# DANIEL J. BLILEY

*SOIL AND LAND USE CONSULTANT*

614 SOUTH SECOND STREET SMITHFIELD, NORTH CAROLINA 27577 (919) 934-8610


March 19, 2020

Mr. Allen Kent
616 Shadywood Lane
Raleigh, North Carolina 27603

**RE:** Johnson Tract

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**INVOICE**

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| **ITEMS** | **COST** |
|---|---|
| Preliminary soils and site investigations for septic system suitability on the 27.99 acre tract located on the west side of Ebinezer Church Road just north of the intersection with NC 27 at Coats in Harnett County. | $ 600.00 |

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March 19, 2020
616 Shadywood lane
Raleigh, North Carolina 27603

Mr. Kent:

This report concerns the soils and site investigations for septic system suitability at three locations on the Johnson tract (27.99 ac.) located on the west side of Ebinezer Church Road just north of the intersection with NC 27 on the east side of Coats in Harnett County. The property identification number is: 1600-17-5354.

The attached sketch map shows the approximate location of the proposed parcel as well as the relevant cultural features and drainage features. This map was prepared using property information and aerial photography obtained from the Harnett County GIS web site. The topographic contours (2 ft. interval-LIDAR) were obtained from the NC DOT GIS web site. The USDA soil survey maps of the area were also consulted as the general nature of the soils, landforms and streams.

The soils were investigated by hand auger borings made at locations that you selected as potential house sites. The suitability classifications were estimated from the soil borings and from field observations of soil related landforms and vegetation. The locations of the individual soil borings as well as proposed house sites and selected cultural features and drainage features were estimated using a Trimble mapping grade GPS receiver. This map with topographic contours is sufficient in detail for preliminary planning for the location of on -site sewage disposal facilities for the proposed fire and rescue station.

**SOILS GENERAL**

The soils on the proposed parcel are mapped in the Norfolk (NoA), Goldsboro (GoA), Wagram (WaB) and Bibb (Bb) soils map unit by the Soil Survey of Harnett County (USDA, 1994). A copy of the relevant section of the soil survey map is attached with this report. Under the USDA system Norfolk and Wagram soils are classified as have moderate to slight limitations for septic system drain fields. These soils are commonly permitted for septic drain fields in Harnett County. The Goldsboro and Bibb soils are classified as having severe limitations for septic drain fields. The main potential for use is the depth to a seasonally perched water table and flood hazard. Goldsboro soils are often permitted for septic systems with modifications to the system or the drain field site. Bibb soils are not normally permitted for septic drain fields due to site wetness and flood hazard.

**SOIL SUITABILITY**

The suitability classifications of the soil areas as specifically on the attached sketch map based on State Sewage Disposal regulations (15A NCAC 18A .1900-.1970) are as follows:

**SOILS AREA 1:** These soils will dominantly classify provisionally suitable for conventional septic system drain fields. These are well drained soils with loamy sand surface layers and sandy clay loam subsoils that have seasonal wetness indicators below depths of 40 inches from the surface. These soils have potential for conventional septic system drain fields. The sewage loading rates are estimated to range from 0.40 to 0.45 gal./sq. ft. of trench bottom for conventional drain fields.

**SUMMARY**

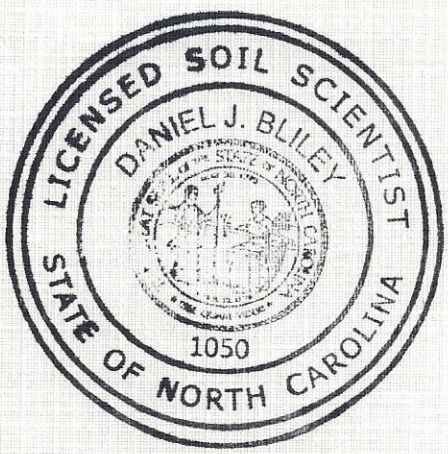
There is in excess of one acre of provisionally suitable soils identified at or in the immediate vicinity each of the identified house sites. These soils areas are sufficient to support septic drain fields for four bedroom dwellings subject to specific site planning considerations. It is likely that additional areas of provisionally suitable soils are present within the NoB, WaB & GoA soils units as shown on the USDA soils map.

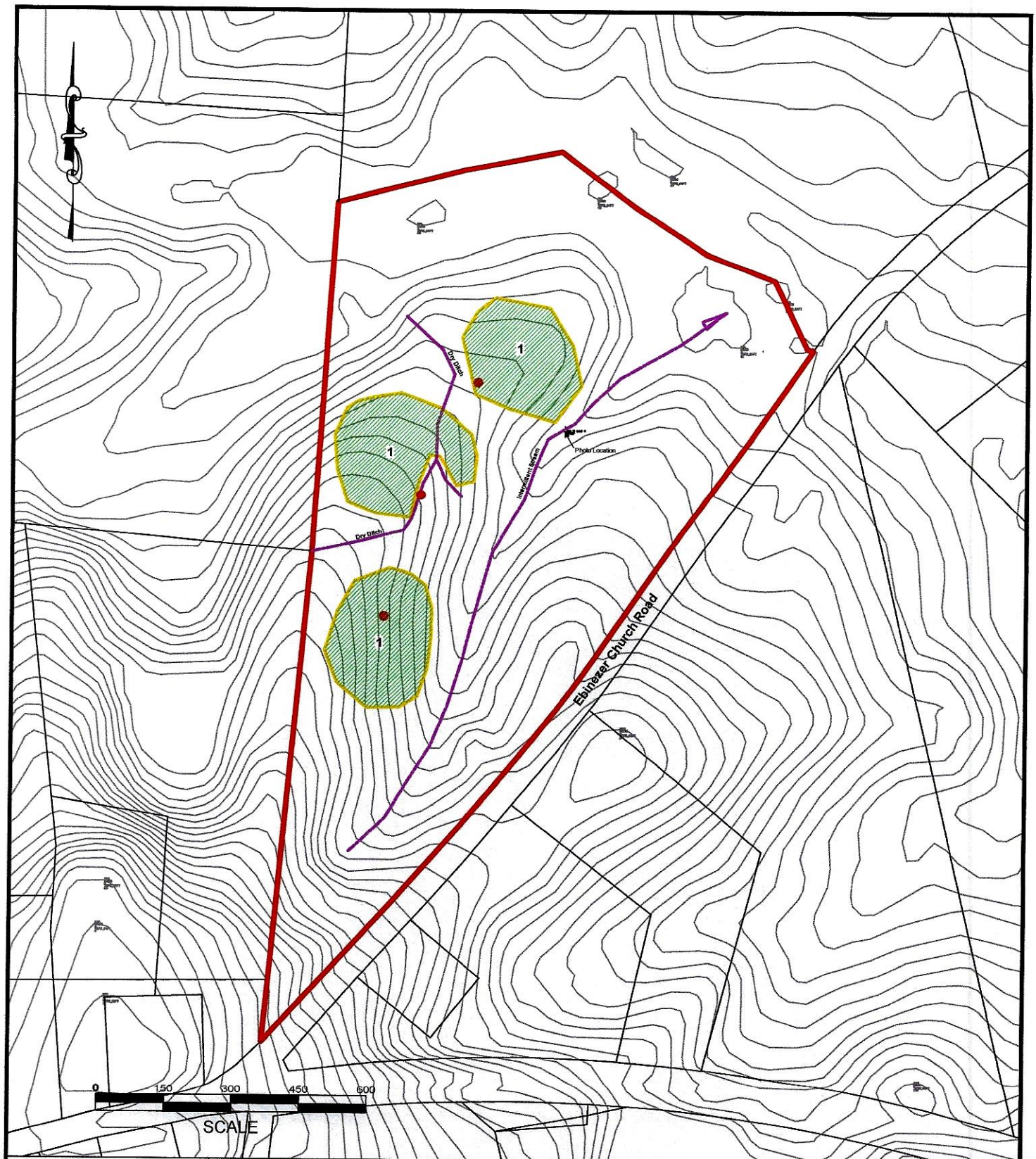
A stream feature is shown on the attached sketch map. This feature is located within the Bibb soils mapping units. Bibb soils are typically classified as hydric soils by the USDA. Hydric soils are indicators of the possible presence of wetlands, which are regulated by the Army Corps of Engineers. Impacts to wetlands normally require a permit from the Corps of Engineers and impacts that exceed 0.10 acre usually require some type of mitigation. Prior notification or the Corps is usually required before any impacts can be executed. This area was not investigated in any detail, but an attached photograph in the area adjacent to the northern most house site shows the small stream channel, which likely classify as a wetland. These wetlands probably need to be delineated to some extent before you close on the property. A possible solutions to this problem (if it is a problem) would be to locate a driveway near the head of the stream or at an up-stream non-wetland site.

Please call me if you want to discuss these investigations or this report in more detail.

Sincerely

Daniel J. Bliley
Soils & Land Use Consultant
Licensed Soil Scientist






| | |
|---|---|
| *Project:* | Johnson Tract |
| *Client:* | Allen Kent |
| *CAD File:* | Kent |
| *Scale:* | 1" = 300' |
| *Date:* | mARCH 19, 2020 |


# Daniel J. Bliley

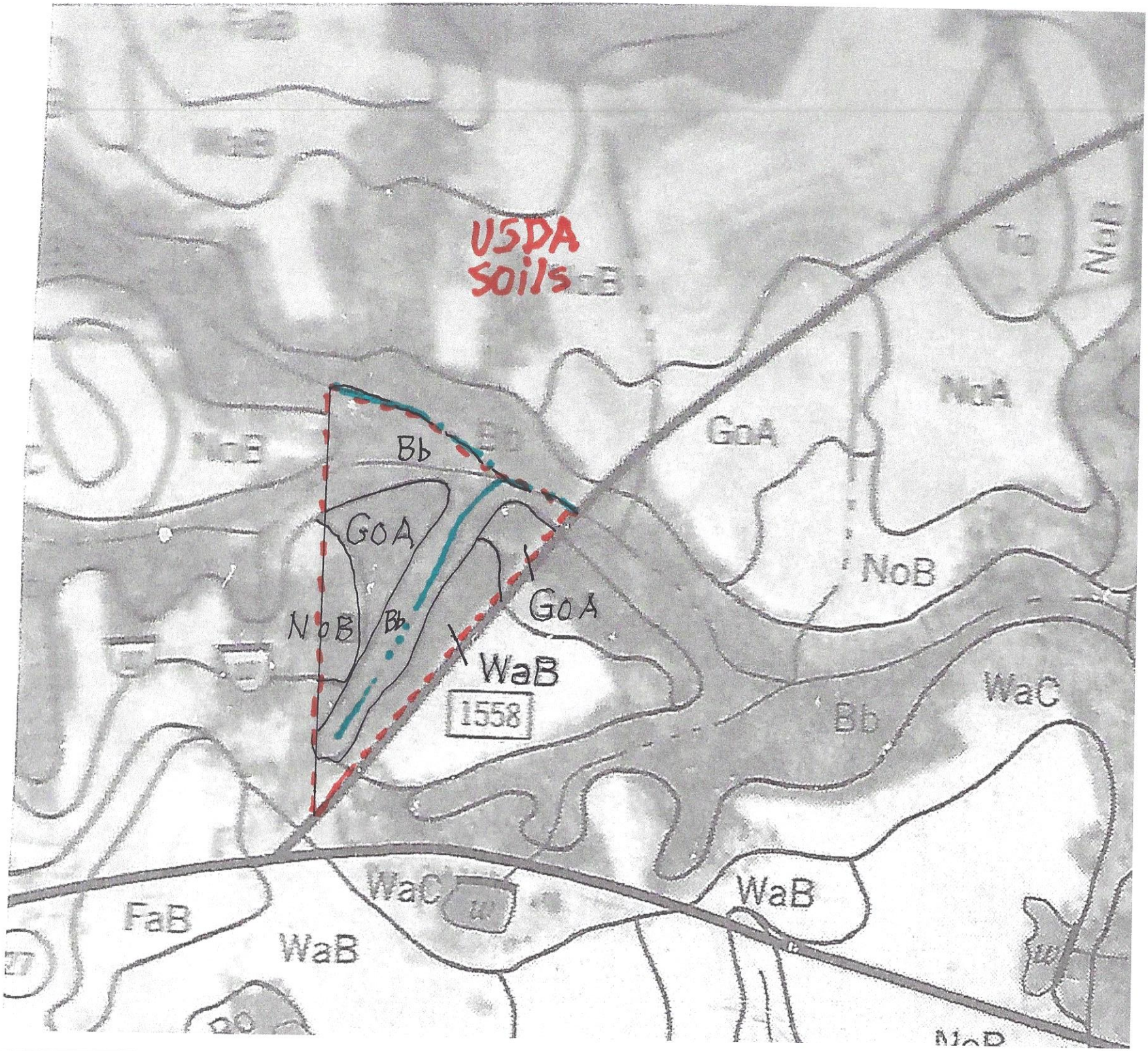
## Soils and Land Use Consultant

614 South Second Street - Smithfield NC 27577

Phone/Fax: (919) 934-8610 - Email: dbliley1@nc.rr.com


**Legend**

- 1 — Provisionally Suitable
- Marked House Sites
- Intermittent Stream or Ditch


USDA
soils
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