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## Preliminary Evaluation

**County Line Road  
Rutherfordton, NC 28731**

Parcel #: 1609759 / 25.26 Acre Tract

Owners: Teodoro & Nora Delrosario

Prepared for Neadom & Rene Tucker

June 12, 2021



*[Handwritten signature in blue ink]*

## **Project Summary**

Auger borings were evaluated in potential onsite wastewater system areas located on the property. Borings were selected from potential drainfield areas and were evaluated by a professional soil scientist to determine the suitability of the tract to support on-site septic systems for a proposed total of 6, single family dwellings, consisting of 1,600 to 3,000 square feet footprints ranging from 3 to 4 bedrooms each. Evaluation methods included visual inspection of the soil-landscape associations present on the tracts and complete soil morphological descriptions of each auger boring. The site and soil evaluations were conducted using the North Carolina rules and regulations for waste disposal as guidance.\*

This study found that there are sufficient suitable soil areas and available space to utilize “conventional” septic drainfields to treat the wastewater generated from the proposed housing units. Provisionally suitable soil areas were found on the tract in the areas delineated on the site plan. This report provides the collected field data, and general site recommendations.

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\* Rules of and amendments to North Carolina Department of Environment, Health, and Natural Resources Title 15A. Ch. 18. Environmental Health. Subch. 18A Sanitation.

## **Landscape position and soil morphological conditions**

The portions of the property evaluated are described as upland sideslope and shoulder landscapes with linear to convexly shaped slopes. Proposed building and system sites are in proximity to the areas. The soils evaluated for potential system placement are derived from residuum (with minor alluvial soils existing on lower terraces) and consist of convex and linear contoured sideslope landscapes with percent slopes roughly ranging from 10 to 35%. The soils are consistent with the Pacolet Cecil soil series association. Generally, soils found on these landscapes are moderately deep to deep over saprolite and underlying parent material, which is mapped as muscovite-biotite gneiss and layered mica schist.

The majority of the property contains residual soils and parent material that will serve the proposed design flows by gravity distribution from house sites. Soil depth in the borings ranges from 36 to 60 inches, with underlying saprolite material (displaying mostly suitable features). Several areas contain more shallow conditions over saprolite and weathered rock, drainageways and stream flows (with setbacks) that will be avoided for system placement.

Soils in the proposed usage areas were found to have sub-angular-blocky structure in the subsoil. Textures within the subsoil were generally fine-loamy with the argillic horizons consisting of slightly sticky and plastic (slightly expansive) sandy clay loam, clay loam, and clay material. Massive structure was found, at depth, in underlying saprolite (C-horizons).

### **LTAR**

The LTAR (Long Term Acceptance Rate) is determined using the site and soil profile data. LTAR for each described profile are provided in site data and notes section. Generally, a LTAR of .3 gallons/day/ft<sup>2</sup> to .5 gallons/day/ft<sup>2</sup> is recommended in the usage areas.

## **Conclusions and additional recommendations**

This property was found to have adequate soils and space available to utilize “conventional” IIIg – 25% reduction and ten-inch large diameter pipe septic drainfields to dispose of and treat the wastewater generated from the proposed housing units. The access

to the proposed drainfield - usage areas may be accessible by conventional gravity fall systems from the house site areas. However, this will depend on the location and size of the house sites and also the potential lot configuration (system easements if necessary) of the property. Horizontal setbacks of 50 feet must be maintained from creeks and streams. Private water supply / drinking water wells should maintain a setback of 100 feet to any proposed septic system component. It is recommended that house sites are identified on the property and that each individual septic system is designed for them, with drainfield areas flagged on contour in proximity to the corresponding house site.

Date: 6/12/2021  
County: Rutherford  
Sheet Number: 1

## Soil /Site Evaluation

Owner/Agent: Teodoro & Nora Delrosario / Neadom & Rene Tucker

Water Supply: Private Well(s) X Community Well(s) \_\_\_\_\_ Municipal \_\_\_\_\_ Spring \_\_\_\_\_

Proposed Facilities: 4 to 6 total – 4 Bedroom Houses

Evaluation Method: Auger Boring X Pit \_\_\_\_\_ Cut \_\_\_\_\_

Location: County Line Road/ Rutherfordton, NC 28731 25.26 Acres Parcel#: 1609759

Profile #	Landscape Position	Slope %	Horizon	Depth Inches	Texture	Structure	Consistence	Mineralogy	Mottle Color	Matrix Color	Other Profile Factors
AB 1	Linear Convex Sideslope N 35.34418° W82.06469°	21%	A	0-4	SL	Gr	VFr	so, po, SE			Wetness Condition
			Bt	4-13	CL	SBK	Fr	s, p, SE			Soil Depth
			BC	13-16	CL	SBK	Fr	ss, p, SE			Restrictive Horizon
			A/R								Profile Classification:
			recommend	additional	Borings in	Area or	Test pits				LTAR: <b>0.40 test pits recommended</b>
AB 2	Linear Convex Footslope N 35.34466° W82.06514°	17%	A	0-8	SL	Gr	VFr	so, po, SE			Wetness Condition <b>PS</b>
			Bt1	8-39	SCL	SBK	Fr	ss, p, SE			Soil Depth <b>PS</b>
			Bt2	39-50	CL	SBK	Fr	s, p, SE			Restrictive Horizon <b>PS</b>
											Profile Classification: <b>PS</b>
											LTAR: <b>0.40 Type IIIG</b>
AB 3	Linear Convex Sideslope N 35.34476° W82.06508°	18%	A	0-6	SL	Gr	VFr	so, po, SE			Wetness Condition <b>PS</b>
			Bt	6-24	CL	ABK	Fr	s, p, SE			Soil Depth <b>PS</b>
			BC	24-44	SCL	SBK	Fr	ss, p, SE			Restrictive Horizon <b>PS</b>
			C	44-60	SL/L	M	Fr	ss, sp, SE			Profile Classification: <b>PS</b>
											LTAR: <b>0.40 Type IIIG</b>
AB 4	Linear Convex Sideslope N 35.34360° W82.06474°	21%	A	0-6	SL	Gr	VFr	so, po, SE			Wetness Condition <b>PS</b>
			Bt	6-40	Clay	ABK	Fr	s, p, SE			Soil Depth <b>PS</b>
			BC	40-60	SCL	SBK	Fr	ss, p, SE			Restrictive Horizon <b>PS</b>
											Profile Classification: <b>PS</b>
											LTAR: <b>0.35 Type IIIG</b>
AB 5	Linear Convex Sideslope N 35.34331° W82.06566°	16%	A	0-6	SL	Gr	VFr	so, po, SE			Wetness Condition <b>PS</b>
			Bt	6-28	Clay	ABK	Fr	s, p, SE			Soil Depth <b>PS</b>
			BC	28-48	CL	SBK	Fr	ss, p, SE			Restrictive Horizon <b>PS</b>
											Profile Classification: <b>PS</b>
											LTAR: <b>0.40 Type IIIG</b>

Comments: A/R = Auger Refusal due to rock PS= provisionally suitable, U=Unsuitable, rclfd=reclassified as provisionally suitable for modified or alternative systems. Designated initial & repair system = IIIG  
25% Reduction Drainfields. Soil descriptions pits / auger borings are within and in proximity to delineated system usage areas, soil units.



*[Signature]* 6/12/2021

Date: 6/12/2021  
 County: Rutherford  
 Sheet Number: 2

## Soil /Site Evaluation

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Location: County Line Road/ Rutherfordton, NC 28731 25.26 Acres Parcel#: 1609759

Profile #	Landscape Position	Slope %	Horizon	Depth Inches	Texture	Structure	Consistence	Mineralogy	Mottle Color	Matrix Color	Other Profile Factors
AB 6	Linear Convex Sideslope N 35.34050° W82.06660°	18%	A	0-4	SL	Gr	VFr	so, po, SE			Wetness Condition <b>PS</b>
			Bt	4-32	CL	ABK	Fr	s, p, SE			Soil Depth <b>PS</b>
			BC	32-48	SCL	SBK	Fr	ss, p, SE			Restrictive Horizon <b>PS</b>
											Profile Classification: <b>PS</b>
											LTAR: <b>0.40 Type IIIG</b>
AB 7	Linear Convex Sideslope N 35.34041° W82.06781°	16%	A	0-5	SL	Gr	VFr	so, po, SE			Wetness Condition <b>PS</b>
			Bt	5-34	CL	ABK	Fr	s, p, SE			Soil Depth <b>PS</b>
			BC	34-48	CL	SBK	Fr	ss, p, SE			Restrictive Horizon <b>PS</b>
											Profile Classification: <b>PS</b>
											LTAR: <b>0.40 Type IIIG</b>

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