type="checkbox"/> restrictive layer	
			<input type="checkbox"/> bedrock	
C.S.S.	Soil Series / phase name:		Drainage Class	Hydrologic Group
L.S.E.	Soil Classification:		<u>8</u>	<u>C</u>
	Profile	Soil Condition		

SOIL DESCRIPTION AND CLASSIFICATION					
DEPTH BELOW MINERAL SOIL SURFACE (Inches)	Exploration Symbol: <u>TP-22</u> <input checked="" type="checkbox"/> Test Pit <input type="checkbox"/> Boring				
	<u>1 "</u> Depth of Organic Horizon Above Mineral Soil				
	0	Texture	Consistency	Color	Mottling
	1	SANDY LOAM	FRIABLE	DARK BROWN	NONE OBSERVED
	2				
	3				
	4	LOAMY SAND		BROWN	
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13			LIGHT YELLOWISH BROWN	
	14				
	15				
	16				
	17				
18					
19			YELLOWISH BROWN		
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31	LIMIT OF EXCAVATION = 30"				
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
48					
49					
50					
51					
52					
53					
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89					
90					
91					
92					
93					
94					
95					
96					
97					
98					
99					
100					
<input type="checkbox"/> hydric <input checked="" type="checkbox"/> non-hydric					
Slope %		Limiting factor		<input type="checkbox"/> ground water	
<u>0-3</u>		<u>>30"</u>		<input type="checkbox"/> restrictive layer	
				<input type="checkbox"/> bedrock	
C.S.S.	Soil Series / phase name: _____				
	Drainage Class		Hydrologic Group		
L.S.E.	Soil Classification: <u>5</u> <u>C</u> _____				
	Profile		Soil Condition		
SOIL DESCRIPTION AND CLASSIFICATION					
DEPTH BELOW MINERAL SOIL SURFACE (Inches)	Exploration Symbol: <u>TP-FB2</u> <input checked="" type="checkbox"/> Test Pit <input type="checkbox"/> Boring				
	<u>0 "</u> Depth of Organic Horizon Above Mineral Soil				
	0	Texture	Consistency	Color	Mottling
	1	SANDY LOAM	FRIABLE	DARK BROWN	NONE OBSERVED
	2				
	3				
	4	FINE SANDY LOAM		BROWN	
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13			GRAYISH BROWN	FEW, FINE, & FAINT
	14				
	15				
	16	SILT LOAM			
	17				
18					
19		FIRM	GRAY	COMMON, MEDIUM, & DISTINCT	
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
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45					
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51					
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65					
66					
67					
68					
69					
70					

Professional Endorsements (as applicable)


C.S.S.	signature:	Date:
	name printed/typed:	Lic. #:
L.S.E.	signature: 	Date: 6/8/18
	name printed/typed: Alexander A. Finamore	Lic. #: 391

Detailed Description of Subsurface Conditions at Project Sites

Project Name:	Applicant Name:	Project Location (municipality):
Annie's Way Subdivision	MTR Development, LLC	Windham

DEPTH BELOW MINERAL SOIL SURFACE (Inches)	SOIL DESCRIPTION AND CLASSIFICATION				
	Exploration Symbol: <u>TP-FB3</u> <input checked="" type="checkbox"/> Test Pit <input type="checkbox"/> Boring	<u>1</u> " Depth of Organic Horizon Above Mineral Soil			
	0	Texture	Consistency	Color	Mottling
	1	SANDY LOAM	FRIABLE	DARK BROWN	NONE OBSERVED
	2				
	3				
	4				
	5				
	6			DARK GRAYISH BROWN	
	7				
	8				
	9				
	10				
	12			DARK YELLOWISH BROWN	
	14				
	17				
	18				
	20				
	25	LOAMY FINE SAND		LIGHT OLIVE BROWN	
	30	FINE SAND		GRAY	COMMON, MEDIUM, & DISTINCT
40					
	LIMIT OF EXCAVATION = 40"				
50					
60					
<input type="checkbox"/> hydric	Slope %	Limiting factor	<input checked="" type="checkbox"/> ground water restrictive layer bedrock		
<input checked="" type="checkbox"/> non-hydric					
c.s.s. Soil Series / phase name: _____ Drainage Class _____ Hydrologic Group _____					
L.S.E. Soil Classification: <u>5</u> <u>C</u> _____					
Profile Soil Condition					
SOIL DESCRIPTION AND CLASSIFICATION					
	Exploration Symbol: _____ <input type="checkbox"/> Test Pit <input type="checkbox"/> Boring	_____ " Depth of Organic Horizon Above Mineral Soil			
	0	Texture	Consistency	Color	Mottling
	1				
	2				
	3				
	4				
	5				
	6				
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	9				
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	15				
	16				
	19				
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	26				
	30				
	37				
	40				
	48				
	50				
60					
<input type="checkbox"/> hydric	Slope %	Limiting factor	<input type="checkbox"/> ground water restrictive layer bedrock		
<input checked="" type="checkbox"/> non-hydric					
c.s.s. Soil Series / phase name: _____ Drainage Class _____ Hydrologic Group _____					
L.S.E. Soil Classification: _____ _____					
Profile Soil Condition					

SOIL DESCRIPTION AND CLASSIFICATION					
DEPTH BELOW MINERAL SOIL SURFACE (Inches)	Exploration Symbol: <u>TP-FB4</u> <input checked="" type="checkbox"/> Test Pit <input type="checkbox"/> Boring				
	<u>1</u> " Depth of Organic Horizon Above Mineral Soil				
	0	Texture	Consistency	Color	Mottling
	1	SANDY LOAM	FRIABLE	DARK BROWN	NONE OBSERVED
	2				
	3				
	4				
	5	SAND		LIGHT GRAY	
	6	SANDY LOAM		BROWN	
	7				
	8				
	9				
	10			DARK YELLOWISH BROWN	
	12				
	14				
	16				
	19				
	20				
	21	LOAMY SAND		LIGHT YELLOWISH BROWN	
	22				
28					
30	MEDIUM SAND	LOOSE			
31					
32					
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37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
48					
49					
50	LIMIT OF EXCAVATION = 40"				
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Professional Endorsements (as applicable)		
C.S.S.	signature:	Date:
	name printed/typed:	Lic.#:
L.S.E.	signature: 	Date: 6/8/18
	name printed/typed: Alexander A. Finamore	Lic.#: 391

Attachment 3: Proposed Subdivision Plan

