PIEDMONT ENVIRONMENTAL ASSOCIATES, P.A.

August 16, 2024 Project #5644

Land Quest Ventures LLC
Attn: Joseph Pinchbeck
309 Southwater Dr.
Seneca, SC 29672

RE: Detailed Soil/Site Evaluation on Property Located at Grogan Road, Rockingham County, PIN: 794703420955, 794703341700, 794703341700 (Approx. 150 acres)

Mr. Pinchbeck,

This report details the findings of a detailed site and soil evaluation performed on the tract 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 Tuesday, August 13, 2024. 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. The scope of the evaluation was to identify at least one usable soil area on each proposed lot sufficient for one house.

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. Areas that are suitable for low-profile chamber systems are hatched in orange. These areas have usable topography, and a minimum slope corrected soil depth of 20-inches. Minimum soil depths require additional soil cover due to shallower depths. The pink hatched areas have a minimum usable soil depth of 18-inches and are suitable for anerobic drip systems. All hatched areas are generated using gps technology in the field and are not survey located. The areas are 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 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 10,000 – 12,000 square feet. The minimum required area for a low-profile chamber system would be 16,000 square feet for initial and repair (no reductions in linear footage are granted for low-profile chamber systems). These areas must meet all setbacks from property lines, wells, water lines and structures as well as any other setback imposed by any other entity. Each proposed lot contains sufficient usable soil for one 3–4-bedroom home. Unless you pursue private option permitting, all proposed lots will require an application and evaluation by the county health department on an individual basis.

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 Smith
NC Licensed Soil Scientist
Piedmont Environmental Associates, PA

Attachment I

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

Site Features	Setback (Feet)
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. 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.	15
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
Underground utilities	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.

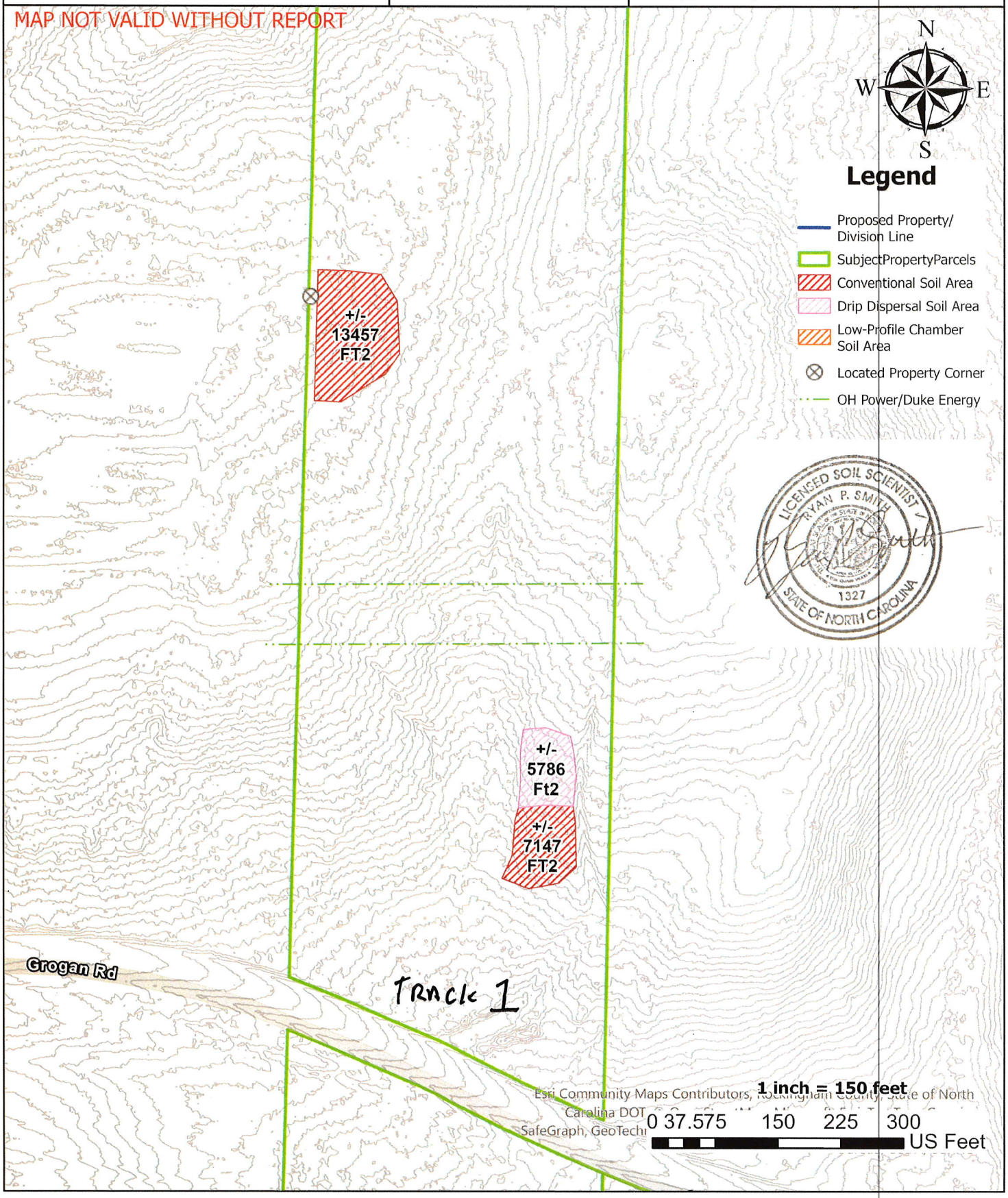
PIEDMONT ENVIRONMENTAL ASSOCIATES, P.A.

Soil Map - Grogan Road, Tract 1, Parcel 128289

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

Job# 5644
Date: August 16, 2024
Client: Land Quest Ventures LLC
County: Rockingham

MAP NOT VALID WITHOUT REPORT



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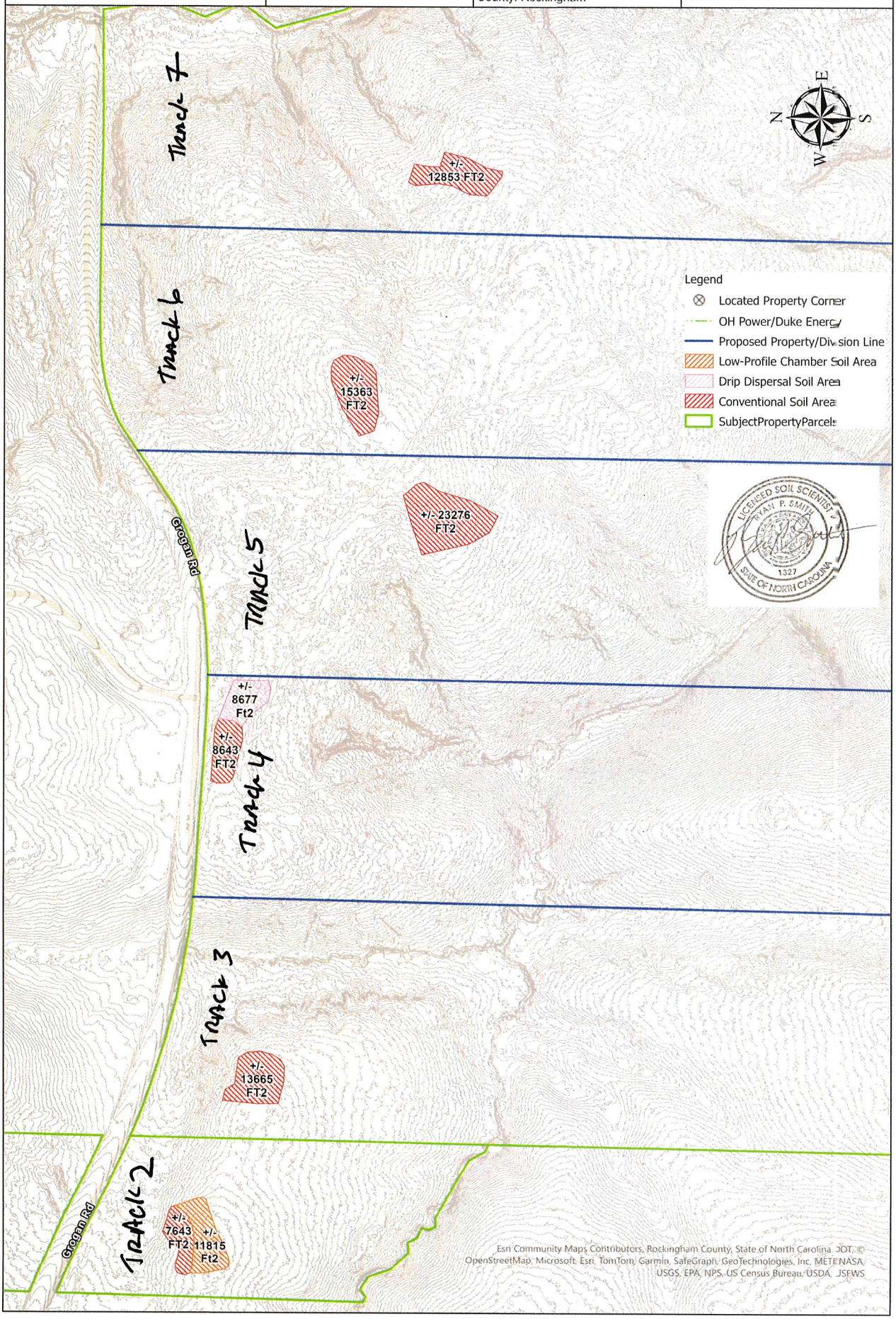
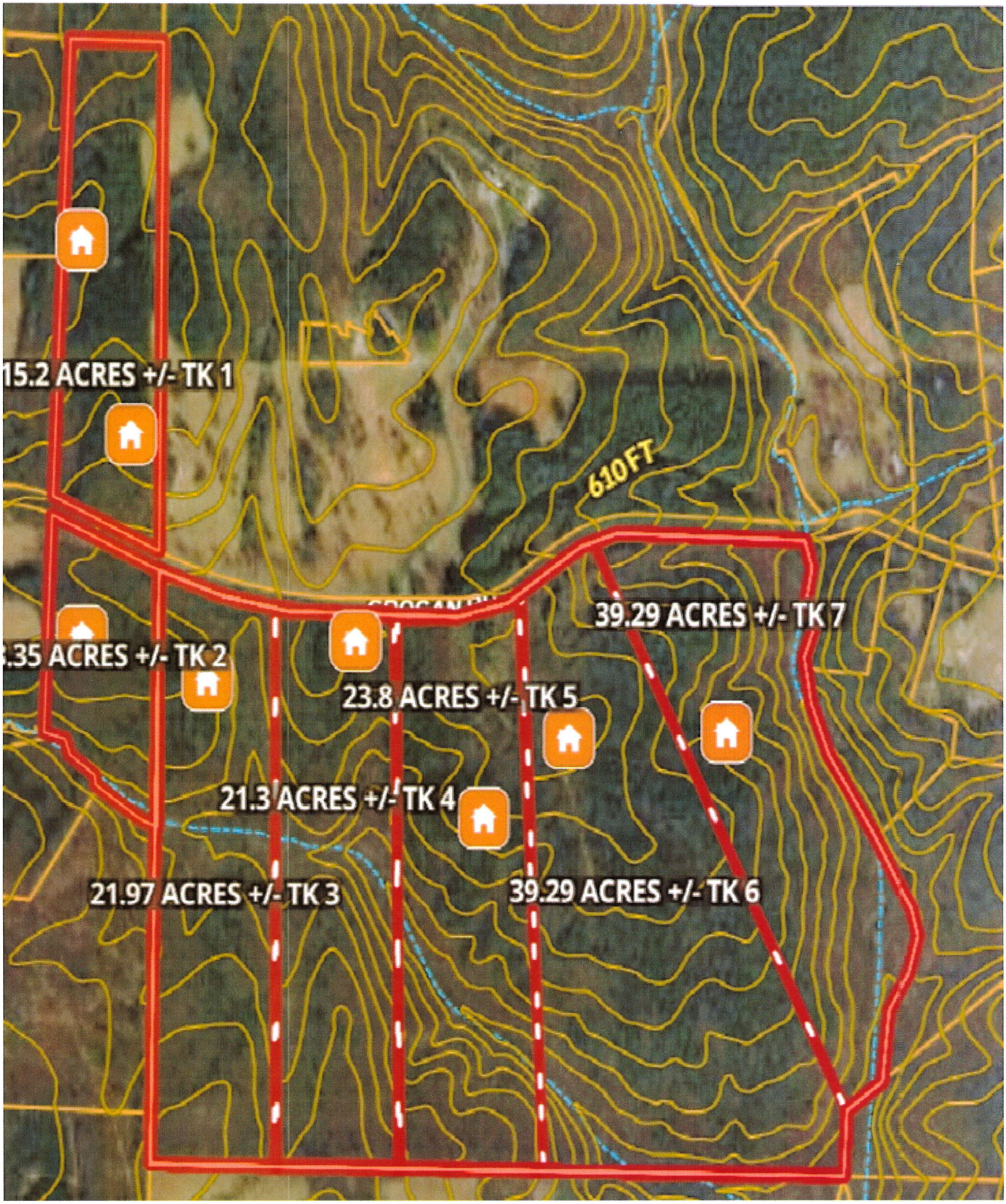
216 S. Swing Rd. Suite 1
Greensboro, NC 27409
piedmontsoil.com

Soil Map - Grogan Road, Tract 2, Parcel 128296, 128289

Job# 5644
Date: August 16, 2024
Client: Land Quest Ventures LLC
County: Rockingham

1" = 200 ft
0 100 200 400 Feet




15.2 ACRES +/- TK 1
610FT
39.29 ACRES +/- TK 7
.35 ACRES +/- TK 2
23.8 ACRES +/- TK 5
21.3 ACRES +/- TK 4
21.97 ACRES +/- TK 3
39.29 ACRES +/- TK 6