



Soil & Environmental Consultants, PA

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www.SandEC.com

March 31, 2006

S&EC Project No.: 10085.W1

Pickett- Sprouse Real Estate
Attn: Robert Sprouse
3805-A University Dr. PO Box 52118
Durham NC 27717

Re: Detailed Wetlands Delineation and Proposed Cape Fear River Buffer Evaluation
Manns Chapel/ Andrews Site (+/- 58 acres)
Pittsboro, Chatham County, NC

Dear Mr. Sprouse:

In March, 2006, S&EC conducted a detailed wetland delineation and the proposed Cape Fear River Buffer evaluation on the Manns Chapel/ Andrews Site. This site is approximately 58 acres in size and lies on the north east side of the intersection of Manns Chapel and Andrews Store Road. Figure 1 shows the location of the site on a USGS topographic quadrangle.

EXECUTIVE SUMMARY

We have determined that wetlands and other jurisdictional waters (i.e., streams and a pond) exist on the site. The attached wetland sketch map depicts the approximate location of wetlands and other jurisdictional waters identified on the site. Please refer to the sketch map and the results and recommendations section below for more detailed information.

SCOPE OF WORK

The detailed wetland delineation consisted of pedestrian reconnaissance of the property to examine the soils, vegetation, and hydrology for the presence of areas that meet the criteria for jurisdictional wetlands by the procedures described in the Corps of Engineers Wetlands Delineation Manual (January 1987 – Final Report). Areas on the site with positive indicators of hydric soils and evidence of wetland hydrology and hydrophytic vegetation were flagged with sequentially numbered, pink S&EC logo flagging. Proof of wetland hydrology would be the existence of hydric soils with oxidized root channels in the upper 12 inches of the “A” horizon, water borne deposits, drift lines, scour marks, drainage patterns, regional indicators of soil saturation, etc. Surface waters such as intermittent and perennial stream channels, ponds, and lakes, which are also subject to regulation by the US Army Corps of Engineers (USACE) as waters of the US, were also identified. These surface waters may also be referred to as jurisdictional waters to indicate that they are within the jurisdiction of the USACE. It is important to note that wetlands are also classified as waters of the US and regulated by the

USACE

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Phone: (704) 720-9405
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Greensboro, NC 27455
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The Proposed Cape Fear River Basin: Nutrient Sensitive Waters Management Strategy: Protection and Maintenance of Riparian Areas with Existing Forest Vegetation rules would apply to a 50-foot wide riparian buffers directly adjacent to surface waters in the Cape Fear River Basin (intermittent streams, perennial streams, lakes, ponds, and estuaries), excluding wetlands. The ruler would define surface waters as features approximately shown on either the most recent version of the soil survey map prepared by the Natural Resource Conservation Service (NRCS) of the US Department of Agriculture (USDA) or the 7.5-minute quadrangle topographic maps prepared by the US Geologic Survey (USGS). Surface waters that appear on these maps are not subject only if an on-site determination by the NC Division of Water Quality (NC-DWQ) shows that they fall into one of the following categories:

- 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.

S&EC's Cape Fear River buffer evaluation consisted of examining each feature on the site that is shown on the most recent version of the pertinent topographic map or soil survey for applicability to the Cape Fear River Basin riparian buffer rule using NC-DWQ stream evaluation techniques. Figure 2 shows the location of the site on the relevant Chatham County Soil Survey map.

RESULTS & RECOMMENDATIONS

The results of the detailed delineation of jurisdictional wetlands and other waters of the US and the evaluation of surface waters on the site subject or potentially subject to the Cape Fear River Basin riparian buffer rule are discussed below.

Wetlands and Jurisdictional Waters:

We have determined that wetlands and other jurisdictional waters (i.e., streams and a pond) exist on the site. The wetland sketch map depicts the approximate location of wetlands and jurisdictional waters identified within the evaluated area. **Feature A is a perennial channel that starts on property at flag A04 and flows west off property into Wilkinson Creek. Feature B is a perennial channel that starts above the pond at flag A01, stops at flag A02, and then starts again at flag A03. Feature B flows north into feature A. Feature C is an intermittent channel that starts on property at flag M200 and flows north into feature A.** Wetlands on property are riparian or headwater wetlands, please see sketch map for locations. The water quality classification of the stream found within the evaluated area is **WS-IV; NSW**. No other wetlands or jurisdictional waters were found within the project boundaries.

Two marginal features exist on the property that are not believed to be jurisdictional wetlands or waters by S&EC due to weak evidence of soils. However due to the marginal nature of these areas, confirmation of our determination should be obtained from the USACE. No other wetlands or jurisdictional waters were found within the project boundaries.

All S&EC flags comprising the wetland and jurisdictional waters delineation should be surveyed and a Wetland Delineation Map generated for use in USACE approval and permitting. **Stream**

channels were not flagged in the field and should be surveyed with points taken at each bend noting the width at these points. The Wetland Delineation Map should include all of the information listed on the attached '**Standard Plat Requirements**'. S&EC delineation flag numbers should be shown on the wetland survey. Please have the property owner complete the attached agent authorization form if you would like S&EC to act on their behalf for requesting approval of the wetland delineation. This form will also be used in preparing a permit application for impacts to wetlands or surface waters when we are provided with a plan showing the proposed impacts. **S&EC cannot conduct correspondence with the USACE unless we have agent authorization (see attached Agent Authorization). This authorization form must be filled out in its entirety by the current landowner and sent to S&EC (a faxed copy is acceptable).**

Proposed Cape Fear River Buffers:

The surface waters (i.e., intermittent streams, perennial streams, lakes, ponds or estuaries) potentially subject to the 50-foot proposed Cape Fear Buffers include feature A, feature B, and the pond. No other surface waters are indicated on either the USGS topographic or Chatham County Soil Survey maps. The only surface waters that S&EC actually believes are subject to the buffers consist of feature A starting at flag A04, feature B starting at the flag A01, and the pond. The NC-DWQ must confirm our determination regarding the subjectivity of the aforementioned channels in order for our determination to be valid. **A site meeting with the NC-DWQ will most likely not be required. If we are advised by you, S&EC will schedule this meeting with NC-DWQ.**

REGULATIONS

Regulations that apply to jurisdictional wetlands and waters present on the site are discussed below.

Proposed Cape Fear River Buffer Rules

It was decided by the Environmental Management Commission that temporary Cape Fear River Basin Rules would not be enacted prior to adopting permanent rules. A specific date has not been set as to when the permanent Cape Fear Buffer Rules will be enacted. **It is important to note that the decision to not adopt temporary rules can be changed at any time.** The buffer rules will protect up to 50 feet from the edge of existing "surface waters" (i.e., intermittent streams, perennial streams, ponds, lakes and estuaries) found within the Cape Fear River Basin. The 50-foot buffer consists of two zones. The first zone is measured 30 feet landward from the top bank of streams and is intended to contain an undisturbed forested area. The second zone extends 20 feet landward from the edge of the first zone and is intended to contain a vegetated buffer. Grading with re-vegetating is permissible in Zone 2 (the outer 20 feet of the 50 foot buffer). Mitigation for road crossings is mandatory for impacts greater than 150 feet in width and utility lines running parallel and within Zone 1. Please call if you would like to discuss the uses/allowances within buffered areas. **In order for a project not to be subject to these buffer rules, an approved site specific plan for proposed impacts to wetlands and other waters of the US would have to be obtained from the USACE and the DWQ prior to enactment of the rules.**

Water Supply Waters Rules

Perennial streams within a classified water supply watershed require a 100-foot buffer for new development activities with greater than 24 percent “built upon” area (i.e., percent covered by impervious or partially impervious cover) and a 30-foot buffer for activities with less than 24 percent built upon area by the NC-DWQ. (These buffers are in addition to the 50-foot Neuse River Buffers. The stricter of the two buffers applies to these stream channels.) Other regulations may also apply.

Wetland Permitting

Wetland impact permits are issued on a per-project basis as determined by the USACE. The USACE has determined that impacts on parcels sub-divided from larger tracts are sometimes considered to be cumulative to existing impacts for the large tract. If this is the case, then thresholds as discussed below may not apply and impacts to wetlands must be considered in light of existing permits.

Preconstruction notification to the USACE and the NC-DWQ is not required for wetland impacts that meet the general conditions of Nationwide Permit 39 and that impact less than 1/10 acre per project. Preconstruction notification and approval by the USACE is required for wetland impacts that exceed 1/10 of an acre and /or any stream channel impacts. **Preconstruction notification and approval by the NC-DWQ is required for wetland impacts that exceed 1/10 of an acre if the property is west of I-95 or 1/3 of an acre if the project is east of I-95. Preconstruction notification and approval by the NC-DWQ is required for any stream channel impacts within buffered basins (i.e. the Neuse, Tar-Pamlico, Randleman, and portions of the Catawba Basins) or for cumulative stream impacts that exceed 150 linear feet in non-buffered basins.** If development impacts exceed the thresholds for notification and proposed impervious area for the project or any part of the project exceeds 30%, then stormwater treatment to meet the pollutant removal design standard of 85% removal of total suspended solids (i.e., wet detention basins, stormwater wetlands, bioretention areas, etc.) and 30% of Nitrogen will likely be required by the NC-DWQ. The maximum permanent impact allowed per project under the nationwide permits is 1/2 acre of wetland and/or 300 linear feet of USACE important stream channel. Nationwide Permit 39 limits above-grade fills within 100-year floodplains specifically prohibiting above-grade fill within the floodway. Additionally, Nationwide Permit 39 limits stream channelization and relocation to streams with an average annual flow of less than 1cfs.

Per project impacts to vegetated wetlands in excess of 1 acre or impacts to streams that contain “significant aquatic function” in excess of 150 linear feet will most likely require mitigation by the NC-DWQ. The USACE may require mitigation for any wetland/jurisdictional waters impacts. Actual mitigation requirements are typically determined on a case-by-case basis. Wetland mitigation is a complex process that requires planning and monitoring. S&EC will discuss mitigation issues with you if we believe your project may require mitigation. Impacts to channels containing “significant aquatic function” in excess of the notification thresholds may require mitigation. Channel mitigation is typically intended to replace lost significant aquatic functions and values. Relocating channels is considered to be an adverse impact and typically results in mitigation within the new channel. Therefore, this type of

mitigation usually requires that meanders be created within constructed channels. Side-slopes and beds be vegetated; riprap is discouraged.

A complete NC-DWQ 401 Water Quality Certification application for a Nationwide Permit has a maximum 60-day processing period. A complete USACE Nationwide Permit application has a 45-day processing period, while Individual Permit applications submitted to the USACE have no maximum processing periods. **The USACE requires that all impacts to wetlands or Waters of the US, less than 1/10 acre, be reported to the USACE within 30 days of the completion of construction.**

Nationwide Permits can potentially be utilized if the project is designed to impact up to 1/2 acre of jurisdictional wetlands or waters of the US including a maximum of 300 linear feet of important stream channel impact under NWP 39. Cumulative impacts per project over these nationwide thresholds will require an individual permit. Individual Permits require an analysis to determine that the proposed impact is the least environmentally damaging practical alternative, typically require compensatory mitigation, notification to adjacent property owners, a public notice, and may require a public hearing. All impacts greater than 1/10 acre require written justification.

ADDITIONAL SERVICES


If you choose to have us perform additional work, the following is a listing of additional services: (1) Request that the USACE verify our delineation, and (2) Notification to the USACE and NC-DWQ regarding impacts to jurisdictional areas and riparian buffers and permitting issues, if required. This additional work can be completed at our hourly rates or a proposal can be generated. Please advise.

Please call David Gainey if you need further explanation of the information provided.



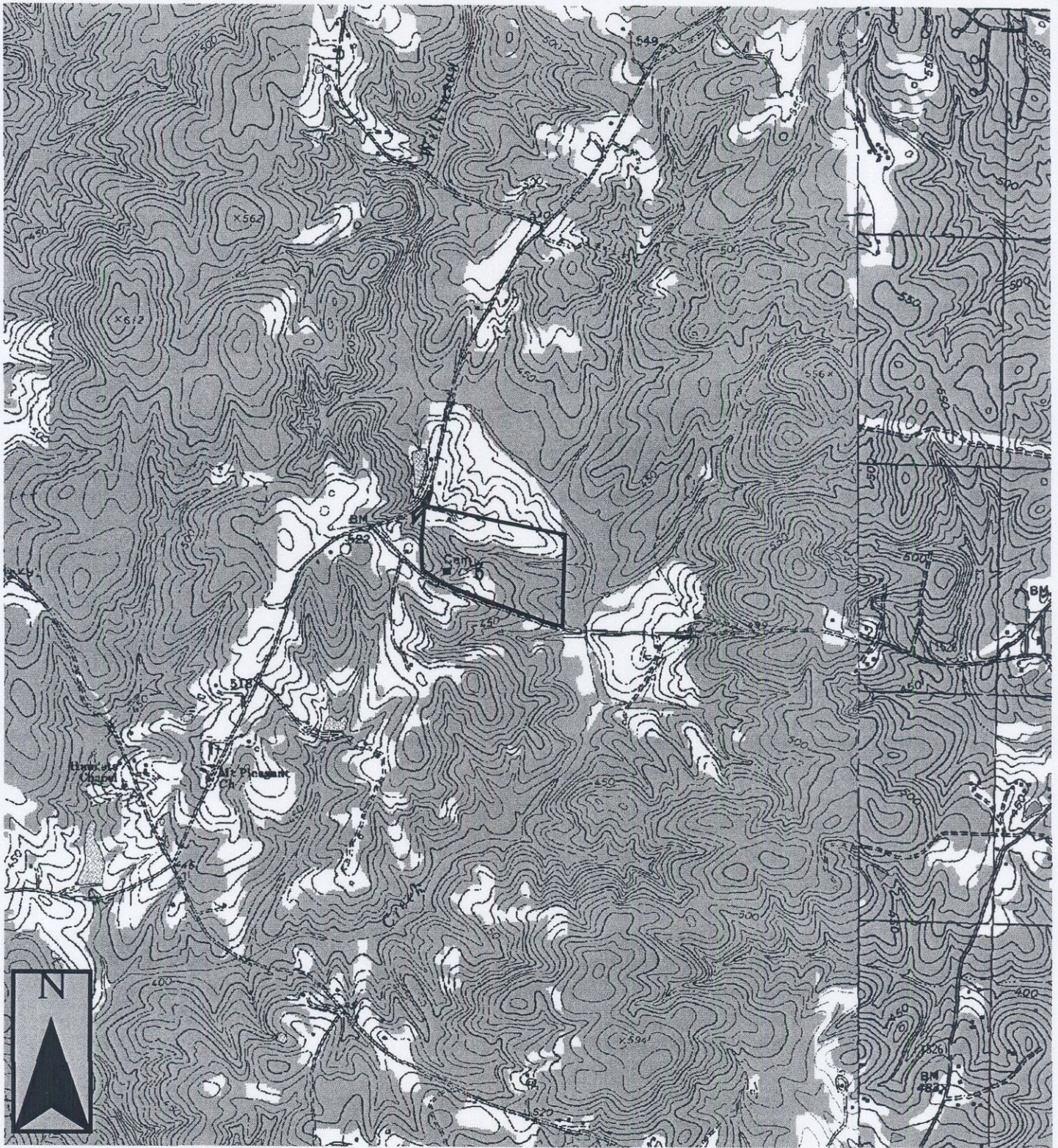
Maximilian Merrill
Environmental Scientist/Hydrologist

Sincerely,


David Gainey
Environmental Technician/ Project Manager

Attachments

- c: USGS Vicinity Map
- Soils Survey Vicinity Map
- Agent Authorization
- USACE Standard Plat Requirements
- Wetlands Sketch Map



Project Number:
10085.W1

Project Manager:
DG

Scale:
1" = 2,000'

Date:
01/23/06

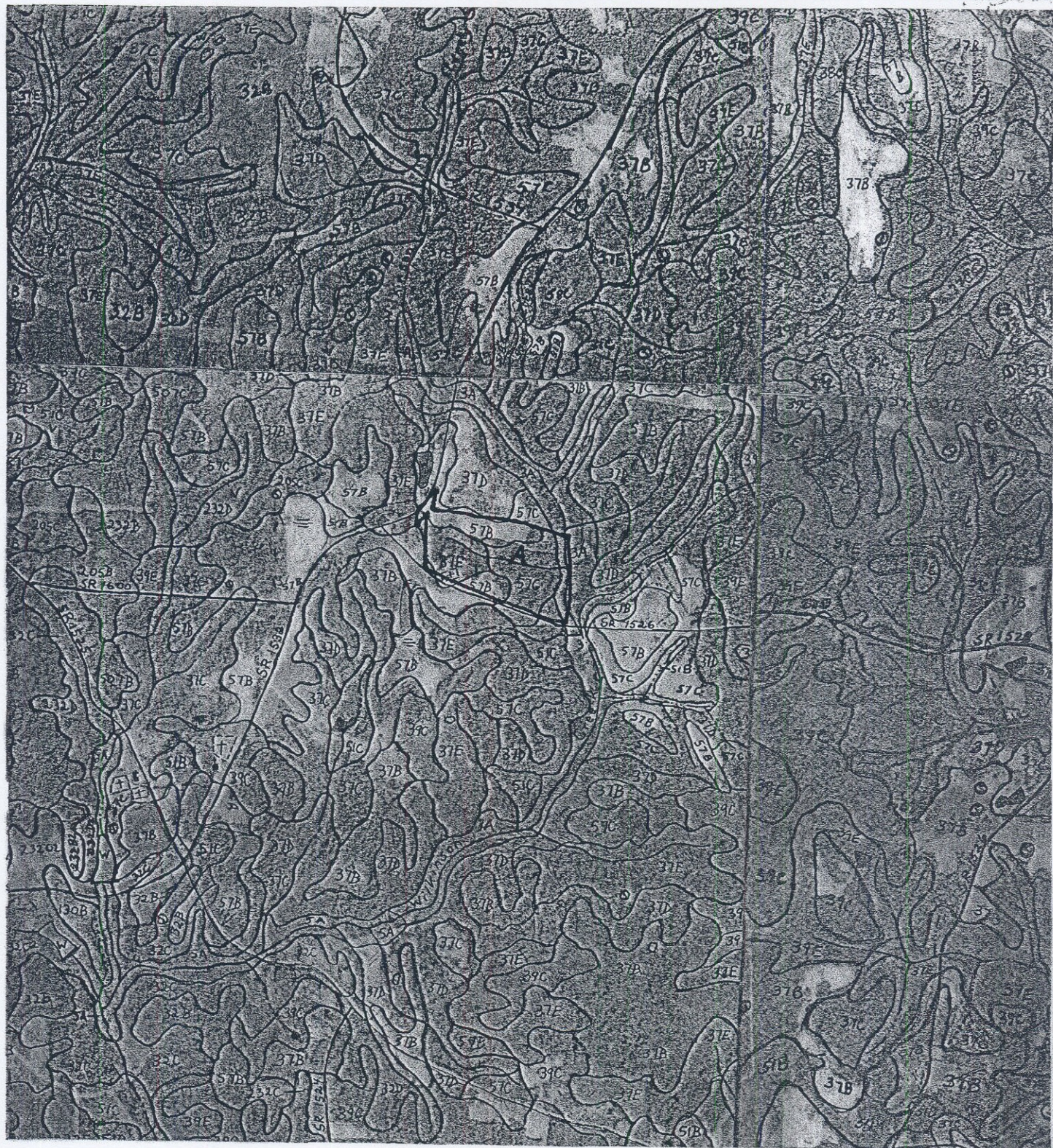
Map Title:
Figure 1. USGS Quad

Manns Chapel/ Andrews Site
Project #: 10085.W1
Chatham CO, NC

Source:
Bynum & Ferrington Quads



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Project Number:
10085.W1

Project Manager:
DG

Scale:
1" = 2,000

Date:
03/15/06

Map Title:
Figure 2. Soil Survey Map

Manns Chapel/ Andrews Site
Project #: 10085.W1
Chatham County, NC

Source:
Chatham CO Soil Survey



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AGENT AUTHORIZATION FORM

All Blanks To Be Filled In By The Current Landowner

Name: _____

Address: _____

Phone: _____

Project Name/Description: _____ S&EC Project # _____

Date: _____

The Department of the Army
U.S. Army Corps of Engineers, Wilmington District
P.O. Box 1890
Wilmington, NC 28402

Attn: _____

Field Office: _____

Re: Wetlands Related Consulting and Permitting

To Whom It May Concern:

I, the current property owner, hereby designate and authorize Soil & Environmental Consultants, PA to act in my behalf as my agent in the processing of permit applications, to furnish upon request supplemental information in support of applications, etc. from this day forward. The _____ day of _____

This notification supersedes any previous correspondence concerning the agent for this project.

NOTICE: This authorization, for liability and professional courtesy reasons, is valid only for government officials to enter the property when accompanied by S&EC staff. You should call S&EC to arrange a site meeting prior to visiting the site.

Print Property Owner's Name

Property Owner's Signature

cc: Ms. Cyndi Karoly
NCDENR - DWQ
2321 Crabtree Boulevard
Raleigh, NC 27604

cc: Mr. David Gainey
Soil & Environmental Consultants, PA

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236 LePhillip Court, Suite C
Concord, NC 28025
Phone: (704) 720-9405
Fax: (704) 720-9406

Greensboro Office:
3817-E Lawndale Drive
Greensboro, NC 27455
Phone: (336) 540-8234
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USACE Wilmington District Standard Plat Certification Requirements

The following are required for plats or plans submitted to the Corps of Engineers for confirmation of Section 404 jurisdiction (any plats submitted for approval that do not meet the following will be returned unsigned):

1. In addition to the applicant's copies, one legible paper copy on 11 x 17 inch or smaller paper must be submitted. Multiple sheets that include matchlines are acceptable, if necessary for legibility.
2. A digital copy (Autocad or Microstation) may also be submitted along with the 11 x 17 paper copy.
3. Distances and bearings or coordinates of all points must be printed legibly along side the lines or arranged in a table on the map.
4. Area of wetlands depicted (square feet or acreage), or linear measurements allowing the area to be calculated must be shown.
5. Locations of data points must be shown.
6. All copies of plats for approval must be sealed and signed by the surveyor.
7. If isolated waters not subject to Corps jurisdiction are present, we recommend that they be shown on the survey, but they must be identified as isolated. Determination of isolation must first be Corps approved.
8. All pipes, culverts, or other conveyances that transport jurisdictional waters (streams) must be surveyed and identified on the plat.
9. One of the following certification paragraphs and signature blocks must be printed on all pages of all copies of the survey. Use the paragraph that best fits the circumstances.

For Sites Where The Entire Actual Jurisdictional Boundary Is Depicted:

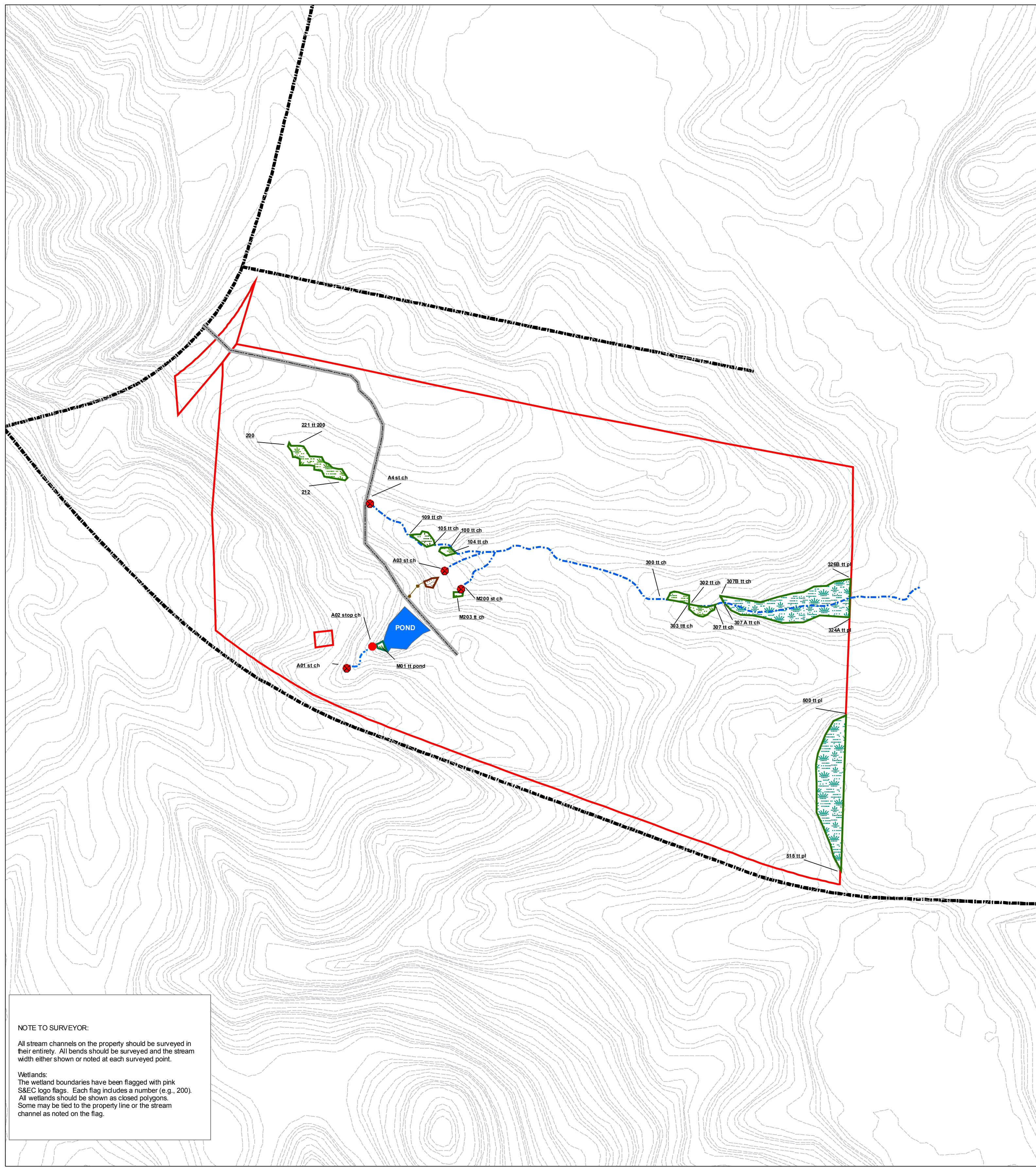
"This certifies that this copy of this plat accurately depicts the boundary of the jurisdiction of Section 404 of the Clean Water Act as determined by the undersigned on this date. Unless there is a change in the law or our published regulations, this determination of Section 404 jurisdiction may be 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."	
Regulatory Official	_____
Title	_____
Date	_____
USACE Action ID	_____

For Sites Where A Portion Of The 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 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 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 Wetland Delineation Manual."	
Regulatory Official	_____
Title	_____
Date	_____
USACE Action ID	_____

For Sites Where There May Be Upland Within The Depicted Jurisdictional Boundary:

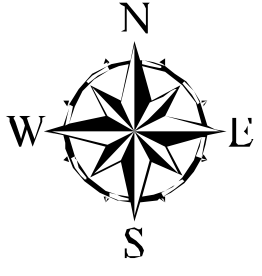
"This certifies that this copy of this plat identifies as wetlands all areas of wetlands regulated pursuant to Section 404 of the Clean Water Act as determined by the undersigned on this date. Unless there is change in the law or our published regulations, this determination of Section 404 jurisdiction 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 Wetland Delineation Manual."	
Regulatory Official	_____
Title	_____
Date	_____
USACE Action ID	_____



NOTE TO SURVEYOR:
 All stream channels on the property should be surveyed in their entirety. All bends should be surveyed and the stream width either shown or noted at each surveyed point.
 Wetlands:
 The wetland boundaries have been flagged with pink S&EC logo flags. Each flag includes a number (e.g., 200). All wetlands should be shown as closed polygons. Some may be tied to the property line or the stream channel as noted on the flag.

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Project Name: Manns Chapel/ Andrews Site
 Project #: 10085.W1
 Project Manager: David Gainey
 Site Location: Pittsboro, NC
 Source: Chatham CO and DOT GIS
 01/24/06
 Map by: Maximilian Merrill



1" = 200FT

Legend

- = WATERS OF THE U.S. SUBJECT TO THE PROPOSED CAPE FEAR RIVER 50 ft. BUFFERS [intermittent streams; must be confirmed by the USACE and DWQ]
- = MARGINAL WATERS OF THE U.S. SUBJECT TO THE PROPOSED CAPE FEAR RIVER 50 ft. BUFFERS [intermittent streams; must be confirmed by the USACE and DWQ]
- = WATERS OF THE U.S. SUBJECT TO THE PROPOSED CAPE FEAR RIVER 50 ft. BUFFERS [perennial streams; must be confirmed by the USACE and DWQ]
- = S&EC FLAG DENOTING THE STARTING POINT OF THE PROPOSED CAPE FEAR BUFFERS [must be confirmed by the USACE and DWQ]
- = MARGINAL WETLANDS [must be confirmed by the USACE]
- = JURISDICTIONAL WETLANDS [must be confirmed by the USACE]
- = TIE TO
- = CHANNEL
- = PROPERTY LINE
- = BOUNDARY OF EVALUATED AREA
- = TOPO LINES