SEVERSON SOIL CONSULTING, PLLC

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Preliminary
Site Suitability for Domestic Sewage Treatment and Disposal Systems

Joe Gardner Rd
Grifton, NC
Pitt County
APN: 8249
South Portion

Prepared for: Matt Fonda, Dream Hill Homes

Prepared by: Erik Severson, Severson Soil Consulting, PLLC

Report Date: 1/27/2026

SYNOPSIS

This report shows the findings of a preliminary soil and site evaluation of the referenced parcel in Pitt County, NC. The site evaluation revealed s sufficient areas for the installation of a conventional septic system and repair area for a four–bedroom dwelling on the property. This report is intended to aid the permitting authority to evaluate the site.

Figure 1. Property Location

Matt, this is a summary of my findings:

Severson Soil Consulting, PLLC (SSC) conducted a preliminary onsite wastewater soil feasibility study on the above referenced parcel to determine the area of soils, suitable for a subsurface onsite wastewater disposal system. The soil and site evaluation were performed by using a hand auger boring during moist soil conditions based on the criteria in the Rules and Laws Governing Onsite Wastewater Systems (18E rules). From this evaluation, SSC sketched an area suitable for the installation of a septic system. All dimensions, locations are approximate.

Site Description

The 6.7–acre tract was the southern portion of a larger tract off Joe Gardner Road, Grifton NC (figure 1). The potential drainfield site lay in the coastal plain physiographic province in open farmed field. There was one mapping unit of interest in the NRCS soil map, WaB, Wagram soils (figure 2). The open famed field was evaluated.

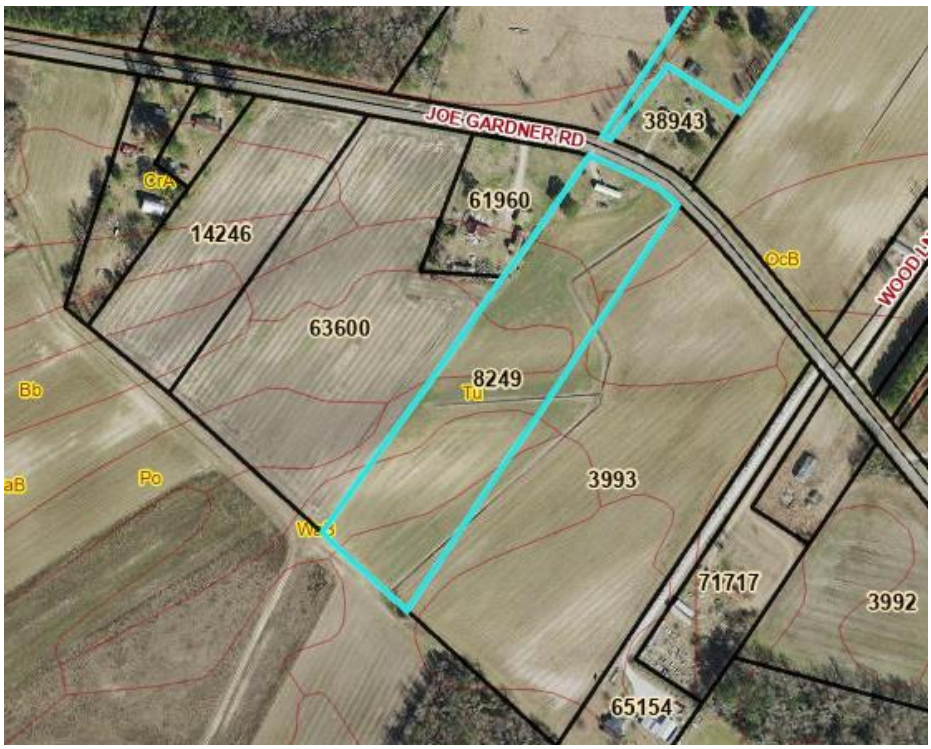


Figure 2. Soil map of the of the subject property (Pitt Co GIS).

Soil Borings

Over 11 soil borings and observations were advanced on the parcel as seen in figure 3 below. Their depths of suitable soils categorized the soils; the red dots represent suitable soils to 30" and were the Wagram soils. The brown dots represented suitable soils from 20 to 24" and Goldsboro soils (figure 3). The recommended LTAR (long term acceptance rate) for the Wagram and Goldsboro soils are 0.35 gallons per day per foot squared (GPD/ft2).

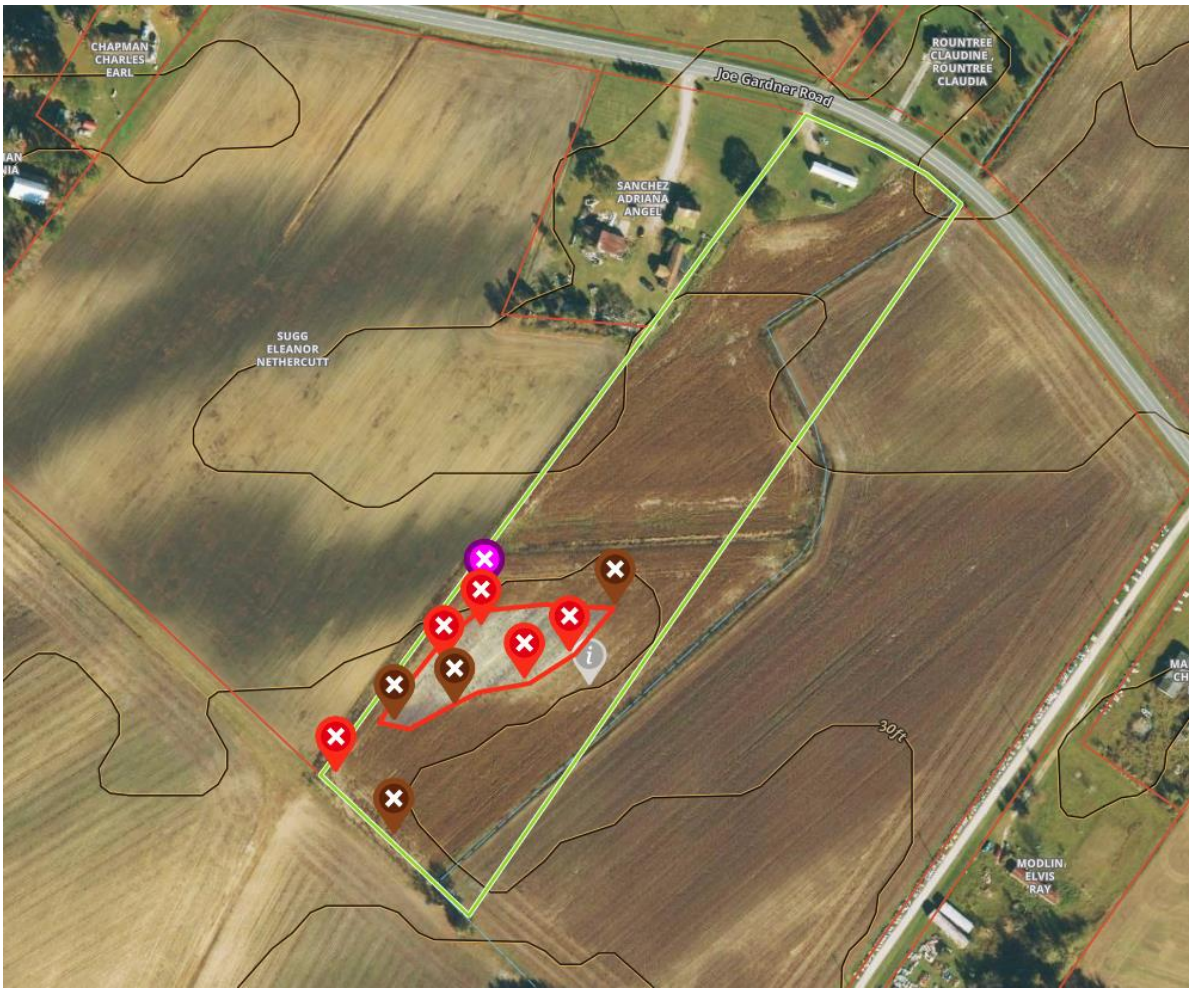


Figure 3. Soil boring locations within the lot as located by the onX Hunt application.

The depth to water table decreases immediately outside the defined area. The purple dot represents soils with a water table at 14 inches. Several other holes were evaluated outside this ridgetop.

Required Area

The required linear footage needed for an accepted status (camber or polystyrene aggregate) drainfield product is calculated by dividing the flow rate for a four-bedroom dwelling (4-BR= 480 gpd) by the long-term acceptance rate, LTAR (0.35 GPD/ft2). Then dividing that number by a 3-foot-wide trench bottom. Then multiply the result by 0.75 to account for the 25% percent reduction in the accepted status drainfield product.

[(480gpd / 0.35 gpd/ft2) / 3ft wide trench)] x 0.75 = 342 LF

342 Linear Feet of drainfield product

The required space of suitable soils was calculated based upon a 3-foot-wide trench and a 9-foot minimum center to center spacing of each trench. Assuming three 115-foot-long trench lengths, the minimum total area required would then be 8,750 ft2 including primary and a 100% repair area (4,375 ft2 x 2). Other drainfield lengths and configurations could be employed, such as additional shorter or longer lines. This system may require a pump to d-box or pressure manifold if gravity distribution cannot be achieved.

Usable Area

The usable soil area was near the southern boundary of the property (see figure 4 below) on a ridgetop at the highest elevation (and most suited soils) in the open field. It was 0.61 acres or 26,572 ft2 in size. This area is 3 times the needed space for a drainfield and repair area servicing the a four-bedroom dwelling primary and repair drainfield.

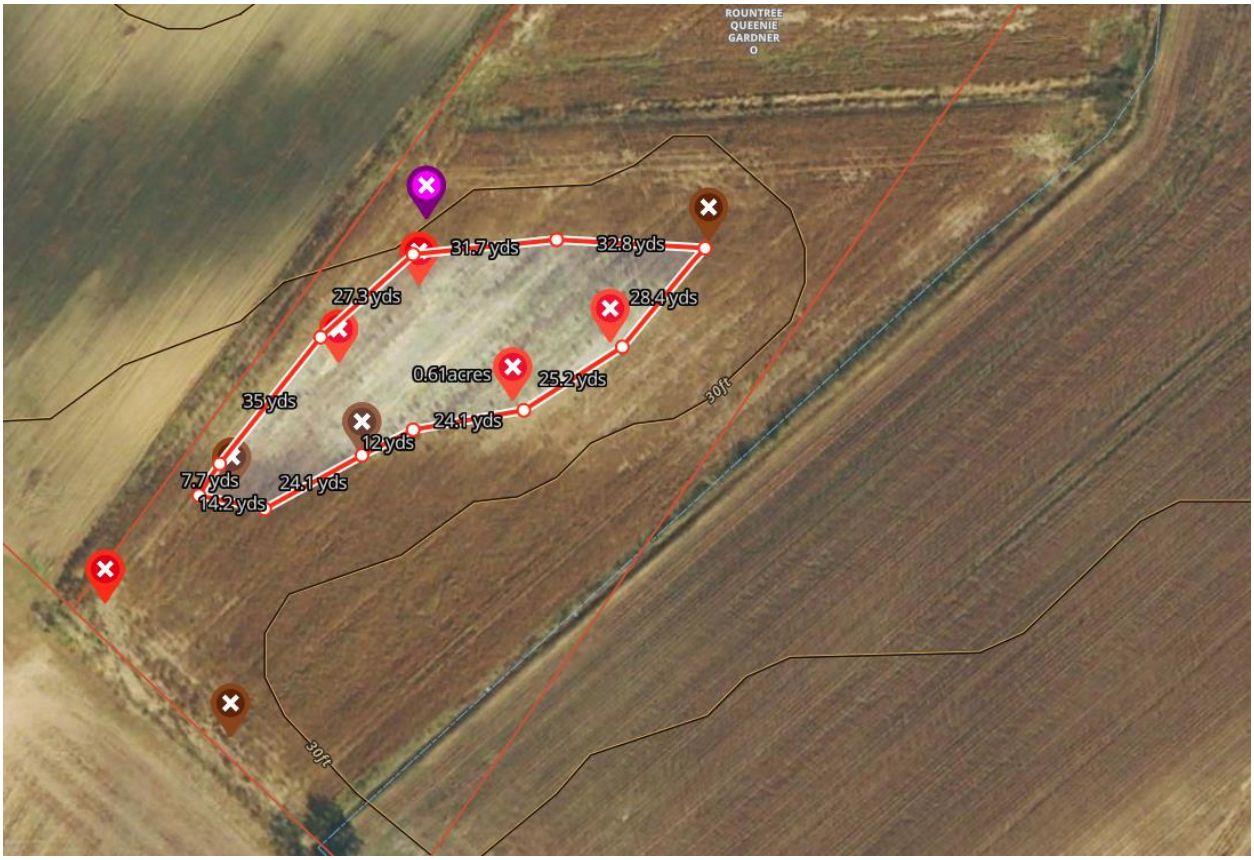


Figure 4. Usable soil area

Permitting

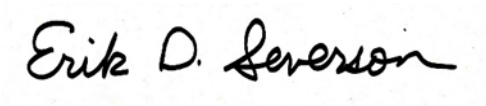
Prior to the issuance of a septic permit, the lot will require a soil and site evaluation by the Pitt County Health Department of private permitting authority. The specific trench product type and soil loading rate will be determined by their assessment. The areas for proposed drainfields shall not be impacted by home sites, pools, garages, nor be mechanically altered from the natural lay of the land. Regulatory setbacks to property lines, roads, wells, etc. are to be maintained.

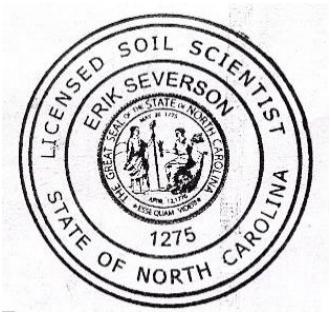
Exact locations of future drainfields, repair areas, buffer from property lines (current and future), building foundations, pools, decks, and well locations are not addressed in this report. Those items should be fully considered as the plans develop for the potential future use of the site. Depending on the position of the house location, house size, property lines and setbacks that may encroach on available usable space, this lot may require a septic system utilizing a pump.

Due to the subjective nature of the permitting process, zoning, variability of naturally occurring soil, and unforeseen circumstances, SSC cannot guarantee that areas delineated as suitable for on-site wastewater disposal systems will be permitted, as the permits are issued by the local governing agency. However, the areas of suitable soil have at least 3 times the needed space for a conventional system and repair depending on the loading rate. This report may be used to assist the local permitting agency to issue a septic permit.

Thank you for your business. Please do not hesitate to ask for more information regarding this report.

Sincerely,





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