



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE  
GOVERNOR

EUGENE A. CONTI, JR.  
SECRETARY

May 21, 2012

Mr. Tom Steffens  
U. S. Army Corps of Engineers  
Regulatory Field Office  
US Army Corps of Engineers  
2407 West Fifth Street Washington, NC 27889

Dear Sir:

Subject:       **Application for Section 404 Nationwide Permits (NWP) 23 & 12, Section 401 Water Quality Certification & Riparian Buffer Certification** for the replacement of Bridge No. 215 over Beaverdam Creek on SR 1227 in Wayne County; TIP Project B-4841; Federal Aid Project No. BRZ-1227(4); Debit \$240 from WBS No. 38611.1.1.

Please find enclosed PCN, permit drawings, utility drawings, stormwater management plan, and roadway plans for the above referenced project proposed by the North Carolina Department of Transportation (NCDOT). A Programmatic Categorical Exclusion (PCE) was completed for this project on February 11, 2010 and distributed shortly thereafter. Additional copies are available upon request. The NCDOT proposes to replace existing Bridge No. 215 over Beaverdam Creek on SR 1227 in Wayne County. The project involves replacement of the existing functionally obsolete and structurally deficient two span 53-foot bridge and approaches with a new three span 105-foot bridge. The new bridge will feature a 20-foot pavement width, with two 10-foot lanes and 4-foot offsets. The approach roadway will extend approximately 200 feet from the west end of the new bridge and 190 feet from the east end of the new bridge. The approaches will be widened to include a 20-foot pavement width, providing two 10-foot lanes and three-foot grass shoulders.

Proposed permanent impacts to riparian wetlands from bridge construction are less than 0.01 acre for excavation and less than 0.01 acre for mechanized clearing. Utility relocations will require less than 0.01 acre of fill in wetlands. The project will also impact riparian buffers due to bridge construction and approach work. Roadway and bridge buffer impacts involve 959 sq. ft. in Zone 1 and 338 sq. ft. in Zone 2. Traffic will be detoured off-site during construction.

**MAILING ADDRESS:**

NC DEPARTMENT OF TRANSPORTATION  
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS  
NATURAL ENVIRONMENT SECTION  
1598 MAIL SERVICE CENTER  
RALEIGH NC 27699-1598

TELEPHONE: 919-707-6100  
FAX: 919-212-5785

WEBSITE: [WWW.NCDOT.ORG](http://WWW.NCDOT.ORG)

**LOCATION:**

1020 BIRCH RIDGE DRIVE  
RALEIGH NC 27610-4328



This project calls for a letting date of December 18, 2012 and a review date of October 30, 2012; however, the let date may advance as additional funding becomes available.

### **Regulatory Approvals**

Section 404 Permit: All aspects of this project are being processed by the Federal Highway Administration as a "Categorical Exclusion" in accordance with 23 CFR 771.115(b). The NCDOT requests that the project be authorized by NWP 23 for bridge construction and NWP 12 for utility impacts.

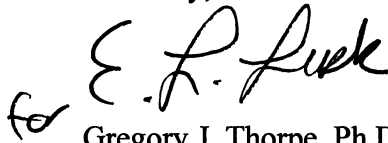
Section 401 Permit: We anticipate 401 General Certification numbers 3891 and 3884 will apply to this project. NCDOT is requesting written concurrence from the North Carolina Department of Environment and Natural Resources, Division of Water Quality. We are providing five copies of this application to the NCDWQ for their approval.

Neuse Riparian Buffer Authorization: NCDOT is requesting a Neuse Riparian Buffer Authorization from the NCDWQ.

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

If you have any questions or need additional information, please contact Gordon Cashin at (919) 707-6107.

Sincerely,

A handwritten signature in black ink, appearing to read "G. J. Thorpe", with a small "for" written to the left.

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 & 12                      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 215 over Beaverdam Creek on SR 1227 (Oakland Church Rd)
2b. County:	Wayne
2c. Nearest municipality / town:	Rosewood
2d. Subdivision name:	not applicable
2e. NCDOT only, T.I.P. or state project no:	B-4841

#### 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) 707-6107
3g. Fax no.:	(919) 431-2002
3h. Email address:	gcashin@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: 35.407818 Longitude: -78.113292 (DD.DDDDDD) (-DD.DDDDDD)
1c. Property size:	15.2 acres
<b>2. Surface Waters</b>	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Beaverdam Creek and an unnamed tributary of Beaverdam Creek
2b. Water Quality Classification of nearest receiving water:	WS-IV NSW
2c. River basin:	Neuse River Basin
<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: Agriculture, with residential along roadways, and forested stream corridors.	
3b. List the total estimated acreage of all existing wetlands on the property: 3.1	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 1,075	
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 53-foot bridge with a 105-foot, 3-span bridge on the existing alignment with an off-site detour. Standard road building equipment, such as trucks, dozers, and cranes will be used.	
<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: Requesting a preliminary JD at permitting	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown
4b. If the Corps made the jurisdictional determination, what type of determination was made?	<input type="checkbox"/> Preliminary <input type="checkbox"/> Final
4c. If yes, who delineated the jurisdictional areas? Name (if known): Veronica Barnes, Amy James	Agency/Consultant Company: NCDOT Other:
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation.	
<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 checked="" type="checkbox"/> Streams - tributaries		<input checked="" 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	excavation	riparian	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input checked="" type="checkbox"/> DWQ	<0.01	
Site 1 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	mechanized clearing	riparian	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input checked="" type="checkbox"/> DWQ	<0.01	
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>					<0.02 Perm. 0.0 Temporary	
2h. Comments: There will be 0.09 ac of hand clearing and <0.01 ac of fill due to utility relocation.						
<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>						0.0 Perm 0.0 Temp
3i. Comments: There will be 13 sq. ft. (<0.01 ac) of fill in surface waters due to bent installation.						



**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 <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>				0.0 Permanent 0.0 Temporary

4g. Comments:

**5. Pond or Lake Construction**

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

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

5g. Comments:

5h. Is a dam high hazard permit required?	<input type="checkbox"/> Yes	<input type="checkbox"/> 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?			<input checked="" type="checkbox"/> Neuse <input type="checkbox"/> Tar-Pamlico <input type="checkbox"/> Other: <input type="checkbox"/> Catawba <input type="checkbox"/> Randleman		
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 checked="" type="checkbox"/> P <input type="checkbox"/> T	Bridge	Beaverdam Creek	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	728	64
B2 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Road crossing	Beaverdam Creek	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	231	274
B3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
6h. Total buffer impacts				959	338
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 longer than the existing bridge with fewer spans; the proposed bridge will be at approximately the same grade as the existing structure; an off site detour will be used. Slopes of 3:1 will be constructed in wetlands.		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques. Top down construction and Design Standards in Sensitive Watersheds will be implemented.		
<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 type="checkbox"/> Yes <input checked="" type="checkbox"/> 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):	<input type="checkbox"/> DWQ <input type="checkbox"/> Corps	
2c. If yes, which mitigation option will be used for this project?	<input type="checkbox"/> Mitigation bank <input 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 type="checkbox"/> Yes	
4b. Stream mitigation requested:	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):	square feet	
4e. Riparian wetland mitigation requested:	acres	
4f. Non-riparian wetland mitigation requested:	acres	
4g. Coastal (tidal) wetland mitigation requested:	acres	
4h. Comments:		
<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	
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:				




<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:	<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 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 type="checkbox"/> No
<b>5. DWQ 401 Unit Stormwater Review</b>	
5a. Does the Stormwater Management Plan meet the appropriate requirements?	<input type="checkbox"/> Yes <input type="checkbox"/> No N/A
5b. Have all of the 401 Unit submittal requirements been met?	<input type="checkbox"/> Yes <input type="checkbox"/> No N/A



<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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5c. If yes, indicate the USFWS Field Office you have contacted.	<input 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? USFWS County Site, NC Natural Heritage site		
<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 <small>(Agent's signature is valid only if an authorization letter from the applicant is provided.)</small>	5.21.12 Date



## **STORMWATER MANAGEMENT PLAN**

Project: B-4841 (38611.1.1)  
County: Wayne  
Hydraulics Project Manager: Jay Twisdale, PE

May 7, 2010

### ***ROADWAY DESCRIPTION***

The project involves the replacement of Br. No. 215 over Beaverdam Creek on SR 1227. The overall length of the project is 0.085 mi., and the existing 3-span bridge (52'-8" overall length) is being replaced with a 3-span 105'-long bridge at existing location. The proposed roadway utilizes shoulder section throughout. There is only one major crossing.

### ***ENVIRONMENTAL DESCRIPTION***

The project is located in the Neuse River Basin. The floodplain is swampy both up and down, with extensive wetlands within project limits. Two inlet channels join at the bridge, with one channel on the downstream side; all are jurisdictional with riparian buffers (with the following exception). One of the inlet channels runs parallel with the existing road in the NW quadrant, just off the existing shoulder; this channel is jurisdictional but does not have riparian buffers. There is some discrepancy in mapping regarding which is Beaverdam Creek and which is a tributary, and both are rather shallow with poorly-defined banks farther upstream. The best usage classification of the Beaverdam Creek is WS IV NSW (Water Supply IV, highly developed, Nutrient Sensitive Waters).

### ***BEST MANAGEMENT PRACTICES***

Due to the short project length, adjacent channels and wetlands, and flat topography, opportunities for Best Management Practices (BMPs) and measures to reduce stormwater impacts are minimal. No bridge deck drainage is being discharged directly into Beaverdam Creek. Due to the flat topography and minimal fill, drainage systems off the ends of the bridge to collect bridge deck drainage have been eliminated to avoid direct discharge into the creek or tail ditching through wetlands. 1.5:1 fill slope with rip rap is utilized in the NW quadrant to avoid placing fill in the adjacent inlet channel, for sufficient length until there is enough clearance between the road and channel to establish stable 3:1 side slopes. Standard roadway cut ditches were eliminated in favor of maintaining existing ditches.



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4841	1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
38611.1.1	BRZ-1227(4)	P.E.	
38611.2.1	BRZ-1227(4)	RW, UTIL.	

STATE OF NORTH CAROLINA

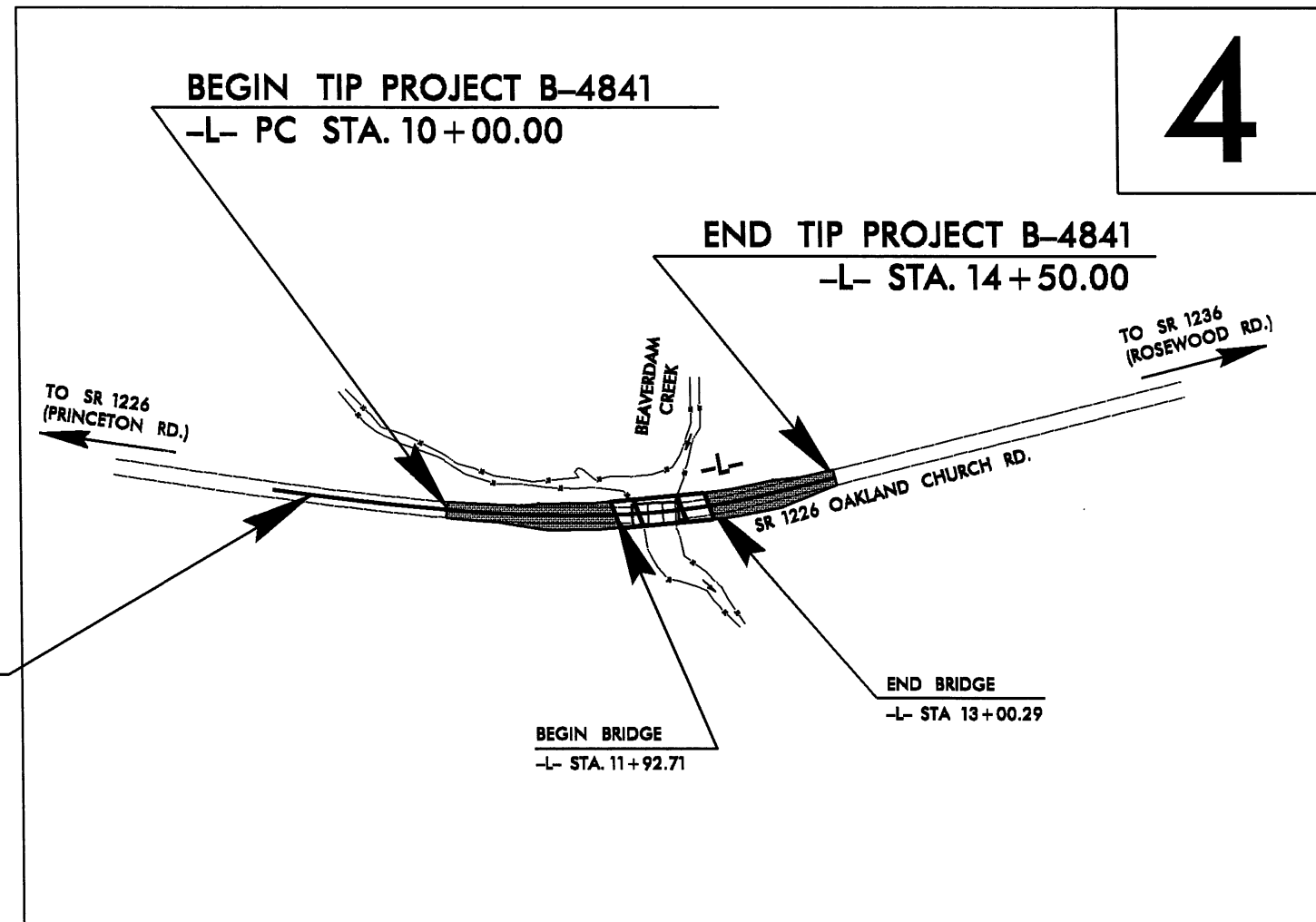
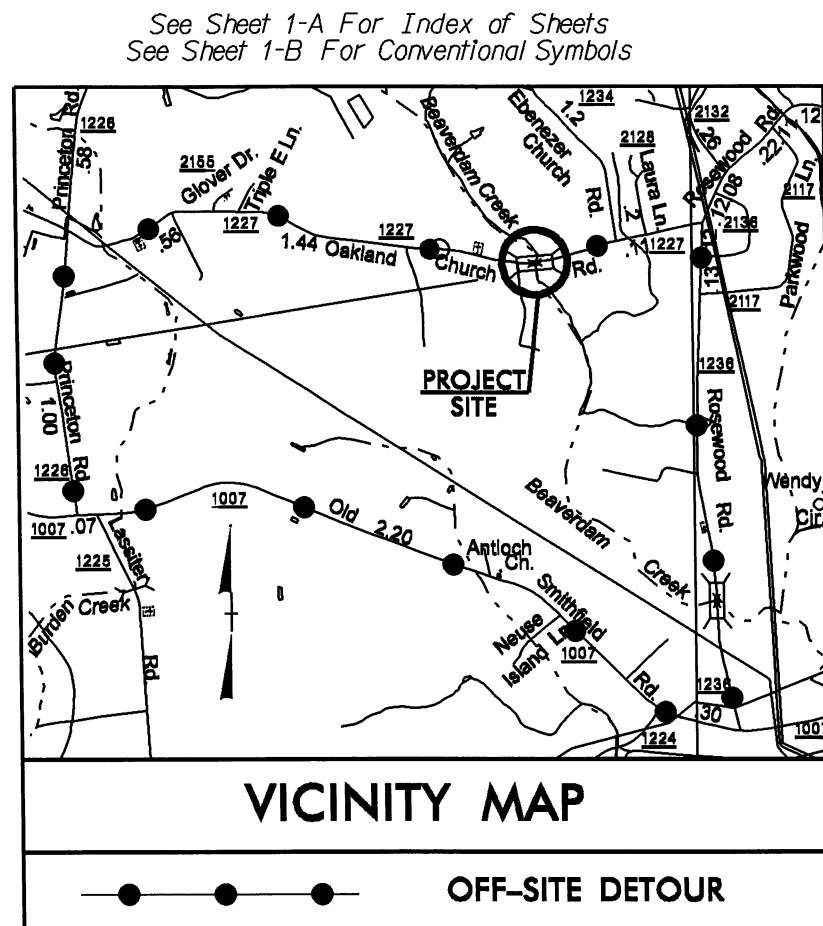
DIVISION OF HIGHWAYS

WAYNE COUNTY

LOCATION: BRIDGE NO. 215 AND APPROACHES OVER BEAVERDAM CREEK ON SR 1227 (OAKLAND CHURCH RD.)

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

WETLAND/SURFACE WATER PERMIT DWG.



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.

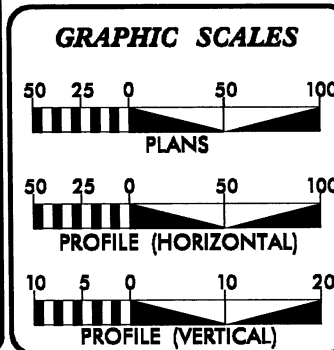
CLEARING ON THIS PROJECT SHALL BE PREFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

Permit Drawing

Sheet 1 of 7

PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION



DESIGN DATA	
ADT 2012 =	625
ADT 2035 =	1,125
DHV =	65 %
D =	13 %
T =	9 % *
V =	40 MPH
FUNC CLASS =	RURAL LOCAL
* (TTST 3% + DUAL 6%)	
SUBREGIONAL TIER	

PROJECT LENGTH	
LENGTH ROADWAY TIP PROJECT B-4841 =	0.065 MI
LENGTH STRUCTURES TIP PROJECT B-4841 =	0.020 MI
TOTAL LENGTH TIP PROJECT B-4841 =	0.085 MI

Prepared In the Office of:	
DIVISION OF HIGHWAYS	
1000 Birch Ridge Dr., Raleigh NC, 27610	
2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE:	BRENDA MOORE, PE
NOVEMBER 22, 2011	PROJECT ENGINEER
LETTING DATE:	TATIA L. WHITE, PE
DECEMBER 18, 2012	PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER	
SIGNATURE:	P.E.
ROADWAY DESIGN ENGINEER	
SIGNATURE:	P.E.
STATE HIGHWAY DESIGN ENGINEER	

DIVISION OF HIGHWAYS

STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER

TIP PROJECT: B-4841

CONTRACT:

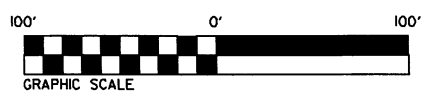


8/17/99

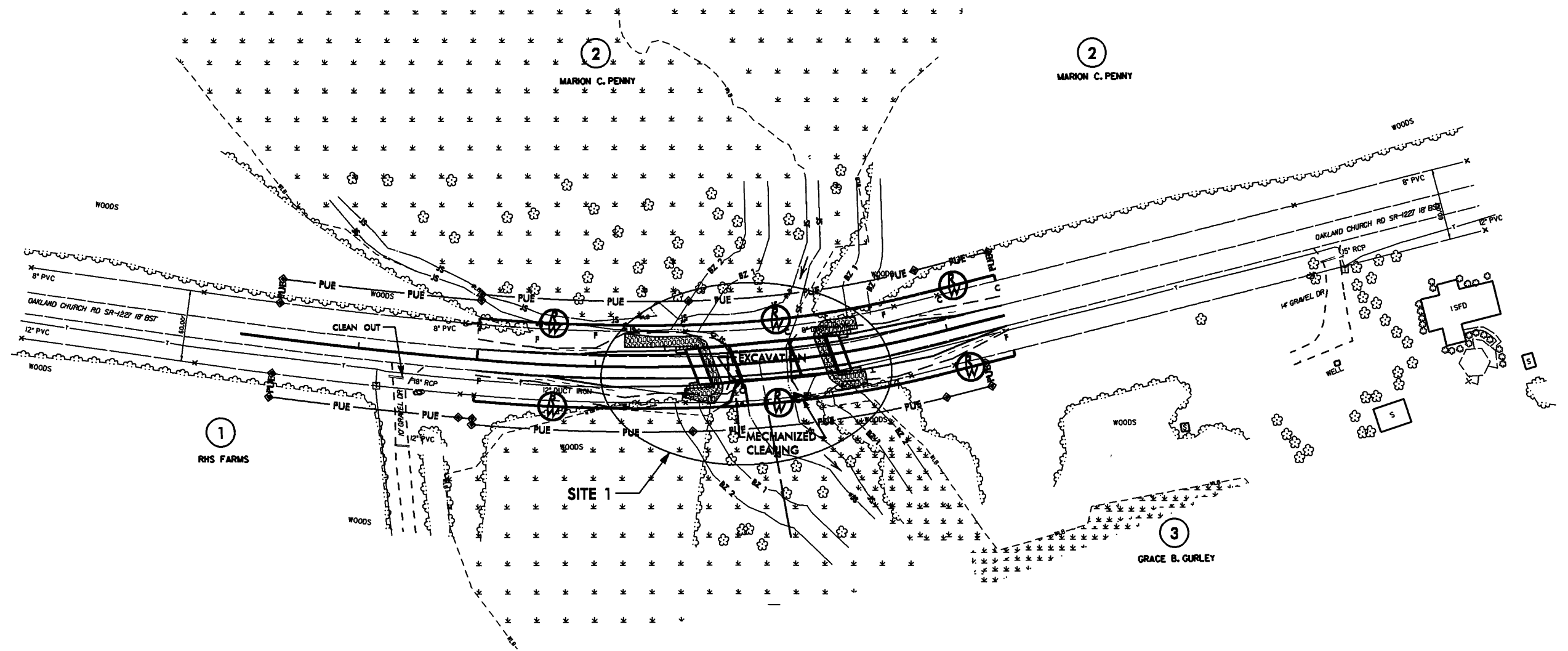
REVISIONS

SYTIME  
DGN  
USERAME

# WETLAND/SURFACE WATER PERMIT DWG.



PROJECT REFERENCE NO.	SHEET NO.
B-4841	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



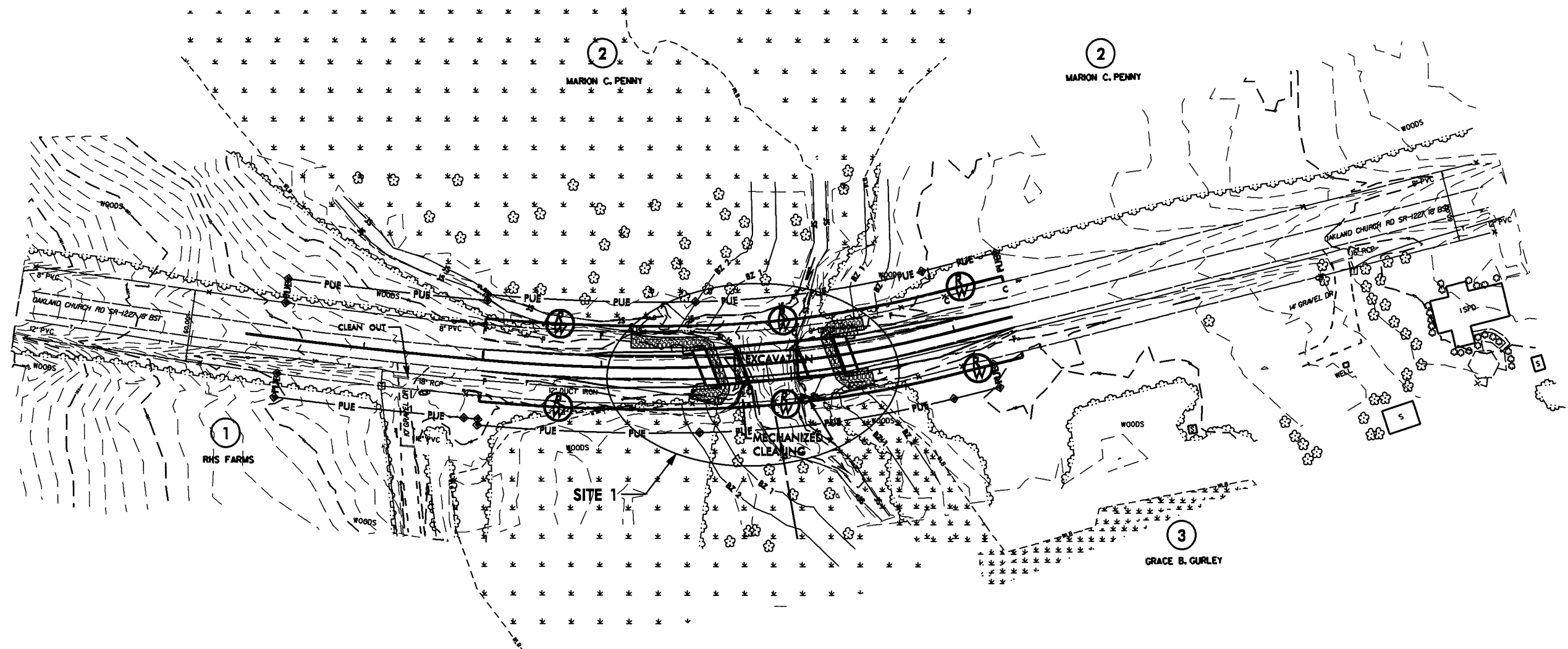
- DENOTES EXCAVATION IN WETLAND
- DENOTES MECHANIZED CLEARING



## A graphic scale bar with a total length of 200 feet. It is divided into two 100-foot segments. The left segment is marked with alternating black and white squares. The right segment is solid black. A '0' mark is positioned at the center of the bar, between the two 100-foot segments. The text 'GRAPHIC SCALE' is printed below the left portion of the bar.



PROJECT REFERENCE NO.	SHEET NO.
B-4841	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<div style="border: 1px solid black; padding: 10px; text-align: center;"><b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION</div>	



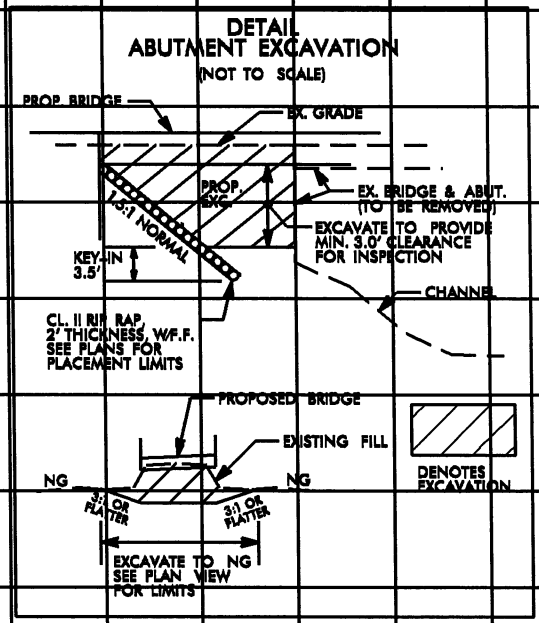
 DENOTES EXCAVATION  
IN WETLAND

 DENOTES MECHANIZED  
CLEARING

Permit Drawing  
Sheet 3 of 7



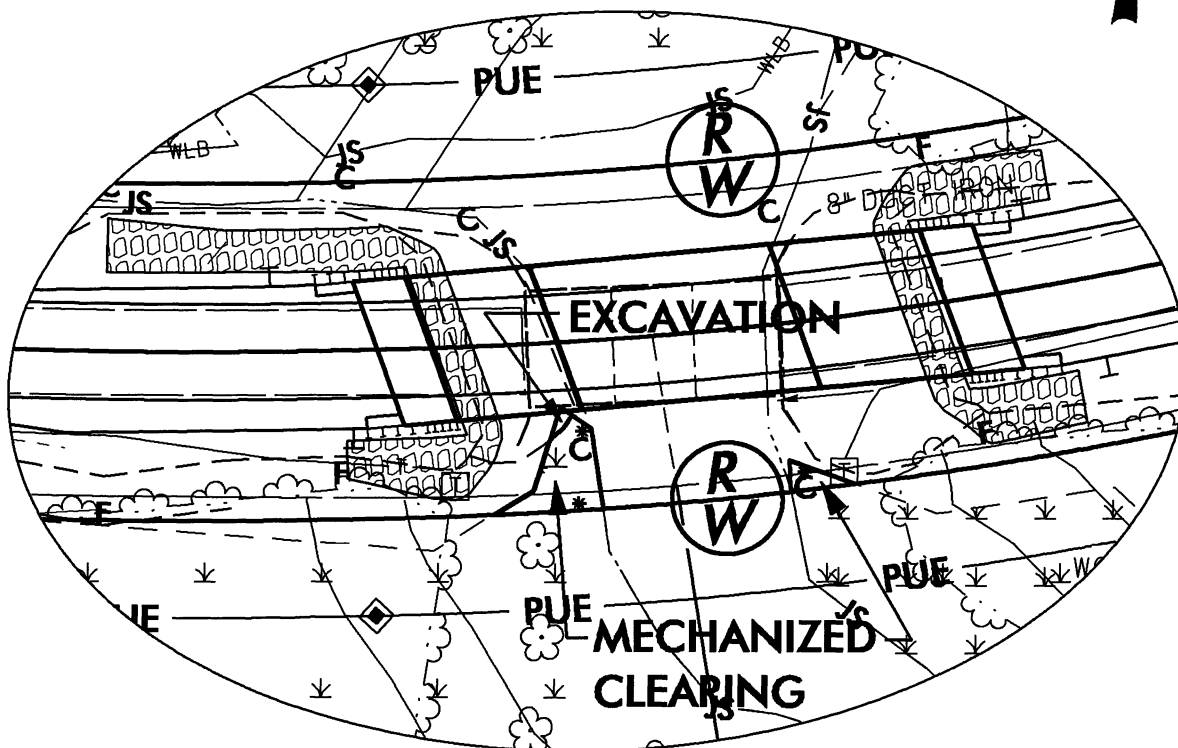
BRIDGE HYDRAULIC DATA			
DESIGN DISCHARGE	=	1600	CFS
DESIGN FREQUENCY	=	25	YRS
DESIGN HW ELEVATION	=	91J	FT
BASE DISCHARGE	=	2400	CFS
BASE FREQUENCY	=	100	YRS
BASE HW ELEVATION	=	92.3	FT
OVERTOPPING DISCHARGE	=	2000	CFS
OVERTOPPING FREQUENCY	=	50	YRS
OVERTOPPING ELEVATION	=	91.4	FT
DATE OF SURVEY	=	5/11/10	
NORMAL W.S. ELEVATION	=	86.6	FT



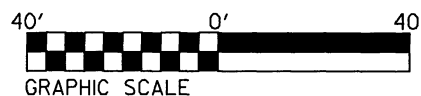
SEE SHEET 4 FOR -L- PLAN



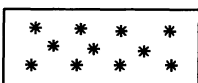
NAD 83/95



## SITE 1 ENLARGEMENT



DENOTES EXCAVATION  
IN WETLAND



DENOTES MECHANIZED  
CLEARING

**NCDOT**

**DIVISION OF HIGHWAYS  
WAYNE COUNTY**

**PROJECT: 38611.1.1 (B-4841)**

**BRIDGE NO. 215 OVER THE  
BEAVERDAM CREEK ON  
SR 1227 (OAKLAND CHURCH RD.)**

**SHEET 4 OF 7**

**01/04/12**

**Permit Drawing  
Sheet 5 of 7**



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

<b>PARCEL NO.</b>	<b>NAMES</b>	<b>ADDRESSES</b>
<b>1</b>	<b>RMS Farms</b>	<b>5 Timbercreek Crt. Durham, NC 27712</b>
<b>2</b>	<b>Penny Marion C.</b>	<b>120 Penmarc Dr. Raleigh, NC 27603</b>
<b>3</b>	<b>Gurley Grace B.</b>	<b>245 Oakland Church Rd. Goldsboro, NC 27530</b>

**NCDOT**

**DIVISION OF HIGHWAYS**  
**WAYNE COUNTY**

**PROJECT: 38611.1.1 (B-4841)**

**BRIDGE NO. 215 OVER THE**  
**BEAVERDAM CREEK ON**

**SR 1227 (OAKLAND CHURCH RD.)**

**SHEET 6 OF 7**

**01/04/12**

**Permit Drawing**

**Sheet 6 of 7**



WETLAND PERMIT IMPACT SUMMARY													
		WETLAND IMPACTS					SURFACE WATER IMPACTS						
Site No.	Station (From/To)	Structure Size / Type	CAMA Permanent Fill In Wetlands (ac)	404 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	-L- STA 12+46.50					<0.01	<0.01						
TOTALS:			0.00	0.00	0.00	<0.01	<0.01	0.00	0.00	0.00	0.00	0.00	0.00

NOTE:

BENT NO.1 IN THE STREAM,13 SQ. FT. PERMANENT IMPACTS.

N.C.D.O.T.  
DIVISION OF HIGHWAYS  
CATAWBA COUNTY  
PROJECT: 38611.1.1 (B-4841)  
BRIDGE NO. 215 OVER THE  
BEAVERDAM CREEK ON  
SR 1227 (OAKLAND CHURCH RD.)  
SHEET 7 OF 7 (01/04/2012)

ATN Revised 3/31/05

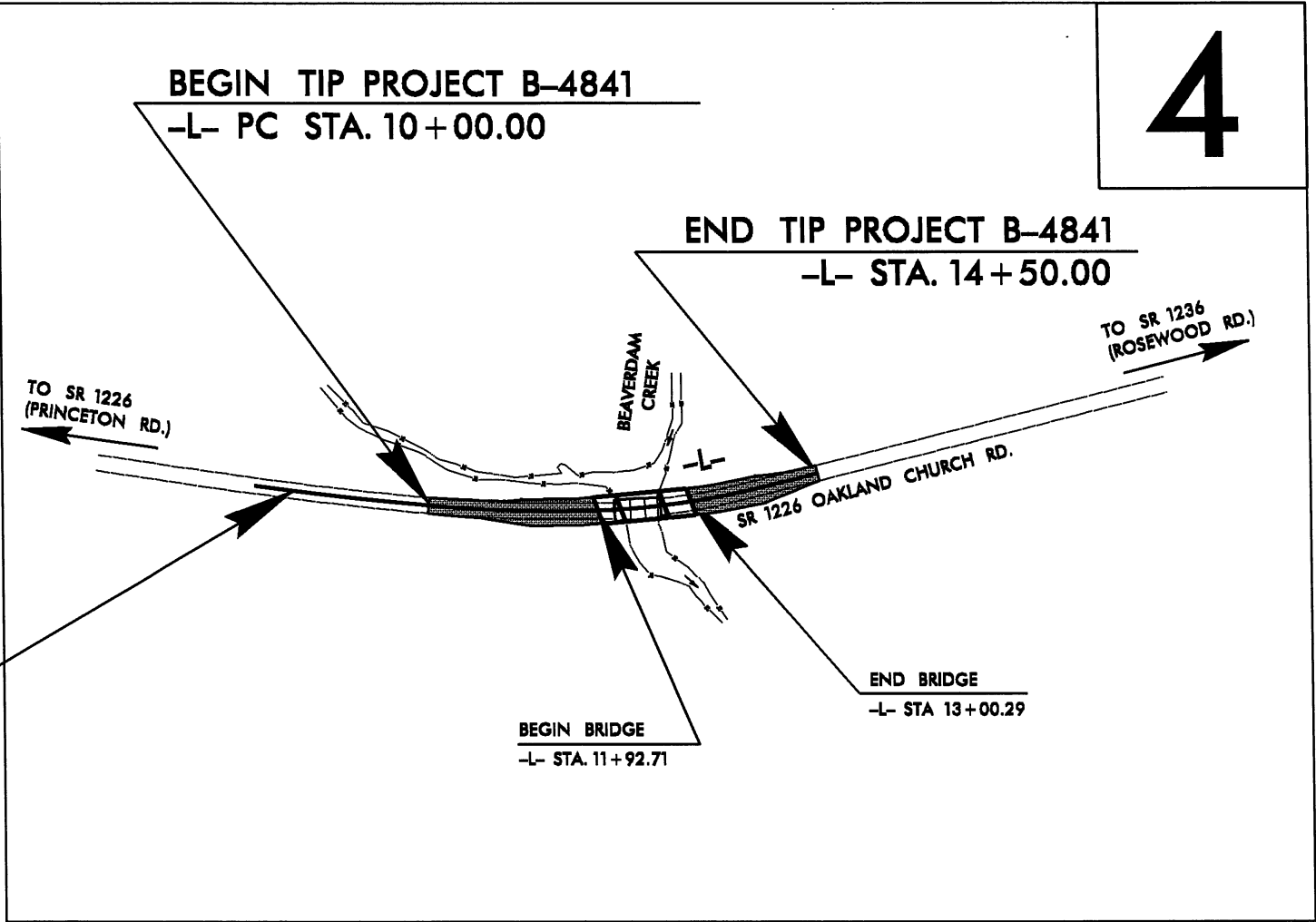
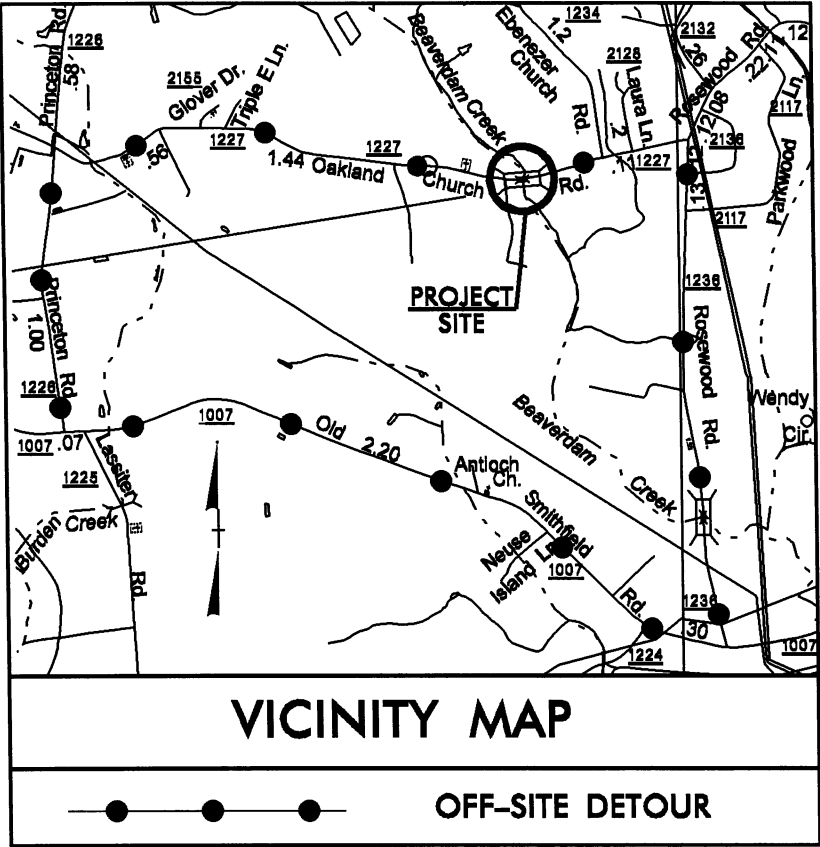


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4841	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38611.1.1	BRZ-1227(4)	P.E.	
38611.2.1	BRZ-1227(4)	R/W, UTIL.	

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

WAYNE COUNTY

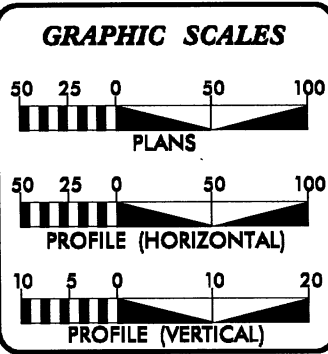
LOCATION: BRIDGE NO. 215 AND APPROACHES OVER BEAVERDAM  
CREEK ON SR 1227 (OAKLAND CHURCH RD.)  
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE  
BUFFER PERMIT DWG.



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

Buffer Drawing  
Sheet 1 of 5

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION



DESIGN DATA

ADT 2012 =	625
ADT 2035 =	1,125
DHV =	65 %
D =	13 %
T =	9 % *
V =	40 MPH
FUNC CLASS=RURAL LOCAL	
* (TTST 3% + DUAL 6%) SUBREGIONAL TIER	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4841 =	0.065 MI
LENGTH STRUCTURES TIP PROJECT B-4841 =	0.020 MI
TOTAL LENGTH TIP PROJECT B-4841 =	0.085 MI

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

2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: NOVEMBER 22, 2011	BRENDA MOORE, PE PROJECT ENGINEER
LETTING DATE: DECEMBER 18, 2012	TATIA L. WHITE, PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE:	P.E.
ROADWAY DESIGN ENGINEER	
SIGNATURE:	P.E.

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

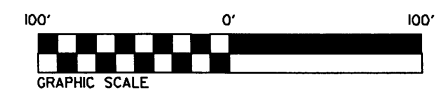
STATE HIGHWAY DESIGN ENGINEER

P.E.



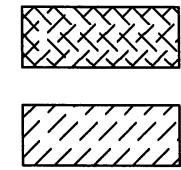
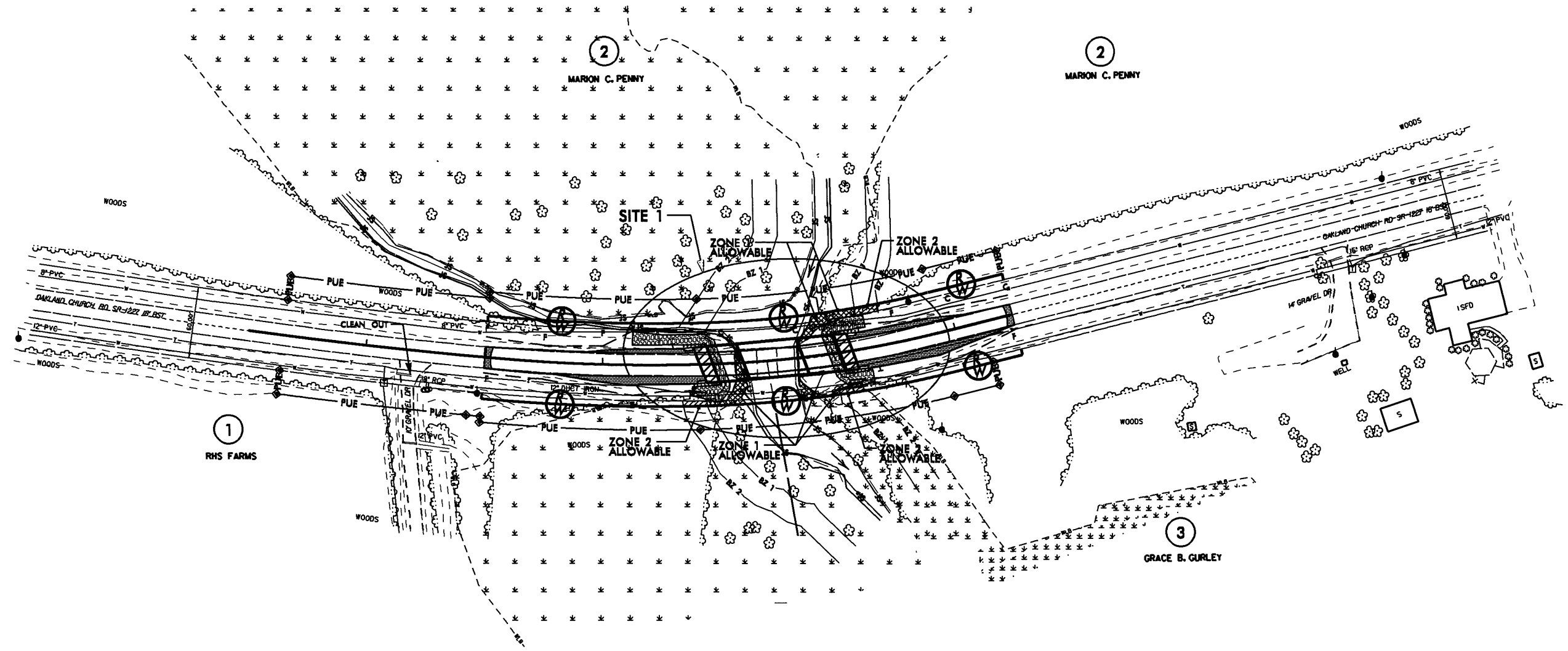
8/17/99

# BUFFER PERMIT DWG.



NAD 83/95

PROJECT REFERENCE NO.		SHEET NO.
B-4841		4
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
<div><div>PRELIMINARY PLANS</div><div>DO NOT USE FOR CONSTRUCTION</div></div>		



ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

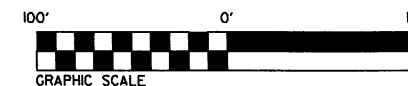
REVISIONS

\*\*\*\*\*SYSTIME\*\*\*\*\*  
\*\*\*\*\*DGN\*\*\*\*\*  
\*\*\*\*\*\*\*\*\*\*

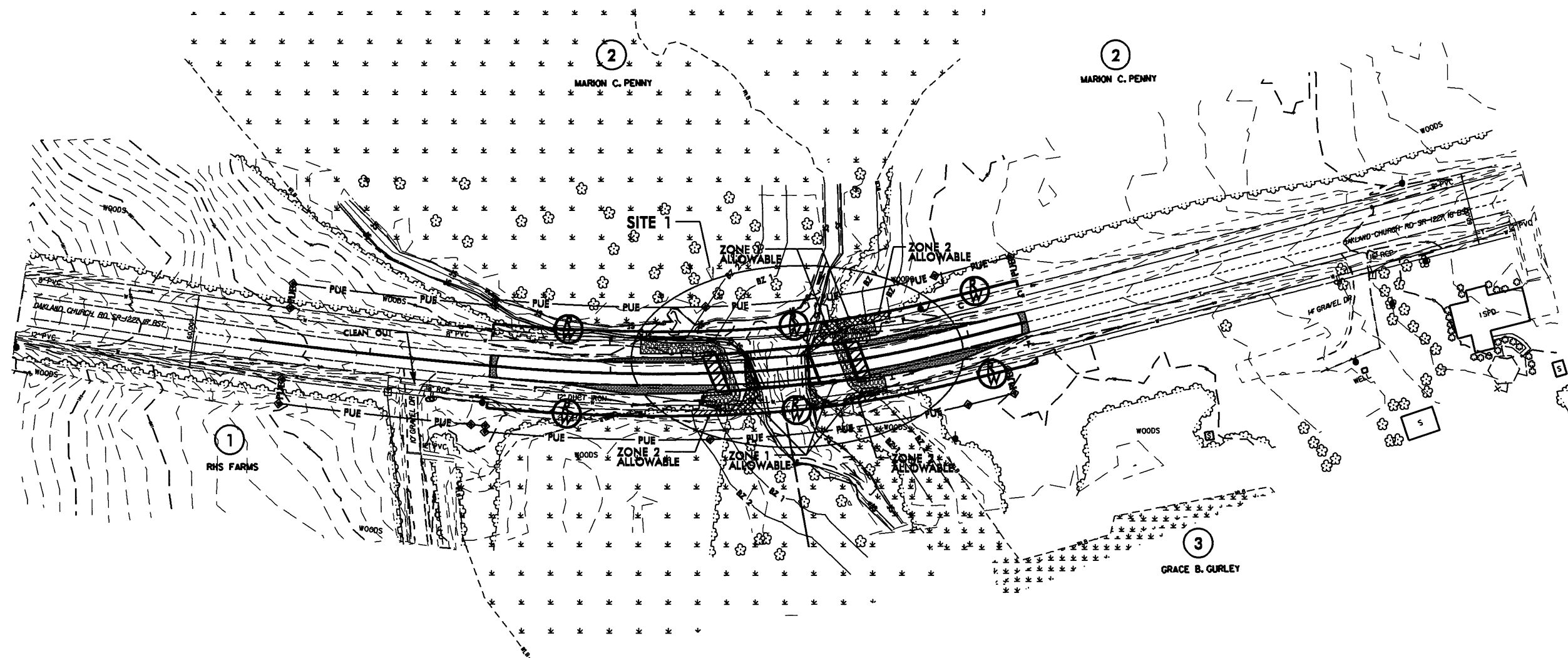



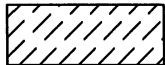
8/17/99

# BUFFER PERMIT DWG.

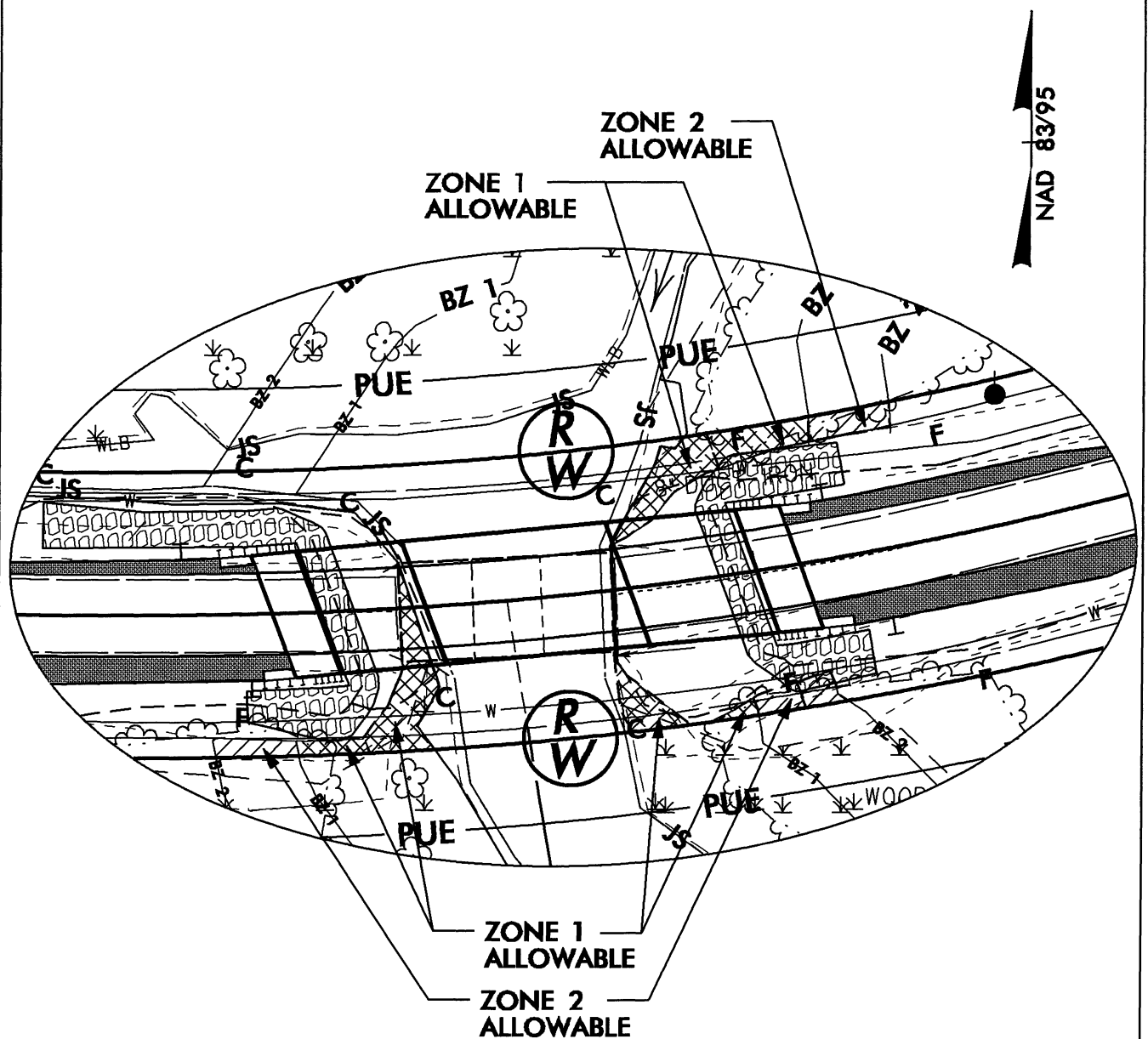


PROJECT REFERENCE NO.	SHEET NO.
B-4841	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



-  ALLOWABLE IMPACTS ZONE 1
-  ALLOWABLE IMPACTS ZONE 2

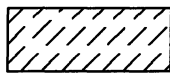




## SITE 1 ENLARGEMENT



ALLOWABLE IMPACTS ZONE 1



ALLOWABLE IMPACTS ZONE 2



**NCDOT**

**DIVISION OF HIGHWAYS**

**CABARRUS COUNTY**

**PROJECT: 38611.1.1 (B-4841)**

**BRIDGE NO 215 OVER**

**BEAVERDAM CREEK ON**

**SR 1227 (OAKLAND CHURCH RD.)**

**SHEET 4 OF 5**

**01 / 09 / 12**

**Buffer Drawing**

**Sheet 4 of 5**



## BUFFER IMPACTS SUMMARY

[illegible]

## METHOD II CLEARING

**SITE 1 CONTAINS 266 SQ. F. OF WETLAND IMPACTS THAT FALL WITHIN THE REFLECTED ALLOWABLE ZONE I BRIDGE**

**N.C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
WAYNE COUNTY**

PROJECT: 38611.1.1 (B-4841)  
BRIDGE NO. 215 OVER BEAVERDAM  
ON SR 1227 (OAKLAND CHURCH RD.)

SHEET 5 OF 5 01/09/2012

Rev. May 2006



## **B-4841 NEU Narrative**

### **Utility Owners:**

- **Power:** Tri-County EMC – (contact: Tony Grantham (919)-735-2611)
- **Telephone:** AT&T (contact: Shannon Coston (910) 341-1623)
- **Water:** Fork Township Sanitary District (contact: Tony McCabe (919) 736-2551)

### **General Utility Relocation:**

All utility lines inside the project limits will be adjusted as necessary or relocated away from construction. The power and telephone will be relocated prior to the letting.

### **Existing Utilities:**

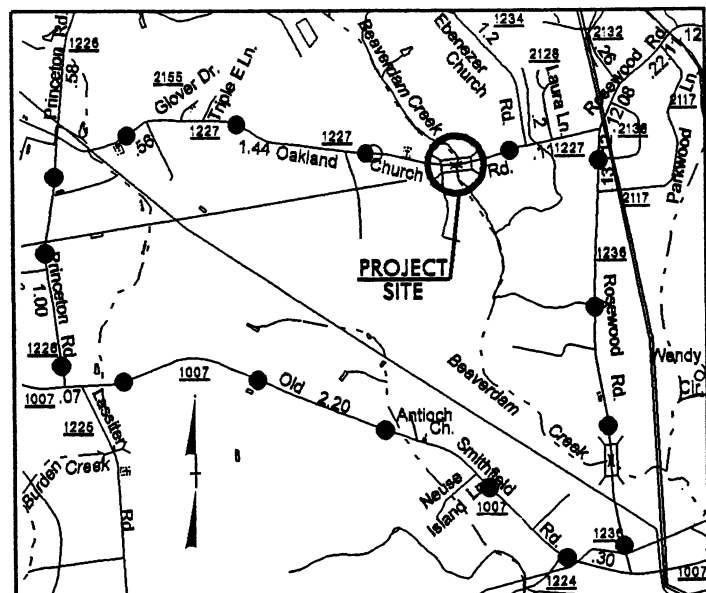
- **Power:** the existing Tri-County EMC aerial power pole line runs along the South side of Oakland Church Rd SR-1227 at the beginning of the project and crosses over to the North side and continues to the end of the project.
- **Telephone:** AT&T has two (2) poles with an aerial crossing and buried cable on the south side of Oakland Church Road SR-1227.
- **Water:** there is an existing 8” water line on the north side of Oakland Church Rd SR-1227 and a 12” water line on the south side of the Road.

### **Proposed Utility Relocation:**

- **Power:** Tri-County EMC power line will be relocated to the South side of Oakland Church Rd SR-1227 with environmental impact by placing 1(One) power pole inside the wet land boundary.
- **Telephone:** AT&T telephone line will be relocated to the South side of Oakland Church Rd SR-1227 by directional bore with no environmental impacts.
- **Water:** Both water lines will be relocated to the North side of Oakland Church Rd SR-1227 by directional bore with no environmental impacts.



TIP PROJECT: B-4841



VICINITY MAP

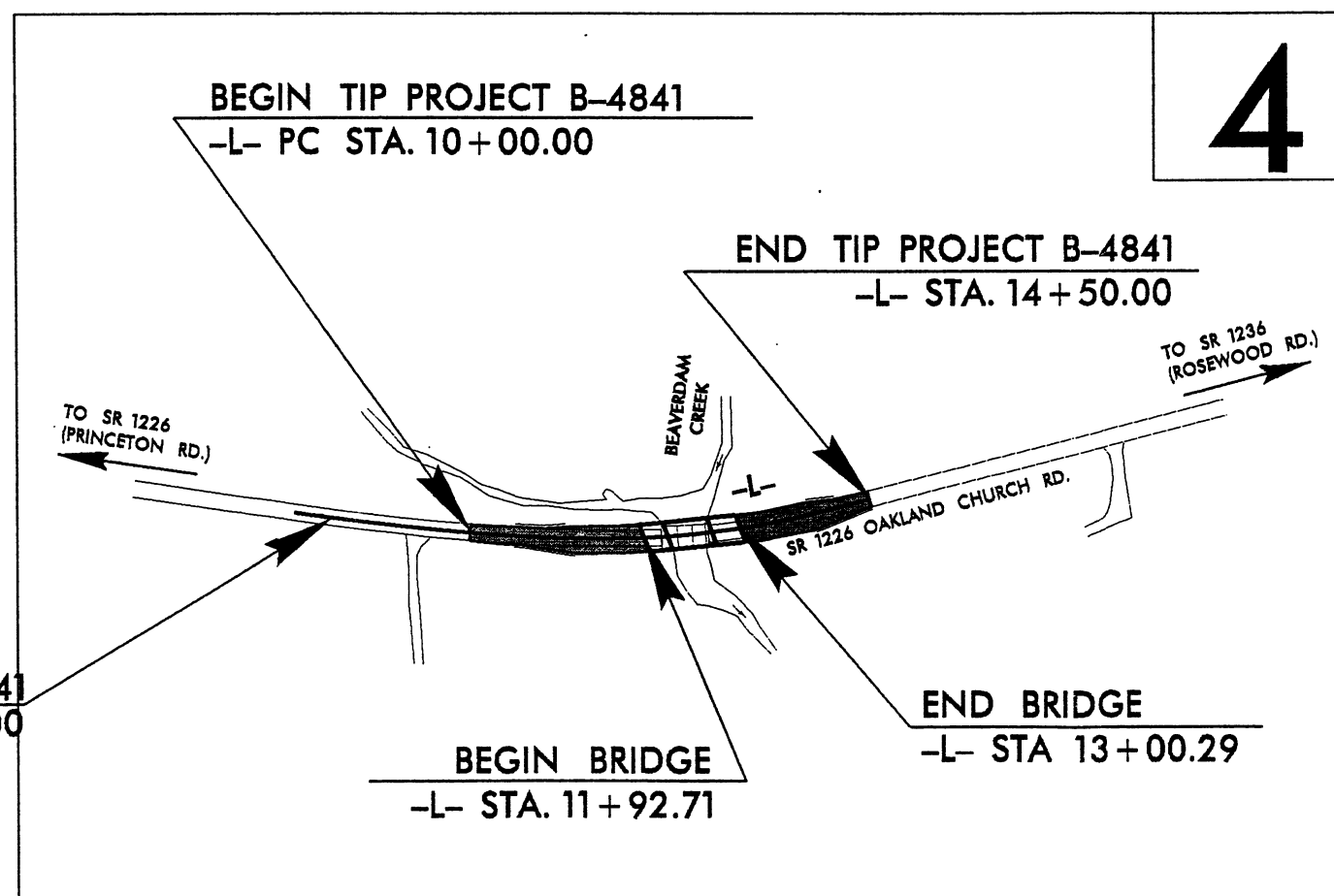
OFF-SITE DETOUR

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

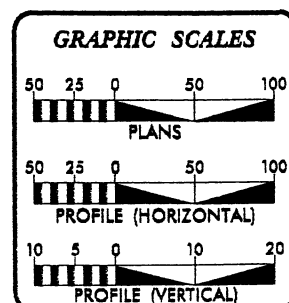
NEU PERMIT PLANS (1/23/2012)  
WAYNE COUNTY

LOCATION: BRIDGE NO. 215 AND APPROACHES OVER BEAVERDAM  
CREEK ON SR 1227 (OAKLAND CHURCH RD)

TYPE OF WORK: UTILITIES RELOCATION



BEGIN CONSTRUCTION TIP B-4841  
-L- POC STA. 8+30.00



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2	PLAN SHEET

UTILITY OWNERS ON PROJECT

- (1) Tri-County EMC (Power)
- (2) AT&T (Telephone)
- (3) Fork Township Sanitary District (Water)



PREPARED IN THE OFFICE OF:  
DIVISION OF HIGHWAYS  
UTILITIES ENGINEERING  
SECTION

1591 MAIL SERVICES CENTER  
RALEIGH NC 27699-1591  
PHONE (919) 767-6690  
FAX (919) 216-4151

Roger Worthington, P.E. UTILITIES SECTION ENGINEER  
Corey Bousquet, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER  
Nabil Hamdan UTILITIES PROJECT DESIGNER



# NEU PERMIT PLANS (JANUARY 23, 2012)

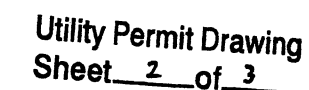
Diagram illustrating the plan view of a bridge structure, showing various segments and stationing. The bridge is oriented diagonally across the frame.

**Key Labels and Stationing:**

- BEGIN SBG** (Start of Bridge Segment): -L- STA. +68.69
- END SBG** (End of Bridge Segment): -L- STA. +76.89
- BEGIN APPROACH SLAB** (Start of Approach Slab): -L- STA. 11+81.50
- BEGIN BRIDGE** (Start of Bridge): -L- STA. 11+92.71
- END BRIDGE** (End of Bridge): -L- STA. 13+00.29
- END APPROACH SLAB** (End of Approach Slab): -L- STA. 13+11.12
- BEGIN SBG** (Start of Bridge Segment): -L- STA. +08.16
- END SBG** (End of Bridge Segment): -L- STA. +16.02
- BEGIN SBG** (Start of Bridge Segment): -L- STA. +86.85
- END SBG** (End of Bridge Segment): -L- STA. +21.85
- BEGIN SBG** (Start of Bridge Segment): -L- STA. +14.26
- END SBG** (End of Bridge Segment): -L- STA. +14.26

**Dimensions and Features:**

- 3' MIN.** (Minimum width/spacing) is indicated at several points along the bridge structure.
- 10' 10'** (Width/spacing) is indicated for the main bridge deck sections.
- 30' MIN.** (Minimum width/spacing) is indicated for the central bridge deck section.
- TYPE III** (Bridge type) is labeled for the main bridge deck sections.
- 03** (Number of lanes) is indicated for the main bridge deck sections.





## 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)
Site 1	10+42 to 12+32	Power Line					0.07'					
Site 2	11+50 -L-	Power Pole	<0.01				0.02'					
Site 3	12+66 to 13+35	Power Line										
<b>TOTALS:</b>			<0.01				0.09					

NC DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

WAYNE COUNTY  
TIP (B-4841)

ATN Revised 3/31/05

SHEET 1

1/23/2012



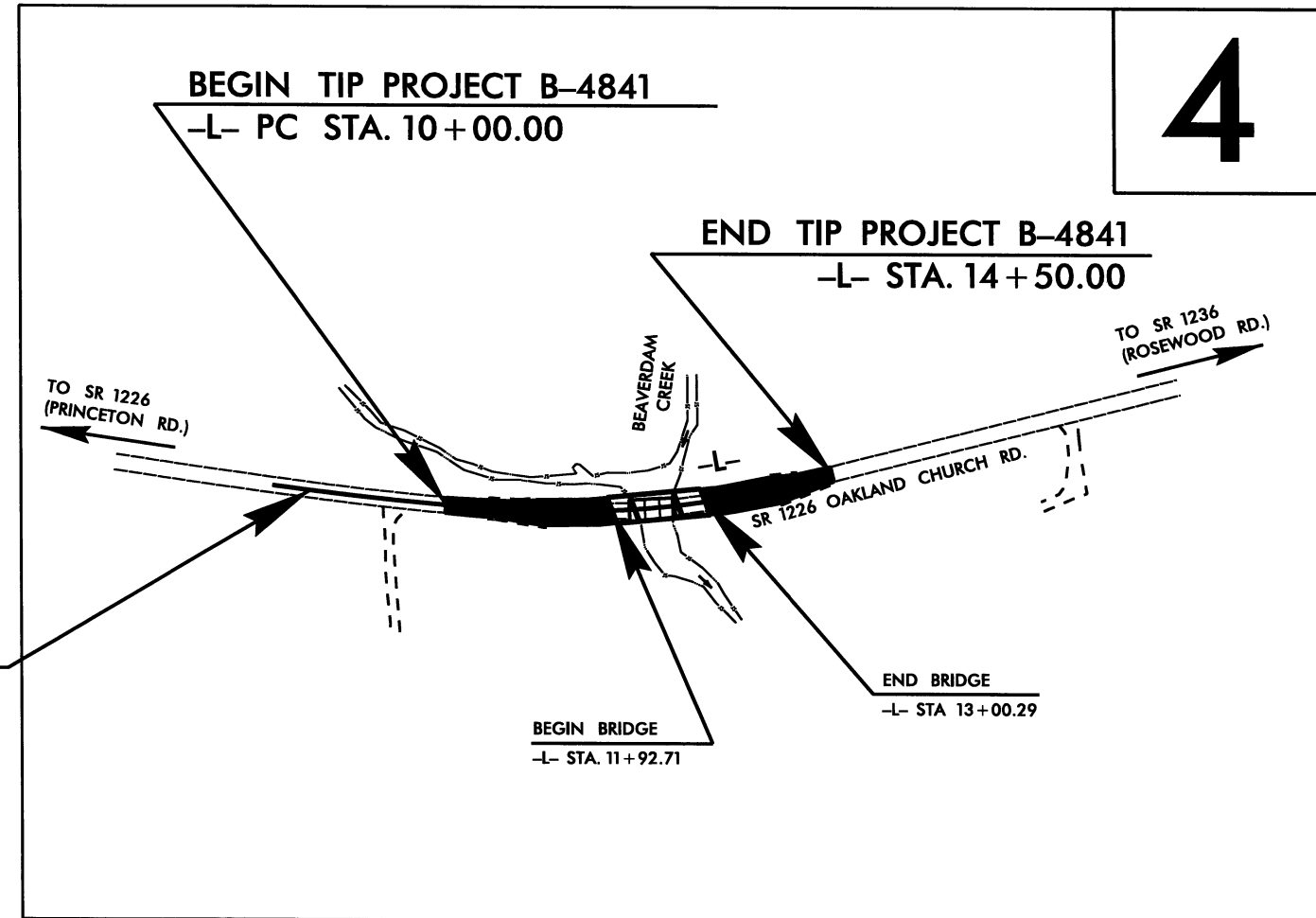
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## **CONTRACT:**

**VICINITY MAP**

Legend: —●—●—●— OFF-SITE DETOUR

## ROW PLANS



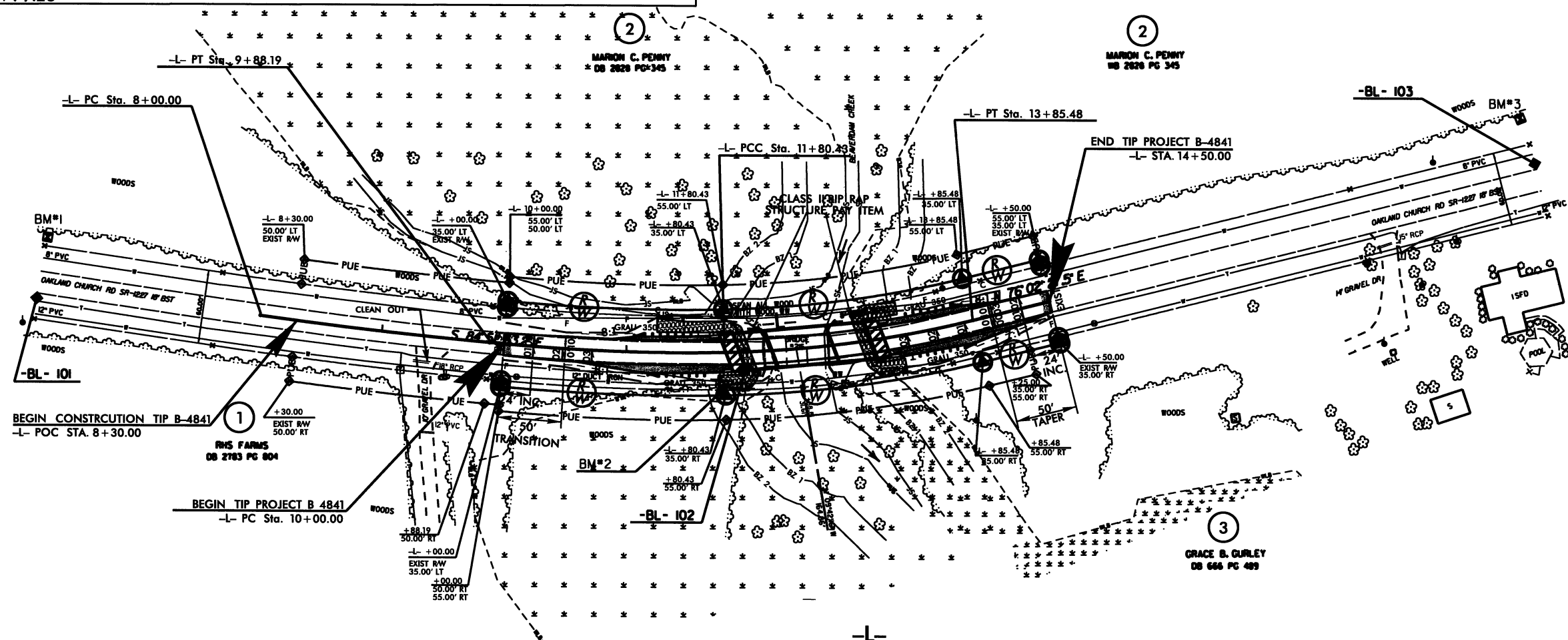
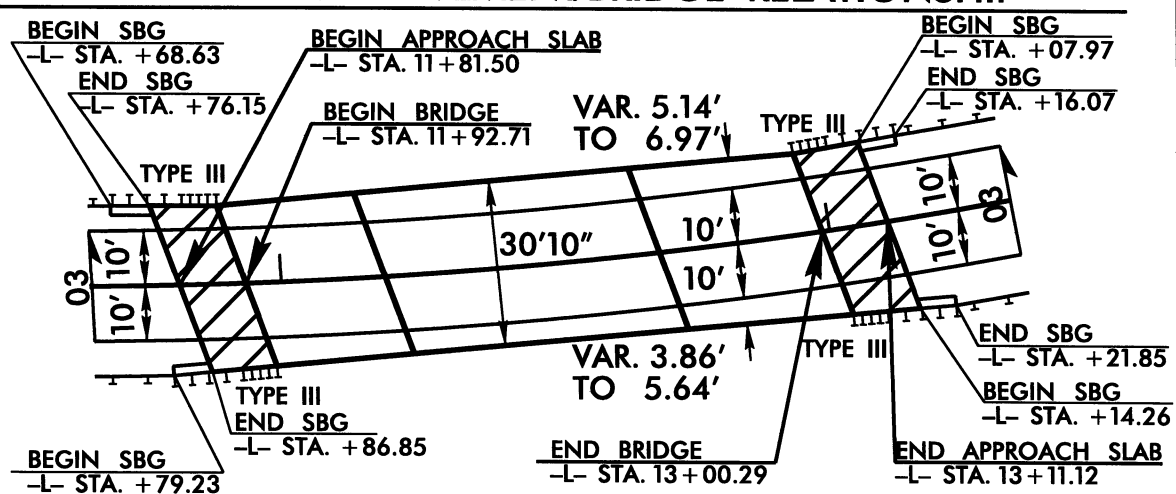
**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION





23-JAN-2012 10:19  
R:\Roadway\Proj\B4841-Rdy-psh.dgn

## SKETCH OF PAVEMENT/BRIDGE RELATIONSHIP



<b>PI Sta 8+94.11</b> <b>Δ = 2' 41" 44.4" (LT)</b> <b>D = 1' 25" 56.6"</b> <b>L = 188.19'</b> <b>T = 94.11'</b> <b>R = 4,000.00'</b> <b>SE = EXIST.</b> <b>BK BEARING =</b> <b>S 82° 10' 08.80" E</b>	<b>PI Sta 10+90.31</b> <b>Δ = 6' 27" 40.0" (LT)</b> <b>D = 3' 34" 51.6"</b> <b>L = 180.43'</b> <b>T = 90.31'</b> <b>R = 1,600.00'</b> <b>SE = 03</b> <b>DS = 40mph</b>	<b>PI Sta 12+83.37</b> <b>Δ = 12' 37" 59.3" (LT)</b> <b>D = 6' 09" 39.0"</b> <b>L = 205.06'</b> <b>T = 102.95'</b> <b>R = 930.00'</b> <b>SE = 03</b> <b>DS = 30mph</b>
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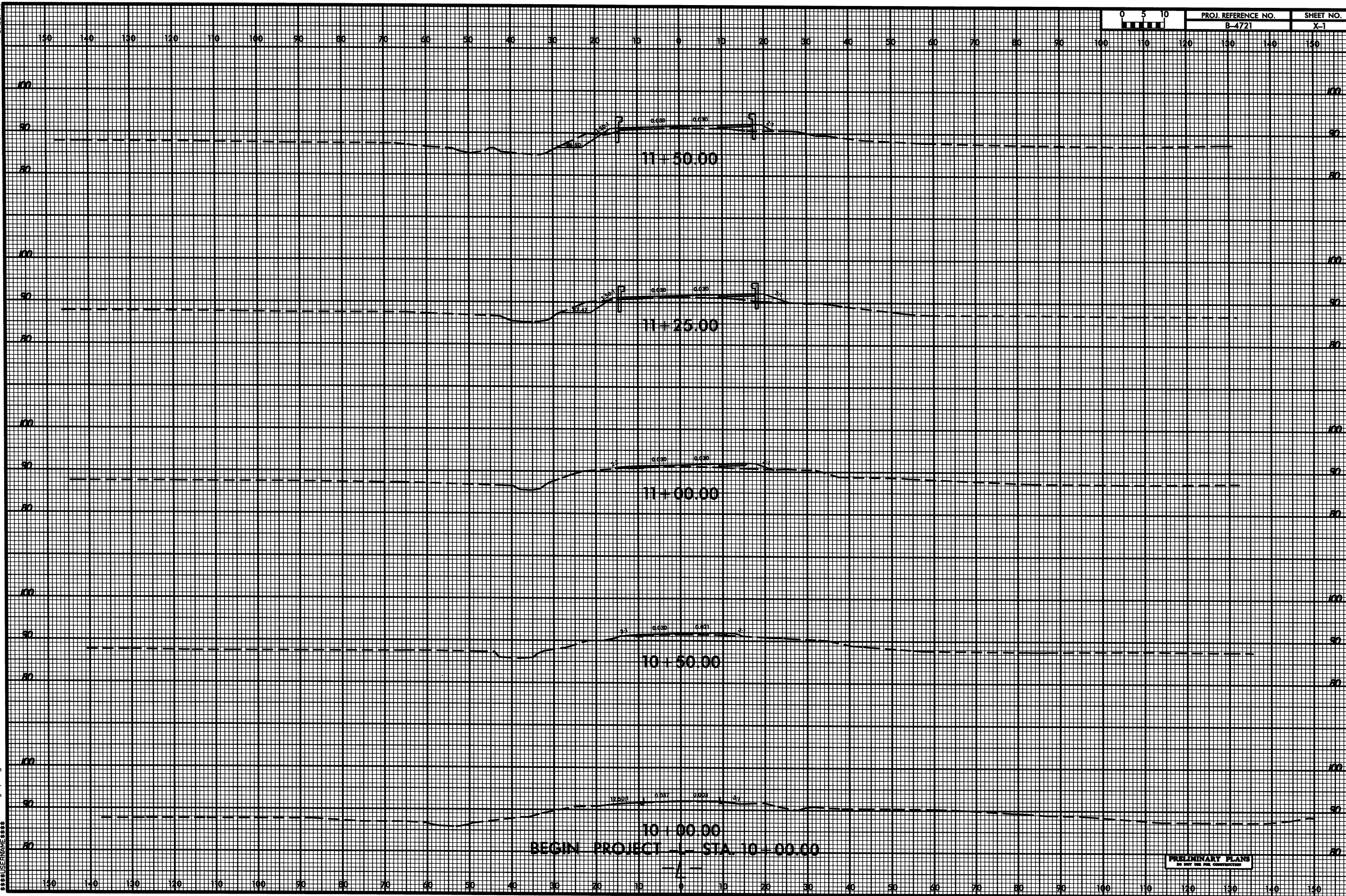
**NOTE:**

- 1) SEE SHEET 5 FOR -L- PROFILE  
2) SEE SHEETS S-1 THROUGH S-2 FOR STRUCTURE PLANS

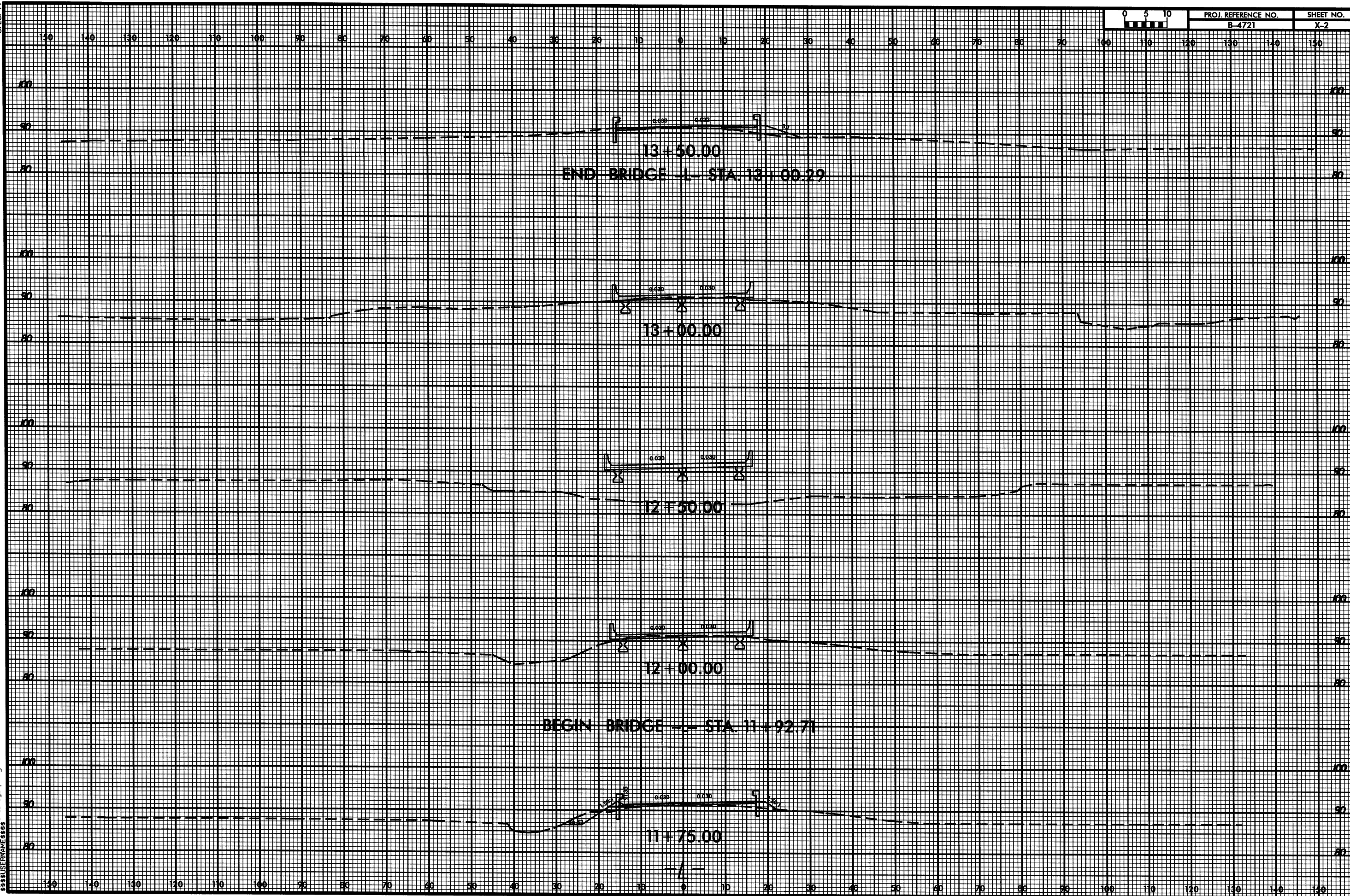
PROJECT REFERENCE NO.	SHEET NO.
B-4841	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION











8/23/99

23-JAN-2012 10:21  
R:\PROJECTS\SS\4841.dwg  
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