

Barnard & Gervais, LLC

Land Surveyors - Licensed Designers - Environmental Consultants
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JAN 06 2017

CHARLOTTE
PLANNING & ZONING

December 30, 2016

Town of Charlotte
Planning and Zoning Department
Attn: Joe Rheaume
159 Ferry Road
Charlotte, Vermont 05445

Subject: Michael & Johanna Ingalls (Former George and Claire Aube Property), 5.06+/-
Acre Parcel (Lot 3), 1450 Dorset Street, Charlotte, Vermont (WW-138-1313-1) –
Primary Mound Wastewater System and Drilled Well Completion Letter

Dear Joe:

I am writing to inform you the primary mound wastewater disposal system been completed for the Michael & Johanna Ingalls (Former George and Claire Aube - Lot 3) residential property located at 1450 Dorset Street in Charlotte. The Town of Charlotte approved (WW-138-1313-1) primary mound wastewater disposal system was staked out by Jason Barnard Consulting, LLC, and was installed by Masterson Excavation and George Aube between June and December 2016. Based on the required inspections, the primary mound wastewater system that will serve the new single-family residence was installed in reasonable conformance with the permitted design drawings dated July 25 2013 and December 23, 2014 and revised on March 4 and April 1, 2015. In addition to the installation of the primary mound wastewater disposal system, a drilled water supply well was installed on Lot 3 that will provide water to the new single-family residence. As you may recall, the original permit was to share a drilled well that is located on other lands of George and Claire Aube. Following our discussions and e-mail correspondence relative to this change, it was determined that a drilled bedrock well could be installed for Lot 3 without requiring a permit amendment provided a record drawing with the well location was provided with the completion letter. The drilled well location and new house location are shown on the attached **Record Drawing No. 1**. It should be noted that the entire drilled well isolation shield is located on Lot 3 and therefore does not impact other lands of George and Claire Aube.

During construction of the primary mound wastewater system, inspections of the new 1,000 gallon concrete septic tank with approved effluent filter, the 1,000 gallon concrete pump station, plowed layer beneath the mound sand, the placement of the State of Vermont approved mound sand, mound system absorption bed, the distribution piping network, covering of the mound wastewater disposal system and review of the upslope curtain drain location was performed by Barnard & Gervais, LLC between June and December 2016.

Results of the inspections clearly show the proper preparation of the ground surface prior to placing the mound sand, the proper placement of the approved mound sand (see **Attachment A** - mound sand sieve analysis) and system stone, the proper installation of the new 1,000 gallon concrete septic tank and proper installation of the new 1,000 gallon concrete pump station. The final grading inspection that was performed on December 23, 2016 showed the primary mound wastewater disposal system has been adequately covered and properly graded. Based on the time of year the mound system was installed, the landowner and Mr. Aube will likely need to complete some additional seeding and mulching of the system in the spring of 2017.

Starksboro: 4400 VT Route 17, Starksboro, VT 05487 Phone (802) 453-2597
Enosburg Falls: 167 Main Street Suite 10, Enosburg Falls, VT 05450 Phone (802) 933-5168

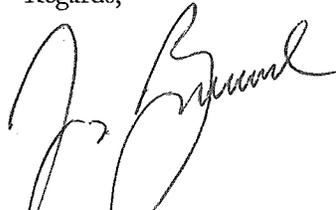
A flow test of the mound wastewater disposal system's piping distribution network was performed on October 7, 2016. Results of the flow test showed the squirt height was approximately five and a half (5.5) feet high and difference in flow was less than 10% between any of the orifices.

Based on my inspections during the construction of the primary mound wastewater disposal system and the successful completion of all performance tests, "I hereby certify that, in the exercise of my reasonable professional judgment, the installation-related information submitted is true and correct and the potable water supply and wastewater systems were installed in accordance with the record drawings and such record drawings are in compliance with applicable rules, were filed with the Secretary, are in accordance with all other permit conditions, were inspected, were properly tested, and have successfully met those performance tests".

As a note to the homeowner, it is recommended the septic tank and pump station be pumped out at least prior to every three (3) years. Additionally, the effluent filter should be accessed and rinsed back into the septic tank at least once (1) a year.

Should you have any questions or comments regarding the installation information discussed above, please feel free to call me at (802) 453-2597.

Regards,



Jason S. Barnard
Licensed Designer #430-B

C: Michael and Johanna Ingalls
George and Claire Aube

Attachment A
Mound Sand Sieve Analysis

Sieve Analysis Test Report

Material Tested Mound System Sand

Sample Identification P-1 Test No. 1

Retained					Passing					
Required Limits	Cummulative Percent	Cummulative Weight	Percent	Weight	Screen Size	Weight	Percent	Cummulative Weight	Cummulative Percent	Required Limits
					3/8		99.9			85-100
			6.3	23.9	4		93.6			
			23.4	88.9	8		70.2			
			28.4	107.9	30		41.8			
			5.9	22.6	40		35.9			30-50
			24.9	94.7	100		11			
			8.5	32.5	200		2.5			0-5
			2.5	9.4	Pass					

379.9

Time: 1000
Date: 7-21-16
Certified By: DAW

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