



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

October 15, 2012

U. S. Army Corps of Engineers
Regulatory Field Office
151 Patton Avenue, Room 208
Asheville, NC 28801-5006

ATTN: Ms. Loretta Beckwith
NCDOT Coordinator

Subject: **Application for Section 404 Nationwide Permits 23 & 33 and Section 401 Water Quality Certification** for the proposed replacement of Bridge No. 11 over Chatuge Lake on NC 175 in Clay County, Federal Aid Project No. BRSTP-175(7); WBS No. 38506.1.1; Division 14; TIP No. B-4733

Dear Madam:

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 11 (a single-lane bridge) over Lake Chatuge on NC 175 with a 2-lane, 360-foot long, 3-span bridge. There will be <0.01 acre of permanent impact to Chatuge Lake due to the installation of interior bridge bents. There will be 0.15 acre of temporary impact to Chatuge Lake due to the installation of two (2) temporary work pads for the construction of the new bridge and six (6) temporary cofferdams for the removal of the existing bridge bents.

Please see enclosed copies of the Pre-Construction Notification (PCN), stormwater management plan, USFWS Concurrence Letter, permit drawings, and design plans. A Categorical Exclusion (CE) was completed in September 2011 and distributed shortly thereafter. Additional copies are available upon request.

Comments from the North Carolina Wildlife Resources Commission (NCWRC) will be required prior to authorization by the Corps of Engineers. By copy of this letter and attachments, NCDOT hereby requests NCWRC review. NCDOT requests that NCWRC forward their comments to the Corps of Engineers and the NCDOT within 30 calendar days of receipt of this application.

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

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

WEBSITE: WWW.NCDOT.ORG

LOCATION:
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610-4328

This project calls for a letting date of June 18, 2013 and a review date of April 30, 2013; however, the let date may advance as additional funding becomes available.

A copy of this permit application and its distribution list will be posted on the NCDOT Website at: <http://www.ncdot.org/doh/preconstruct/pe/neu/permit.html>. If you have any questions or need additional information, please call Bill Barrett at (919) 707-6103.

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:	<input checked="" type="checkbox"/> Section 404 Permit	<input type="checkbox"/> Section 10 Permit
1b. Specify Nationwide Permit (NWP) number: 23 33 or General Permit (GP) number:		
1c. Has the NWP or GP number been verified by the Corps?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1d. Type(s) of approval sought from the DWQ (check all that apply):		
<input type="checkbox"/> 401 Water Quality Certification – Regular <input type="checkbox"/> Non-404 Jurisdictional General Permit <input type="checkbox"/> 401 Water Quality Certification – Express <input type="checkbox"/> Riparian Buffer Authorization		
1e. Is this notification solely for the record because written approval is not required?	For the record only for DWQ 401 Certification: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	For the record only for Corps Permit: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
1f. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts? If so, attach the acceptance letter from mitigation bank or in-lieu fee program.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1g. Is the project located in any of NC's twenty coastal counties. If yes, answer 1h below.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1h. Is the project located within a NC DCM Area of Environmental Concern (AEC)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

2. Project Information

2a. Name of project:	Replacement of Bridge No. 11 over Chatuge Lake on NC 175.
2b. County:	Clay
2c. Nearest municipality / town:	Hayesville, NC
2d. Subdivision name:	<i>not applicable</i>
2e. NCDOT only, T.I.P. or state project no:	B-4733

3. Owner Information

3a. Name(s) on Recorded Deed:	North Carolina Department of Transportation
3b. Deed Book and Page No.	<i>not applicable</i>
3c. Responsible Party (for LLC if applicable):	<i>not applicable</i>
3d. Street address:	1598 Mail Service Center
3e. City, state, zip:	Raleigh, NC 27699-1598
3f. Telephone no.:	(919) 707-6103
3g. Fax no.:	(919) 212-5785
3h. Email address:	wabarrett@ncdot.gov

4. Applicant Information (if different from owner)	
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:	
5. Agent/Consultant Information (if applicable)	
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. Project Information and Prior Project History	
1. Property Identification	
1a. Property identification no. (tax PIN or parcel ID):	<i>not applicable</i>
1b. Site coordinates (in decimal degrees):	Latitude: 35.2 (DD.DDDDDD) Longitude: - 83.73 (-DD.DDDDDD)
1c. Property size:	4.38 acres
2. Surface Waters	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Chatuge Lake
2b. Water Quality Classification of nearest receiving water:	B
2c. River basin:	Hiwassee
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: The land use in the vicinity of the project is dominated by residential homes surrounding Chatuge Lake, along with some forested area.	
3b. List the total estimated acreage of all existing wetlands on the property: 0	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 0	
3d. Explain the purpose of the proposed project: To replace a structurally deficient (sufficiency rating of 6.0 out of 100) and functionally obsolete (deck geometry rating of 2 of 9) bridge.	
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing a 331-foot bridge with a 360-foot, 3-span bridge to the east of the existing bridge. A suitable off-site detour is not available, so traffic will be maintained on-site during the construction period. 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: Chatuge Lake is the only jurisdictional feature on the project.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input 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):	Agency/Consultant Company: 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> 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):						
<input type="checkbox"/> Wetlands		<input type="checkbox"/> Streams - tributaries		<input type="checkbox"/> Buffers		
<input checked="" type="checkbox"/> Open Waters		<input type="checkbox"/> 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 <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 2 <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 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		
2g. Total wetland impacts					X Permanent X Temporary	
2h. Comments:						
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 <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		
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 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Chatuge Lake	3 bridge bents	lake	< 0.01
O2 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Chatuge Lake	2 work pads and 6 cofferdams	lake	0.15
O3 <input type="checkbox"/> P <input type="checkbox"/> T				
O4 <input type="checkbox"/> P <input type="checkbox"/> T				
4f. Total open water impacts				< 0.01 ac Permanent 0.15 ac 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?	<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.		<input type="checkbox"/> Neuse <input type="checkbox"/> Tar-Pamlico <input type="checkbox"/> Other <input type="checkbox"/> Catawba <input type="checkbox"/> Randleman			
Project is in which protected basin?					
6b. Buffer impact number – Permanent (P) or Temporary (T)	6c. Reason for impact	6d. Stream name	6e. Buffer mitigation required?	6f. Zone 1 impact (square feet)	6g. Zone 2 impact (square feet)
B1 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
B2 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
B3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
6h. Total buffer impacts					
6i. Comments:					

D. Impact Justification and Mitigation		
1. Avoidance and Minimization		
1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing project.		
The proposed bridge will be a 3-span structure resulting in two less bents in Chatuge Lake, as compared to the existing structure which is a 7-span structure with five bents within Chatuge Lake; 3:1 fill slopes where practicable.		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques.		
Six temporary cofferdams will be utilized in the removal of the existing structure, and two temporary work pads will be utilized for the construction of the proposed structure. There will be no permanent impacts to Chatuge Lake other than from the three bents.		
NCDOT will conduct bridge demolition (deck and superstructure) between October 15 th and February 28 th to avoid direct impacts to bats actively using the structure and to avoid impacts to migratory birds. Additionally, NCDOT constructed two bat houses at the project site on March 29, 2012, to provide adequate roost sites for bats.		
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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	If no, explain: The permanent impacts are from bridge bents, which don't require mitigation. All other impacts are temporary.	
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	
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.	<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:		
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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
1b. If yes, then is a diffuse flow plan included? If not, explain why. Comments: If required from 1a, see attached buffer permit drawings.	<input type="checkbox"/> Yes <input type="checkbox"/> 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?	<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
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):	<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
4. DWQ Stormwater Program Review	
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
5. DWQ 401 Unit Stormwater Review	
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

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?	<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
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)?	<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):	
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?	<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.	
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?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5c. If yes, indicate the USFWS Field Office you have contacted.	<input type="checkbox"/> Raleigh <input checked="" type="checkbox"/> Asheville	
5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? NCDOT field surveys (see attached concurrence letter).		
6. Essential Fish Habitat (Corps Requirement)		
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		
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)?	<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		
8. Flood Zone Designation (Corps Requirement)		
8a. Will this project occur in a FEMA-designated 100-year floodplain?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
8b. If yes, explain how project meets FEMA requirements: NCDOT Hydraulics Unit coordination with FEMA		
8c. What source(s) did you use to make the floodplain determination? FEMA Maps		
Dr. Gregory J. Thorpe, Ph D Applicant/Agent's Printed Name	 Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	10.17.12 Date



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

December 20, 2011

MEMORANDUM TO: File

FROM: Paul F. Fisher, P.E.
Hydraulics Unit

SUBJECT: Stormwater Management Plan
B-4733, Clay Co.

This project will replace bridge #11 in Clay County. The following items were incorporated into the Hydraulic design of this project for stormwater quality considerations:

- We collected water in the storm drain system on the south approach before entering the bridge.
- We used sheet flow, rip rap pads and grass-lined ditches to the extent practicable.

PFF

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
HYDRAULICS UNIT
1590 MAIL SERVICE CENTER
RALEIGH NC 27699-1590

TELEPHONE: 919-250-4100
FAX: 919-250-4108

WEBSITE: WWW.DOH.DOT.STATE.NC.US

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



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Asheville Field Office

160 Zillicoa Street

Asheville, North Carolina 28801

January 19, 2012

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

Dear Dr. Thorpe:

Subject: Section 7 Concurrence Request for the Proposed Replacement of Bridge No. 11 on NC 175 over Chatuge Lake in Clay County, North Carolina. Federal Project No. BRSTP-175(7), WBS Element 38506.1.1, Division 14, T.I.P. No. B-4733

On November 16, 2011, we received your letter (via email) requesting section 7 concurrence on the subject project and its possible effect on the federally endangered Indiana bat (*Myotis sodalis*). The following comments are provided in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543) (Act).

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 11 in Clay County, North Carolina. Bridge No. 11 is the NC Route 175 crossing of the Shooting Creek arm of Chatuge Lake. The structure is a cast-in-place concrete structure with concrete guard rails and receives full sunlight. This type of structure is known to provide habitat for bats.

The U.S. Fish and Wildlife Service recognizes Clay County, North Carolina, as a county that possesses adequate habitat for the Indiana bat. This wide-ranging species is known from records in neighboring Cherokee County, North Carolina. Documentation provided by the NCDOT indicates that there are bats using this bridge as summer roost habitat. It is unknown if Indiana bats actively use this site. Because the site is situated within the accepted range for this species and the habitat appears to be adequate for the species, it is not possible to ensure that the proposed project has no effect on this species. Possible direct effects resulting from construction include mortality of bats during demolition and take that may occur as a result of relocation during the roosting season. Removal of a roost site may also result in indirect effects due to site

fidelity as a component of the Indiana bat's long-term recruitment success. The NCDOT proposes the following measures to minimize the possibility of take.

- Bridge deck and superstructure demolition will take place between October 15th and February 28th in order to avoid direct effects to bats actively using the structure.
- Two bat houses will be placed in a suitable location to ensure that any returning bats have an adequate roost site.

In addition to these proposed minimization measures, we request that NCDOT personnel responsible for the construction and placement of the bat houses coordinate their efforts with our staff. We also request that the bat houses be monitored for the following two maternity seasons after construction to determine if the location of the bat houses is adequate for use by bats.

We believe these commitments will reduce the potential for negative effects to the Indiana bat. With implementation of the above-listed measures, we concur with the NCDOT's determination that the subject bridge construction and demolition may affect, but is not likely to adversely affect, the Indiana bat. Therefore, we believe the requirements under section 7(c) of the Act are fulfilled. However, obligations under section 7 of the Act must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered, (2) this action is subsequently modified in a manner that was not considered in this review, or (3) a new species is listed or critical habitat is determined that may be affected by the identified action.

If you have questions about these comments, please contact Mr. Jason Mays of our staff at 828/258-3939, Ext. 226. In any future correspondence concerning this project, please reference our Log Number 4-2-09-036.

Sincerely,



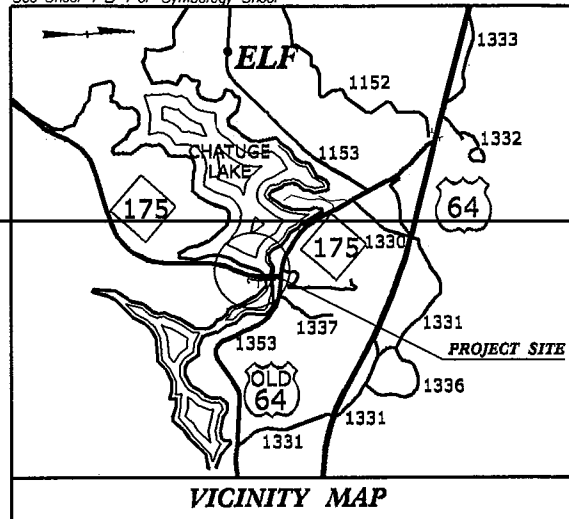
Brian P. Cole
Field Supervisor

cc:

Ms. Lori Beckwith, Asheville Regulatory Field Office, U.S. Army Corps of Engineers,
151 Patton Avenue, Room 208, Asheville, NC 28801-5006
Ms. Marla J. Chambers, Western NCDOT Permit Coordinator, North Carolina Wildlife
Resources Commission, 12275 Swift Road, Oakboro, NC 28129
Mr. Brian Wrenn, North Carolina Division of Water Quality, Central Office, 2321 Crabtree
Blvd., Suite 250, Raleigh, NC 27604

09/08/99

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Symbology Sheet



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CLAY COUNTY

LOCATION: BRIDGE NO. 11 OVER CHATUGE LAKE ON NC 175

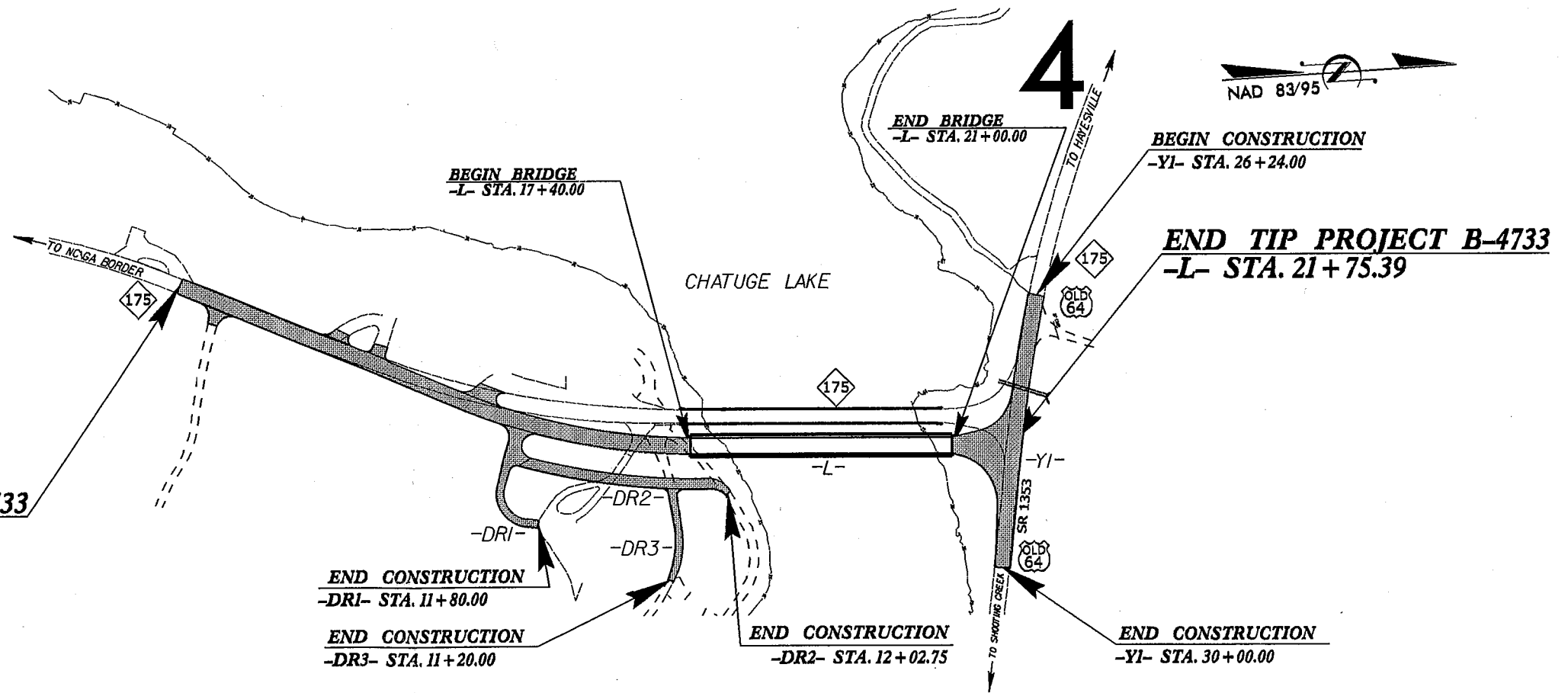
SURFACE WATER IMPACTS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4733	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38506.1.1	BRSTP-175(7)	P.E.	
38506.2.1	BRSTP-175(7)	R/W, UTL.	



Permit Drawing
Sheet 1 of 6

TIP PROJECT: B-4733



BEGIN TIP PROJECT B-4733
-L- STA. 10+00.00

BEGIN BRIDGE
-L- STA. 17+40.00

END BRIDGE
-L- STA. 21+00.00

BEGIN CONSTRUCTION
-YI- STA. 26+24.00

END TIP PROJECT B-4733
-L- STA. 21+75.39

END CONSTRUCTION
-DRI- STA. 11+80.00

END CONSTRUCTION
-DR3- STA. 11+20.00

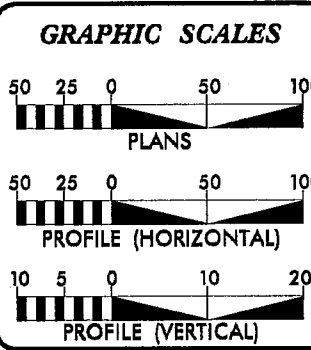
END CONSTRUCTION
-DR2- STA. 12+02.75

END CONSTRUCTION
-YI- STA. 30+00.00

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONTRACT:



DESIGN DATA

ADT 2013 =	5,140
ADT 2033 =	9,925
DHV =	11 %
D =	55 %
T =	8 % *
V =	60 MPH
FUNC. CLASS =	MAJOR COLLECTOR
REGIONAL TIER	
* (TTST 2% + DUAL 6%)	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4733 =	0.155 Miles
LENGTH STRUCTURE TIP PROJECT B-4733 =	0.068 Miles
TOTAL LENGTH OF TIP PROJECT B-4733 =	0.223 Miles

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

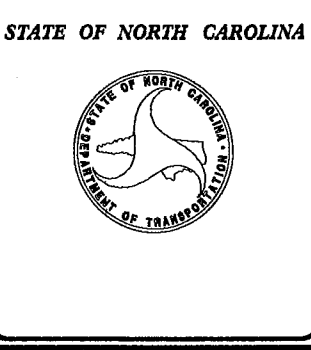
2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE:	JUNE 8, 2012
LETTING DATE:	JUNE 18, 2013
	G.E. BREW, PE PROJECT ENGINEER
	THAD F. DUNCAN, PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

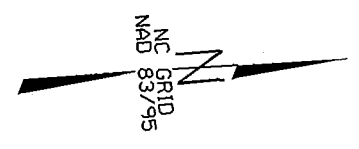
ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



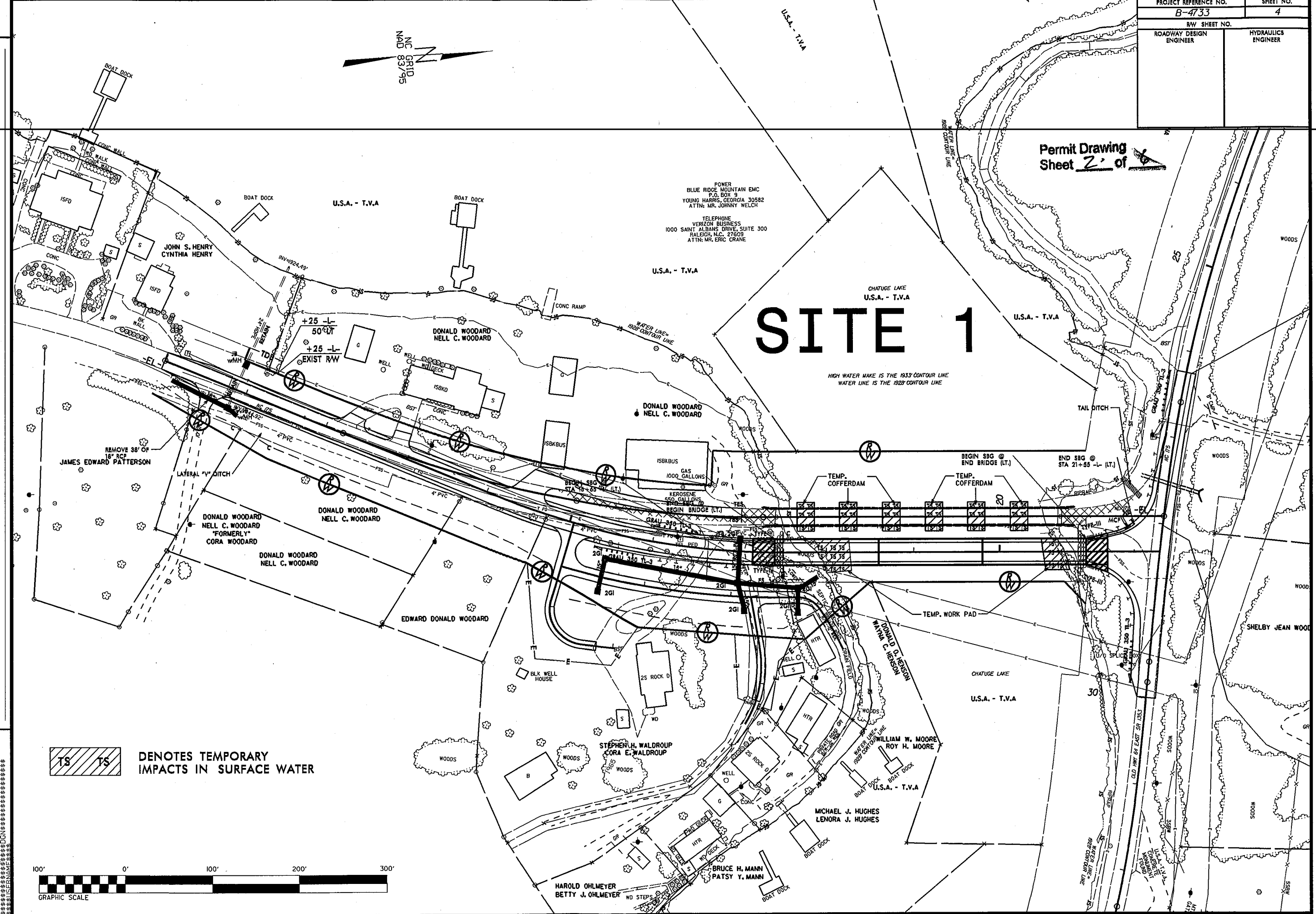
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\$\$\$\$\$DGN\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

PROJECT REFERENCE NO.	SHEET NO.
B-4733	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



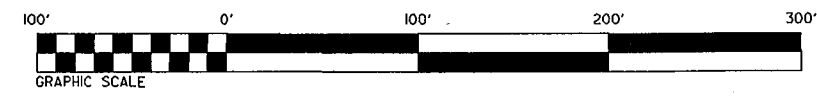
Permit Drawing
Sheet 2 of 3

SITE 1



HIGH WATER MAKE IS THE 1933 CONTOUR LINE
WATER LINE IS THE 1928 CONTOUR LINE

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER



POWER
BLUE RIDGE MOUNTAIN EMC
P.O. BOX 9
YOUNG HARRIS, GEORGIA 30582
ATTN: MR. JOHNNY WELCH

TELEPHONE
VERIZON BUSINESS
1000 SAINT ALBANS DRIVE, SUITE 300
RALEIGH, N.C. 27609
ATTN: MR. ERIC CRANE

U.S.A. - T.V.A

CHATUGE LAKE
U.S.A. - T.V.A

U.S.A. - T.V.A

BEGIN SRG @
END BRIDGE (LT.)

END SRG @
STA 21+85 -L- (LT.)

TEMP. WORK PAD

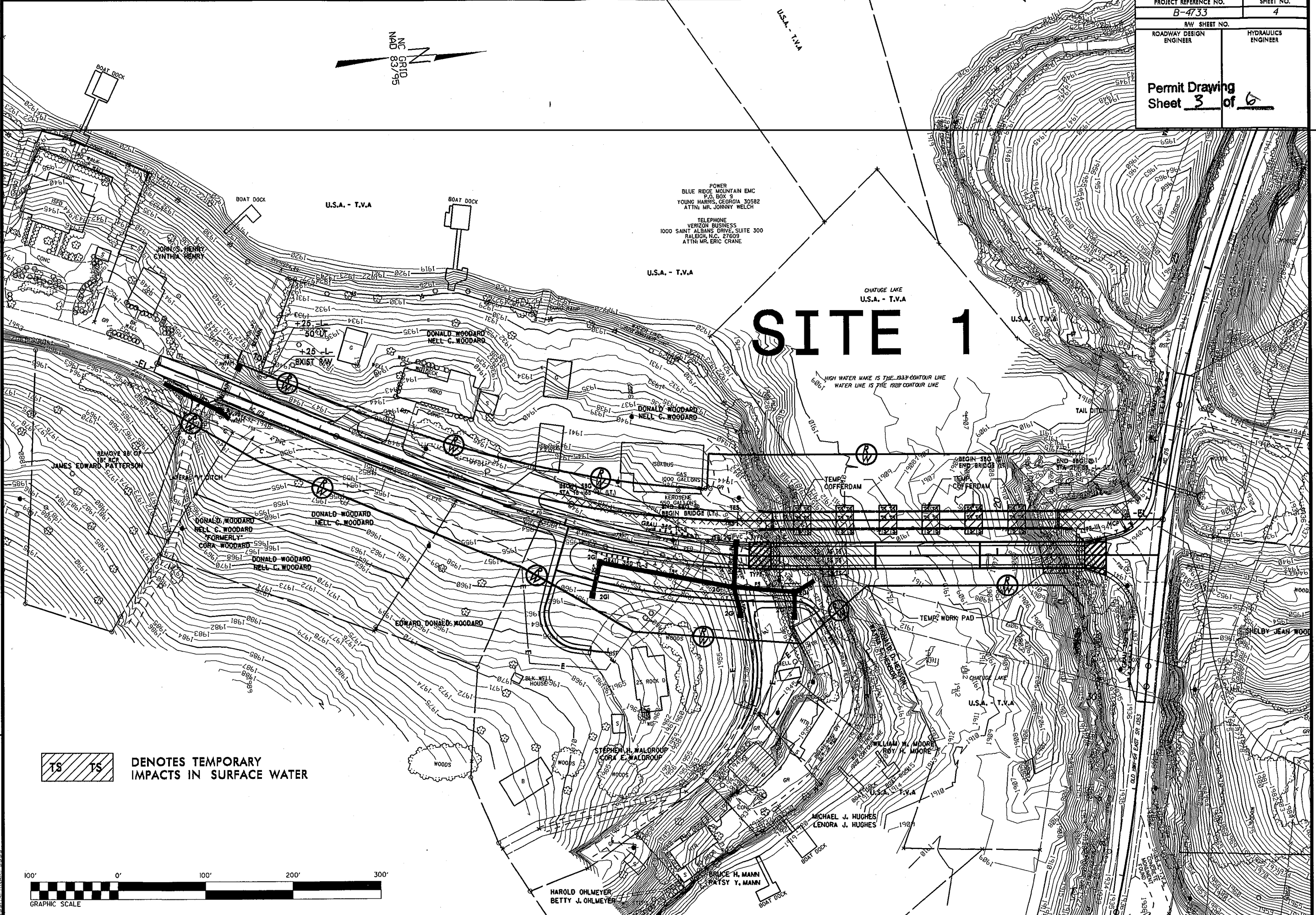
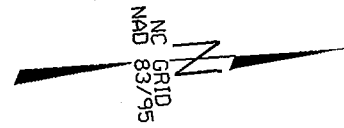
CHATUGE LAKE
U.S.A. - T.V.A

MICHAEL J. HUGHES
LENORA J. HUGHES

HAROLD OHLMEYER
BETTY J. OHLMEYER

BRUCE H. MANN
PATSY Y. MANN

SYSTEMS DESIGN



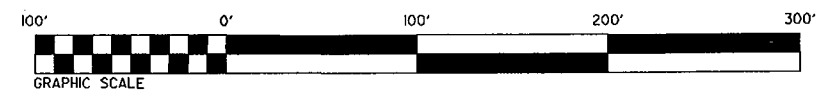
POWER
BLUE RIDGE MOUNTAIN EMC
P.O. BOX 9
YOUNG HARRIS, GEORGIA 30582
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SITE 1

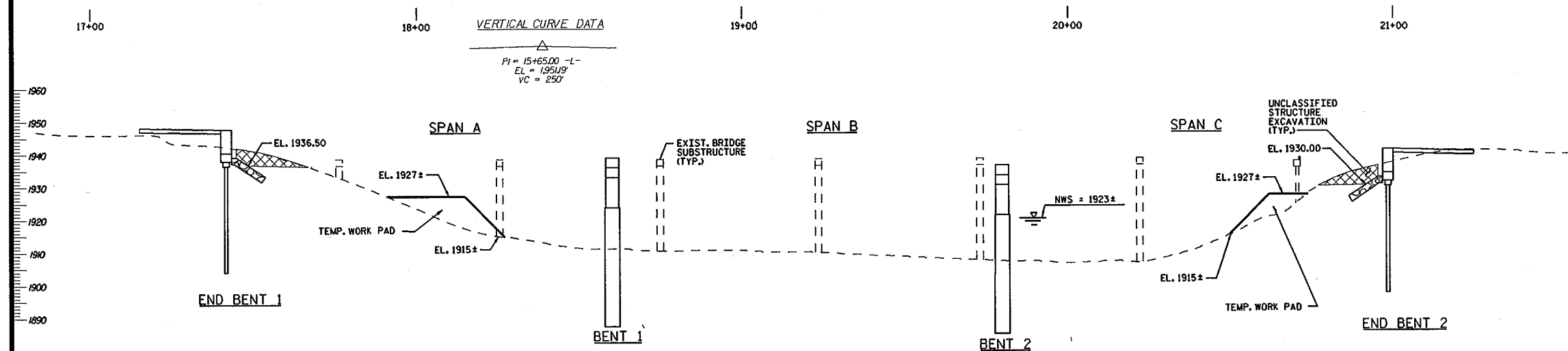
HIGH WATER MAKE IS THE 1933 CONTOUR LINE
WATER LINE IS THE 1928 CONTOUR LINE

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER



Permit Drawing
Sheet 4 of 6

SITE 1



PROFILE

PROPERTY OWNERS

<u>Site</u>	<u>Last Name</u>	<u>First Name</u>	<u>Address</u>	<u>City/Town</u>	<u>State</u>	<u>Zip Code</u>
1	STATE OF NORTH CAROLINA		2090 US Hwy 70	SWANNANOA	NC	28778
1	USA--TVA		4800 Hwy 64 West Suite 102	MURPHY	NC	28906

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

CUMBERLAND COUNTY
WBS - 38506.1.1 (B-4733)

SHEET

7/17/2012

Permit Drawing
Sheet 5 of 6

WETLAND PERMIT IMPACT SUMMARY												
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	17+15.83 to 21+24.17 -L-	work pad's and cofferdam's						0.15				
TOTALS:								0.15				

*Note: < 0.01 Acre of permanent impact due to interior bents.

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 CLAY COUNTY
 WBS - 38506.1.1 (B-4733)
 SHEET 7/18/2012

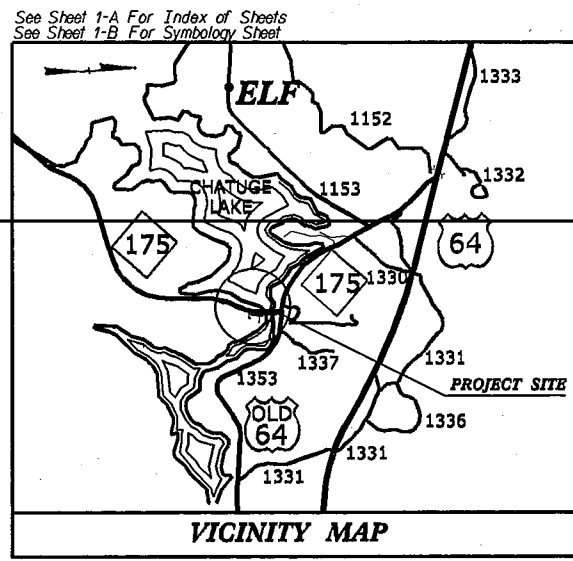
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4733	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38506.1.1	BRSTP-175(7)	P.E.	
38506.2.1	BRSTP-175(7)	RAW, UTL.	



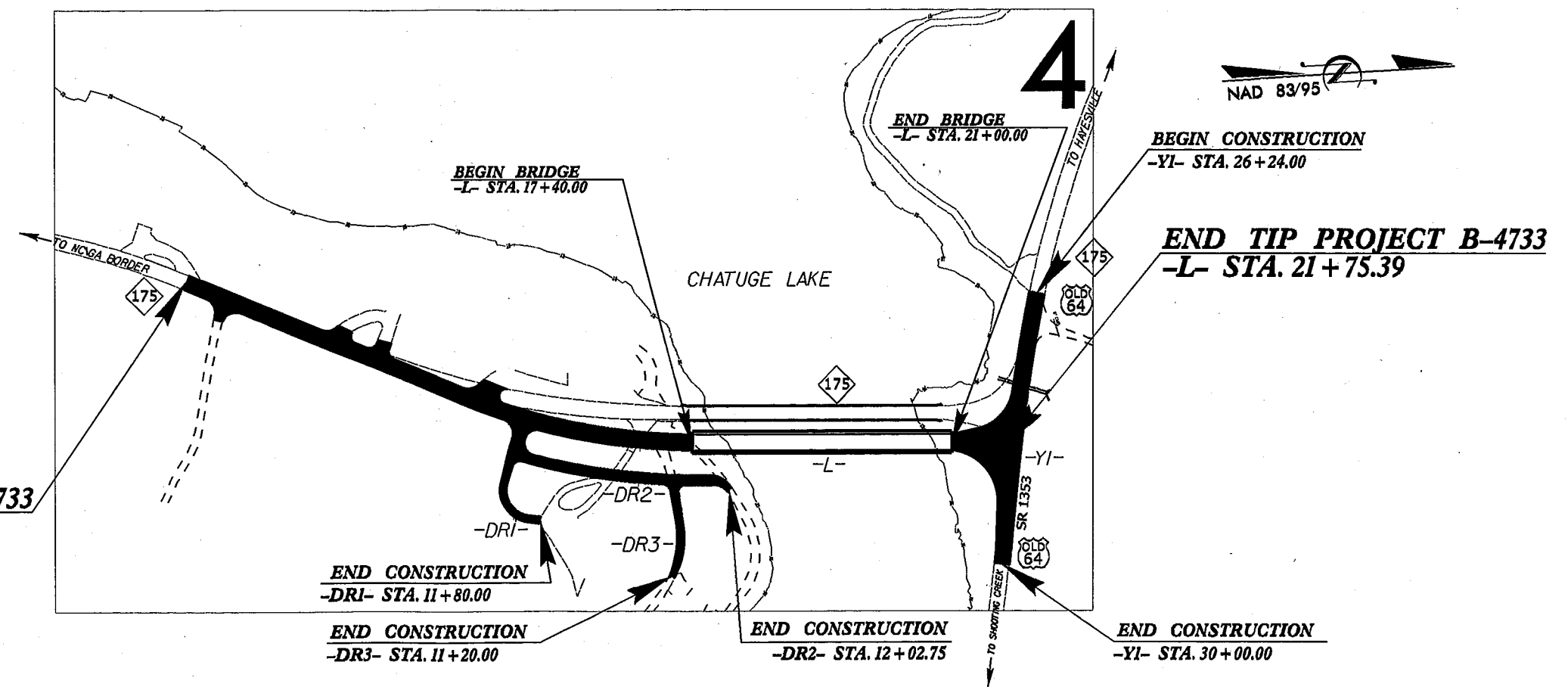
STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
CLAY COUNTY

LOCATION: BRIDGE NO. 11 OVER CHATUGE LAKE ON NC 175

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

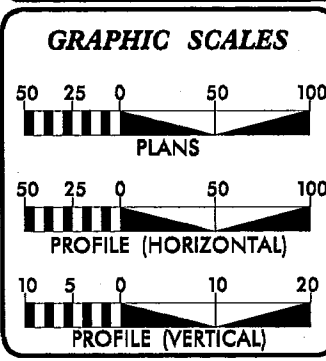


TIP PROJECT: B-4733



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

PRELIMINARY PLANS
 NOT TO BE USED FOR CONSTRUCTION



DESIGN DATA

ADT 2013 =	5,140
ADT 2033 =	9,925
DHV =	11 %
D =	55 %
T =	8 % *
V =	60 MPH
FUNC. CLASS =	MAJOR COLLECTOR
REGIONAL TIER	
* (TTST 2% + DUAL 6%)	

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

2012 STANDARD SPECIFICATIONS

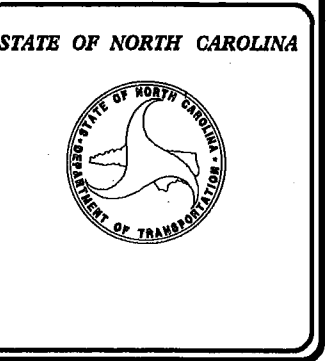
RIGHT OF WAY DATE: JUNE 8, 2012	G.E. BREW, PE PROJECT ENGINEER
LETTING DATE: JUNE 18, 2013	THAD F. DUNCAN, PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



19-JUL-2012 07:14 R:\Roadway\proj\11-b-4733_rdy_tsh.dgn \$\$\$USERNAME\$\$\$

CONTRACT:

04/16/11

Note: Not to Scale
*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. B-4733
SHEET NO. 1-B

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EP
Property Corner	----- X
Property Monument	□ ECM
Parcel/Sequence Number	⑫③
Existing Fence Line	-X-X-X-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	-W.B.-
Proposed Wetland Boundary	-W.B.-
Existing Endangered Animal Boundary	-E.A.B.-
Existing Endangered Plant Boundary	-E.P.B.-
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	◇
Well	⊕
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	▭
False Sump	▭

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○
Switch	□
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

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

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-C-
Proposed Slope Stakes Fill	-F-
Proposed Curb Ramp	○
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	▭

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	⊕
Storm Sewer	-----

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊗
Power Transformer	⊗
U/G Power Cable Hand Hole	-----
H-Frame Pole	-----
Recorded U/G Power Line	-----
Designated U/G Power Line (S.U.E.*)	-----

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Booth	⊕
Telephone Pedestal	⊕
Telephone Cell Tower	⊕
U/G Telephone Cable Hand Hole	-----
Recorded U/G Telephone Cable	-----
Designated U/G Telephone Cable (S.U.E.*)	-----
Recorded U/G Telephone Conduit	-----
Designated U/G Telephone Conduit (S.U.E.*)	-----
Recorded U/G Fiber Optics Cable	-----
Designated U/G Fiber Optics Cable (S.U.E.*)	-----

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

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

MISCELLANEOUS:

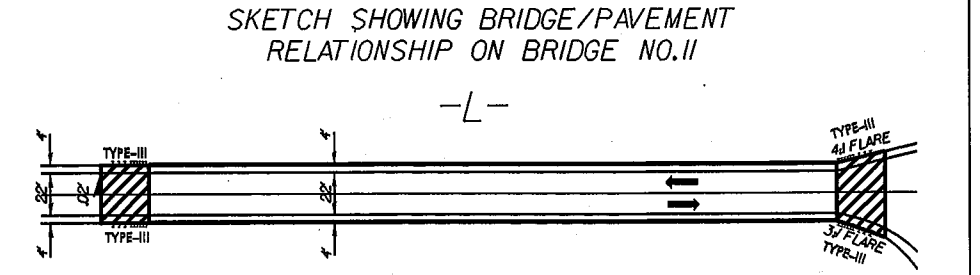
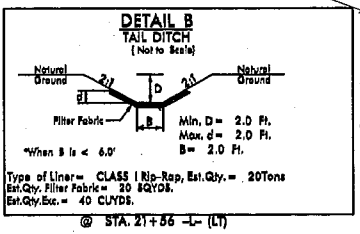
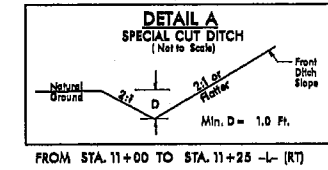
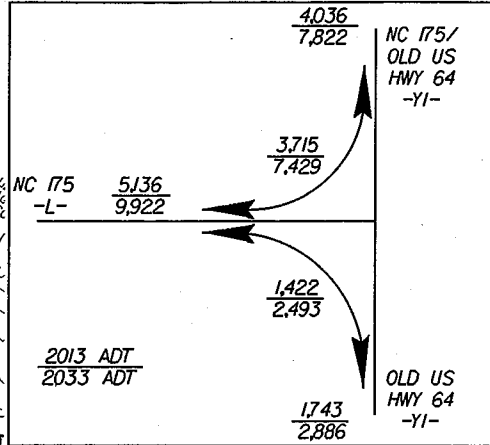
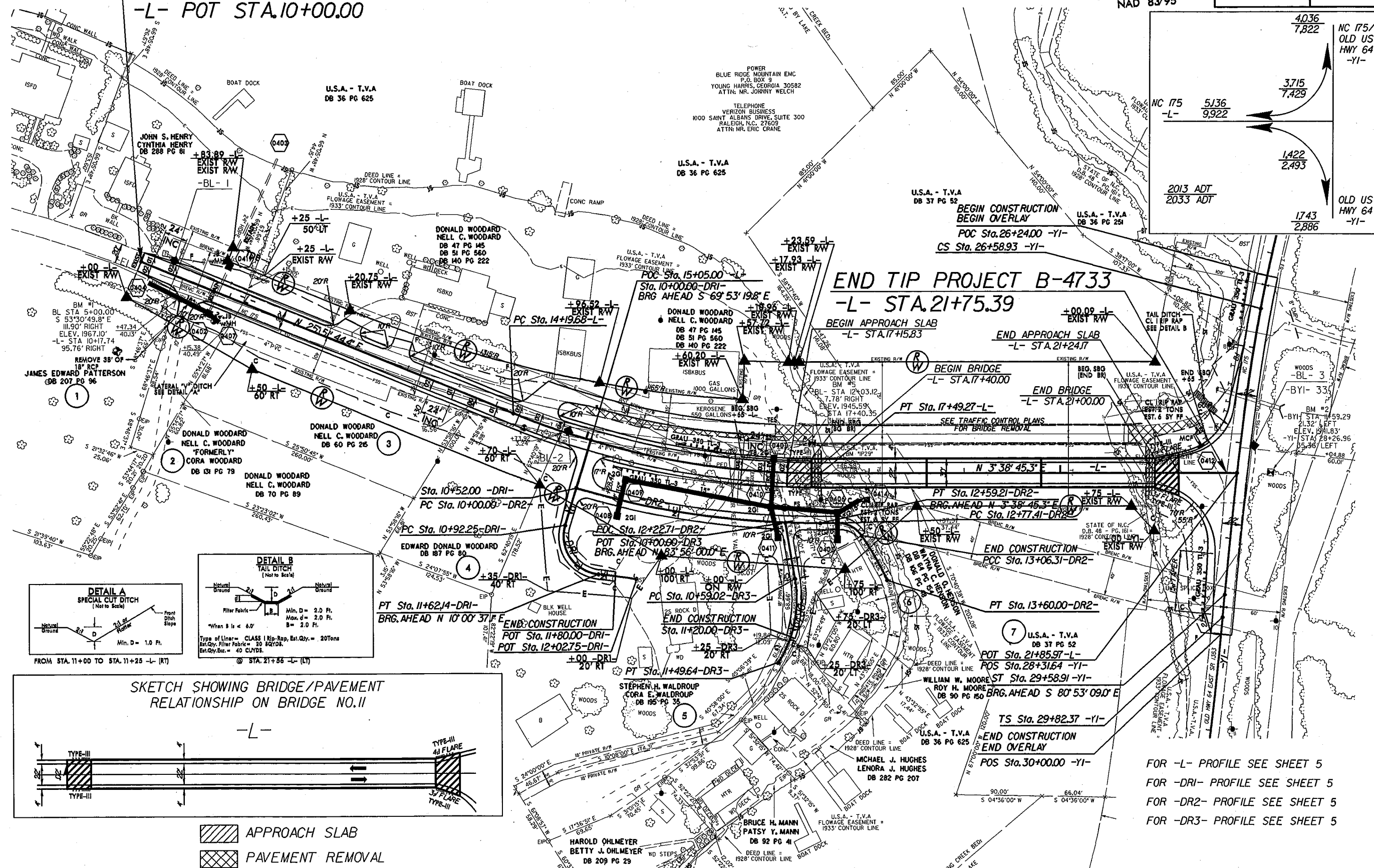
Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line	-----
U/G Tank; Water, Gas, Oil	▭
Underground Storage Tank, Approx. Loc.	⊕
AG Tank; Water, Gas, Oil	▭
Geoenvironmental Boring	⊕
U/G Test Hole (S.U.E.*)	⊕
Abandoned According to Utility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

PROJECT REFERENCE NO.	SHEET NO.
B-4733	4
RDW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L-	-DRI-	-DR2-	-DR3-	-YI-
PI Sta 15+86.57 $\Delta = 22' 12" 59.1'$ (LT) $D = 6' 4" 26.4'$ $L = 329.59'$ $T = 166.89'$ $R = 850.00'$ SE = SEE PLANS RO = SEE PLANS	PI Sta 11+40.01 $\Delta = 100' 06" 03.1'$ (LT) $D = 143' 14" 22.0'$ $L = 69.88'$ $T = 47.76'$ $R = 400.00'$ SE = NC	PI Sta 11+30.50 $\Delta = 16' 27" 55.0'$ (LT) $D = 6' 2" 07.5'$ $L = 259.21'$ $T = 130.50'$ $R = 902.00'$ SE = NC	PI Sta 12+93.09 $\Delta = 55' 10" 56.2'$ (RT) $D = 190' 59" 09.4'$ $L = 28.89'$ $T = 15.68'$ $R = 330.00'$ SE = NC	PI Sta 13+33.21 $\Delta = 9' 19" 23.0'$ (RT) $D = 17' 2" 44.5'$ $L = 53.70'$ $T = 26.91'$ $R = 300.00'$ SE = NC
PI Sta 11+06.42 $\Delta = 41' 31" 58.4'$ (RT) $D = 45' 50" 11.8'$ $L = 90.61'$ $T = 47.40'$ $R = 125.00'$ SE = NC	PI Sta 12+55.67 $\Delta = 5' 15" 03.8'$ $D = 300.06'$ $Ls = 200.13'$ $ST = 100.10'$	PI Sta 20+44.02 $\Delta = 45' 36" 59.0'$ (LT) $D = 3' 30" 00.0'$ $L = 1,303.32'$ $T = 688.42'$ $R = 1,637.02'$	PI Sta 27+59.00 $\Delta = 5' 14" 58.8'$ $D = 299.98'$ $Ls = 200.07'$ $ST = 100.07'$	PI Sta 31+55.87 $\Delta = 7' 48" 00.0'$ $D = 260.00'$ $Ls = 173.50'$ $ST = 86.82'$
PI Sta 36+26.73 $\Delta = 43' 51" 00.5'$ (RT) $D = 6' 00" 00.0'$ $L = 730.84'$ $T = 384.36'$ $R = 954.93'$	PI Sta 40+60.01 $\Delta = 7' 47" 57.8'$ $D = 259.98'$ $Ls = 173.49'$ $ST = 86.81'$			

BEGIN TIP PROJECT B-4733
-L- POT STA. 10+00.00

END TIP PROJECT B-4733
-L- STA. 21+75.39



FOR -L- PROFILE SEE SHEET 5
FOR -DRI- PROFILE SEE SHEET 5
FOR -DR2- PROFILE SEE SHEET 5
FOR -DR3- PROFILE SEE SHEET 5

8/17/95

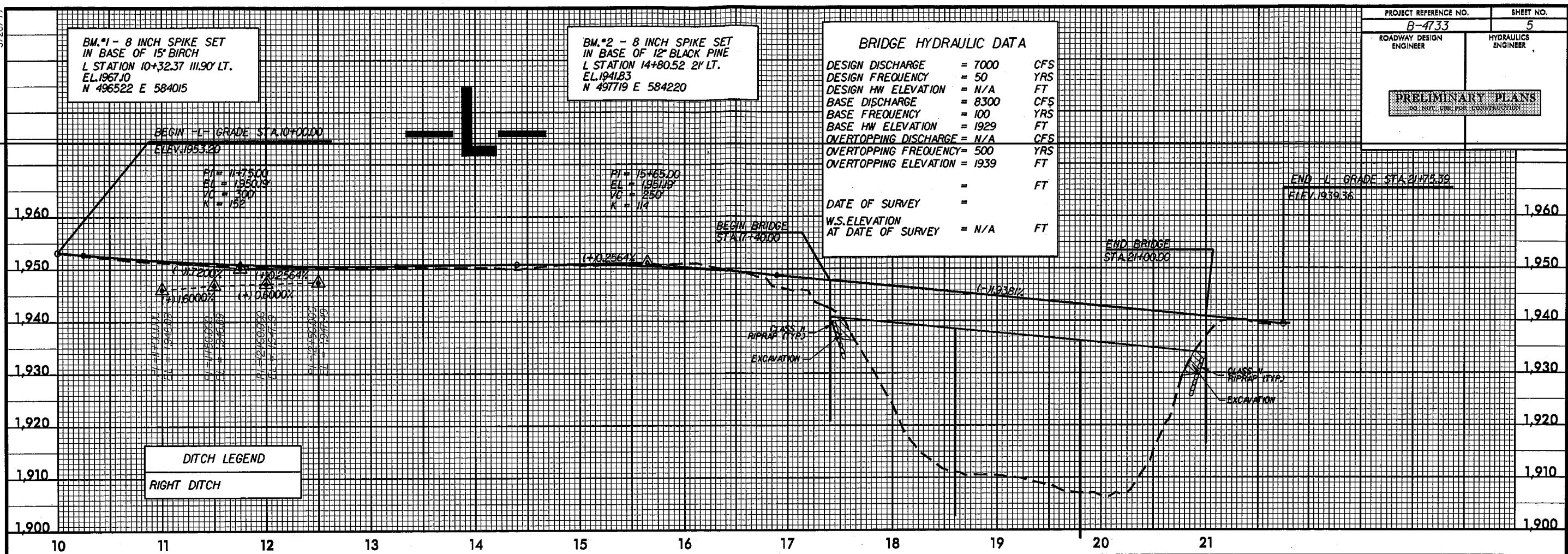
9/11/2012 09:15 AM B-4733.Rdw.psh.dgn

BM.#1 - 8 INCH SPIKE SET
IN BASE OF 15' BIRCH
L STATION 10+32.37 111.90' LT.
EL. 1967.10
N 496522 E 584015

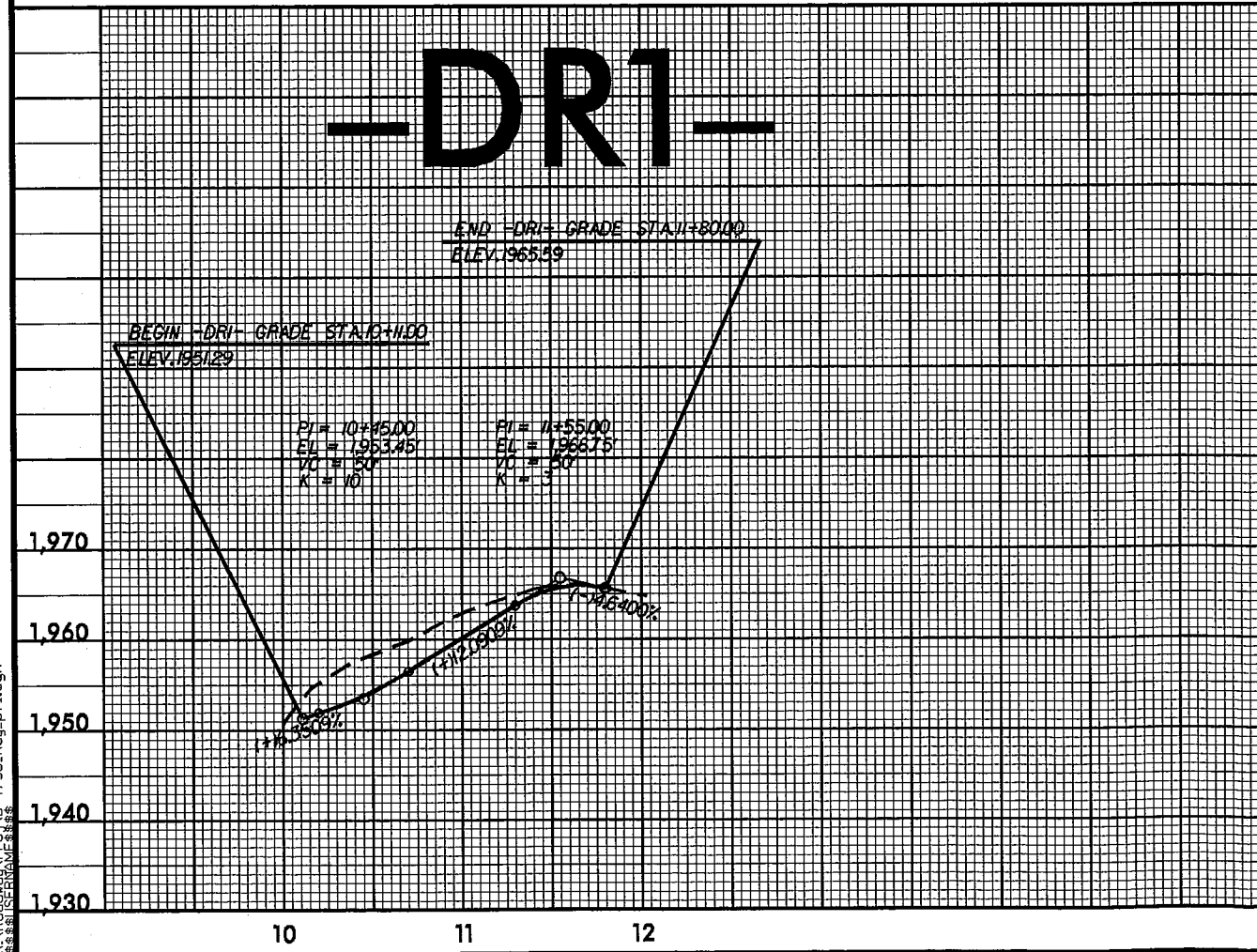
BM.#2 - 8 INCH SPIKE SET
IN BASE OF 12' BLACK PINE
L STATION 14+80.52 21' LT.
EL. 1941.83
N 497719 E 584220

BRIDGE HYDRAULIC DATA

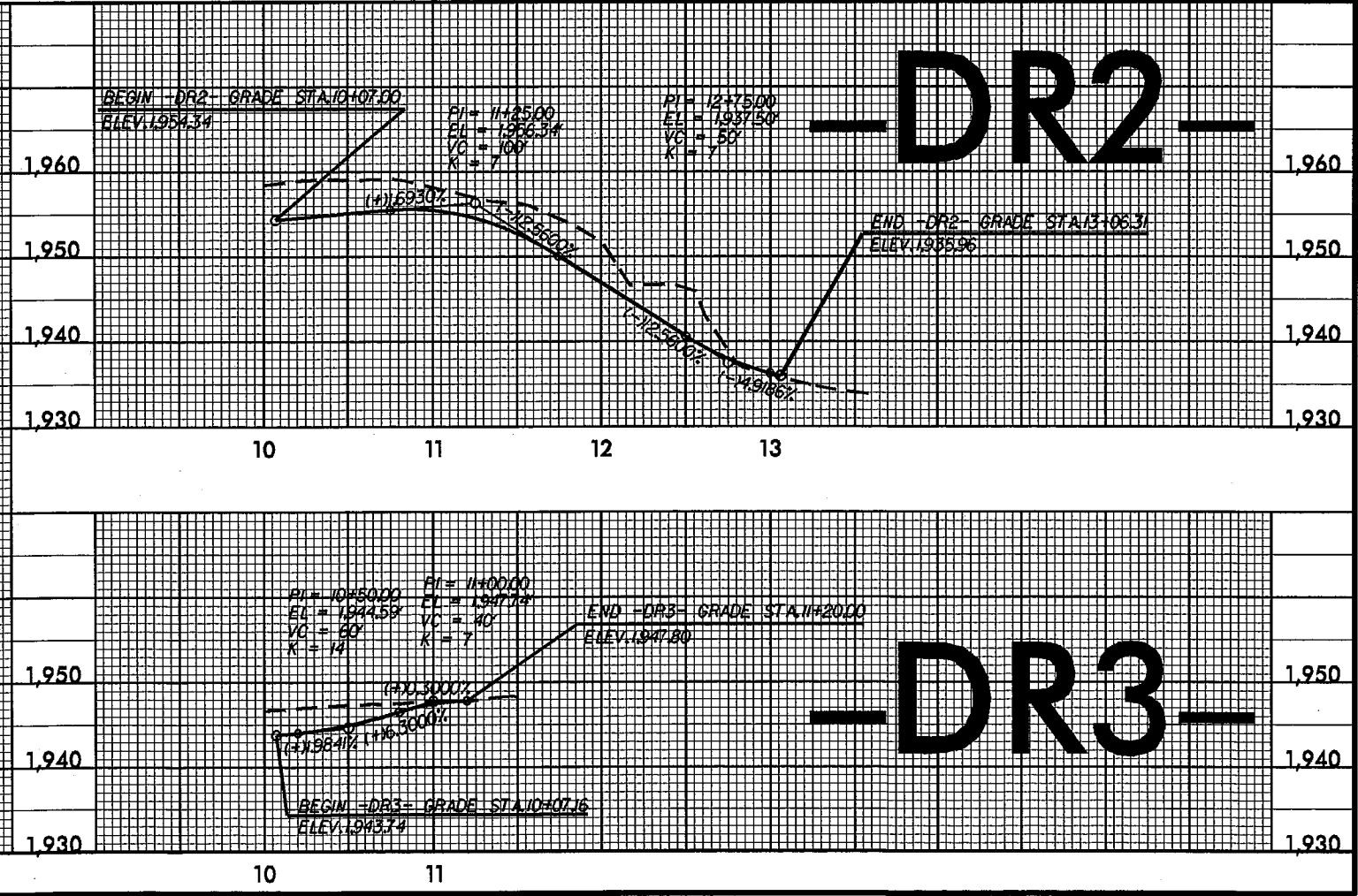
DESIGN DISCHARGE	= 7000	CFS
DESIGN FREQUENCY	= 50	YRS
DESIGN HW ELEVATION	= N/A	FT
BASE DISCHARGE	= 8300	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 1929	FT
OVERTOPPING DISCHARGE	= N/A	CFS
OVERTOPPING FREQUENCY	= 500	YRS
OVERTOPPING ELEVATION	= 1939	FT
DATE OF SURVEY	=	FT
W.S. ELEVATION AT DATE OF SURVEY	= N/A	FT



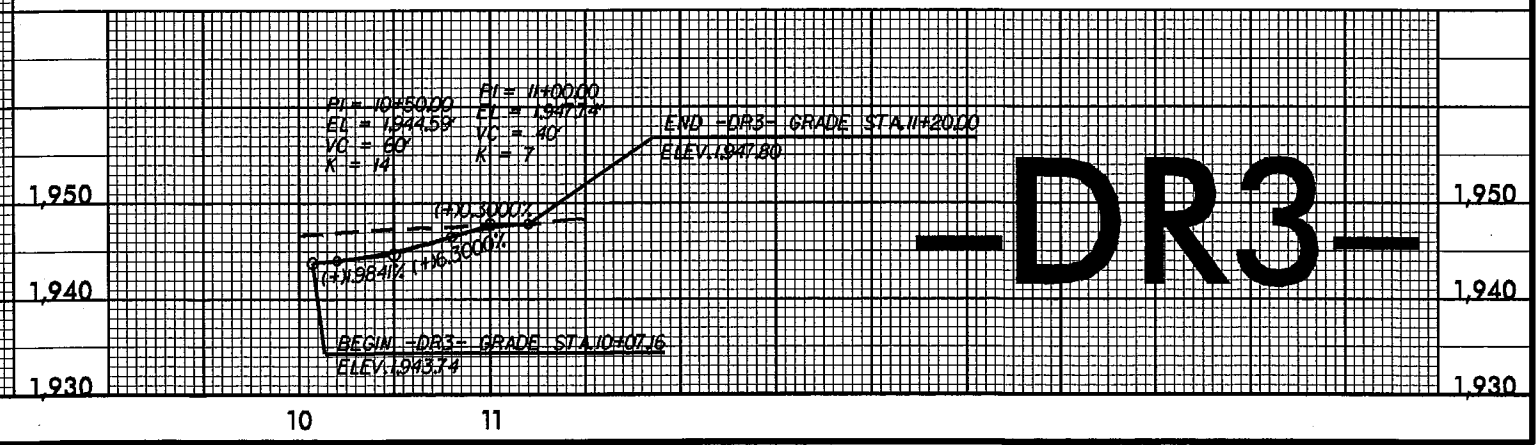
-DR1-



-DR2-



-DR3-



5/28/99
19-JUL-2012 07:15
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