

**CHATHAM COUNTY
MAJOR SUBDIVISION
REVIEW CHECKLIST**

Subdivision Name Pennington South
 Review For: Sketch Prelim Final

Attach all supporting documentation regarding these approvals. If approvals are still pending, attach applications for approval.

SKETCH DESIGN REVIEW	APPROVAL DATE
<input checked="" type="checkbox"/> 25 Copies of Plat with topo along with one (1) 8-1/2 x 11 copy	-----
<input checked="" type="checkbox"/> Application w/Complete Adjacent Owner Addresses	-----
<input checked="" type="checkbox"/> Soil Scientist Report and soil map	-----
<input checked="" type="checkbox"/> 1 electronic copy of all items above (see Digital Document Requirements)	
PRELIMINARY PLAT REVIEW	
<input type="checkbox"/> 25 Copies of Plat along with one (1) 8-1/2 x 11 copy
<input type="checkbox"/> Application w/ Complete Adjacent Owner Addresses
<input type="checkbox"/> Detailed Soils Map and Letter of explanation or D.E.M. approval (see Requirements for soil scientist report)	___/___/___
<input type="checkbox"/> NCDOT Approval (if public roads)	___/___/___
<input type="checkbox"/> DOT Comm. Driveway Permit	___/___/___
<input type="checkbox"/> Erosion Control Plan Approval (if new roads or one acre disturbed)	___/___/___
<input type="checkbox"/> U.S. Army Corps of Engineers Permit (if appl)	___/___/___
<input type="checkbox"/> Road Name Request Form	___/___/___
<input type="checkbox"/> County Public Water Approval (if applicable)	___/___/___
<input type="checkbox"/> State Public Water Approval (if applicable)	___/___/___
<input type="checkbox"/> Chatham Co. Schools' Road Comments (if new roads)	___/___/___
<input type="checkbox"/> Stormwater Management Plan Approval (if appl)	___/___/___
<input type="checkbox"/> Economic & Environmental Impact Study (if appl)	___/___/___
<input type="checkbox"/> Water / Sewer Impact Statement (if appl)	___/___/___
<input type="checkbox"/> 1 electronic copy of all items above (see Digital Document Requirements)	
FINAL PLAT REVIEW	
<input type="checkbox"/> 25 Copies of Plat	-----
<input type="checkbox"/> Application
<input type="checkbox"/> 1 electronic copy of all items above (see Digital Document Requirements)	___/___/___
<input type="checkbox"/> Chatham County Environmental Health Division septic improvement permits or NCDWQ septic permits for each lot.	___/___/___
<input type="checkbox"/> Road Completion Certificate or Financial Guarantee	___/___/___
<input type="checkbox"/> Utilities Completion Cert. or Financial Guarantee	___/___/___

Comment _____

Date Complete Application Rec'd: ___/___/___ By: _____

Chatham County Planning Department
P.O. Box 54
Pittsboro, NC 27312
Tel: (919) 542-8204
Fax: (919) 542-2698

Type of Review
 Sketch
 Preliminary
 Final

MAJOR SUBDIVISION APPLICATION

Name of Subdivision: Pennington South Subdivision
Subdivision Applicant: _____ Subdivision Owner: _____

Name: Don Sullivan

Name: Contentnea Creek Co

Address: 8502 Sixforks Road Suite 201
Raleigh, North Carolina 27615

Address: 8502 Sixforks Road Suite 201
Raleigh, North Carolina 27615

Phone:(W) _____

Phone:(W) 919-961-3690

Phone:(H) _____ Fax: 919-882-2341

Phone:(H) _____ Fax: 919-789-8744

E-Mail dan@standoutproperties.com

E-Mail Coachjwh@aol.com

Township: New Hope Zoning: RA-5

P. I. N. # 9772-93-8896

Flood Map # 3710977200 J Zone: X

Parcel # 17347

Watershed: WS-IV PA

Existing Access Road: S.R. # _____

S.R. road name _____

Total Acreage: 67.52

Total # of Lots: 50

Min. Lot Size: 40,000 sq. ft.

Ph. I Acreage _____

Ph. I # of lots _____

Max. Lot Size: _____

Ph. II Acreage _____

Ph. II # of lots _____

Avg. Lot Size: 53,484 sq. ft.

Ph. III Acreage _____

Ph. III # of lots _____

Type of new road: Private/ Length _____

Public/ Length 5339.76

Road Surface:

paved
 gravel

Water System:

individual wells
 community wells
 public system
name _____

Sewer System:

septic systems
 community system
 public system
name _____

List other facilities: commercial, recreation, etc., and the approximate acreage or square footage:

Paul Phillips Date _____ Signature of Applicant
Robert O. Hill, Jr. Date _____

For Office Use Only:
Notes: _____

Approved by County Commissioners: Sketch _____
Preliminary _____
Final _____

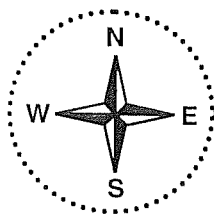
Payment: Date _____ / _____ / _____ Amount: \$ _____

ADJACENT LAND OWNERS (Property owners across a road, easement, or waterway are considered adjacent land owners):

Legal notices are mailed to these owners, please **type or write neatly**, and include zip codes.

1. Martin, Sharon C. 1666 Hortons Pond Rd Apex, NC 27523	11. Martin Sharon C 1666 Hortons Pond Rd Apex, NC. 27523
2. Horton Barbara C & Ernest J Ho 2652 Farrington Rd Apex NC 27502	12.
3. Dollar Jacqueline C 904 Arbor Valley Ln Apex NC 27502	13.
4. Clark Doris E 9246 NC Hwy 751 Durham NC 27713-6878	14.
5. Jesse David D & Karen Love 532 Seaforth Rd Pittsboro NC 27312	15.
6. Montgomery Carlia Joe Eutz 9 Crosswinds Estate Dr Pittsboro NC 27312-8456	16.
7. Bailey Warren D & Andrea E 8 Crosswinds Estates Dr Pittsboro NC 27312	17.
8. Riedling Jonathan Kent 7 Crosswinds Estates Dr Pittsboro NC 27312	18.
9. Gunn Robert L & Rebekah P.O. Box 886 Pittsboro, N.C. 27312	19.
10. Pennington Family LTD Partner 3522 House Ave Cheyenne WY 82009	20.





BURDETTE LAND CONSULTING, INC.

308D W Millbrook Road, Suite 200 - Raleigh, North Carolina 27609
Telephone (919) 841-9977 – Fax (919) 841-9909

July 20, 2006

Mr. Daniel T. Sullivan
Contentnea Creek Development Company
8502-202 Six Forks Road
Raleigh, North Carolina 27615

**RE: Surface Waters and Wetlands Delineation
Pennington South Property**
Pittsboro, Chatham County, North Carolina
BLC Project #: 60053

Dear Mr. Sullivan:

On July 12, 2006, Burdette Land Consulting, Inc. (BLC) conducted a determination and delineation of jurisdictional and isolated wetlands, and streams on the subject property. This 79-acre property is located on the south side of US Highway 64 approximately 2000 feet west of Big Woods Road (SR 1716), near Lake Jordan in Chatham County, North Carolina. An unnamed tributary to Windfall Branch runs from southwest to northwest through the property and has WS-IV and NSW water quality classifications. Figure 1 depicts the location of the property on the US Geological Survey (USGS) Merry Oaks, NC 7.5-minute quadrangle topographic map.

Waters of the US, commonly referred to as jurisdictional waters, include intermittent and perennial streams, ponds, lakes, rivers, and wetlands that are adjacent to or eventually connect to navigable waters. They are under the jurisdiction of the US Army Corps of Engineers (USACE), which regulates the discharge of fill material, mechanized land clearing, and excavation within their boundaries. If these features are not connected downstream then they are considered isolated and regulated only by the State of North Carolina through the NC Division of Water Quality (NCDWQ). The NCDWQ and a number of local government entities also regulate activities within vegetated riparian buffers established around surface waters to protect water quality. Riparian buffers only apply to wetlands in certain municipalities. Proposed development and road/utility construction require these jurisdictional and isolated waters and their associated riparian buffers to be identified and delineated in order to avoid impacts where practicable and to obtain the proper permits when impacts cannot be avoided.

Scope of Work

The delineation of jurisdictional and isolated waters consisted of a field reconnaissance of the property to identify surface waters and areas that meet the criteria for jurisdictional wetlands described below. Surface waters (intermittent and perennial streams, ponds, lakes, and rivers) are identified by an ordinary high water mark usually indicated by a clear line impressed in the bank, shelving along the water's edge, changes in the character of the soil, destruction of terrestrial vegetation, and/or presence of litter or debris.

Areas that exhibit hydrophytic vegetation, hydric soils, and wetland hydrology are wetlands according to the *1987 Corps of Engineers Wetland Delineation Manual*. Hydrophytic vegetation is present when more than 50 percent of the dominant species are obligate wetland, facultative wetland, or facultative plants listed on the *National List of Plant Species that Occur in Wetlands*. Hydric soils are identified based on Field Indicators of Hydric Soils published by the Natural Resources Conservation Service. Field indicators for hydric soils rely on the presence of gray or black colored surface and subsurface soils. Areas exhibiting wetland hydrology are permanently inundated to irregularly inundated or saturated with water. Since inundation and saturation may not be present during a one time field visit to conduct a wetland delineation, field indicators of wetland hydrology were established to confirm the presence of this parameter. These field indicators include, but are not limited to, direct observation of saturation or inundation, watermarks on woody vegetation, drift lines, sediment deposits, drainage patterns within wetlands, and the presence of oxidized root channels in the soil. Areas that meet all three criteria for wetlands may be either jurisdictional or isolated depending on whether or not they are adjacent or connect to navigable waters.

Surface waters in the Neuse and Tar-Pamlico River Basins require maintenance of 50-foot wide riparian buffers directly adjacent to these features. Only those surface waters shown on the most recent version of the soil survey map provided by the Natural Resource Conservation Service or 7.5-minute quadrangle topographic maps supplied by the USGS are subject to the Neuse/Tar-Pamlico River Basin: Nutrient Sensitive Waters Management Strategy: Protection and Maintenance of Riparian Areas with Existing Forest Vegetation (15A NCAC 2B.0233/260). The NCDWQ may exempt surface waters depicted on these maps from the riparian buffer rules if an on-site determination shows that the features are one of the following:

- 1) Ditches and manmade conveyances other than modified natural streams;
- 2) Manmade ponds and lakes that are located outside natural drainage ways; or
- 3) Ephemeral (stormwater) streams.

The NCDWQ does not require maintenance riparian buffers directly adjacent to surface waters in the Cape Fear River Basin at this time. However, Chatham County requires 50-foot wide riparian buffers on all streams shown on the applicable USGS topographic map. Additionally, Chatham County may require maintenance of a riparian buffer on stream channels present in the field, which meet the criteria for at least an intermittent stream channel, but are not shown on the

USGS topographic map. BLC has identified surface water features that would be considered at least intermittent stream channels.

Wetland boundaries and some channel centerlines were identified with pink, sequentially numbered flagging. For each surface water or wetland identified, we evaluated the downstream connection to distinguish isolated from jurisdictional waters. Additionally, surface waters encountered on the site were examined using NCDWQ stream evaluation techniques. Figure 2 shows the location of the site on the applicable Chatham County Soil Survey map.

Results

We observed stream channels and two jurisdictional wetlands on the site. The Surface Waters and Wetlands Sketch Map provided as Figure 3 shows the approximate location of these features on the site. The following flag numbers were hung in the field to locate the start points and boundaries of these features: 100-113. It is important to note that sequentially numbered flags were hung around all wetland areas near or outside of 30 feet from buffered stream channels, but the centerline of obvious stream channels were not flagged. These features are approximated on the map to ensure that they are also surveyed along with the wetland boundary flags.

Flag #111 denotes the point at which Stream Channel A begins to exhibit important aquatic function. Linear footage of impacts proposed to this channel below flag #111 would count towards the overall limit of 300 linear feet of stream channel impacts under the Nationwide Permit program.

Stream Channel A is definitely subject to maintenance of a 50-foot wide vegetated buffer by Chatham County because it is shown on the USGS topographic map provided as Figure 1. Based on our field evaluation, BLC also believes that Chatham County may require vegetated buffers on Stream Channels B and D. The limits of stream channels and wetland boundaries and information regarding stream channels that exhibit important aquatic function provided are based on our best professional judgment and require verification from the USACE.

In general, property owners may choose to submit a jurisdictional and isolated waters survey to the USACE for their signature, which establishes the jurisdictional and isolated waters boundaries until the map expires five years from the date it is signed. A USACE signed survey is not required for permitting, but is offered to provide property owners with the assurance that the boundaries of jurisdictional and isolated waters on the property would not change for five years. Attached is a two-page guidance document regarding the preparation of a jurisdictional and isolated waters survey map suitable for the USACE's approval. It also includes four certification statements available for different site circumstances. The certification "For sites where there may be upland within the depicted boundary" is appropriate for this site.

An agent authorization form signed by the current property owner is required for BLC to submit either a survey for approval or a permit application for proposed development. A blank agent authorization form is attached for your use. A buyer may also sign this authorization provided contact information for the current property owner is provided along with the relevant portions of the real estate contract documenting the current property owner's authorization for the buyer to conduct inspections of the property.

Jurisdictional Waters Permitting

There are several layers of regulations that apply independently to these features. However, the USACE and NCDWQ have developed a joint-application with concurrent review for permits to impact jurisdictional and isolated waters including wetlands, which is referred to as a Pre-Construction Notification Application.

Jurisdictional Waters

The USACE has issued activity specific Nationwide Permits to streamline the permitting process for unavoidable impacts to less than 300 linear feet of jurisdictional stream channel that exhibits important aquatic function and/or perennial stream channels and/or 0.5 acre of jurisdictional wetlands and other surface waters. Pre-construction notification and approval from the USACE is required for greater than 150 linear feet of stream channel impact and 0.10 acre of wetland impacts. Nationwide Permits have a maximum 45-day processing period upon the USACE's receipt of a complete application. Compensatory mitigation may be required to offset the loss of jurisdictional stream channels and wetlands when an approval from the USACE is required. Impacts that exceed the thresholds above for Nationwide Permits require an individual permit. Individual permit processing could take as much as 12 months to complete.

Impacts permitted by the USACE also require a Section 401 Water Quality Certification from NCDWQ. The NCDWQ has issued General Water Quality Certifications for impacts to jurisdictional waters approved by USACE and impacts to riparian buffers. Pre-construction notification and approval from the NCDWQ is required for greater than 150 linear feet of stream channel impact and 0.10 acre of wetland impacts for the entire project area and/or any length of stream impact within Neuse, Tar-Pamlico, or Randleman River Basins that require written concurrence from the NCDWQ for compliance with the riparian buffer rules discussed below. Water Quality Certifications have a maximum 60-day processing period upon the NCDWQ's receipt of a complete application. Compensatory mitigation may be required for impacts to 150 linear feet or more of stream channel and/or 1 or more acre of wetlands.

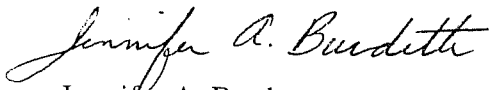
Recommendations

BLC recommends proceeding with a survey of the wetlands and stream channels identified on Figure 3. If proposed, BLC also recommends continued coordination with our office regarding permitting impacts to jurisdictional waters and wetlands present on the site.

We thank you for the opportunity to provide our services in support of the this project and look forward to assisting Contentnea Creek Development Company with obtaining the proper permits for development.

Sincerely,

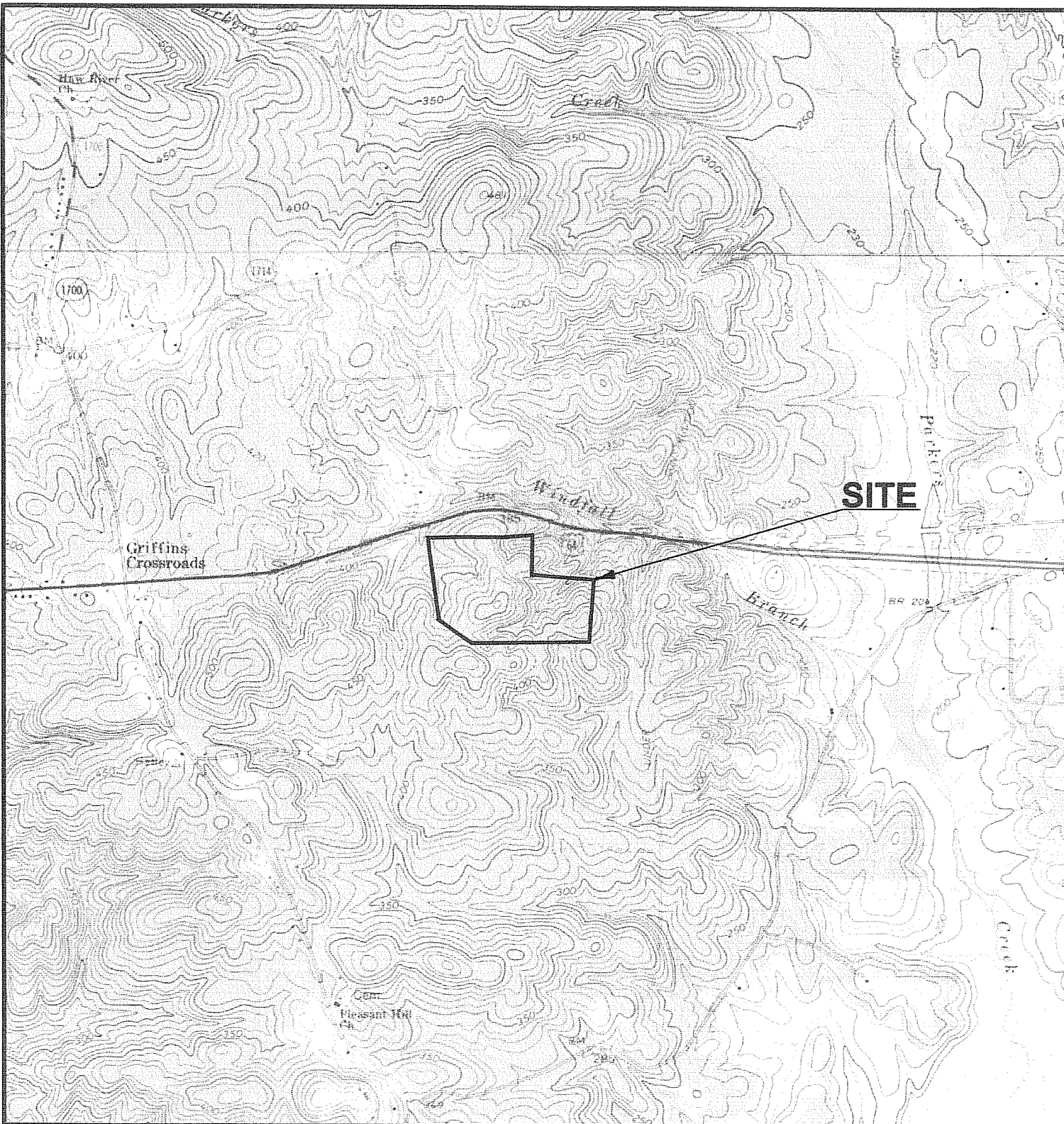
BURDETTE LAND CONSULTING, INC.



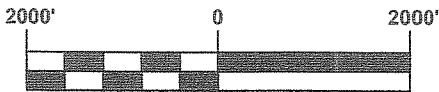
Jennifer A. Burdette
Environmental Specialist

Attachments

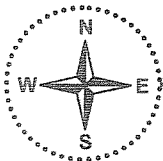
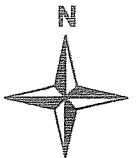
c: John Harris



GRAPHIC SCALE
1" = 2000'



USGS LOCATION MAP
PENNINGTON SOUTH PROPERTY
CONTENTNEA CREEK DEVELOPMENT COMPANY
PITTSBORO, CHATHAM COUNTY, NC



BURDETTE LAND CONSULTING, INC.

308D W Millbrook Road, Suite 200 - Raleigh, North Carolina 27609
Telephone (919) 841-9977 - Fax (919) 841-9909

DATE: 07/10/06

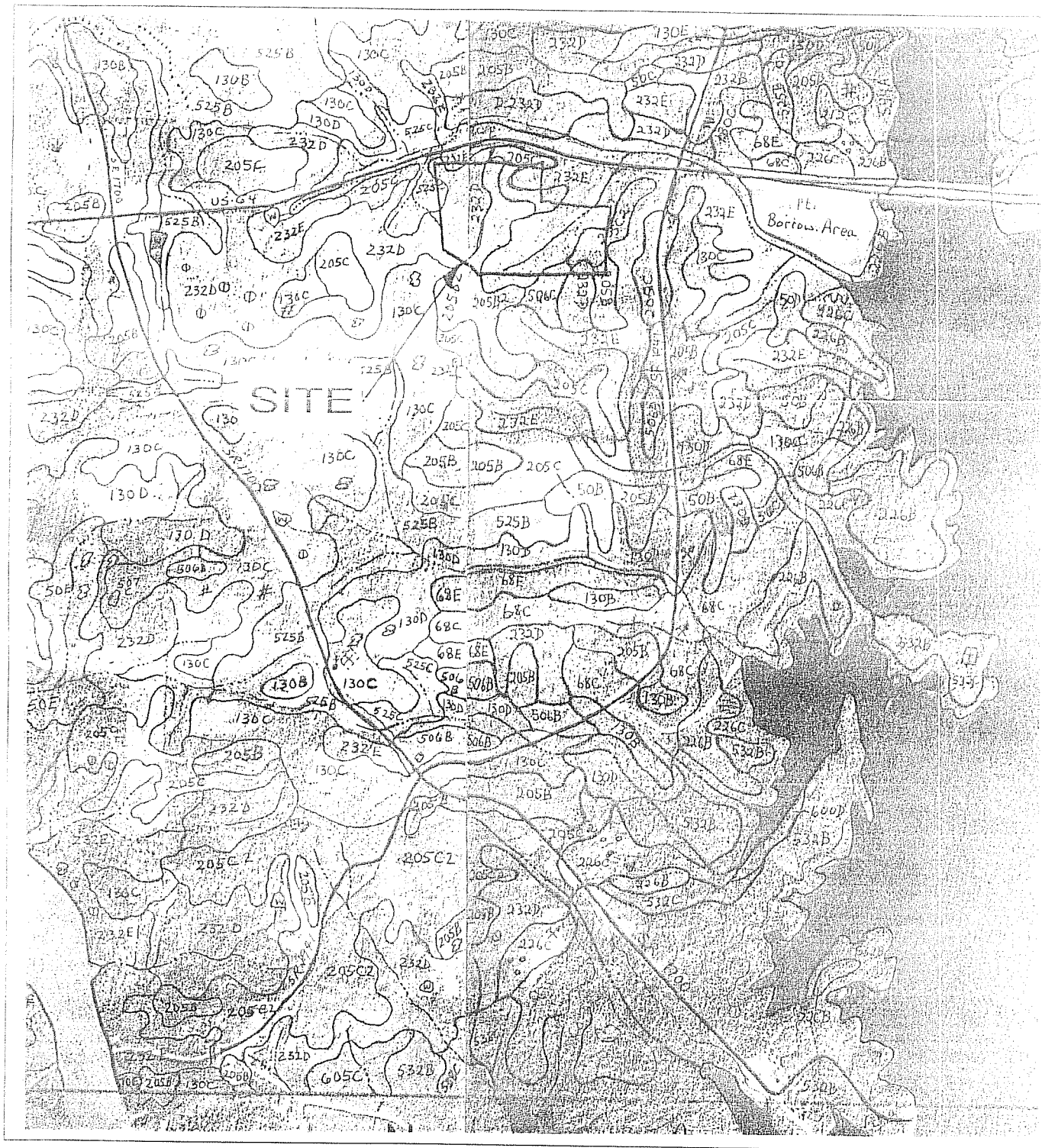
DRAWN BY: TMB

PROJECT #: 60053

USGS 7.5' TOPO QUAD:
MERRY OAKS

CHK'D BY: JAB

FIGURE #: 1



GRAPHIC SCALE
1" = 2000'



CHATHAM COUNTY SOIL SURVEY MAP
PENNINGTON SOUTH PROPERTY
CONTENTNEA CREEK DEVELOPEMENT COMPANY
PITTSBORO, CHATHAM COUNTY, NC



BURDETTE LAND CONSULTING, INC.

308-D W Millbrook Road, Suite 200 - Raleigh, North Carolina 27609
Telephone (919) 841-9977 - Fax (919) 841-9909

DATE: 07-10-06

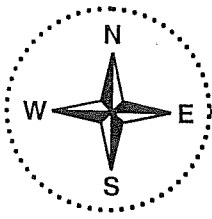
DRAWN BY: TMB

PROJECT #: 60053

SHEET(S) 18 AND 19

FIGURE 1

FIGURE 1



BURDETTE LAND CONSULTING, INC.

308D W Millbrook Road, Suite 200 - Raleigh, North Carolina 27609
Telephone (919) 841-9977 - Fax (919) 841-9909

AGENT AUTHORIZATION FORM

US Army Corps of Engineers
Raleigh Regulatory Field Office
6508 Falls of Neuse Road, Suite 120
Raleigh, North Carolina 27615

North Carolina Division of Water Quality
Central Office
Mail Service Center 1650
Raleigh, North Carolina 27699

To Whom It May Concern:

By signing below, the current property owner gives representatives of Burdette Land Consulting, Inc. permission to act as their authorized agent for jurisdictional and isolated waters and riparian buffer determinations, delineation, and permitting for the subject project. This authorization includes permission to enter the site to conduct site meetings with US Army Corps of Engineers and NC Division of Water Quality personnel, as necessary.

Project Name: Pennington South Property

BLC Project #: 60053

Current Property Owner or Easement Holder:

Name: _____
(include contact person if a corporation, partnership, or government)

Mailing Address: _____

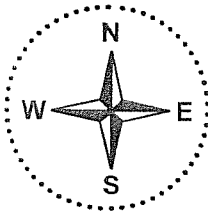
Telephone: _____ Fax: _____

Signature

Print Name *(include title, if appropriate)*

Date





BURDETTE LAND CONSULTING, INC.

308-D W Millbrook Road, Suite 200 - Raleigh, North Carolina 27609

Telephone (919) 841-9977 – Fax (919) 841-9909

Preparation of Jurisdictional and Isolated Waters Survey for USACE Approval Guidance

The following applies to plats or plans submitted to the Corps of Engineers for confirmation of Section 404 jurisdiction:

- 1) In addition to the applicant's copies, one legible paper copy on 11X17 inch or smaller paper (multiple sheets with matchlines are acceptable), or a digital copy on disk (Autocad or Microstation are acceptable) must be submitted for Corps files.
- 2) Distances and bearings for wetland boundaries and stream channels must be printed legibly along side the lines or in an arranged table. Centerline points with widths noted at each point are acceptable for stream channels. Show all connections of stream channels through culverts.
- 3) Area of individual wetlands depicted (square feet or acreage) or linear measurements allowing the area to be calculated should be shown.
- 4) Total area of wetlands and waters depicted (square feet or acreage) should be shown
- 5) Total area (acreage) of property or area evaluated
- 6) The plat must be sealed or signed by the surveyor.
- 7) Plat must clearly identify the limit of the evaluation. Cut jurisdictional areas at the property lines or the limit of evaluation, and do not show jurisdictional areas beyond the property or area being surveyed.
- 8) If non-jurisdictional wetlands are present, we recommend that some legible method (e.g. hatching, or an arrow indicating isolated wetlands) be used to identify the wetland on the survey. Determination of non-jurisdiction must first be approved by the Corps.
- 9) One of the following paragraphs of certification should be printed on the survey with the signature lines, depending upon the situation:

- a. For sites where the entire actual jurisdictional boundary is depicted:

“This certifies that this copy of this plat accurately depicts the boundary of the jurisdiction of Section 404 of the Clean Water Act as determined by the undersigned on this date. Unless there is a change in the law or our published regulations, this determination of Section 404 jurisdiction may be relied upon for a period not to exceed five years from this date. This determination was made utilizing the 1987 Corps of Engineers Wetlands Delineation Manual.”

Name: _____

Title: _____

Date: _____

AID: _____

For sites where a portion of the actual jurisdictional boundary is depicted (such as when only the impact areas were delineated):

“This certifies that this copy of this plat accurately depicts the boundary of the jurisdiction of Section 404 of the Clean Water Act in the areas impacted by the present proposed activity, as determined by the undersigned on this date. Other areas of jurisdiction may be present on the site but have not been delineated. Unless there is a change in the law or our published regulations, this determination of Section 404 jurisdiction may be relied upon for a period not to exceed five years from this date. This determination was made utilizing the 1987 Corps of Engineers Wetlands Delineation Manual.”

For sites where there may be upland within the depicted jurisdictional boundary:




“This certifies that this copy of this plat identifies as waters of the U.S. or wetlands all areas of waters of the U.S., including wetlands, regulated pursuant to Section 404 of the Clean Water Act as determined by the undersigned on this date. Unless there is a change in law or our published regulations, this determination of Section 404 jurisdiction may be relied upon for a period not to exceed five years from this date. This determination was made utilizing the 1987 Corps of Engineers Wetlands Delineation Manual.”

For sites where only the impact areas have been delineated and those areas include uplands.

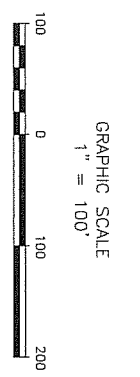
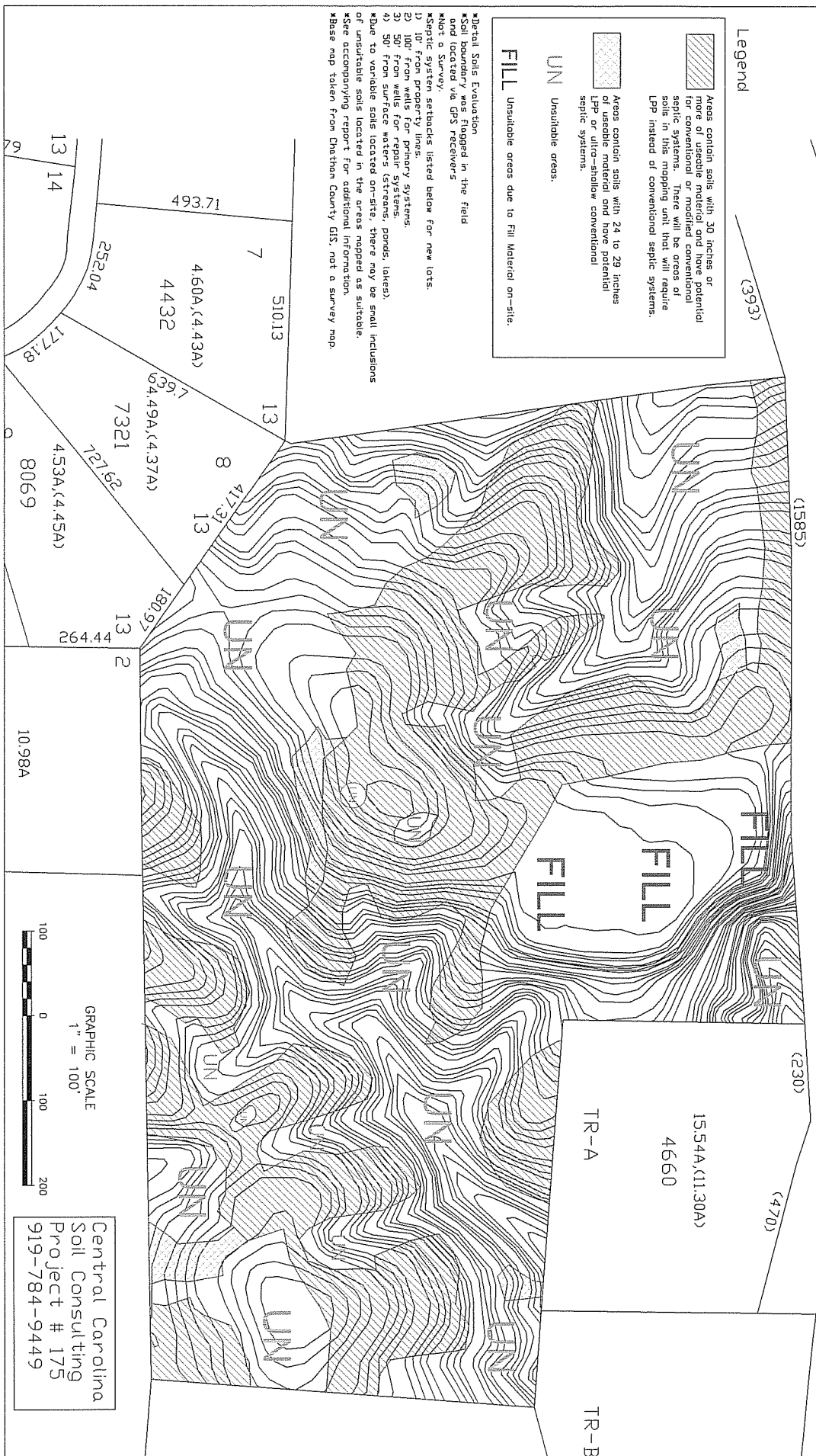
“This certifies that this copy of this plat identifies as waters of the U.S. or wetlands all areas of waters of the U.S., including wetlands, regulated pursuant to Section 404 of the Clean Water Act in the areas impacted by the present proposed activity, as determined by the undersigned on this date. Other areas of jurisdiction may be present on the site but have not been delineated. Unless there is a change in the law or our published regulations, this determination of Section 404 jurisdiction may be relied upon for a period not to exceed five years from this date. The determination was made utilizing the 1987 Corps of Engineers Wetlands Delineation Manual”

Detail Soils Evaluation
 75-acres, Chatham County, NC
 Standout Properties
 Pennington Tract South

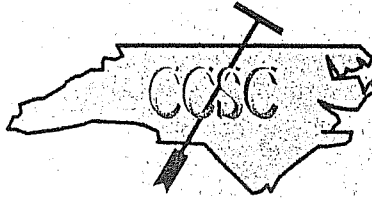
Legend

-  Areas contain soils with 30 inches or more of useable material and have potential for conventional or modified conventional septic systems. The use of LPP or ultra-shallow conventional LPP instead of conventional septic systems.
-  Areas contain soils with 24 to 29 inches of useable material and have potential LPP or ultra-shallow conventional septic systems.
-  UN Unsuitable areas.
- FILL** Unsuitable areas due to Fill Material on-site.

Detail Soils Evaluation
 Soil boundary was flagged in the field and located via GPS receivers
 Next a survey setbacks listed below for new lots:
 1) Septic system setbacks for primary systems.
 2) 100' from wells for repair systems.
 3) 50' from surface waters (streams, ponds, lakes).
 4) 50' from variable soils located on-site, there may be small inclusions of unsuitable soils located in the areas mapped as suitable.
 *See accompanying report for additional information.
 *Base map taken from Chatham County GIS, not a survey map.



Central Carolina
 Soil Consulting
 Project # 175
 919-784-9449



Central Carolina Soil Consulting, PLLC

6325-9 Falls of Neuse Rd., PMB#341

Raleigh, NC 27615-6809

919-784-9449

February 1, 2006

Job # 175

Standout Properties
Attention: Dan Sullivan
8502-201 Six Forks Road
Raleigh, NC 27615

RE: Detailed soil/site evaluation on 97-acres adjacent to Highway 64 and Windfall Subdivision in Chatham County.

Dear Mr. Sullivan:

Central Carolina Soil Consulting, PLLC conducted a detailed soil evaluation on the parcel listed above to determine the areas of soils that are suitable for subsurface wastewater disposal systems. The soil/site evaluation was performed using hand auger borings during moist soils conditions based on the criteria found in the State Subsurface Rules, 15ANCAC 18A .1900 "Laws and Rules for Sewage Treatment and Disposal Systems". From this evaluation, CCSC flagged the boundary between the suitable soils and unsuitable soils, then located them utilizing GPS technology.

The above referenced parcel is located west of Jordan Lake and east of Pittsboro. This area lies in the Carolina Slate Belt geologic unit, where soils have formed from residual parent material such as volcanic argillites. The soils that have formed on this parcel are similar to the Georgeville, Herndon, Badin, Lignum and Cid soil series. The attached soils map indicates the areas of suitable vs. unsuitable soils. The Georgeville and Herndon soil series are generally suitable for subsurface wastewater systems. That is, the morphology of the soils contain suitable characteristics that would support subsurface septic systems such as clayey textured subsoils that are not considered expansive, blocky structure and no indicators of restrictive characteristics within 24 inches of the soil surface. The Badin, Lignum and Cid soil series have a combination of expansive clays and/or a perched water table within 24 inches of the soil surface.

The attached soils map indicates the areas of soils which are suitable for subsurface wastewater systems. The "hatched soil units" on the attached map indicates the areas of soils that have 24 to 30+ inches of suitable soil material. These areas have potential for conventional, modified conventional, LPP or ultra-shallow conventional septic systems. Due to variable soil characteristics, there may be small inclusions of unsuitable soils in the areas mapped as suitable. The "cross hatched soil unit" indicates areas of soils that will need to be evaluated with backhoe pits to determine suitability for subsurface wastewater systems due to dense amounts of rock in the soil profile. Unit "UN" on the attached map indicates areas of unsuitable soils that contain restrictive soil characteristics less than 24 inches.

Future Subdivision Considerations

Several factors should be considered before a final subdivision plan is created for this property. One consideration is that each proposed lot shall contain an adequate amount of suitable soils, which can support a primary septic system along with a repair septic system. The suitable soil areas cannot be affected by future homes, driveways, patios, excavation or filling activities and if an on-site well is used then a 100' setback is required around the well head. An exact square footage of suitable soils required per lot to obtain a permit cannot be given due to soil variability and topographic characteristics on each lot. The amount of suitable soils required to support a 5-bedroom residence will range between 18,000 ft² - 22,000 ft² (could be more or less) per lot. These soil area estimates are based upon soil application rates for a clayey textured subsoil with a range of 0.25 gallons per day/square foot and 0.3 gallons per day/square foot for conventional type systems and 0.1 to 0.13 gallons per/day/square foot for low pressure pipe septic systems. The ultimate application rate will be assigned by the Chatham County Health Department based on a detailed evaluation on each proposed lot.

This particular parcel already had a portion of the proposed roads graded or they were in the process of being graded. The attached map indicates the approximate areas of road ways that have been constructed. The areas that illustrate suitable soils where the proposed roads are shown on the attached map were not constructed at the time CCSC evaluated the property. During any future road construction in the subdivision it is important not to impact any suitable soil areas with such activities as excavating or filling. Only the actual roadways and required drainage ditches and/or sediment basins should be constructed during this process. If the contractor requires a staging area to place fill from the construction process, then areas of unsuitable soils on the property should be utilized as long as they are not state/county buffers, jurisdictional wetlands or other areas protected by local zoning regulations. If this is not possible, then the disturbed areas should be minimized as much as possible. The developer may decide to stockpile the upper 12-16 inches (topsoil) when constructing the roads to use this material for fill over any future lots that may require ultra-shallow conventional septic systems. The same precautions should be taken when the individual lots are cleared for home sites. Only the vegetation should be removed in the areas of the proposed drain fields on lots to prevent any disturbance of the naturally occurring soil. A lot with adequate areas of suitable soils can be deemed unsuitable due to poor planning or site disturbance. Central Carolina Soil Consulting recommends that all lot clearing activities are delayed until a permit is issued by the local health department, with the exception of clearing thick vegetation to access the lot.

This report discusses the location of suitable soils for subsurface wastewater disposal systems and does not guarantee any permits or approval required by the local health department. Central Carolina Soil Consulting, PLLC is a professional consulting firm specializing in soil delineations and design for on-site wastewater disposal systems. The rules governing on-site wastewater disposal systems are complex and the interpretation of the rules are based upon the opinions of regulators (state and county

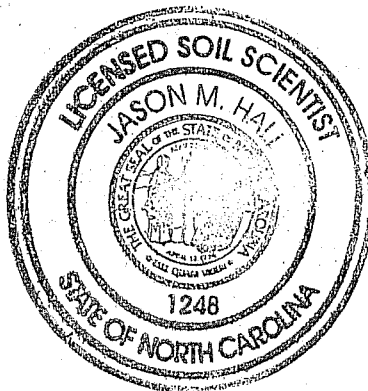
level). Due to the subjective nature of the permitting process, CCSC cannot guarantee that areas delineated as suitable for on-site wastewater disposal systems will be permitted by the governing agencies. These permitting considerations should be taken into account before a financial commitment is made on a tract of land.

If you have any questions regarding the findings on the attached map or in this report, please feel free contact me at anytime. Thank you allowing Central Carolina Soil Consulting to perform this site evaluation for you.

Sincerely,



Jason Hall
NC Licensed Soil Scientist #1248



Encl: Soil Map