

HAL OWEN & ASSOCIATES, INC.

SOIL & ENVIRONMENTAL SCIENTISTS

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24 July 2024

Mr Dave Lucas
93 Regis Lane
Coats, NC

Reference: Soil Investigation and Septic System Design
93 Regis Lane, Coats, NC

Dear Mr. Lucas,

A site investigation was conducted on 18 July 2024 for the above referenced property, which is located on the western side of Regis Lane in Harnett County, North Carolina. The purpose of the investigation was to determine the existence of a subsurface wastewater dispersal system and to determine if an above ground swimming pool could be added behind the home.

All sewage disposal ratings and determinations were made in accordance with the Rules for "Wastewater Treatment and Dispersal Systems", 15A NCAC 18E. This report represents my professional opinion as a Licensed Soil Scientist but does not guarantee or represent permit approval for any lot by the Local Health Department. The permit you receive from the Local Health Department may contain some modifications or amendments to our submitted design. Please carefully review your permit and adhere to all prescribed requirements.

EXISTING SYSTEM

Hal Owen & Associates Inc. reviewed the septic permit issued by the Local Health Department (Permit# SFD2308-0114) and identified the existing septic system at the site. According to the permit, the 3-bedroom home does not have a foundation drain and it utilizes public water supplies. The design daily flow is 360 gallons and the existing septic system utilizes a 1000 gallon septic tank and 1000 gallon pump tank. Effluent is pumped to 240 feet of accepted status drainlines (25% reduction system chambers) installed with trench bottom depths at 18-22 inches. The repair area is designated in the back left corner of the lot below the existing drainfield.

SOIL INVESTIGATION

The soils were evaluated under moist soil conditions through the advancing of auger borings. This evaluation included observations of soil morphology (texture, structure, clay mineralogy, organics), topography, and landscape position. Results of the borings located within the proposed areas for the initial system and repair area are provided in the attached Soil/Site Evaluation form.

The soils shown as suitable in Figure 1 are adequate to support subsurface wastewater dispersal system. These soils were observed to be firm sandy clay loams to greater than 36 inches and will support long term acceptance rates of 0.4 gal/day/sqft.

The soils shown as unsuitable are so rated due to a ditch running along the back property line.

REPAIR SYSTEM DESIGN

It appears that adequate space exists behind the home to install the proposed pool without adversely impacting the existing septic system. The repair area will need to be modified to reduce the required dispersal field area by utilizing a Prefabricated Permeable Block Panel System (PPBPS).

The modified repair area is proposed as a pump driven system to 150 feet of PPBPS utilizing a long-term application rate of 0.4 gal/day/ft² (see Figure 2). Effluent will be distributed to three 50ft long drainlines installed on contour with maximum trench bottom depths at 20 inches below surface. Potential septic system drainlines have been demonstrated with various colored pin flags that are located on the lot.

CONCLUSION

The modified repair area should allow the for the installation of a 24ft diameter above ground pool. Please note the regulatory setback from a wastewater system (including repair area) to a pool is 5 feet and to any decking around the pool is 1ft.

This report and the attached septic system design information will need to be submitted to the Local Health Department for review and the permitting process. I appreciate the opportunity to provide this service and hope to be allowed to assist you again in the future. If you have any questions or need additional information, please contact me at your convenience.



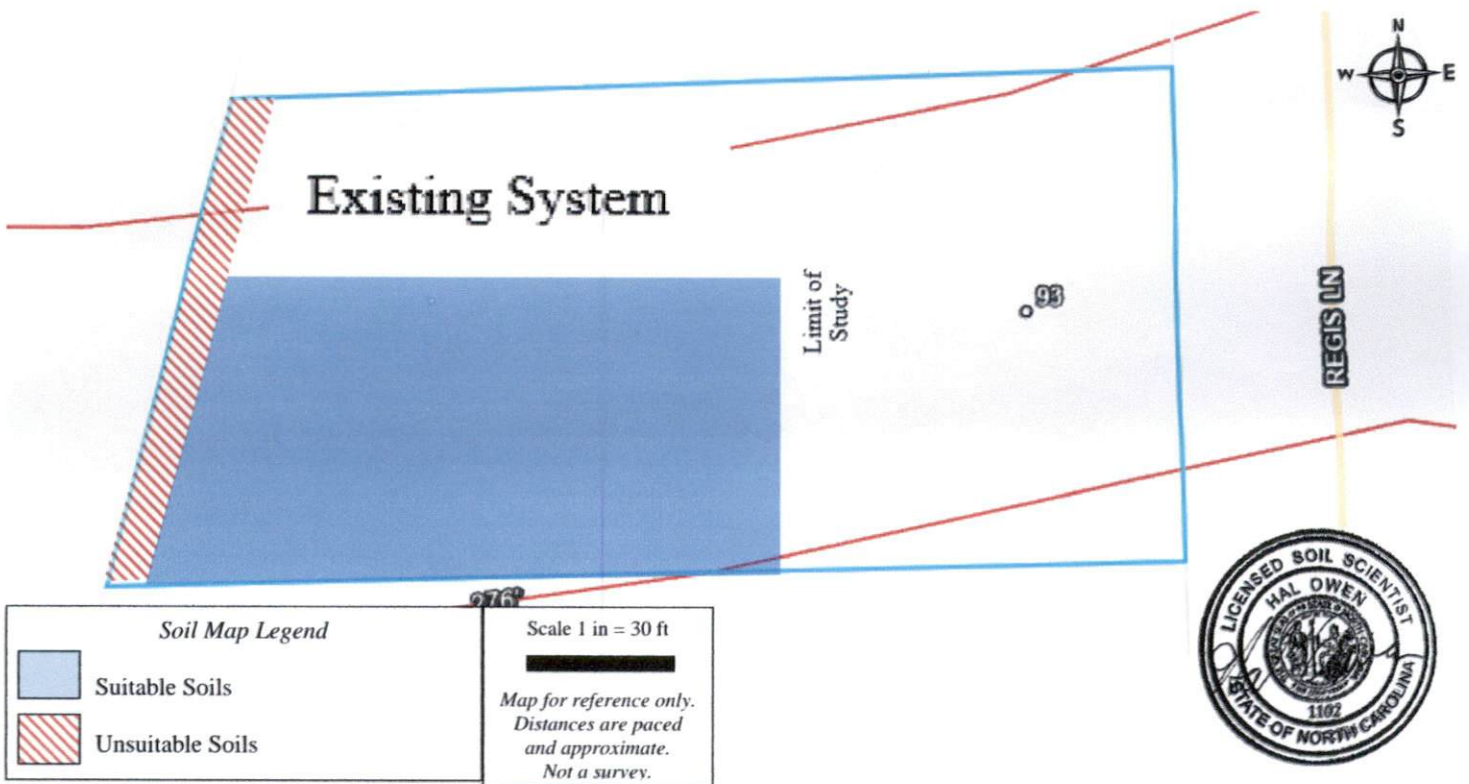
Sincerely,

A handwritten signature in black ink that reads "Hal Owen". The signature is written in a cursive, flowing style.

Hal Owen
Licensed Soil Scientist

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Figure 1. Soil Map showing Septic Suitability



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Figure 2. Septic System Layout

Drainlines flagged at site on 9-ft centers.

Line #	Color	Relative Elevation (ft)	Drainline Length(ft)	Field Length(ft)
1	Y	100.15	82	82
2	Y	99.20	82	82
3	Y	98.65	82	82
4	W	97.68	50	56
5	B	97.16	50	54
6	R	96.68	50	52

Initial
Repair

Septic Tank:	97.73
Pump Tank:	97.83
Reference Elev:	100.00

Scale 1 in = 25 ft
 Map for reference only.
 Not a survey.

