Pre-Construction Notification (PCN) Form

For Nationwide Permits and Regional General Permits

(along with corresponding Water Quality Certifications)

September 29, 2018 Ver 3

*Please note: fields marked with a red asterisk * below are required. You will not be able to submit the form until all mandatory questions are answered.*

Also, if at any point you wish to print a copy of the E-PCN, all you need to do is right-click on the document and you can print a copy of the form.

Below is a link to the online help file.

https://edocs.deq.nc.gov/WaterResources/0/edoc/624704/PCN%20Help%20File%202018-1-30.pdf

A. Processing Information

County (or Counties) where the project is located:*

Pitt

Is this project a public transportation project?*

(•) Yes ( ) No

This is any publicly funded by municipal,state or federal funds road, rail, airport transportation project.

Is this a NCDOT Project?*

(•) Yes ( ) No

(NCDOT only) T.I.P. or state project number:

B-5612

WBS #*

45567.1.1

(for NCDOT use only)

1a. Type(s) of approval sought from the Corps:*

☑ Section 404 Permit (wetlands, streams and waters, Clean Water Act)

☑ Section 10 Permit (navigable waters, tidal waters, Rivers and Harbors Act)

1b. What type(s) of permit(s) do you wish to seek authorization?*

☑ Nationwide Permit (NWP)

☐ Regional General Permit (RGP)

☐ Standard (IP)

This form may be used to initiate the standard/individual permit process with the Corps. Please contact your Corps representative concerning submittals for standard permits. All required items that are not provided in the E-PCN can be added to the miscellaneous upload area located at the bottom of this form.

1c. Has the NWP or GP number been verified by the Corps?*

(•) Yes ( ) No

Nationwide Permit (NWP) Number: 6 - Survey Activities

NWP Numbers (for multiple NWPS):

List all NW numbers you are applying for not on the drop down list.

1d. Type(s) of approval sought from the DWR:*

check all that apply

☑ 401 Water Quality Certification - Regular

☐ Non-404 Jurisdictional General Permit

☐ Individual Permit

☐ 401 Water Quality Certification - Express

☐ Riparian Buffer Authorization

1e. Is this notification solely for the record because written approval is not required?

*

For the record only for DWR 401 Certification: (•) Yes ( ) No

For the record only for Corps Permit: ( ) Yes (•) No

1f. Is this an after-the-fact permit application?*

( ) Yes (•) No

1g. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts?

If so, attach the acceptance letter from mitigation bank or in-lieu fee program.

○ Yes ◉ No

Acceptance Letter Attachment

Click the upload button or drag and drop files here to attach document

FILE TYPE MUST BE PDF

1h. Is the project located in any of NC's twenty coastal counties?*

○ Yes ◉ No

1j. Is the project located in a designated trout watershed?*

○ Yes ◉ No

Link to trout information: http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Trout.aspx

B. Applicant Information

1a. Who is the Primary Contact?*

NC Department of Transportation

1b. Primary Contact Email:*

ajames10@ncdot.gov

1c. Primary Contact Phone:*

(xxx)xxx-xxxx

(919)707-6129

1d. Who is applying for the permit?*

☑ Owner ☐ Applicant (other than owner)

(Check all that apply)

1e. Is there an Agent/Consultant for this project?*

○ Yes ◉ No

2. Owner Information

2a. Name(s) on recorded deed:*

N/A

2b. Deed book and page no.:

2c. Responsible party:

(for Corporations)

2d. Address*

Street Address

1000 Birch Ridge Dr.

Address Line 2

City

Raleigh

State / Province / Region

NC

Postal / Zip Code

27610

Country

USA

2e. Telephone Number:*

(xxx)xxx-xxxx

(919)707-6123

2f. Fax Number:

(xxx)xxx-xxxx

2g. Email Address:*

pharris@ncdot.gov

C. Project Information and Prior Project History

1. Project Information

1a. Name of project:*

B-5612 NC 222 Pitt County-Geotechnical borings-Tar River (Central)

1b. Subdivision name:

(if appropriate)

1c. Nearest municipality / town:*

Falkland

2. Project Identification

2a. Property Identification Number:

(tax PIN or parcel ID)

2b. Property size:

(in acres)

2c. Project Address

Street Address

Address Line 2

City

State / Province / Region

Postal / Zip Code

Country

2d. Site coordinates in decimal degrees

Please collect site coordinates in decimal degrees. Use between 4-6 digits (unless you are using a survey-grade GPS device) after the decimal place as appropriate, based on how the location was determined. (For example, most mobile phones with GPS provide locational precision in decimal degrees to map coordinates to 5 or 6 digits after the decimal place.)

Latitude: *

35.696261

ex: 34.208504

Longitude: *

-77.489590

-77.796371

3. Surface Waters

3a. Name of the nearest body of water to proposed project: *

Tar River

3b. Water Resources Classification of nearest receiving water: *

WS-IV; NSW

Surface Water Lookup

3c. What river basin(s) is your project located in? *

Tar-Pamlico

3d. Please provide the 12-digit HUC in which the project is located. *

030201030204

River Basin Lookup

4. Project Description and History

4a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: *

The east side of the crossing is largely forested, while the west side is a mix of forest, agricultural and low density residential uses (including the Falkland boat ramp). The general land use in the vicinity of the bridge is a similar mix of uses, with the addition of a nearby industrial operation (mining).

4b. Have Corps permits or DWR certifications been obtained for this project (including all prior phases) in the past? *

○ Yes ◉ No ○ Unknown

4d. Attach an 8 1/2 X 11 excerpt from the most recent version of the USGS topographic map indicating the location of the project site. (for DWR)

Click the upload button or drag and drop files here to attach document

File type must be pdf

4e. Attach an 8 1/2 X 11 excerpt from the most recent version of the published County NRCS Soil Survey map depicting the project site. (for DWR)

Click the upload button or drag and drop files here to attach document

File type must be pdf

4f. List the total estimated acreage of all existing wetlands on the property:

5.3

4g. List the total estimated linear feet of all existing streams on the property:

(intermittent and perennial)

740

4h. Explain the purpose of the proposed project: *

Geotechnical soil borings will be advanced in the streambed of the Tar River (bridge no. 24) to determine what bent type to use in the replacement structure. Impacts associated with replacing the bridge are not authorized or included in this permit application.

4i. Describe the overall project in detail, including indirect impacts and the type of equipment to be used: *

Borings will be advanced from the bridge deck in the approximate locations shown on the attached drawing (proposed bent locations), for a total of 3 borings in the Tar River channel and 5 borings in delineated wetlands (east side of bridge only). Borings will be advanced using the mud rotary method; this method involves setting a piece of 4" to 6" diameter casing between the drill rig and the river bed to contain the drilling fluid and cutting returns. All soil samples, drilling fluid, and cutting returns are disposed of off-site.

4j. Please upload project drawings for the proposed project.

Click the upload button or drag and drop files here to attach document

B5612_GEO_BOREPLAN (2).pdf 215.19KB

File type must be pdf

5. Jurisdictional Determinations

5a. Have the wetlands or streams been delineated on the property or proposed impact areas? *

◉ Yes ○ No ○ Unknown

Comments:

5b. If the Corps made a jurisdictional determination, what type of determination was made? *

○ Preliminary ○ Approved ◉ Not Verified ○ Unknown ○ N/A

Corps AID Number:

Example: SAW-2017-99999

5c. If 5a is yes, who delineated the jurisdictional areas?

Name (if known): Beth Reed

Agency/Consultant Company: Kimley-Horn and Associates

Other:

5d1. Jurisdictional determination upload

Click the upload button or drag and drop files here to attach document

_TIP_B5612_PreliminaryJD_Request_28JUL2016.pdf 14.21MB

File type must be PDF

6. Future Project Plans

6a. Is this a phased project? *

○ Yes ◉ No

Are any other NWP(s), regional general permit(s), or individual permits(s) used, or intended to be used, to authorize any part of the proposed project or related activity? This includes other separate and distant crossing for linear projects that require Department of the Army authorization but don't require pre-construction notification.

A nationwide permit is also anticipated for actual bridge replacement to let in May 2020.

D. Proposed Impacts Inventory

1. Impacts Summary

1a. Where are the impacts associated with your project? (check all that apply):

☑ Wetlands ☐ Streams-tributaries ☐ Buffers

☑ Open Waters ☐ Pond Construction

2. Wetland Impacts

If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.

"W." will be used in the table below to represent the word "wetland".

2a. Site # * (?)	2a1 Reason * (?)	2b. Impact type * (?)	2c. Type of W. *	2d. W. name *	2e. Forested *	2f. Type of Jurisdicition * (?)	2g. Impact area *
1	Soil borings	T	Bottomland Hardwood Forest	WB	No	Both	0.000 (acres)

2g. Total Temporary Wetland Impact

0.000

2g. Total Permanent Wetland Impact

0.000

2g. Total Wetland Impact

0.000

2h. Comments:

Borings will be under existing bridge, so while the rest of the wetland is forested, the impacted area is not. Actual impact is 0.45 sq. ft. or 0.00001 acre assuming each boring has a diameter of 4 inches (5 borings).

4. Open Water Impacts

If there are proposed impacts to lakes, ponds, estuaries, tributaries, sounds, the Atlantic Ocean, or any other open water of the U.S. then individually list all open water impacts below.

4a. Site # * (?)	4a1. Impact Reason	4b. Impact type * (?)	4c. Name of waterbody (?)	4d. Activity type *	4e. Waterbody type *	4f. Impact area *
1	Soil borings	T	Tar River	Other	Other	0.00 (acres)

4g. Total temporary open water Impacts:

0.00

4g. Total permanent open water impacts:

0.00

4g. Total open water impacts:

0.00

4h. Comments:

Actual impact is 0.27 sq. ft. or 0.000006 acre assuming each boring has a diameter of 4 inches (3 borings).

E. Impact Justification and Mitigation

1. Avoidance and Minimization

1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing the project: *

The drill will be encased and all soil, drill fluid, and cutting returns will be disposed of off-site.

1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques: *

N/A

2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State

2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?

○ Yes ◉ No

2b. If this project DOES NOT require Compensatory Mitigation, explain why:

No permanent impacts to jurisdictional resources are anticipated for activities authorized by this permit.

NC Stream Temperature Classification Maps can be found under the Mitigation Concepts tab on the Wilmington District's RIBITS website.

F. Stormwater Management and Diffuse Flow Plan (required by DWR)

*** Recent changes to the stormwater rules have required updates to this section .***

1. Diffuse Flow Plan

1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?

◉ Yes ○ No

1b. All buffer impacts and high ground impacts require diffuse flow or other form of stormwater treatment. If the project is subject to a state implemented riparian buffer protection program, include a plan that fully documents how diffuse flow will be maintained.

All Stormwater Control Measures (SCM)s must be designed in accordance with the NC Stormwater Design Manual. Associated supplement forms and other documentation shall be provided.

What type of SCM are you providing?

- ☐ Level Spreader
- ☐ Vegetated Conveyance (lower SHWT)
- ☐ Wetland Swale (higher SHWT)
- ☐ Other SCM that removes minimum 30% nitrogen
- ☑ Proposed project will not create concentrated stormwater flow through the buffer

(check all that apply)

For a list of options to meet the diffuse flow requirements, click here.

Diffuse Flow Documentation

Click the upload button or drag and drop files here to attach document

File type must be PDF

2. Stormwater Management Plan

2a. Is this a NCDOT project subject to compliance with NCDOT's Individual NPDES permit NCS000250? *

○ Yes ◉ No

2b. Does this project meet the requirements for low density projects as defined in 15A NCAC 02H .1003(2)? *

◉ Yes ○ No

To look up low density requirement click here 15A NCAC 02H .1003(2).

Comments:

G. Supplementary Information

1. Environmental Documentation

1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? *

◉ Yes ○ No

1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)? *

◉ Yes ○ No

1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) *

◉ Yes ○ No

NEPA or SEPA Final Approval Letter

Click the upload button or drag and drop files here to attach document

FILE TYPE MUST BE PDF

2. Violations (DWR Requirement)

2a. Is the site in violation of DWR Water Quality Certification Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), or DWR Surface Water or Wetland Standards or Riparian Buffer Rules (15A NCAC 2B .0200)? *

○ Yes ◉ No

3. Cumulative Impacts (DWR Requirement)

3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? *

○ Yes ◉ No

3b. If you answered "no," provide a short narrative description.

This application is for geotechnical borings only.

4. Sewage Disposal (DWR Requirement)

4a. Is sewage disposal required by DWR for this project? *

○ Yes ○ No ◉ N/A

5. Endangered Species and Designated Critical Habitat (Corps Requirement)

5a. Will this project occur in or near an area with federally protected species or habitat? *

◉ Yes ○ No

5b. Have you checked with the USFWS concerning Endangered Species Act impacts? *

○ Yes ◉ No

5d. Is another Federal agency involved? *

◉ Yes ○ No ○ Unknown

What Federal Agency is involved?

NOAA National Marine Fisheries Service

5e. Is this a DOT project located within Division's 1-8? *

◉ Yes ○ No

5j. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? *

NC Natural Heritage Program data; terrestrial surveys completed in June and September 2016; aquatic surveys completed in October 2017; rule in federal register (50 CFR 226) promulgating Atlantic sturgeon critical habitat, published on 9/18/2017.

Consultation Documentation Upload

Click the upload button or drag and drop files here to attach document

File type must be PDF

6. Essential Fish Habitat (Corps Requirement)

6a. Will this project occur in or near an area designated as an Essential Fish Habitat? *

○ Yes ◉ No

6b. What data sources did you use to determine whether your site would impact an Essential Fish Habitat? *

NMFS EFH viewer

7. Historic or Prehistoric Cultural Resources (Corps Requirement)

Link to the State Historic Preservation Office Historic Properties Map (does not include archaeological data: http://gis.ncdcr.gov/hpoweb/

7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)? *

○ Yes ◉ No

7b. What data sources did you use to determine whether your site would impact historic or archeological resources? *

Environmental documentation (Minimum Criteria Determination Checklist) completed April 2019.

7c. Historic or Prehistoric Information Upload

Click the upload button or drag and drop files here to attach document

File must be PDF

8. Flood Zone Designation (Corps Requirement)

Link to the FEMA Floodplain Maps: https://msc.fema.gov/portal/search

8a. Will this project occur in a FEMA-designated 100-year floodplain? *

(•) Yes ( ) No

8b. If yes, explain how project meets FEMA requirements:

NCDOT Hydraulics Unit coordination with FEMA. The activities authorized by this permit will take place in open water and/or will not effect base flood elevations.

8c. What source(s) did you use to make the floodplain determination? *

FEMA mapping (Map number 3720474000J panel 370372, effective 1/2/2004).

Miscellaneous

Comments

The Tar River at this location is designated as a primary nursery area, and as such carries an in-water work moratorium between February 15 and September 30. Per the Wildlife Resources Commission, the activities authorized by this permit are allowed to be conducted during the in-water work moratorium (see attached email response).

Miscellaneous attachments not previously requested.

Click the upload button or drag and drop files here to attach document

B-5612 NW 6 WRC response.pdf 226.81KB

File must be PDF or KMZ

Signature

*

☑ By checking the box and signing below, I certify that:

- I have given true, accurate, and complete information on this form;
- I agree that submission of this PCN form is a “transaction” subject to Chapter 66, Article 40 of the NC General Statutes (the “Uniform Electronic Transactions Act”);
- I agree to conduct this transaction by electronic means pursuant to Chapter 66, Article 40 of the NC General Statutes (the “Uniform Electronic Transactions Act”);
- I understand that an electronic signature has the same legal effect and can be enforced in the same way as a written signature; AND
- I intend to electronically sign and submit the PCN form.

Full Name: *

Mack Christopher Rivenbark III

Signature

Mack C Rivenbark III

Date

5/24/2019

Rivenbark, Chris

From: Wilson, Travis W.
Sent: Thursday, May 23, 2019 9:31 AM
To: Rivenbark, Chris
Cc: Riffey, Deanna; thomas.a.steffens@usace.army.mil; James, Amy
Subject: RE: B-5612 Tar River, Pitt County geotechnical borings

WRC does not object to the proposed Geotechnical boring work occurring during the in water work moratorium.

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Sent: Thursday, May 23, 2019 9:29 AM
To: Wilson, Travis W. <travis.wilson@ncwildlife.org>
Cc: Riffey, Deanna <driffey@ncdot.gov>; thomas.a.steffens@usace.army.mil; James, Amy <ajames10@ncdot.gov>
Subject: RE: B-5612 Tar River, Pitt County geotechnical borings

Correction on the TIP it should be B-5612.

Likely two, possibly three depending on water levels. I've attached the boring sites.

Chris Rivenbark
NCDOT- Environmental Analysis Unit
(919) 707-6152

From: Wilson, Travis W. <travis.wilson@ncwildlife.org>
Sent: Thursday, May 23, 2019 9:06 AM
To: Rivenbark, Chris <crivenbark@ncdot.gov>
Cc: Riffey, Deanna <driffey@ncdot.gov>; thomas.a.steffens@usace.army.mil; James, Amy <ajames10@ncdot.gov>
Subject: RE: B-5616 Tar River, Pitt County geotechnical borings

How many borings will be in water. Although this work has typically been allowable, we recently had one at the coast with an unusually high and long duration of in water work for geo tech.

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Travis,
We are planning to perform geotechnical borings in the Tar River on NC 222 in Pitt County. This project is subject to the Inland PNA moratoria and we wanted to see if you had any objections to this work occurring.

Chris Rivenbark
Environmental Analysis Unit
North Carolina Department of Transportation

PROJECT REFERENCE NO.	SHEET NO.
B-5612	4

ROADWAY DESIGN ENGINEER

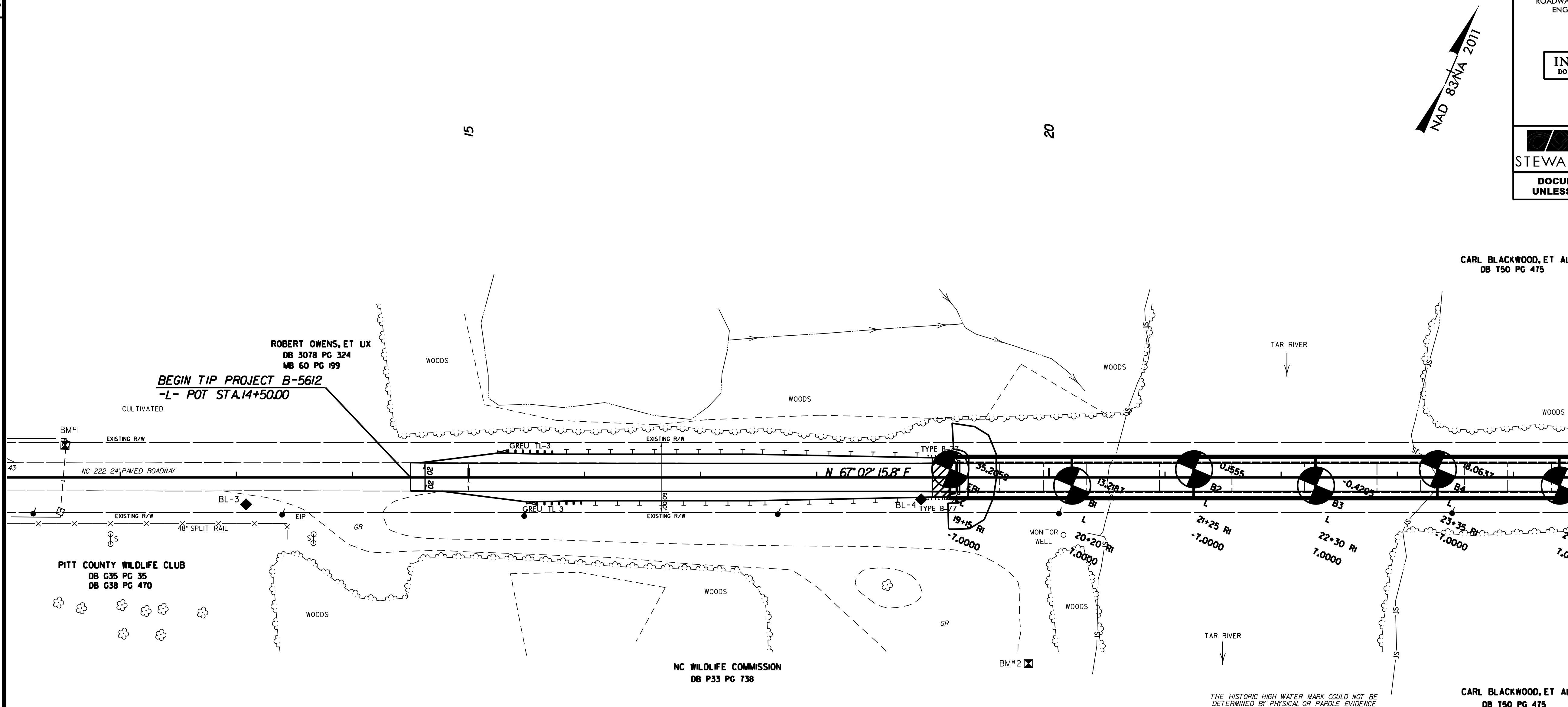
HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

STEWART

VHB Engineering NC, P.C. (C-3705)
940 Main Campus Drive, Suite 500
Raleigh, NC 27606

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



PAVEMENT-BRIDGE RELATIONSHIP SKETCH

FOR -L- PROFILE SEE SHEET 6 AND 7

8/17/99

22-MAY-2019 15:44
C:\Users\Lee Stone\Share\B5612_GEO_BRDG\CADD_GEOTECH\SITE&SUB\B5612_RDY_PSH04.dgn

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-5612	5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

Firm License No. C-1351
223 S. West St.
Suite 1100
Raleigh, NC 27603
T- 919.380.8704
www.stewartinc.com
STEWART

VHB Engineering NC, P.C. (C-3705)
940 Main Campus Drive, Suite 500
Raleigh, NC 27606

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

-L-

PI Sta 30+20.43
Δ = 0° 30' 39.9" (RT)
D = 0° 22' 55.1"
L = 133.80'
T = 66.90'
R = 15,000.00'
S_e = NC

PI Sta 33+90.99
Δ = 1° 34' 53.8" (LT)
D = 0° 15' 37.6"
L = 607.29'
T = 303.67'
R = 22,000.00'
S_e = NC

25

30

35

PC Sta. 29+53.53

PRC Sta. 30+87.33

PT Sta. 36+94.62

NAD 83/NA 2011

CONETOE CREEK

CARL BLACKWOOD, ET AL
DB T50 PG 475

PINNER PROPERTIES, LLC
DB 1632 PG 136

END TIP PROJECT B-5612
-L- POC STA.33+00.00

MATCH STATION 24+50.00
SEE SHEET 4

WOODS

EXISTING R/W

GREU TL-3

TYPE B-77

TYPE B-BL-5

67° 02' 15.8" RT

32.0791

TO BELVOIR

NC 222 24' PAVED ROADWAY

BL-6

18.1077

12.1740

13.1648

11.8689

11.4389

B5 B6 B7 B8 B9

25+40 RI -7.0000

26+40 RI 7.0000

27+40 RI 7.0000

28+15 RI 7.0000

28+90 RI -7.0000

JS

CONETOE CREEK

CARL BLACKWOOD, ET AL
DB T50 PG 475

MACK DUPREE
DB 256 PG 382
DB F32 PG 482
UNRECORDED PLAT (DUPREE BROTHERS)

FOR -L- PROFILE SEE SHEET 6 AND 7

23-MAY-2019 15:53
C:\Users\lee.stone\Share\B5612_GEO_BRDG\CADD\GEOTECH\SITE&SUB\B5612_RDY_PSH05.dgn
Lee Stone AT STONE FOUNDRY

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Chris Rivenbark
Environmental Analysis Unit
North Carolina Department of Transportation

ATTACHMENT A
PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): _____

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:
NCDOT; ATTN: Chris Rivenbark, Natural Environment Section
1598 Mail Service Center; Raleigh, NC 27699-1598

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:
_____

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
_____

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

State: NC County/parish/borough: Pitt City: Greenville

Center coordinates of site (lat/long in degree decimal format):
Lat. 35.696490 °N; Long. 77.488566 °W.

Universal Transverse Mercator: 18

Name of nearest waterbody: Tar River

Identify (estimate) amount of waters in the review area:
Non-wetland waters:
740 linear feet: 25-230 width (ft) and/or N/A acres.

Cowardin Class: Riverine

Stream Flow: Perennial (Tar River, Conetoe Creek)

Wetlands: 5.3 acres.

Cowardin Class: Palustrine

Name of any water bodies on the site that have been identified as Section 10 waters:
Tidal: N/A
Non-Tidal: Tar River

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

☐ Office (Desk) Determination. Date: _____

☐ Field Determination. Date(s): _____

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: NCDOT

☐ 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: _____

☐ U.S. Geological Survey Hydrologic Atlas: _____

☐ USGS NHD data

☐ USGS 8 and 12 digit HUC maps

☑ U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 - Greeneville Nw

☑ USDA Natural Resources Conservation Service Soil Survey. Citation: Pitt County, 1974

☐ National wetlands inventory map(s). Cite name: _____

☐ State/Local wetland inventory map(s): _____

☐ FEMA/FIRM maps: _____

☐ 100-year Floodplain Elevation is: _____ (National Geodectic Vertical Datum of 1929)

☑ Photographs: ☑ Aerial (Name & Date): NC Statewide Orthoimagery Project (2015) or ☐ Other (Name & Date): _____

☐ Previous determination(s). File no. and date of response letter: _____

☐ Other information (please specify): _____

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.

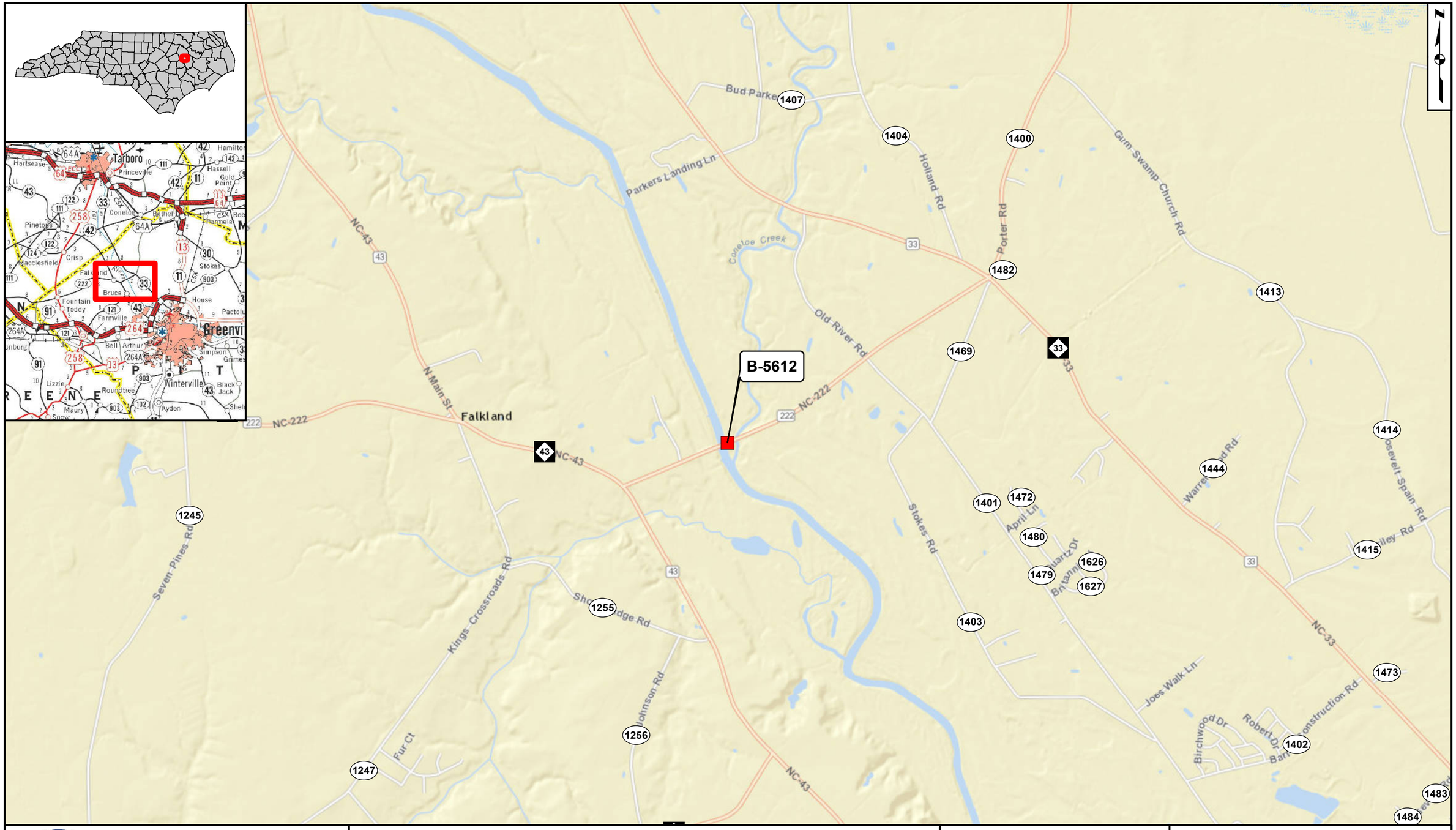
2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has 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:

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)

Site number	Latitude	Longitude	Cowardin Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
Tar River	35.696165	-77.489720	Riverine	300 linear feet	Section 10 – non-tidal
SB	35.696681	-77.488488	Riverine	340 linear feet	Non-section 10 – non-wetland
WA	35.695221	-77.491480	Palustrine	0.2 acres	Non-section 10 – wetland
WB	35.696618	-77.487875	Palustrine	5.1 acres	Non-section 10 – wetland



NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND
ENVIRONMENTAL ANALYSIS UNIT

VICINITY MAP
Replace Bridge No. 24 on NC 222
over Tar River in Pitt County

TIP Project B-5612

0 0.5
Miles

Div: 2	TIP# B-5612
Date: DECEMBER 2015	

Figure 1

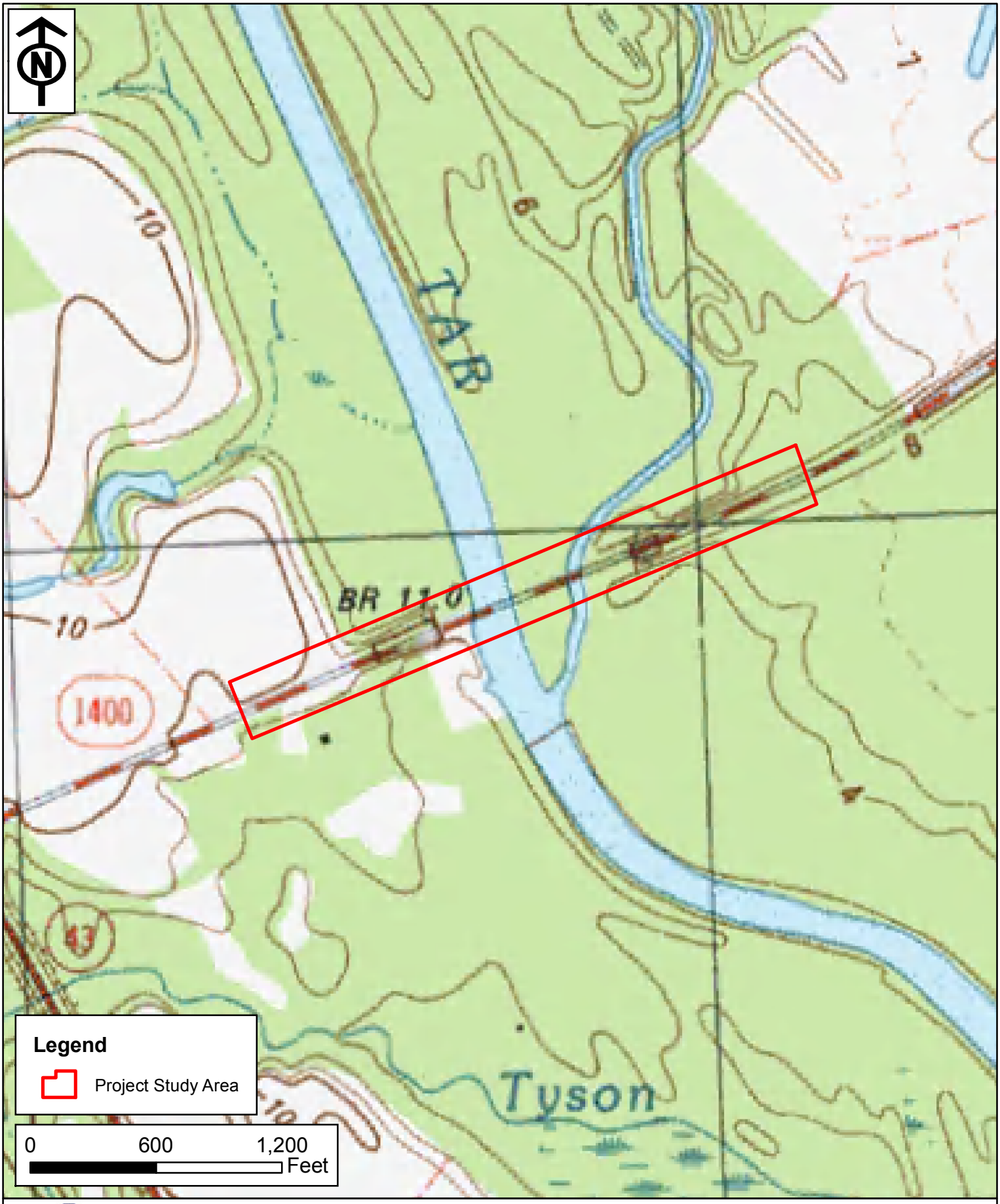


Figure 2: Project Study Area Map
TIP B-5612
Replace Bridge No. 24 on NC 222 over Tar River
Pitt County, NC

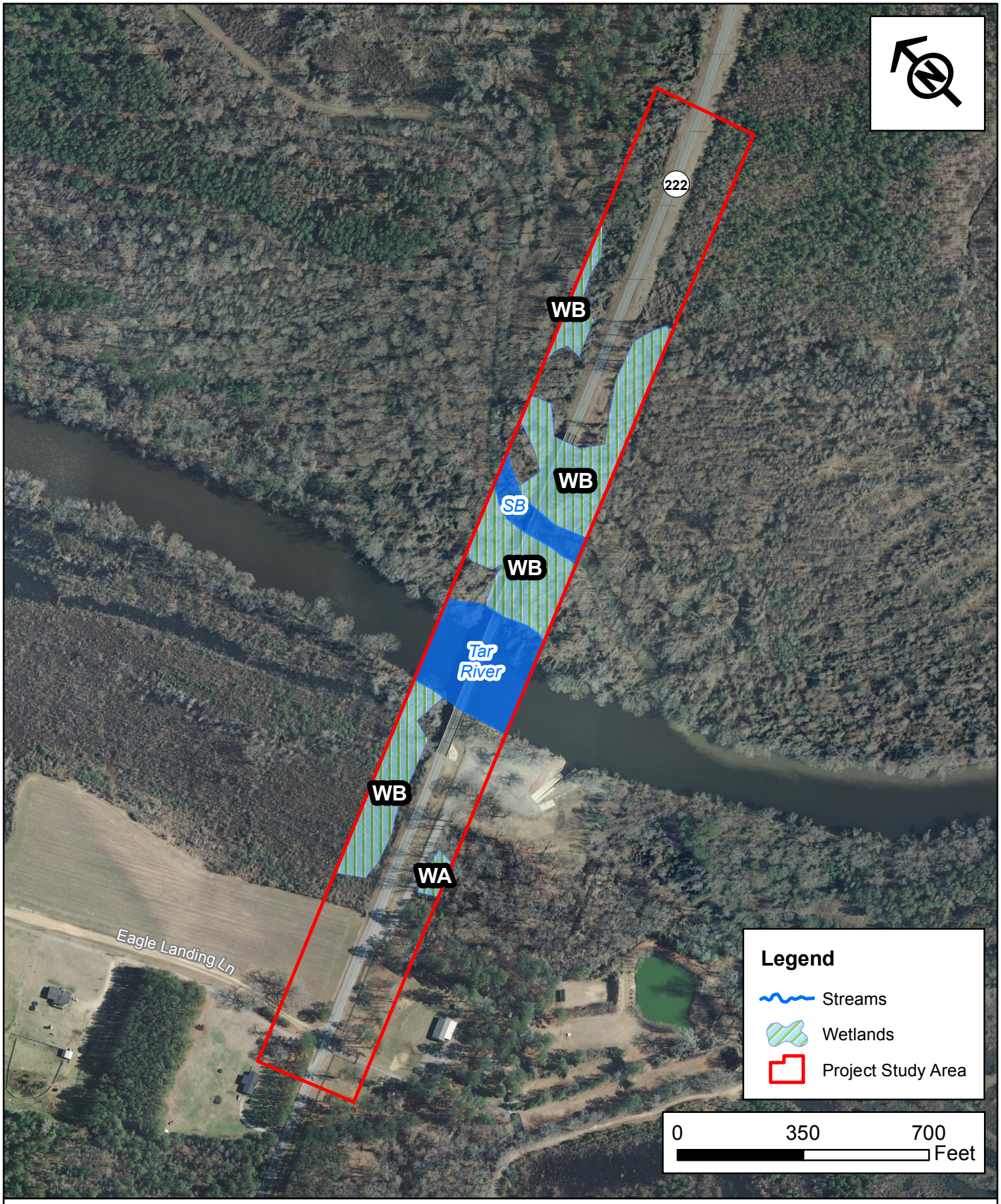


Figure 3: Jurisdictional Features Map
TIP B-5612
Replace Bridge No. 24 on NC 222 over Tar River
Pitt County, NC

Hydric Soil Table

Map Unit Symbol	Map Unit Name	Hydric
AlB	Altavista sandy loam, 0 to 4 percent slopes	Yes
Bb	Bibb complex	Yes
Gp	Gravel pits	N/A
LaB	Lakeland sand, 0 to 6 percent slopes	Incl.
Pa	Pactolus loamy sand	No
Po	Portsmouth loam	Yes
WaB	Wagram loamy sand, 0 to 6 percent slopes	Incl.

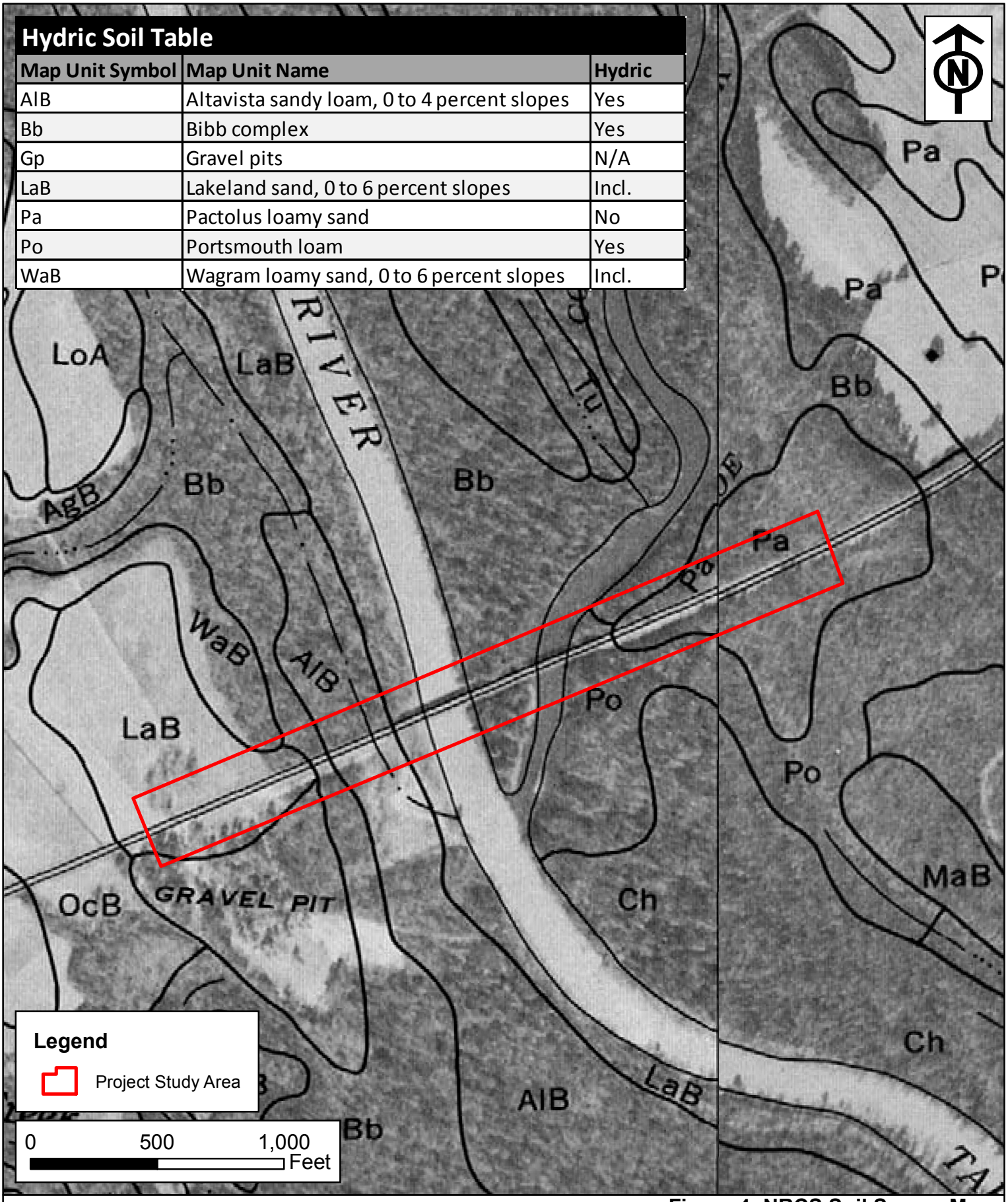


Figure 4: NRCS Soil Survey Map
Pitt County, 1974
TIP B-5612
Replace Bridge No. 24 on NC 222 over Tar River
Pitt County, NC

North Carolina Division of Water Quality - Stream Identification Form, Version 4.11

Date: 6/8/2016	Project/Site: Tar River TIP #B-5612	Latitude: 35.696388	**Tar River B5612**
Evaluator: B. Reed (Kimley-Horn) J. Hartshorn (Kimley-Horn)	County: Pitt	Longitude: -77.489773	
Total Points: 45.25 Stream is at least intermittent if ≥ 19 or perennial if ≥ 30	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Greenville NW	

A. Geomorphology Subtotal = 21	Absent	Weak	Moderate	Strong	Score
1[a]. Continuity of channel bed and bank	0	1	2	3	**3**
2. Sinuosity of channel along thalweg	0	1	2	3	**3**
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3	**1**
4. Particle size of stream substrate	0	1	2	3	**2**
5. Active/relic floodplain	0	1	2	3	**3**
6. Depositional bars or benches	0	1	2	3	**2**
7. Recent alluvial deposits	0	1	2	3	**3**
8. Headcuts	0	1	2	3	**0**
9. Grade control	0	0.5	1	1.5	**0**
10. Natural valley	0	0.5	1	1.5	**1**
11. Second or greater order channel	No = 0		Yes = 3		**3**

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology Subtotal = 10					
12. Presence of Baseflow	0	1	2	3	**3**
13. Iron oxidizing bacteria	0	1	2	3	**0**
14. Leaf litter	1.5	1	0.5	0	**1**
15. Sediment on plants or debris	0	0.5	1	1.5	**1.5**
16. Organic debris lines or piles	0	0.5	1	1.5	**1.5**
17. Soil-based evidence of high water table?	No = 0		Yes = 3		**3**

C. Biology Subtotal = 14.25					
18. Fibrous roots in streambed	3	2	1	0	**3**
19. Rooted upland plants in streambed	3	2	1	0	**3**
20. Macrobenthos (note diversity and abundance)	0	1	2	3	**0**
21. Aquatic Mollusks	0	1	2	3	**3**
22. Fish	0	0.5	1	1.5	**1.5**
23. Crayfish	0	0.5	1	1.5	**1.5**
24. Amphibians	0	0.5	1	1.5	**1.5**
25. Algae	0	0.5	1	1.5	**0**
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5; Other = 0				**0.75**

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:
The Tar River is a large, coastal plain perennial stream within the study area. The bankful width is roughly 230' and the bankful height is 8'. The channel is 3-5' deep and has a moderate flow. During sampling, the water was turbid, likely due to recent heavy rainfall. No aquatic biology was observed, however the Tar River provides habitat for many mullosks, fish, and other aquatic organisms.

North Carolina Division of Water Quality - Stream Identification Form, Version 4.11

Date: 6/8/2016	Project/Site: SB TIP #B-5612	Latitude: 35.696502	**SB B5612**
Evaluator: B. Reed (Kimley-Horn) J. Hartshorn (Kimley-Horn)	County: Pitt	Longitude: -77.488416	
Total Points: 30.5 Stream is at least intermittent if ≥ 19 or perennial if ≥ 30	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Greenville NW	

A. Geomorphology Subtotal = 15	Absent	Weak	Moderate	Strong	Score
1[a]. Continuity of channel bed and bank	0	1	2	3	**3**
2. Sinuosity of channel along thalweg	0	1	2	3	**2**
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3	**1**
4. Particle size of stream substrate	0	1	2	3	**1**
5. Active/relic floodplain	0	1	2	3	**3**
6. Depositional bars or benches	0	1	2	3	**1**
7. Recent alluvial deposits	0	1	2	3	**2**
8. Headcuts	0	1	2	3	**0**
9. Grade control	0	0.5	1	1.5	**1**
10. Natural valley	0	0.5	1	1.5	**1**
11. Second or greater order channel	No = 0		Yes = 3		**0**

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology Subtotal = 9.5					
12. Presence of Baseflow	0	1	2	3	**3**
13. Iron oxidizing bacteria	0	1	2	3	**0**
14. Leaf litter	1.5	1	0.5	0	**1.5**
15. Sediment on plants or debris	0	0.5	1	1.5	**1**
16. Organic debris lines or piles	0	0.5	1	1.5	**1**
17. Soil-based evidence of high water table?	No = 0		Yes = 3		**3**

C. Biology Subtotal = 6					
18. Fibrous roots in streambed	3	2	1	0	**3**
19. Rooted upland plants in streambed	3	2	1	0	**3**
20. Macrobenthos (note diversity and abundance)	0	1	2	3	**0**
21. Aquatic Mollusks	0	1	2	3	**0**
22. Fish	0	0.5	1	1.5	**0**
23. Crayfish	0	0.5	1	1.5	**0**
24. Amphibians	0	0.5	1	1.5	**0**
25. Algae	0	0.5	1	1.5	**0**
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5; Other = 0				**0**

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:
Stream SB is a perennial secondary tributary to the Tar River in Pitt County. The banks along SB are 4' deep and 25' wide. The channel is roughly 3' deep and has a low-flow. During sampling, the channel was slightly out of bank due to recent heavy rainfall. Channel appears to be excavated and ATV roads run along both banks.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: TIP# B-5612 City/County: Pitt Sampling Date: 6/8/2016

Applicant/Owner: NCDOT State: NC Sampling Point: WA-UP

Investigator(s): B. Reed & J. Hartshorn (Kimley-Horn) Section, Township, Range: Falkland

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None Slope (%): <1%

Subregion (LRR or MLRA): LRR P Lat: 35.695312 Long: -77.491238 Datum: NAD83

Soil Map Unit Name: Bb - Bibb complex NWI classification: None

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 [✓]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✓]
Hydric Soil Present?	Yes [ ]	No [✓]	
Wetland Hydrology Present?	Yes [ ]	No [✓]	

Remarks:

WA is a floodplain wetland along the Tar River, separated from a riverine swamp system by NC 222. WA-UP is roughly 10' outside the boundary of wetland WA and was taken at a similar elevation (<1' difference).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] Marl Deposits (B15) **(LRR U)**
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres along Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] FAC-Neutral Test (D5)
- [ ] Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes [ ]	No [✓]	Depth (inches):
Water Table Present?	Yes [ ]	No [✓]	Depth (inches): >18"
Saturation Present? (includes capillary fringe)	Yes [ ]	No [✓]	Depth (inches): >18"

Wetland Hydrology Present? Yes [ ] No [✓]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators were observed at WA-UP.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: WA-UP

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Carpinus caroliniana*	60%	Y	FAC
2. *Ulmus americana*	30%	Y	FAC
3. *Nyssa sylvativa*	5%	N	FAC
4.			
5.			
6.			
7.			
8.			
	95% = Total Cover		
50% of total cover: 47.5%	20% of total cover: 19%		
Sapling/Shrub Stratum (Plot size: 30')			
1. *Carpinus caroliniana*	10%	Y	FAC
2. *Nyssa sylvatica*	5%	Y	FAC
3. *Ilex opaca*	5%	Y	FAC
4. *Acer rubrum*	5%	Y	FAC
5.			
6.			
7.			
8.			
	25% = Total Cover		
50% of total cover: 12.5%	20% of total cover: 5%		
Herb Stratum (Plot size: 30')			
1. *Carex sp.*	5%	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	5% = Total Cover		
50% of total cover: 2.5%	20% of total cover: 1%		
Woody Vine Stratum (Plot size: 30')			
1. *Campsis radicans*	5%	Y	FAC
2. *Smilax rotundifolia*	5%	Y	FAC
3. *Toxicodendron radicans*	5%	Y	FAC
4. *Vitis rotundifolia*	5%	Y	FAC
5. *Lonicera japonica*	5%	Y	FACU
	25% = Total Cover		
50% of total cover: 12.5%	20% of total cover: 5%		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 11 (A)

Total Number of Dominant Species Across All Strata: 12 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 91.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

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

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

SOIL

Sampling Point: WA-UP

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4"	10YR 3/2	100%					Sandy loam	
4-10"	10YR 4/3	90%	7.5YR 4/5	10%	C	M	Loamy sand	
10-18"	10YR 5/4	80%	7.5YR 5/6	20%	C	M	Loamy sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators 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:

No hydric soil indicators were observed at data point WA-UP. The data point was taken within the floodplain, but water does not impound at WA-UP.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: TIP# B-5612 City/County: Pitt Sampling Date: 6/8/2016

Applicant/Owner: NCDOT State: NC Sampling Point: WA-WET

Investigator(s): B. Reed & J. Hartshorn (Kimley-Horn) Section, Township, Range: Falkland

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): <1%

Subregion (LRR or MLRA): LRR P Lat: 35.695297 Long: -77.491443 Datum: NAD83

Soil Map Unit Name: Bb - Bibb complex NWI classification: None

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 [✓]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [✓] No [ ]
Hydric Soil Present?	Yes [✓]	No [ ]	
Wetland Hydrology Present?	Yes [✓]	No [ ]	

Remarks:

WA is within the floodplain of the Tar River in roughly the area of an NRCS mapped stream. This area likely floods from backwater in the offsite stream when the Tar River floods.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [✓] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [✓] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] Marl Deposits (B15) **(LRR U)**
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres along Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [✓] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [✓] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [✓] FAC-Neutral Test (D5)
- [ ] Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes [ ]	No [✓]	Depth (inches):
Water Table Present?	Yes [ ]	No [✓]	Depth (inches): >18"
Saturation Present? (includes capillary fringe)	Yes [ ]	No [✓]	Depth (inches): >18"

Wetland Hydrology Present? Yes [✓] No [ ]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No saturation or water table was observed, but crayfish burrows and water-stained leaves were present throughout wetland WA.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: WA-WET

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	25%	Y	FAC
2. *Taxodium distichum*	20%	Y	OBL
3. *Nyssa sylvatica*	15%	N	FAC
4. *Quercus phellos*	15%	N	FACW
5. *Acer rubrum*	15%	N	FAC
6.			
7.			
8.			
	90% = Total Cover		
50% of total cover: 45%	20% of total cover: 18%		
Sapling/Shrub Stratum (Plot size: 30')			
1. *Carpinus caroliniana*	5%	Y	FAC
2. *Quercus phellos*	5%	Y	FACW
3. *Ilex opaca*	5%	Y	FAC
4. *Nyssa sylvatica*	5%	Y	FAC
5. *Ligustrum sinense*	5%	Y	FAC
6.			
7.			
8.			
	25% = Total Cover		
50% of total cover: 12.5%	20% of total cover: 5%		
Herb Stratum (Plot size: 30')			
1. *Carex sp.*	10%	Y	FAC
2. *Viola sp.*	5%	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	15% = Total Cover		
50% of total cover: 7.5%	20% of total cover: 3%		
Woody Vine Stratum (Plot size: 30')			
1. *Smilax rotundifolia*	10%	Y	FAC
2. *Vitis rotundifolia*	5%	Y	FAC
3.			
4.			
5.			
	15% = Total Cover		
50% of total cover: 7.5%	20% of total cover: 3%		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 11 (A)

Total Number of Dominant Species Across All Strata: 11 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

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

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

SOIL

Sampling Point: WA-WET

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4"	10YR 2/2	100%					Loam	
4-10"	10YR 4/2	80%	10YR 5/6	20%	C	M	Clay loam	
10-18"	10YR 5/1	60%	7.5YR 5/8	40%	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators 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:

No saturation or water table observed.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: TIP# B-5612 City/County: Pitt Sampling Date: 6/8/2016

Applicant/Owner: NCDOT State: NC Sampling Point: WB-UP

Investigator(s): B. Reed & J. Hartshorn (Kimley-Horn) Section, Township, Range: Belvoir

Landform (hillslope, terrace, etc.): Floodplain terrace Local relief (concave, convex, none): Convex Slope (%): <1%

Subregion (LRR or MLRA): LRR P Lat: 35.697324 Long: -77.487396 Datum: NAD83

Soil Map Unit Name: Bb - Bibb complex NWI classification:

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 [✓]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✓]
Hydric Soil Present?	Yes [ ]	No [✓]	
Wetland Hydrology Present?	Yes [ ]	No [✓]	

Remarks:

WB-UP is representative of the upland pockets/berms that are present throughout the floodplain of the Tar River. Some berms appear to be natural, while others appear man-made spoil from river channelization. WB-UP was taken approximately 2-3' higher and 80' northeast of WB-WET.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] Marl Deposits (B15) **(LRR U)**
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres along Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] FAC-Neutral Test (D5)
- [ ] Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes [ ]	No [✓]	Depth (inches):
Water Table Present?	Yes [ ]	No [✓]	Depth (inches): >18"
Saturation Present? (includes capillary fringe)	Yes [ ]	No [✓]	Depth (inches): >18"

Wetland Hydrology Present? Yes [ ] No [✓]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators were observed.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: WB-UP

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus phellos*	30%	Y	FACW
2. *Liquidambar styraciflua*	20%	Y	FAC
3. *Quercus pagoda*	20%	Y	FACW
4. *Ulmus americana*	15%	N	FAC
5. *Acer rubrum*	10%	N	FAC
6. *Platanus occidentalis*	5%	N	FACW
7.			
8.			
	100% = Total Cover		
50% of total cover: 50%	20% of total cover: 20%		
Sapling/Shrub Stratum (Plot size: 30')			
1. *Carpinus caroliniana*	25%	Y	FAC
2. *Ligustrum sinense*	5%	N	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	30% = Total Cover		
50% of total cover: 15%	20% of total cover: 6%		
Herb Stratum (Plot size: 30')			
1. *Carex sp.*	5%	Y	FAC
2. *Boehmeria cylindrica*	5%	Y	FACW
3. *Viola sp.*	5%	Y	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	15% = Total Cover		
50% of total cover: 7.5%	20% of total cover: 3%		
Woody Vine Stratum (Plot size: 30')			
1. *Toxicodendron radicans*	20%	Y	FAC
2. *Vitis rotundifolia*	10%	Y	FAC
3. *Smilax rotundifolia*	10%	Y	FAC
4.			
5.			
	40% = Total Cover		
50% of total cover: 20%	20% of total cover: 8%		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 10 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

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

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

SOIL

Sampling Point: WB-UP

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6"	10YR 4/4	100%					Loam	
6-12"	10YR 5/3	100%					Clay loam	
12-18"	10YR 5/4	90%	10YR 5/8	10%			Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators 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:

No hydric soil indicators were observed. Neither saturation or the water table were present.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: TIP# B-5612 City/County: Pitt Sampling Date: 6/8/2016

Applicant/Owner: NCDOT State: NC Sampling Point: WB-WET

Investigator(s): B. Reed & J. Hartshorn (Kimley-Horn) Section, Township, Range: Belvoir

Landform (hillslope, terrace, etc.): Riverine floodplain Local relief (concave, convex, none): Concave Slope (%): <1%

Subregion (LRR or MLRA): LRR P Lat: 35.697116 Long: -77.487540 Datum: NAD83

Soil Map Unit Name: Bb - Bibb complex NWI classification: PFO1/2C

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 [✓]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [✓] No [ ]
Hydric Soil Present?	Yes [✓]	No [ ]	
Wetland Hydrology Present?	Yes [✓]	No [ ]	

Remarks:

WB is an expansive floodplain associated with the Tar River. WB is inundated throughout to varying depths. Depths of 1-2' were observed near data point WB-WET. Small seeps are also present along the toe of the slope away from the Tar River.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [✓] Surface Water (A1)
- [ ] High Water Table (A2)
- [✓] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] Marl Deposits (B15) **(LRR U)**
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres along Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [✓] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [✓] FAC-Neutral Test (D5)
- [ ] Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes [✓]	No [ ]	Depth (inches): 0-24"
Water Table Present?	Yes [✓]	No [ ]	Depth (inches): 8"
Saturation Present? (includes capillary fringe)	Yes [✓]	No [ ]	Depth (inches): 0"

Wetland Hydrology Present? Yes [✓] No [ ]

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WB is bounded topographically on most sides by small berms. 0-3' tall cypress knees were observed throughout the wetland. WB is frequently flooded from the Tar River and small seeps, as well as precipitation.

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WB-WET

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Taxodium distichum*	60%	Y	OBL
2. *Quercus phellos*	30%	Y	FACW
3. *Liquidambar styraciflua*	5%	N	FAC
4. *Acer rubrum*	5%	N	FAC
5.			
6.			
7.			
8.			
	100%	= Total Cover	
50% of total cover: 50%	20% of total cover: 20%		
Sapling/Shrub Stratum (Plot size: 30')			
1. *Ligustrum sinense*	10%	Y	FAC
2. *Carpinus caroliniana*	5%	Y	FAC
3. *Taxodium distichum*	5%	Y	OBL
4.			
5.			
6.			
7.			
8.			
	20%	= Total Cover	
50% of total cover: 10%	20% of total cover: 4%		
Herb Stratum (Plot size: 30')			
1. *Carex sp.*	5%	Y	FAC
2. *Saururus cernuus*	5%	Y	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	10%	= Total Cover	
50% of total cover: 5%	20% of total cover: 2%		
Woody Vine Stratum (Plot size: 30')			
1. *Vitis rotundifolia*	10%	Y	FAC
2. *Smilax rotundifolia*	10%	Y	FAC
3. *Toxicodendron radicans*	10%	Y	FAC
4.			
5.			
	30%	= Total Cover	
50% of total cover: 15%	20% of total cover: 6%		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 10 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

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

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

SOIL

Sampling Point: WB-WET

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4"	10YR 2/2	100%					Loam	
4-10"	10YR 4/1	100%					Loam	
10-18"	10YR 5/2	80%	10YR 5/8	20%	C	M	Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators 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:

Soils are saturated at the surface. WB is frequently inundated due to flooding from the Tar River.