

**Site Certification for the
Williamsburg Cooperative Commerce Centre South
In Williamsburg County, South Carolina**

Attachment 21

**Wetlands Delineation for
Epps No. 1 Industrial Site**



0 200 400 800 1,200 1,600 Feet

SCALE: 1" = 400'

BACKGROUND SOURCE: SCDNR GIS DEPT.

SOURCE DATE: 2006

DATE: JUNE 2009



WWW.SMEINC.COM

SITE AERIAL PHOTOGRAPH

EPPS NO. 1 INDUSTRIAL SITE
WILLIAMSBURG COUNTY, SC

S & ME PROJECT # 1634-08-370

FIGURE #

3

REQUEST FOR WETLAND DETERMINATION

Date: 12/3/08 County: Williamsburg Total Acreage of Tract: +/-90 Ac.

Project Name (if applicable): Epps No. 1 Industrial Site

Property Owner (name, address, phone): <u>Williamsburg County</u> <u>c/o Alliance Consulting Engineers</u> <u>Post Office Box 8147</u> <u>Columbia, SC 29202-8147</u> _____	Agent/Developer/Engineer (name, address, phone): <u>Charles Oates</u> <u>S&ME, Inc.</u> <u>1330 Highway 501 Business</u> <u>Conway, SC 29526 (843) 347-7800</u>
--	---

Status of Project (check one):

- ☐ On-going site work for development purposes
☒ Development in planning stages
☐ No specific development plans at this time

Project Type – Indicate the proposed use of the land in question of, if no specific work is planned at present, indicate the current zoning or land use at the site. (check one)

- | | | |
|--|--------------------------------------|---|
| <input type="checkbox"/> Residential | <input type="checkbox"/> Commercial | <input type="checkbox"/> Mixed Use (Residential + Commercial) |
| <input checked="" type="checkbox"/> Industrial | <input type="checkbox"/> Agriculture | <input type="checkbox"/> Public Works |
| <input type="checkbox"/> Silviculture | <input type="checkbox"/> Aquaculture | <input type="checkbox"/> Other: |

Information Required to Accompany Request – Check the items submitted – forward as much information as is available. At a minimum, the first two items must be forwarded:

- ☒ Accurate Location Map (from County Map, USGS Quad Sheet, etc.)
☐ Survey Plat of Tax Map of Property in Question
☒ Soil Survey Sheet (from USDA-NRCS) or Aerial Photo (from County Assessor's Office or other source). Property boundaries should be shown on the soil survey/photo.
☒ Topographic Survey
☐ Conceptual Site Plan for the Overall Development

Endangered Species Evaluation:

Has the site been evaluated for the presence of federally protected (endangered, threatened, or proposed) species and/or any proposed or designated critical habitat for such species? ☐ YES ☒ NO

If YES, has this evaluation been coordinated with the US Fish and Wildlife Service (FWS)? ☐ YES ☒ NO

If coordination has occurred, please provide the FWS Log number and enclose a copy of the report:

FWS Log Number: _____

Copy of Report enclosed: ☐ YES ☐ NO

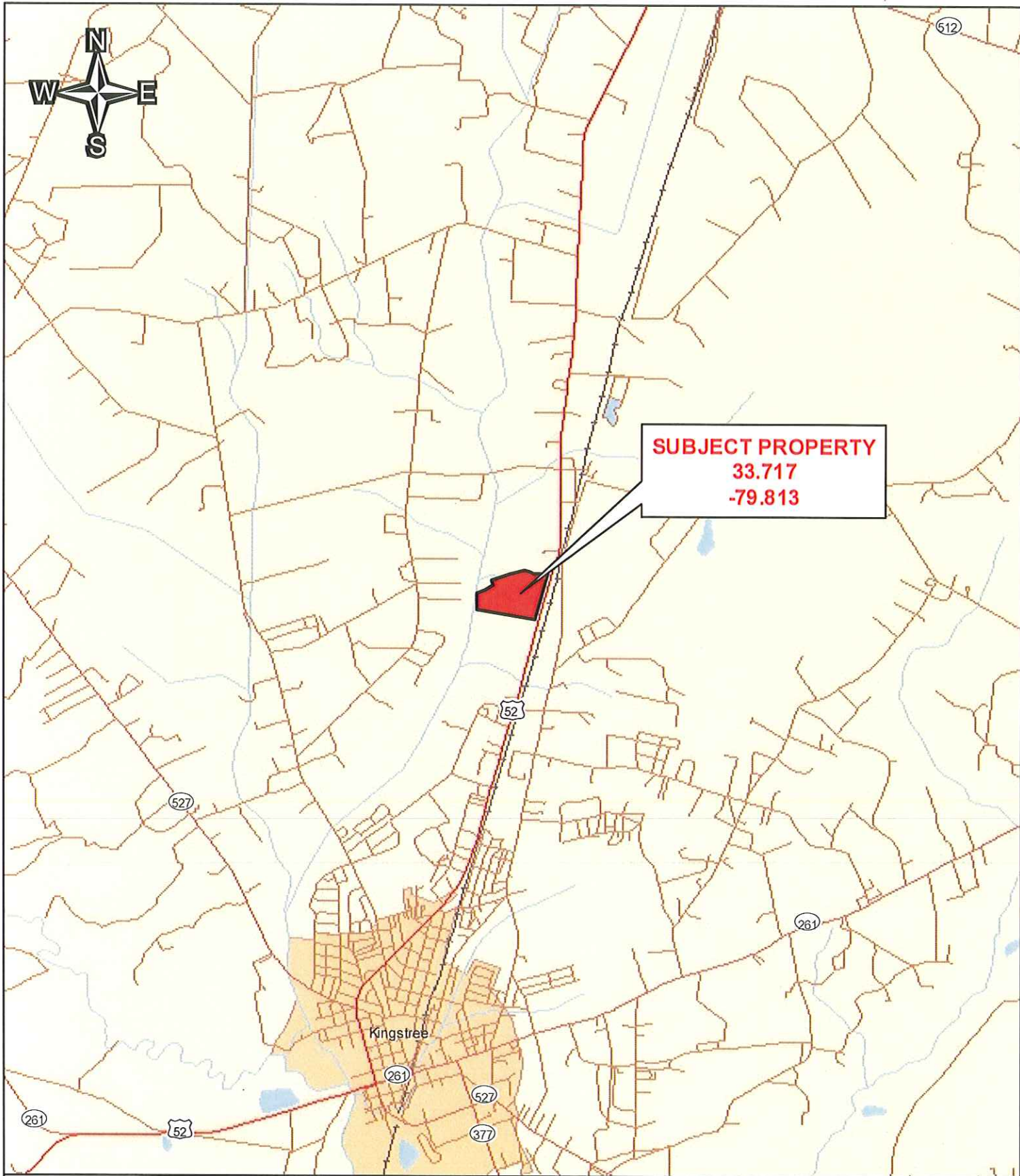
If the evaluation has not been coordinated with the US FWS, enclose a copy of your report findings.

IMPORTANT NOTE: Legible printed name and signature required. The person signing this form must be the present property owner or have the specific authority of the property owner to authorized Corps of Engineers employees or their agents to enter onto the property for on-site investigations if such is deemed necessary. Do not sign this form unless you are the owner, or have the specific authority of the property owner.

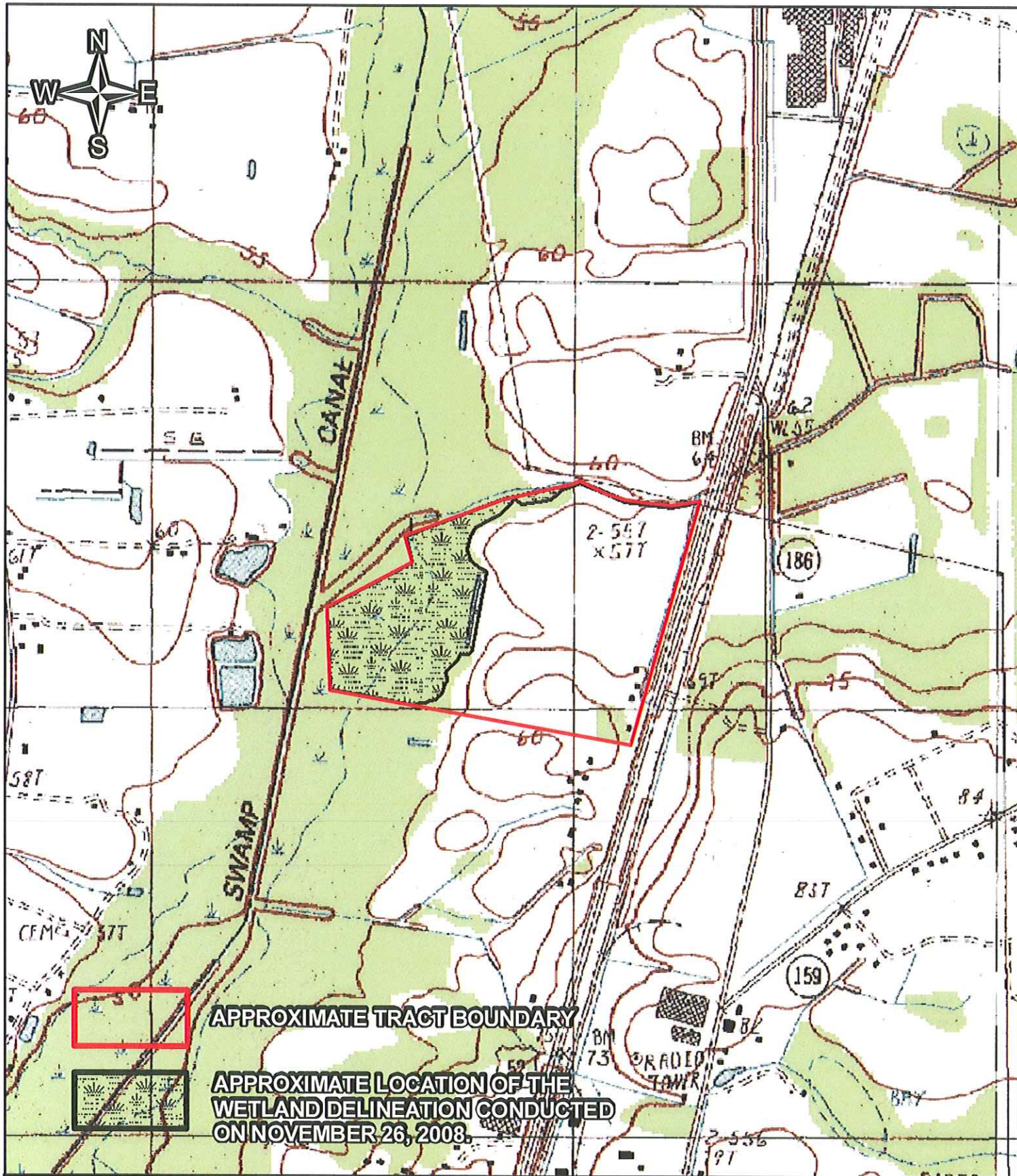
PRINTED NAME of person signing this form, below: Charles Oates

Signature of property Owner or Authorized Agent: _____





<div><div>00.51234</div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div></div>			
---	--	--	--



0 500 1,000 2,000 3,000 4,000 Feet

SCALE:	1"= 1,000'
BACKGROUND SOURCE:	TERRASERVER DATA
SOURCE DATE:	1990
DATE:	NOVEMBER 2008



WWW.SMEINC.COM

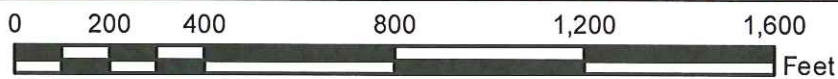
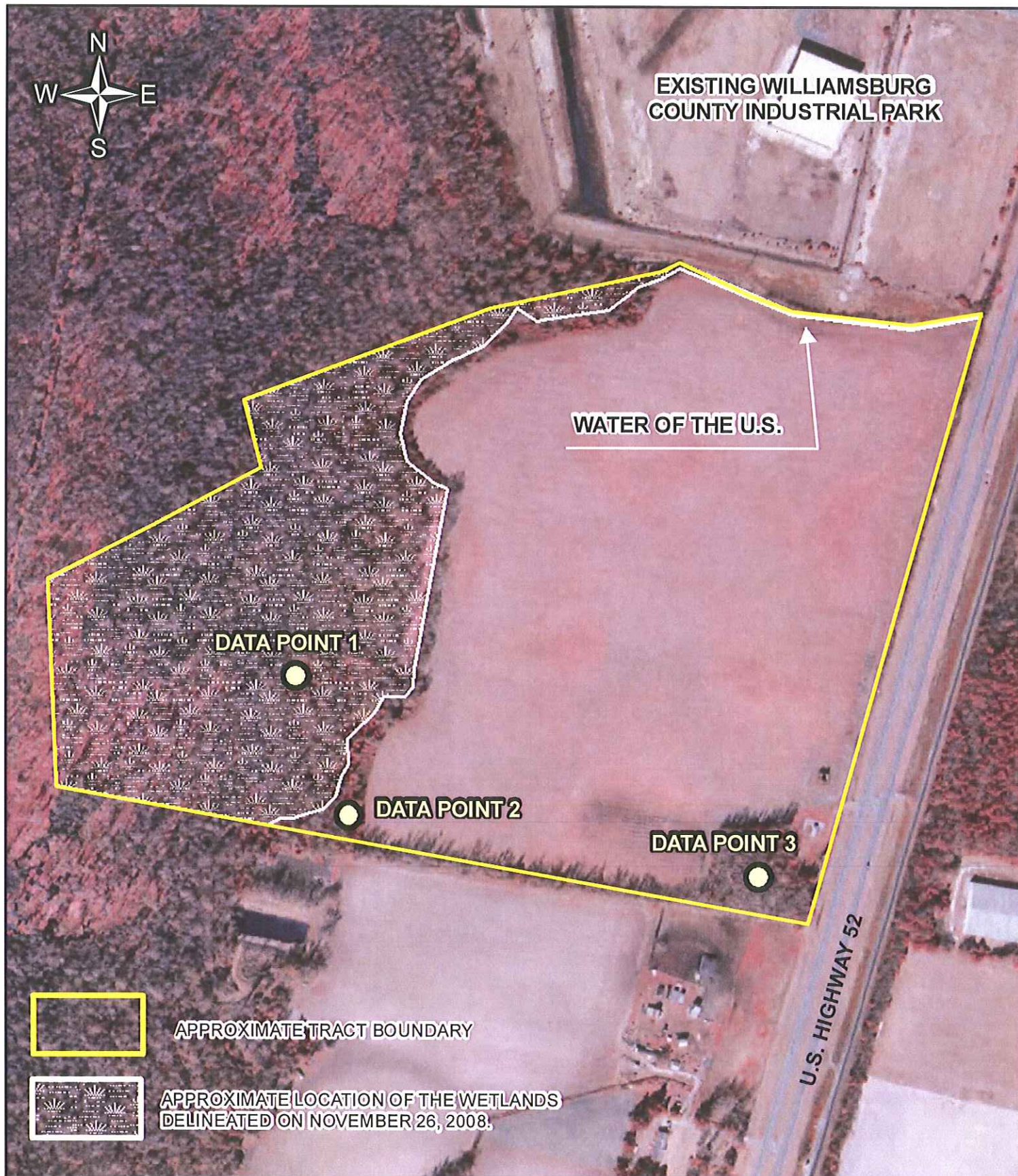
SITE TOPOGRAPHIC MAP

EPPS NO. 1 INDUSTRIAL SITE
WILLIAMSBURG COUNTY, SC

S & ME PROJECT # 1634-08-370

FIGURE #

2



SCALE:	1"= 400'
BACKGROUND SOURCE:	SCDNR GIS DEPT.
SOURCE DATE:	2006
DATE:	NOVEMBER 2008



WWW.SMEINC.COM

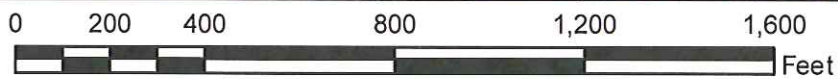
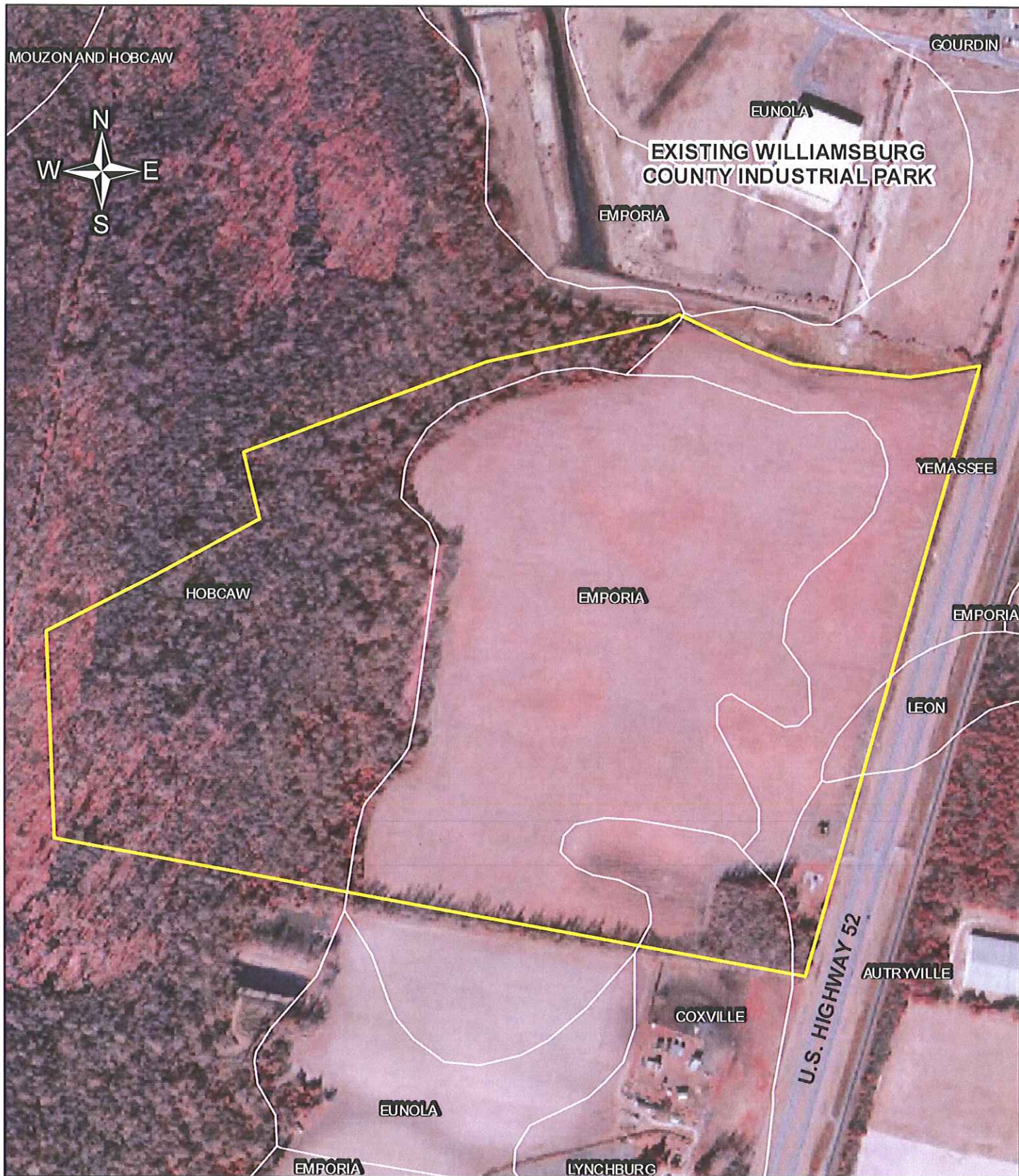
SITE AERIAL PHOTOGRAPH

EPPS NO. 1 INDUSTRIAL SITE
WILLIAMSBURG COUNTY, SC

S & ME PROJECT # 1634-08-370

FIGURE #

3



SCALE:	1"= 400'
BACKGROUND SOURCE:	SCDNR GIS DEPT.
SOURCE DATE:	1984 SOILS DATA
DATE:	NOVEMBER 2008



WWW.SMEINC.COM

SITE SOIL SURVEY

EPPS NO. 1 INDUSTRIAL SITE
WILLIAMSBURG COUNTY, SC

S & ME PROJECT # 1634-08-370

FIGURE #

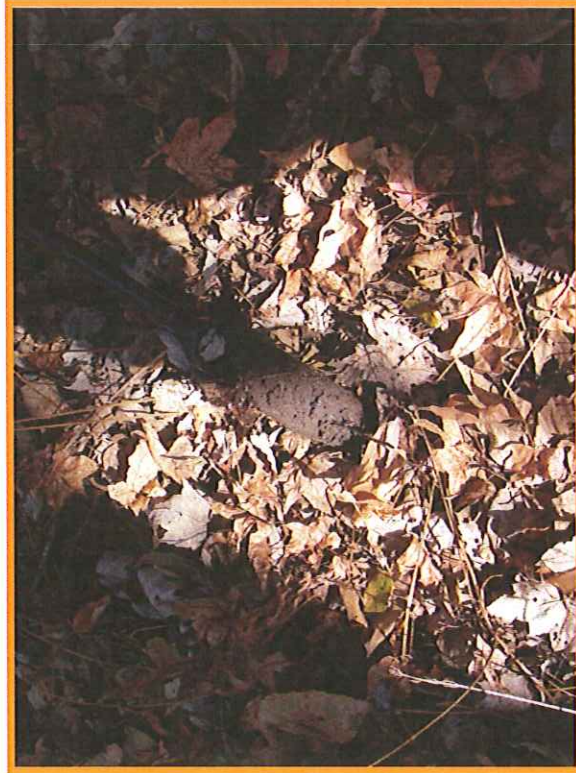
4



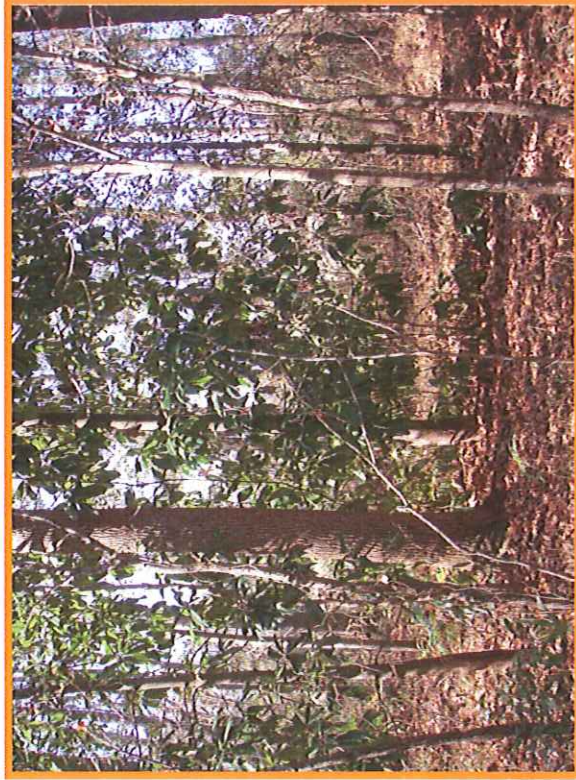
1 Upland soils located at Data Point 2.



2 Wetland area at Data Point 1.



3 Saturated hydric soils at Data Point 1.



4 Vegetation at Data Point 3.



Site Photographs Epps No.1 Industrial Site

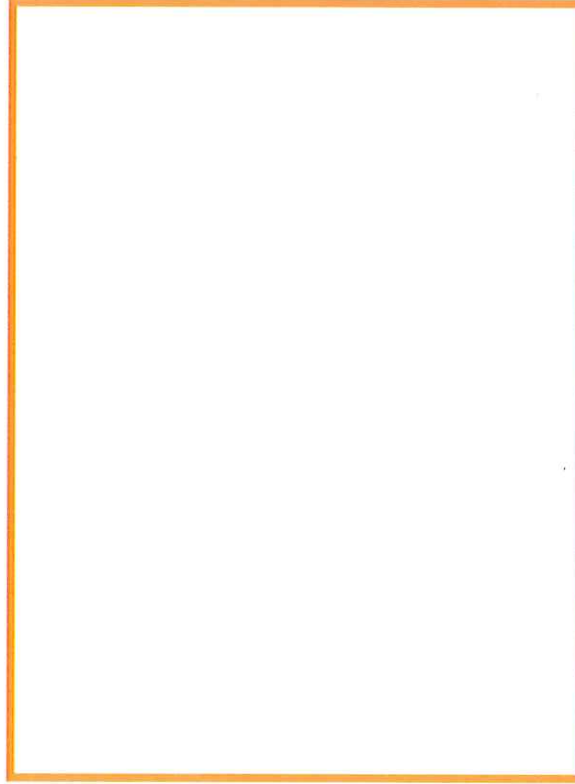
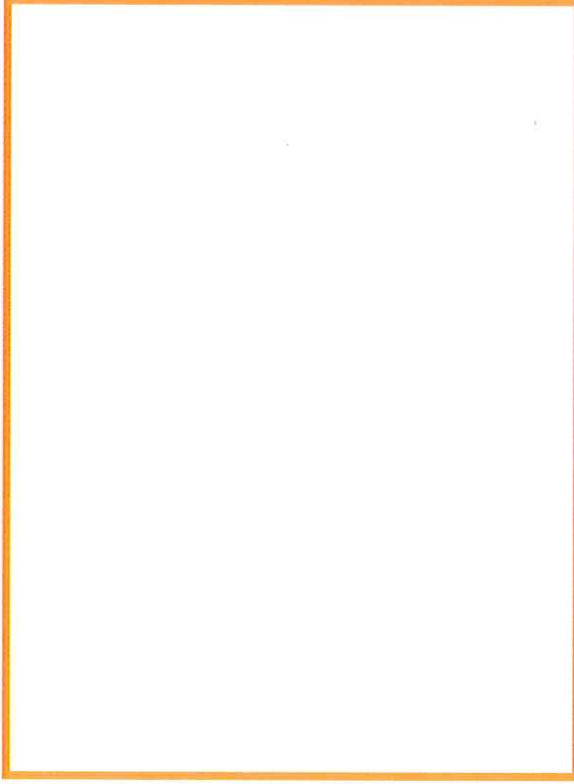
S&ME Project No.: 1634-08-370

Taken by: CO

Checked by: CW



6 Drained Coxville soils at Data Point 3.



Site Photographs
Epps No. 1 Industrial Site

S&ME Project No.: 1634-08-370

Taken by: CO

Checked by: CW

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 USACE Wetlands Delineation Manual)

Project Site: <u>Epps No. 1 Industrial Site</u>		Date: <u>11-26-08</u>
Applicant/Owner: <u>Williamsburg County</u>		County: <u>Williamsburg</u>
Investigator: <u>Charles Oates (S&ME, Inc.)</u>		State: <u>SC</u>
Do normal circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Community ID: <u>Wetland</u>
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Transect ID: _____
Is the area a potential problem area? (if needed, explain on reverse) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Plot ID: <u>1</u>

VEGETATION (Note those species observed to have morphological adaptations to wetlands with an *).

	<u>Dominant Plant Species</u>	<u>Stratum</u>	<u>Indicator</u>		<u>Dominant Plant Species</u>	<u>Stratum</u>	<u>Indicator</u>
1.	*Taxodium distichum	Tree	OBL	9.			
2.	*Nyssa sylvatica	Tree	FAC	10.			
3.	*Quercus michauxii	Tree	FACW	11.			
4.	*Acer rubrum	Tree	FAC	12.			
5.	Ilex glabra	Shrub	FACW	13.			
6.	Lyonia lucida	Shrub	FACW	14.			
7.	Ilex coriacea	Shrub	FACW	15.			
8.	Woodwardia aerolata	Herb	OBL	16.			
Percent of Dominant Species that are OBL, FACW or FAC: (except FAC-) _____							100%
Include species noted (*) as showing morphological adaptations to wetlands. _____							
Describe Morphological Adaptations: Multi-stemmed & buttressed trunks							
Remarks: Hydrophytic vegetation was present.							

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <div style="margin-left: 20px;"> <input type="checkbox"/> Stream, Lake or Tide Gage <input type="checkbox"/> Aerial Photograph <input type="checkbox"/> Other </div> <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: see below <div style="margin-left: 20px;"> <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input checked="" type="checkbox"/> Water Marks <input checked="" type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> Other (Explain in Remarks) </div>
Field Observations: <div style="margin-left: 20px;"> Depth of Surface Water: _____ (in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: 6-8 (in.) </div>	
Remarks: Jurisdictional hydrology was present.	

SOILS

Map Unit Name	Hobcaw (Ho)		Drainage Class:		VPD
Series and Phrase):	Typic Umbraquults		Field Observations		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Taxonomy (Subgroup):			Confirm Mapped Type?		
Profile Description:					
<u>Depth</u> (Inches)	<u>Horizon</u>	<u>Matrix Color</u> (Munsell Moist)	<u>Mottle Colors</u> (Munsell Moist)	<u>Mottle</u> Abundance/Contrast	<u>Texture, Concretions</u> Rhizospheres, etc.
0-12	A1	10YR 2/1			Sandy loam
12-15	A2	10YR 3/2			Loamy sand
15-30	Btg	10 YR 3/2			Sandy loam
Hydric Soil Indicators: see below					
<input type="checkbox"/>	Histosol	<input type="checkbox"/>	Concretions		
<input checked="" type="checkbox"/>	Histic Epipedon	<input checked="" type="checkbox"/>	High Organic Content in Surface Layer		
<input checked="" type="checkbox"/>	Sulfide Odor	<input checked="" type="checkbox"/>	Organic Streaking		
<input checked="" type="checkbox"/>	Aquic Moisture Regime	<input checked="" type="checkbox"/>	Listed on Local Hydric Soils List		
<input type="checkbox"/>	Reducing Conditions	<input type="checkbox"/>	Listed on National Hydric Soils List		
<input checked="" type="checkbox"/>	Gleyed or Low-Chroma Colors	<input checked="" type="checkbox"/>	Other (Explain in Remarks)		
Remarks:	Hydric soil was present.				

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soils Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is this Sampling Point Within A Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Remarks: Wetland criteria was present.					

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 USACE Wetlands Delineation Manual)

Project Site: <u>Epps No. 1 Industrial Site</u>	Date: <u>11-26-08</u>
Applicant/Owner: <u>Williamsburg County</u>	County: <u>Williamsburg</u>
Investigator: <u>Charles Oates (S&ME, Inc.)</u>	State: <u>SC</u>
Do normal circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community ID: <u>Upland Area</u>
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential problem area? (if needed, explain on reverse) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Plot ID: <u>2</u>

VEGETATION (Note those species observed to have morphological adaptations to wetlands with an *)

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Quercus alba</u>	<u>Tree</u>	<u>FACU</u>	9. _____	_____	_____
2. <u>Q. falcata</u>	<u>Tree</u>	<u>FACU</u>	10. _____	_____	_____
3. <u>Prunus serotina</u>	<u>Tree</u>	<u>FACU</u>	11. _____	_____	_____
4. <u>Magnolia grandifolra</u>	<u>Tree</u>	<u>FAC+</u>	12. _____	_____	_____
5. <u>Sassafras albidium</u>	<u>Shrub</u>	<u>FACU</u>	13. _____	_____	_____
6. <u>Cornus florida</u>	<u>Shrub</u>	<u>FACU</u>	14. _____	_____	_____
7. <u>Pteridium aquilinum</u>	<u>Herb</u>	<u>FACU</u>	15. _____	_____	_____
8. <u>Smilax smallii</u>	<u>vine</u>	<u>FACU</u>	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC: (except FAC-) _____
 Include species noted (*) as showing morphological adaptations to wetlands. _____

Describe Morphological Adaptations: N/A

Remarks: Hydrophytic vegetation was not present, the site is currently being used as an agricultural field.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake or Tide Gage <input type="checkbox"/> Aerial Photograph <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: <u>N/A</u> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> </div> <div style="width: 50%;"> Inundated Saturated in Upper 12 Inches Water Marks Drift Lines Sediment Deposits Drainage Patterns in Wetlands Oxidized Root Channels in Upper 12 Inches Water-Stained Leaves Local Soil Survey Data Other (Explain in Remarks) </div> </div>
Field Observations: Depth of Surface Water: _____ (in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>>30</u> (in.)	
Remarks: <u>Jurisdictional hydrology was not present.</u>	

SOILS

Map Unit Name Series and Phrase):		Emporia (EmA)		Drainage Class:		WD	
Taxonomy (Subgroup):		Typic Hapludults		Field Observations Confirm Mapped Type?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Profile Description:							
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Rhizospheres, etc.		
0-8	Ap	10YR 5/3			Loamy sand		
8-23	Bt1	10YR 5/8			Sandy clay loam		
23-37	Bt2	10YR 6/8			Sandy clay		
Hydric Soil Indicators: N/A							
<input type="checkbox"/>	Histosol	<input type="checkbox"/>	Concretions				
<input type="checkbox"/>	Histic Epipedon	<input type="checkbox"/>	High Organic Content in Surface Layer				
<input type="checkbox"/>	Sulfide Odor	<input type="checkbox"/>	Organic Streaking				
<input type="checkbox"/>	Aquic Moisture Regime	<input type="checkbox"/>	Listed on Local Hydric Soils List				
<input type="checkbox"/>	Reducing Conditions	<input type="checkbox"/>	Listed on National Hydric Soils List				
<input type="checkbox"/>	Gleyed or Low-Chroma Colors	<input type="checkbox"/>	Other (Explain in Remarks)				
Remarks: Hydric soil was not present.							

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soils Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is this Sampling Point Within A Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Remarks: Jurisdictional criteria was not present.					

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 USACE Wetlands Delineation Manual)

Project Site: <u>Epps No. 1 Industrial Site</u>	Date: <u>11/26/08</u>
Applicant/Owner: <u>Williamsburg County</u>	County: <u>Williamsburg</u>
Investigator: <u>Charles Oates (S&ME, Inc.)</u>	State: <u>SC</u>
Do normal circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community ID: <u>Forested Upland</u>
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential problem area? (if needed, explain on reverse) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Plot ID: <u>Data point 3</u>

VEGETATION (Note those species observed to have morphological adaptations to wetlands with an *)

<u>Dominant Plant Species</u>	<u>Stratum</u>	<u>Indicator</u>	<u>Dominant Plant Species</u>	<u>Stratum</u>	<u>Indicator</u>
1. <u>Liquidambar styraciflua</u>	<u>Tree</u>	<u>FAC+</u>	9. _____	_____	_____
2. <u>Liriodendron tulipifera</u>	<u>Tree</u>	<u>FAC</u>	10. _____	_____	_____
3. <u>Magnolia grandiflora</u>	<u>Tree</u>	<u>FAC+</u>	11. _____	_____	_____
4. <u>Cornus florida</u>	<u>Shrub</u>	<u>FACU</u>	12. _____	_____	_____
5. <u>Smilax smallii</u>	<u>Vine</u>	<u>FACU</u>	13. _____	_____	_____
6. <u>Gelsemium sempervirens</u>	<u>Vine</u>	<u>FAC</u>	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____
Percent of Dominant Species that are OBL, FACW or FAC: (except FAC-) 100%					
Include species noted (*) as showing morphological adaptations to wetlands. _____					
Describe Morphological Adaptations: _____					
Remarks: Hydrophytic vegetation was present.					

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake or Tide Gage <input type="checkbox"/> Aerial Photograph <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: see below <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____ (in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: >30 (in.)	
Remarks: Jurisdictional hydrology was not present. Recent rainfall amounts over the past four months have placed this area back in "Normal Rainfall Conditions".	

SOILS

Map Unit Name Series and Phrase):		Coxville (Co) Typic Paleaquults		Drainage Class: Field Observations Confirm Mapped Type?		poorly drained <input type="checkbox"/> Yes <input type="checkbox"/> No	
Taxonomy (Subgroup):							

Profile Description:					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Rhizospheres, etc.
0-6	A	10YR 3/2			loam
6-14	E	10YR 5/2			loam
14-28	Btg1	10YR 5/1			clay loam

Hydric Soil Indicators: see below			
<input type="checkbox"/>	Histosol	<input type="checkbox"/>	Concretions
<input checked="" type="checkbox"/>	Histic Epipedon	<input checked="" type="checkbox"/>	High Organic Content in Surface Layer
<input checked="" type="checkbox"/>	Sulfide Odor	<input checked="" type="checkbox"/>	Organic Streaking
<input checked="" type="checkbox"/>	Aquic Moisture Regime	<input checked="" type="checkbox"/>	Listed on Local Hydric Soils List
<input checked="" type="checkbox"/>	Reducing Conditions	<input checked="" type="checkbox"/>	Listed on National Hydric Soils List
<input checked="" type="checkbox"/>	Gleyed or Low-Chroma Colors	<input type="checkbox"/>	Other (Explain in Remarks)

Remarks:	Hydric soil was present.
----------	--------------------------

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Is this Sampling Point Within A Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Wetland criteria was not present.	

Course	Bearing	Distance
L13	S 80°34'51" E	16.22'
L14	N 34°36'14" E	42.22'
L15	N 59°17'33" E	45.40'
L16	N 70°36'39" E	33.21'
L17	N 60°18'43" E	44.64'
L18	S 88°02'51" E	35.52'
L19	N 56°55'57" E	42.98'
L20	N 26°07'38" E	44.27'
L21	N 16°52'14" W	36.81'
L22	N 12°22'50" E	53.52'
L23	N 02°09'23" E	50.12'
L24	N 33°22'25" E	33.15'
L25	N 44°45'39" E	50.67'
L26	N 67°50'16" E	41.03'
L27	N 68°13'16" E	40.31'
L28	N 75°01'14" E	42.16'
L29	S 78°39'22" E	56.71'
L30	N 71°10'53" E	53.73'
L31	N 07°26'47" E	48.04'
L32	N 54°25'44" E	40.25'
L33	N 02°57'58" E	33.26'
L34	N 04°14'31" W	50.24'
L35	N 10°01'33" E	49.59'
L36	N 10°50'47" E	70.90'
L37	N 08°34'45" E	65.06'
L38	N 11°31'38" E	60.91'
L39	N 11°36'03" E	57.21'
L40	N 10°30'44" E	49.12'
L41	N 11°43'09" E	69.63'
L42	N 06°13'08" E	47.89'
L43	N 46°28'27" W	51.05'
L44	N 67°30'12" W	30.54'
L45	N 72°02'31" W	23.90'
L46	N 49°17'15" W	73.16'
L47	N 21°00'34" W	49.18'
L48	N 01°17'35" W	29.94'
L49	N 05°12'57" E	30.46'
L50	N 15°34'21" E	24.80'
L51	N 21°04'16" E	21.12'
L52	N 51°54'13" E	34.41'
L53	N 14°44'02" E	28.04'
L54	N 15°23'33" E	27.17'
L55	N 54°18'34" E	37.29'
L56	N 50°42'17" E	42.44'
L57	N 39°27'43" E	25.50'
L58	N 63°07'17" E	52.45'
L59	N 60°43'37" E	46.79'
L60	N 53°29'54" E	51.73'
L61	N 55°42'37" E	58.51'
L62	N 51°55'33" E	59.43'
L63	N 78°09'50" E	43.64'
L64	N 73°12'44" E	45.06'
L65	S 80°45'17" E	46.37'
L66	N 79°58'40" E	40.81'
L67	S 78°37'38" E	58.43'
L68	S 66°24'55" E	43.72'
L69	N 54°41'49" E	53.42'
L70	N 23°30'47" W	28.57'
L71	N 29°37'17" W	30.25'
L72	N 30°24'39" E	36.79'
L73	N 45°28'42" E	31.69'
L74	N 76°23'58" E	54.29'
L75	N 89°46'12" E	50.15'
L76	N 79°33'30" E	64.51'
L77	S 77°51'43" E	41.40'
L78	S 63°58'31" E	41.41'
L79	S 73°03'38" E	80.95'
L80	S 64°16'18" E	71.65'
L81	S 67°26'06" E	46.22'
L82	S 72°43'10" E	48.70'
L83	S 66°01'53" E	72.87'
L84	S 67°09'39" E	56.20'
L85	S 84°14'43" E	91.35'
L86	S 88°02'48" E	92.93'
L87	S 83°24'21" E	82.20'
L88	N 88°17'24" E	78.84'
L89	N 82°12'58" E	72.25'
L90	N 78°59'20" E	56.71'
L91	S 87°21'03" E	31.57'

GRAPHIC SCALE - FEET

Course	Bearing	Distance
L1	N 75°43'56" E	134.17'
L2	N 79°33'06" E	61.09'
L3	N 85°27'27" E	240.84'
L4	N 77°41'23" E	271.49'
L5	S 87°09'31" E	125.37'
L6	S 71°38'15" E	187.75'
L7	S 58°16'16" E	72.19'
L8	S 70°01'09" E	121.22'
L9	S 76°58'39" E	138.01'
L10	S 85°18'48" E	224.56'
L11	N 78°13'38" E	207.27'
L12	S 16°12'42" W	35.25'

DIST. _____ Map _____ Parcel _____
ON WILLIAMSBURG COUNTY TAX MAPS
SPLIT FROM _____

WILLIAMSBURG COUNTY TAX ASSESSOR

Grid Bearing

Since the Center on the Intermittent RPW
is the Property Line, the Included Acreage is
only about 0.1 Acre.

Perennial RPW
Approximately 0.1 Acre

Williamsburg County

Center Line
Ditch the Line

Progress Energy
100'

Man Hole
Cover 56.51
Invert 39.36'

Lift Pit
Cover 57.06
Pipe 39.06'
Bottom 34'

24.78' Wetland Line
to North Property Line

Rebar Property Line to
F4
Rebar Found

TBM RR Spk
In Power Pole
NAVD '88
59.25

U. S. Hwy 52

Rebar
N 687,324.08
E 2,361,648.4

Rebar
N 686,894.62
E 2,361,549.43
NAVD '88

Course	Bearing	Distance
L92	N 80°34'12" W	113.96'
L93	N 80°34'12" W	197.09'
L94	N 54°24'40" E	40.90'
L95	N 08°52'17" E	31.45'
L96	N 01°53'57" E	42.27'
L97	N 22°59'58" E	30.81'
L98	N 22°40'53" E	31.93'
L99	N 61°29'48" E	42.23'
L100	N 23°47'36" E	25.27'
L101	S 71°57'00" E	35.77'
L102	N 76°38'38" E	33.30'
L103	S 64°56'19" E	39.62'
L104	S 25°30'59" E	40.96'
L105	S 05°18'17" E	38.72'
L106	S 04°47'55" E	56.43'
L107	S 10°04'42" W	34.76'
L108	S 52°49'03" W	41.09'
L109	S 17°31'27" W	20.47'

Jane E. Dewitt
Remainder of Parcel

9.9 Acres
of Designated
Wetlands

30' Access Reserved

N 80°34'11" W 1778.45'
Iron to Iron

T. Mauldin Brown

0.87 Acres
of Designated
Wetlands

State of South Carolina
County of Williamsburg
Tax Parcel part of 45-174-003

J.B. Ellis, Jr
LLS 13849
415 East Main Street
Kingstree, SC
843-355-6872

Wetlands Plat
Epps no.1 Tract

73.22 Acres Total Area

Survey Completed: December '8, 2008
Additional Wetlands Added: July 6, 2009

62.35 Acres of Land
Excluding Designated Wetlands
And Intermittent RPW

C 4160
Wetlands

WBUG4160WetlandSSPCoord

**Site Certification for the
Williamsburg Cooperative Commerce Centre South
In Williamsburg County, South Carolina**

Attachment 21

**Wetlands Delineation for
Tracts 8-10 and 13 of the Williamsburg Cooperative
Commerce Centre**

U.S. Army Corps of Engineers – Charleston District - Regulatory Division

JURISDICTIONAL DETERMINATION REQUEST

For Identifying Waters of the U.S., Including Wetlands and Tributaries

Project Name: Epps #1 Additional Land

Date: 4/21/11

County: Williamsburg County

Total Acreage of Tract: +/- 39 Acres

Property Owner : Williamsburg County

Address: Post Office Box 1132

Address: Kingstree, SC 29556

Phone: (843) 382-9393

Email: Attention: Mr. Hilton McGill

Agent: S&ME, Inc. (Charles Oates)

Address: 1330 Highway 501 Business

Address: Conway, SC 29526

Phone: (843) 347-7800

Email: coates@smeinc.com

Information Required to Accompany Request - Check the items submitted - forward as much information as is available. At a minimum, the first two items must be forwarded:

- ☒ Accurate Location Maps (from County Map, USGS Quad Sheet, etc.)
- ☐ Survey Plat or Tax Map of the Property in Question
- ☒ Soil Survey Sheet (from USDA-NRCS) or Aerial Photo (from County Assessor's Office or other source).
Property boundaries should be shown on the soil survey / photo.
- ☒ Topographic Survey
- ☐ Conceptual Site Plan for the Overall Development
- ☒ Description of the proposed use of the property (residential, commercial, industrial, silvicultural, agricultural, etc.)
- ☒ Status of the project (on-going site work for development, development in planning stages, no plans at this time, etc.)

Type of Determination Requested - Choose one:

- ☐ Preliminary – Preliminary determinations will identify whether wetlands or other waters are present on the site and will presume that they are jurisdictional. This type of determination is likely to be made more quickly and require less information be submitted.
- ☒ Approved – Approved determinations will identify whether wetlands or other waters are present on the site and will include a determination of their jurisdictional status. This type of determination is likely to take longer and require more detailed information be submitted.

IMPORTANT NOTE: Legible printed name and signature required. The person signing this form must be the present property owner or have the specific authority of the property owner to authorize Corps of Engineers employees or their agents to enter onto the property for on-site investigations if such is deemed necessary. Do not sign this form unless you are the owner, or have the specific authority of the property owner.

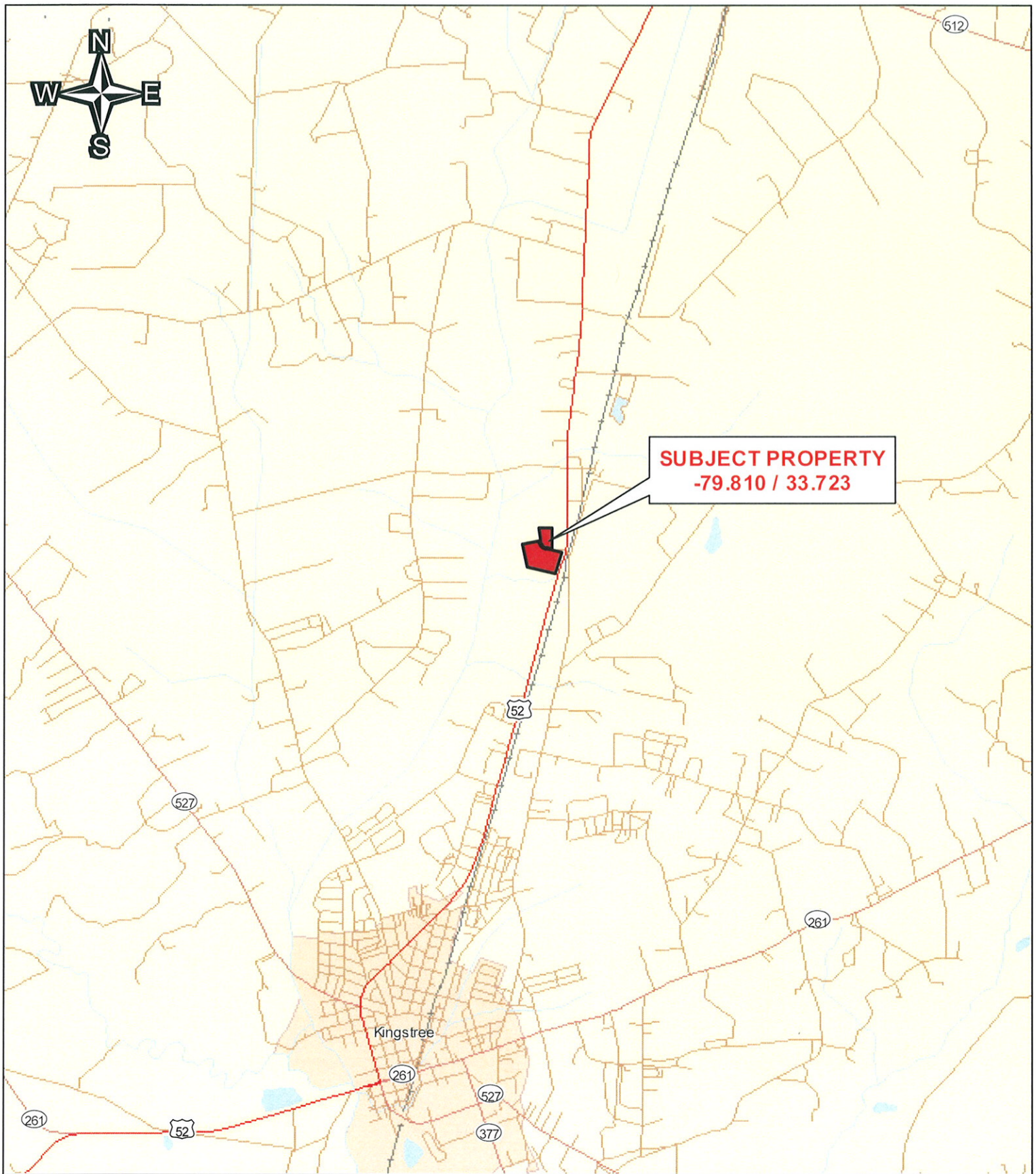
PRINTED NAME of person signing this form, below: Charles C. Oates, Jr.

Signature of Property Owner or Authorized Agent: 

HQ and South Branch
69-A Hagood Avenue
Charleston, SC 29403
843-329-8044

Northeast Branch
1949 Industrial Park Rd, Room 140
Conway, SC 29526
843-365-4239

Northwest Branch
1835 Assembly St., Room 865-B1
Columbia, SC 29201
803-253-3444



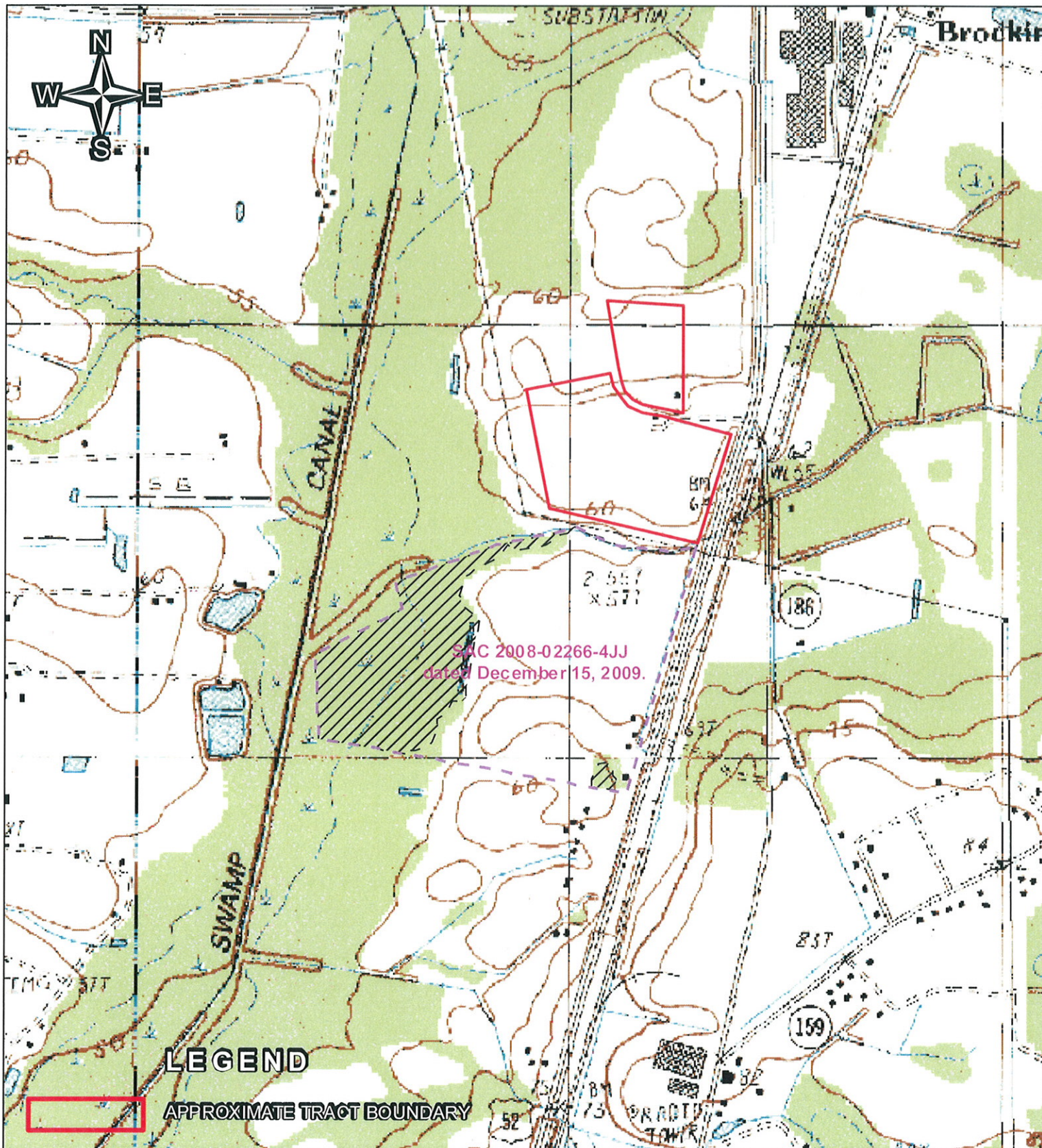
SCALE:	1" = 1 MILE
BACKGROUND SOURCE:	ESRI
SOURCE DATE:	2007
DATE:	FEBRUARY 2011



SITE VICINITY MAP EPPS #1 ADDITIONAL LAND WILLIAMSBURG CO., SC
S & ME PROJECT # 1634-11-040

FIGURE #

1



SCALE: 1" = 1,000'

BACKGROUND SOURCE: TERRASERVER DATA

SOURCE DATE: 1990

DATE: FEBRUARY 2011



SITE TOPOGRAPHIC MAP
EPPS #1 ADDITIONAL LAND
WILLIAMSBURG CO., SC

S & ME PROJECT # 1634-11-040

FIGURE #

2



0 300 600 1,200 1,800 2,400
Feet

SCALE: 1" = 600'
 BACKGROUND SOURCE: SCDNR GIS DEPT.
 SOURCE DATE: 2006
 DATE: FEBRUARY 2011



WWW.SMEINC.COM

SITE AERIAL PHOTOGRAPH
 EPPS #1 ADDITIONAL LAND
 WILLIAMSBURG CO., SC

S & ME PROJECT # 1634-11-040

FIGURE #

3



0 300 600 1,200 1,800 2,400
Feet

SCALE: 1" = 600'
 BACKGROUND SOURCE: SCDNR GIS DEPT.
 SOURCE DATE: 1984
 DATE: FEBRUARY 2011



WWW.SMEINC.COM

SITE SOIL SURVEY MAP
EPPS #1 ADDITIONAL LAND
WILLIAMSBURG CO., SC

S & ME PROJECT # 1634-11-040

FIGURE #

4



0 200 400 800 1,200 1,600 Feet

SCALE: 1" = 400'

BACKGROUND SOURCE: SCDNR GIS DEPT.

SOURCE DATE: 1984

DATE: FEBRUARY 2011



WWW.SMEINC.COM

SITE NWI MAP
EPPS #1 ADDITIONAL LAND
WILLIAMSBURG CO., SC

S & ME PROJECT # 1634-11-040

FIGURE #

5



1 Data Point 1.



2 Soils at Data Point 1.



3 Wooded wetland area at Data Point 2.



4 Existing Spec Building on site.



Site Photographs Epps #1 Industrial Park Additional Land

S&ME Project No.: 1634-11-040

Taken by: CO

Date: 2/21/11



5 Wetland Area at Data Point 2.



6 Wetland at Data Point 2.



7 Soils at Data Point 2.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Epps #1 Additional Land City/County: Kingstree/Williamsburg Sampling Date: 2/21/11
 Applicant/Owner: Williamsburg County State: SC Sampling Point: DP1
 Investigator(s): Charles Oates (S&ME, Inc.) Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Cleared and Graded Land Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR or MLRA): LRR T Lat: 33.723 Long: -79.810 Datum: NAD83
 Soil Map Unit Name: Gourdin NWI classification: U21

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: This area has been cleared and graded as part of an industrial park from a previous determination.		

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: DP1

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species _____	x 3 = _____																	
FACU species _____	x 4 = _____																	
UPL species _____	x 5 = _____																	
Column Totals: _____	(A) _____ (B) _____																	
Sapling Stratum (Plot size: _____)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
_____ = Total Cover																		
Shrub Stratum (Plot size: _____)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.														
_____ = Total Cover																		
Herb Stratum (Plot size: _____)																		
1. <u>Andropogon virginicus</u>	60	Yes	FAC															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
60 _____ = Total Cover																		
Woody Vine Stratum (Plot size: _____)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
_____ = Total Cover																		

Remarks: (If observed, list morphological adaptations below).

Sampling Point: DP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Indicators for Problematic Hydric Soils³:

- ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Soils appear to be imported soils.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Epps #1 Additional Land City/County: Kingstree/Williamsburg Sampling Date: 2/21/11
 Applicant/Owner: Williamsburg County State: SC Sampling Point: DP2
 Investigator(s): Charles Oates (S&ME, Inc.) Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Isolated wetland Local relief (concave, convex, none): concave Slope (%): 1%
 Subregion (LRR or MLRA): LRR T Lat: 33.723 Long: -79.810 Datum: NAD83
 Soil Map Unit Name: Gourdin NWI classification: PFO1Bd

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6-8</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: **DP2**

Tree Stratum (Plot size: 1/10 Ac.)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <i>Liriodendron tulipifera</i>	50	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)														
2. <i>Liquidambar styracflua</i>	50	Yes	FAC															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
100% = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____ (A)	_____ (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species _____	x 3 = _____																	
FACU species _____	x 4 = _____																	
UPL species _____	x 5 = _____																	
Column Totals: _____ (A)	_____ (B)																	
Sapling Stratum (Plot size: _____)																		
1. <i>Liriodendron tulipifera</i>	20	Yes	FAC															
2. <i>Liquidambar styracflua</i>	30	Yes	FAC															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
50 = Total Cover				Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
Shrub Stratum (Plot size: _____)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.														
Herb Stratum (Plot size: _____)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
_____ = Total Cover																		
Woody Vine Stratum (Plot size: 1/10 Ac.)																		
1. <i>Smilax laurifolia</i>	40	Yes	FACW	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
40 = Total Cover																		
Remarks: (if observed, list morphological adaptations below).																		

SOIL

Sampling Point: DP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 3/1						Loam	
5-15	10YR 5/2						SCL	Sandy Clay Loam
15-25	10YR 5/1						Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☒ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
 (MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12) (LRR T, U)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

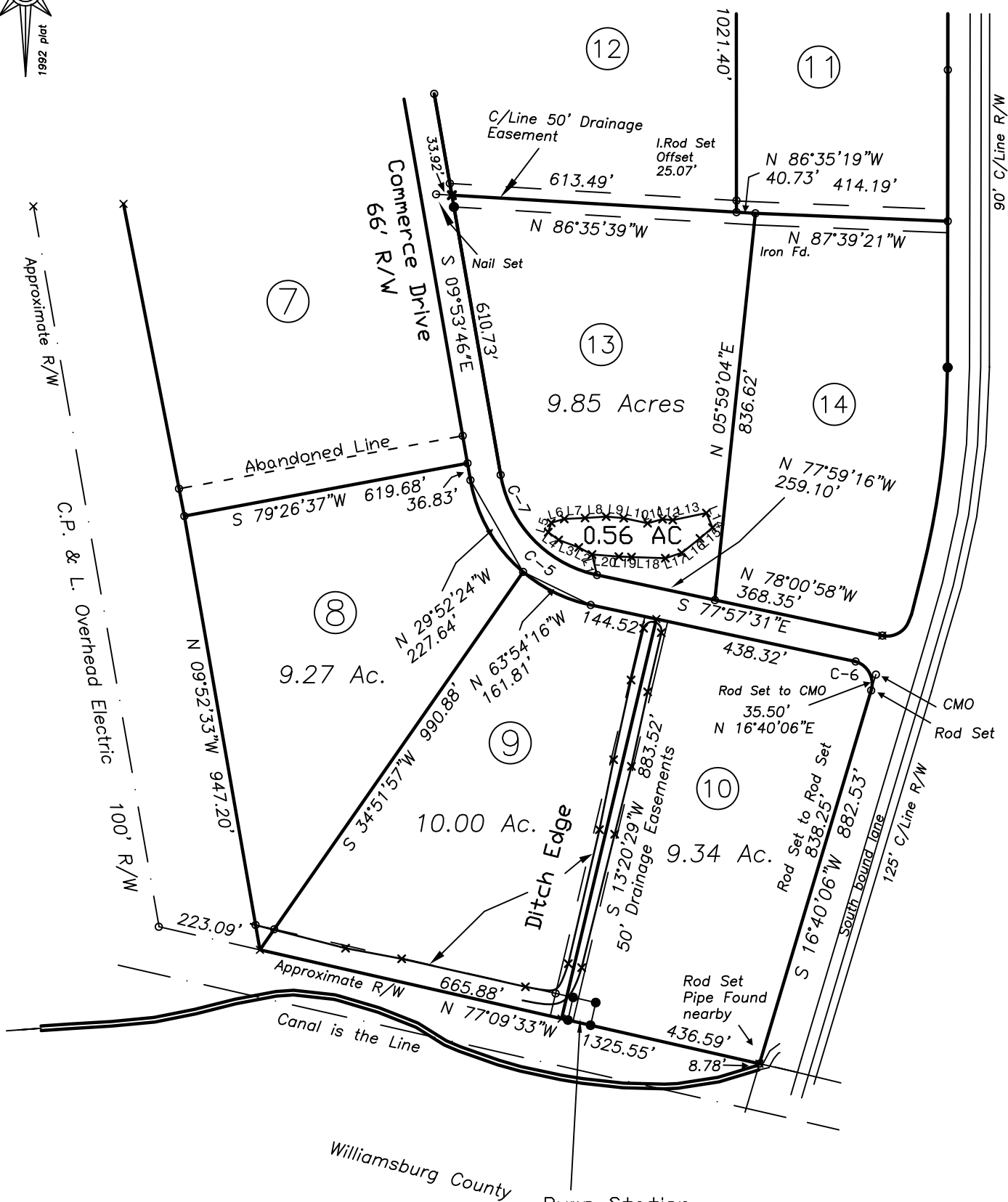
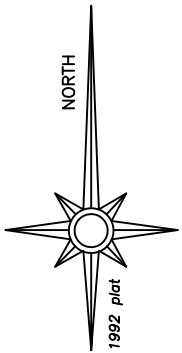
Restrictive Layer (if observed):

Type: _____

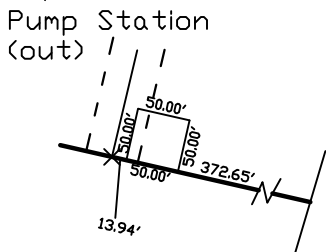
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:



State of South Carolina
County of Williamsburg
Tax Map: 45-173



CURVE	RADIUS	TANGENT	LENGTH	DELTA	DEGREE	CHORD	CH.BEARING
C-5	333.15'	224.98'	395.76'	68°03'45"	17°11'53"	372.90'	S 43°55'39"E
C-6	50.00'	50.00'	78.54'	90°00'00"	114°35'30"	70.71'	S 28°19'54"E
C-7	267.15'	180.41'	317.36'	68°03'45"	21°26'48"	299.02'	N 43°55'39"W

*Williamsburg County
Development Corporation*

J.B. Ellis, Jr
LLS 13849
415 East Main Street
Kingstree, SC
843-355-6872

Wetland Survey of Lots 8, 9, 10 and 13
Survey Completed: April 28, 2011

WBUG2101 wet May 1998

Course	Bearing	Distance
L1	N 13°52'14" W	45.50'
L2	N 62°11'16" W	32.23'
L3	N 69°24'04" W	46.12'
L4	N 53°34'22" W	28.01'
L5	N 17°43'13" E	21.14'
L6	N 73°41'16" E	29.33'
L7	N 87°26'09" E	44.72'
L8	N 86°11'46" E	45.69'
L9	S 85°04'56" E	37.71'
L10	S 77°59'05" E	52.49'
L11	N 74°58'51" E	33.35'
L12	S 84°54'34" E	22.15'
L13	N 78°02'22" E	73.91'
L14	S 22°34'08" E	34.09'
L15	S 49°25'12" W	35.48'
L16	S 51°26'52" W	50.22'
L17	S 71°53'32" W	37.00'
L18	N 88°00'49" W	72.92'
L19	N 87°30'14" W	27.18'
L20	N 85°32'32" W	57.96'