

HAL OWEN & ASSOCIATES, INC.

SOIL & ENVIRONMENTAL SCIENTISTS

P.O. Box 400, Lillington, NC 27546-0400

Phone (910) 893-8743 / Fax (910) 893-3594

www.halowensoil.com

19 November 2021

Mike Foley
MF Development LLC

Reference: Preliminary Soil and Wetland Investigation
Ray Road, Spring Lake, NC; PIN 0505-55-2762 (~31 Acres)

Dear Mr. Foley,

A site investigation has been conducted for the above referenced property, located on the western side of Ray Road (SR 1121) in the Anderson Creek Township of Harnett County, North Carolina. The purpose of this investigation was to determine the site's ability to support subsurface sewage waste disposal systems; and to determine the existence, extent, and location of areas that meet the criteria for wetlands and surface waters on the property.

All sewage disposal rating and determinations were made in accordance with "Laws and Rules for Sewage Treatment and Disposal Systems, 15A NCAC 18A .1900". This report represents my professional opinion as a Licensed Soil Scientist but does not guarantee or represent permit approval for this lot by the Local Health Department. An improvement permit will need to be obtained from the LHD that specifies the proposed home size and location, and the design and location of each septic system to be installed.

All wetland determinations were made in accordance with the 1987 US Army Corps of Engineers Wetland Delineation Manual and subsequent regional supplements. This report represents my professional opinion but does not represent the exact wetland boundaries or concurrence by the US Army Corps of Engineers (USACE).

PRELIMINARY SOIL INVESTIGATION

This property was observed to be underlain by a complex mixture of soils that range from provisionally suitable to unsuitable for subsurface sewage waste disposal (see attached map). Soils rated as provisionally suitable will function adequately as sewage waste disposal sites. You should expect that 80 to 133 feet of conventional or accepted status (EZ Flow or chamber) drainlines would be required for the initial system per bedroom in the home. It is recommended that lots be designed that contain at least 30,000 square feet in areas dominated by provisionally suitable soils and serviced by public or community water supplies. Developing lots with individual wells will necessitate an additional 10,000 square feet at minimum. Utilization of pump type conventional systems will allow unsuitable soils to make up part of the lot area. However, it is necessary that at least 10,000 square feet of usable soil be incorporated into each lot in such a way that it will be completely available for waste disposal.

The soils at this site exhibit variable depths to unsuitable conditions over short distances and with little topographic indication that a change likely happened. Inclusions of contrasting soil types should be expected within the provisionally suitable soil areas. These inclusions will likely be fairly small and may only require alternative drainlines with shallow placement but could represent unsuitable areas. A high density subdivision at this site will require a much more detailed soil investigation. The property appears well suited for a six lot minor subdivision.

The unsuitable soil area is so rated due to inadequate soil depth to excessive soil wetness conditions and/or unsuitable landscape position. The ability to utilize alternative systems or make modifications to this area to allow for septic systems is minimal. Much of the unsuitable area is dominated by potential wetlands and homes should not be sited there. The unsuitable area in the north eastern corner will likely support building foundations, and homes could be sited in this area. Septic systems that utilize pumps to conventional drainlines are recommended if you wish to locate homes on unsuitable soils and attempt to maximize the usable portion of the property.

PRELIMINARY WETLANDS INVESTIGATION

Potential wetland areas and streams were observed on the property and are approximately shown on the attached map. It appears that fully developing this property for a single family residential subdivision would require roads to be sited across potential streams and wetlands. Current environmental regulations require a Clean Water Act §404 permit from the US Army Corps of Engineers and a matching §401 water quality certification from the NC Division of Water Resources for any activity that impacts jurisdictional waters (including wetlands); which includes filling, draining, and mechanized land clearing of the area. A permit application prior to construction must be submitted to both agencies if it is anticipated that stream or wetland impacts will occur. Nationwide permits (NWP) are general permits issued by USACE on a nationwide basis to streamline the authorization of activities that result in no more than minimal individual and cumulative adverse environmental effects. They may be used for activities that will impact less than 0.5 acre of wetlands or waters and less than 300 linear feet of stream, and they cover typical activities such as road crossings and building foundations. Authorization to use NWPs and WQCs can usually be secured in about two to three months. The applicant is required to show that all measures have been taken to minimize and avoid impacts. In some cases, USACE or NCDWR may require compensatory mitigation to offset losses of aquatic resources. Additional information about regulatory requirements and permitting can be provided at your request.

I appreciate the opportunity to provide this service and trust that you will feel free to call on me 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".

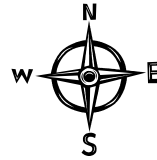
Hal Owen
Licensed Soil Scientist

Preliminary Soil and Wetland Investigation
Ray Road, Spring Lake, NC; PIN 0505-55-2762 (~31 Acres)
19 November 2021




Soil Map



Scale 1 in = 300 ft

Distances are paced
and approximate



Map Legend

	Provisionally Suitable Soils
	Unsuitable Soils
	Potential Wetlands

