



**PIEDMONT**  
**ENVIRONMENTAL**  
ASSOCIATES, P.A.

June 19, 2026

Project #7878

John Shipley  
4113 Cherrylaurel Lane  
Winston-Salem, NC 27106

RE: Detailed Soil/Site Evaluation on Property Located at Tesh Road, Forsyth County,  
PIN: 6930-69-5060.000, 6930-89-1049.000, 6931-90-0059.000 & 6930-99-0921.000  
(Approx. 43.44, 65.08, 1.55 & 1.1 acres)

John Shipley,

This report details the findings of a detailed site and soil evaluation performed on the tracts referenced above. The evaluation was conducted at the client's written request to determine the site's suitability for the installation of sub-surface wastewater disposal systems to serve domestic strength wastewater. This evaluation was for residential wastewater applications. Any other type of use may require additional testing and/or stricter setbacks. This report does not address systems receiving more than 3,000 gallons per day of flow.

The evaluation was conducted by Ryan P. Smith, North Carolina Licensed Soil Scientist on Thursday, June 18, 2026. The evaluation was conducted during moist soil conditions with the use of a hand-auger to determine soil suitability for on-site sewage disposal systems in accordance with 15A NCAC 18E "Wastewater Treatment and Dispersal Systems". Characteristics that affect the suitability of sub-surface systems include soil depth to expansive clay, seasonal high-water table, rock, and unusable saprolite. Topography and slope also affect the suitability of an area for septic systems. The evaluation of these components was conducted on the site.

Findings are conveyed by showing areas on the enclosed map that are usable for different system types. Areas that are suitable for conventional depth wastewater systems are hatched in red. These areas have usable topography and a minimum slope-corrected soil depth of 24 inches. All hatched areas are generated using gps technology in the field and are not survey located. The area is labeled with approximate square footage.

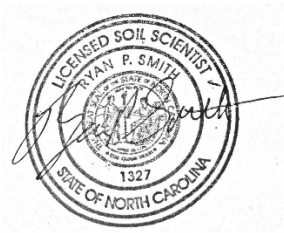
Once the soils map is complete the size of area required for a septic system can be estimated. Residential systems are sized according to the number of bedrooms in the proposed dwelling. Systems are not sized based on the number of bathrooms in the dwelling. Each bedroom in the proposed dwelling is calculated to generate a daily flow of 120 gallons. A five-bedroom dwelling would have a daily calculated flow of 600 gallons, a four-bedroom dwelling would have a daily calculated flow of 480 gallons. The daily flow is divided by the loading rate based on the soil texture. This site has a clay texture so would have an estimated long-term acceptance rate (LTAR) of 0.25 gallons per square foot of trench bottom per day. The minimum required area or square footage on the ground for the primary septic system and the repair area with this LTAR for the conventional hatched areas would be approximately

15,000-20,000 square feet for a five bedroom dwelling, and 10,000-12,000 square feet for a four bedroom dwelling. Septic areas must meet all setbacks from property lines, wells, water lines and structures as well as any other setbacks or easements imposed by any other entity.

There is sufficient useable soil on the above referenced tracts to accommodate one, five-bedroom dwelling each on tracts A, B, C, and D, and one four bedroom dwelling each on tracts E and F using conventional type systems.

This report discusses the general location of potentially usable soils for on-site wastewater disposal and the soil and site limitations on the property that exists at the time of the evaluation. Piedmont Environmental Associates, PA ("Piedmont") provides professional consulting specializing in the practice of soil science and wastewater management. Piedmont is therefore hired for its professional opinion regarding these matters. Laws and rules governing wastewater treatment and disposal are forever evolving and subject to the interpretation and opinion of individuals which are employed by local and state agencies that govern these laws and rules. Due to this fact, Piedmont cannot guarantee in any way that any area located in the field, shown on a sketch, or discussed with the client will be permitted by any of these agencies. It is for this reason that **Piedmont strongly recommends to anyone considering a financial commitment on any piece of property be completely aware of all permit requirements on that property before purchase and obtain those permits prior to a final financial commitment.** We are pleased to be of service in this matter. If you have any further questions, please feel free to call (336)260-3564. This map and report may not be reproduced or shared in any way without the express written permission of Piedmont Environmental Associates, PA.

Sincerely,



Ryan P. Smith  
NC Licensed Soil Scientist # 1327  
Piedmont Environmental Associates, P.A.

## Attachment I

**TABLE IX:** Minimum setbacks from all wastewater systems to site features

**Setback (Feet)**

| <b>Site Features</b>                                                                                                                                                                                                                        |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Any transient or non-transient non-community water supply well, community well, shared water supply well, well that complies with 15A NCAC 18A .1700, or water supply spring                                                                | 100 |
| A private drinking water well or upslope spring serving a single family dwelling unit                                                                                                                                                       | 50  |
| Any other well or source not listed in this table, excluding monitoring wells                                                                                                                                                               | 50  |
| Surface waters classified WS-I, from ordinary high-water mark                                                                                                                                                                               | 100 |
| Waters classified SA, from mean high-water mark                                                                                                                                                                                             | 100 |
| Any Class I or Class II reservoir, from normal water level                                                                                                                                                                                  | 100 |
| Lake or pond, from normal water level                                                                                                                                                                                                       | 50  |
| Any other stream, non-water supply spring, or other surface waters, from the ordinary high-water mark                                                                                                                                       | 50  |
| Tidal influenced waters, such as marshes and coastal waters, from mean high-water mark                                                                                                                                                      | 50  |
| Permanent stormwater retention basin, from normal water level                                                                                                                                                                               | 50  |
| Any water line, unless the requirements of Paragraph (i) have been met                                                                                                                                                                      | 10  |
| Closed loop geothermal wells                                                                                                                                                                                                                | 15  |
| Building foundation and deck supports                                                                                                                                                                                                       | 5   |
| Patio, porch, stoop, lighting fixtures, or signage, including supporting structures such as posts or pilings                                                                                                                                | 1   |
| Any basement, cellar, or in-ground swimming pool                                                                                                                                                                                            | 15  |
| Buried storage tank or basin, except stormwater                                                                                                                                                                                             | 10  |
| Above ground swimming pool and appurtenances that require a building permit                                                                                                                                                                 | 5   |
| Top of slope of embankment or cuts of two feet or more vertical height with a slope greater than 50 percent                                                                                                                                 | 15  |
| Top of slope of embankment or cuts of two feet or more vertical height with a slope greater than 33 percent and less than or equal to 50 percent.                                                                                           | 15  |
| If the site has suitable soil depth that extends for a minimum horizontal distance of 15 feet from the edge of the dispersal field, no minimum setback is required.                                                                         |     |
| Top of slope of embankment or cuts of two feet or more vertical height with a slope less than 33 percent                                                                                                                                    | 0   |
| Groundwater lowering system, as measured on the ground surface from the edge of the feature                                                                                                                                                 | 25  |
| Downslope interceptor drains and surface water diversions with a vertical cut of more than two feet, as measured on the ground surface from the edge of the feature                                                                         | 15  |
| Upslope and sideslope interceptor drains and surface water diversions with a vertical cut of more than two feet, as measured on the ground surface from the edge of the feature                                                             | 10  |
| A stormwater collection system as defined in 15A NCAC 02H .1002(48), excluding gutter drains that connect to a stormwater collection system, with a vertical cut of more than two feet as measured from the center of the collection system | 10  |
| Bio-retention area, injection well, infiltration system, or dry pond                                                                                                                                                                        | 25  |
| Any other dispersal field, except designated dispersal field repair area for project site                                                                                                                                                   | 20  |
| Any property line                                                                                                                                                                                                                           | 10  |
| Burial plot or graveyard boundary                                                                                                                                                                                                           | 10  |
| Above ground storage tank from dripline or foundation pad, whichever is more limiting                                                                                                                                                       | 5   |
| Utility transmission and distribution line poles and towers, including guy wires, unless a greater setback is required by the utility company                                                                                               | 5   |
| Utility transformer, ground-surface mounted                                                                                                                                                                                                 | 5   |

**Note: Systems over 3000 GPD or an individual nitrification fields with a capacity of 1500 GPD or more have more restrictive setback requirements, see .0601 for specifics.**



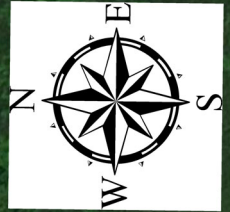
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ASSOCIATES, P.A.

## Soil Map / Site Plan - Tesh Road

216 S. Swing Rd. Suite 1  
Greensboro, NC 27409  
piedmontsoil.com

Job #7878  
Date: 19 June 2026  
Client: John Shipley  
County: Forsyth

MAP NOT VALID WITHOUT REPORT



### Legend

Parcels

#### Line

Property Line

Power Line

ESMT

Well

#### Polygons

Proposed House Box

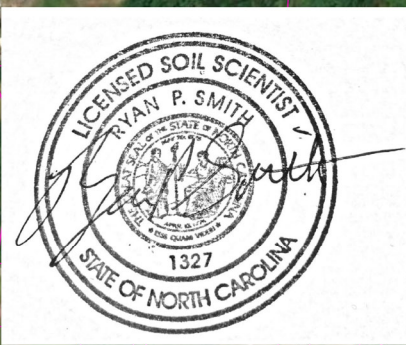
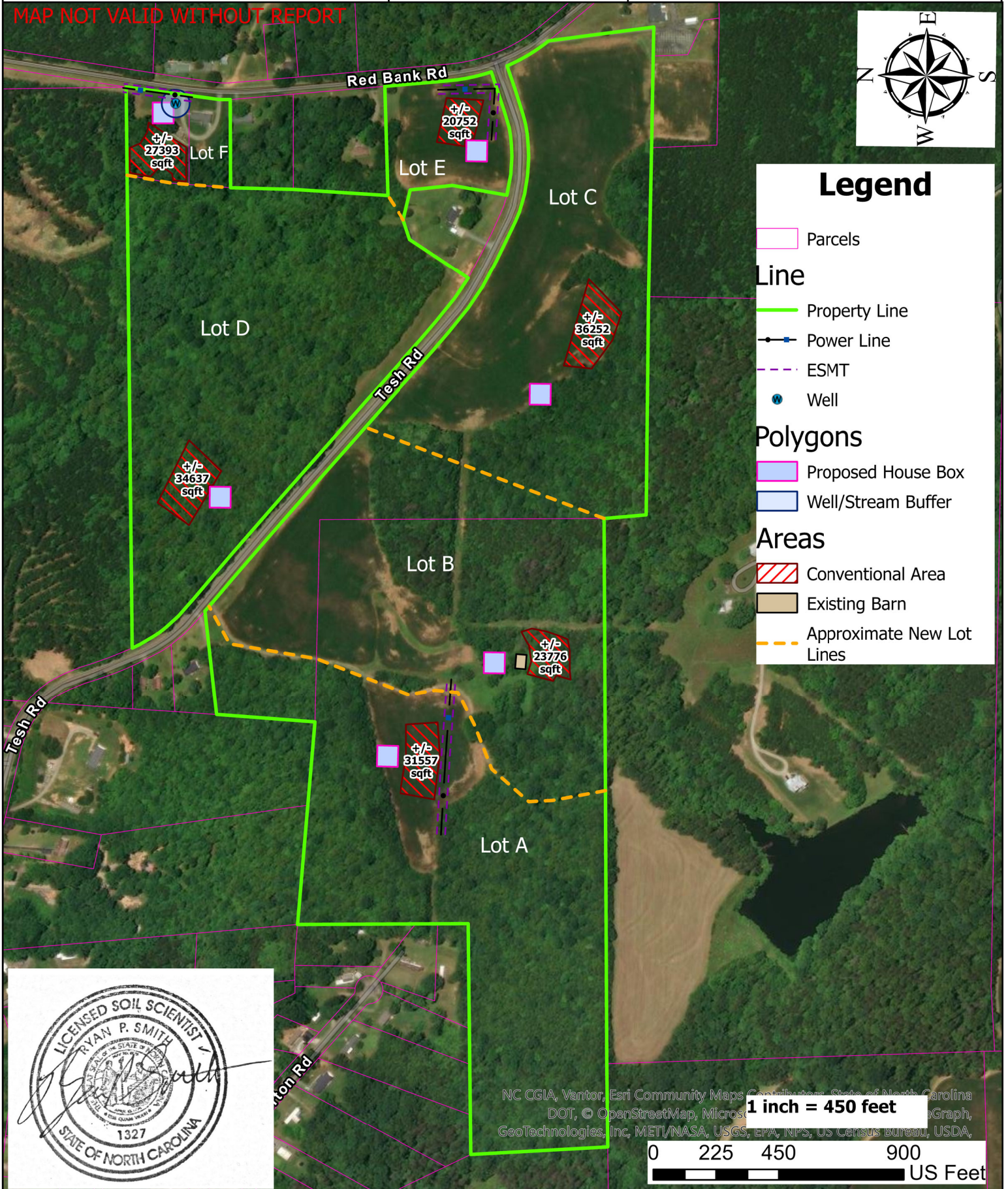
Well/Stream Buffer

#### Areas

Conventional Area

Existing Barn

Approximate New Lot Lines



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1 inch = 450 feet

0 225 450 900  
US Feet