



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT L. MCCRORY
GOVERNOR

May 3, 2013

ANTHONY J. TATA
SECRETARY

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

ATTN: Ms. Lori Beckwith
NCDOT Coordinator

Subject: **Application for Section 404 Nationwide Permit 23, 33, and 13 and Section 401 Water Quality Certification** for the proposed replacement of Bridge No. 93 over North Fork French Broad River on SR 1324 in Transylvania County, Federal Aid Project No. BRZ-1324(2); Division 14; TIP No. B-4289, \$240.00 Debit Work Order WBS Element 33628.1.1.

Dear Madam:

The North Carolina Department of Transportation (NCDOT) proposes to replace the existing 3-span, 96 foot long Bridge No. 93 over North Fork French Broad River on SR 1324 with a 110 foot long, two-span bridge. There will be 95 linear feet of stream impact to an Unnamed Tributary (UT) that runs parallel to SR 1324 due to the encroaching roadway fill. There will also be 20 feet of stream bank stabilization and 0.01 acre (68 feet) of temporary fill necessary to remove the existing bent and construct the new bridge bent in the dry. Traffic will be phased on-site during construction.

Please see enclosed copies of the Pre-Construction Notification (PCN), EEP Acceptance, Stormwater management plan, permit drawings, and design plans for the above-referenced project. A Categorical Exclusion (CE) was completed and distributed in August 2008. Additional copies are available upon request.

Comments from the North Carolina Wildlife Resources Commission (NCWRC) will be required prior to authorization by the United States Army Corps of Engineers (USACE). By copy of this letter and attachments, NCDOT hereby requests NCWRC's 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.

This project calls for a letting date of November 19, 2013 and a review date of October 1, 2013. However, the date could be advanced if funding becomes available.

A copy of this permit application and its distribution list will be posted on the NCDOT Website at: <http://connect.ncdot.gov/resources/Environmental>. If you have any questions or need additional information, please e-mail Michael Turchy at maturchy@ncdot.gov.

Sincerely,

A handwritten signature in cursive script that reads "E. L. Lusk".

for

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

The "cc" List:

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 33 13 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 93 over North Fork Fork French Broad River on SR 1324.

2b. County:

Transylvania

2c. Nearest municipality / town:

Balsam Grove, NC

2d. Subdivision name:

not applicable

2e. NCDOT only, T.I.P. or state project no:

B-4289

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) 707-6157

3g. Fax no.:

(919) 212-5785

3h. Email address:

maturchy@ncdot.gov

4. Applicant Information (if different from owner)	
4a. Applicant is:	☐ Agent ☐ 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: 35.22978 (DD.DDDDDD) Longitude: - 82.87401 (-DD.DDDDDD)
1c. Property size:	1 acres
2. Surface Waters	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	North Fork French Broad River
2b. Water Quality Classification of nearest receiving water:	B; Tr
2c. River basin:	French Broad
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: Residential and mixed deciduous-coniferous forest land	
3b. List the total estimated acreage of all existing wetlands on the property: No wetlands within right of way, 0.05 acre in project area. All wetlands will be avoided.	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 270	
3d. Explain the purpose of the proposed project: To replace a structurally deficient and functionally obsolete bridge.	
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing a 96-foot bridge with a 110-foot, two-span bridge on the same alignment, using staged construction. Standard road building equipment, such as trucks, dozers, and cranes will be used.	
4. Jurisdictional Determinations	
4a. Have jurisdictional wetland or stream determinations by the Corps or State been requested or obtained for this property / project (including all prior phases) in the past? Comments:	☐ Yes ☒ No ☐ Unknown
4b. If the Corps made the jurisdictional determination, what type of determination was made?	☐ Preliminary ☐ Final
4c. If yes, who delineated the jurisdictional areas? Name (if known):	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?	☐ Yes ☒ No ☐ Unknown
5b. If yes, explain in detail according to "help file" instructions.	
6. Future Project Plans	
6a. Is this a phased project?	☐ Yes ☒ No
6b. If yes, explain.	

C. Proposed Impacts Inventory						
1. Impacts Summary						
1a. Which sections were completed below for your project (check all that apply):						
☐ Wetlands		☒ Streams - tributaries		☐ Buffers		
☐ Open Waters		☐ Pond Construction				
2. Wetland Impacts						
If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.						
2a. Wetland impact number – Permanent (P) or Temporary (T)	2b. Type of impact	2c. Type of wetland (if known)	2d. Forested	2e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	2f. Area of impact (acres)	
Site 1 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ		
Site 2 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ		
Site 3 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ		
Site 4 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ		
Site 5 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ		
Site 6 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ		
2g. Total wetland impacts						
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 ☒ P ☐ T	Roadway Fill	UT to N Fork French Broad Riv.	☒ PER ☐ INT	☒ Corps ☐ DWQ	1	95
Site 1 ☒ P ☐ T	Bank Stabilization	North Fork French Broad River	☒ PER ☐ INT	☒ Corps ☐ DWQ	35	20
Site 1 ☐ P ☒ T	Workpad	North Fork French Broad River	☒ PER ☐ INT	☒ Corps ☐ DWQ	35	0.01 (68')
Site ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
3h. Total stream and tributary impacts						115 Perm 0.01 Temp
3i. Comments:						

4. Open Water Impacts

If there are proposed impacts to lakes, ponds, estuaries, tributaries, sounds, the Atlantic Ocean, or any other open water of the U.S. then individually list all open water impacts below.

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

4g. Comments:

5. Pond or Lake Construction

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

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

5g. Comments:

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

6. Buffer Impacts (for DWQ)

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

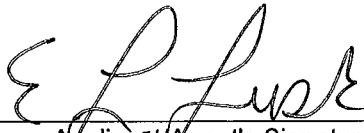
6a. Project is in which protected basin?			☐ Neuse ☐ Tar-Pamlico ☐ Other: ☐ Catawba ☐ Randleman		
6b. Buffer impact number – Permanent (P) or Temporary (T)	6c. Reason for impact	6d. Stream name	6e. Buffer mitigation required?	6f. Zone 1 impact (square feet)	6g. Zone 2 impact (square feet)
B1 ☐ P ☐ T			☐ Yes ☐ No		
B2 ☐ P ☐ T			☐ Yes ☐ No		
B3 ☐ P ☐ T			☐ Yes ☐ 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. Rip rap dissipators will be used on this project at the outlets from modified concrete flumes's, reducing impacts to surface waters associated with direct roadway runoff. Preformed Scour Holes were not specified since the discharge from the MCF's is only 0.15 cfs on the left side and 0.10 cfs on the right side. Rip rap at embankments will also be utilized to prevent streambank erosion. The bridge will be demolished from the top down and so no impacts to surface waters will be necessary		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques. Design Standards for Sensitive Waters will be used for this project. Deck drains will not discharge directly into North Fork French Broad River. The Department will observe an in-stream moratorium for trout from October 15-April 15.		
2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State		
2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?	☒ Yes ☐ No If no, explain:	
2b. If yes, mitigation is required by (check all that apply):	☐ DWQ ☒ Corps	
2c. If yes, which mitigation option will be used for this project?	☐ Mitigation bank ☒ Payment to in-lieu fee program ☐ Permittee Responsible Mitigation	
3. Complete if Using a Mitigation Bank		
3a. Name of Mitigation Bank: not applicable		
3b. Credits Purchased (attach receipt and letter)	Type	Quantity
3c. Comments:		
4. Complete if Making a Payment to In-lieu Fee Program		
4a. Approval letter from in-lieu fee program is attached.	☒ Yes	
4b. Stream mitigation requested:	95 linear feet	
4c. If using stream mitigation, stream temperature:	☐ warm ☐ cool ☒ cold	
4d. Buffer mitigation requested (DWQ only):	square feet	
4e. Riparian wetland mitigation requested:	acres	
4f. Non-riparian wetland mitigation requested:	acres	
4g. Coastal (tidal) wetland mitigation requested:	acres	
4h. Comments:		
5. Complete if Using a Permittee Responsible Mitigation Plan		
5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan.		

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

E. Stormwater Management and Diffuse Flow Plan (required by DWQ)	
1. Diffuse Flow Plan	
1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?	☐ Yes ☒ No
1b. If yes, then is a diffuse flow plan included? If no, explain why. Comments:	☐ Yes ☐ No
2. Stormwater Management Plan	
2a. What is the overall percent imperviousness of this project?	N/A
2b. Does this project require a Stormwater Management Plan?	☒ Yes ☐ No
2c. If this project DOES NOT require a Stormwater Management Plan, explain why:	
2d. If this project DOES require a Stormwater Management Plan, then provide a brief, narrative description of the plan: See attached permit drawings.	
2e. Who will be responsible for the review of the Stormwater Management Plan?	☐ Certified Local Government ☐ DWQ Stormwater Program ☒ DWQ 401 Unit
3. Certified Local Government Stormwater Review	
3a. In which local government's jurisdiction is this project?	not applicable
3b. Which of the following locally-implemented stormwater management programs apply (check all that apply):	☐ Phase II ☐ NSW ☐ USMP ☐ Water Supply Watershed ☐ Other:
3c. Has the approved Stormwater Management Plan with proof of approval been attached?	☐ Yes ☐ No
4. DWQ Stormwater Program Review	
4a. Which of the following state-implemented stormwater management programs apply (check all that apply):	☐ Coastal counties ☒ HQW ☐ ORW ☐ Session Law 2006-246 ☐ Other:
4b. Has the approved Stormwater Management Plan with proof of approval been attached?	☐ Yes ☒ No pending
5. DWQ 401 Unit Stormwater Review	
5a. Does the Stormwater Management Plan meet the appropriate requirements?	☐ Yes ☐ No N/A
5b. Have all of the 401 Unit submittal requirements been met?	☐ Yes ☐ No N/A

F. Supplementary Information	
1. Environmental Documentation (DWQ Requirement)	
1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land?	☒ Yes ☐ No
1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)?	☒ Yes ☐ No
1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) Comments:	☒ Yes ☐ No
2. Violations (DWQ Requirement)	
2a. Is the site in violation of DWQ Wetland Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), DWQ Surface Water or Wetland Standards, or Riparian Buffer Rules (15A NCAC 2B .0200)?	☐ Yes ☒ No
2b. Is this an after-the-fact permit application?	☐ Yes ☒ No
2c. If you answered "yes" to one or both of the above questions, provide an explanation of the violation(s):	
3. Cumulative Impacts (DWQ Requirement)	
3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality?	☐ Yes ☒ No
3b. If you answered "yes" to the above, submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent DWQ policy. If you answered "no," provide a short narrative description. Due to the minimal transportation impact resulting from this bridge replacement, this project will neither influence nearby land uses nor stimulate growth. Therefore, a detailed indirect or cumulative effects study will not be necessary.	
4. Sewage Disposal (DWQ Requirement)	
4a. Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility. not applicable	

5. Endangered Species and Designated Critical Habitat (Corps Requirement)		
5a. Will this project occur in or near an area with federally protected species or habitat?	☒ Yes	☐ No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	☐ Yes	☒ No
5c. If yes, indicate the USFWS Field Office you have contacted.	☐ Raleigh ☐ Asheville	
5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? NHP Element Occurance Search, USFWS Website, and NCDOT onsite surveys. All species were "No Effect", due to lack of habitat with the exception of mountain sweet pitcher plant, and Virginia spiraea which habitat is present for. The most recent survey was conducted on June 22, 2010. No specimens were located.		
6. Essential Fish Habitat (Corps Requirement)		
6a. Will this project occur in or near an area designated as essential fish habitat?	☐ Yes	☒ No
6b. What data sources did you use to determine whether your site would impact Essential Fish Habitat? NMFS County Index		
7. Historic or Prehistoric Cultural Resources (Corps Requirement)		
7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)?	☐ Yes	☒ No
7b. What data sources did you use to determine whether your site would impact historic or archeological resources? NEPA Documentation		
8. Flood Zone Designation (Corps Requirement)		
8a. Will this project occur in a FEMA-designated 100-year floodplain?	☒ Yes	☐ No
8b. If yes, explain how project meets FEMA requirements: NCDOT Hydraulics Unit coordination with FEMA		
8c. What source(s) did you use to make the floodplain determination? FEMA Maps		
<u>Dr. Gregory J. Thorpe, Ph D</u> Applicant/Agent's Printed Name	 Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	5.2-13 Date



April 23, 2013

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

Dear Dr. Thorpe:

Subject: EEP Mitigation Acceptance Letter:

B-4289, Replace Bridge Number 93 over North Fork of the French Broad River on SR
1324 (Tanasee Gap Road), Transylvania County

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the compensatory stream mitigation for the subject project. Based on the information supplied by you on April 18, 2013, the impacts are located in CU 06010105 of the French Broad River Basin in the Southern Mountains (SM) Eco-Region, and are as follows:

French Broad 06010105 SM	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non- Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	95.0	0	0	0	0	0	0	0

This mitigation acceptance letter replaces the mitigation acceptance letter issued on August 16, 2011. EEP commits to implementing sufficient compensatory stream mitigation credits to offset the impacts associated with this project in accordance with the N.C. Department of Environment and Natural Resources' Ecosystem Enhancement Program In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from EEP.

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-707-8420.

Sincerely,

James B. Stanfill
EEP Asset Management Supervisor

cc: Ms. Lori Beckwith, USACE – Asheville Regulatory Field Office
Ms. Amy Chapman, Division of Water Quality, Wetlands/401 Unit
File: B-4289 Revised

Restoring... Enhancing... Protecting Our State





North Carolina Department of Transportation
Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR LINEAR ROADWAY PROJECTS



(Version 1.2; Released September 2011)

Project/TIP No.: B-4289 County(ies): Transylvania Page 1 of 1

General Project Information

Project No.:	B-4289	Project Type:	Bridge Replacement	Date:	2/28/2013
NCDOT Contact:	Bill Zerman, PE	Contractor / Designer:	Sungate Design Group, P.A.		
Address:	1020 Birch Ridge Road Raleigh, NC 27610	Address:	915 Jones Franklin Road Raleigh, NC 27606		
	Phone:		919-707-6755	Phone:	919-859-2243
	Email:		bzerman@ncdot.gov	Email:	hwells@sungatedesign.com
City/Town:		County(ies):	Transylvania		
River Basin(s):	French Broad	CAMA County?	No		
Primary Receiving Water:	North Fork French Broad River	NCDWQ Stream Index No.:	6-3-(6.5)		
NCDWQ Surface Water Classification for Primary Receiving Water	Primary:	Class B			
	Supplemental:	Trout Waters (Tr)			
Other Stream Classification:	None				
303(d) Impairments:	None				
Buffer Rules in Effect	N/A				

Project Description

Project Length (lin. Miles or feet):	0.06	Surrounding Land Use:	Rural, Agriculture
	Proposed Project		Existing Site
Project Built-Upon Area (ac.)	0.20 ac.		0.29 ac.
Typical Cross Section Description:	2-Lane Shoulder Section	2-Lane Shoulder Section	
Average Daily Traffic (veh/hr/day):	Design/Future: 1100	Existing:	735

General Project Narrative: B-4289 involves the removal and replacement of Transylvania County bridge number 93 along with improvements to approaches. Rip rap dissipators will be used on this project at the outlets from Modified Concrete Flume's (MCF's), reducing impacts to surface waters associated with direct roadway runoff. Preformed Scour Holes were not specified since the discharge from the MCF's is only 0.15 cfs on the left side and 0.10 cfs on the right side. Rip rap at embankments will also be utilized to prevent streambank erosion. The bridge will be demolished from the top down and so no impacts to surface waters will be necessary.

References

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

CONTRACT: C202817

VICINITY MAP

75% (RW) PLAN SUBMITTAL

TRANSYLVANIA COUNTY

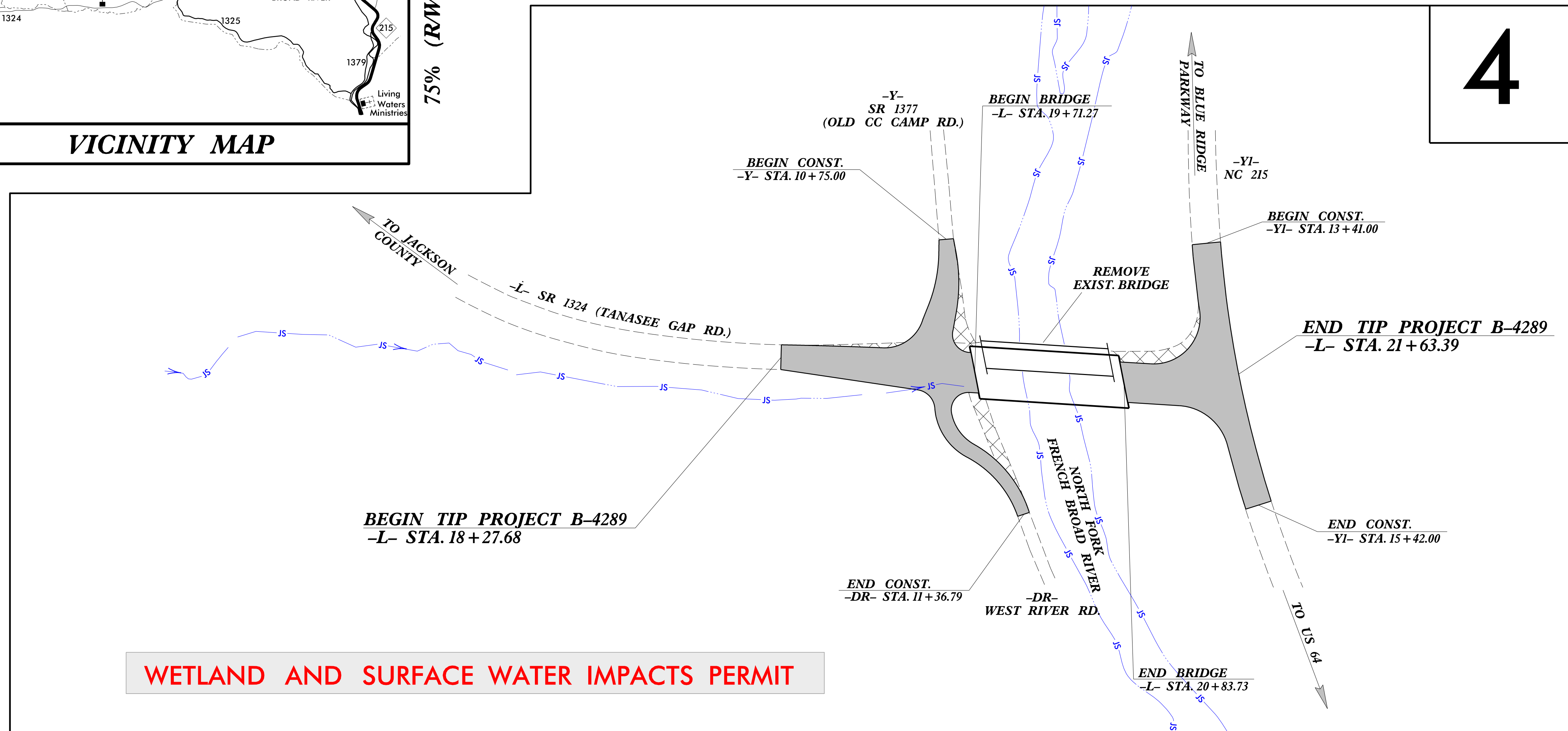
TYPE OF WORK: GRADING, DRAINAGE, PAVING & STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4289	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33628.1.1	BRZ-1324(2)	PE	
33628.2.1	BRZ-1324(2)	UTIL. & R/W	
33628.3.1	BRZ-1324(2)	CONST.	

PERMIT DRAWING
SHEET 1 OF 7

4

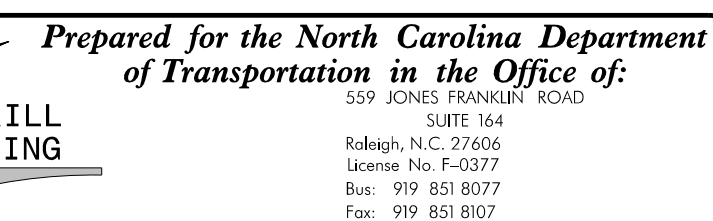
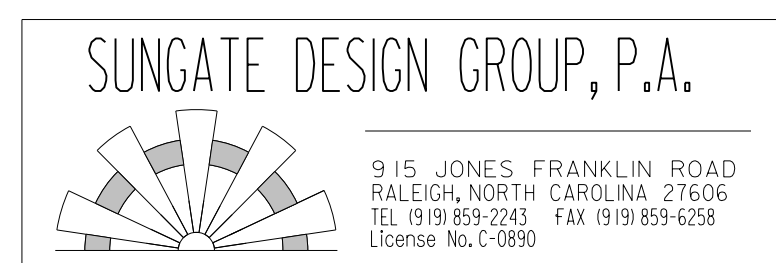
NAD 83/
NSRS 2007



PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CLASSIFICATION = RURAL LOCAL
SUBREGIONAL TIER DESIGN

LENGTH ROADWAY TIP PROJECT B-4289 =	0.043 MILES
LENGTH STRUCTURE TIP PROJECT B-4289 =	0.021 MILES
TOTAL LENGTH TIP PROJECT B-4289 =	0.064 MILES

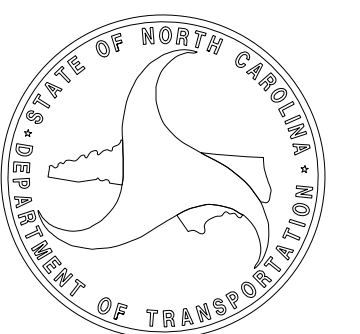


NCDOT CONTACT:

BRENDA L. MOORE, PE
ROADWAY DESIGN: ENGINEERING
COORDINATION SECTION PROJECT ENGINEER

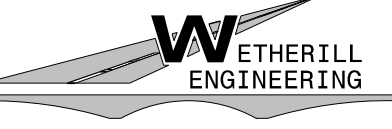
P.E.

SIGNATURE: _____

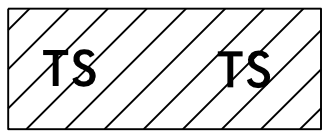
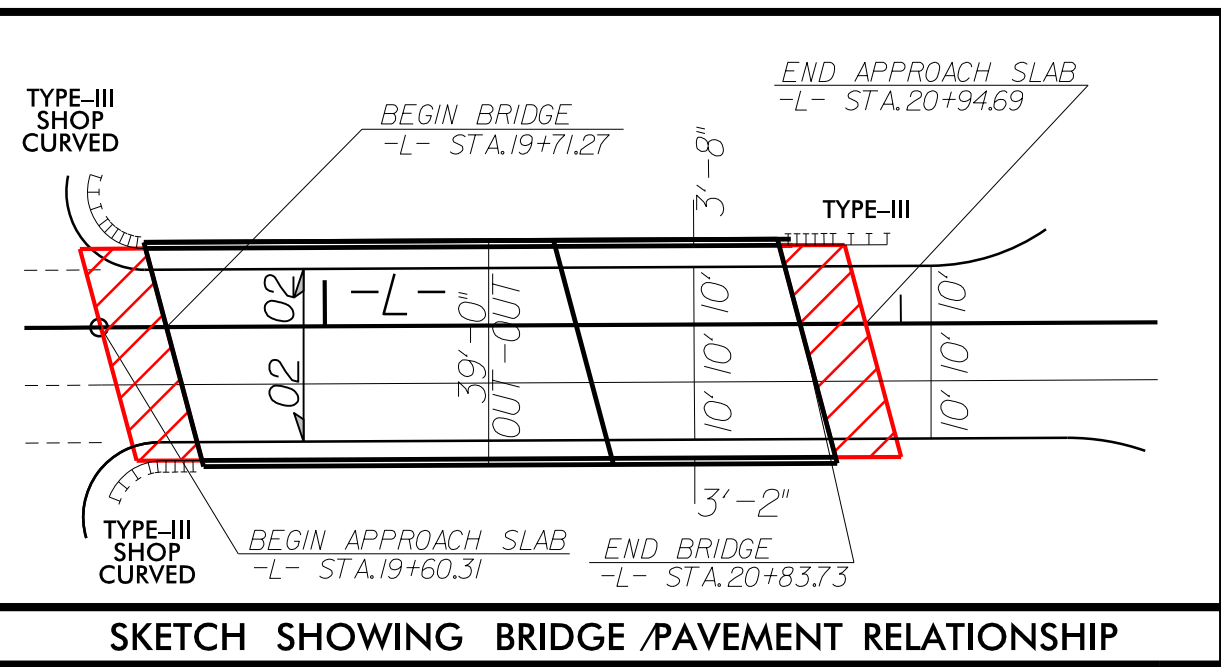
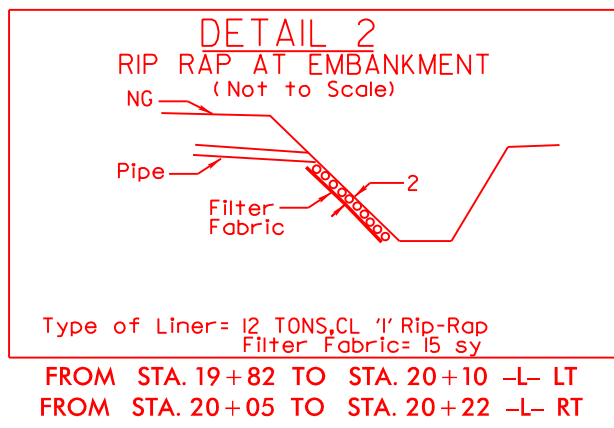
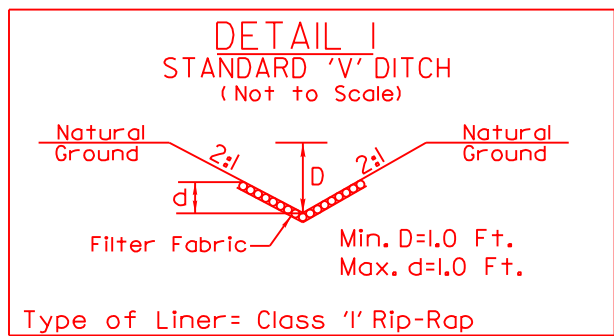
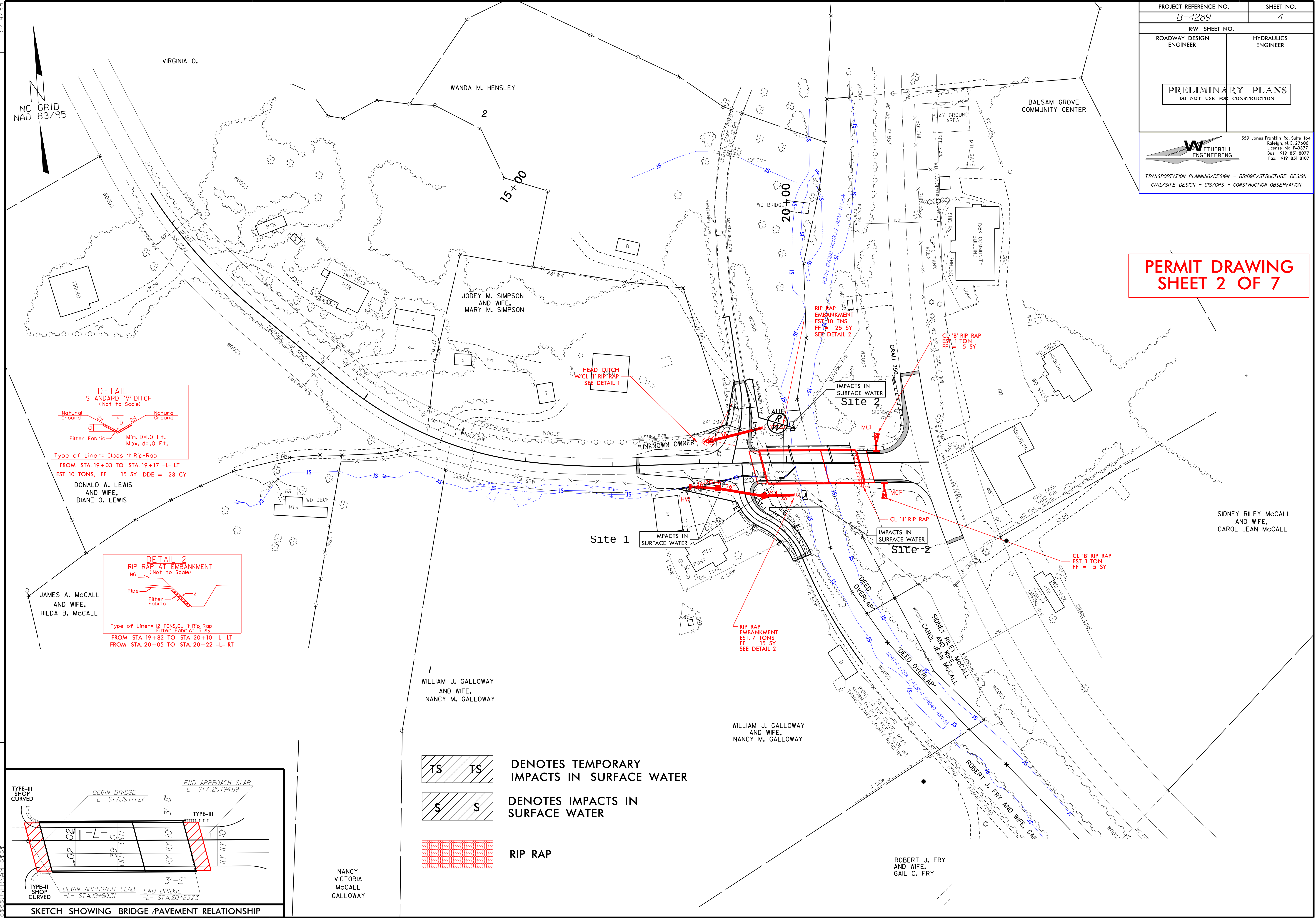


P.E.

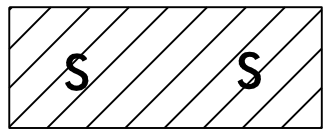
STATE HIGHWAY DESIGN ENGINEER

PROJECT REFERENCE NO.		SHEET NO.	
B-4289		4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
		559 Jones Franklin Rd. Suite 164 Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107	
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION			

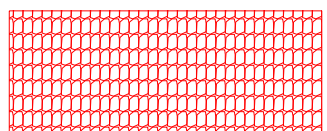
PERMIT DRAWING
SHEET 2 OF 7



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



DENOTES IMPACTS IN
SURFACE WATER



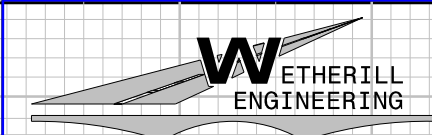
RIP RAP

5/14/99

DATE OF SURVEY = 7/18/2003

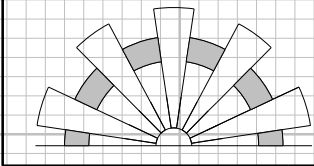
W.S.ELEVATION AT DATE OF SURVEY = 2820.2 FT

BM #1
-BL- STA.6+90.32,ELEV.2877.67'
31.69' RT.,8" SPIKE IN BASE OF 12"
POPLAR TREE
=-L- STA.14+60.46 31.09' RT.



559 Jones Franklin Rd. Suite 164
Raleigh, N.C. 27606
License No. F-0377
Bus.: 919.851.8077
Fax: 919.851.8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION



915 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 859-2243 FAX (919) 859-6258
License No. C-0890

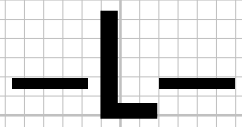
PROJECT REFERENCE NO.
B-4289

ROADWAY DESIGN ENGINEER

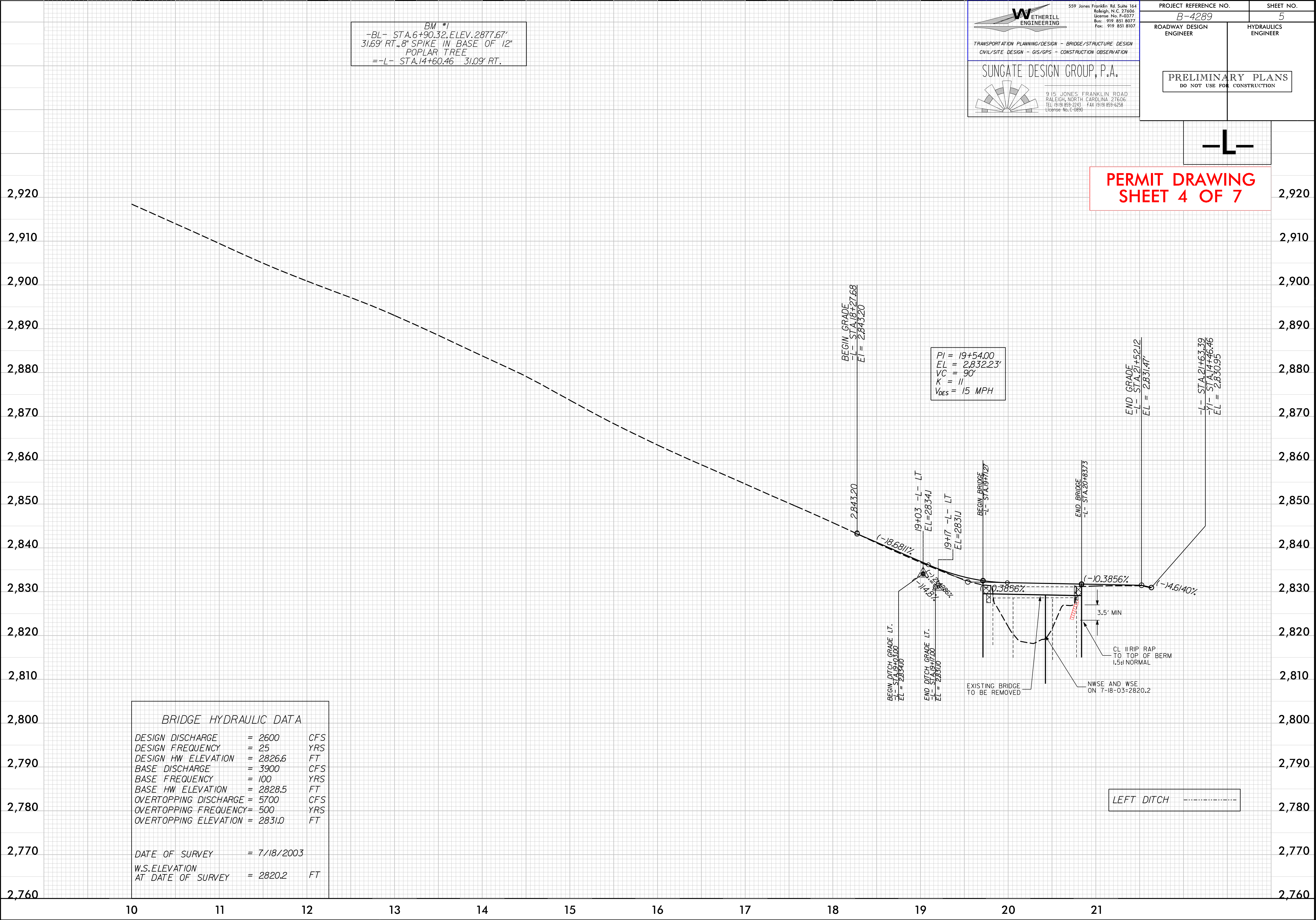
SHEET NO.
5

HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

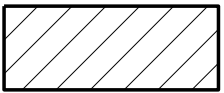
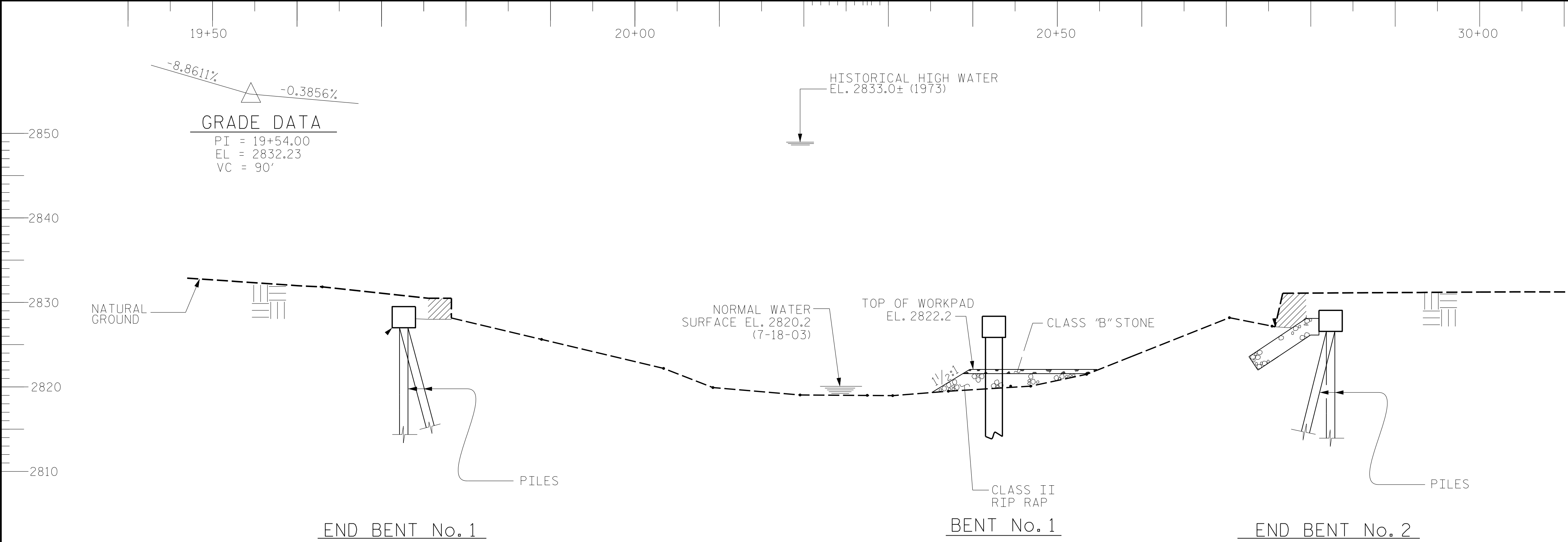


PERMIT DRAWING
SHEET 4 OF 7

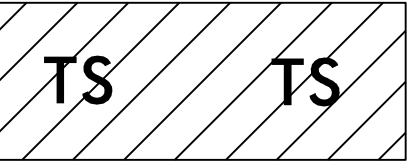


LEFT DITCH

PERMIT DRAWING
SHEET 5 OF 7

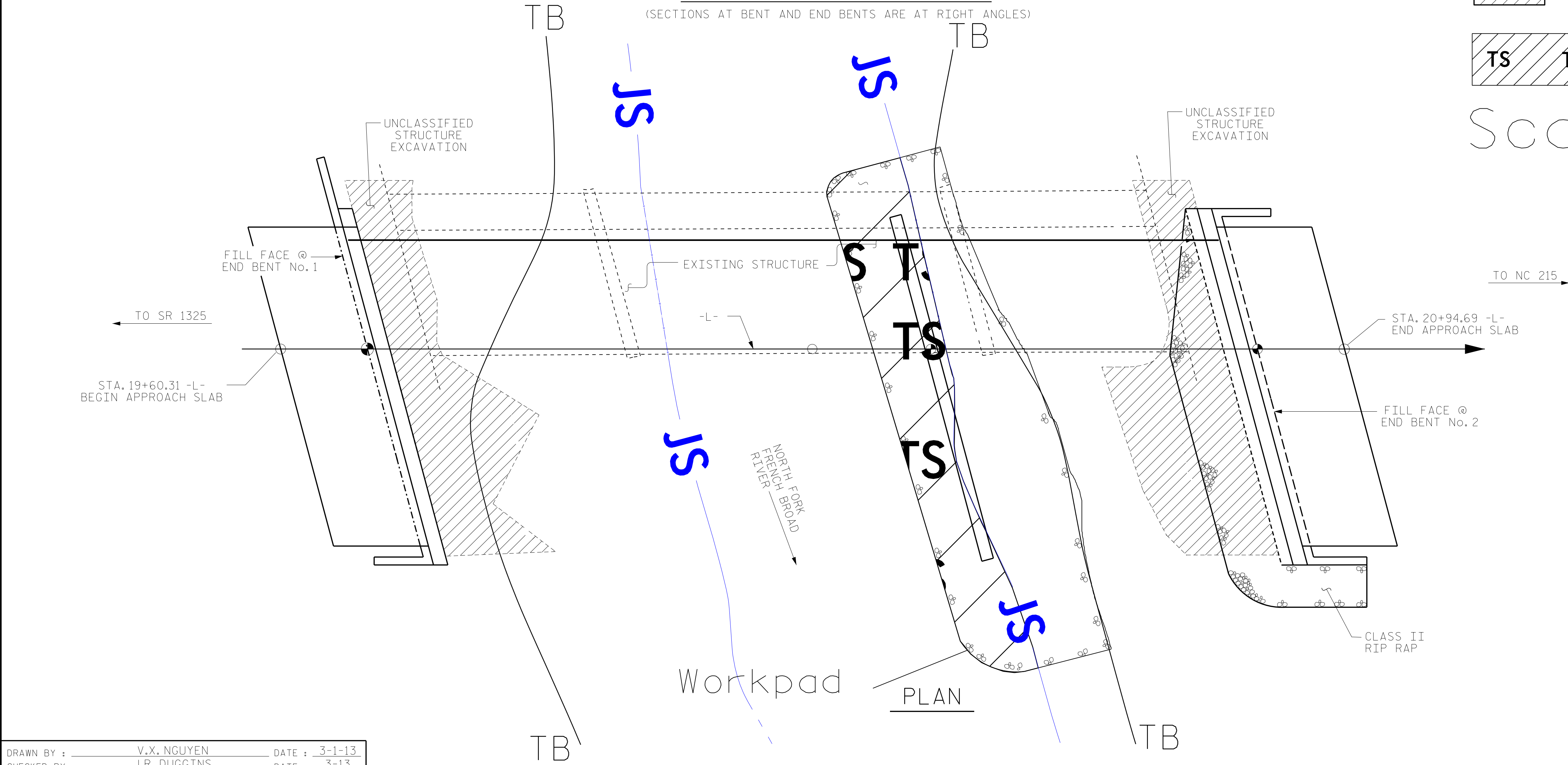


UNCLASSIFIED STRUCTURE EXCAVATION



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

Scale: 1" = 20'



DRAWN BY : V.X. NGUYEN DATE : 3-1-13
CHECKED BY : J.R. DUGGINS DATE : 3-13

*****SYSTEM*****
*****\$DCN*****
*****\$USER*****

PROJECT NO. B-4289
TRANSYLVANIA COUNTY
STATION: 20+27.50 -L-

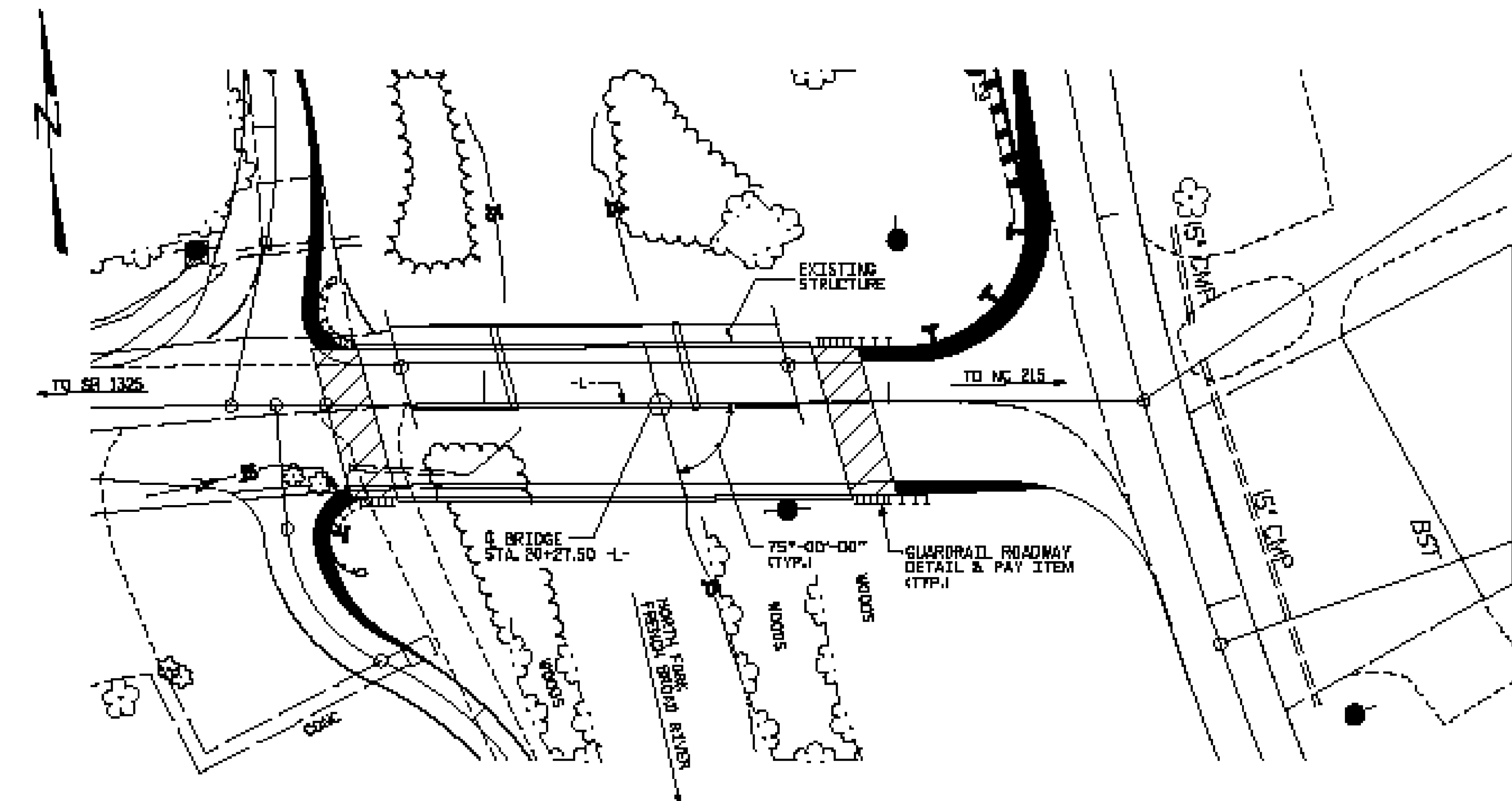
REPLACES BRIDGE No. 93

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON SR 1324
OVER NORTH FORK FRENCH
BROAD RIVER
BETWEEN SR 1325 AND NC 215

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			

B.M. 71 : 8" SPIKE IN BASE OF 12" POPLAR TREE, STA. 14+60.46 -L-, 31.09 FT. RIGHT, EL. 2877.67, NAVD 88



FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

LOCATION SKETCH

NOTES

ASSUMED LIVE LOAD = HL 93 OR ALTERNATE LOADING.
THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.

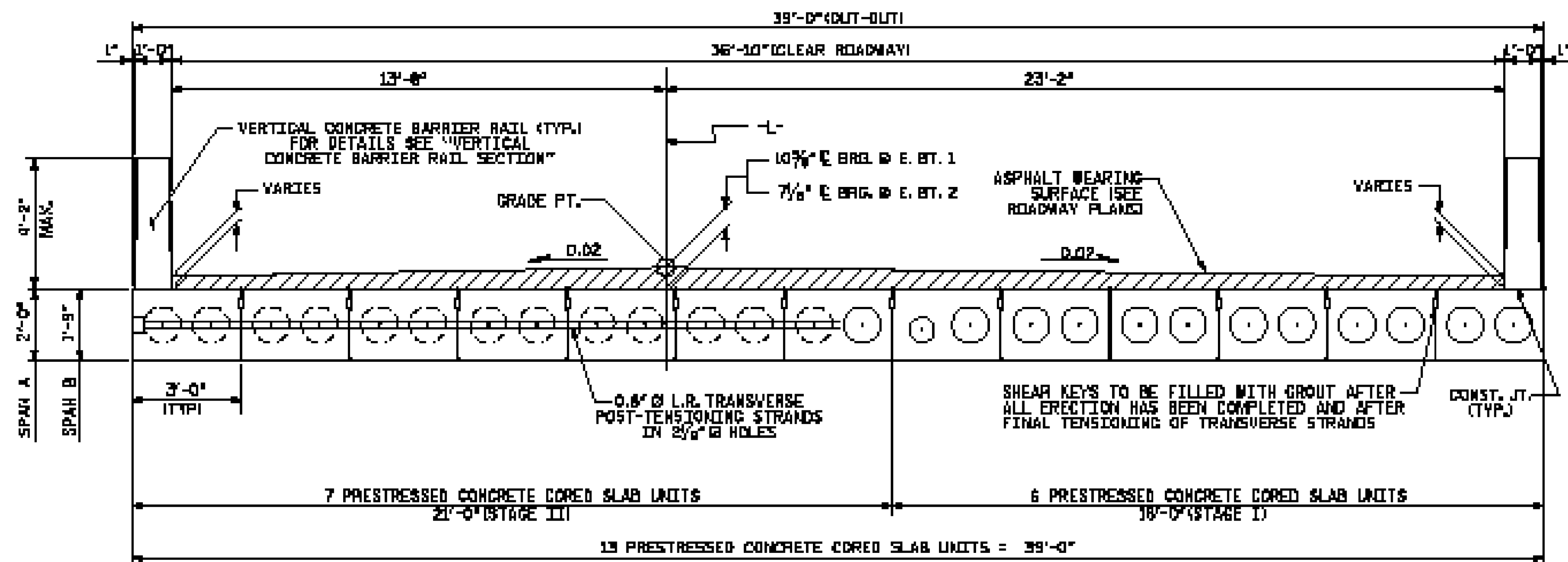
PERMIT DRAWING
SHEET 6 OF 7

HYDRAULIC DATA

DESIGN DISCHARGE..... 2600 CFS.
FREQUENCY OF DESIGN FLOOD..... 25 YR.
DESIGN HIGH WATER ELEVATION..... 2825.6
DRAINAGE AREA..... 13.84 SQ. MI.
BASIC DISCHARGE..... 3900 CFS.
BASIC HIGH WATER ELEVATION..... 2828.5

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE..... 7500 CFS.
FREQUENCY OF OVERTOPPING FLOOD..... 500 YRS.
OVERTOPPING FLOOD ELEVATION..... 2830.0



TYPICAL SECTION

PROJECT NO. B-4289
TRANSYLVANIA COUNTY
STATION: 20+40.00 -L-

SHEET 2 OF 2

DEPARTMENT OF TRANSPORTATION
BUREAU

PRELIMINARY
GENERAL DRAWING
FOR BRIDGE ON SR 1324
OVER NORTH FORK FRENCH
BROAD RIVER
BETWEEN SR 1325 AND NC 215

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			2			2
2			3			2

DRAWN BY : V.Z. NGUYEN DATE : 3-5-13
CHECKED BY : J.R. DUGGINS DATE : 3-13

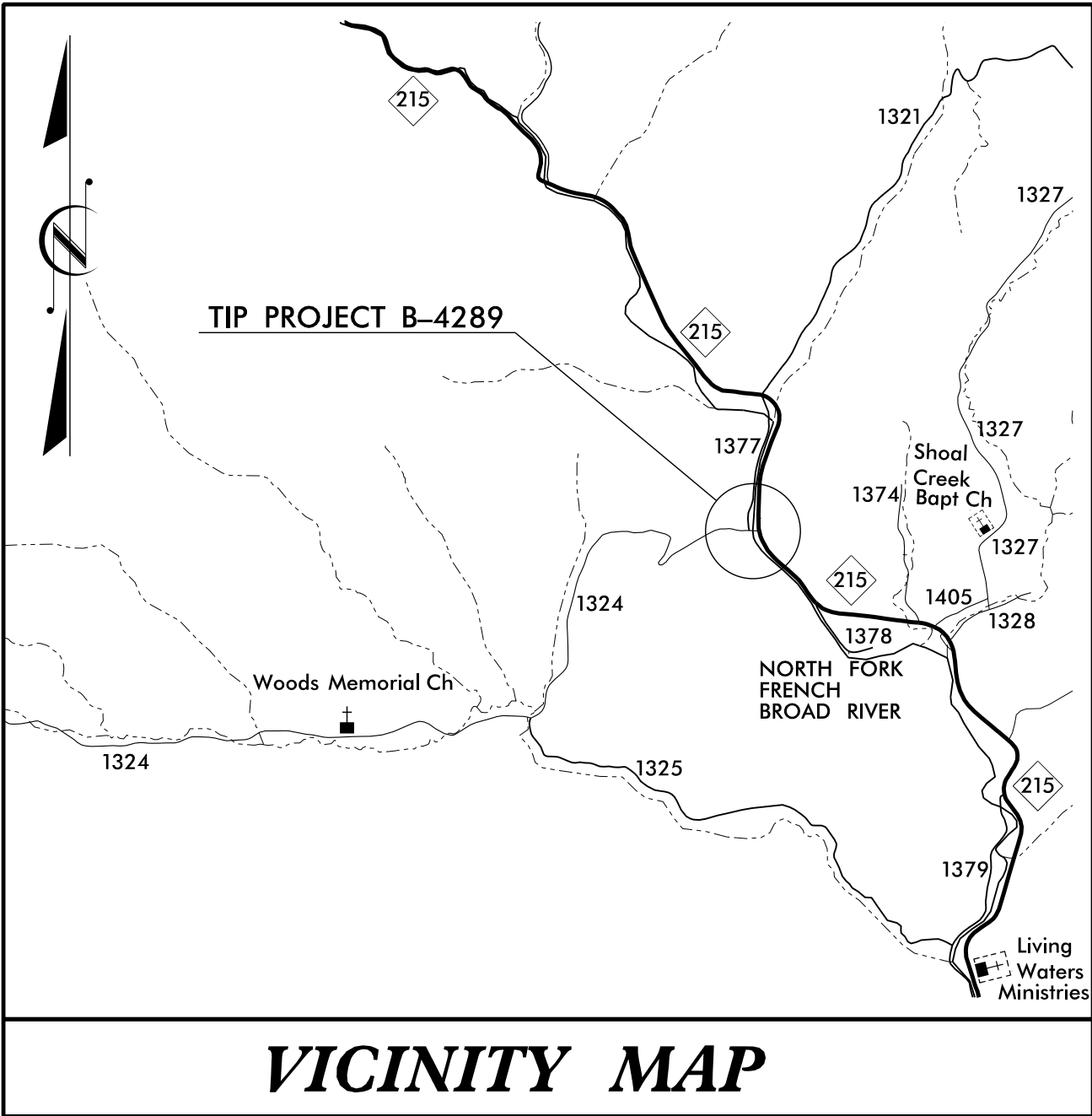
WETLAND PERMIT IMPACT SUMMARY												
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	18+15 - 20+10 -L- RT	Road Fill						0.01		95		
2	20+03 -L- LT	Streambank Stabil								10		
2	20+21 -L- RT	Streambank Stabil								10		
2	20+32 -L-	Workpad							0.01		68	
TOTALS:								0.01	0.01	115	68	

Permanent impact of 40 sq ft for the bent columns

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4289	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33628.1.1	BRZ-1324(2)	PE	
33628.2.1	BRZ-1324(2)	UTIL. & RW	
33628.3.1	BRZ-1324(2)	CONST.	

TIP PROJECT: B-4289

CONTRACT: C202817

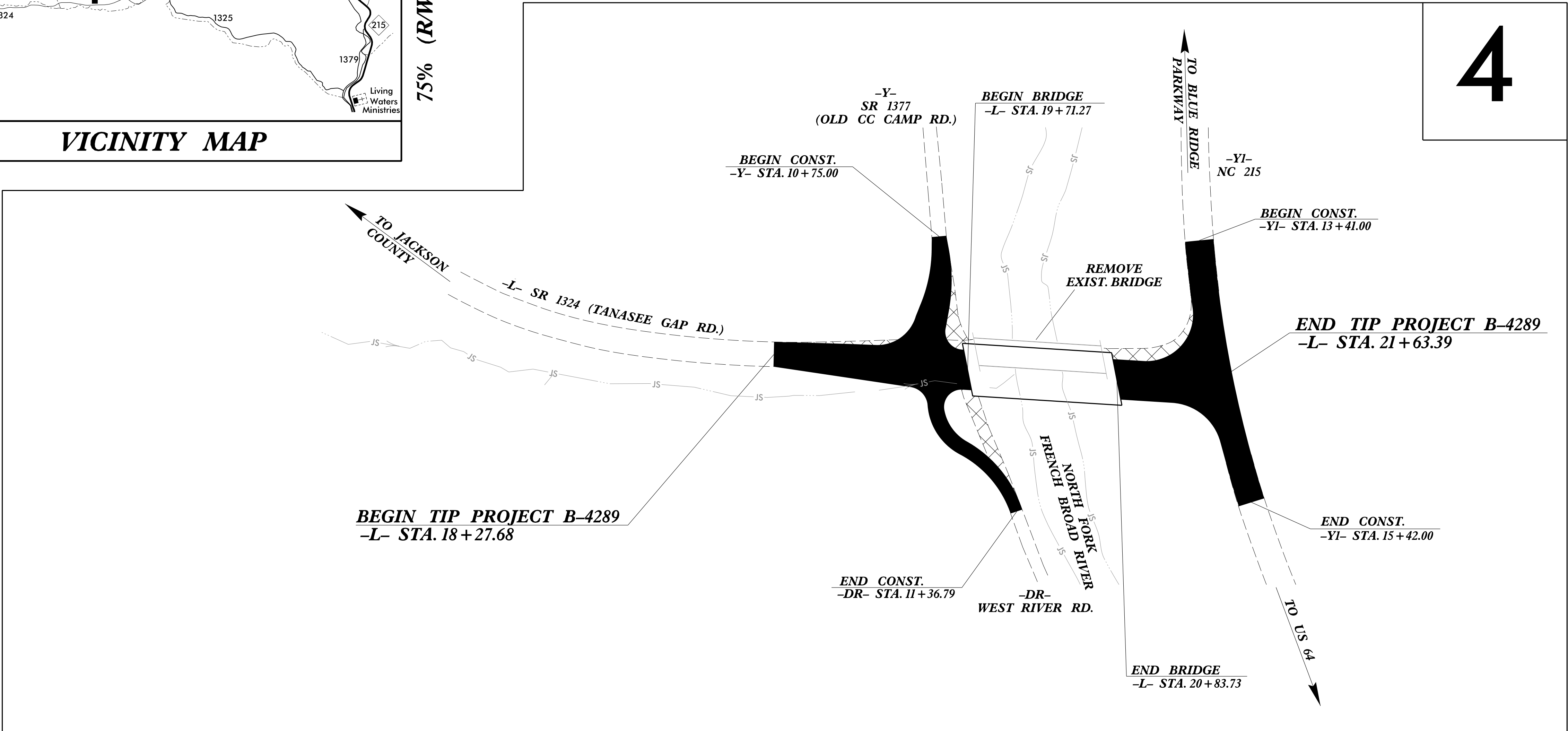


75% (RW) PLAN SUBMITTAL

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
TRANSYLVANIA COUNTY

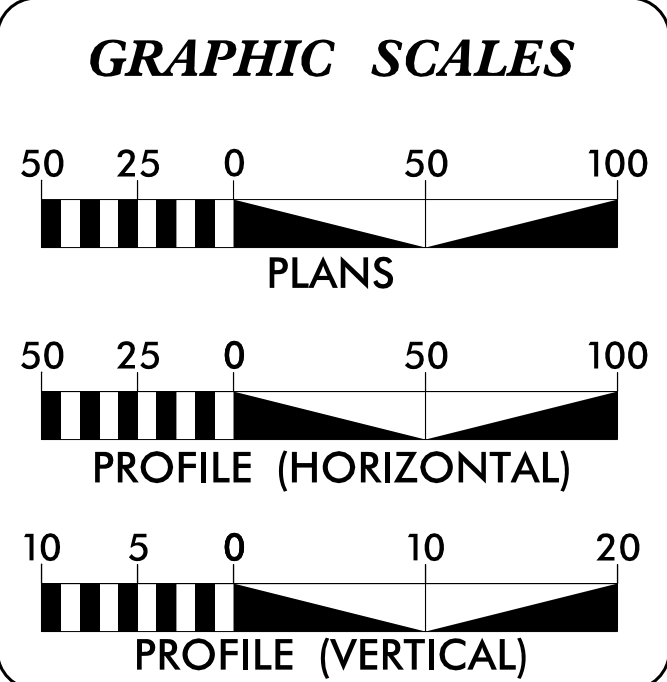
LOCATION: **BRIDGE NO. 93 OVER NORTH FORK FRENCH BROAD RIVER ON SR 1324 (TANASEE GAP RD.)**

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



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



DESIGN DATA

ADT 2013 = 765
ADT 2035 = 1100
DHV = 12 %
D = 70 %
T = 7 % *
V = 45 MPH
* (TTST 2% + DUAL 5%)

CLASSIFICATION = RURAL LOCAL
SUBREGIONAL TIER DESIGN

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4289 = 0.043 MILES
LENGTH STRUCTURE TIP PROJECT B-4289 = 0.021 MILES
TOTAL LENGTH TIP PROJECT B-4289 = 0.064 MILES

SUNGATE DESIGN GROUP, P.A.

915 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 859-2243 FAX (919) 859-6258
License No. C-0890

WETHERILL ENGINEERING

Prepared for the North Carolina Department of Transportation in the Office of:
559 JONES FRANKLIN ROAD
SUITE 104
RALEIGH, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8007

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MARCH 16, 2011

LETTING DATE:
NOVEMBER 19, 2013

NCDOT CONTACT:

EDWARD G. WETHERILL, PE
PROJECT ENGINEER

BOB A. MAY, PE
PROJECT DESIGN ENGINEER

BRENDA L. MOORE, PE
ROADWAY DESIGN ENGINEERING
COORDINATION SECTION PROJECT ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

STATE HIGHWAY DESIGN ENGINEER

Note: Not to Scale

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	
County Line	
Township Line	
City Line	
Reservation Line	
Property Line	
Existing Iron Pin	
Property Corner	
Property Monument	
Parcel/Sequence Number	
Existing Fence Line	
Proposed Woven Wire Fence	
Proposed Chain Link Fence	
Proposed Barbed Wire Fence	
Existing Wetland Boundary	
Proposed Wetland Boundary	
Existing Endangered Animal Boundary	
Existing Endangered Plant Boundary	
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	
Buffer Zone 1	
Buffer Zone 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 RW Marker	
Proposed Control of Access Line with Concrete CA Marker	
Existing Control of Access	
Proposed Control of Access	
Existing Easement Line	
Proposed Temporary Construction Easement	
Proposed Temporary Drainage Easement	
Proposed Permanent Drainage Easement	
Proposed Permanent Drainage / Utility Easement	
Proposed Permanent Utility Easement	
Proposed Temporary Utility Easement	
Proposed Aerial Utility Easement	

Proposed Permanent Easement with Iron Pin and Cap Marker	
--	--

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	
Existing Curb	
Proposed Slope Stakes Cut	
Proposed Slope Stakes Fill	
Proposed Curb Ramp	
Existing Metal Guardrail	
Proposed Guardrail	
Existing Cable Guiderail	
Proposed Cable Guiderail	
Equality Symbol	
Pavement Removal	
Single Tree	
Single Shrub	
Hedge	
Woods Line	

VEGETATION:

Orchard	
Vineyard	

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	
Bridge Wing Wall, Head Wall and End Wall	
MINOR:	
Head and End Wall	
Pipe Culvert	
Footbridge	
Drainage Box: Catch Basin, DI or JB	
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:

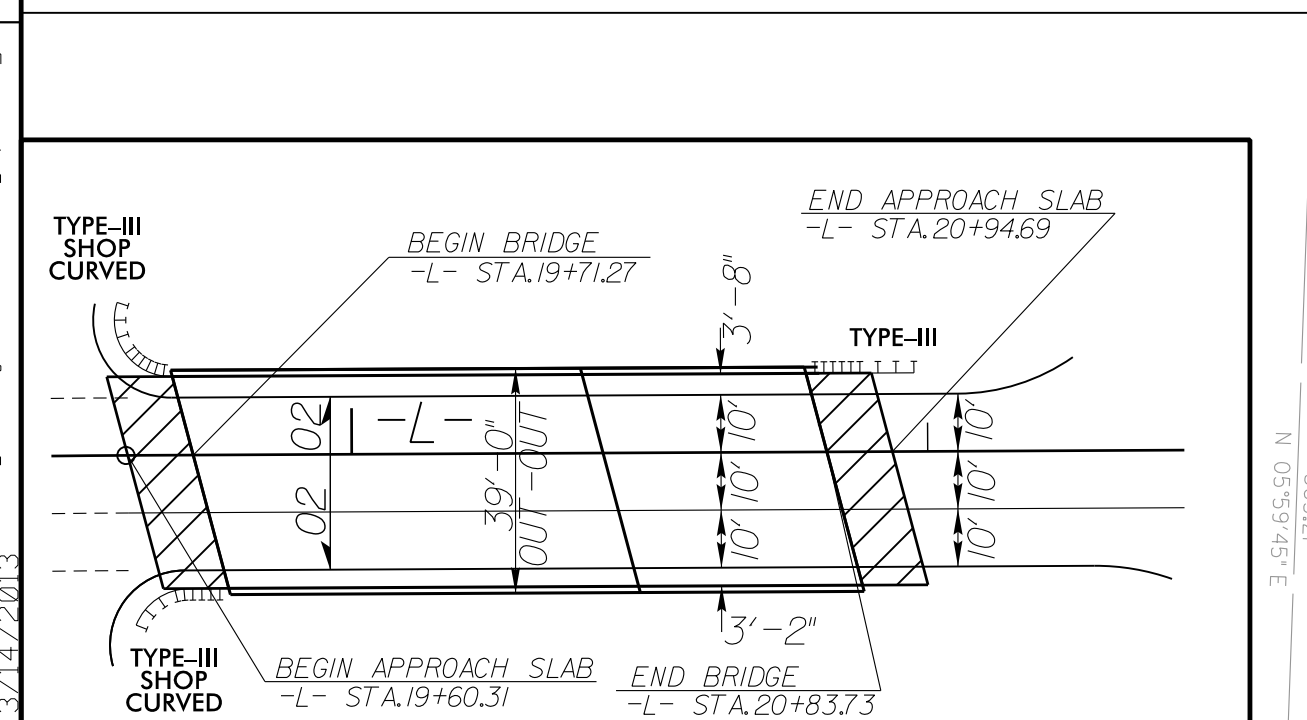
Utility Pole	
Utility Pole with Base	
Utility Located Object	
Utility Traffic Signal Box	
Utility Unknown U/G Line	
U/G Tank; Water, Gas, Oil	
Underground Storage Tank, Approx. Loc.	
A/G Tank; Water, Gas, Oil	
Geoenvironmental Boring	
U/G Test Hole (S.U.E.*)	
Abandoned According to Utility Records	
End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

ONES FRANKLIN ROAD
I, NORTH CAROLINA 27606
859-2243 FAX (919) 859-6258
No. C-0890

PI Sta 19+51.40
 $\Delta = 18^{\circ} 08' 03.8''$ (LT)
 $D = 5^{\circ} 08' 52.3''$
 $L = 352.27'$
 $T = 177.62'$
 $R = 1113.00'$

TIP PROJECT B-4289
 POT Sta. 21+63.39
 POC Sta. 14+46.46

SEE SHEET S-1 THRU S- FOR STRUCTURE PLANS



REVISIONS

9:28:45 AM
p:\2009\B-4289\Roadway\Proj\B4289_Rdy_psh.dgn