

Fred D. Smith Soil Scientist

August 1, 2023

Gail and Jim Finnegan
8129 Kingsland Dr.
Raleigh, N.C. 27613

Subject: Preliminary Soil Suitability for Conventional Septic Systems
Piney Grove Road, Parcel 0580-01008A
Vance County

Dear Gail and Jim:

This letter presents our evaluation results and conclusions regarding soil suitability for septic systems for the above-mentioned parcel.

We were asked to evaluate the soils on the above-mentioned parcel. You want to determine if the soils on the parcel are suitable for conventional septic systems for a 3-bedroom home. The property lines were not flagged at the site.

Soil and Site Evaluation

The site and soil were evaluated to observe soil properties, surface features, landscapes, and site parameters. Hand auger borings were used to evaluate soil characteristics in accordance with 15A NCAC 18A 1900 (Laws and Rules for Sewage Treatment and Disposal Systems).

The portion of the tract that was evaluated is a flat linear area with slopes of about 2% to 4% and is a grassy area.

The soils are residual soils formed from the underlying rocks of the Piedmont Region of N.C. They have sandy loam topsoil and reddish-brown sandy clay loam and clay subsoils. They have subangular blocky structure. They do not have a significant amount of shrink-swell clay mineralogy. They do not have shallow seasonal wetness or saprolite or rock within 36 inches of the surface.

These soils are suitable for a shallow conventional drainfield. Based on the soil properties found, we suggest a LTAR (Long Term Acceptance Rate) of 0.3 gallons per square foot of trench bottom (3-ft wide trenches). A 3-bedroom home (360 gallons per day of wastewater)

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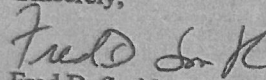
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is estimated to require about 300 linear feet of trench for the initial drainfield. Based on the 300 linear feet, approximately 2200 square feet of area is needed for the initial drainfield. The repair area also requires an equal amount of area. A total minimum amount of suitable soil needed is about 4400 square feet.

The required setbacks for septic system include a 10-foot property line setback, 5-foot from a house foundation, 15-foot from basement walls, 10-foot from the water supply pipe, and 50-foot from a well.

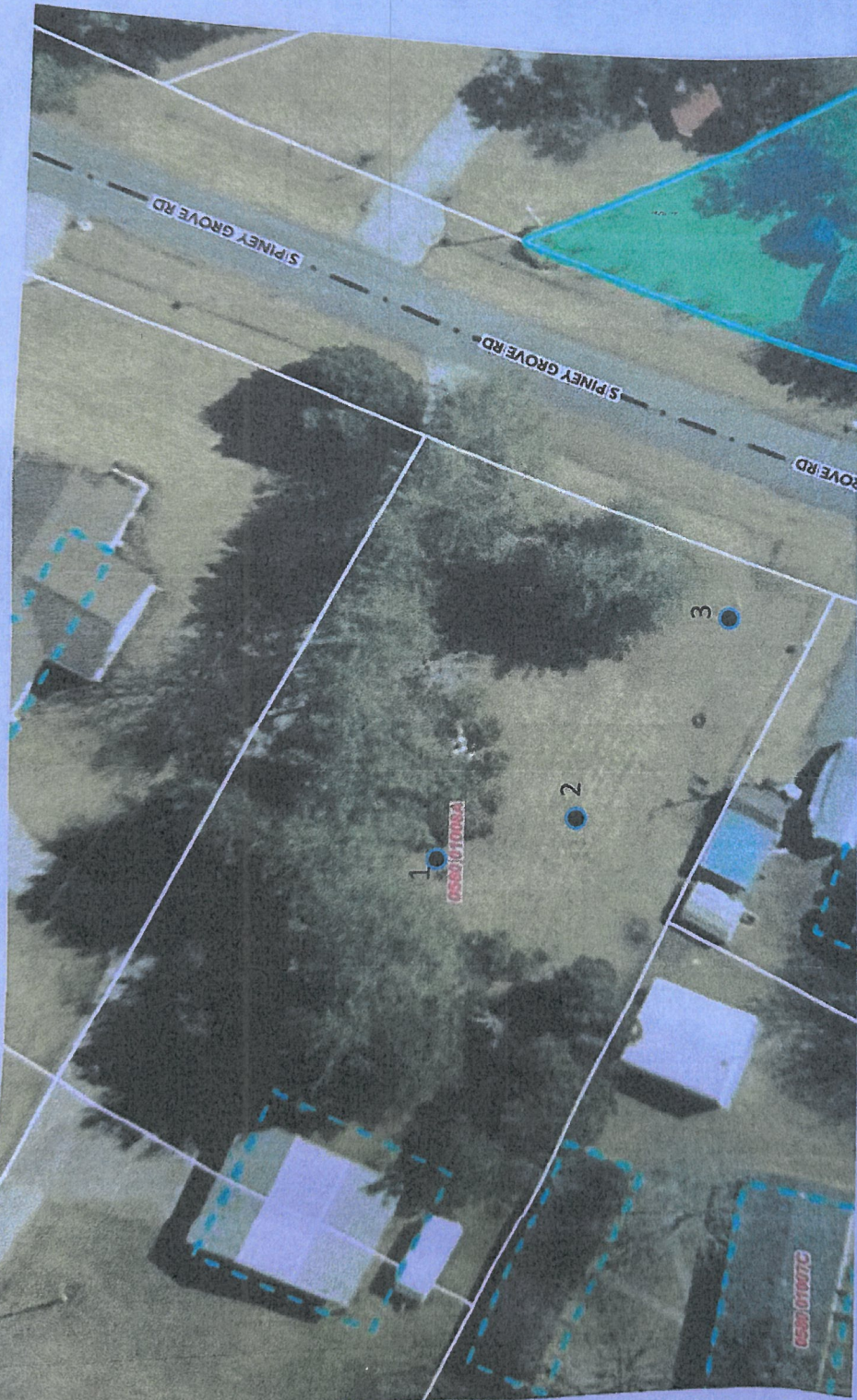
We appreciate the opportunity to work with you on this project. Please contact me with questions or additional information after you have reviewed the information here.

Sincerely,


Fred D. Smith, LSS



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Roads/Addressing

Vance County Roads (Centerlines)



SCHEDULE B

