STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT L. MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

July 19, 2013

U.S. Army Corps of Engineers
Regulatory Field Office
2407 West 5th St.
Washington, NC 27889

Attention: Mr. Tom Steffens
NCDOT Coordinator

Dear Sir:

Subject: **Application for Section 404 Nationwide Permit (NWP) 3, Section 401 Water Quality Certification, and Tar-Pamlico Riparian Buffer Authorization** for the replacement of Bridge No. 111 over Briery Swamp on SR 1588 in Pitt County; TIP Project B-5111; Federal Aid Project No. BRZ-1588(2); Debit $240 from WBS No. 42249.1.1.

Please find enclosed PCN, permit drawings, stormwater management plan, and roadway plans for the above referenced project proposed by the North Carolina Department of Transportation (NCDOT). A Programmatic Categorical Exclusion (PCE) was completed for this project on March 12, 2012 and distributed shortly thereafter. Additional copies are available at the NCDOT website: http://207.4.62.65/PDEA/EnvironmentalDocs/. The NCDOT proposes to replace existing Bridge No. 111 over Briery Swamp on SR 1588 in Pitt County. The project involves replacement of the existing structurally deficient bridge and approach with new structures. Bridge 111 will be replaced with a new 115-foot long three-span bridge.

Proposed permanent impacts to riparian wetlands from bridge construction are <0.01 acre of fill. There will be a total of 286 square feet of zone 1 buffer impacts and 113 square feet in zone 2. Traffic will be detoured off-site during construction.

This project calls for a letting date of January 21, 2014 and a review date of December 3, 2013; however, the let date may advance as additional funding becomes available.

Regulatory Approvals

Section 404 Permit: All aspects of this project are being processed by the Federal Highway Administration as a "Categorical Exclusion" in accordance with 23 CFR

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS UNIT
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1548

TELEPHONE: 919-707-6000
FAX: 919-212-5785
WEBSITE:NCDOT.GOV

LOCATION:
CENTURY CENTER, BUILDING B
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610

771.115(b). The NCDOT requests that the project be authorized by NW 3 for bridge construction.

Section 401 Permit: We anticipate 401 General Certification number 3883 will apply to this project. NCDOT is requesting written concurrence from the North Carolina Department of Environmental and Natural Resources, Division of Water Quality. We are providing two copies of this application to the NCDWQ for their approval. Authorization to debit the $240 Permit Application Fee from WBS Element 42249.1.1 is hereby given.

Tar-Pamlico Riparian Buffer Authorization: NCDOT requests that the NC Division of Water Quality review this application and issue a written approval for a Tar-Pamlico Riparian Buffer Authorization.

A copy of this permit application and its distribution list will be posted on the NCDOT website at http://www.ncdot.org/doh/preconstruct/pe/neu/permit.html.

If you have any questions or need additional information, please contact Chris Manley at cdmanley@ncdot.gov or (919) 707-6135.

Sincerely,

E. L. Lush

for Gregory J. Thorpe, Ph.D., Manager
Project Development and Environmental Analysis Unit

cc

NCDOT Permit Application Standard Distribution List.

Office Use Only:
Corps action ID no. _____
DWQ project no. _____
Form Version 1.3 Dec 10 2008

Pre-Construction Notification (PCN) Form

A. Applicant Information

1. Processing

1a. Type(s) of approval sought from the Corps:	☒ Section 404 Permit	☐ Section 10 Permit
1b. Specify Nationwide Permit (NWP) number: 3	or General Permit (GP) number:	
1c. Has the NWP or GP number been verified by the Corps?	☐ Yes	☒ No
1d. Type(s) of approval sought from the DWQ (check all that apply): ☒ 401 Water Quality Certification – Regular ☐ 401 Water Quality Certification – Express ☐ Non-404 Jurisdictional General Permit ☒ Riparian Buffer Authorization		
1e. Is this notification solely for the record because written approval is not required?	For the record only for DWQ 401 Certification: ☐ Yes ☒ No	For the record only for Corps Permit: ☐ Yes ☒ No
1f. 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
1g. Is the project located in any of NC's twenty coastal counties. If yes, answer 1h below.	☐ Yes	☒ No
1h. Is the project located within a NC DCM Area of Environmental Concern (AEC)?	☐ Yes	☒ No

2. Project Information

2a. Name of project:	Replacement of Bridge 111 over Briery Swamp on SR 1588
2b. County:	Pitt
2c. Nearest municipality / town:	Stokes
2d. Subdivision name:	*not applicable*
2e. NCDOT only, T.I.P. or state project no:	B-5111

3. Owner Information

3a. Name(s) on Recorded Deed:	North Carolina Department of Transportation
3b. Deed Book and Page No.	*not applicable*
3c. Responsible Party (for LLC if applicable):	*not applicable*
3d. Street address:	1598 Mail Service Center
3e. City, state, zip:	Raleigh, NC 27699-1598
3f. Telephone no.:	(919) 707-6135
3g. Fax no.:	(919) 250-4224
3h. Email address:	cdmanley@ncdot.gov

4. Applicant Information (if different from owner)	
4a. Applicant is:	☐ Agent ☐ Other, specify:
4b. Name:	*not applicable*
4c. Business name (if applicable):	
4d. Street address:	
4e. City, state, zip:	
4f. Telephone no.:	
4g. Fax no.:	
4h. Email address:	
5. Agent/Consultant Information (if applicable)	
5a. Name:	*not applicable*
5b. Business name (if applicable):	
5c. Street address:	
5d. City, state, zip:	
5e. Telephone no.:	
5f. Fax no.:	
5g. Email address:	

B. Project Information and Prior Project History		
1. Property Identification		
1a. Property identification no. (tax PIN or parcel ID):	*not applicable*	
1b. Site coordinates (in decimal degrees):	Latitude: 35.704073 (DD.DDDDDD)	Longitude: - 77.239991 (-DD.DDDDDD)
1c. Property size:	0.5 acre	
2. Surface Waters		
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Briery Swamp	
2b. Water Quality Classification of nearest receiving water:	C; Sw; NSW	
2c. River basin:	Tar Pamlico	
3. Project Description		
3a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: Existing conditions at the site include maintained / disturbed roadside shoulder and agriculture in addition to forested wetlands. Land use in the project vicinity is predominantly residential with some agriculture.		
3b. List the total estimated acreage of all existing wetlands on the property: 0.1		
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 65		
3d. Explain the purpose of the proposed project: To replace a structurally deficient and functionally obsolete bridge.		
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing a 100-foot 6 span bridge with a 115-foot 3 span bridge on the existing alignment with an off-site detour. Standard road building equipment, such as trucks, dozers, and cranes will be used. The 6 inch water line will be relocated by directional bore method within jurisdictional areas.		
4. Jurisdictional Determinations		
4a. Have jurisdictional wetland or stream determinations by the Corps or State been requested or obtained for this property / project (including all prior phases) in the past? Comments: Requested August 31,2009	☒ Yes	☐ No ☐ Unknown
4b. If the Corps made the jurisdictional determination, what type of determination was made?	☐ Preliminary	☐ Final
4c. If yes, who delineated the jurisdictional areas? Name (if known): Jim Hauser	Agency/Consultant Company: NCDOT Other:	
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation.		
5. Project History		
5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?	☐ Yes	☒ No ☐ Unknown
5b. If yes, explain in detail according to “help file” instructions.		
6. Future Project Plans		
6a. Is this a phased project?	☐ Yes	☒ No
6b. If yes, explain.		

C. Proposed Impacts Inventory

1. Impacts Summary

1a. Which sections were completed below for 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.

2a. Wetland impact number – Permanent (P) or Temporary (T)	2b. Type of impact	2c. Type of wetland (if known)	2d. Forested	2e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	2f. Area of impact (acres)
Site 1 ☒ P ☐ T	Fill	Riparian	☒ Yes ☐ No	☒ Corps ☐ DWQ	<0.01
Site 1 ☐ P ☒ T	Fill	Riparian	☒ Yes ☐ No	☒ Corps ☐ DWQ	<0.01
Site 2 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 3 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 4 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 5 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
				2g. **Total wetland impacts**	<0.01 Perm. <0.01 Temp.

2h. Comments: There will be 0.05 ac of hand clearing. Additionally, there will be <0.01 ac of temporary fill in wetlands in the hand clearing areas for the installation of erosion control measures, including temporary silt fence and/or special sediment control fence.

3. Stream Impacts

If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.

3a. Stream impact number - Permanent (P) or Temporary (T)	3b. Type of impact	3c. Stream name	3d. Perennial (PER) or intermittent (INT)?	3e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	3f. Average stream width (feet)	3g. Impact length (linear feet)
Site 2 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 2 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 3 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 4 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 5 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 6 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
					3h. **Total stream and tributary impacts**	0 Perm

	0 Temp
3i. Comments:	

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. Open water impact number – Permanent (P) or Temporary (T)	4b. Name of waterbody (if applicable)	4c. Type of impact	4d. Waterbody type	4e. Area of impact (acres)
O1 ☐ P ☐ T				
O2 ☐ P ☐ T				
O3 ☐ P ☐ T				
O4 ☐ P ☐ T				
			4f. Total open water impacts	0.0 Permanent 0.0 Temporary

4g. Comments:

5. Pond or Lake Construction

If pond or lake construction proposed, then complete the chart below.

5a. Pond ID number	5b. Proposed use or purpose of pond	5c. Wetland Impacts (acres)			5d. Stream Impacts (feet)			5e. Upland (acres)
		Flooded	Filled	Excavated	Flooded	Filled	Excavated	Flooded
P1								
P2								
	5f. Total							

5g. Comments:	
5h. Is a dam high hazard permit required?	☐ Yes ☐ No If yes, permit ID no:
5i. Expected pond surface area (acres):	
5j. Size of pond watershed (acres):	
5k. Method of construction:	

6. Buffer Impacts (for DWQ)

If project will impact a protected riparian buffer, then complete the chart below. If yes, then individually list all buffer impacts below. If any impacts require mitigation, then you **MUST** fill out Section D of this form.

6a. Project is in which protected basin?			☐ Neuse ☐ Catawba ☒ Tar-Pamlico ☐ Randleman ☐ Other:		
6b. Buffer impact number – Permanent (P) or Temporary (T)	6c. Reason for impact	6d. Stream name	6e. Buffer mitigation required?	6f. Zone 1 impact (square feet)	6g. Zone 2 impact (square feet)
B1 ☒ P ☐ T	Bridge	Briery Swamp	☐ Yes ☒ No	286	113
B2 ☐ P ☐ T			☐ Yes ☐ No		
B3 ☐ P ☐ T			☐ Yes ☐ No		
		6h. **Total buffer impacts**		286	113
6i. Comments:					

D. Impact Justification and Mitigation

1. Avoidance and Minimization

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

The proposed bridge will have 3 spans verses the existing 6-span bridge; the proposed bridge will be at approximately the same grade as the existing structure; an off-site detour will be used, 3:1 fill slopes in jurisdictional areas. No deck drains. Placement of stormwater control measures outside wetlands where practicable. Best Management Practices for the Protection of Surface Waters will be implemented.

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

Hand clearing will be used instead of mechanized clearing. Open trench excavation minimized for utility relocation by using trenchless (directional bore) methodolgy where practicable. Top-down construction.

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 If no, explain: Due to minimal impacts mitigation is not proposed
2b. If yes, mitigation is required by (check all that apply):	☐ DWQ ☐ Corps
2c. If yes, which mitigation option will be used for this project?	☐ Mitigation bank ☐ Payment to in-lieu fee program ☐ Permittee Responsible Mitigation

3. Complete if Using a Mitigation Bank

3a. Name of Mitigation Bank: not applicable

3b. Credits Purchased (attach receipt and letter)	Type	Quantity

3c. Comments:

4. Complete if Making a Payment to In-lieu Fee Program

4a. Approval letter from in-lieu fee program is attached.	☐ Yes
4b. Stream mitigation requested:	linear feet
4c. If using stream mitigation, stream temperature:	☐ warm ☐ cool ☐ cold
4d. Buffer mitigation requested (DWQ only):	square feet
4e. Riparian wetland mitigation requested:	acres
4f. Non-riparian wetland mitigation requested:	acres
4g. Coastal (tidal) wetland mitigation requested:	acres

4h. Comments:

5. Complete if Using a Permittee Responsible Mitigation Plan

5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan.

6. Buffer Mitigation (State Regulated Riparian Buffer Rules) – required by DWQ				
6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation?			☐ Yes	☒ No
6b. If yes, then identify the square feet of impact to each zone of the riparian buffer that requires mitigation. Calculate the amount of mitigation required.				
Zone	6c. Reason for impact	6d. Total impact (square feet)	Multiplier	6e. Required mitigation (square feet)
Zone 1			3 (2 for Catawba)	
Zone 2			1.5	
	6f. **Total buffer mitigation required:**			
6g. If buffer mitigation is required, discuss what type of mitigation is proposed (e.g., payment to private mitigation bank, permittee responsible riparian buffer restoration, payment into an approved in-lieu fee fund).				
6h. Comments:				

E. Stormwater Management and Diffuse Flow Plan (required by DWQ)	
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. If yes, then is a diffuse flow plan included? If not, explain why. Comments: See attached permit drawings and Stormwater Management Plan.	☐ Yes ☐ No
2. Stormwater Management Plan	
2a. What is the overall percent imperviousness of this project?	N/A
2b. Does this project require a Stormwater Management Plan?	☒ Yes ☐ No
2c. If this project DOES NOT require a Stormwater Management Plan, explain why:	
2d. If this project DOES require a Stormwater Management Plan, then provide a brief, narrative description of the plan: See attached permit drawings and stormwater management plan.	
2e. Who will be responsible for the review of the Stormwater Management Plan?	☐ Certified Local Government ☐ DWQ Stormwater Program ☒ DWQ 401 Unit
3. Certified Local Government Stormwater Review	
3a. In which local government's jurisdiction is this project?	not applicable
3b. Which of the following locally-implemented stormwater management programs apply (check all that apply):	☐ Phase II ☐ NSW ☐ USMP ☐ Water Supply Watershed ☐ Other:
3c. Has the approved Stormwater Management Plan with proof of approval been attached?	☐ Yes ☐ No
4. DWQ Stormwater Program Review	
4a. Which of the following state-implemented stormwater management programs apply (check all that apply):	☐ Coastal counties ☐ HQW ☐ ORW ☐ Session Law 2006-246 ☐ Other:
4b. Has the approved Stormwater Management Plan with proof of approval been attached?	☒ Yes ☐ No
5. DWQ 401 Unit Stormwater Review	
5a. Does the Stormwater Management Plan meet the appropriate requirements?	☐ Yes ☐ No N/A
5b. Have all of the 401 Unit submittal requirements been met?	☐ Yes ☐ No N/A

F. Supplementary Information		
1. Environmental Documentation (DWQ Requirement)		
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.) Comments:	☒ Yes	☐ No
2. Violations (DWQ Requirement)		
2a. Is the site in violation of DWQ Wetland Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), DWQ Surface Water or Wetland Standards, or Riparian Buffer Rules (15A NCAC 2B .0200)?	☐ Yes	☒ No
2b. Is this an after-the-fact permit application?	☐ Yes	☒ No
2c. If you answered "yes" to one or both of the above questions, provide an explanation of the violation(s):		
3. Cumulative Impacts (DWQ 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 "yes" to the above, submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent DWQ policy. If you answered "no," provide a short narrative description. Due to the minimal transportation impact resulting from this bridge replacement, this project will neither influence nearby land uses nor stimulate growth. Therefore, a detailed indirect or cumulative effects study will not be necessary.		
4. Sewage Disposal (DWQ Requirement)		
4a. Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility. not applicable		

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
5c. If yes, ind icate the USFWS Field Office you have contacted.	☐ Raleigh ☐ Asheville
5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? NCNHP, USFWS, field surveys	
6. Essential Fish Habitat (Corps Requirement)	
6a. Will this project occur in or near an area designated as essential fish habitat?	☐ Yes ☒ No
6b. What data sources did you use to determine whether your site would impact Essential Fish Habitat? NMFS County Index	
7. Historic or Prehistoric Cultural Resources (Corps Requirement)	
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? NEPA Documentation	
8. Flood Zone Designation (Corps Requirement)	
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	
8c. What source(s) did you use to make the floodplain determination? FEMA Maps	

Dr. Gregory J. Thorpe, Ph D Applicant/Agent's Printed Name	E. L. Fuste Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	7.19.13 Date

North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR LINEAR ROADWAY PROJECTS

(Version 1.2; Released July 2012)

Project/TIP No.: B-5111 **County(ies):** Pitt

General Project Information

Project No.:	B-5111	**Project Type:**	Bridge Replacement	**Date:**	3/6/2013
NCDOT Contact:	MARSHALL CLAWSON, PE	**Contractor / Designer:**			
Address:	1020 Birch Ridge Road, Raleigh, 27610	**Address:**			
Phone:	919-707-6713	**Phone:**			
Email:	mclawson@ncdot.gov	**Email:**			
City/Town:	Stokes	**County(ies):**	Pitt		
River Basin(s):	Tar-Pamlico	**CAMA County?**	No		
Primary Receiving Water:	Briery Swamp	**NCDWQ Stream Index No.:**	28-103-8		
NCDWQ Surface Water Classification for Primary Receiving Water	**Primary:**	Class C			
	Supplemental:	Swamp Waters (Sw)			
Other Stream Classification:	None				
303(d) Impairments:	None				
Buffer Rules in Effect	Tar-Pamlico				

Project Description

Project Length (lin. Miles or feet):	320.00	**Surrounding Land Use:**	Wooded

	Proposed Project	**Existing Site**
Project Built-Upon Area (ac.)	0.18 ac.	0.16 ac.
Typical Cross Section Description:	The typical section consist of a 20 ft EOP with the 3:1 side slope. The replaced bridge is 27'-10" clear roadway.	The typical section consist of a 20 ft EOP.
Average Daily Traffic (veh/hr/day):	Design/Future: 734	Existing: 580

General Project Narrative:

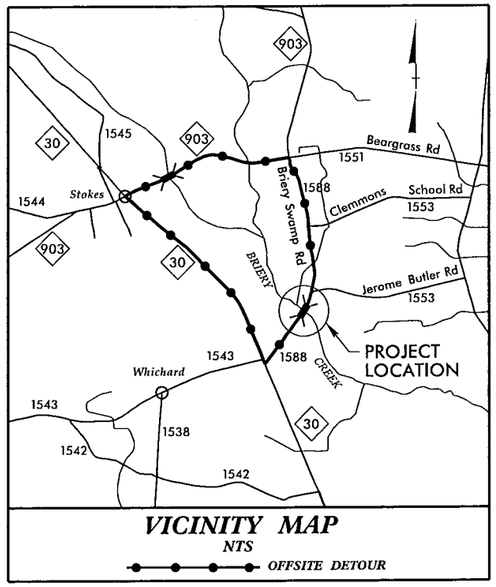
The project B-5111 consists of replacing the existing bridge with a new 117.5' long 21" cored slab bridge with 27.83' clear roadway with 3' offset to the rails. The project area is approximately 0.43 acres. The project drainage system consits of grated inlets with associated pipe systems with rip rap pipe outlet protection. There is a wetland site surrounding the bridge that will be impacted by the proposed project. Impacts have been minimized by using rip rap at the storm systems that outlet into the wetlands. The PSH's are not considered in the wetland to avoid wetland adverse impact.

References

TIP PROJECT: B-5111

CONTRACT: C203300

See Sheet 1-A For Index of Sheets
See Sheet 1-B for Symbology Sheet
See Sheet 1-C for Control Sheet



VICINITY MAP
NTS
OFFSITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PITT COUNTY

LOCATION: BRIDGE NO. 111 OVER BRIERY SWAMP ON SR 1588

TYPE OF WORK: GRADING, DRAINAGE, STRUCTURE AND PAVING

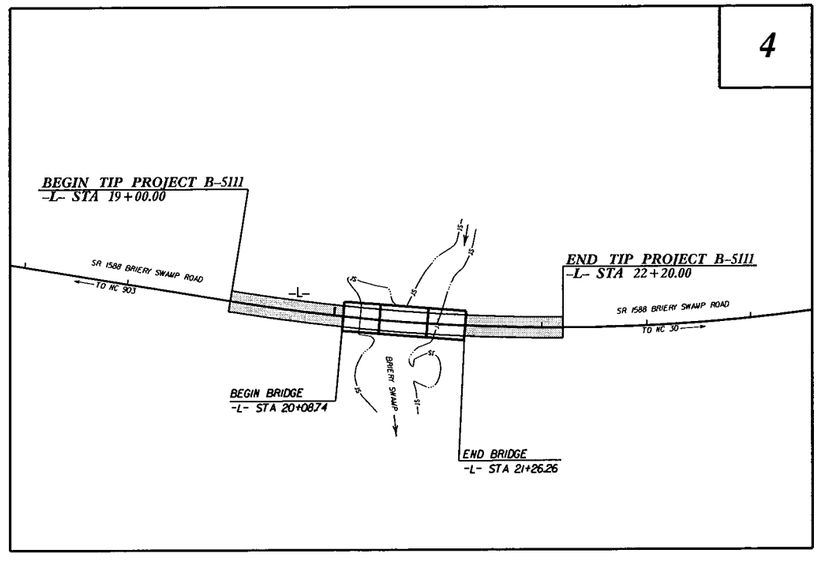
STREAM AND WETLAND PERMIT DRAWINGS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5111	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
42249.1.1	BRZ-1588(2)	PE
42249.2.1	BRZ-1588(2)	RW & UTIL
42249.3.1	BRZ-1588(2)	

Permit Drawing
Sheet 1 of 8

4



NAD 83/
NSRS 2007

NOTE:

1. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III. HOWEVER, CLEARING SHOULD EXTEND TO THE R/W WITHIN THE LIMITS OF THE BRIDGE.

2. THIS PROJECT IS NOT LOCATED WITHIN ANY MUNICIPAL BOUNDARIES.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2013 = 580
ADT 2033 = 734
DHV = 10 %
D = 60 %
T = 5 % *
V = 60 MPH
* TTST = 2% DUAL 3%
FUNC CLASS =
RURAL LOCAL
SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-5111	=	0.039 MILES
LENGTH STRUCTURE TIP PROJECT B-5111	=	0.022 MILES
TOTAL LENGTH OF TIP PROJECT B-5111	=	0.061 MILES

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: AUGUST 22, 2012
LETTING DATE: JANUARY 21, 2014

GARY LOVERING, PE
PROJECT ENGINEER

KEVIN E. MOORE, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION

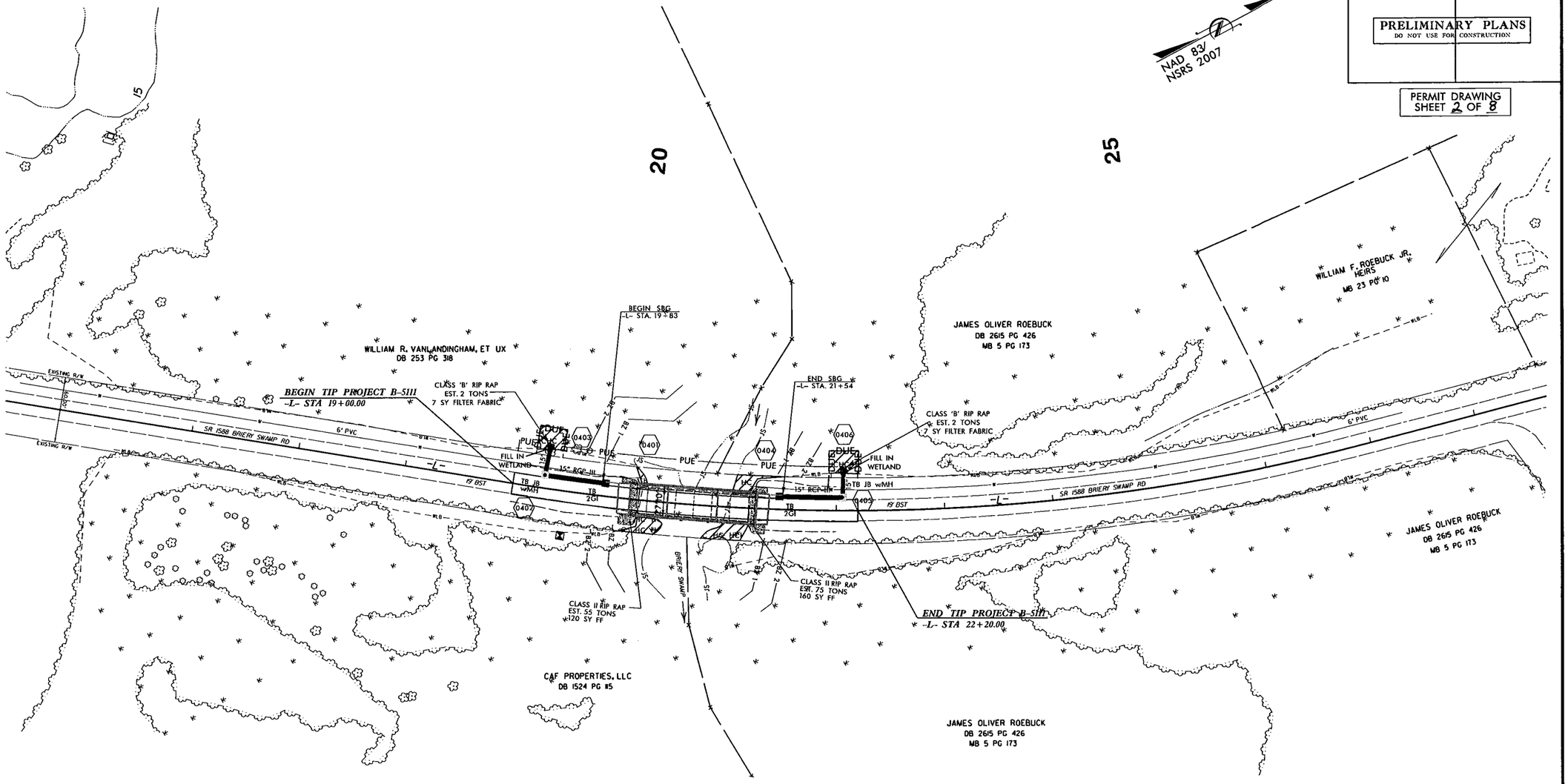
WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
B-5111	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

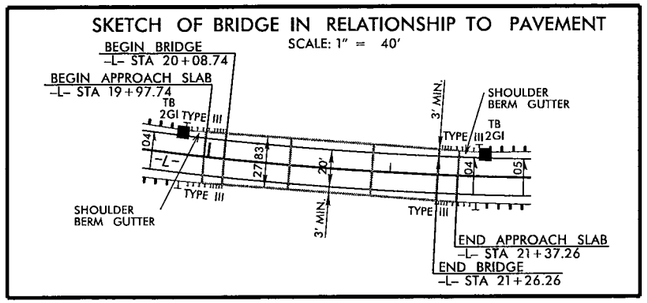
PERMIT DRAWING SHEET 2 OF 8

NAD 83/ NSRS 2007



SKETCH OF BRIDGE IN RELATIONSHIP TO PAVEMENT

SCALE: 1" = 40'



HC HC DENOTES HAND CLEARING

F F DENOTES FILL IN WETLAND

METHOD OF CLEARING – METHOD III

$DATES$
$(USERNAME)$
$FILEL$

H:\SEPA\B-5111_EEP\Environmental\Drawings\B-5111_wet_prm_psh.dgn
3/15/2013

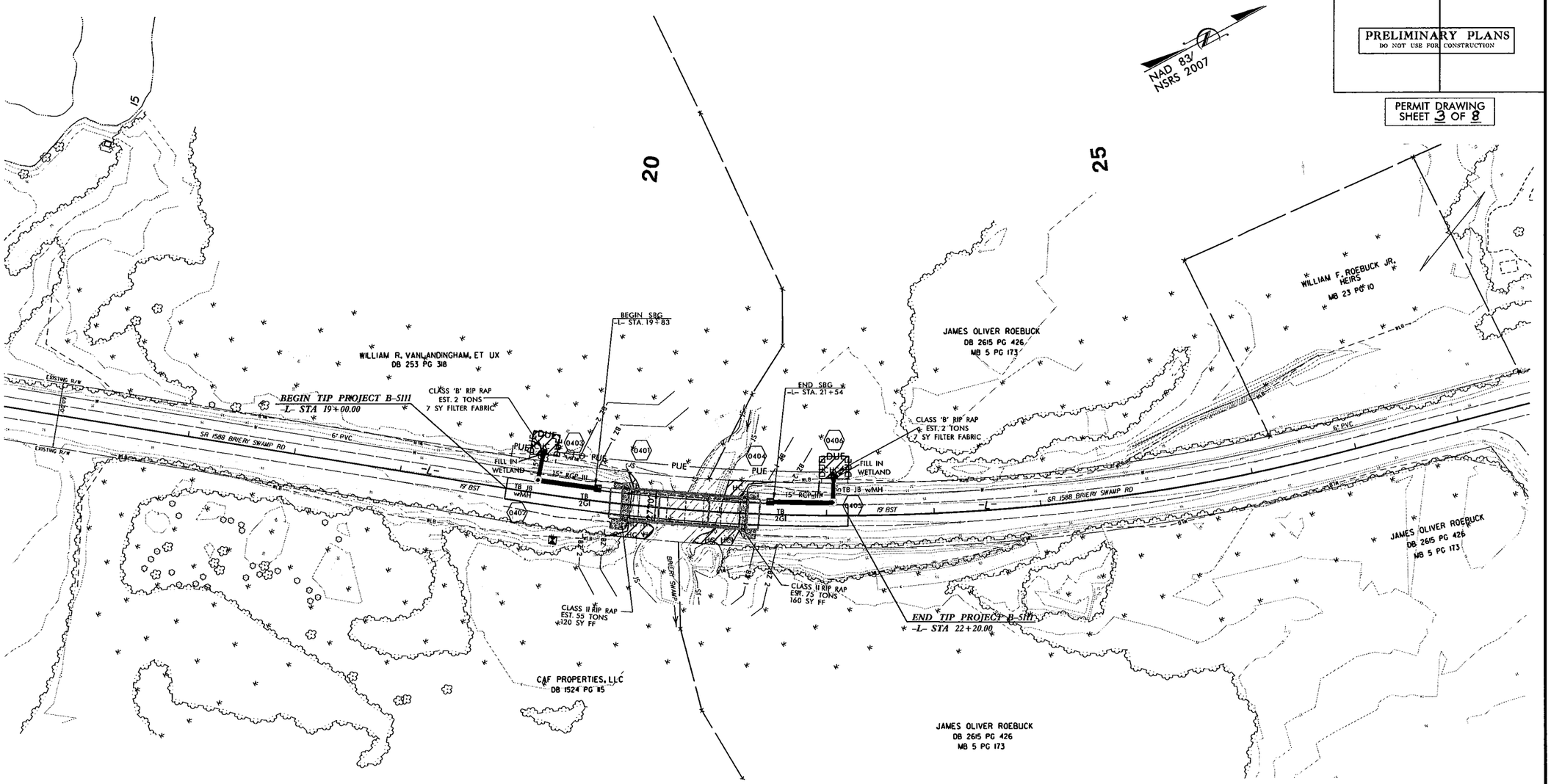
WETLAND AND SURFACE WATER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
B-5111	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

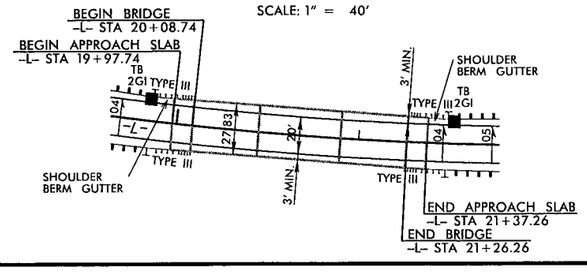
PERMIT DRAWING SHEET 3 OF 8

NAD 83/ NSRS 2007



SKETCH OF BRIDGE IN RELATIONSHIP TO PAVEMENT

SCALE: 1" = 40'



HC HC DENOTES HAND CLEARING

F F DENOTES FILL IN WETLAND

METHOD OF CLEARING – METHOD III

$DATES
$(USERNAME)$
$FILEL$

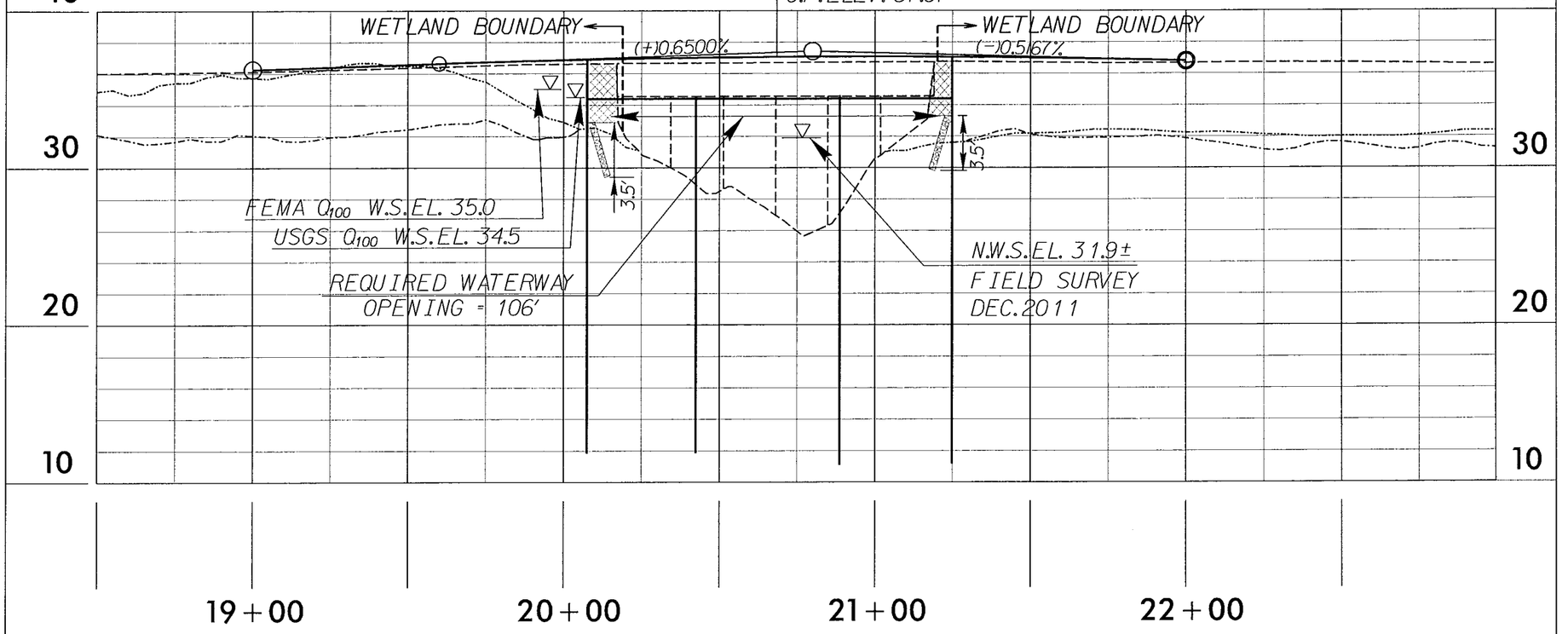
J:\...\PERMIT\...\wetlands\B-5111 wet_permit.dgn 5/15/2013

BEGIN GRADE
–L– STA 19+00.00
ELEV. = 36.26

PI = 20+80.00
EL = 37.43'
VC = 240'
K = 206
V = 65

℄ STA. 20+69.5-L-
3-SPAN (1@35', 1@45', 1@35')
21" CORED SLAB BRIDGE
TOTAL LENGTH = 115', SKEW 90°
G.P. ELEV. 37.07

END GRADE
–L– STA 22+00.00
ELEV. = 36.81



STRUCTURE HYDRAULIC DATA

DESIGN DISCHARGE	= 1200	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 33.8	FT
BASE DISCHARGE	= 1800	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 34.5	FT
OVERTOPPING DISCHARGE	= 2900	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 35.4	FT

PROFILE

NCDOT
DIVISION OF HIGHWAYS
PITT COUNTY
PROJECT: B-5111
REPLACEMENT OF
BRIDGE B-5111
ON SR 1588

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	B-5111	X-1

Permit Drawing
Sheet 5 of 8

WLB

3:1 | 0.040 | 0.040 | 3:1

36.61

20+00.00

WLB

3:1 | 0.040 | 0.040 | 3:1

36.52

19+75.00

WLB

3:1 | 0.040 | 0.040 | 3:1

36.37

19+50.00

WLB

3:1 | 0.039 | 0.039 | 3:1

36.25

19+25.00

WLB

3:1 | 0.030 | 0.030 | 3:1

36.13

19+00.00

BEGIN TIP PROJECT B-5111
-L- STA 19+00.00

36.09

18+75.00

36.04

18+50.00

-L-

7/6/2015
8:58:57 AM
R:\Projects\PERMITS_Environmental\Drawings\B-5111_wet_prm_rpl.dgn

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	B-5111	X-2

Permit Drawing
Sheet 6 of 8

END BRIDGE
-L- STA 21+26.26

WLB

0.040 0.040
36.77
21+25.00

0.040 0.040
30.60
21+00.00

0.040 0.040
25.96
20+75.00

0.040 0.040
28.50
20+50.00

0.040 0.040
30.83
20+25.00

WLB

WLB

0.040 0.040
36.63
20+10.00

BEGIN BRIDGE
-L- STA 20+08.74

-L-

3/6/2013
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[10.00,10.00]

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	B-5111	X-3

Permit Drawing
Sheet 7 of 8

WLB

WLB

22+25.00
END TIP PROJECT B-5111
-L- STA 22+20.00

WLB

WLB

0.060 0.060
3:1 2.5:1
36.68

22+00.00

WLB

WLB

0.051 0.051
3:1 3:1
36.66

21+75.00

WLB

0.041 0.041
3:1 3:1
36.72

21+50.00

-L-

3/6/2003
Plotted by: jrs
Plotted at: 7:44:35 AM
J:\projects\PERMITS_Environmental\Drawings\B-5111_wet_prm_pl.dgn

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	WETLAND IMPACTS: Temp. Fill In Wetlands (ac)	WETLAND IMPACTS: Excavation in Wetlands (ac)	WETLAND IMPACTS: Mechanized Clearing in Wetlands (ac)	WETLAND IMPACTS: Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	SURFACE WATER IMPACTS: Temp. SW impacts (ac)	SURFACE WATER IMPACTS: Existing Channel Impacts Permanent (ft)	SURFACE WATER IMPACTS: Existing Channel Impacts Temp. (ft)	SURFACE WATER IMPACTS: Natural Stream Design (ft)
	-L- STA 20+12 LT to 21+52 LT	3 SPAN (1@35', 1@45, 1@35') 21" CORED SLAB BRIDGE					0.01					
	-L- STA 20+00 RT to 21+20 RT	3 SPAN (1@35', 1@45, 1@35') 21" CORED SLAB BRIDGE					0.02					
	-L- STA 19+17 LT to 19+43 LT	RIPRAP PADS	<0.01				0.01					
	-L- STA 21+92 LT to 22+21 LT	RIPRAP PADS	<0.01				0.01					
TOTALS:			<0.01				0.05					

Note: < 0.01 Acre of temporary fill in Wetlands in hand clearing areas for erosion control measures.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PITTS COUNTY
B-5111

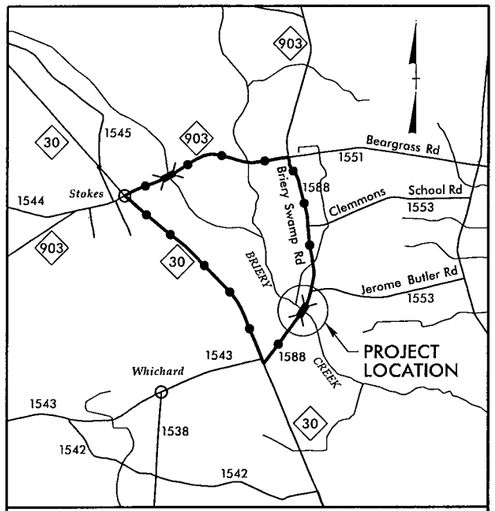
SHEET 8 of 8 3/28/2013

ATN Revised 3/31/05

TIP PROJECT: B-5111

CONTRACT: C203300

See Sheet 1-A For Index of Sheets
See Sheet 1-B for Symbology Sheet
See Sheet 1-C for Control Sheet



VICINITY MAP
NTS
OFFSITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PITT COUNTY

LOCATION: BRIDGE NO. 111 OVER BRIERY SWAMP ON SR 1588

TYPE OF WORK: GRADING, DRAINAGE, STRUCTURE AND PAVING

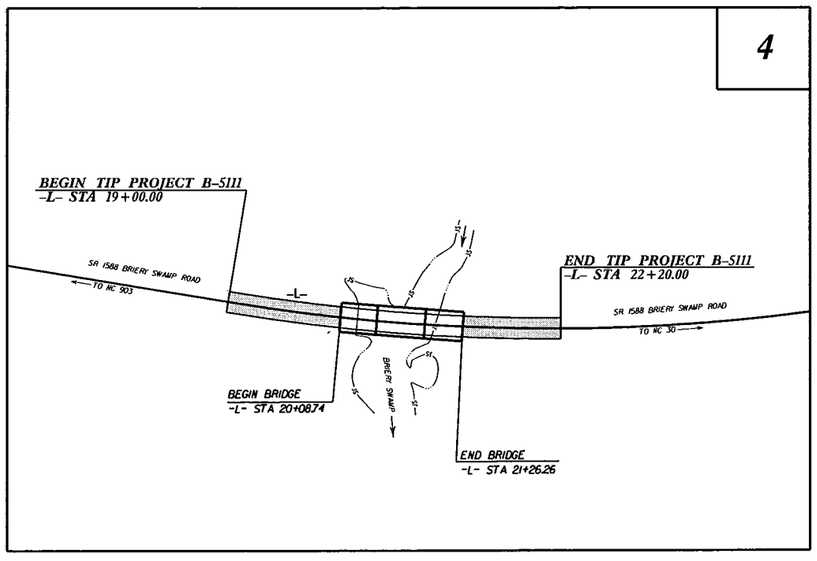
BUFFER PERMIT DRAWINGS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5111	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
42249.1.1	BRZ-1588(2)	PE
42249.2.1	BRZ-1588(2)	RW & UTIL
42249.3.1	BRZ-1588(2)	

Buffer Drawing
Sheet 1 of 3

4



NAD 83/
NSRS 2007

NOTE:

1. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III. HOWEVER, CLEARING SHOULD EXTEND TO THE RW WITHIN THE LIMITS OF THE BRIDGE.

2. THIS PROJECT IS NOT LOCATED WITHIN ANY MUNICIPAL BOUNDARIES.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2013 = 580
ADT 2033 = 734
DHV = 10 %
D = 60 %
T = 5 % *
V = 60 MPH
* TTST = 2% DUAL 3%
FUNC CLASS =
RURAL LOCAL
SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-5111 = 0.039 MILES
LENGTH STRUCTURE TIP PROJECT B-5111 = 0.022 MILES
TOTAL LENGTH OF TIP PROJECT B-5111 = 0.061 MILES

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
AUGUST 22, 2012

LETTING DATE:
JANUARY 21, 2014

GARY LOVERING, PE
PROJECT ENGINEER

KEVIN E. MOORE, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION

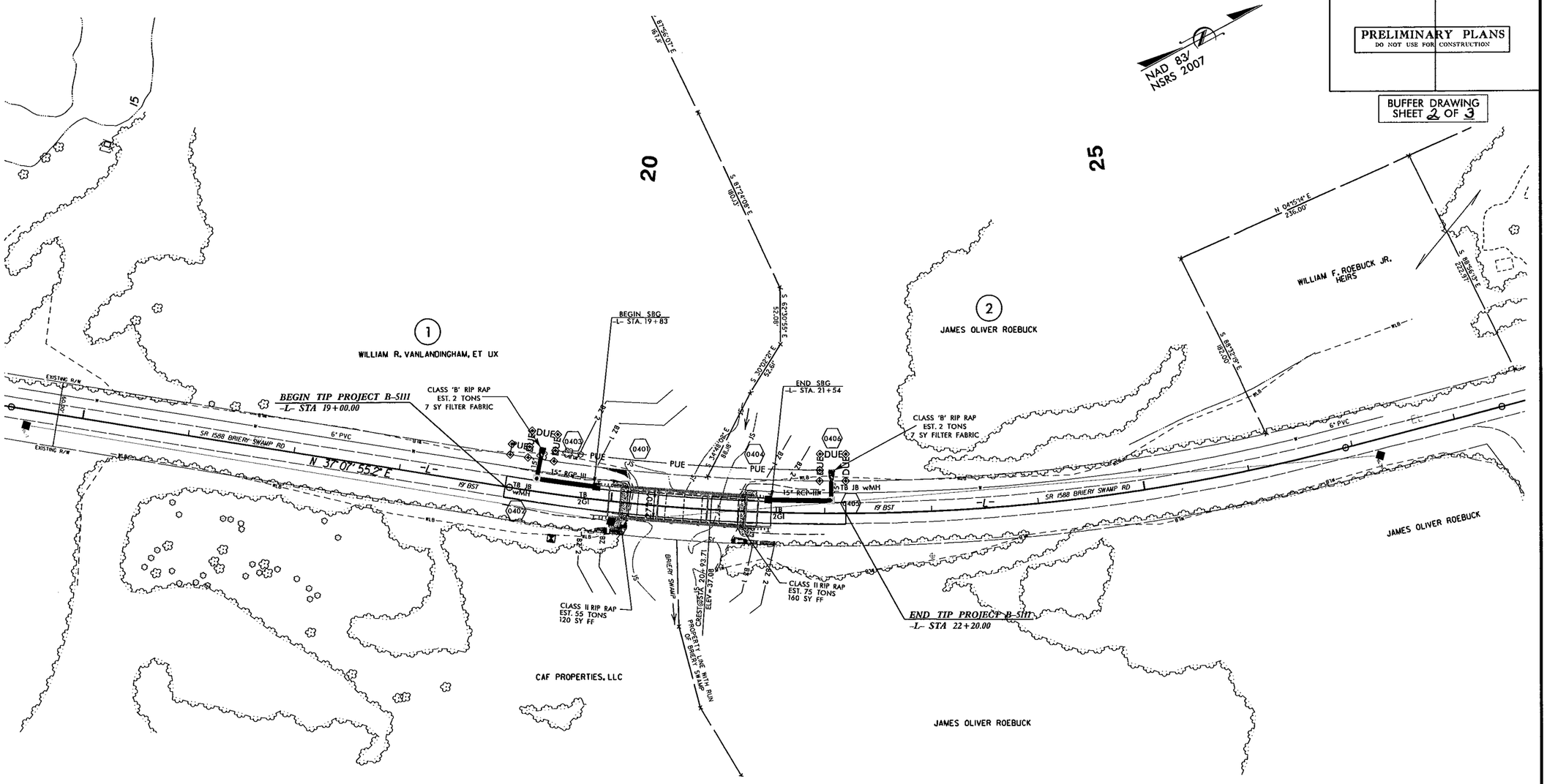
BUFFER IMPACTS PERMIT

PROJECT REFERENCE NO.	SHEET NO.
B-5111	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

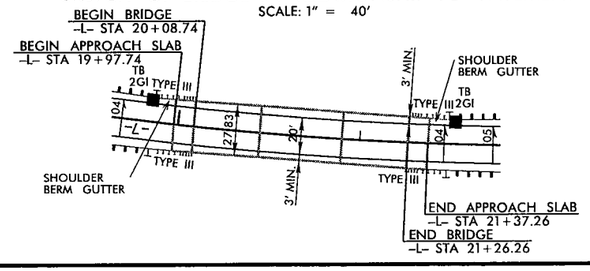
BUFFER DRAWING SHEET 2 OF 3

NAD 83/ NSRS 2007



SKETCH OF BRIDGE IN RELATIONSHIP TO PAVEMENT

SCALE: 1" = 40'



ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

$DATE$
$(USERNAME)$
$FILEL$

5/14/99

3/8/2013
Dwg:\EPRM\[...]\Environmental\Drawings\B-5111_wet_buf.psh.dgn

BUFFER IMPACTS SUMMARY

SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	IMPACT									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE				
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)
	Roadway Fill	STA. -L- 19+87 to 20+08 LT	X			41		41					
	Bridge Impact	STA. -L- 20+08 to 20+14 LT		X		20		20					
	Roadway Fill	STA. -L- 19+80 To 20+09 RT	X			75	46	121					
	Bridge Impact	STA. -L- 20+09 To 20+17 RT		X		56		56					
	Roadway Fill	STA. -L- 21+25.50 To 21+55 RT	X			38	67	105					
	Bridge Impact	STA. -L- 21+14 To 21+25.50 RT		X		56		56					
TOTAL:						286	113	399					

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

PITT COUNTY
WBS - 42249.1.1 (B-5111)

SHEET 3 of 3 5.9.2013

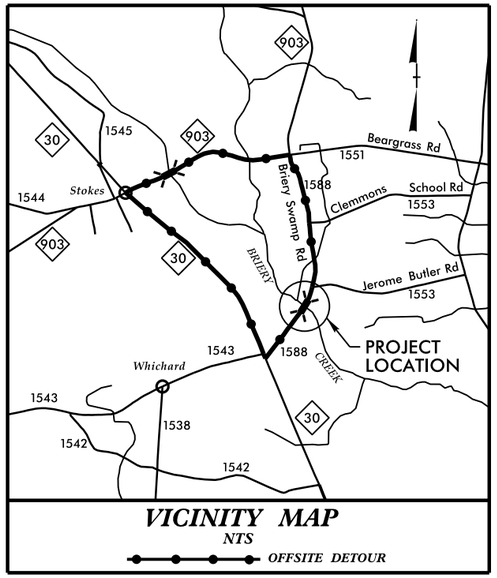
Rev. May 2006

09/28/99

TIP PROJECT: B-5111

CONTRACT: C203300

See Sheet 1-A For Index of Sheets
See Sheet 1-B for Symbology Sheet
See Sheet 1-C for Control Sheet



VICINITY MAP
NTS
OFFSITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PITT COUNTY

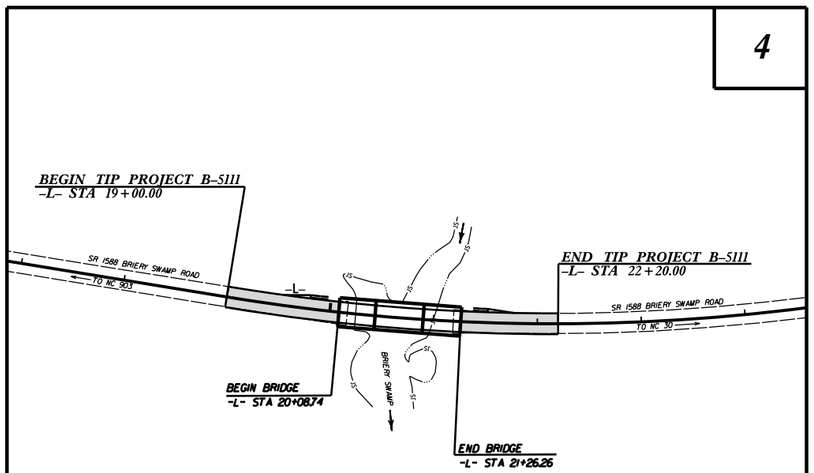
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5111	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
42249.1.1	BRZ-1588(2)	PE
42249.2.1	BRZ-1588(2)	RW & UTIL
42249.3.1	BRZ-1588(2)	

LOCATION: BRIDGE NO. 111 OVER BRIERY SWAMP ON SR 1588

TYPE OF WORK: GRADING, DRAINAGE, STRUCTURE AND PAVING

4



NAD 83/
NSRS 2007

NOTE:

1. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III. HOWEVER, CLEARING SHOULD EXTEND TO THE R/W WITHIN THE LIMITS OF THE BRIDGE.

2. THIS PROJECT IS NOT LOCATED WITHIN ANY MUNICIPAL BOUNDARIES.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2013 = 580
ADT 2033 = 734
DHV = 10 %
D = 60 %
T = 5 % *
V = 60 MPH
* TTST = 2% DUAL 3%
FUNC CLASS =
RURAL LOCAL
SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-5111	=	0.039 MILES
LENGTH STRUCTURE TIP PROJECT B-5111	=	0.022 MILES
TOTAL LENGTH OF TIP PROJECT B-5111	=	0.061 MILES

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
AUGUST 22, 2012

LETTING DATE:
JANUARY 21, 2014

GARY LOVERING, PE
PROJECT ENGINEER

KEVIN E. MOORE, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION

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$$$$USERNAME$$$$

04/16/11

PROJECT REFERENCE NO.	SHEET NO.
B-5111	1-B

Note: Not to Scale

****S.U.E. = Subsurface Utility Engineering***

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB
- Known Soil Contamination: Boundary or Site
- Potential Soil Contamination: Boundary or Site

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line
- Proposed Right of Way Line with Iron Pin and Cap Marker
- Proposed Right of Way Line with Concrete or Granite Marker
- Existing Control of Access
- Proposed Control of Access
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Drainage / Utility Easement — DUE
- Proposed Permanent Utility Easement — PUE
- Proposed Temporary Utility Easement — TUE
- Proposed Aerial Utility Easement — AUE
- Proposed Permanent Easement with Iron Pin and Cap Marker

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Curb Cut Future Ramp — CCFR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H-Frame Pole
- Recorded U/G Power Line — P
- Designated U/G Power Line (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Booth
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- Recorded U/G Telephone Cable — T
- Designated U/G Telephone Cable (S.U.E.*) — T
- Recorded U/G Telephone Conduit — TC
- Designated U/G Telephone Conduit (S.U.E.*) — TC
- Recorded U/G Fiber Optics Cable — T FO
- Designated U/G Fiber Optics Cable (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- Recorded U/G Water Line — W
- Designated U/G Water Line (S.U.E.*) — W
- Above Ground Water Line — A/G Water

TV:

- TV Satellite Dish
- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- Recorded U/G TV Cable — TV
- Designated U/G TV Cable (S.U.E.*) — TV
- Recorded U/G Fiber Optic Cable — TV FO
- Designated U/G Fiber Optic Cable (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- Recorded U/G Gas Line — G
- Designated U/G Gas Line (S.U.E.*) — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- Recorded SS Forced Main Line — FSS
- Designated SS Forced Main Line (S.U.E.*) — FSS

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line — ?UTL
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- U/G Test Hole (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

6/2/99

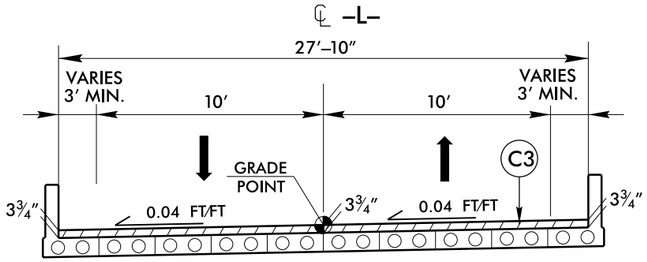
PROJECT REFERENCE NO.	SHEET NO.
B-5111	2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

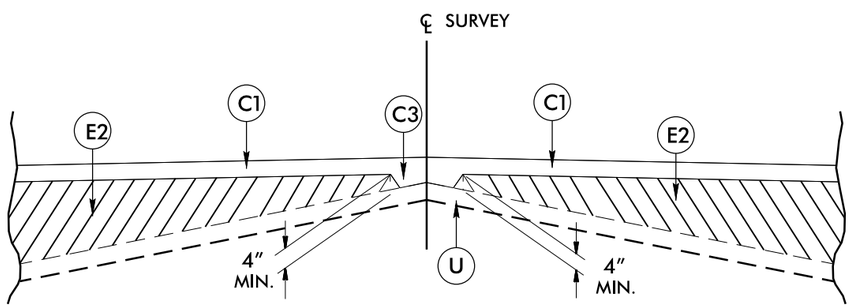
PAVEMENT SCHEDULE
FINAL DESIGN

C1	PROP. APPROX. 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 2½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 4" IN DEPTH OR GREATER THAN 5½" IN DEPTH.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL)

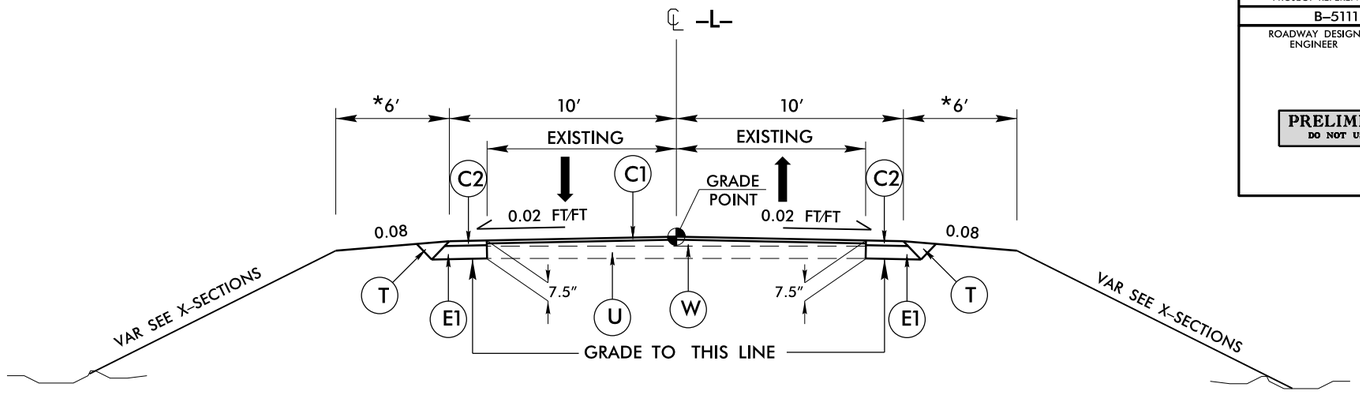
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



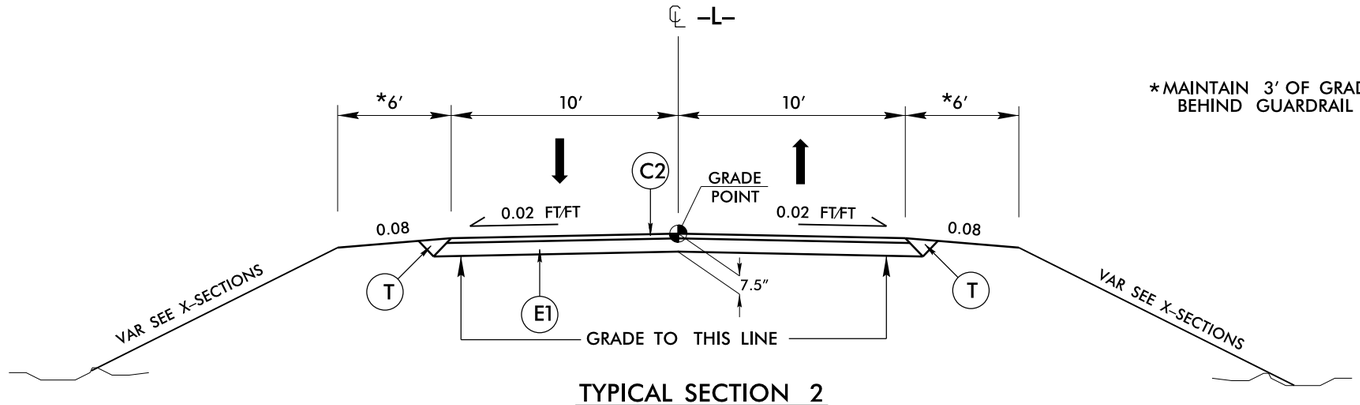
BRIDGE TYPICAL
–L– STA 20+08.74 (BEGIN BRIDGE) TO –L– STA 21+26.26(END BRIDGE)



STANDARD WEDGING DETAIL

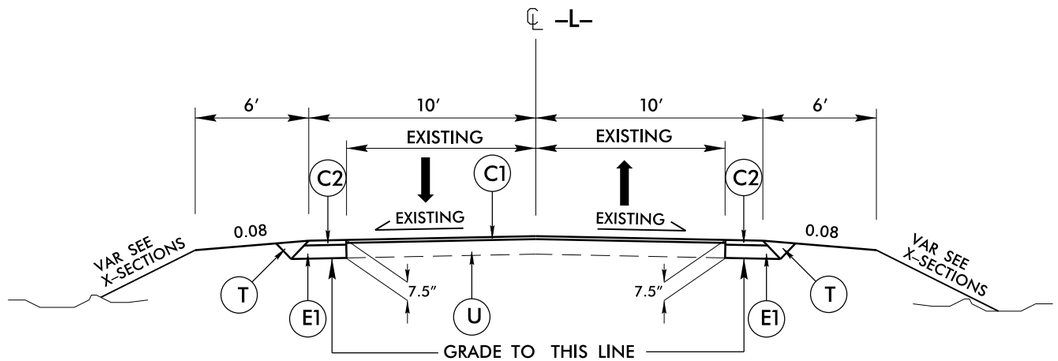


TYPICAL SECTION 1
–L– STA 19+00.00 TO –L– STA 19+80
–L– STA 21+50 TO –L– STA 22+00.00



*MAINTAIN 3' OF GRADED SHOULDER BEHIND GUARDRAIL INSTALLATION

TYPICAL SECTION 2
–L– STA 19+80 TO –L– STA 20+08.74 (BEGIN BRIDGE)
–L– STA 21+26.26 (END BRIDGE) TO –L– STA 21+50

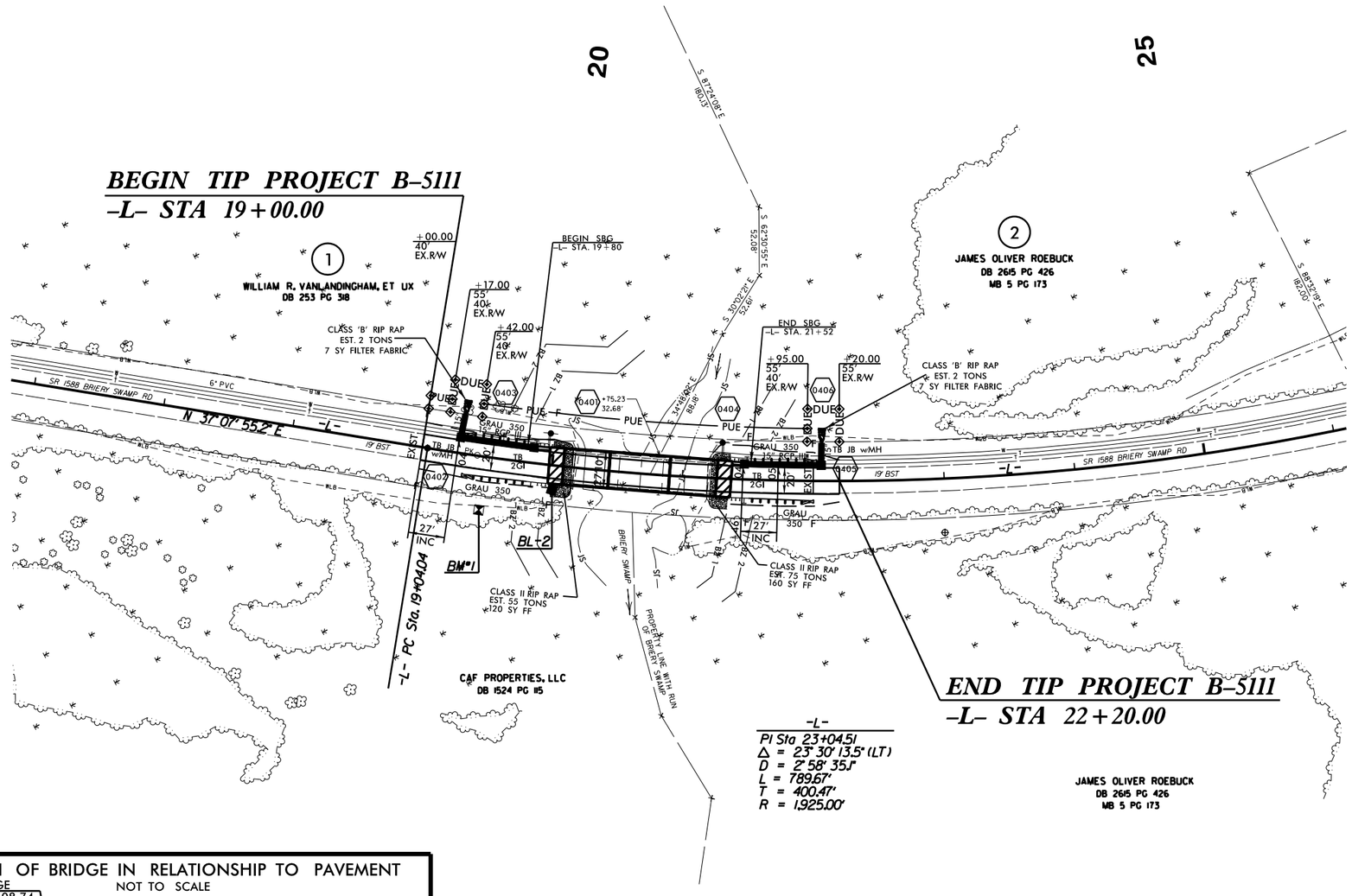


TYPICAL SECTION 3
–L– STA 22+00.00 TO –L– STA 22+20.00

PROJECT REFERENCE NO.	SHEET NO.
B-5111	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

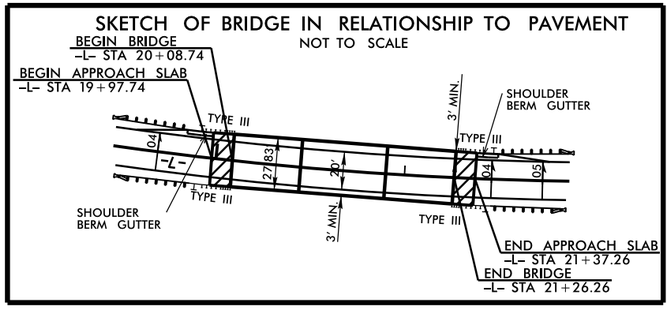
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/
NSRS 2007



SKETCH OF BRIDGE IN RELATIONSHIP TO PAVEMENT

NOT TO SCALE



BRIDGE APPROACH SLAB

FOR -L- PROFILE, SEE SHEET 5

5/14/99

08-APR-2013 09:28
R:\Roadway Projects\B5111_rdy_psh_s4.dgn
$$$$USERNAME$$$$