



March 6, 2018

Mr. Travis Hughes
US Army Corps of Engineers
Charleston District, Regulatory Branch
69A Hagood Avenue
Charleston, South Carolina 29403-5107

Re: Jurisdictional Determination Request Package
S-45 Bridge Replacement over the Little Pee Dee River
P031751, Dillon County

Dear Mr. Hughes:

Please find enclosed the South Carolina Department of Transportation (SCDOT) jurisdictional determination request package for the replacement of the S-45 (Lester Road) Bridge over the Little Pee Dee River. The package includes the US Army Corps of Engineers (USACE) Jurisdictional Determination Request Form, maps of the project study area with potential jurisdictional features identified, all associated data forms, a USACE data sheet of identified features and photos.

If further information or additional documentation is required, please feel free to contact me at 803-737-1332 or via email at BeckhamJC@scdot.org.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Beckham", followed by a long horizontal line extending to the right.

Chris Beckham
Mitigation Manager

JCB:bag

Enclosures

File: Env/JCB

U.S. Army Corps of Engineers – Charleston District - Regulatory Division
REQUEST FOR CORPS JURISDICTIONAL DETERMINATION (JD) / DELINEATION
(For Jurisdictional Status and Identifying Wetlands and Other Aquatic Resources)

I. PROPERTY AND AGENT INFORMATION

A. Site Details/Location:

Site Name: Bridge Replacements - Little Pee Dee River on S-45 (SP-084-EJEP-18) Date: 3/1/2018
City/Township/Parish: Dillon County: Dillon
Latitude/Longitude: Start (south): 34.3295N, -79.3285W; Stop (north): 34.3364N, -79.3210W Acreage: 25.9
Tax Map Sequence (TMS) #(s): SCDOT ROW
Property Address(es): Lester Road (S-45), Dillon, Dillon County, SC

Please attach a survey/plat map and vicinity map identifying location and review area for the JD/delineation. An accurate depiction of the review area must be provided (survey, tax map, or GPS coordinates). Tax maps may only be used if the site includes the entire tax map parcel.

B. Requestor of Jurisdictional Determination/Delineation (if there are multiple property owners, please attach additional pages)

Name: Chris Beckham, Mitigation Manager
Company Name (if applicable): SCDOT
Address: Post Office Box 191, 955 Park Street, Columbia, SC 29202-0191
Phone: 803-737-1332 Email: BeckhamJC@scdot.org

Check one: I currently own this property
 I plan to purchase this property
 Other, please explain _____

C. Agent/Environmental Consultant Acting on Behalf of the Requestor (if applicable):

Consultant/Agent Name: Chris Daves, P.W.S.
Company Name: S&ME, Inc.
Address: 134 Suber Road, Columbia, SC 29210 Phone: 803-561-9024
Email: cdaves@smeinc.com

II. REASON FOR REQUEST (check all that apply)

- I intend to construct/develop a project or perform activities on this site which would be designed to avoid all aquatic resources.
- I intend to construct/develop a project or perform activities on this site which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
- I intend to construct/develop a project or perform activities on this site which may require authorization from the Corps, and the Jurisdictional Determination would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
- I intend to construct/develop a project or perform activities on this site which may require authorization from the Corps; this request is accompanied by my permit application and the jurisdictional determination is to be used in the permitting process.
- I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is subject to the ebb and flow of the tide.
- A Corps jurisdictional determination is required in order to obtain my local/state authorization.
- I intend to contest jurisdiction over a particular aquatic resource and the request the Corps to confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
- I believe that the site may be comprised entirely of dry land.
- Other: _____

*Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.

Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.

Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.

Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an jurisdictional determination cannot be evaluated nor can a jurisdictional determination be issued.

III. TYPE OF REQUEST:

- Approved¹ Jurisdictional Determination (AJD) Only
- Preliminary² Jurisdictional Determination (PJD) Only
- Approved Jurisdictional Determination (AJD) with submittal of a Pre-Construction Notification or Department of the Army permit application
- Preliminary Jurisdictional Determination (PJD) with submittal of a Pre-Construction Notification or Department of the Army permit application
- Delineation of Wetlands and/or Other Aquatic Resources Only Conducted By Agent/Environmental Consultant with submittal of a Pre-Construction Notification or Department of the Army permit application (No jurisdictional determination requested)
- I request that the **Corps delineate** the wetlands and/or other aquatic resources that may be present on my property with the attached **Pre-Construction Notification or Department of the Army permit application**
- I request that the **Corps delineate** the wetlands and/or other aquatic resources that may be present on my property **with an AJD or PJD**
- “No Permit Required” (NPR) Letter** as I believe my proposed activity is not regulated³
- Unclear** as to which jurisdictional determination I would like to request and require additional information to inform my decision

¹Approved – An AJD is defined in Corps regulations at 33 CFR 331.2. As explained in further detail in RGL 16-01, an AJD is used to indicate that this office has identified the presence or absence of wetlands and/or other aquatic resources on a site, including their accurate location(s) and boundaries, as well as their jurisdictional status. AJDs are valid for 5 years.

²Preliminary – A PJD is defined in Corps regulations at 33 CFR 331.2. As explained in further detail in RGL 16-01, a PJD is used to indicate that this office has identified the approximate location(s) and boundaries of wetlands and/or other aquatic resources on a site that are presumed to be subject to regulatory jurisdiction of the Corps of Engineers. Unlike an AJD, a PJD does not represent a definitive, official determination that there are, or that there are not, jurisdictional aquatic resources on a site, and does not have an expiration date.

³ “No Permit Required” (NPR) Letter- A NPR letter may be provided by the Corps to notify the requestor that an activity will not require a permit (authorization) from the Corps; this letter can only be used if the proposed activity is not a regulated activity, regardless of where the activity may occur. A NPR letter cannot be used to indicate the presence or absence of wetlands and/or other aquatic resources, nor can it be used to determine their jurisdictional status.

IV. LEGAL RIGHT OF ENTRY

By signing below, I am indicating that I have the authority, or am acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant U.S. Army Corps of Engineers personnel right of entry to legally access the property(ies) subject to this request for the purposes of conducting on-site investigations (e.g., digging and refilling shallow holes) and issuing a jurisdictional determination. I acknowledge that my signature is an affirmation that I possess the requisite property rights to request a jurisdictional determination on the properties subject to this request.

Post Office Box 191, 955 Park Street, Columbia, SC 29202-0191

Lester Road (S-45) /SCDOT ROW

Mailing Address

Property Address / TMS #(s)

BeckhamJC@scdot.org

803-737-1332

Email Address

Daytime Phone Number

Chris Beckham, Mitigation Manager

*Signature:

Printed Name and Date

<p>Charleston Office: US Army Corps of Engineers Regulatory Division 69A Hagood Avenue Charleston, SC 29403 (ph) 843-329-8044</p>	<p>Columbia Office: US Army Corps of Engineers Regulatory Office 1835 Assembly Street, Room 865 B-1 Columbia, SC 29201 (ph) 803-253-3444</p>	<p>Conway Office: US Army Corps of Engineers Regulatory Office 1949 Industrial Park Road, Room 140 Conway, SC 29526 (ph) 843-365-4239</p>
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*Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.

Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.

Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District’s website and on the Headquarters USACE website.

Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an jurisdictional determination cannot be evaluated nor can a jurisdictional determination be issued.



March 1, 2018

U.S. Army Corps of Engineers
Charleston Regulatory Office
69-A Hagood Avenue
Charleston, South Carolina 29403

Attention: Mr. Travis Hughes, Regulatory Division Chief

Reference: **Request for Preliminary Jurisdictional Determination
Bridge Replacements – Little Pee Dee River on S-45 (SP-084-EJEP-18)**
Dillon, Dillon County, South Carolina
S&ME Project No. 4261-18-022

Dear Mr. Hughes:

On behalf of the South Carolina Department of Transportation (SCDOT, S&ME, Inc. (S&ME) has completed a Wetland Delineation at the above-referenced project area (site). The approximately 25.9-acre site is located along Lester Road (S-45) as it crosses the Little Pee Dee River, approximately 6.25 miles southeast of Dillon in Dillon County, South Carolina. The site is within a 300-foot wide corridor (150 feet from each side of the centerline of Lester Road).

The site is located in the Middle Little Pee Dee River Watershed (HUC 03040204-05) within the Pee Dee River Basin and U.S. Army Corps of Engineers (USACE) Watershed Group 4. Please refer to Exhibits 1-6 in **Appendix A** for depictions of the site and surrounding features. We are seeking a Preliminary Jurisdictional Determination (PJD) for this project.

◆ **Wetland Delineation**

On February 28, 2018, S&ME Biologists Chris Daves and Chris Handley conducted the Wetland Delineation. The following features were observed:

- ◆ 6 Wetlands
- ◆ 3 Non-Wetland Waters (Tributaries)
- ◆ 1 Non-Aquatic Resource (Roadside Ditch)

Please refer to Exhibit 3 (Aerial Exhibit) in **Appendix A** for the approximate locations of these features.



◆ Wetlands

Please refer to the table below for information regarding the wetland features included in the delineation.

Table 1 – Jurisdictional Wetlands

Wetland ID	Photo ID	Comments	Acreage
Wetland 1	1-2	PFO wetland on northern portion of site west of Lester Road. Includes roadside ditch on edge of wetland.	1.70
Wetland 2	3	PFO wetland located on northern portion of site west of Lester Road. Includes roadside ditch on edge of wetland.	0.64
Wetland 3	4-5	PFO wetland located on central and southern portions of site west of Lester Road.	3.42
Wetland 4	6	PFO/PEM wetland located on northern portion of site east of Lester Road. PEM portion of wetland includes powerline ROW immediately adjacent to Lester Road.	1.55
Wetland 5	7	PFO/PEM wetland located on north-central portion of site east of Lester Road. PEM portion of wetland includes powerline ROW immediately adjacent to Lester Road.	0.10
Wetland 6	8	PFO/PEM wetland located on central and southern portions of site east of Lester Road. PEM portion of wetland includes powerline ROW immediately adjacent to Lester Road.	3.49
Total Wetlands			10.90

PFO = Palustrine Forested

PEM = Palustrine Emergent

◆ Non-Wetland Waters (Tributaries)

Please refer to the table below for information regarding the non-wetland waters features included in the delineation.

Table 2 – Non-Wetland Waters

Tributary ID	Photo ID	Comments	Linear Footage	Acreage
NWW-1	9	Unnamed tributary to the Little Pee Dee River. Fed by roadside ditch (NAR-1).	463	0.25
NWW-2	10-11	Little Pee Dee River.	500	1.02
NWW-3	12-13	Side tributary of the Little Pee Dee River.	340	0.37
Total NWW			1,303	1.64

NWW – Non-Wetland Water

NAR – Non-Aquatic Resource

In summary, the site contains approximately **12.54 acres** of Waters of the U.S. (WOUS).



◆ **Non-Aquatic Resource (Roadside Ditch)**

Please refer to the table below for information regarding the non-aquatic resource feature included in the delineation.

Table 3 – Non-Aquatic Feature

Wetland ID	Photo ID	Comments	Linear Footage
NAR-1	14	Roadside ditch on western side of Lester Road. Eventually forms NWW-1.	196

NAR – Non-Aquatic Resource

NWW – Non-Wetland Water

◆ **Uplands**

Upland areas on the site consist predominately of existing road causeway, a boat landing west of Lester Road on the Little Pee Dee River, and a former sand pit north of the boat landing. These portions of the site consist of the non-hydric soil series Rimini, Persanti, and Fuquay as listed in the Soil Survey of Dillon County, South Carolina and the U.S. Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS) Web Soil Survey (Exhibit 4 – Soils Exhibit). Wetland vegetation, hydric soils, or hydrology were not observed in the upland areas.

◆ **Enclosures**

Attached in Appendices A-C, please find the following information for your review:

Appendix A

Exhibit 1 – Vicinity Exhibit, Exhibit 2 – Topographic Exhibit, Exhibit 3 – Aerial Exhibit, Exhibit 4 – Soils Exhibit, Exhibit 5 – NWI Exhibit, Exhibit 6 – Lidar Exhibit, Site Photographs

Appendix B

Wetland/Upland Datasheets

Appendix C

Preliminary Jurisdictional Determination Form



**Request for Preliminary Jurisdictional Determination
Bridge Replacements – Little Pee Dee River on S-45 (SP-084-EJEP-18)**
Dillon, Dillon County, South Carolina
S&ME Project No. 4261-18-022

◆ **Closing**

Thank you for your time and attention to this project. If we can provide additional information, please do not hesitate to contact us at 803-561-9024.

Sincerely,

S&ME

A handwritten signature in cursive script that reads "Chris Handley".

Chris Handley
Biologist
chandley@smeinc.com

A handwritten signature in cursive script that reads "Chris Daves".

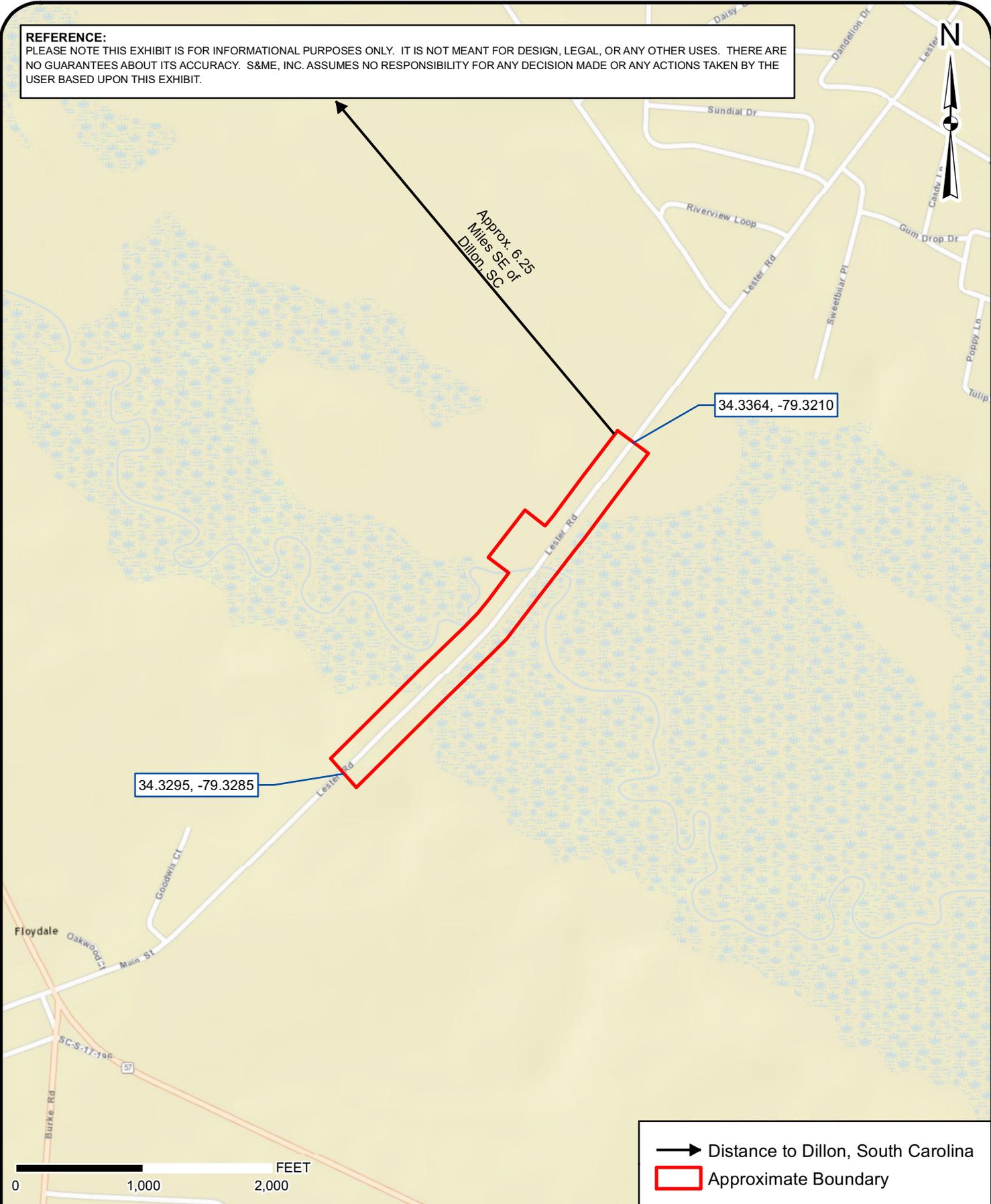
Chris Daves, P.W.S.
Senior Scientist
cdaves@smeinc.com

Enclosures

Appendix A

Exhibits and Site Photographs

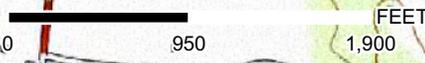
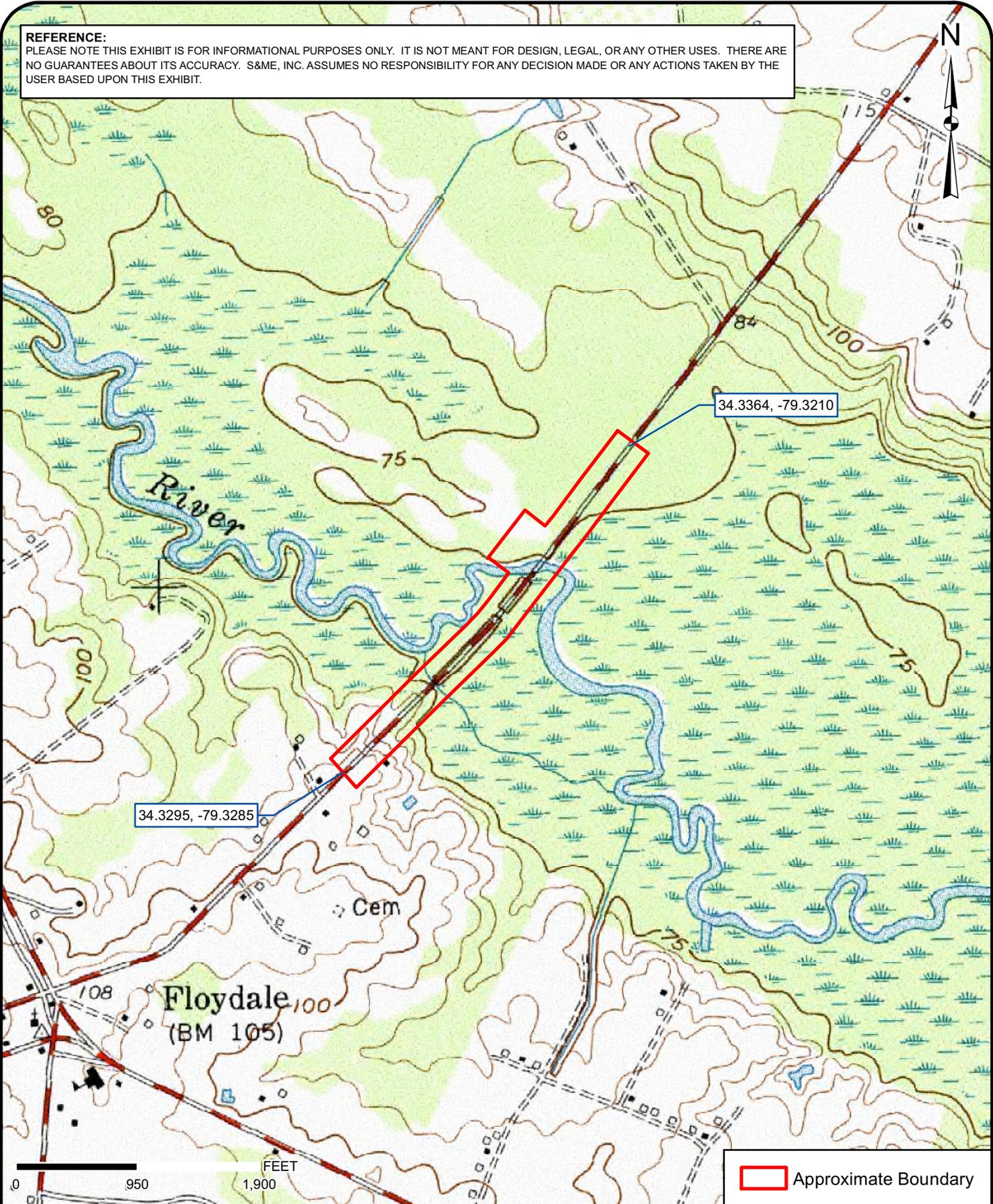
REFERENCE:
 PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



→ Distance to Dillon, South Carolina
 □ Approximate Boundary

	<h3>Vicinity Exhibit</h3> <p>Bridges Replacements-Little Pee Dee River on S-45 +/- 25.9 Ac</p>	SCALE: 1" = 1,000'	EXHIBIT NO. <h1>1</h1>
	Dillon, Dillon County, South Carolina Source: World Street Map	DATE: 3-2-18	
		PROJECT NUMBER 4261-18-022	

REFERENCE:
PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



 Approximate Boundary

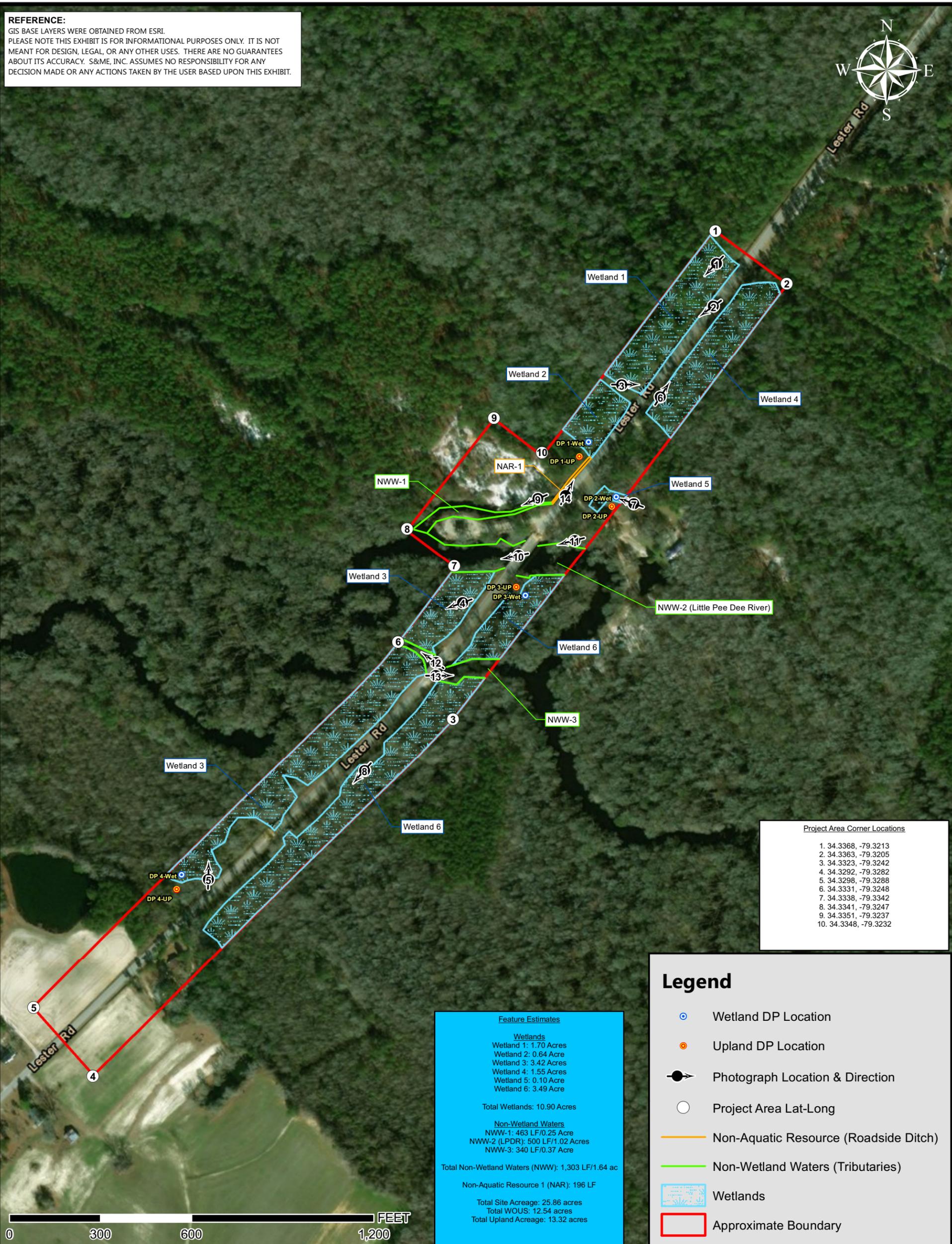
SCALE:
1" = 1,000'
DATE:
3-2-18
PROJECT NUMBER
4261-18-022

EXHIBIT NO.
2



Topographic Exhibit
Bridges Replacements-Little Pee Dee River on S-45 +/- 25.9 Ac
Dillon, Dillon County, South Carolina
Source: USGS 7.5-Minute Topo Quad Fork, SC 1959

REFERENCE:
 GIS BASE LAYERS WERE OBTAINED FROM ESRI.
 PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



Project Area Corner Locations

1.	34.3368, -79.3213
2.	34.3363, -79.3205
3.	34.3323, -79.3242
4.	34.3292, -79.3282
5.	34.3298, -79.3288
6.	34.3331, -79.3248
7.	34.3338, -79.3342
8.	34.3341, -79.3247
9.	34.3351, -79.3237
10.	34.3348, -79.3232

Feature Estimates

Wetlands	
Wetland 1:	1.70 Acres
Wetland 2:	0.64 Acre
Wetland 3:	3.42 Acres
Wetland 4:	1.55 Acres
Wetland 5:	0.10 Acre
Wetland 6:	3.49 Acre
Total Wetlands:	10.90 Acres
Non-Wetland Waters	
NWW-1:	463 LF/0.25 Acre
NWW-2 (LPDR):	500 LF/1.02 Acres
NWW-3:	340 LF/0.37 Acre
Total Non-Wetland Waters (NWW):	1,303 LF/1.64 ac
Non-Aquatic Resource 1 (NAR):	196 LF
Total Site Acreage:	25.86 acres
Total WOUS:	12.54 acres
Total Upland Acreage:	13.32 acres

Legend

- Wetland DP Location
- Upland DP Location
- Photograph Location & Direction
- Project Area Lat-Long
- Non-Aquatic Resource (Roadside Ditch)
- Non-Wetland Waters (Tributaries)
- Wetlands
- Approximate Boundary

SCALE: 1 inch = 300 feet
 DATE: 3/2/2018
 DRAWN BY: CCH
 PROJECT NO: 4261-18-022



Aerial Exhibit
 Bridge Replacements-Little Pee Dee River on S-45 +/- 25.86 Acres
 Dillon, Dillon County, South Carolina
 Source: World Imagery 2016

EXHIBIT NO.
3

Drawing Path: T:\Projects\2018\ENR\4261-18-022_SCDOT_Bridges Replacements over Little Pee Dee River\GIS\mxd\J.D.Mxd\Updated Project Area 1000 ft. south of 3rd bridge\Dillon Pee Dee Bridge Replacement_JD Aerial Exhibit.mxd plotted by Chandley 03-02-2018

REFERENCE:
 PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



Soils Information

- CpA - Chipley Sand (0-2% slopes)
- FuB - Fuquay Sand (0-6% slopes)
- JR - Johnston-Rutledge Association
- LbA - Leon Sand (0-2% slopes)
- Ly - Lynn Haven Sand
- Pb - Paxville Loam
- PeB - Persanti Fine Sandy Loam (2-6% slopes)
- RnB - Rimini Sand (0-6% slopes)
- W - Water

	Soils
	Approximate Boundary



Soils Exhibit

Bridge Replacements-Little Pee Dee River on S-45 +/- 25.9 Ac

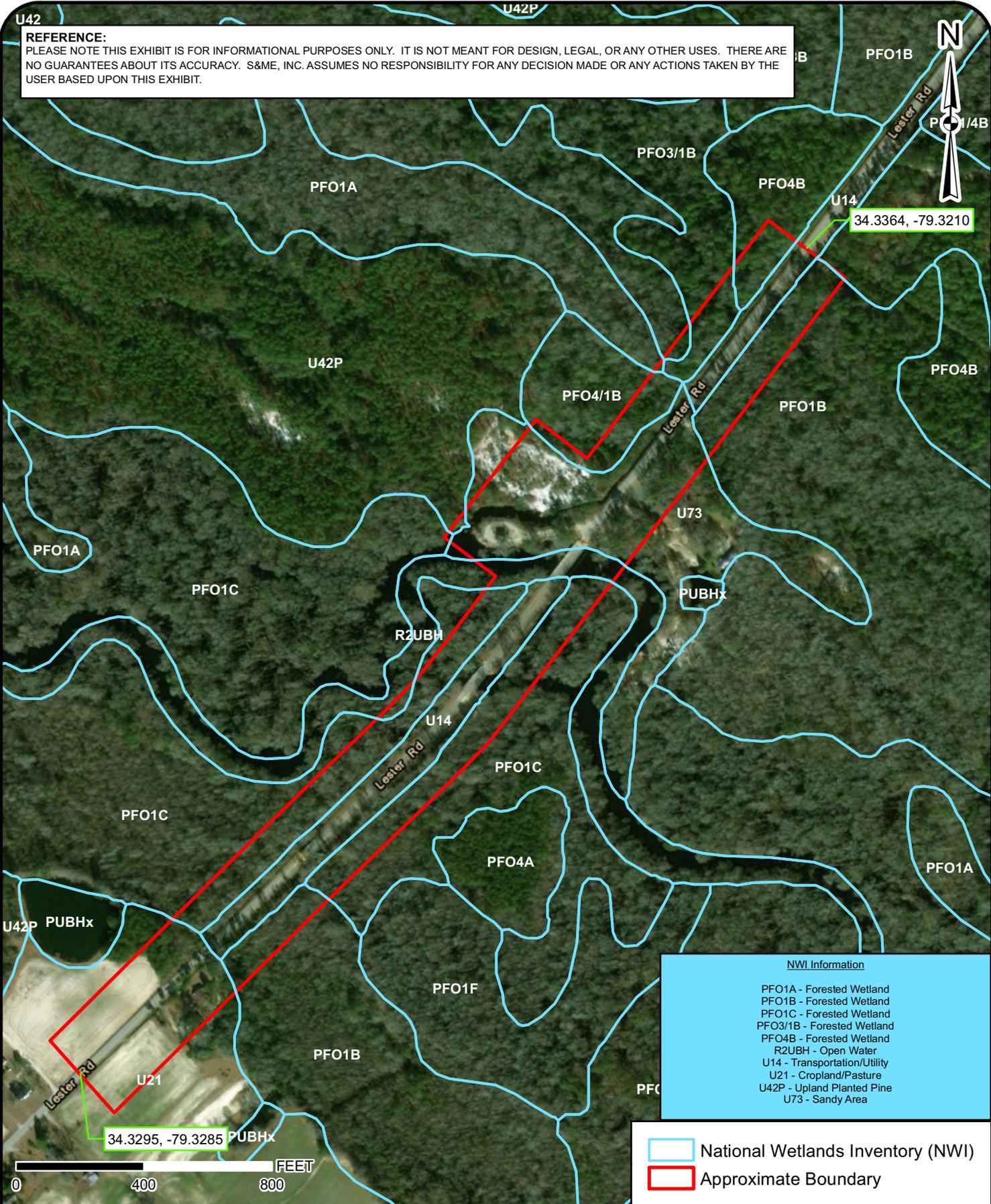
Dillon, Dillon County, South Carolina

Source: World Imagery 2016 & SCDNR (Soils Data)

SCALE: 1" = 400'	4
DATE: 3-2-18	
PROJECT NUMBER 4261-18-022	

EXHIBIT NO.

REFERENCE:
 PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



NWI Information	
PFO1A -	Forested Wetland
PFO1B -	Forested Wetland
PFO1C -	Forested Wetland
PFO3/1B -	Forested Wetland
PFO4B -	Forested Wetland
R2UBH -	Open Water
U14 -	Transportation/Utility
U21 -	Cropland/Pasture
U42P -	Upland Planted Pine
U73 -	Sandy Area

	National Wetlands Inventory (NWI)
	Approximate Boundary



NWI Exhibit
 Bridge Replacements-Little Pee Dee River on S-45 +/- 25.9 Ac
 Dillon, Dillon County, South Carolina
 Source: World Imagery 2016 & SCDNR (NWI Data)

SCALE:	1" = 400'
DATE:	3-2-18
PROJECT NUMBER	4261-18-022

EXHIBIT NO.
5

Drawing Path: T:\Projects\2018\EN\4261-18-022 SCDOT_Bridges Replacements over Little Pee Dee_Dillon\GIS\mxd\Updated Project Area 1000 ft. south of 3rd bridge\Dillon Pee Dee Bridge Replacement_LIDAR.mxd plotted by Chandley 03-02-2018

REFERENCE:

PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&M, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



34.3364, -79.3210

34.3295, -79.3285



— 2 Ft. Contours

□ Approximate Boundary

LIDAR Value

High : 116

Low : 69



LIDAR Exhibit

Bridge Replacements-Little Pee Dee River on S-45 +/- 25.9 Ac

Dillon, Dillon County, South Carolina
Source: World Imagery 2016 & SCDNR (LIDAR Data)

SCALE:
1" = 400'

DATE:
3-2-18

PROJECT NUMBER
4261-18-022

EXHIBIT NO.

6



1 Wetland 1 on northern portion of site.



2 Wetland 1 on northern portion of site. Wetland 1 includes roadside ditch immediately adjacent to forested portion. Photo taken facing southwest.



3 Wetland 2 near data point location.



4 Wetland 3 on central portion of site.



Site Photographs
Bridge Replacements – Little Pee Dee River on S-45
Dillon, Dillon County, South Carolina

S&ME Project 4261-18-022

Taken by: CH/CD

Date: February 28, 2018



5 Wetland 3 on southern portion of site near data point location.



6 Wetland 4 on northern portion of site. Emergent portion within road/powerline ROW. Photo taken facing northeast.



7 Wetland 5 on northern-central portion of site.



8 Wetland 6 on southern portion of site. Emergent portion within road/powerline ROW. Photo taken facing southwest.



Site Photographs
Bridge Replacements – Little Pee Dee River on S-45
Dillon, Dillon County, South Carolina

S&ME Project 4261-18-022

Taken by: CH/CD

Date: February 28, 2018



9 Non-Wetland Water 1 (NWW-1) on central portion of site facing west. NWW-1 is an unnamed tributary to the Little Pee Dee River. Feature is fed by roadside ditch (NAR-1).



10 Non-Wetland Water 1 (NWW-1) facing west from bridge. Little Pee Dee River.



11 Non-Wetland Water 2 (NWW-2) facing west toward bridge. Little Pee Dee River.



12 Non-Wetland Water 3 (NWW-3) facing northwest from bridge. Side channel of Little Pee Dee River.



Site Photographs
Bridge Replacements – Little Pee Dee River on S-45
Dillon, Dillon County, South Carolina

S&ME Project 4261-18-022

Taken by: CH/CD

Date: February 28, 2018



13 Non-Wetland Water 3 (NWW-3) facing southeast west from bridge. Side channel of Little Pee Dee River.



14 Non-Aquatic Resource 1 (NAR-1) located on central portion of site on north side of Lester Road. Roadside ditch. Photo taken facing northeast.



Site Photographs
Bridge Replacements – Little Pee Dee River on S-45
Dillon, Dillon County, South Carolina

S&ME Project 4261-18-022

Taken by: CH/CD

Date: February 28, 2018

Appendix B

Wetland/Upland Datasheets

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Bridge Replacements - Little Pee Dee River on S-45 **City/County:** Dillon/Dillon **Sampling Date:** 28-Feb-18
Applicant/Owner: SCDOT **State:** SC **Sampling Point:** DP1 - Wet
Investigator(s): Chris Daves, P.W.S. **Section, Township, Range:** S T R
Landform (hillslope, terrace, etc.): Lowland **Local relief (concave, convex, none):** concave **Slope:** 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR P **Lat.:** 34.3348 **Long.:** -79.3227 **Datum:** NAD 83
Soil Map Unit Name: Leon Sand (LbA) **NWI classification:** PFO4/1B

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="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: Wetland 2. Three parameters met.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9)		Secondary Indicators (minimum of 2 required) <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 checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>10</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks: Wetland hydrology observed.		

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: DP1 - Wet

Tree Stratum (Plot size: <u>30'</u>)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Liquidambar styraciflua</u>	<u>15</u>	<input checked="" type="checkbox"/> 37.5%	<u>FAC</u>
2.	<u>Acer rubrum</u>	<u>15</u>	<input checked="" type="checkbox"/> 37.5%	<u>FAC</u>
3.	<u>Persea palustris</u>	<u>10</u>	<input checked="" type="checkbox"/> 25.0%	<u>FACW</u>
4.		<u>0</u>	<input type="checkbox"/> 0.0%	
5.		<u>0</u>	<input type="checkbox"/> 0.0%	
6.		<u>0</u>	<input type="checkbox"/> 0.0%	
7.		<u>0</u>	<input type="checkbox"/> 0.0%	
8.		<u>0</u>	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>20</u>		20% of Total Cover: <u>8</u>	<u>40</u>	= Total Cover
Sapling or Sapling/Shrub Stratum (Plot size: <u>30'</u>)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Persea palustris</u>	<u>10</u>	<input checked="" type="checkbox"/> 100.0%	<u>FACW</u>
2.		<u>0</u>	<input type="checkbox"/> 0.0%	
3.		<u>0</u>	<input type="checkbox"/> 0.0%	
4.		<u>0</u>	<input type="checkbox"/> 0.0%	
5.		<u>0</u>	<input type="checkbox"/> 0.0%	
6.		<u>0</u>	<input type="checkbox"/> 0.0%	
7.		<u>0</u>	<input type="checkbox"/> 0.0%	
8.		<u>0</u>	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>5</u>		20% of Total Cover: <u>2</u>	<u>10</u>	= Total Cover
Shrub Stratum (Plot size: <u>30'</u>)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Cyrilla racemiflora</u>	<u>20</u>	<input checked="" type="checkbox"/> 44.4%	<u>FACW</u>
2.	<u>Lyonia lucida</u>	<u>20</u>	<input checked="" type="checkbox"/> 44.4%	<u>FACW</u>
3.	<u>Persea borbonia</u>	<u>5</u>	<input type="checkbox"/> 11.1%	<u>FACW</u>
4.		<u>0</u>	<input type="checkbox"/> 0.0%	
5.		<u>0</u>	<input type="checkbox"/> 0.0%	
6.		<u>0</u>	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>22.5</u>		20% of Total Cover: <u>9</u>	<u>45</u>	= Total Cover
Herb Stratum (Plot size: <u>30'</u>)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		<u>0</u>	<input type="checkbox"/> 0.0%	
2.		<u>0</u>	<input type="checkbox"/> 0.0%	
3.		<u>0</u>	<input type="checkbox"/> 0.0%	
4.		<u>0</u>	<input type="checkbox"/> 0.0%	
5.		<u>0</u>	<input type="checkbox"/> 0.0%	
6.		<u>0</u>	<input type="checkbox"/> 0.0%	
7.		<u>0</u>	<input type="checkbox"/> 0.0%	
8.		<u>0</u>	<input type="checkbox"/> 0.0%	
9.		<u>0</u>	<input type="checkbox"/> 0.0%	
10.		<u>0</u>	<input type="checkbox"/> 0.0%	
11.		<u>0</u>	<input type="checkbox"/> 0.0%	
12.		<u>0</u>	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u>		20% of Total Cover: <u>0</u>	<u>0</u>	= Total Cover
Woody Vine Stratum (Plot size: <u>30'</u>)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Smilax laurifolia</u>	<u>5</u>	<input checked="" type="checkbox"/> 100.0%	<u>FACW</u>
2.		<u>0</u>	<input type="checkbox"/> 0.0%	
3.		<u>0</u>	<input type="checkbox"/> 0.0%	
4.		<u>0</u>	<input type="checkbox"/> 0.0%	
5.		<u>0</u>	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>2.5</u>		20% of Total Cover: <u>1</u>	<u>5</u>	= Total Cover

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: 40 Multiply by: 7

OBL species 0 x 1 = 0

FACW species 70 x 2 = 140

FAC species 30 x 3 = 90

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 100 (A) 230 (B)

Prevalence Index = B/A = 2.300

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤3.0¹

Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definition 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.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: DP1 - Wet

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)	%	Tvde ¹	Loc ²		
0-20	10YR	2/1	100				Loam	

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

<p>Hydric Soil Indicators:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) <input type="checkbox"/> Muck Presence (A8) (LRR U) <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR O, S) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) 	<ul style="list-style-type: none"> <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Marl (F10) (LRR U) <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) <input checked="" type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) 	<p>Indicators for Problematic Hydric Soils³:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1 cm Muck (A9) (LRR O) <input type="checkbox"/> 2 cm Muck (A10) (LRR S) <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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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:
 Hydric soils observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Bridge Replacements - Little Pee Dee River on S-45 **City/County:** Dillon/Dillon **Sampling Date:** 28-Feb-18
Applicant/Owner: SCDOT **State:** SC **Sampling Point:** DP 1 - UP
Investigator(s): Chris Daves, P.W.S. **Section, Township, Range:** S T R
Landform (hillslope, terrace, etc.): Hillside **Local relief (concave, convex, none):** concave **Slope:** 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR P **Lat.:** 34.3347 **Long.:** -79.3228 **Datum:** NAD 83
Soil Map Unit Name: Leon Sand (LbA) **NWI classification:** PFO4/1B

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="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Upland DP take on small slope west of Wetland 2.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of 2 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 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 along 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) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Wetland hydrology not observed.		

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: DP1 - UP

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Pinus taeda</u>	40	<input checked="" type="checkbox"/> 100.0%	FAC
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>20</u> 20% of Total Cover: <u>8</u>		40	= Total Cover	

Sapling or Sapling/Shrub Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	= Total Cover	

Shrub Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Lyonia lucida</u>	35	<input checked="" type="checkbox"/> 87.5%	FACW
2.	<u>Cyrilla racemiflora</u>	5	<input type="checkbox"/> 12.5%	FACW
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>20</u> 20% of Total Cover: <u>8</u>		40	= Total Cover	

Herb Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Pteridium aquilinum</u>	5	<input checked="" type="checkbox"/> 100.0%	FACU
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
9.		0	<input type="checkbox"/> 0.0%	
10.		0	<input type="checkbox"/> 0.0%	
11.		0	<input type="checkbox"/> 0.0%	
12.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>2.5</u> 20% of Total Cover: <u>1</u>		5	= Total Cover	

Woody Vine Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of: 40 Multiply by: 5

OBL species 0 x 1 = 0

FACW species 40 x 2 = 80

FAC species 40 x 3 = 120

FACU species 5 x 4 = 20

UPL species 0 x 5 = 0

Column Totals: 85 (A) 220 (B)

Prevalence Index = B/A = 2.588

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is > 50%
 - 3 - Prevalence Index is ≤ 3.0¹
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definition 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.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: DP 1 - UP

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)	%	Tv _{de} ¹		
0-9	10YR	3/1	100				Loamy Sand	<70% coated grains/no redox
9-20	10YR	3/3	100				Sand	

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

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) <input type="checkbox"/> Muck Presence (A8) (LRR U) <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR O, S) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Marl (F10) (LRR U) <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> 1 cm Muck (A9) (LRR O) <input type="checkbox"/> 2 cm Muck (A10) (LRR S) <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> Type: _____ Depth (inches): _____	<p>Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/></p>
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Remarks:
Hydric soils not observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Bridge Replacements-Little Pee Dee River on S-45 **City/County:** Dillon/Dillon **Sampling Date:** 28-Feb-18
Applicant/Owner: SCDOT **State:** SC **Sampling Point:** DP-2 Wet
Investigator(s): Chris Handley, S&ME **Section, Township, Range:** S T R
Landform (hillslope, terrace, etc.): Base of Hillslope **Local relief (concave, convex, none):** concave **Slope:** 0.5 % / 0.3 °
Subregion (LRR or MLRA): LRR P **Lat.:** 34.3343 **Long.:** -79.3223 **Datum:** NAD 83
Soil Map Unit Name: Leon Sand (LbA) **NWI classification:** U73

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="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: Data point taken on the southern side of Wetland 2 at base of minor hillslope.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9)		Secondary Indicators (minimum of 2 required) <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 checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>3</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks: Wetland hydrology indicators were observed.		

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: DP-2 Wet

Tree Stratum (Plot size: <u>30-ft.</u>)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Acer rubrum</u>	<u>30</u>	<input checked="" type="checkbox"/> 60.0%	<u>FAC</u>
2.	<u>Liquidambar styraciflua</u>	<u>20</u>	<input checked="" type="checkbox"/> 40.0%	<u>FAC</u>
3.		<u>0</u>	<input type="checkbox"/> 0.0%	
4.		<u>0</u>	<input type="checkbox"/> 0.0%	
5.		<u>0</u>	<input type="checkbox"/> 0.0%	
6.		<u>0</u>	<input type="checkbox"/> 0.0%	
7.		<u>0</u>	<input type="checkbox"/> 0.0%	
8.		<u>0</u>	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>25</u> 20% of Total Cover: <u>10</u>		<u>50</u>	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot size: <u>30-ft.</u>)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Quercus nigra</u>	<u>10</u>	<input checked="" type="checkbox"/> 100.0%	<u>FAC</u>
2.		<u>0</u>	<input type="checkbox"/> 0.0%	
3.		<u>0</u>	<input type="checkbox"/> 0.0%	
4.		<u>0</u>	<input type="checkbox"/> 0.0%	
5.		<u>0</u>	<input type="checkbox"/> 0.0%	
6.		<u>0</u>	<input type="checkbox"/> 0.0%	
7.		<u>0</u>	<input type="checkbox"/> 0.0%	
8.		<u>0</u>	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>5</u> 20% of Total Cover: <u>2</u>		<u>10</u>	= Total Cover	
Shrub Stratum (Plot size: <u>30-ft.</u>)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Persea borbonia</u>	<u>5</u>	<input checked="" type="checkbox"/> 100.0%	<u>FACW</u>
2.		<u>0</u>	<input type="checkbox"/> 0.0%	
3.		<u>0</u>	<input type="checkbox"/> 0.0%	
4.		<u>0</u>	<input type="checkbox"/> 0.0%	
5.		<u>0</u>	<input type="checkbox"/> 0.0%	
6.		<u>0</u>	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>2.5</u> 20% of Total Cover: <u>1</u>		<u>5</u>	= Total Cover	
Herb Stratum (Plot size: <u>30-ft.</u>)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Smilax rotundifolia</u>	<u>10</u>	<input checked="" type="checkbox"/> 100.0%	<u>FAC</u>
2.		<u>0</u>	<input type="checkbox"/> 0.0%	
3.		<u>0</u>	<input type="checkbox"/> 0.0%	
4.		<u>0</u>	<input type="checkbox"/> 0.0%	
5.		<u>0</u>	<input type="checkbox"/> 0.0%	
6.		<u>0</u>	<input type="checkbox"/> 0.0%	
7.		<u>0</u>	<input type="checkbox"/> 0.0%	
8.		<u>0</u>	<input type="checkbox"/> 0.0%	
9.		<u>0</u>	<input type="checkbox"/> 0.0%	
10.		<u>0</u>	<input type="checkbox"/> 0.0%	
11.		<u>0</u>	<input type="checkbox"/> 0.0%	
12.		<u>0</u>	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>5</u> 20% of Total Cover: <u>2</u>		<u>10</u>	= Total Cover	
Woody Vine Stratum (Plot size: <u>30-ft.</u>)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		<u>0</u>	<input type="checkbox"/> 0.0%	
2.		<u>0</u>	<input type="checkbox"/> 0.0%	
3.		<u>0</u>	<input type="checkbox"/> 0.0%	
4.		<u>0</u>	<input type="checkbox"/> 0.0%	
5.		<u>0</u>	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: 75 Multiply by: (A)

OBL species 0 x 1 = 0

FACW species 5 x 2 = 10

FAC species 70 x 3 = 210

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 75 (A) 220 (B)

Prevalence Index = B/A = 2.933

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is > 50%
 - 3 - Prevalence Index is ≤ 3.0¹
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definition 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.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: DP-2 Wet

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)	%	Tv _{de} ¹	Loc ²		
1-20	10YR	2/1	100				Loam	Mucky/oily soil texture

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

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) <input type="checkbox"/> Muck Presence (A8) (LRR U) <input checked="" type="checkbox"/> 1 cm Muck (A9) (LRR P, T) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR O, S) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Marl (F10) (LRR U) <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> 1 cm Muck (A9) (LRR O) <input type="checkbox"/> 2 cm Muck (A10) (LRR S) <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> Type: _____ Depth (inches): _____	<p>Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>
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Remarks:
Hydric soils were observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Bridge Replacements-Little Pee Dee River on S-45 **City/County:** Dillon/Dillon **Sampling Date:** 28-Feb-18
Applicant/Owner: SCDOT **State:** SC **Sampling Point:** DP 2-Up
Investigator(s): Chris Handley, S&ME **Section, Township, Range:** S T R
Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** concave **Slope:** 0.5 % / 0.3 °
Subregion (LRR or MLRA): LRR P **Lat.:** 34.3343 **Long.:** -79.3224 **Datum:** NAD 83
Soil Map Unit Name: Leon Sand (LbA) **NWI classification:** U73

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="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Data point taken in upland area on hillslope.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of 2 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 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 along 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) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Wetland hydrology criteria not met.		

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: DP 2-Up

Tree Stratum (Plot size: <u>30-ft.</u>)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Pinus taeda</u>	<u>15</u>	<input checked="" type="checkbox"/> 100.0%	<u>FAC</u>
2.		<u>0</u>	<input type="checkbox"/> 0.0%	
3.		<u>0</u>	<input type="checkbox"/> 0.0%	
4.		<u>0</u>	<input type="checkbox"/> 0.0%	
5.		<u>0</u>	<input type="checkbox"/> 0.0%	
6.		<u>0</u>	<input type="checkbox"/> 0.0%	
7.		<u>0</u>	<input type="checkbox"/> 0.0%	
8.		<u>0</u>	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>7.5</u> 20% of Total Cover: <u>3</u>		<u>15</u>	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot size: <u>30-ft.</u>)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		<u>0</u>	<input type="checkbox"/> 0.0%	
2.		<u>0</u>	<input type="checkbox"/> 0.0%	
3.		<u>0</u>	<input type="checkbox"/> 0.0%	
4.		<u>0</u>	<input type="checkbox"/> 0.0%	
5.		<u>0</u>	<input type="checkbox"/> 0.0%	
6.		<u>0</u>	<input type="checkbox"/> 0.0%	
7.		<u>0</u>	<input type="checkbox"/> 0.0%	
8.		<u>0</u>	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		<u>0</u>	= Total Cover	
Shrub Stratum (Plot size: <u>30-ft.</u>)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		<u>0</u>	<input type="checkbox"/> 0.0%	
2.		<u>0</u>	<input type="checkbox"/> 0.0%	
3.		<u>0</u>	<input type="checkbox"/> 0.0%	
4.		<u>0</u>	<input type="checkbox"/> 0.0%	
5.		<u>0</u>	<input type="checkbox"/> 0.0%	
6.		<u>0</u>	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		<u>0</u>	= Total Cover	
Herb Stratum (Plot size: <u>30-ft.</u>)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Smilax rotundifolia</u>	<u>10</u>	<input checked="" type="checkbox"/> 100.0%	<u>FAC</u>
2.		<u>0</u>	<input type="checkbox"/> 0.0%	
3.		<u>0</u>	<input type="checkbox"/> 0.0%	
4.		<u>0</u>	<input type="checkbox"/> 0.0%	
5.		<u>0</u>	<input type="checkbox"/> 0.0%	
6.		<u>0</u>	<input type="checkbox"/> 0.0%	
7.		<u>0</u>	<input type="checkbox"/> 0.0%	
8.		<u>0</u>	<input type="checkbox"/> 0.0%	
9.		<u>0</u>	<input type="checkbox"/> 0.0%	
10.		<u>0</u>	<input type="checkbox"/> 0.0%	
11.		<u>0</u>	<input type="checkbox"/> 0.0%	
12.		<u>0</u>	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>5</u> 20% of Total Cover: <u>2</u>		<u>10</u>	= Total Cover	
Woody Vine Stratum (Plot size: <u>30-ft.</u>)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Smilax rotundifolia</u>	<u>15</u>	<input checked="" type="checkbox"/> 100.0%	<u>FAC</u>
2.		<u>0</u>	<input type="checkbox"/> 0.0%	
3.		<u>0</u>	<input type="checkbox"/> 0.0%	
4.		<u>0</u>	<input type="checkbox"/> 0.0%	
5.		<u>0</u>	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>7.5</u> 20% of Total Cover: <u>3</u>		<u>15</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: 40 Multiply by: 3

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 40 x 3 = 120

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 40 (A) 120 (B)

Prevalence Index = B/A = 3.000

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is > 50%
 - 3 - Prevalence Index is ≤ 3.0¹
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definition 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.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: DP 2-Up

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)	%	Tv _{de} ¹	Loc ²		
1-6	10YR	4/3	100				Sand	
6-20	10YR	4/4	100				Sand	

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

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) <input type="checkbox"/> Muck Presence (A8) (LRR U) <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR O, S) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Marl (F10) (LRR U) <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> 1 cm Muck (A9) (LRR O) <input type="checkbox"/> 2 cm Muck (A10) (LRR S) <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> Type: _____ Depth (inches): _____	<p>Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/></p>
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Remarks:
Hydric soils were not observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Bridge Replacements-Little Pee Dee River on S-45 **City/County:** Dillon/Dillon **Sampling Date:** 28-Feb-18
Applicant/Owner: SCDOT **State:** **Sampling Point:** DP 3- Wet
Investigator(s): Chris Handley, S&ME **Section, Township, Range:** S T R
Landform (hillslope, terrace, etc.): Floodplain **Local relief (concave, convex, none):** flat **Slope:** 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR P **Lat.:** 34.3334 **Long.:** -79.3235 **Datum:** NAD 83
Soil Map Unit Name: Johnston-Rutlege Association (JR) **NWI classification:** PFO1C

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="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: Data point taken on the northern side of Wetland 6.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of 2 required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" 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 along 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 checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>1</u>		Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Wetland hydrology indicators were observed.		

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: DP 3- Wet

Tree Stratum (Plot size: <u>30-ft.</u>)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Acer rubrum</u>	<u>30</u>	<input checked="" type="checkbox"/> 50.0%	<u>FAC</u>
2.	<u>Liquidambar styraciflua</u>	<u>30</u>	<input checked="" type="checkbox"/> 50.0%	<u>FAC</u>
3.		<u>0</u>	<input type="checkbox"/> 0.0%	
4.		<u>0</u>	<input type="checkbox"/> 0.0%	
5.		<u>0</u>	<input type="checkbox"/> 0.0%	
6.		<u>0</u>	<input type="checkbox"/> 0.0%	
7.		<u>0</u>	<input type="checkbox"/> 0.0%	
8.		<u>0</u>	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>30</u> 20% of Total Cover: <u>12</u>		<u>60</u>	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot size: <u>30-ft.</u>)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Acer rubrum</u>	<u>10</u>	<input checked="" type="checkbox"/> 100.0%	<u>FAC</u>
2.		<u>0</u>	<input type="checkbox"/> 0.0%	
3.		<u>0</u>	<input type="checkbox"/> 0.0%	
4.		<u>0</u>	<input type="checkbox"/> 0.0%	
5.		<u>0</u>	<input type="checkbox"/> 0.0%	
6.		<u>0</u>	<input type="checkbox"/> 0.0%	
7.		<u>0</u>	<input type="checkbox"/> 0.0%	
8.		<u>0</u>	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>5</u> 20% of Total Cover: <u>2</u>		<u>10</u>	= Total Cover	
Shrub Stratum (Plot size: <u>30-ft.</u>)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Acer rubrum</u>	<u>10</u>	<input checked="" type="checkbox"/> 100.0%	<u>FAC</u>
2.		<u>0</u>	<input type="checkbox"/> 0.0%	
3.		<u>0</u>	<input type="checkbox"/> 0.0%	
4.		<u>0</u>	<input type="checkbox"/> 0.0%	
5.		<u>0</u>	<input type="checkbox"/> 0.0%	
6.		<u>0</u>	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>5</u> 20% of Total Cover: <u>2</u>		<u>10</u>	= Total Cover	
Herb Stratum (Plot size: <u>30-ft.</u>)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Smilax rotundifolia</u>	<u>10</u>	<input checked="" type="checkbox"/> 100.0%	<u>FAC</u>
2.		<u>0</u>	<input type="checkbox"/> 0.0%	
3.		<u>0</u>	<input type="checkbox"/> 0.0%	
4.		<u>0</u>	<input type="checkbox"/> 0.0%	
5.		<u>0</u>	<input type="checkbox"/> 0.0%	
6.		<u>0</u>	<input type="checkbox"/> 0.0%	
7.		<u>0</u>	<input type="checkbox"/> 0.0%	
8.		<u>0</u>	<input type="checkbox"/> 0.0%	
9.		<u>0</u>	<input type="checkbox"/> 0.0%	
10.		<u>0</u>	<input type="checkbox"/> 0.0%	
11.		<u>0</u>	<input type="checkbox"/> 0.0%	
12.		<u>0</u>	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>5</u> 20% of Total Cover: <u>2</u>		<u>10</u>	= Total Cover	
Woody Vine Stratum (Plot size: <u>30-ft.</u>)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		<u>0</u>	<input type="checkbox"/> 0.0%	
2.		<u>0</u>	<input type="checkbox"/> 0.0%	
3.		<u>0</u>	<input type="checkbox"/> 0.0%	
4.		<u>0</u>	<input type="checkbox"/> 0.0%	
5.		<u>0</u>	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: 60 Multiply by: 5

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 90 x 3 = 270

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 90 (A) 270 (B)

Prevalence Index = B/A = 3.000

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is > 50%
 - 3 - Prevalence Index is ≤ 3.0¹
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definition 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.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: DP 3- Wet

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)	%	Tvde ¹	Loc ²			
1-3	10YR	6/3	100						Sand	Sediment
3-20	10YR	4/2	95	10YR	5/8	5	C	M	Sandy Loam	

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

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) <input type="checkbox"/> Muck Presence (A8) (LRR U) <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR O, S) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Marl (F10) (LRR U) <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> 1 cm Muck (A9) (LRR O) <input type="checkbox"/> 2 cm Muck (A10) (LRR S) <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> Type: _____ Depth (inches): _____	<p>Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>
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Remarks:
Hydric soils were observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Bridge Replacements-Little Pee Dee River on S-45 **City/County:** Dillon/Dillon **Sampling Date:** 28-Feb-18
Applicant/Owner: SCDOT **State:** SC **Sampling Point:** DP 3 - Up
Investigator(s): Chris Handley, S&ME **Section, Township, Range:** S T R
Landform (hillslope, terrace, etc.): Hillslope **Local relief (concave, convex, none):** concave **Slope:** 1.0 % / 0.6 °
Subregion (LRR or MLRA): LRR P **Lat.:** 34.3335 **Long.:** -79.3235 **Datum:** NAD 83
Soil Map Unit Name: Johnston-Rutlege Association (JR) **NWI classification:** PFO1C

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 type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Data point taken in upland area on hillslope, adjacent to S-45.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of 2 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 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 along 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) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____		Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Wetland hydrology criteria not met.		

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: DP 3 - Up

Tree Stratum	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1. _____	0	<input type="checkbox"/> 0.0%	_____
2. _____	0	<input type="checkbox"/> 0.0%	_____
3. _____	0	<input type="checkbox"/> 0.0%	_____
4. _____	0	<input type="checkbox"/> 0.0%	_____
5. _____	0	<input type="checkbox"/> 0.0%	_____
6. _____	0	<input type="checkbox"/> 0.0%	_____
7. _____	0	<input type="checkbox"/> 0.0%	_____
8. _____	0	<input type="checkbox"/> 0.0%	_____
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>	<u>0</u>	= Total Cover	
Sapling or Sapling/Shrub Stratum (Plot size: 30-ft. _____)			
1. _____	0	<input type="checkbox"/> 0.0%	_____
2. _____	0	<input type="checkbox"/> 0.0%	_____
3. _____	0	<input type="checkbox"/> 0.0%	_____
4. _____	0	<input type="checkbox"/> 0.0%	_____
5. _____	0	<input type="checkbox"/> 0.0%	_____
6. _____	0	<input type="checkbox"/> 0.0%	_____
7. _____	0	<input type="checkbox"/> 0.0%	_____
8. _____	0	<input type="checkbox"/> 0.0%	_____
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>	<u>0</u>	= Total Cover	
Shrub Stratum (Plot size: 30-ft. _____)			
1. _____	0	<input type="checkbox"/> 0.0%	_____
2. _____	0	<input type="checkbox"/> 0.0%	_____
3. _____	0	<input type="checkbox"/> 0.0%	_____
4. _____	0	<input type="checkbox"/> 0.0%	_____
5. _____	0	<input type="checkbox"/> 0.0%	_____
6. _____	0	<input type="checkbox"/> 0.0%	_____
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>	<u>0</u>	= Total Cover	
Herb Stratum (Plot size: 30-ft. _____)			
1. <u>Dichanthelium acuminatum</u>	<u>20</u>	<input checked="" type="checkbox"/> 50.0%	FAC
2. <u>Eupatorium capillifolium</u>	<u>10</u>	<input checked="" type="checkbox"/> 25.0%	FACU
3. <u>Liquidambar styraciflua</u>	<u>5</u>	<input type="checkbox"/> 12.5%	FAC
4. <u>Hypericum perforatum</u>	<u>5</u>	<input type="checkbox"/> 12.5%	FACU
5. _____	0	<input type="checkbox"/> 0.0%	_____
6. _____	0	<input type="checkbox"/> 0.0%	_____
7. _____	0	<input type="checkbox"/> 0.0%	_____
8. _____	0	<input type="checkbox"/> 0.0%	_____
9. _____	0	<input type="checkbox"/> 0.0%	_____
10. _____	0	<input type="checkbox"/> 0.0%	_____
11. _____	0	<input type="checkbox"/> 0.0%	_____
12. _____	0	<input type="checkbox"/> 0.0%	_____
50% of Total Cover: <u>20</u> 20% of Total Cover: <u>8</u>	<u>40</u>	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft. _____)			
1. _____	0	<input type="checkbox"/> 0.0%	_____
2. _____	0	<input type="checkbox"/> 0.0%	_____
3. _____	0	<input type="checkbox"/> 0.0%	_____
4. _____	0	<input type="checkbox"/> 0.0%	_____
5. _____	0	<input type="checkbox"/> 0.0%	_____
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>	<u>0</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 25 x 3 = 75

FACU species 15 x 4 = 60

UPL species 0 x 5 = 0

Column Totals: 40 (A) 135 (B)

Prevalence Index = B/A = 3.375

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is > 50%
 - 3 - Prevalence Index is ≤3.0¹
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definition 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.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (If observed, list morphological adaptations below).
Hydrophytic vegetation was not observed.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Bridge Replacements - Little Pee Dee River on S-45
City/County: Dillon/Dillon
Sampling Date: 28-Feb-18
Applicant/Owner: SCDOT
State:
Sampling Point: DP 4 - Wet
Investigator(s): Chris Daves, P.W.S.
Section, Township, Range: S T R
Landform (hillslope, terrace, etc.): Hillside
Local relief (concave, convex, none): concave
Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR P
Lat.: 34.3309
Long.: -79.3271
Datum: NAD 83
Soil Map Unit Name: Paxville Loam (Pb)
NWI classification: PF01C

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="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Upland DP taken on small slope west of Wetland 3.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of 2 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 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 along 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) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Wetland hydrology not observed.		

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: DP 4 - Wet

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Liquidambar styraciflua</u>	10	<input checked="" type="checkbox"/> 50.0%	FAC
2.	<u>Quercus nigra</u>	10	<input checked="" type="checkbox"/> 50.0%	FAC
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>10</u> 20% of Total Cover: <u>4</u>		<u>20</u>	= Total Cover	

Sapling or Sapling/Shrub Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Persea borbonia</u>	5	<input checked="" type="checkbox"/> 100.0%	FACW
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>2.5</u> 20% of Total Cover: <u>1</u>		<u>5</u>	= Total Cover	

Shrub Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Ligustrum sinense</u>	40	<input checked="" type="checkbox"/> 80.0%	FAC
2.	<u>Liquidambar styraciflua</u>	10	<input checked="" type="checkbox"/> 20.0%	FAC
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>25</u> 20% of Total Cover: <u>10</u>		<u>50</u>	= Total Cover	

Herb Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Lonicera japonica</u>	5	<input checked="" type="checkbox"/> 100.0%	FACU
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
9.		0	<input type="checkbox"/> 0.0%	
10.		0	<input type="checkbox"/> 0.0%	
11.		0	<input type="checkbox"/> 0.0%	
12.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>2.5</u> 20% of Total Cover: <u>1</u>		<u>5</u>	= Total Cover	

Woody Vine Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Smilax rotundifolia</u>	5	<input checked="" type="checkbox"/> 100.0%	FAC
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>2.5</u> 20% of Total Cover: <u>1</u>		<u>5</u>	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 5 x 2 = 10

FAC species 75 x 3 = 225

FACU species 5 x 4 = 20

UPL species 0 x 5 = 0

Column Totals: 85 (A) 255 (B)

Prevalence Index = B/A = 3.000

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is > 50%
 - 3 - Prevalence Index is ≤3.0¹
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definition 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.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: DP 4 - Wet

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)	%	Tvde ¹	Loc ²		
0-4	10YR	4/2	100				Loamy Sand	<70% coated grains/ no redox
4-8	10YR	4/3	100				Loamy Sand	
8-20	10YR	5/6	100				Loamy Sand	

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

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) <input type="checkbox"/> Muck Presence (A8) (LRR U) <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR O, S) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Marl (F10) (LRR U) <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> 1 cm Muck (A9) (LRR O) <input type="checkbox"/> 2 cm Muck (A10) (LRR S) <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> Type: _____ Depth (inches): _____	<p>Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/></p>
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Remarks:
Hydric soils not observed.

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Bridge Replacements - Little Pee Dee River on S-45
City/County: Dillon/Dillon
Sampling Date: 28-Feb-18
Applicant/Owner: SCDOT
State: SC
Sampling Point: DP 4 - UP
Investigator(s): Chris Daves, P.W.S.
Section, Township, Range: S T R
Landform (hillslope, terrace, etc.): Hillside
Local relief (concave, convex, none): concave
Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR P
Lat.: 34.3310
Long.: -79.3271
Datum: NAD 83
Soil Map Unit Name: Paxville Loam (Pb)
NWI classification: PF01C

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="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: Wetland 3. Three parameters met.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of 2 required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" 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 along 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 checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): 10		Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Wetland hydrology observed.		

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: DP 4 - UP

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1. <u>Quercus phellos</u>	20	<input checked="" type="checkbox"/> 100.0%	FACW
2. _____	0	<input type="checkbox"/> 0.0%	
3. _____	0	<input type="checkbox"/> 0.0%	
4. _____	0	<input type="checkbox"/> 0.0%	
5. _____	0	<input type="checkbox"/> 0.0%	
6. _____	0	<input type="checkbox"/> 0.0%	
7. _____	0	<input type="checkbox"/> 0.0%	
8. _____	0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>10</u> 20% of Total Cover: <u>4</u>	20	= Total Cover	

Sapling or Sapling/Shrub Stratum (Plot size: 30')	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1. <u>Liquidambar styraciflua</u>	15	<input checked="" type="checkbox"/> 33.3%	FAC
2. <u>Acer rubrum</u>	15	<input checked="" type="checkbox"/> 33.3%	FAC
3. <u>Quercus nigra</u>	15	<input checked="" type="checkbox"/> 33.3%	FAC
4. _____	0	<input type="checkbox"/> 0.0%	
5. _____	0	<input type="checkbox"/> 0.0%	
6. _____	0	<input type="checkbox"/> 0.0%	
7. _____	0	<input type="checkbox"/> 0.0%	
8. _____	0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>22.5</u> 20% of Total Cover: <u>9</u>	45	= Total Cover	

Shrub Stratum (Plot size: 30')	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1. <u>Liquidambar styraciflua</u>	15	<input checked="" type="checkbox"/> 33.3%	FAC
2. <u>Acer rubrum</u>	15	<input checked="" type="checkbox"/> 33.3%	FAC
3. <u>Quercus nigra</u>	15	<input checked="" type="checkbox"/> 33.3%	FAC
4. _____	0	<input type="checkbox"/> 0.0%	
5. _____	0	<input type="checkbox"/> 0.0%	
6. _____	0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>22.5</u> 20% of Total Cover: <u>9</u>	45	= Total Cover	

Herb Stratum (Plot size: 30')	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1. <u>Arundinaria gigantea</u>	20	<input checked="" type="checkbox"/> 100.0%	FACW
2. _____	0	<input type="checkbox"/> 0.0%	
3. _____	0	<input type="checkbox"/> 0.0%	
4. _____	0	<input type="checkbox"/> 0.0%	
5. _____	0	<input type="checkbox"/> 0.0%	
6. _____	0	<input type="checkbox"/> 0.0%	
7. _____	0	<input type="checkbox"/> 0.0%	
8. _____	0	<input type="checkbox"/> 0.0%	
9. _____	0	<input type="checkbox"/> 0.0%	
10. _____	0	<input type="checkbox"/> 0.0%	
11. _____	0	<input type="checkbox"/> 0.0%	
12. _____	0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>10</u> 20% of Total Cover: <u>4</u>	20	= Total Cover	

Woody Vine Stratum (Plot size: 30')	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1. <u>Smilax rotundifolia</u>	5	<input checked="" type="checkbox"/> 100.0%	FAC
2. _____	0	<input type="checkbox"/> 0.0%	
3. _____	0	<input type="checkbox"/> 0.0%	
4. _____	0	<input type="checkbox"/> 0.0%	
5. _____	0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>2.5</u> 20% of Total Cover: <u>1</u>	5	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 9 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species 0 x 1 = 0

FACW species 40 x 2 = 80

FAC species 95 x 3 = 285

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Totals: 135 (A) 365 (B)

Prevalence Index = B/A = 2.704

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is > 50%
 - 3 - Prevalence Index is ≤ 3.0¹
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definition 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.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

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, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: DP 4 - UP

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)	%	Tvpe ¹	Loc ²			
0-6	10YR	4/2	95	10YR	5/6	5	C	M	Sandy Loam	
6-20	10YR	4/2	95	10YR	5/6	5	C	M	Loam	

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

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) <input type="checkbox"/> Muck Presence (A8) (LRR U) <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Marl (F10) (LRR U) <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> 1 cm Muck (A9) (LRR O) <input type="checkbox"/> 2 cm Muck (A10) (LRR S) <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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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:
 Hydric soils observed.

Appendix C

Preliminary Jurisdictional Determination Form

ATTACHMENT

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): **March XX, 2018**

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:

Applicant:

Mr. Chris Beckham, SCDOT
955 Park Street, Columbia, SC 29201
beckhamjc@scdot.org
(803) 737-1332

Consultant:

Mr. Chris Daves
S&ME, Inc.
134 Suber Road
Columbia, SC 29210

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: **Charleston District, Bridge Replacements-Little Pee Dee River on S-45: SAC 2018-XXXX**

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION: The project is located approximately half mile northeast of the intersection of SC Highway 57 and Lester Road (S-45). Project limits are located east and west of Lester Road (S-45) approximately 6.25 miles southeast of Dillon, Dillon County, South Carolina.

(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: **SC** County/parish/borough: **Dillon** City: **Dillon**
Center coordinates of site (lat/long in degree decimal format):
North End: Lat. 34.3364°, Long. -79.3210°
South End: Lat. 34.3295°, Long. -79.3285°.
Universal Transverse Mercator: **NAD83**
Name of nearest waterbody: **Little Pee Dee River.**

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date:
- Field Determination. Date(s):

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude	Longitude	Estimated amount of aquatic resource in review area	Type of Aquatic Resource	Geographic Authority to which the Aquatic Resource “may be” Subject
Wetland 1	34.3359	-79.3218	1.70 ac	Wetland	Section 404
Wetland 2	34.3351	-79.3226	0.64 ac	Wetland	Section 404
Wetland 3	34.3322	-79.3257	3.42 ac	Wetland	Section 404
Wetland 4	34.3357	-79.3213	1.55 ac	Wetland	Section 404
Wetland 5	34.3343	-79.3325	0.10 ac	Wetland	Section 404
Wetland 6	34.3315	-79.3254	3.49 ac	Wetland	Section 404
Non-Wetland Water 1	34.3342	-79.3238	463 LF	Non-Wetland Water	Section 404
Non-Wetland Water 2 (Little Pee Dee River)	34.3338	-79.3235	500 LF	Non-Wetland Water	Section 404
Non-Wetland Water 3	34.3328	-79.3244	340 LF	Non-Wetland Water	Section 404

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring “pre-construction notification” (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved

JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply

- checked items should be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **The site is depicted on a sketch prepared by S&ME, Inc. titled "Exhibit 3 – Aerial Exhibit", dated March 2, 2018.**
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps: .
- Corps navigable waters' study: **SAC 1977 Navigability Study.**
- U.S. Geological Survey Hydrologic Atlas: **HA 730-G, 1990.**
- USGS NHD data.

- USGS 8 and 12 digit HUC maps. 0304020405-06 (Bell Swamp Branch-Little Pee Dee River)
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 (USGS 7.5 Minute Topographic Quadrangle Fork, SC 1959. USGS quadrangle map depicts the site, adjacent to Lester Road (S-45) as forestland and swamp. Three Bridges are depicted along S-45 within the boundaries of the site. The Little Pee Dee River is depicted along with a secondary channel flowing under the most southern bridge.
- USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Sheet 23 Dillon County Soil Survey, dated 1978. Soil survey depicts the site to be underlain by the following soils: Chipley Sand (non-hydric), Fuquay Sand (FuB (non-hydric), Johnston-Rutlege Complex (Hydric), Leon Sand (Hydric), Lynn Haven Sand (Hydric), Paxville Loam (Hydric), Persanti Fine Sandy Loam (non-hydric), and Rimini Sand (non-hydric).
- National wetlands inventory map(s). Cite name: USFWS NWI Data, (Fork, SC Quadrangle) depicted the following on the site: PFO1A, PFO1B, PFO1C, PFO3/1B, PFO4B (Forested Wetlands), R2UBH (Open Water/River), U14 (Transportation/Utility), U21 (Cropland/Pasture), U42P (Upland Planted Pine), and U73 (Sandy Area).
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: Flood Zone A, 45033C0255C, Effective May 24, 2011.
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): World Imagery 2016, Google Earth Aerial Photographs (1994-2017), and SCDNR Dillon County Aerial Index (1999 and 2006).
or Other (Name & Date): Photos provided by S&ME, Inc. in PJD submittal dated March 2, 2018.
- Previous determination(s). File no. and date of response letter: .
- Other information (please specify): .

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and date of
Regulatory Project Manager
(REQUIRED)

Signature and date of
person requesting preliminary JD
(REQUIRED, unless obtaining the
signature is impracticable)