

PRELIMINARY SOIL & SITE EVALUATION

Raunel Benitez Lot
3059 Farm Rd
Bullock, NC 27507

Prepared For:

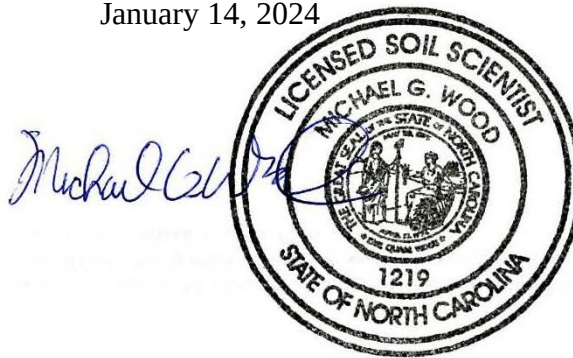
Leticia Benitez
3917 Devonwood Road
Hillsborough, NC 27278

Prepared By:



620 Lee Fox Lane
Hillsborough, NC 27278
(919) 417-8027

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Michael G. Wood, LSS

INTRODUCTION AND SITE DESCRIPTION

A Preliminary Soil & Site Evaluation was performed on the 2.29-acre Raunel Benitez Lot located at 3059 Farm Rd, Bullock, NC (Granville County MAPN: 101001361182). Wood Soil Consultants (WSC) was retained to evaluate the soil and site conditions and identify suitable areas for placement of an on-site subsurface wastewater system(s). The property was evaluated in accordance with the working copy of North Carolina statutes for waste disposal 15A NCAC 18E, effective January 1, 2024.

The study area is a mix of woods and open field. There is an existing foundation on the lot.

INVESTIGATION METHODOLOGY

The field survey was conducted on January 10, 2024, by Michael G. Wood, LSS and Ethan T. Wood. Soil borings were advanced with hand-augers and soil color determined using a Munsell Soil Color Chart. Observations of the landscape as well as soil properties (depths, texture, structure, soil wetness, restrictive horizons, etc.) were recorded. Soil borings were described per the USDA-NRCS, *Field Book for Describing and Sampling Soils, Version 3.0*. Soil borings and site features are noted in Figure 1.

FINDINGS

Five (5) soil borings were advanced their placements located on Figure 1.

Provisionally Suitable for Conventional Type Systems. Borings Provisionally Suitable for Conventional Systems include Gravel, Accepted, Alternative, Shallow-Placed, and prefabricated permeable block panel systems. While the particulars and costs between the system types can vary considerably, these are generally the preferred system types. This soil appeared adequate to support a long-term acceptance rate (LTAR) of 0.25 GPD/sq-ft.

Provisionally Suitable for Low-profile Chamber Systems. Low-Profile Chamber systems are designed similarly to Conventional Type systems but are not allotted any reduction in drainfield size, thus will require more space than the typical Conventional Type systems. These soils require a minimum of 20" of suitable soil when factoring in slope corrections. This soil appeared LTAR of 0.225 GPD/sq-ft.

Provisionally Suitable for Subsurface Drip Systems. Subsurface Drip systems require a minimum of 13" of suitable soil. Soil with a restriction less than 17" will require the septic system to include a pretreatment unit that treats the wastewater to Treatment Standards II. Subsurface Drip systems are substantially more costly to install than Conventional Type and Low-Profile Chamber Systems. LTAR often need to be confirmed via in-situ hydraulic conductivity measurements, but these are expected to support an LTAR of 0.10 GPD/sq-ft.

Unsuitable. Borings were rated as Unsuitable due to a restrictive horizon occurring within 12 inches of the ground surface.

DISCUSSION

All borings advanced were rated as Provisionally Suitable for Conventional Type Septic Systems except for one boring done behind the existing foundation that was deemed suitable for Low-Profile Chamber. The lot is expected to have ample space for at minimum a 4-bedroom house.

CONCLUSION

The findings presented herein represent WSC's professional opinion based on our Preliminary Soil and Site Evaluation and knowledge of the current laws and rules governing on-site wastewater systems in Granville County and North Carolina. There is ample space for a subsurface septic system for a 4-bedroom single-family residence.

This Preliminary Soil and Site Evaluation is for general information purposes only. The data collected will not meet the standards of the Engineered Option Permit (EOP) process. Soils naturally change across a landscape and contain many inclusions. As such, attempts to quantify them are not always precise and exact. Due to this inherent variability of soils and the subjectivity when determining limiting factors, there is no guarantee that a regulating authority will agree with the findings of this report.

3059 Farm Rd



- Conventional Type System
- Low-Profile Chamber