



SITE DESIGN ENGINEERING, LLC.

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February 10, 2021

SDE No. 19221

Nantucket Board of Health
3 East Chestnut Street
Nantucket, MA 02554

**Subject: Variance Request
 167 Hummock Pond Road
 Nantucket, Massachusetts
 Tax Map 65 Parcel 36**

Dear Members of the Board:

The owners of property at 167 Hummock Pond Road last appeared before you in January of this year with this request seeking a septic system variance. The variance request asks for relief relative to allowing a flow rate greater than 110 gpd per 10,000 sf of lot area through the use of I/A treatment systems. The Board voted to continue the meeting pending receipt of a full septic system design and permit application. With this letter we are filing the requested septic system design plans and permit application materials for the Boards review and consideration. The original variance request is provided again below for reference along with an explanation of the proposed septic system design.

Variance Request.

The applicants are asking the Board to grant a variance from the Town of Nantucket Board of Health Regulations Sections 56.02 and 64.04B1 to allow a flow greater than 110 gallons per day per 10,000 square-feet of lot area. The owners of the property are seeking to obtain approvals to construct a commercial kitchen in the existing building on the property. Prior to filing for a building permit the owners must obtain the Boards approval for construction of a new septic system. The property is located within the Hummock Pond Road Watershed District Zone B. The proposed kitchen and existing one bedroom apartment will generate a calculated flow of 1,110 gallons per day (gpd). The existing lot area is approximately 12,600 sf. The building will be connected to Town water in Hummock Pond Road and the existing well will remain for irrigation use only.

Septic System Design.

The applicants will utilize a SeptiTech treatment system to accommodate the proposed septic system flow. The applicant has entered into a use and easement agreement with Jim Powers on abutting properties at 163 and 165 Hummock Pond Road to provide the required land area needed to allow the calculated flow rate and system construction. We are requesting the Board allow a total flow rate of 2,210 gpd for the three combined properties. A breakdown of the flow rates is provided in the table below.

163, 165 & 167 Hummock Pond Road Septic Flow Rates	
Proposed Use	Septic Flow
167 Hummock Pond Commercial Kitchen	1,000 gpd
167 Hummock Pond 1 bedroom apartment	110 gpd
Total flow 167 Hummock Pond	1,110 gpd
163 & 165 Hummock Pond 4 existing bedrooms	440 gpd
163 & 165 Hummock Pond 6 future bedrooms	660 gpd
Total flow 163 & 165 Hummock Pond	1,100 gpd
Total three property flow	2,210 gpd

The proposed property easement and use restriction area is calculated on the septic flow from the 167 Hummock Pond uses and the existing 1-bedroom dwelling at 163 Hummock Pond Rd. This required land area determination was calculated utilizing a septic system application rate of 550 gpd/40,000 sf for the commercial use and 660 gpd/40,000 sf for the residential use. This calculation results in a required land area restriction of 89,395 sf. The proposed land area restriction contains approximately 114,600 sf to also accommodate the existing agricultural use on the 163 Hummock property. A proposed draft easement plan is attached for reference.

The overall site flow rate requested results in an application rate of 519 gpd/acre over the entire properties. State and local Regulations allow flow rates up to 660 gpd/acre and the Board has previously granted approvals at this rate. All proposed and future septic systems on the property will be required to utilize I/A treatment systems which will result in an overall reduction in nitrogen loading compared to construction of conventional septic systems. We ask the Board to grant the requested relief and allow this application to receive final review and approval from the Health Department. Please call me at (508) 503-3500 or email me at (dmulloy@sde-ldec.com) with any questions. I will be attending your meeting on February 18 to discuss this request in greater detail.

Respectfully,



Daniel C. Mulloy, P.E.
Site Design Engineering, LLC.

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