



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE  
GOVERNOR

EUGENE A. CONTI, JR.  
SECRETARY

March 08, 2011

U. S. Army Corps of Engineers  
Regulatory Field Office  
69 Darlington Ave.  
Wilmington, NC 28402-1890

ATTN: Mr. Ronnie Smith  
NCDOT Coordinator

Dear Sir:

**Subject: Application for Section 404 Nationwide Permit 3 for the replacement of Bridge No. 150 over the South River on SR 1502 in Bladen County. State Project No. 42257.1.1; Federal Aid Project Number BRZ-1502(2); TIP No. B-5116.**

The North Carolina Department of Transportation (NCDOT), Division of Highways, in consultation with the Federal Highway Administration (FHWA), proposes to replace Bridge No. 150 in Bladen County. The proposed let date for the project is December 20, 2011 with a review date of November 1, 2011; however, the let date may advance as additional funds become available.

Please find enclosed a Pre-Construction Notification (PCN) form, permit drawings, utility drawings, roadway plans, a copy of the State Stormwater Management Plan, and EEP Mitigation Acceptance Letter. A Programmatic Categorical Exclusion (PCE) was completed for this project on August 9, 2010, and distributed shortly thereafter. Additional copies are available upon request.

#### Regulatory Approvals

**Section 404 Permit:** NCDOT requests that a Nationwide Permit 3 be issued to authorize the impacts resulting from this project in accordance with 23 CFR 771.115(b).

**Section 401 Permit:** We anticipate 401 Certification number 3687 will apply to this project. All general conditions of the Water Quality Certification will be met therefore, we are not

requesting written approval from NCDWQ. In accordance with 15A NCAC 2H, Section .0500(a), we are providing two copies of this application to the NCDWQ for their review.

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 call or email Dr. Lance P. Fontaine at 919-707-6118 or [lfontaine@ncdot.gov](mailto:lfontaine@ncdot.gov).

Sincerely,



(for)

Gregory J. Thorpe, Ph.D. Environmental Management Director  
Project Development and Environmental Analysis Branch

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:	<input checked="" type="checkbox"/> Section 404 Permit	<input type="checkbox"/> 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?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
1d. Type(s) of approval sought from the DWQ (check all that apply):		
<input type="checkbox"/> 401 Water Quality Certification – Regular <input type="checkbox"/> Non-404 Jurisdictional General Permit <input type="checkbox"/> 401 Water Quality Certification – Express <input type="checkbox"/> 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: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	For the record only for Corps Permit: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
1g. Is the project located in any of NC's twenty coastal counties. If yes, answer 1h below.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
1h. Is the project located within a NC DCM Area of Environmental Concern (AEC)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

#### 2. Project Information

2a. Name of project:	Replacement of Bridge No. 150 over South River Overflow on SR 1502
2b. County:	Bladen
2c. Nearest municipality / town:	Garland
2d. Subdivision name:	<i>not applicable</i>
2e. NCDOT only, T.I.P or state project no:	B-5116

#### 3. Owner Information

3a. Name(s) on Recorded Deed:	North Carolina Department of Transportation
3b. Deed Book and Page No.	<i>not applicable</i>
3c. Responsible Party (for LLC if applicable):	<i>not applicable</i>
3d. Street address:	1598 Mail Service Center
3e. City, state, zip:	Raleigh, NC 27699-1598
3f. Telephone no.:	(919) 707-6118
3g. Fax no.:	(919) 212-5785
3h. Email address:	lfontaine@ncdot.gov

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

<b>B. Project Information and Prior Project History</b>	
<b>1. Property Identification</b>	
1a. Property identification no. (tax PIN or parcel ID):	<i>not applicable</i>
1b. Site coordinates (in decimal degrees):	Latitude: 34.834719 (DD.DDDDDD) Longitude: - 78.484826 (-DD.DDDDDD)
1c. Property size:	1.6 acres
<b>2. Surface Waters</b>	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	South River
2b. Water Quality Classification of nearest receiving water:	C; Sw; ORW
2c. River basin:	Cape Fear
<b>3. Project Description</b>	
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 on site include maintained/disturbed, silviculture, swamp, and woodland. General land use is agricultural, cropland, animal operations, and pasture.	
3b. List the total estimated acreage of all existing wetlands on the property: 0.60	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 80	
3d. Explain the purpose of the proposed project: To replace a structurally deficient bridge.	
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing a 169-foot bridge with a 193-foot, 4-span bridge on the existing alignment with an off-site detour. Standard road building equipment, such as trucks, dozers, and cranes will be used. Two power poles (South River EMC) will be relocated to the right of way line, outside of the wetland boundary. Hand clearing for overhead powerlines will be required.	
<b>4. Jurisdictional Determinations</b>	
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:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
4b. If the Corps made the jurisdictional determination, what type of determination was made?	<input checked="" type="checkbox"/> Preliminary <input type="checkbox"/> Final
4c. If yes, who delineated the jurisdictional areas? Name (if known): Fontaine	Agency/Consultant Company: NCDOT Other:
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation. February 23, 2010.	
<b>5. Project History</b>	
5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
5b. If yes, explain in detail according to "help file" instructions.	
<b>6. Future Project Plans</b>	
6a. Is this a phased project?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6b. If yes, explain.	

<b>C. Proposed Impacts Inventory</b>						
<b>1. Impacts Summary</b>						
1a. Which sections were completed below for your project (check all that apply):						
<input checked="" type="checkbox"/> Wetlands		<input type="checkbox"/> Streams - tributaries		<input type="checkbox"/> Buffers		
<input type="checkbox"/> Open Waters		<input type="checkbox"/> Pond Construction				
<b>2. Wetland Impacts</b>						
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 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Roadway Fill	Riparian	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	0.08	
Site 2 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Mechanized Cleaning	Riparian	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	0.12	
Site 3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 4 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 5 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 6 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
<b>2g. Total wetland impacts</b>					0.20 Permanent 0.00 Temporary	
2h. Comments: Impacts of piers to surface waters = +/- 35 sf. Hand clearing for overhead powerline utility = 0.16 ac.						
<b>3. Stream Impacts</b>						
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 1 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 2 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 4 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 5 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 6 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
<b>3h. Total stream and tributary impacts</b>						X Perm X Temp
3i. Comments:						

<b>4. Open Water Impacts</b>								
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.								
<b>4a.</b> Open water impact number – Permanent (P) or Temporary (T)	<b>4b.</b> Name of waterbody (if applicable)	<b>4c.</b> Type of impact	<b>4d.</b> Waterbody type	<b>4e.</b> Area of impact (acres)				
O1 <input type="checkbox"/> P <input type="checkbox"/> T								
O2 <input type="checkbox"/> P <input type="checkbox"/> T								
O3 <input type="checkbox"/> P <input type="checkbox"/> T								
O4 <input type="checkbox"/> P <input type="checkbox"/> T								
<b>4f. Total open water impacts</b>				X Permanent X Temporary				
4g. Comments:								
<b>5. Pond or Lake Construction</b>								
If pond or lake construction proposed, then complete the chart below.								
<b>5a.</b> Pond ID number	<b>5b.</b> Proposed use or purpose of pond	<b>5c.</b> Wetland Impacts (acres)			<b>5d.</b> Stream Impacts (feet)			<b>5e.</b> Upland (acres)
		Flooded	Filled	Excavated	Flooded	Filled	Excavated	Flooded
P1								
P2								
<b>5f. Total</b>								
5g. Comments:								
<b>5h. Is a dam high hazard permit required?</b>		<input type="checkbox"/> Yes <input type="checkbox"/> No      If yes, permit ID no:						
<b>5i. Expected pond surface area (acres):</b>								
<b>5j. Size of pond watershed (acres):</b>								
<b>5k. Method of construction:</b>								

**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?		<input type="checkbox"/> Neuse <input type="checkbox"/> Catawba		<input type="checkbox"/> Tar-Pamlico <input type="checkbox"/> Randleman		<input type="checkbox"/> 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 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No				
B2 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No				
B3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No				
<b>6h. Total buffer impacts</b>							
6i. Comments:							




<b>D. Impact Justification and Mitigation</b>		
<b>1. Avoidance and Minimization</b>		
1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing project. The proposed bridge is 24 feet longer than the existing bridge; the proposed bridge will be at approximately the same grade as the existing structure; an off site detour will be used, 2:1 fill slopes with rock plating where practicable; number of piers reduced from 9 to 3.		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques. Sediment and erosion control measures will be employed; Design Standards in Sensitive Watersheds will be implemented; top-down construction; no deck drains; no temporary stream access required to remove existing bridge nor to construct the proposed bridge.		
<b>2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State</b>		
2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, explain:	
2b. If yes, mitigation is required by (check all that apply):	<input type="checkbox"/> DWQ <input checked="" type="checkbox"/> Corps	
2c. If yes, which mitigation option will be used for this project?	<input type="checkbox"/> Mitigation bank <input checked="" type="checkbox"/> Payment to in-lieu fee program <input type="checkbox"/> Permittee Responsible Mitigation	
<b>3. Complete if Using a Mitigation Bank</b>		
3a. Name of Mitigation Bank: not applicable		
3b. Credits Purchased (attach receipt and letter)	Type	Quantity
3c. Comments:		
<b>4. Complete if Making a Payment to In-lieu Fee Program</b>		
4a. Approval letter from in-lieu fee program is attached.	<input checked="" type="checkbox"/> Yes	
4b. Stream mitigation requested:	0 linear feet	
4c. If using stream mitigation, stream temperature:	<input type="checkbox"/> warm <input type="checkbox"/> cool <input type="checkbox"/> cold	
4d. Buffer mitigation requested (DWQ only):	0 square feet	
4e. Riparian wetland mitigation requested:	0.40 acres	
4f. Non-riparian wetland mitigation requested:	0 acres	
4g. Coastal (tidal) wetland mitigation requested:	0 acres	
4h. Comments: NC EEP will provide riparian wetland mitigation.		
<b>5. Complete if Using a Permittee Responsible Mitigation Plan</b>		
5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan.		

<b>6. Buffer Mitigation (State Regulated Riparian Buffer Rules) – required by DWQ</b>					
6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation?				<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> 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		
			<b>6f. Total buffer mitigation required:</b>		
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:					

<b>E. Stormwater Management and Diffuse Flow Plan (required by DWQ)</b>	
<b>1. Diffuse Flow Plan</b>	
1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
1b. If yes, then is a diffuse flow plan included? If no, explain why. Comments: if yes, see attached permit drawings.	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>2. Stormwater Management Plan</b>	
2a. What is the overall percent imperviousness of this project?	N/A
2b. Does this project require a Stormwater Management Plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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.	
2e. Who will be responsible for the review of the Stormwater Management Plan?	<input type="checkbox"/> Certified Local Government <input type="checkbox"/> DWQ Stormwater Program <input checked="" type="checkbox"/> DWQ 401 Unit
<b>3. Certified Local Government Stormwater Review</b>	
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):	<input type="checkbox"/> Phase II <input type="checkbox"/> NSW <input type="checkbox"/> USMP <input type="checkbox"/> Water Supply Watershed <input type="checkbox"/> Other
3c. Has the approved Stormwater Management Plan with proof of approval been attached?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>4. DWQ Stormwater Program Review</b>	
4a. Which of the following state-implemented stormwater management programs apply (check all that apply):	<input type="checkbox"/> Coastal counties <input type="checkbox"/> Hqw <input checked="" type="checkbox"/> ORW <input type="checkbox"/> Session Law 2006-246 <input type="checkbox"/> Other:
4b. Has the approved Stormwater Management Plan with proof of approval been attached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>5. DWQ 401 Unit Stormwater Review</b>	
5a. Does the Stormwater Management Plan meet the appropriate requirements?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5b. Have all of the 401 Unit submittal requirements been met?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

<b>F. Supplementary Information</b>	
<b>1. Environmental Documentation (DWQ Requirement)</b>	
1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>2. Violations (DWQ Requirement)</b>	
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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2b. Is this an after-the-fact permit application?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2c. If you answered "yes" to one or both of the above questions, provide an explanation of the violation(s):	
<b>3. Cumulative Impacts (DWQ Requirement)</b>	
3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.	
<b>4. Sewage Disposal (DWQ Requirement)</b>	
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	

<b>5. Endangered Species and Designated Critical Habitat (Corps Requirement)</b>		
5a. Will this project occur in or near an area with federally protected species or habitat?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5c. If yes, indicate the USFWS Field Office you have contacted.	<input checked="" type="checkbox"/> Raleigh <input type="checkbox"/> 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.		
<b>6. Essential Fish Habitat (Corps Requirement)</b>		
6a. Will this project occur in or near an area designated as essential fish habitat?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
6b. What data sources did you use to determine whether your site would impact Essential Fish Habitat? NMFS County Index		
<b>7. Historic or Prehistoric Cultural Resources (Corps Requirement)</b>		
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)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
7b. What data sources did you use to determine whether your site would impact historic or archeological resources? NEPA Documentation		
<b>8. Flood Zone Designation (Corps Requirement)</b>		
8a. Will this project occur in a FEMA-designated 100-year floodplain?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> 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	 Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	3.9.11 Date

RECEIVED

MAR 08 2010

REG. WILM. FLD. OFC.

**ATTACHMENT**

**PRELIMINARY JURISDICTIONAL DETERMINATION FORM**

**BACKGROUND INFORMATION**

- A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): February 23, 2010**
- B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:**  
Lance P. Fontaine, Ph.D., NCDOT – NEU, 1598 Mail Service Center,  
Raleigh, NC 27699-1598
- C. DISTRICT OFFICE, FILE NAME, AND NUMBER: SAW-2010-00123**  
(NCDOT/ B-5116/ replace bridge no. 150 over South River on Boykin  
Bridge Road (SR 1502) in Bladen County/ Div. 6)
- D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION: B-5116**  
Replace Bridge No. 150 over South River Overflow on SR 1502

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

State: NC County/parish/borough: Bladen City: North-west of Garland  
 Center coordinates of site (lat/long in degree decimal format):  
 Lat. 34.834816 ° N, Long. -78.48473 ° W. Universal Transverse Mercator:  
 Name of nearest waterbody: South River

Identify (estimate) amount of waters in the review area:

Non-wetland waters: 130 linear feet: 70 width (ft) and/or \_\_\_ acres.

Cowardin Class: Riverine

Stream Flow: Perennial

Wetlands: 2.4 acre

Cowardin Class: Forested

Name of any water bodies on the site that have been identified as Section 10 waters:

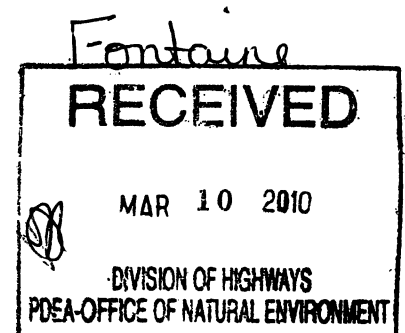
Tidal: N/A

Non-Tidal: N/A

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

Office (Desk) Determination. Date:

Field Determination. Date(s): January 20, 2010



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

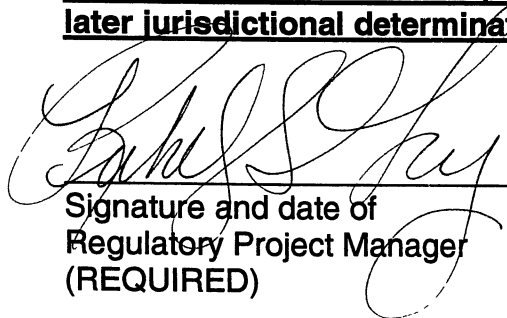
2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there "*may be*" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

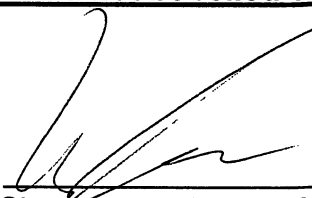
**SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply**

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

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: 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: Garland.
- USDA Natural Resources Conservation Service Soil Survey. Citation: Bladen County.
- National wetlands inventory map(s). Cite name: .
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): Figure 3 (Sampson County SID\_2002).
  - or  Other (Name & Date): Figure 1 – Project Vicinity Map .
- Previous determination(s). File no. and date of response letter: .
- Other information (please specify): .

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

 3/9/10  
Signature and date of  
Regulatory Project Manager  
(REQUIRED)

 03 March 2010  
Signature and date of  
person requesting preliminary JD  
(REQUIRED, unless obtaining  
the signature is impracticable)





March 1, 2011

Mr. Gregory J. Thorpe, Ph.D.  
Manager, Project Development and Environmental Analysis Branch  
North Carolina Department of Transportation  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548

Dear Dr. Thorpe:

Subject: EEP Mitigation Acceptance Letter:

B-5116, Replace Bridge Number 150 on SR 1502 over the South River Overflow  
Winton, Bladen County

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the compensatory riparian wetland mitigation for the subject project. Based on the information supplied by you on March 1, 2011, the impacts are located in CU 03030006 of the Cape Fear River Basin in the Southern Inner Coastal Plain (NOCP) Eco-Region, and are as follows:

Cape Fear 03030006 SICP	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non- Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	0	0	0	0.20	0	0	0	0
Mitigation Units (Credits-up to 2:1)	0	0	0	0.40	0	0	0	0

EEP commits to implementing sufficient compensatory riparian wetland mitigation credits to offset the impacts associated with this project in accordance with the N.C. Department of Environment and Natural Resources' Ecosystem Enhancement Program In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from EEP.

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-715-1929.

Sincerely,

William D. Gilmore, P.E.  
EEP Director

cc: Mr. Ronnie Smith, USACE – Wilmington Regulatory Field Office  
Mr. Brian Wrenn, Division of Water Quality, Wetlands/401 Unit  
File: B-5116

*Restoring... Enhancing... Protecting Our State*





General Project Information

Project No.:	B-5116	Date:	10/11/2010
City/Town:	Garland, NC	Designer:	Michael Kelly, TE-1
County(ies):	Bladen County Cape Fear	Project Manager:	Galen Cail, PE
River Basin(s):	South River	CAMA County?	no
Primary Receiving Water:	South River	TVA County?	no
NCDWQ Surface Water Classification for Primary Receiving Water	Primary: Class C Supplemental: Swamp Waters (Sw)	NCDWQ Stream Index:	C:Sw:ORW
Other Stream Classification:			
303(d) Stream?	no	Type(s) of Impairment:	
State Stormwater Permit Required?	yes	If yes, why?	
Could the Project Impact Threatened or Endangered Species?	no	Outstanding Resource Waters (ORW)	no

Description:	
Anadromous Fish Present?	no
Buffer Rules in Effect?	no
Existing Site	

Description of Existing Project Area:	Two Lane SR 1502 (Melvins Bridge Rd.)
Average Daily Traffic (existing):	210
Existing Cross Section:	10' Travel Lanes, +/- 10' Grass Shoulders
Surrounding Land Use:	Swamp, Wooded
General Comments:	

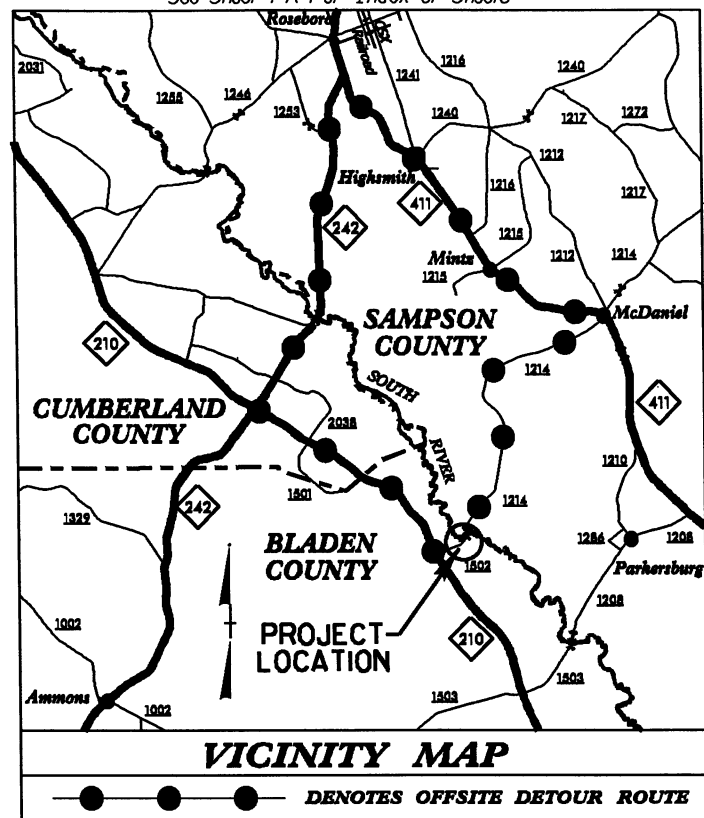
Project Description

Description of Proposed Project:	Replacement of Bridge #150 on SR 1502 over South River Overflow
Average Daily Traffic (proposed):	500 (2035)
Proposed Cross-Section:	11' Travel Lanes, 4' to 13' Grass Shoulders, 2.1 Side Slopes
Interchange Modification:	no
Terminus:	NA
Terminus:	NA
Project Length (lin. miles/feet):	0.117mi
General Comments:	Added Impervious Area (ac.): 0.06 TB2GI/5 PIPE @ Sta. 17+13+L, LT: Q10= 1 09cfs, V10= 12.4ft/s @ pipe outlet, V10= 0.07ft/s @ end of rip-rap pad. Used 2:1 side slopes w/Rock Plating to minimize wetland impacts. Number of piers reduced from 9 to 3.



09/08/99

See Sheet 1-A For Index of Sheets



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**BLADEN COUNTY**

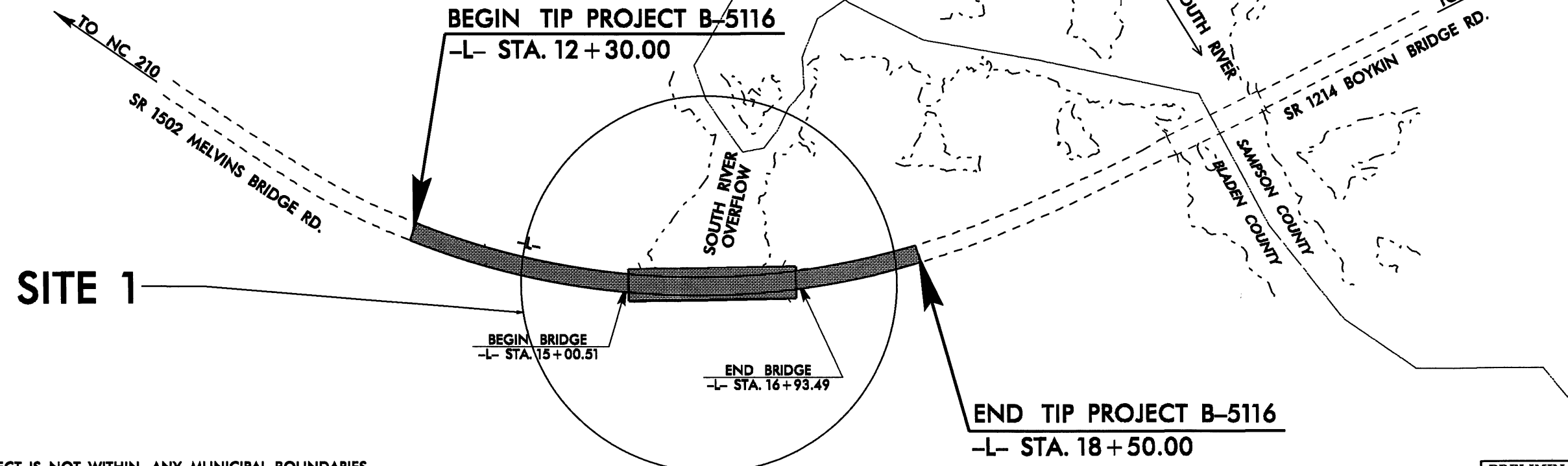
**LOCATION: BRIDGE NO. 150 OVER THE SOUTH RIVER OVERFLOW AND APPROACHES ON SR 1502 (MELVINS BRIDGE RD.)**

**TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5116	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
42257.1.1	BRZ-1502(2)	P.E.	
42257.2.1	BRZ-1502(2)	RW & UTIL	

Permit Drawing Sheet 1 of 8

**WETLAND AND STREAM IMPACTS**

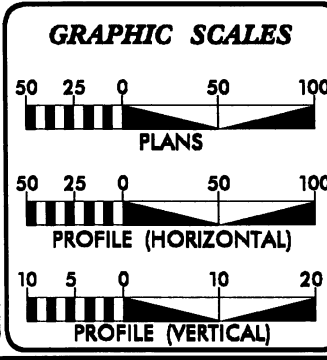


THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION

**TIP PROJECT: B-5116**

**CONTRACT:**



**DESIGN DATA**

ADT 2010 =	210
ADT 2035 =	500
DHV =	12 %
D =	70 %
T =	18 % *
V =	60 MPH
* (TTST 11% + DUAL 7%)	
FUNC CLASS =	LOCAL
SUBREGIONAL TIER	

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJ. B-5116 =	0.080 MILES
LENGTH STRUCTURES TIP PROJ. B-5116 =	0.037 MILES
TOTAL LENGTH OF TIP PROJ. B-5116 =	0.117 MILES

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

2006 STANDARD SPECIFICATIONS

<b>RIGHT OF WAY DATE:</b> NOVEMBER 16, 2010	<b>REKHA PATEL, P.E.</b> PROJECT ENGINEER
<b>LETTING DATE:</b> DECEMBER 20, 2011	<b>SAMUEL L. ST. CLAIR</b> PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

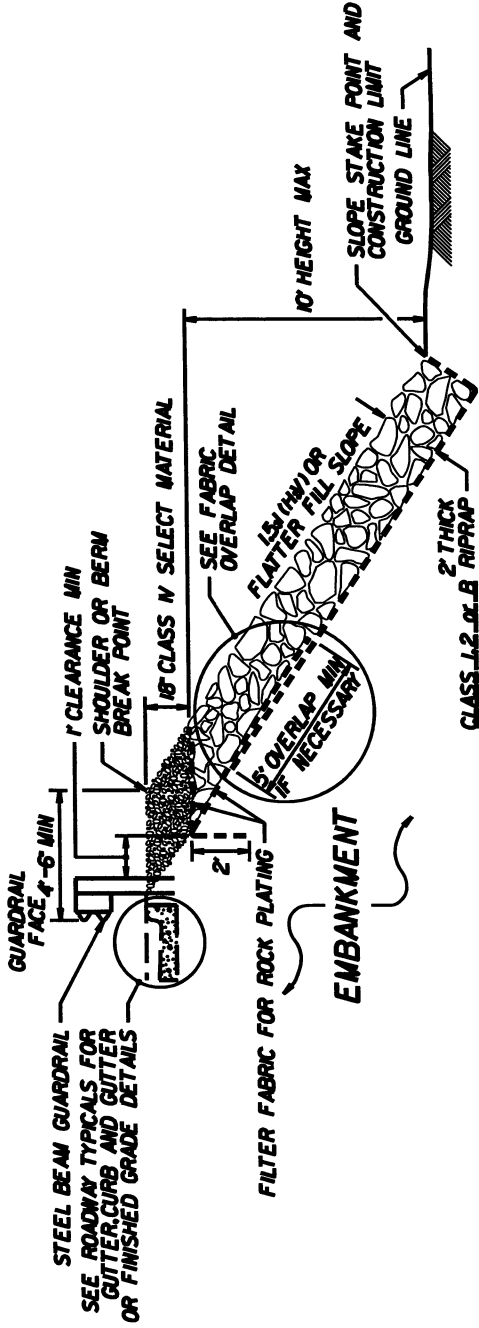
**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**DIVISION OF HIGHWAYS**  
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER

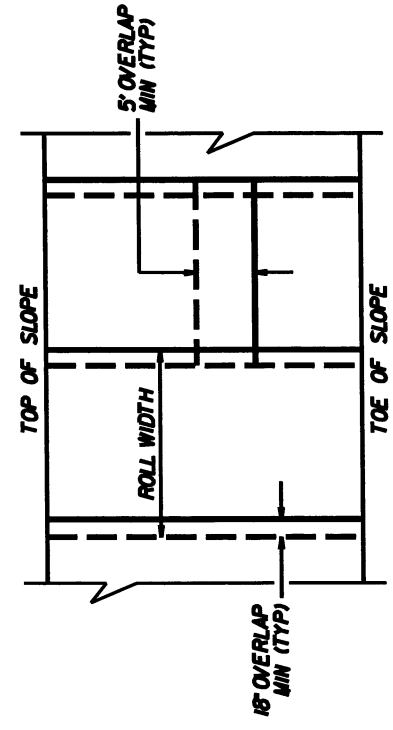
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\$\$\$\$\$DCGN\$\$\$\$\$  
\$\$\$\$\$USRNAME\$\$\$\$\$



ROCK PLATING DETAIL NO. 1 - TYPICAL SECTION

USE ROCK PLATING DETAIL NO. 1  
 AT THE FOLLOWING LOCATIONS:



- L- STA. 13+25 ± RT. TO -L- STA. 14+94 ± RT.
  - L- STA. 17+00 ± RT. TO -L- STA. 18+29 ± RT.
- EXTEND ROCK PLATING LIMITS TO 2.5:1 (H:V) SLOPES.

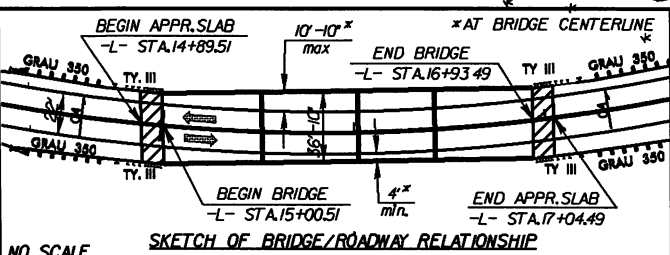
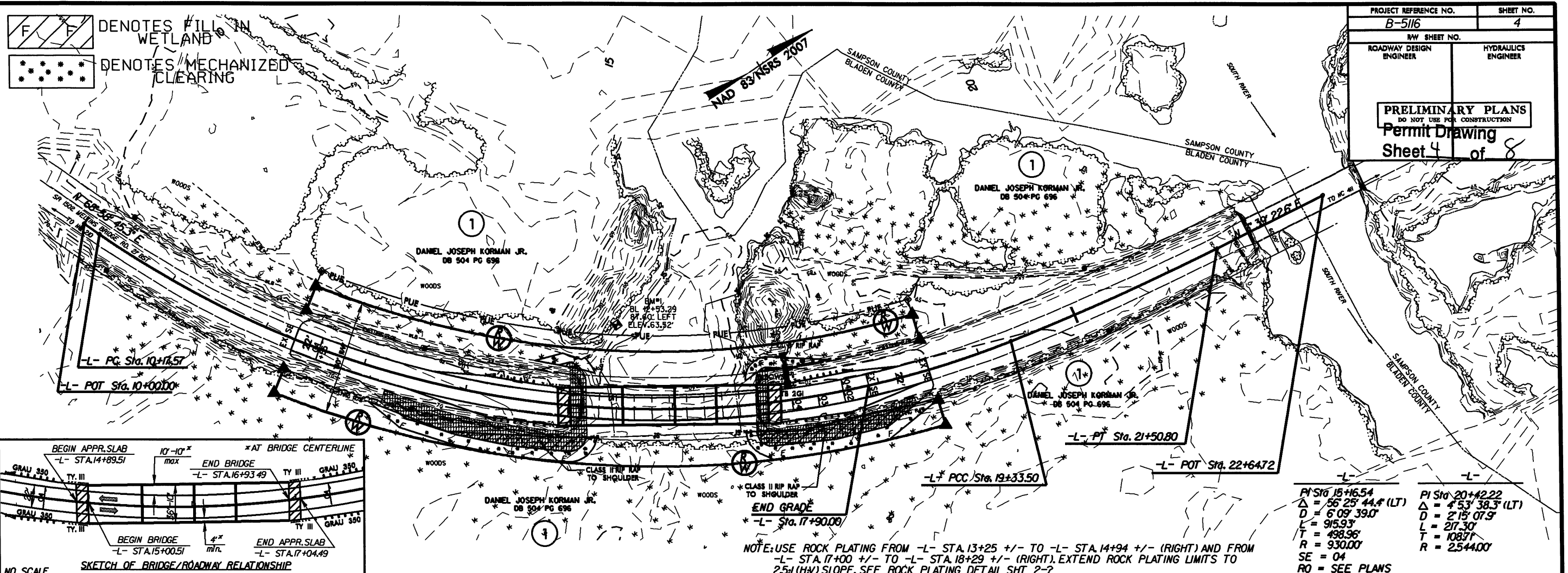


FABRIC OVERLAP DETAIL  
 (PLAN VIEW)



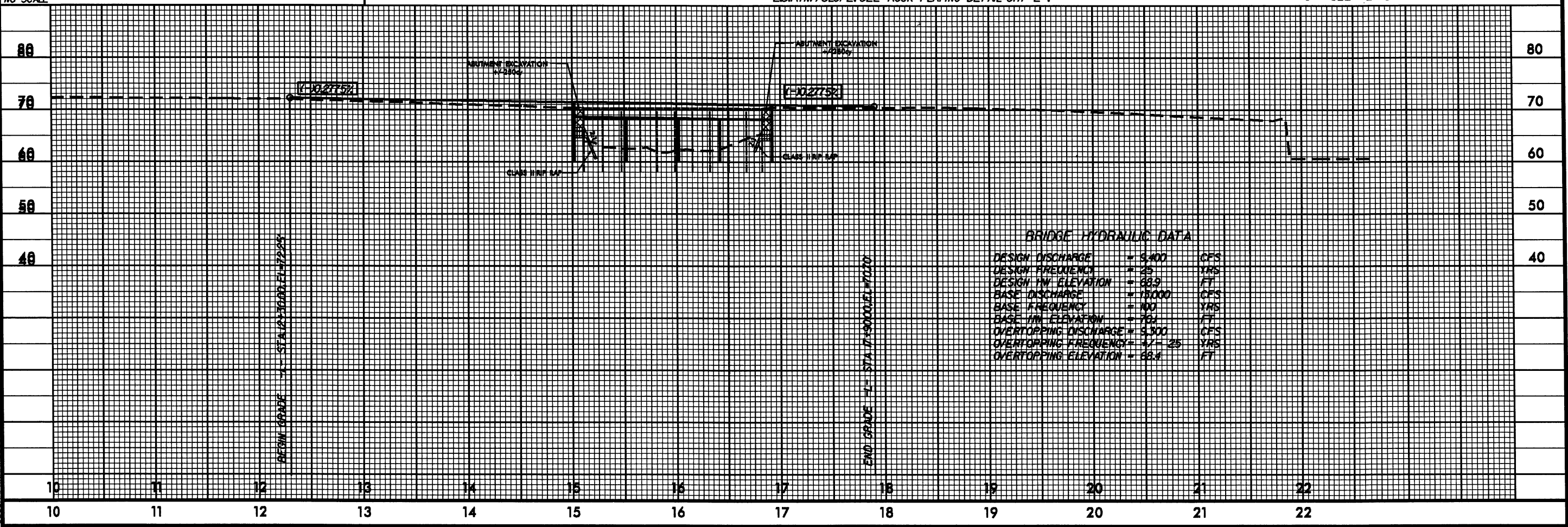


 DENOTES FILL IN WETLAND  
 DENOTES MECHANIZED CLEARING



NOTE: USE ROCK PLATING FROM -L- STA. 13+25 +/- TO -L- STA. 14+94 +/- (RIGHT) AND FROM -L- STA. 17+00 +/- TO -L- STA. 18+29 +/- (RIGHT). EXTEND ROCK PLATING LIMITS TO 25% (H/W) SLOPE. SEE ROCK PLATING DETAIL SHT 2-?

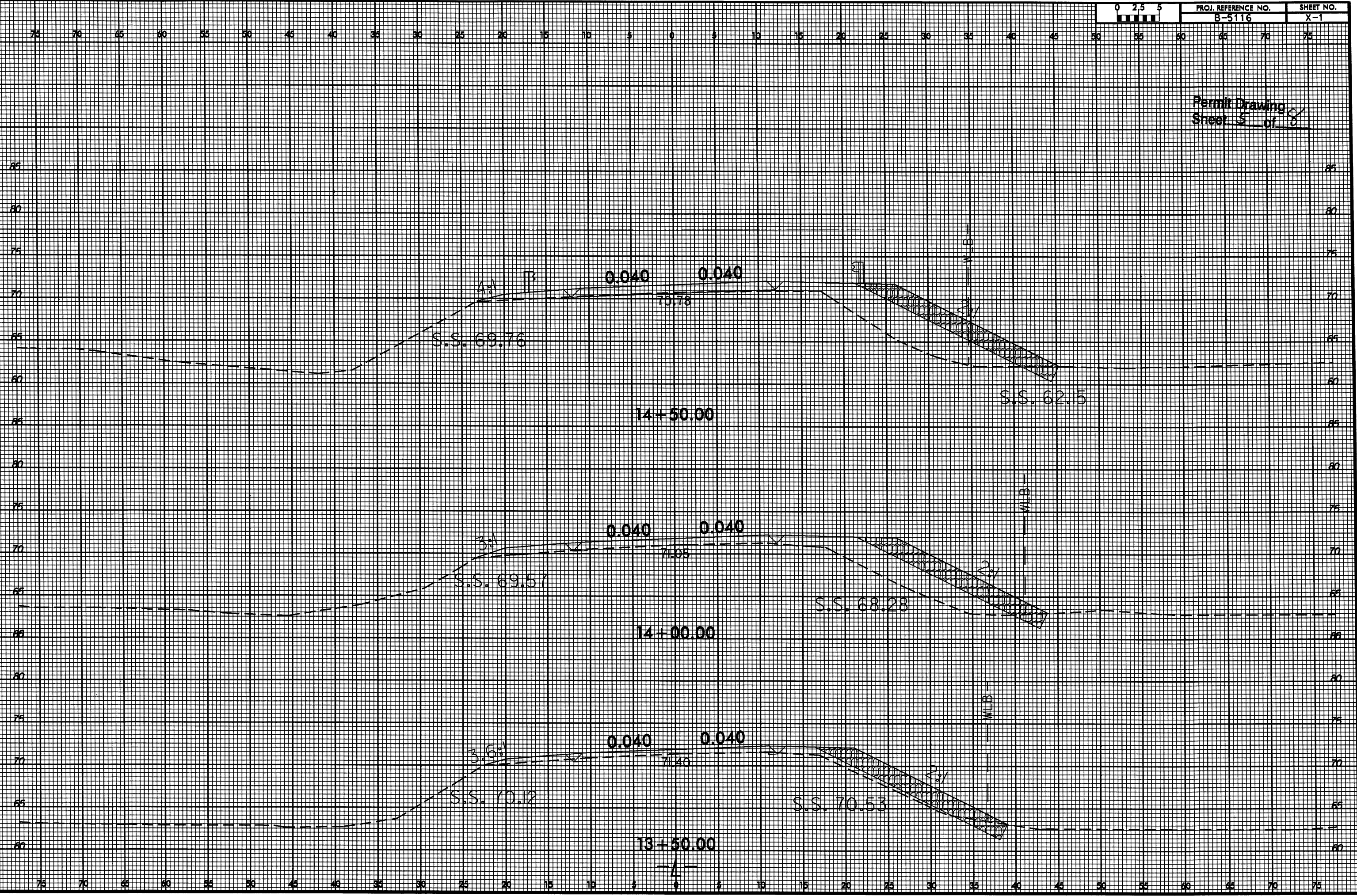
PI STA 15+16.54	PI STA 20+42.22
$\Delta = 56^{\circ} 25' 44.4" (LT)$	$\Delta = 4^{\circ} 53' 38.3" (LT)$
D = 6' 09" 39.0"	D = 2' 15" 07.9"
L = 915.93'	L = 27.30'
T = 498.96'	T = 108.71'
R = 930.00'	R = 2544.00'
SE = 04	
RO = SEE PLANS	



8/17/93  
 REVISIONS  
 SYSTEMS ENGINEERING

8/23/99

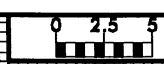
Permit Drawing  
Sheet 5 of 8



\*\*\*\*\* TIME \*\*\*\*\*  
\*\*\*\*\* DATE \*\*\*\*\*  
\*\*\*\*\* BY \*\*\*\*\*

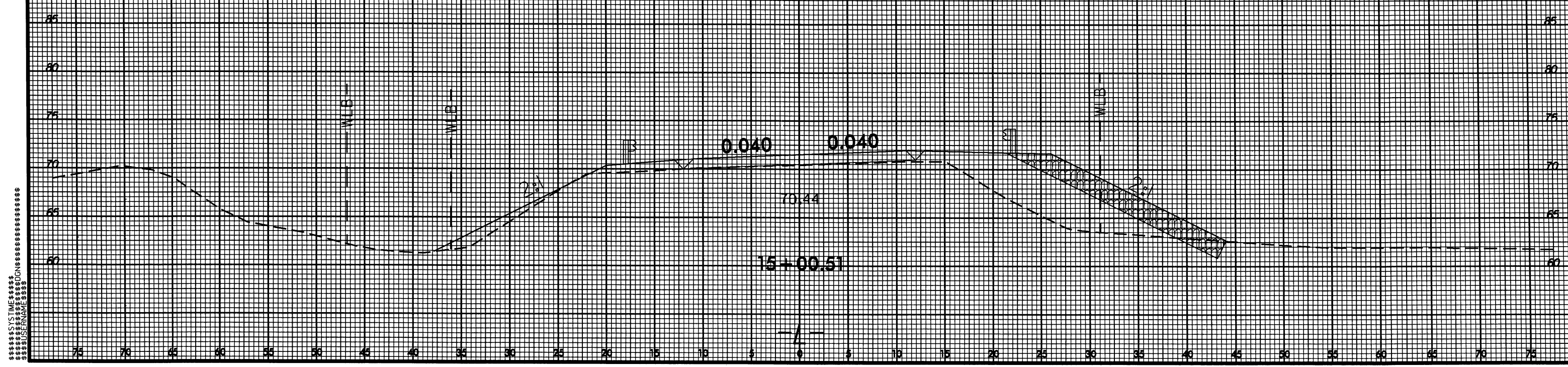


8/23/99



PROJ. REFERENCE NO. B-5116	SHEET NO. X-2
-------------------------------	------------------

Permit Drawing  
Sheet 6 of 8



**PROPERTY OWNERS**  
**NAMES AND ADDRESSES**

<b>PARCEL NO.</b>	<b>NAMES</b>	<b>ADDRESSES</b>
1	Daniel Joseph Korman, Jr.	7002 Wrightsville Avenue Wilmington, NC 28403

Permit Drawing  
Sheet 7 of 8

**NCDOT**  
**DIVISION OF HIGHWAYS**  
**BLADEN COUNTY**  
**PROJECT: 42257.1.1 (B-5116)**  
**REPLACEMENT OF SOUTH RIVER**  
**OVERFLOW BRIDGE #150 ON SR 1502**  
**OVER SOUTH RIVER**

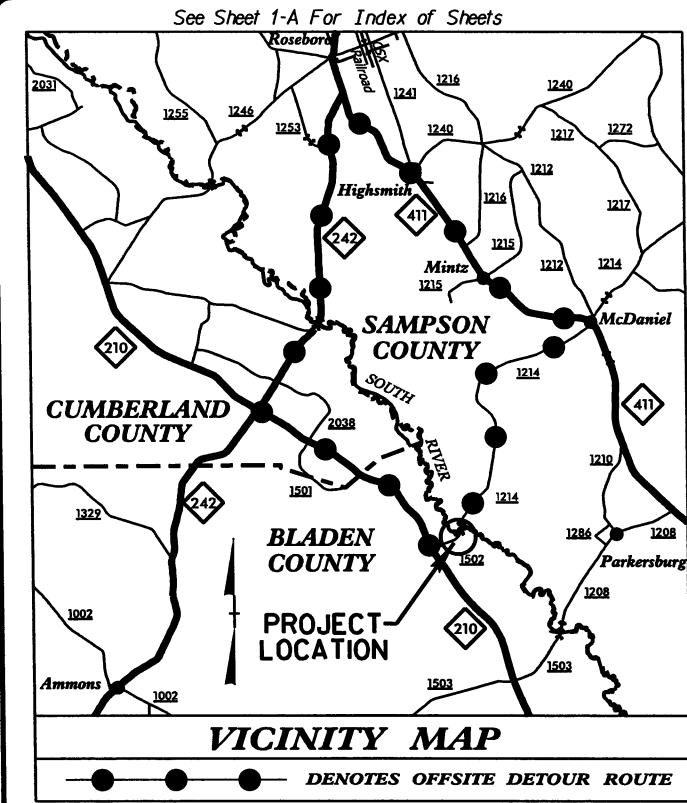
**SHEET                    OF                    1 / 2011**



09/08/99  
 19-JAN-2011 16:53  
 R:\UT\11\res\rdy\UT\Pro\NEUN\B5116\_hyd\_pr.m\_wet\_.tsh.dgn  
 \$\$\$USERNAME\$\$\$

**TIP PROJECT: B-5116**

**CONTRACT:**



STATE OF NORTH CAROLINA  
 DIVISION OF HIGHWAYS

**BLADEN COUNTY**

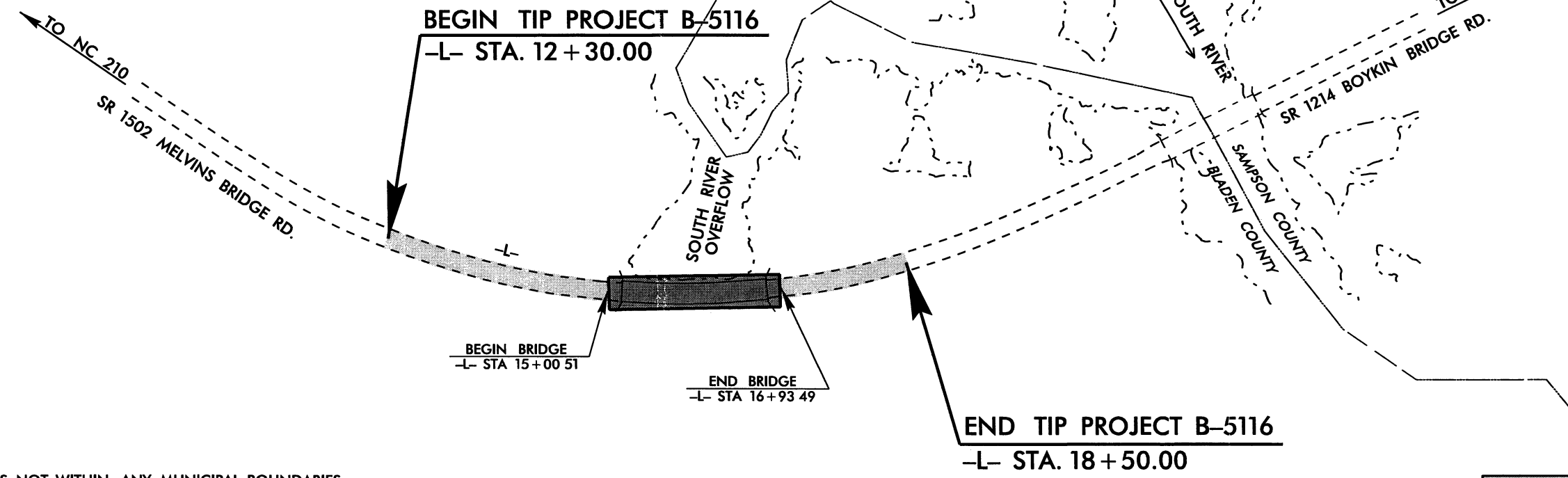
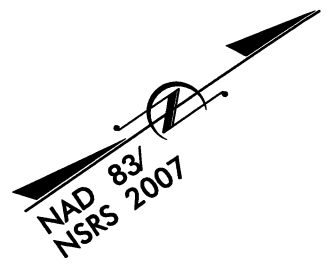
**LOCATION: BRIDGE NO. 150 OVER THE SOUTH RIVER OVERFLOW  
 AND APPROACHES ON SR 1502 (MELVINS BRIDGE RD.)**

**TYPE OF WORK: OVERHEAD POWER RELOCATION**

**NEU PLANS FOR UTILITY RELOCATION  
 WETLAND IMPACTS**

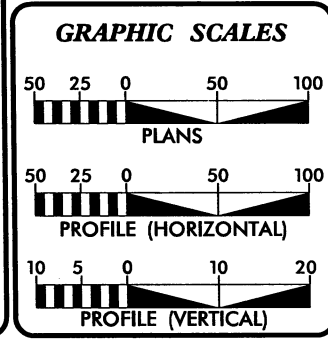
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5116	1	
STATE PROJ. NO.	P.L. PROJ. NO.	DESCRIPTION	
42257.1.1	BRZ-1502(2)	P.E.	
42257.2.1	BRZ-1502(2)	R/W & UTIL	

Utility Permit Drawing  
 Sheet 1 of 4



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES  
 CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III

**PRELIMINARY PLANS**  
 DO NOT USE FOR CONSTRUCTION



**DESIGN DATA**

ADT 2010 =	210
ADT 2035 =	500
DHV =	12 %
D =	70 %
T =	18 % *
V =	60 MPH
* (TTST 11% + DUAL 7%)	
FUNC CLASS =	LOCAL
SUBREGIONAL TIER	

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJ B-5116 =	0.080 MILES
LENGTH STRUCTURES TIP PROJ B-5116 =	0.037 MILES
TOTAL LENGTH OF TIP PROJ B-5116 =	0.117 MILES

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

2006 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
 NOVEMBER 16, 2010

**LETTING DATE:**  
 DECEMBER 20, 2011

REKHA PATEL, P.E.  
 PROJECT ENGINEER

SAMUEL L. ST. CLAIR  
 PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

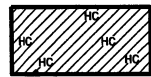
**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**DIVISION OF HIGHWAYS**  
 STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER

8/17/99



DENOTES HAND CLEARING

PROJECT REFERENCE NO. B-5116 SHEET NO. UO-2

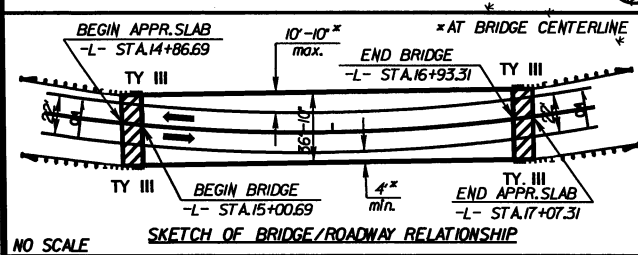
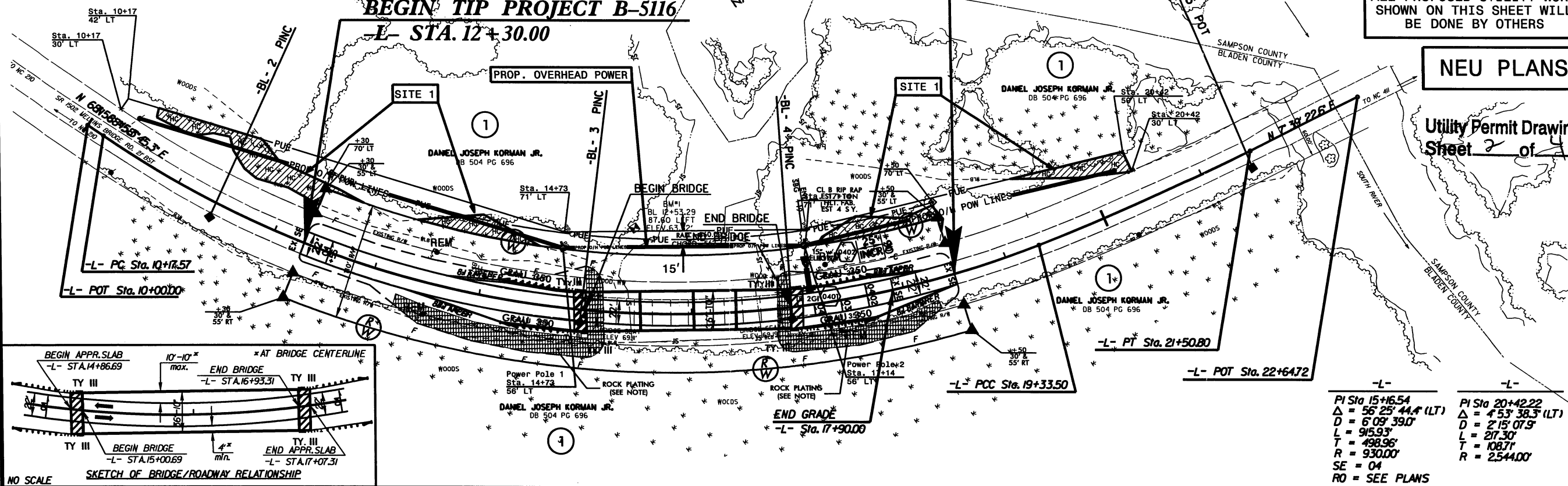
# END TIP PROJECT B-5116

## UTILITIES BY OTHERS

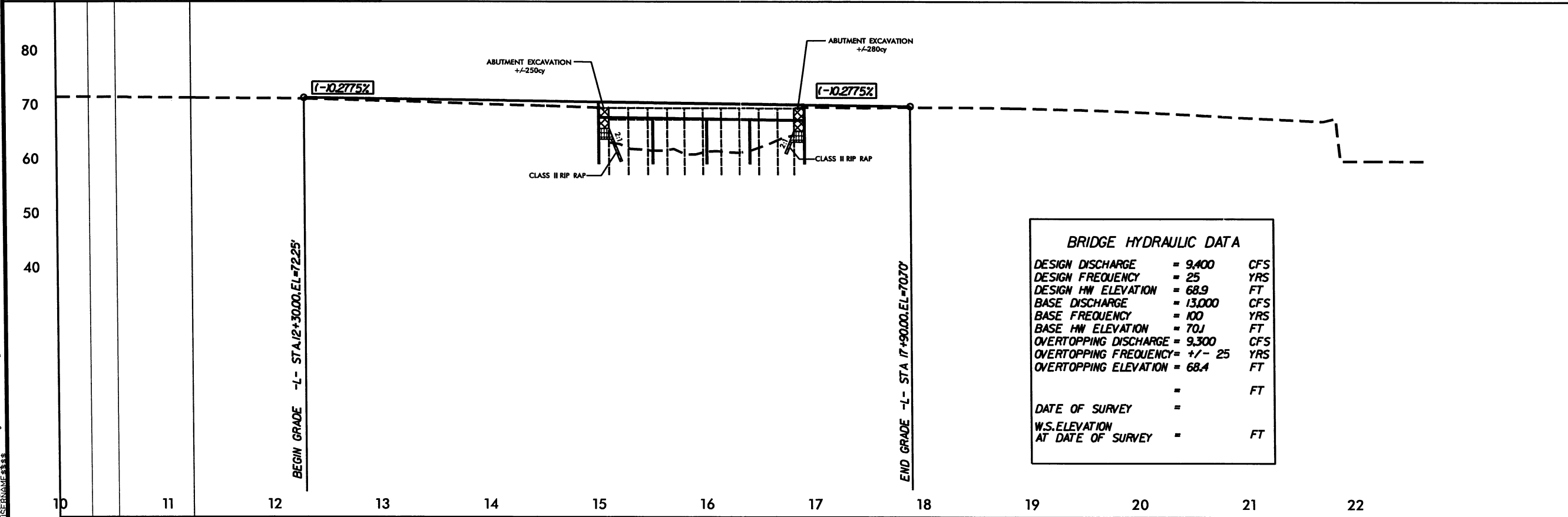
NOTE:  
ALL PROPOSED UTILITY WORK  
SHOWN ON THIS SHEET WILL  
BE DONE BY OTHERS

NEU PLANS

Utility Permit Drawing  
Sheet 2 of 4



-L-	-L-
PI Sta 15+16.54	PI Sta 20+42.22
$\Delta = 56' 25' 44.4''$ (LT)	$\Delta = 4' 53' 38.3''$ (LT)
$D = 6' 09' 39.0''$	$D = 2' 15' 07.9''$
$L = 915.93'$	$L = 217.30'$
$T = 498.96'$	$T = 108.71'$
$R = 930.00'$	$R = 2544.00'$
$SE = 04$	
$RO = \text{SEE PLANS}$	



BRIDGE HYDRAULIC DATA		
DESIGN DISCHARGE	= 9,400	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 68.9	FT
BASE DISCHARGE	= 13,000	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 70.1	FT
OVERTOPPING DISCHARGE	= 9,300	CFS
OVERTOPPING FREQUENCY	= +/- 25	YRS
OVERTOPPING ELEVATION	= 68.4	FT
	=	FT
DATE OF SURVEY	=	
W.S. ELEVATION AT DATE OF SURVEY	=	FT

20 JAN 2010 09:08 J:\A\Pr-j\NEU\B5116\_Rdy\_UT\_psh\_PERMIT.dgn

1/4/2010

Utility Permit Drawing  
Sheet 3 of 4

**B-5116 Bladen County**

**Utility Relocation Environmental Permit**

South River EMC has two power poles located on the North side of the Bridge that are in conflict with construction. The contact for South River EMC is Mr. Scott Byrd. He can be reached at 910-892-8071 (office) or 919-820-1814 (cell). To resolve this issue, the power poles will be relocated to the Right of Way line, outside of the Wetland Boundary, on the North side. Hand clearing for overhead powerlines will be required.

**UTILITY WETLAND PERMIT IMPACT SUMMARY**

Site No	Station (From/To)	Structure Size / Type	WETLAND IMPACTS						SURFACE WATER IMPACTS								
			Permanent Fill In Wetlands (ac)	Temp Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp (ft)	Natural Stream Design (ft)					
1	10+50-L-LT							0.07									
1	12+71-L-LT							0.03									
1	13+26-L-LT							0.03									
1	14+50-L-LT							0.03									
1	17+27-L-LT							0.03									
1	18+55-L-LT							0.03									
1	19+31-L-LT							0.03									
1	17+59-L-LT																
<b>TOTALS:</b>								0.16									

Utility Permit Drawing  
Sheet 4 of 4

NC DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
BLADEN COUNTY  
WBS - 42257 1 1 (B-5116)

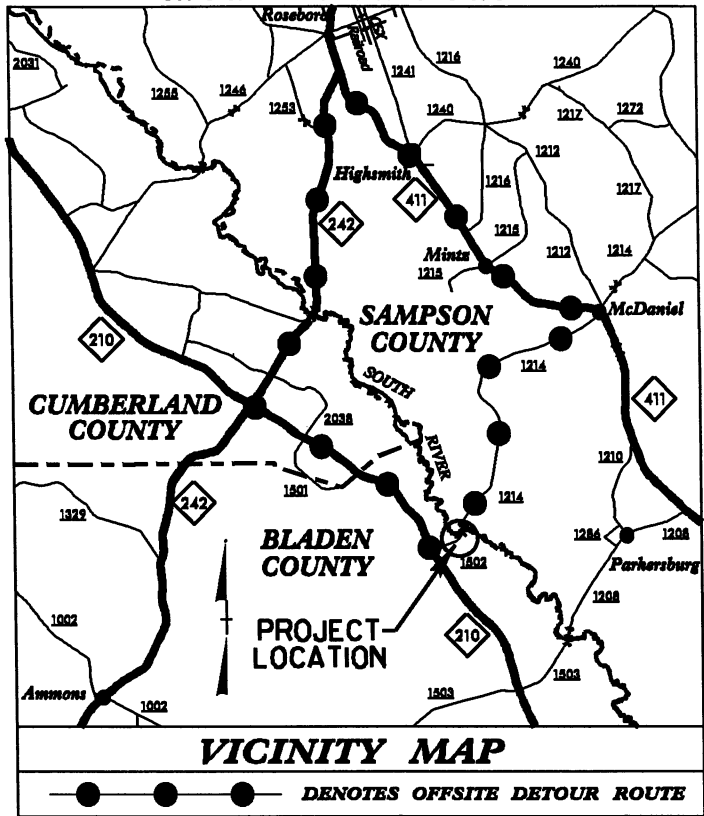


09/08/10  
 SYSTEMS  
 DGN  
 USER  
 NAME

**TIP PROJECT: B-5116**

**CONTRACT:**

See Sheet 1-A For Index of Sheets



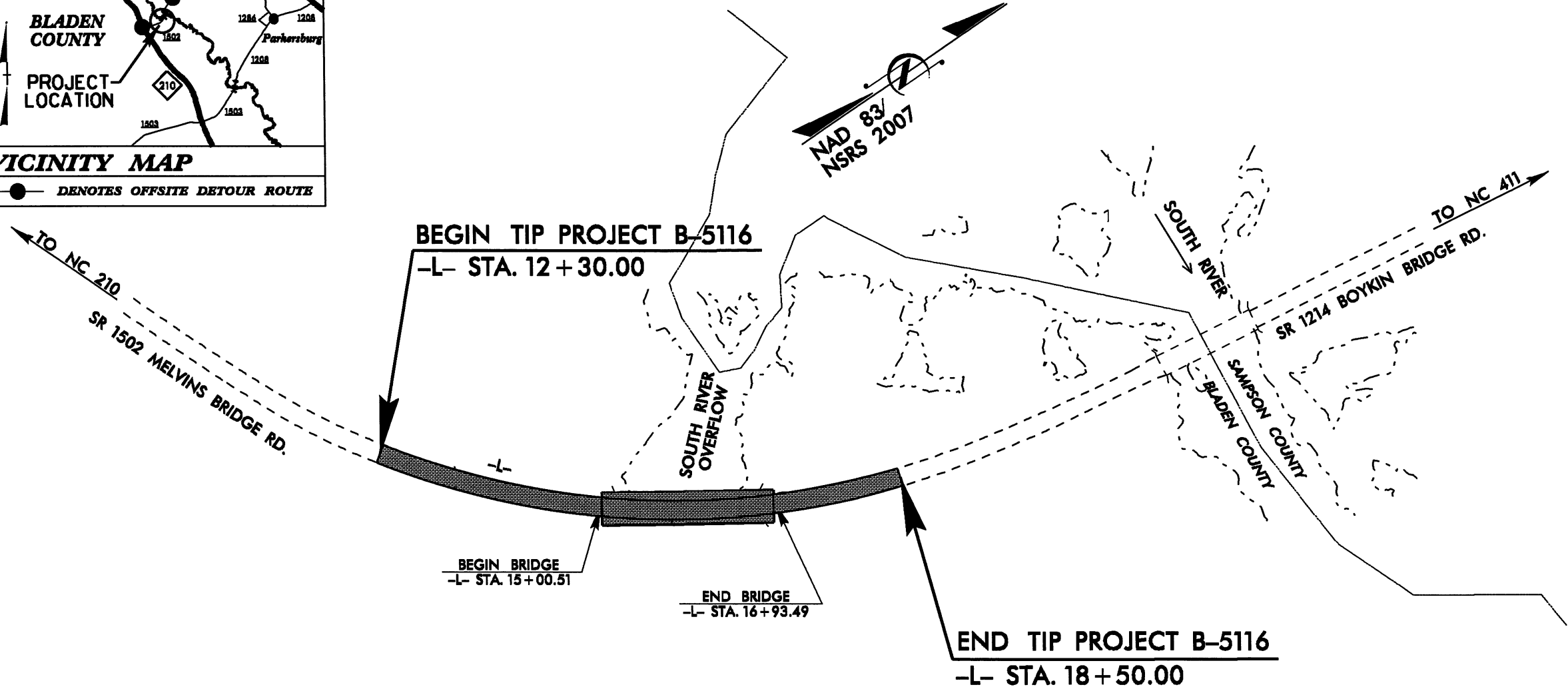
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**BLADEN COUNTY**

**LOCATION: BRIDGE NO. 150 OVER THE SOUTH RIVER OVERFLOW AND APPROACHES ON SR 1502 (MELVINS BRIDGE RD.)**

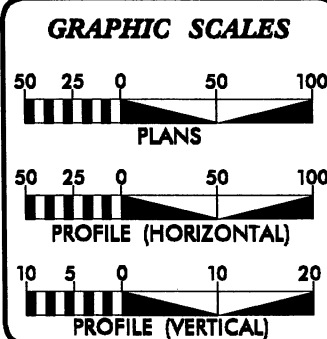
**TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5116	1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
42257.1.1	BRZ-1502(2)	P.E.	
42257.2.1	BRZ-1502(2)	RW & UTIL	



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION



**DESIGN DATA**

ADT 2010 =	210
ADT 2035 =	500
DHV =	12 %
D =	70 %
T =	18 %
V =	60 MPH
* (TTST 11% + DUAL 7%)	
FUNC CLASS =	LOCAL
SUBREGIONAL TIER	

**PROJECT LENGTH**

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LENGTH STRUCTURES TIP PROJ. B-5116 =	0.037 MILES
TOTAL LENGTH OF TIP PROJ. B-5116 =	0.117 MILES

Prepared In the Office of:

**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: NOVEMBER 16, 2010	REKHA PATEL, P.E. PROJECT ENGINEER
LETTING DATE: DECEMBER 20, 2011	SAMUEL L. ST. CLAIR PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**DIVISION OF HIGHWAYS**  
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER



