STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT L. MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

March 6, 2013

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

ATTN: Mr. Tom Steffens
NCDOT Coordinator

Dear Sir:

Subject: **Application for a Section 404 Nationwide Permit No. 23, Section 401 Water Quality Certification and Neuse River Riparian Buffer Authorization** for the proposed replacement of Bridge No. 72 over Appletree Swamp on SR 1253 in Greene County. Federal Aid Project No. BRZ-1253(2), TIP No. B-5112, Debit $240 from WBS Element 42250.1.1.

The North Carolina Department of Transportation (NCDOT) proposes to replace the 53-foot, 3-span Bridge No. 72 with a 60-foot, single-span bridge on the existing alignment. Traffic will follow an offsite detour during construction. Permanent impacts to jurisdictional resources include 0.01 acre of mechanized clearing.

Please see enclosed copies of the Pre-Construction Notification (PCN), Preliminary Jurisdictional Determination Form, permit drawings, stormwater management plan, and design plans for the above referenced project. The Categorical Exclusion (CE) was completed in November 2011. Copies were distributed shortly thereafter. Additional copies are available upon request.

This project calls for a letting date of June 18, 2013 and a review date of April 30, 2013. The project schedule may be advanced if 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 771.115(b). The NCDOT requests that these activities be authorized by Nationwide Permit 23.

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

Section 401 Permit: We anticipate 401 General Certification number 3891 will apply to this project. Authorization to debit the $240 Permit Application Fee from WBS Element 42250.1.1 is hereby given.

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

A copy of this permit application and its distribution list will be posted at the NCDOT Website at https://connect.ncdot.gov/resources/Environmental. If you have any questions or need additional information, please contact Tyler Stanton at tstanton@ncdot.gov or (919) 707-6156.

Sincerely,

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: 23	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 ☐ Non-404 Jurisdictional General Permit ☐ 401 Water Quality Certification – Express ☒ Riparian Buffer Authorization		
1e. Is this notification solely for the record because written approval is not required?	For the record only for 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 No. 72 over Appletree Swamp on SR 1253
2b. County:	Greene
2c. Nearest municipality / town:	Stantonsburg
2d. Subdivision name:	*not applicable*
2e. NCDOT only, T.I.P. or state project no:	B-5112

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) 707-6156
3g. Fax no.:	(919) 250-4224
3h. Email address:	tstanton@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: 35.5330 (DD.DDDDDD) Longitude: - 77.8159 (-DD.DDDDDD)
1c. Property size:	0.74 acres
2. Surface Waters	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Appletree Swamp
2b. Water Quality Classification of nearest receiving water:	C; Sw, NSW
2c. River basin:	Neuse
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 forested areas. Land use in the project vicinity is predominantly agriculture with some residential properties.	
3b. List the total estimated acreage of all existing wetlands on the property: 0.04	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 100	
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 53-foot 3-span bridge with a 60-foot, single-span bridge on the existing alignment. Traffic will follow an offsite detour during construction. Standard road building equipment, such as trucks, dozers, and cranes will be used.	
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: A preliminary JD request was sent 26 Feb. 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): Veronica Barnes	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	Riverine	☒ Yes ☐ No	☒ Corps ☐ DWQ	<0.01
Site 1 ☒ P ☐ T	Mechanized Clearing	Riverine	☒ Yes ☐ No	☒ Corps ☐ DWQ	0.01
Site 3 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 4 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 5 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 6 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
				2g. **Total wetland impacts**	0.01 Permanent 0.00 Temporary

2h. Comments: Total area of fill is approx. 275 sq. ft.

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 1 ☐ 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		
					3h. **Total stream and tributary impacts**	X Perm X 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				
O1 ☐ P ☐ T				
O2 ☐ P ☐ T				
O3 ☐ P ☐ T				
			4f. Total open water impacts	X Permanent X 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 approaches	Appletree Swamp	☐ Yes ☒ No	369	0
B2 ☐ P ☐ T			☐ Yes ☐ No		
B3 ☐ P ☐ T			☐ Yes ☐ No		
		6h. **Total buffer impacts**		369	0

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 is 7 feet longer than the existing bridge and will eliminate all bents from the water. There will be minimal permanent fill and no excavation in jurisdictional areas. The removal of existing road fill for longer bridge and increasing bridge openings will improve hydrological conveyance and wildlife passage, and reduce bridge opening velocities.

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

Construction will be top-down. Best Management Practices for Bridge Demolition and Removal and Design Standards in Sensitive Watersheds will be implemented.

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 the minimal amount of impacts compensatory mitigation is not proposed.
2b. If yes, mitigation is required by (check all that apply):	☐ DWQ ☐ Corps
2c. If yes, which mitigat ion 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	☒ 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 website, 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. Luck Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	3-5-13 Date

ATTACHMENT

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

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

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:
Tyler Stanton
NCDOT
1598 Mail Service Center
Raleigh, NC 27699-1598

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
B-5112
(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)
State: North Carolina County/parish/borough: Greene City: Stantonsburg
Center coordinates of site (lat/long in degree decimal format):
Lat. 35° 31' 43.80" **N**, Long. 77° 49' 12.52"**W**.
Universal Transverse Mercator:
Name of nearest waterbody: Appletree Creek

Identify (estimate) amount of waters in the review area:
Non-wetland waters: 218 linear feet: 20 width (ft) and/or acres.
Cowardin Class: Riverine
Stream Flow: Perennial
Wetlands: 0.72 acres.
Cowardin Class: PFO1C

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

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☐ Field Determination. Date(s):
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: .

☐ 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:.

☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .

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

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

☐ FEMA/FIRM maps: .

☐ 100-year Floodplain Elevation is: (Nation al Geodectic Vertical Datum of 1929)

☐ Photographs: ☐ Aerial (Name & Date):Greene County 2003.
or ☐ Other (Name & Date): .

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

☐ Other information (please specify): .

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

Signature and date of Regulatory Project Manager (REQUIRED)	3/1/13 Signature and date of person requesting preliminary JD (REQUIRED, unless obtaining the signature is impracticable)

Table 1. Waterbodies within the project area.

Site number	**Latitude**	**Longitude**	**Cowardin Class**	**Estimated amount of aquatic resource in review area**	**Class of aquatic resource**
Appletree Creek	35° 31' 43.80" **N**	77° 49' 12.52"**W**	Riverine	200 linear feet	Perennial
WA	35° 31' 43.80" **N**	77° 49' 12.52"**W**	Riverine	0.18 acre	PFO1C
WB	35° 31' 43.80" **N**	77° 49' 12.52"**W**	Riverine	0.28 acre	PFO1C
WC	35° 31' 43.80" **N**	77° 49' 12.52"**W**	Riverine	0.17 acre	PFO1C
WD	35° 31' 43.80" **N**	77° 49' 12.52"**W**	Riverine	0.09 acre	PFO1C

North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR LINEAR ROADWAY PROJECTS

(Version 1.2; Released July 2012)

Project/TIP No.: 42250.1.1 **County(ies):** Greene

General Project Information

Project No.:	42250.1.1	**Project Type:**	Bridge Replacement	**Date:**	10/24/2012
NCDOT Contact:	Randy Henegar, P.E.	**Contractor / Designer:**			
Address:	1020 Birch Ridge Dr. Raleigh, N.C. 27610	**Address:**			
Phone:	919-707-6700	**Phone:**			
Email:	rhenegar@ncdot.gov	**Email:**			
City/Town:	Stantonsburg	**County(ies):**	Greene		
River Basin(s):	Neuse	**CAMA County?**	No		
Primary Receiving Water:	Appletree Swamp	**NCDWQ Stream Index No.:**	27-86-14-7		
NCDWQ Surface Water Classification for Primary Receiving Water	**Primary:**	Class C	Sw	NSW	
	Supplemental:				
Other Stream Classification:	None				
303(d) Impairments:	None				
Buffer Rules in Effect	Neuse				

Project Description

Project Length (lin. Miles or feet):	0.061 miles	**Surrounding Land Use:**	Swamp; Agricultural

	Proposed Project	**Existing Site**
Project Built-Upon Area (ac.)	0.29 ac.	0.28 ac.
Typical Cross Section Description:	The approaches will be 22-foot pavement width providing two 11-foot lanes and six-foot grass shoulders.	Existing is 18-foot pavement width providing two 9-foot lanes and six foot grass shoulders
Average Daily Traffic (veh/hr/day):	Design/Future: 1300	Existing: 860
General Project Narrative:	The purpose of this project is to replace Bridge No. 72 on SR 1253 over Appletree Swamp in Greene County. Existing bridge is 53 feet long. The replacement structure will be a bridge 60 feet long providing a minimum 28 foot clear deck width. The roadway grade of the new structure will be approximately the same as the existing structure. There will be no direct discharge into the stream (no deck drains on bridge). Storm drainage is discharged as far away from stream as practicable and diffused on a rip rap pad at the outlet.	

References

Project/TIP No.: 42250.1.1 **County(ies):** Greene

Project Environmental Summary

Surface Water Impacts

Sheet No.	Station (From / To)	Feature Impacted	Water / Wetland / Buffer Type	Receiving Surface Water Name	NRTR Map ID	NCDWQ Stream Index	NCDWQ Surface Water Classification	303(d) Impairments	Type of Impact	Existing SCM	Proposed SCM
4	14+45-L- 15+50-L-	Wetland	Riverine Swamp Forest	Appletree Swamp	SA	27-86-14-7	C-Sw-NSW	None	Clearing	N/A	
4	14+00-L- 15+50-L-	Buffer	Neuse	Appletree Swamp	SA	27-86-14-7	C-Sw-NSW	None	Clearing	N/A	

* List all stream and surface water impact locations regardless of jurisdiction or size.
Equalizer Pipes to be noted as a minimization of impacts.
All proposed SCMs listed must also be listed under Swales, Preformed Sour Holes and other Energy Dissipators, or Other Stormwater Control Measures.

Description of Minimization of Impacts or Mitigation

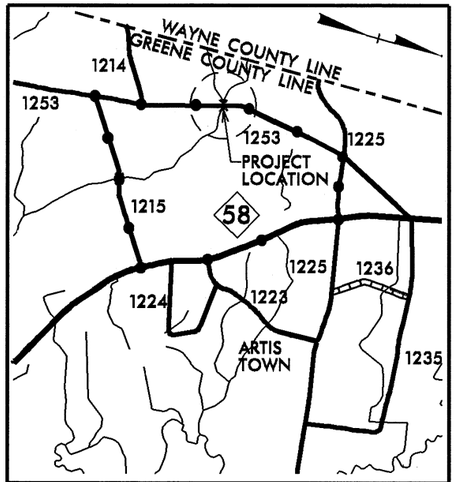
References

09/08/99

TIP PROJECT: B-5112

CONTRACT:

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

GREENE COUNTY

LOCATION: BRIDGE NO. 72 OVER APPLETREE SWAMP ON SR 1253

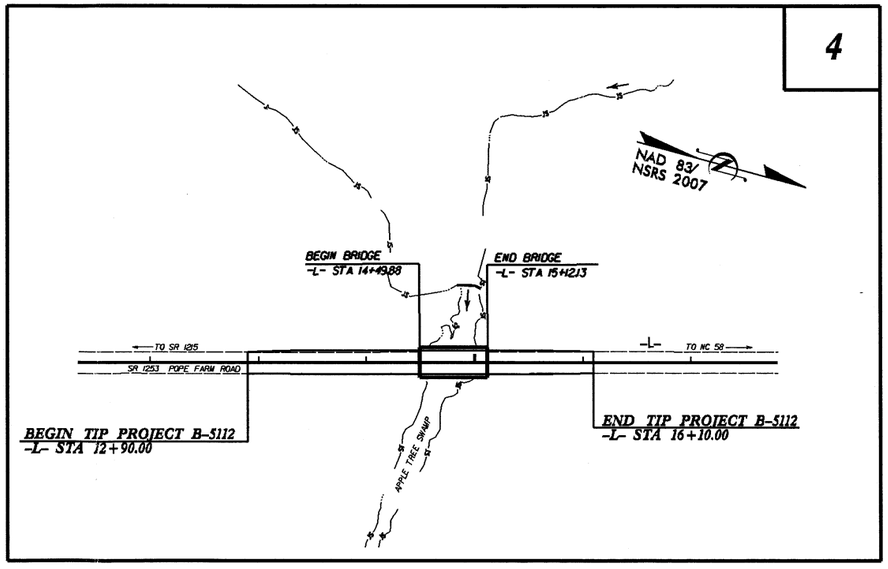
TYPE OF WORK: GRADING, DRAINAGE, STRUCTURE AND PAVING

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5112	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
42250.1.1	BRZ-1253(2)	PE
42250.2.1	BRZ-1253(2)	R/W & UTIL.

Permit Drawing
Sheet 1 of 8

WETLAND AND SURFACE WATER IMPACTS PERMIT



NOTE:

1. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
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 = 878
ADT 2033 = 1262
DHV = 11 %
D = 65 %
T = 14 % *
V = 60 MPH
* TTST = 8% DUAL 6%
FUNC CLASS =
RURAL LOCAL
SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-5112 = 0.049 MILES
LENGTH STRUCTURE TIP PROJECT B-5112 = 0.012 MILES
TOTAL LENGTH OF TIP PROJECT B-5112 = 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:
OCTOBER 19, 2012

LETTING DATE:
OCTOBER 15, 2013

GARY LOVERING, PE
PROJECT ENGINEER

ANTHONY WEST
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: *P.E.*

ROADWAY DESIGN ENGINEER

SIGNATURE: *P.E.*

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION

$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$

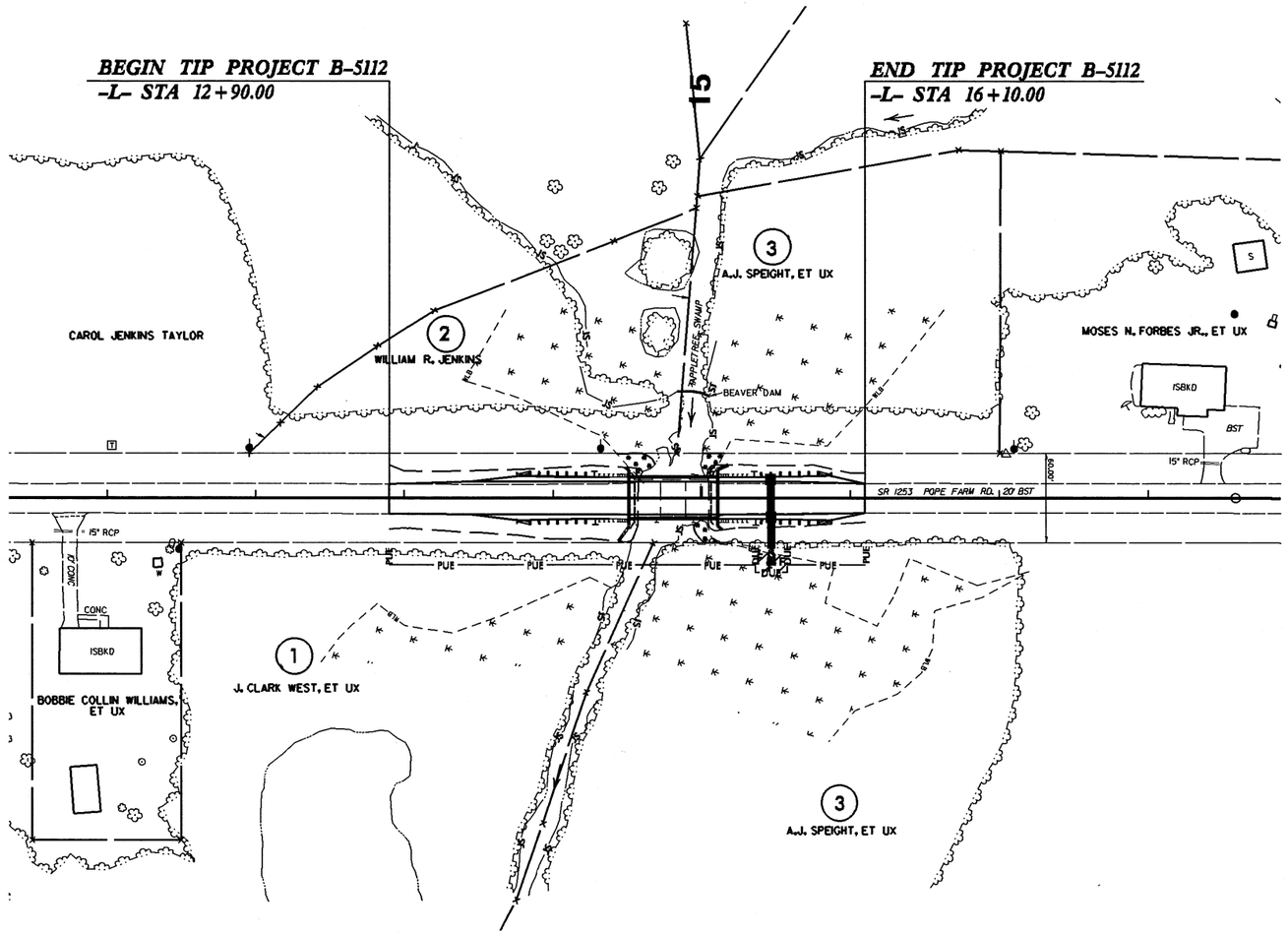
5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-5112	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

Permit Drawing
Sheet 2 of 8



SITE

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

100' 0' 100'
GRAPHIC SCALE

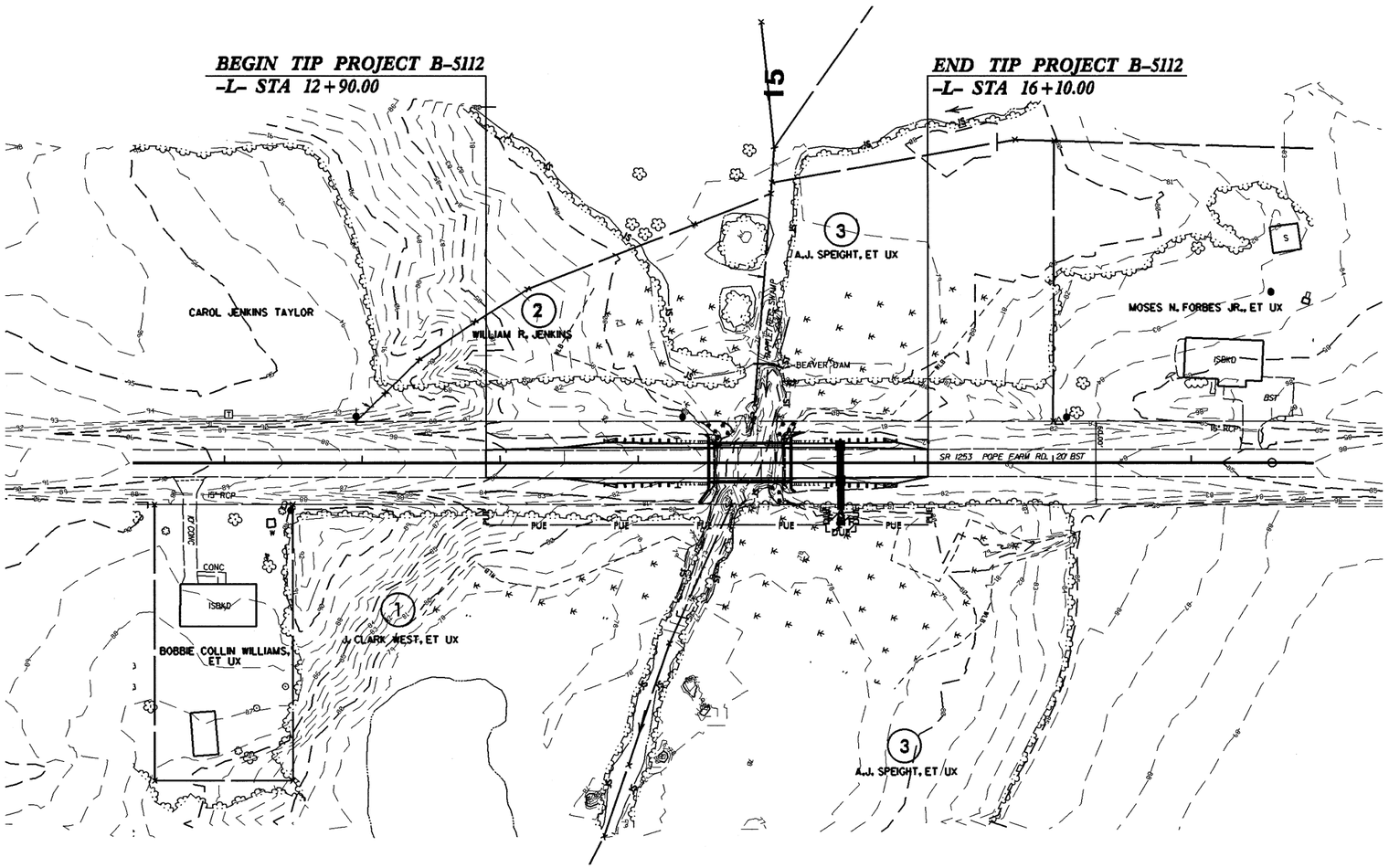
$$$$$$$$SYSTIME$$$$$$
$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$FILENAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-5112	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

Permit Drawing
Sheet 3 of 8



SITE

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

100' 0' 100'
GRAPHIC SCALE

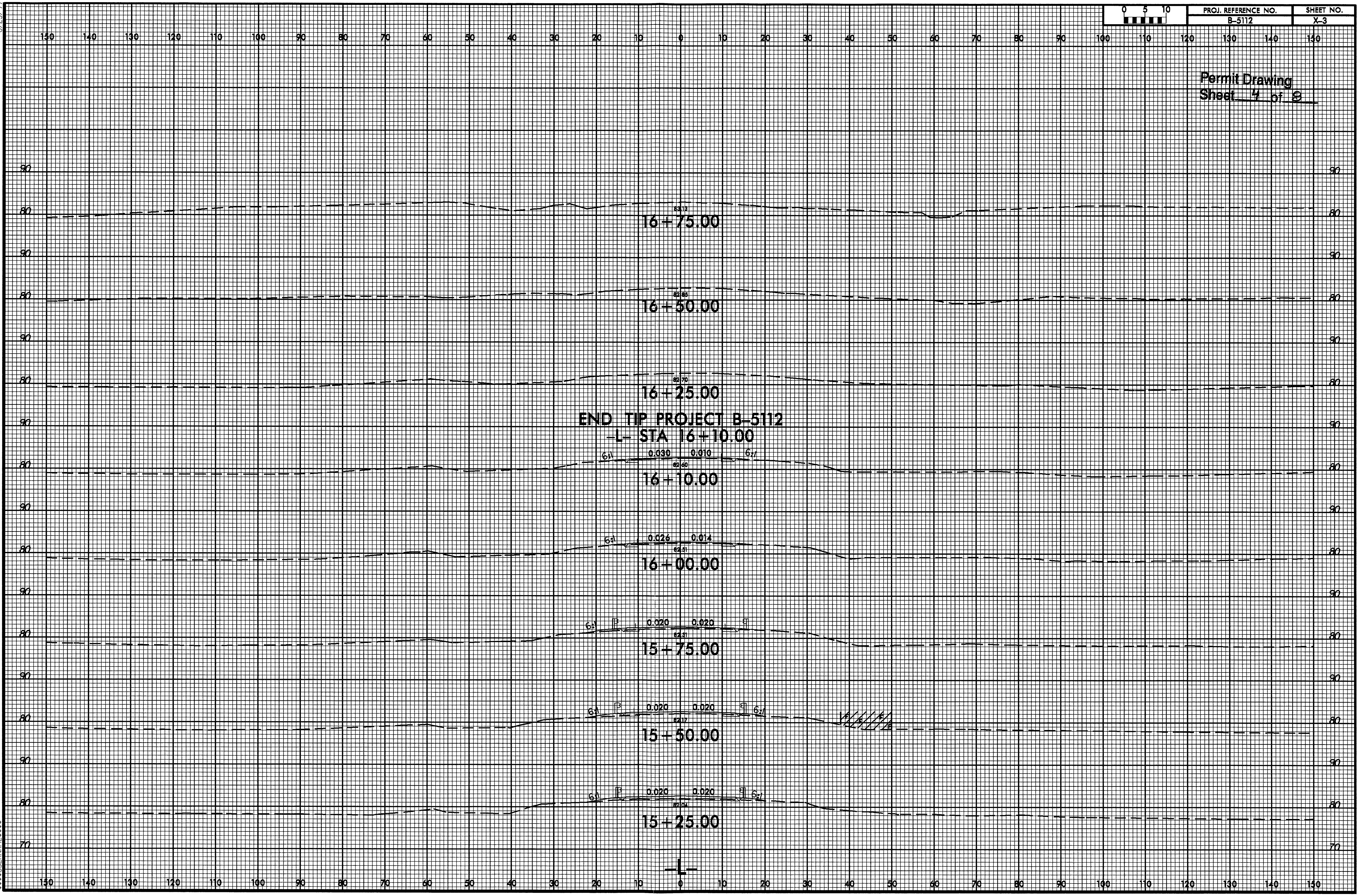
5/14/99

$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$ITEMNAME$$$$$$$$

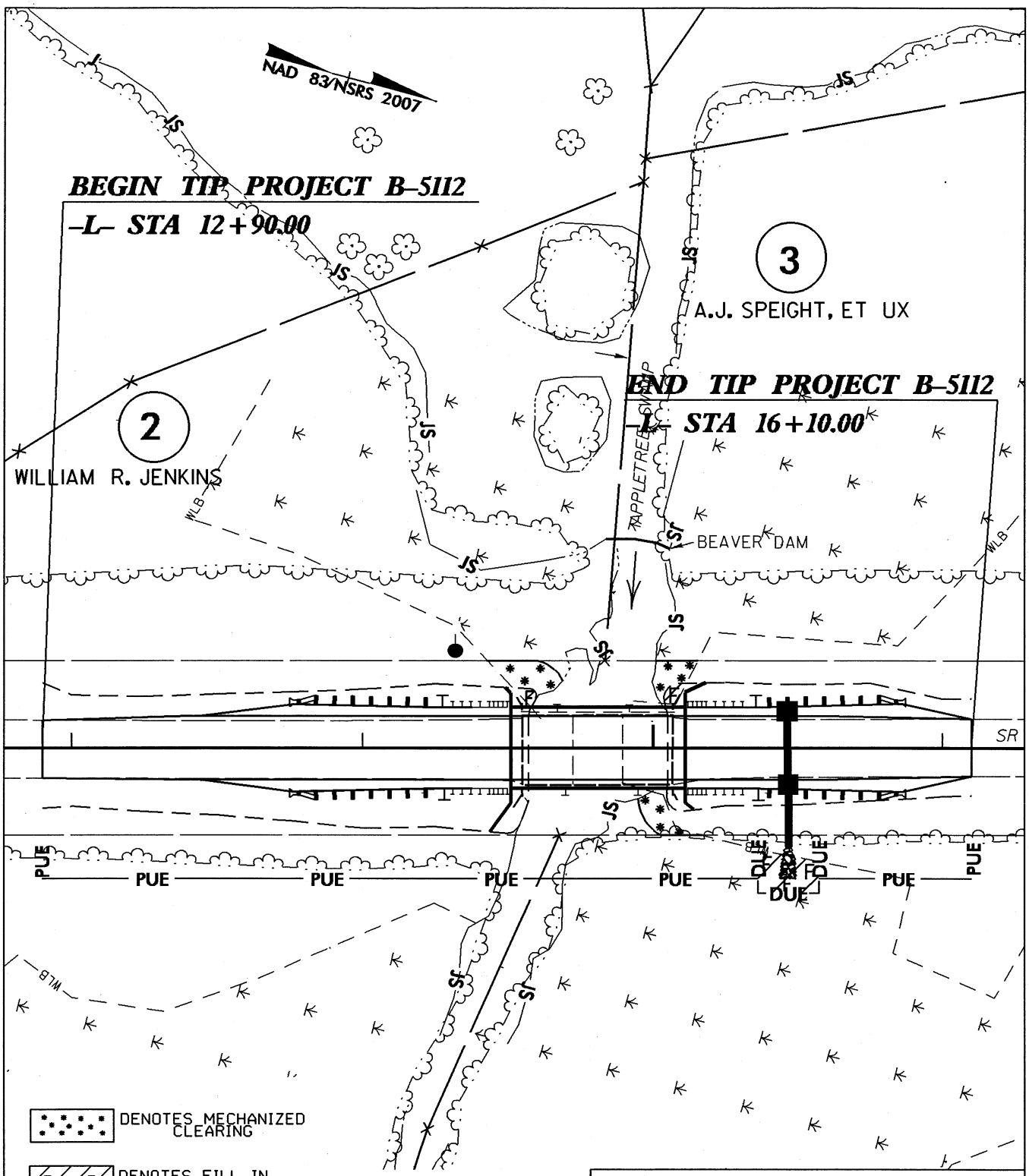
8/23/99

PROJ. REFERENCE NO.	SHEET NO.
B-5112	X-3

Permit Drawing
Sheet 4 of 8



$$$$SYSTIME$$$$
$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$



NCDOT

DIVISION OF HIGHWAYS

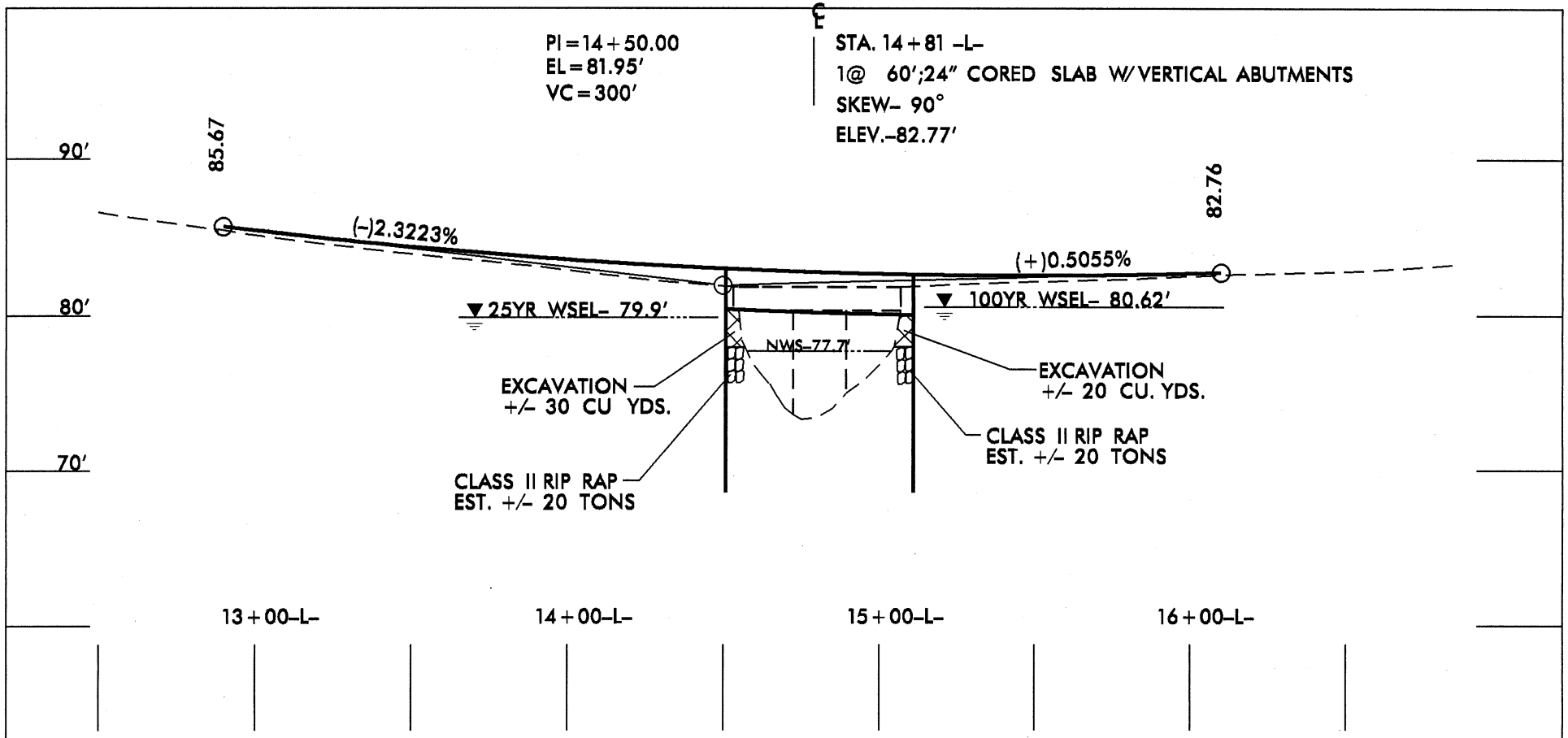
GREENE COUNTY

PROJECT: 42250.1.1 (B-5112)

REPLACE BRG#72 OVER APPLETREE SWAMP ON SR 1253

SHEET **OF** **11/08/12**

Permit Drawing
Sheet 5 of 8



100' 0'

HORIZONTAL SCALE

20' 10' 0'

VERTICAL SCALE

PROFILE

Permit Drawing
Sheet 6 of 8

NCDOT

DIVISION OF HIGHWAYS
GREENE COUNTY
PROJECT: 42250.1.1 (B-5112)

REPLACE BRG#72 OVER APPLETREE SWAMP ON SR 1253

SHEET OF **10/23/12**

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
2	WILLIAM R. JENKINS	P.O. BOX 130 WALSTONBURG, N.C. 27888
3	A.J. SPEIGHT	2399 WATERVIEW ROAD GREENVILLE, N.C. 27858

NCDOT

DIVISION OF HIGHWAYS

GREENE COUNTY

PROJECT: 42250.1.1 (B-5112)

REPLACE BRG #72 OVER
APPLETREE SWAMP ON SR 1253

SHEET OF 11/09/12

Permit Drawing
Sheet 7 of 8

WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	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)
	14+45-L- to 15+50-L-	1 @ 60' Vertical Abutment	<0.01			0.01						
TOTALS:			<0.01			0.01						

Permit Drawing
Sheet 8 of 8

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GREENE COUNTY
WBS -42250.1.1 (B-5112)

SHEET 11/8/2012

ATN Revised 3/31/05

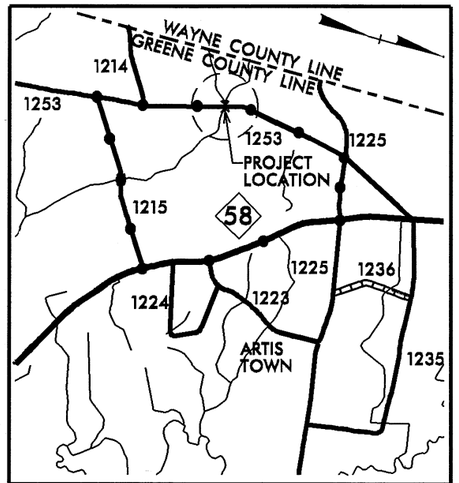
09/08/99

TIP PROJECT: B-5112

CONTRACT:

$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

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

GREENE COUNTY

LOCATION: BRIDGE NO. 72 OVER APPLETREE SWAMP ON SR 1253

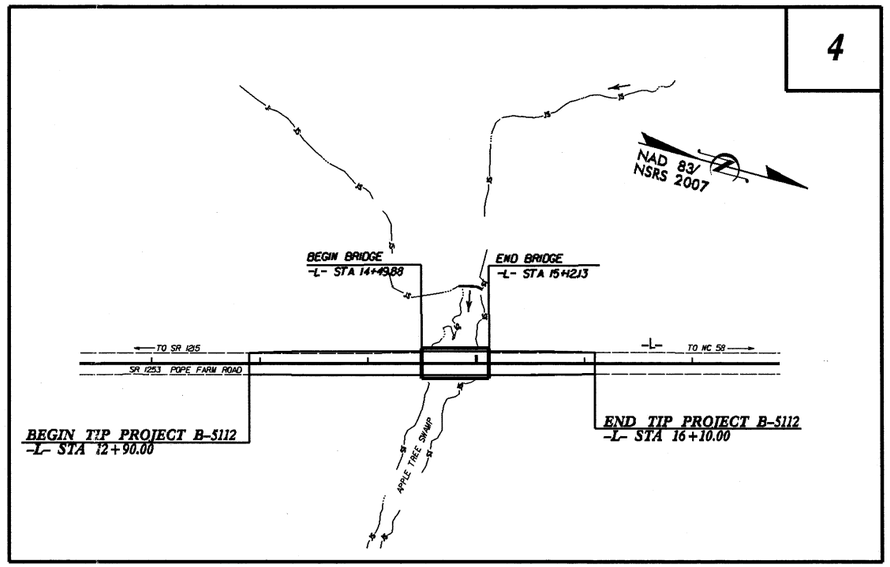
TYPE OF WORK: GRADING, DRAINAGE, STRUCTURE AND PAVING

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5112	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
42250.1.1	BRZ-1253(2)	PE
42250.2.1	BRZ-1253(2)	R/W & UTIL.

Buffer Drawing
Sheet 1 of 6

BUFFER IMPACTS PERMIT



NOTE:

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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 = 878
ADT 2033 = 1262
DHV = 11 %
D = 65 %
T = 14 % *
V = 60 MPH
* TTST = 8% DUAL 6%
FUNC CLASS =
RURAL LOCAL
SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-5112 = 0.049 MILES
LENGTH STRUCTURE TIP PROJECT B-5112 = 0.012 MILES
TOTAL LENGTH OF TIP PROJECT B-5112 = 0.061 MILES

Prepared in the Office of:
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LETTING DATE:
OCTOBER 15, 2013

GARY LOVERING, PE
PROJECT ENGINEER

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HYDRAULICS ENGINEER

P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

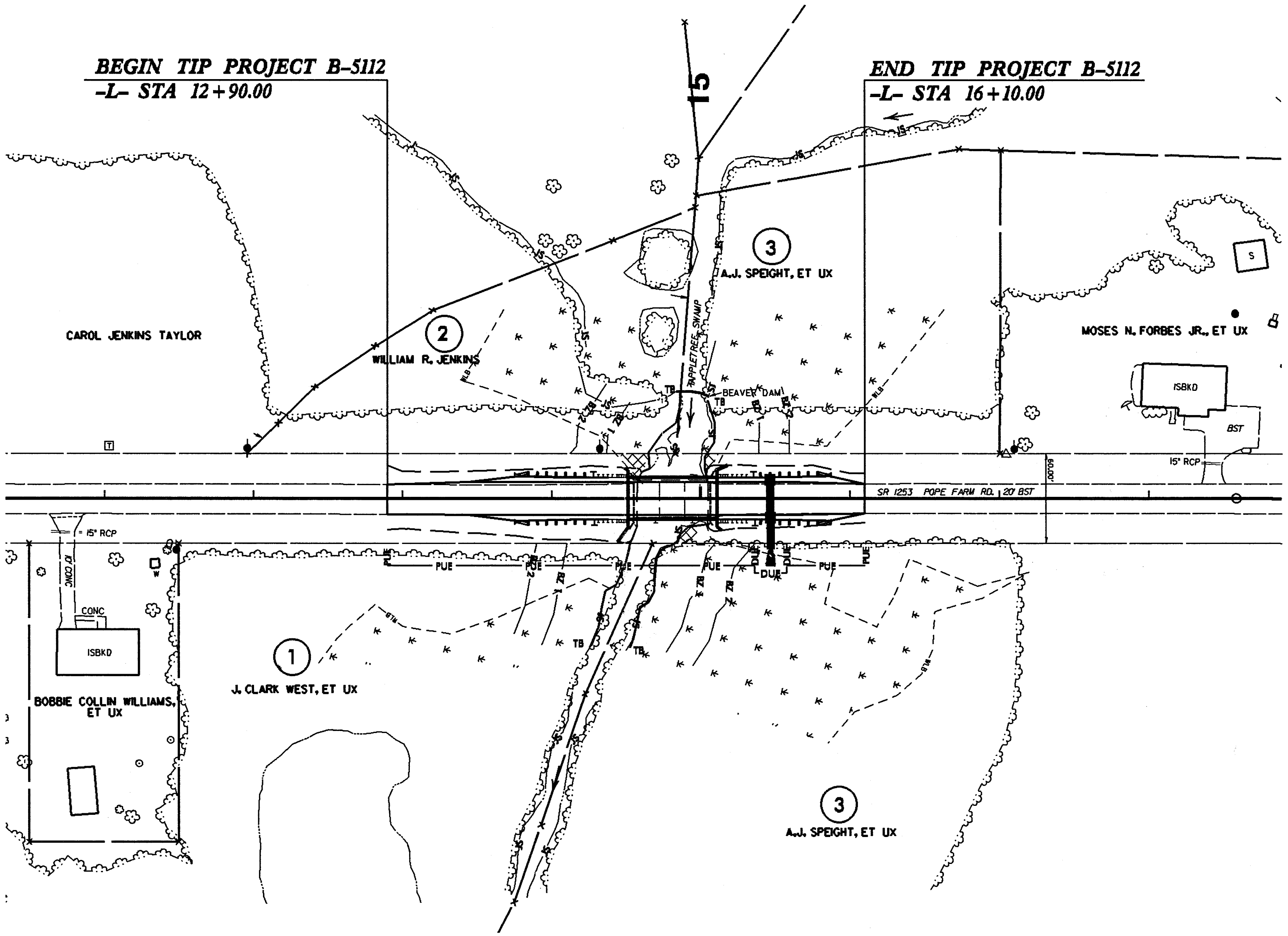
P.E.
SIGNATURE:

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-5112	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

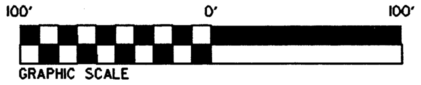
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Buffer Drawing
Sheet 2 of 6



SITE

▨ ALLOWABLE IMPACTS ZONE 1



$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-5112	4

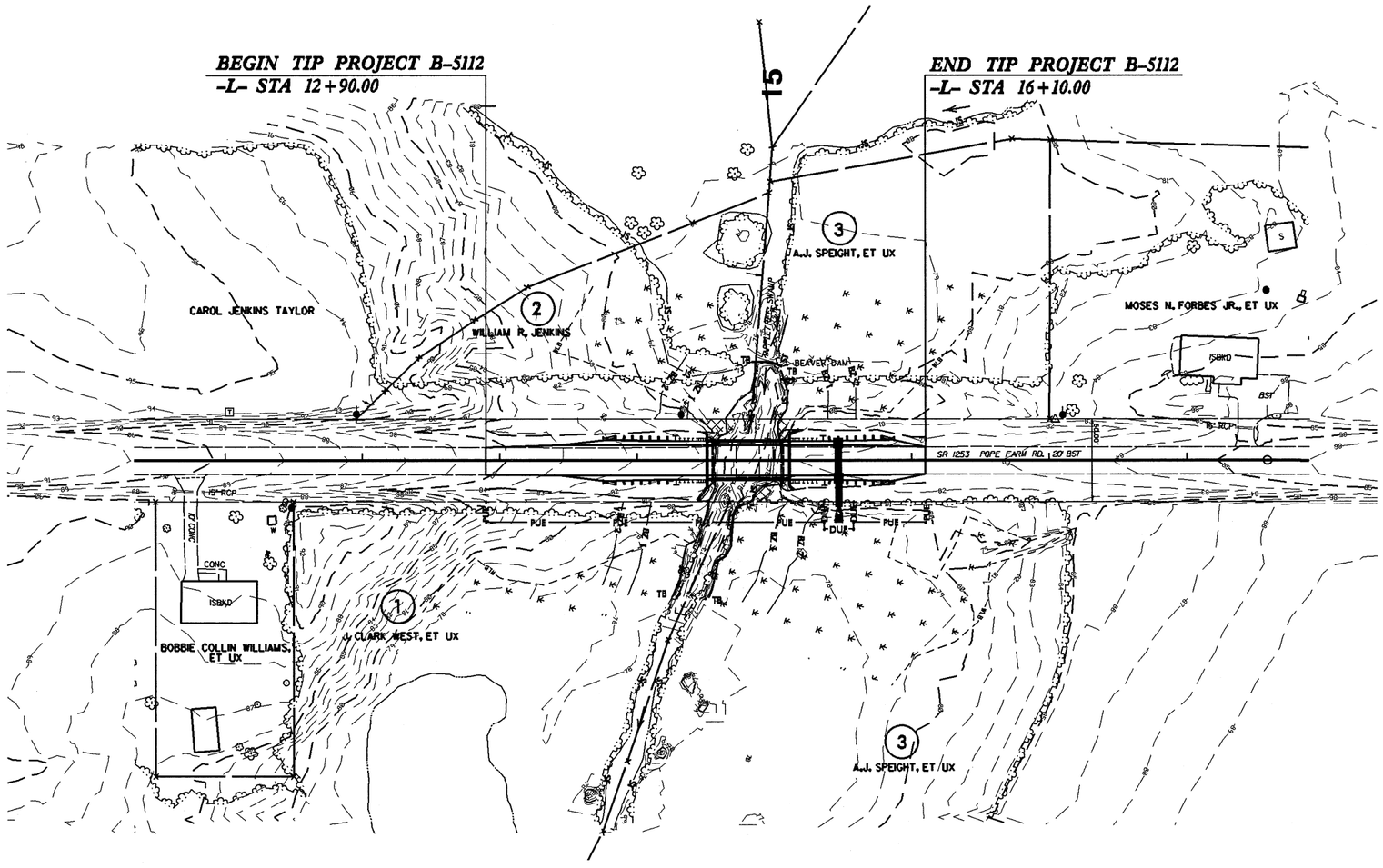
R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

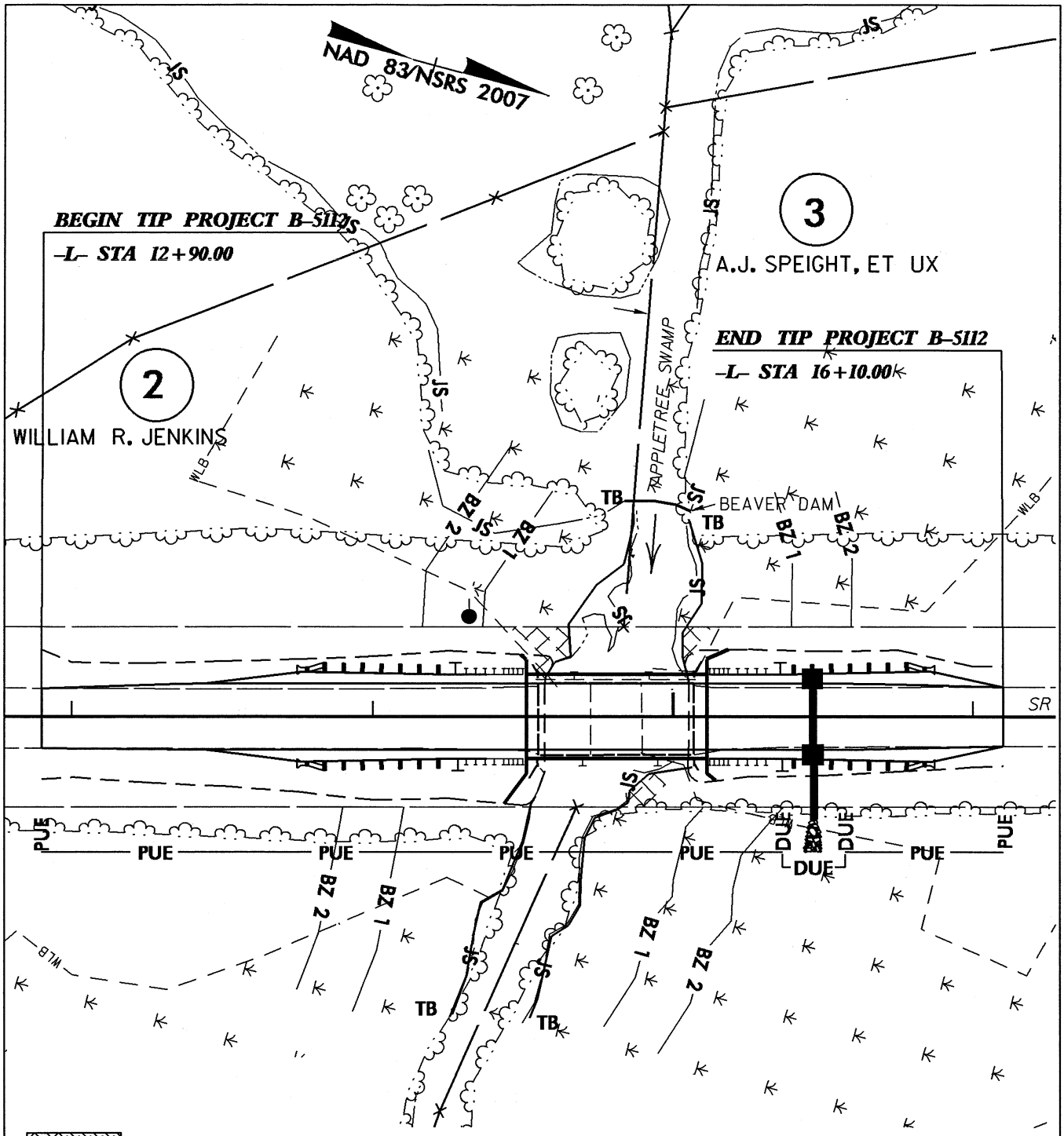
Buffer Drawing
Sheet 3 of 6



SITE

▨ ALLOWABLE IMPACTS ZONE 1

100' 0' 100'
GRAPHIC SCALE



SITE

100′ 0′

GRAPHIC SCALE

NCDOT

DIVISION OF HIGHWAYS

GREENE COUNTY

PROJECT: 42250.1.1 (B-5112)

REPLACE BRG#72 OVER APPLETREE SWAMP ON SR 1253

SHEET OF **11/09/12**

Buffer Drawing
Sheet 4 of 6

BUFFER IMPACTS SUMMARY

SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	IMPACT TYPE: ROAD CROSSING	IMPACT TYPE: BRIDGE	IMPACT TYPE: PARALLEL IMPACT	ALLOWABLE: ZONE 1 (ft^2)	ALLOWABLE: ZONE 2 (ft^2)	ALLOWABLE: TOTAL (ft^2)	MITIGABLE: ZONE 1 (ft^2)	MITIGABLE: ZONE 2 (ft^2)	MITIGABLE: TOTAL (ft^2)	BUFFER REPLACEMENT: ZONE 1 (ft^2)	BUFFER REPLACEMENT: ZONE 2 (ft^2)
	1 @ 60'; 24"	14+00-L- to 15+50-L-		X		369.0	0.0	369.0					
	CORED SLAB												
TOTALS:						369.0		369.0					

Buffer Drawing Sheet 5 of 6

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

GREENE COUNTY
PROJECT: 42250.1.1 (B-5112)

2/28/2013
SHEET OF

Rev. May 2006

WETLANDS IN BUFFER IMPACTS SUMMARY

SITE NO.	STATION (FROM/TO)		WETLANDS IN BUFFERS ZONE 1 (ft^2)	WETLANDS IN BUFFERS ZONE 2 (ft^2)
	14+40-L-to15+00-L-		369	0
TOTAL:			369.00	

Buffer Drawing
Sheet 6 of 6

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

GREENE COUNTY
PROJECT: 42250.1.1 (B-5112)

2/28/2013
SHEET OF

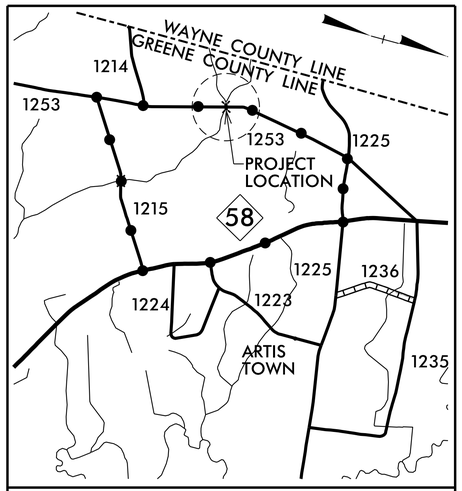
Rev. Jan 2009

09/08/99

TIP PROJECT: B–5112

CONTRACT:

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

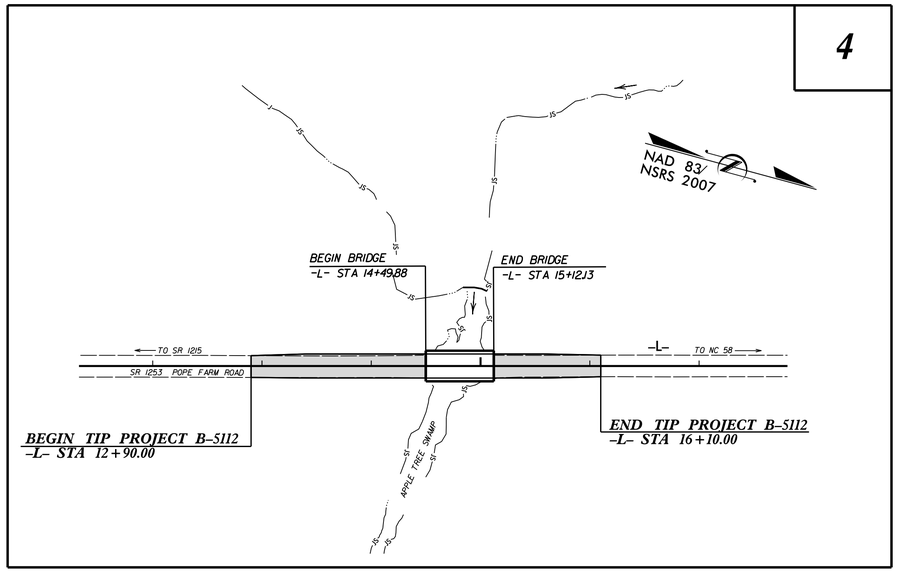
GREENE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B–5112	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
42250.1.1	BRZ–1253(2)	PE
42250.2.1	BRZ–1253(2)	R/W & UTIL.

LOCATION: BRIDGE NO. 72 OVER APPLETREE SWAMP ON SR 1253

TYPE OF WORK: GRADING, DRAINAGE, STRUCTURE AND PAVING



NOTE:

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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 = 878
ADT 2033 = 1262
DHV = 11 %
D = 65 %
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V = 60 MPH
* TTST = 8% DUAL 6%
FUNC CLASS =
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SUB–REGIONAL TIER

PROJECT LENGTH

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LENGTH STRUCTURE TIP PROJECT B–5112 = 0.012 MILES
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P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

15-OCT-2012 15:34
R:\Roadway_Proj\b5112_Rdy_tsh.dgn
$$$$USERNAME$$$$

04/16/11

PROJECT REFERENCE NO.	SHEET NO.
B-5112	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: Area or Site
- Potential Soil Contamination: Area 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 — RW
- Proposed Right of Way Line with Iron Pin and Cap Marker — RW
- Proposed Right of Way Line with Concrete or Granite R/W Marker — RW
- Proposed Control of Access Line with Concrete C/A Marker — CA
- Existing Control of Access — CA
- Proposed Control of Access — CA
- 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
- 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

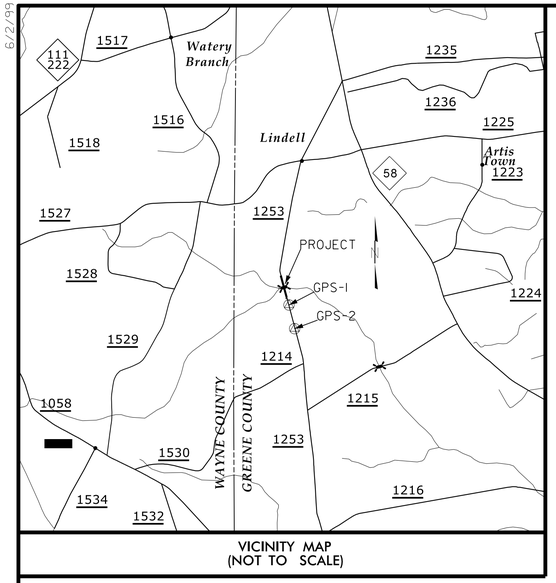
MISCELLANEOUS:

- 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-5112	1-C
Location and Surveys	

SURVEY CONTROL SHEET B-5112



VICINITY MAP
(NOT TO SCALE)

BL

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
BL1	BL-1	650479.5605	2352410.4236	91.72	OUTSIDE PROJECT LIMITS	
BL2	BL-2	650972.1369	2352313.1564	81.28	14+41.75	18.85 RT
BL3	BL-3	651536.4580	2352125.2180	87.18	20+35.26	17.03 LT
GPS1	NCDOT GPS B5112	650174.5730	2352522.3490	93.98	OUTSIDE PROJECT LIMITS	
GPS2	NCDOT GPS B5112	649052.4650	2352789.5810	102.66	OUTSIDE PROJECT LIMITS	

BM1 ELEVATION = 81.38
N 650984 E 2352229
L STATION 14+76.00 59 LEFT
RR SPIKE SET IN 24" HARDWOOD

POPE2009 ELEVATION = 94.53
N 650122 E 2352538
L STATION 30+45.00
S 08°13'11.75" E DIST 2439.31
NCGS POPE 2009

L

TYPE	STATION	NORTH	EAST
POT	10+00.00	650540.7521	2352410.1578
PC	18+58.68	651369.7226	2352186.2346
PCC	21+48.13	651650.2402	2352114.9300
PT	22+17.72	651718.3593	2352100.7672
PC	22+32.94	651733.3440	2352098.1028
PCC	24+40.47	651940.0787	2352089.1259
PT	25+40.92	652039.6699	2352102.0066
PC	27+67.41	652262.9656	2352139.8914
PT	28+35.05	652329.5921	2352151.5931
POT	30+45.18	652536.3369	2352189.1406

ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	15+36.29	50.00	651071.5259	2352318.5761
L	15+36.29	30.00	651066.3104	2352299.2682
L	15+57.29	50.00	651091.7993	2352313.0999
L	15+57.29	30.00	651086.5838	2352293.7919

NAD 83/
NSRS 2007

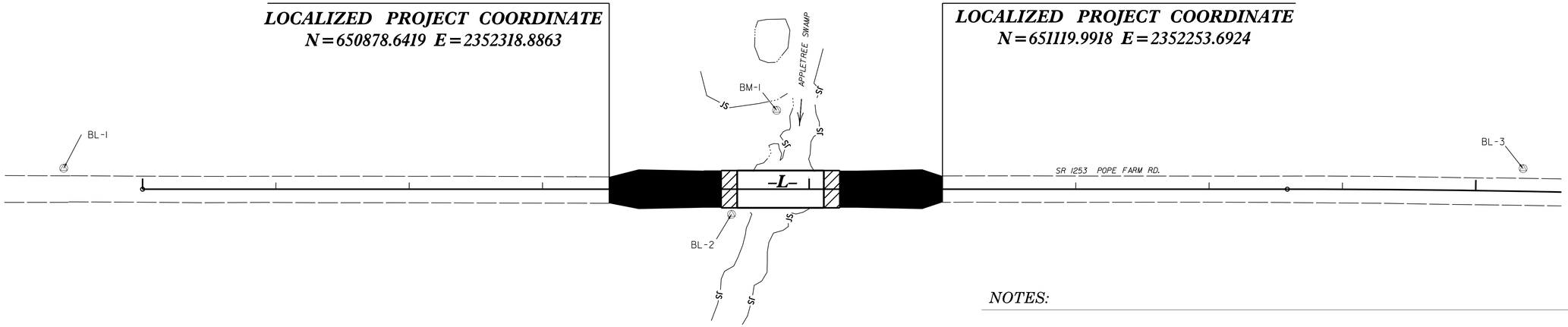
10 15 20

BEGIN TIP PROJECT B-5112
-L- STA 13+50.00

LOCALIZED PROJECT COORDINATE
N = 650878.6419 E = 2352318.8863

END TIP PROJECT B-5112
-L- STA 16+00.00

LOCALIZED PROJECT COORDINATE
N = 651119.9918 E = 2352253.6924



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS B5112-1" WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 650174.573(ft) EASTING: 2352522.349(ft) ELEVATION: 93.983(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998854401
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS B5112-1" TO -L- STATION 13+50.00 IS N 16°07'05.9" W 732.88(ft)
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

NOTE: DRAWING NOT TO SCALE

NOTES:

1. *THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT: HTTP://WWW.NCDOT.ORG/DOH/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/*

   THE FILES TO BE FOUND ARE AS FOLLOWS: B5112_LS_CONTROL.TXT

   SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

△ *INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.*

PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.

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$$$$ICTINGER$$$$

6/2/99

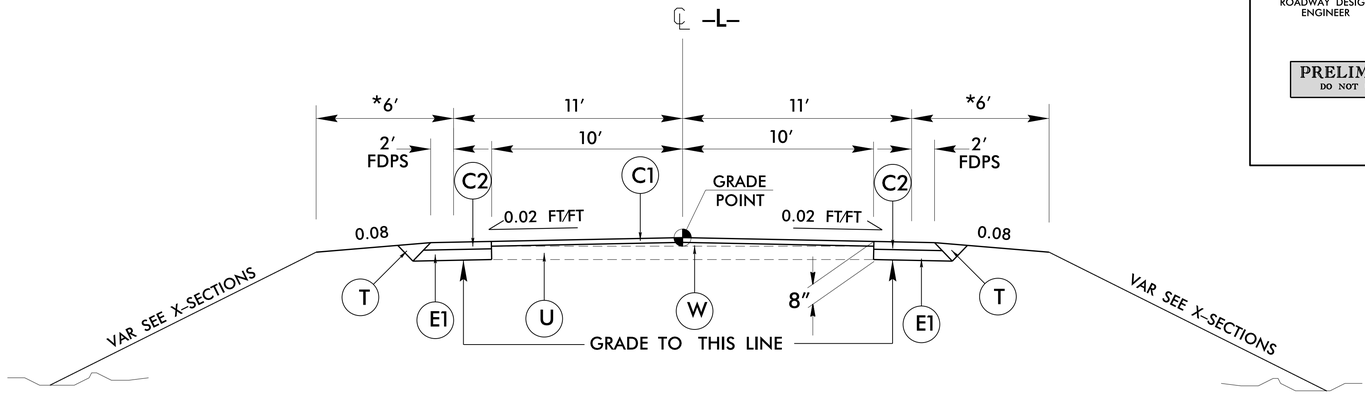
PROJECT REFERENCE NO.	SHEET NO.
B–5112	2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PAVEMENT SCHEDULE
FINAL DESIGN

C1	PROP. APPROX. 1½″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. PLACED IN TWO LAYERS
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1″ DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2″ 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 3″ IN DEPTH OR GREATER THAN 5½″ IN DEPTH.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE DETAIL SHOWING METHOD OF WEDGING).

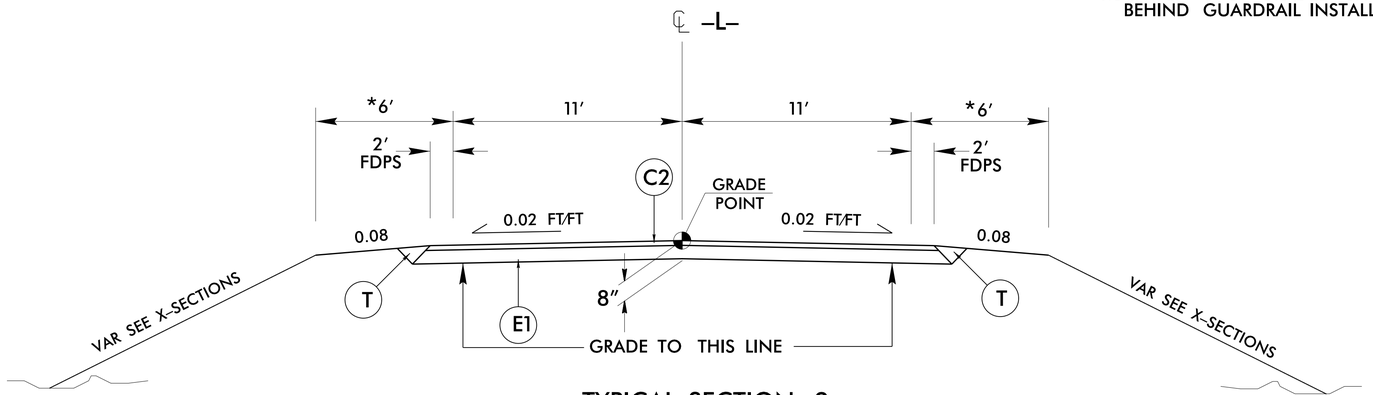
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



TYPICAL SECTION 1

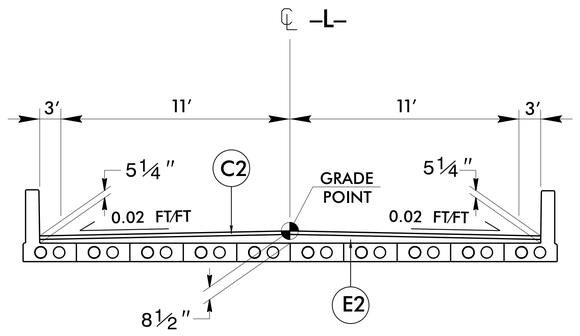
–L– STA 12+90.00 TO –L– STA 14+20.00
–L– STA 15+40.00 TO –L– STA 16+10.00

*MAINTAIN 3′ OF GRADED SHOULDER BEHIND GUARDRAIL INSTALLATION



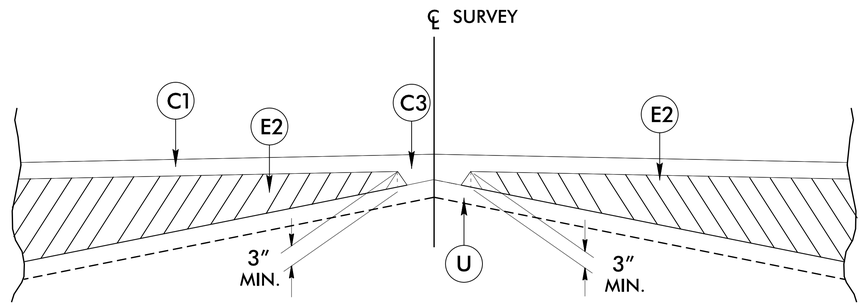
TYPICAL SECTION 2

–L– STA 14+20.00 TO –L– STA 14+49.88 (BEGIN BRIDGE)
–L– STA 15+12.13 (END BRIDGE) TO –L– STA 15+40.00



BRIDGE TYPICAL

–L– STA 14+49.88 (BEGIN BRIDGE) TO –L– STA 15+12.13 (END BRIDGE)



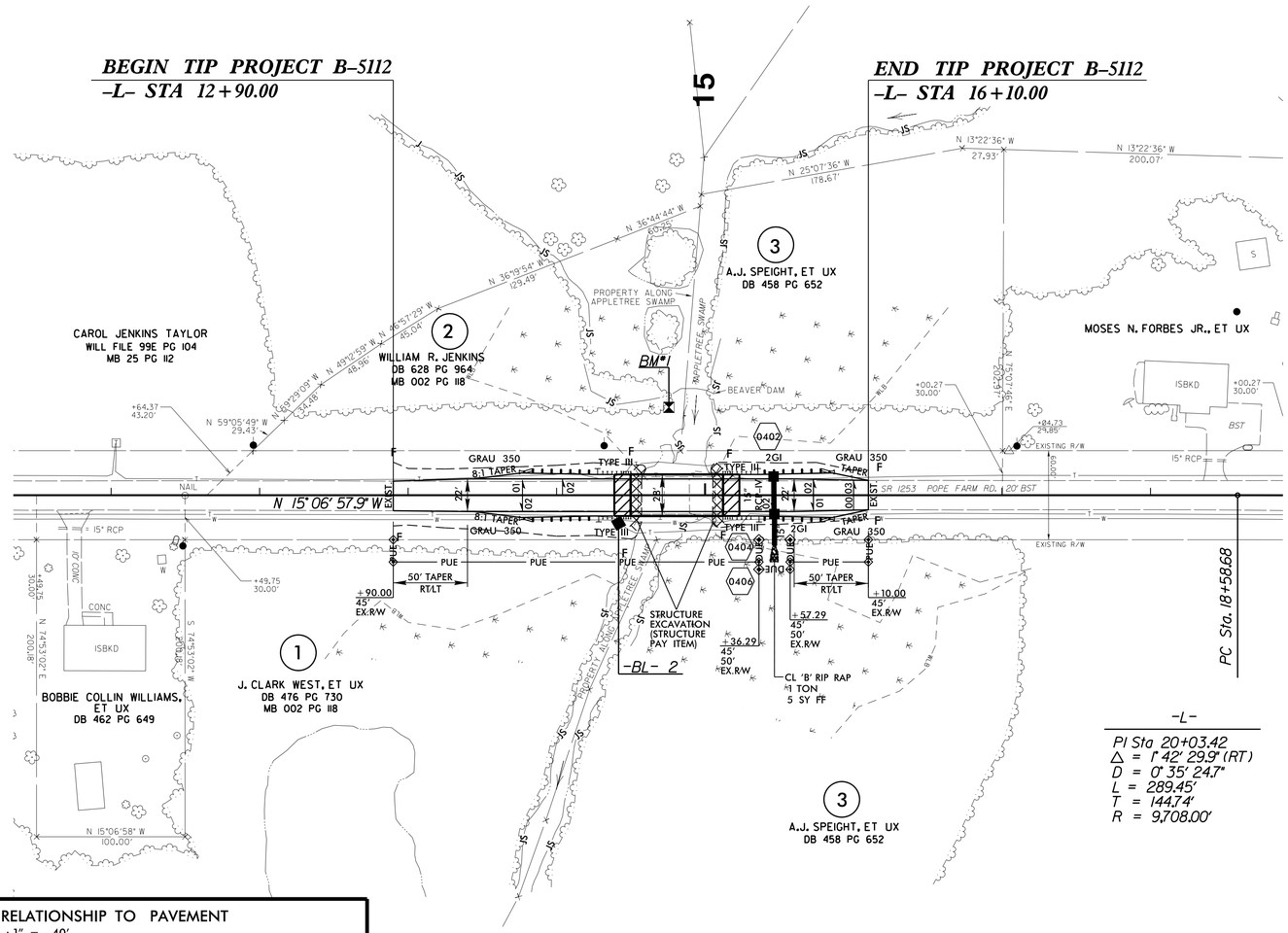
Detail Showing Method of Wedging

5/14/99

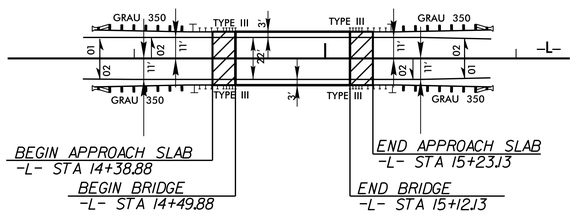
PROJECT REFERENCE NO.	SHEET NO.
B-5112	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007



SKETCH OF BRIDGE IN RELATIONSHIP TO PAVEMENT
SCALE : 1" = 40'



STRUCTURE EXCAVATION (STRUCTURE PAY ITEM)

BRIDGE APPROACH SLAB

FOR -L- PROFILE, SEE SHEET 5
FOR STRUCTURE PLANS, SEE SHEETS S1 – S

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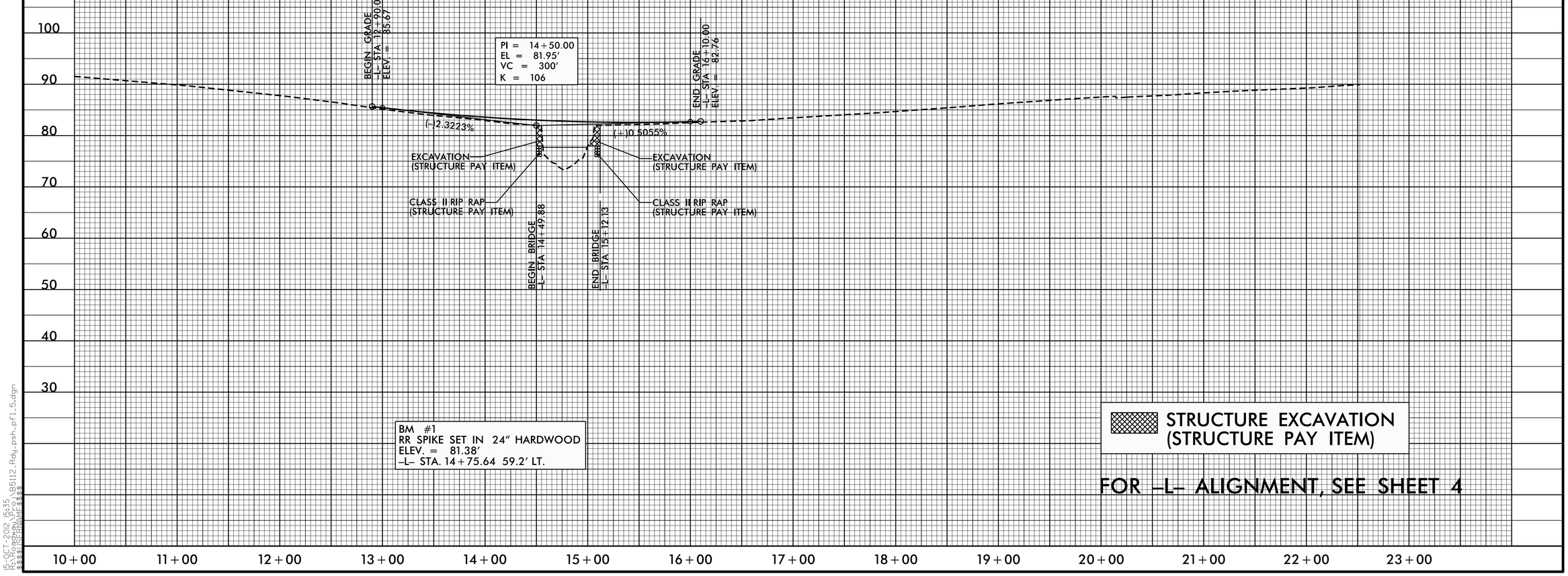
5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-5112	5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 600	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 79.9	FT
BASE DISCHARGE	= 900	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 80.62	FT
OVERTOPPING DISCHARGE	= 2,040	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 82.6	FT
DATE OF SURVEY	= 01/02/04	
W.S.ELEVATION AT DATE OF SURVEY	= 77.7	FT



FOR –L– ALIGNMENT, SEE SHEET 4

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8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	B–5112	X–1

13+75.00

6:1 0.020 0.020 6:1

83.45

13+50.00

6:1 0.020 0.020 6:1

83.92

13+25.00

0.020 0.020 5:1

84.52

13+00.00

5:1 0.014 0.026 5:1

85.14

12+90.00

BEGIN TIP PROJECT B–5112

–L– STA 12+90.00

6:1 0.010 0.030 6:1

85.43

12+75.00

85.86

12+50.00

86.56

–L–

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

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8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	B–5112	X–2

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

90 80 70

0.020 0.020
81.98
15+13.00
END BRIDGE
–L– STA 15+12.13
0.020 0.020
77.94
15+00.00

0.020 0.020
74.47
14+75.00

0.020 0.020
81.96
14+53.00
BEGIN BRIDGE
14+49.88

4:1 0.020 0.020 4:1
82.00
14+50.000

6:1 0.020 0.020 6:1
82.32
14+25.00

6:1 0.020 0.020 6:1
82.92
14+00.00

–L–

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	B–5112	X–3

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

90 / 80 / 90 / 80 / 90 / 80 / 90 / 80 / 90 / 80 / 70

83.13
16+75.00

82.85
16+50.00

82.70
16+25.00

END TIP PROJECT B–5112
–L– STA 16+10.00

6:1 0.030 0.010 6:1
82.60
16+10.00

6:1 0.026 0.014
82.51
16+00.00

6:1 0.020 0.020
82.31
15+75.00

6:1 0.020 0.020 6:1
82.17
15+50.00

6:1 0.020 0.020 6:1
82.04
15+25.00

–L–

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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