STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

July 8, 2011

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

ATTN: Ms. Sarah Elizabeth Hair
NCDOT Coordinator

Dear Madam:

Subject: **Application for Section 404 Nationwide 23, 33, and 13 Permits and Section 401 Water Quality Certification** for the proposed replacement of Bridge No. 184 over Waxhaw Creek on SR 1113 (Davis Road) in Union County, Federal Aid Project No. BRZ-1113(3); Division 10; TIP No. B-4294; WBS 33632.1.1.

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 184 over Waxhaw Creek on SR 1113. There will be 0.02 acre of mechanized clearing of wetlands, less than 0.01 acre (or 20 feet) of temporary surface water impacts, and 10 feet of bank stabilization impacts.

Please see enclosed copies of the Pre-Construction Notification (PCN), permit drawings, stormwater management plan, design plans, Rapanos Forms, EEP acceptance letter, and previous Jurisdictional Determination for the above referenced project. The Biological Opinion for this project will be submitted under separate cover once the document is received. The Programmatic Categorical Exclusion (PCE) was completed in June 2007. Documents were distributed shortly thereafter. Additional copies are available upon request.

This project calls for a letting date of November 15, 2011 and a review date of September 27, 2011.

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

TELEPHONE: 919-431-2000
FAX: 919-431-2002
WEBSITE: WWW.NCDOT.ORG

LOCATION:
4701 ATLANTIC AVENUE
SUITE 116
RALEIGH NC 27604

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 Michael Turchy at maturchy@ncdot.gov or (919) 707-6157.

Sincerely,

E. L. Lusk

for Gregory J. Thorpe, Ph.D.
Environmental Management Director, PDEA

"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 No. 184 over Waxhaw Creek on SR 1113.
2b. County:	Union
2c. Nearest municipality / town:	Waxhaw
2d. Subdivision name:	not applicable
2e. NCDOT only, T.I.P. or state project no:	B-4294

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:	1 South Wilmington Street
3e. City, state, zip:	Raleigh, NC 27601
3f. Telephone no.:	(919) 431-6696
3g. Fax no.:	(919) 431-2002
3h. Email address:	maturchy@ncdot.gov

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

B. Project Information and Prior Project History		
1. Property Identification		
1a. Property identification no. (tax PIN or parcel ID):	not applicable	
1b. Site coordinates (in decimal degrees):	Latitude: 34.857260 (DD.DDDDDD)	Longitude: - 80.746090 (-DD.DDDDDD)
1c. Property size:	3 acres	
2. Surface Waters		
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Waxhaw	
2b. Water Quality Classification of nearest receiving water:	C	
2c. River basin:	Catawba	
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: Forested & Rural low density residentail		
3b. List the total estimated acreage of all existing wetlands on the property: 0.43		
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 720		
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: Replacement of bridge number 184, a two span, 71' structure, with a single span 100' structure, over Waxhaw Creek on SR 1113 (Davis Road). Cranes, backhoes, excavators 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): Lund, Steven	Agency/Consultant Company: HDR Other:	
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation. March 25, 2003. JD Expired in 2008, therefore the NCDOT is requesting for a "final approved" JD.		
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)
W1 ☒ P ☐ T	Fill	Riparian	☒ Yes ☐ No	☒ Corps ☐ DWQ	0.02
W2 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
W3 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
W4 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
W5 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
				2g. **Total wetland impacts**	0.02 mechanized clearing

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)
S1 ☒ P ☐ T	Bank Stabilization	Waxhaw Creek	☒ PER ☐ INT	☒ Corps ☐ DWQ	35	10
S2 ☐ P ☒ T	Temporary Fill	Waxhaw Creek	☒ PER ☐ INT	☒ Corps ☐ DWQ	35	20
S3 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
S4 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
					3h. **Total stream and tributary impacts**	10' linear, permanent impact 20 feet (<0.01) acre of temporary impact

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	

4g. Comments:

5. Pond or Lake Construction

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

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

5g. Comments:

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

6. Buffer Impacts (for DWQ)

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

6a. Project is in which protected basin?	☐ Neuse ☐ Catawba	☐ Tar-Pamlico ☐ Randleman	☐ Other:

6b. Buffer impact number – Permanent (P) or Temporary (T)	6c. Reason for impact	6d. Stream name	6e. Buffer mitigation required?	6f. Zone 1 impact (square feet)	6g. Zone 2 impact (square feet)
B1 ☐ P ☐ T			☐ 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. The bridge will be a single span that will completely span Waxhaw Creek.		
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. A pre-formed scour hole was used to diffuse stormwater flow.		
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	
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:	0 linear feet The NCDOT does not propose mitigation for stream bank stabilization activities. Stabilizing the bank of a stream does not require fill in the stream bed and, therefore, under Section 404 of the Clean Water Act, does not constitute Loss of Waters of the U.S. and is not subject to compensatory mitigation. Furthermore, the proposed bank stabilization activities are necessary to prevent erosion and sedimentation, i.e. preventing bank destabilization and minimizing impacts to the environment.	
4c. If using stream mitigation, stream temperature:	☐ warm ☐ cool ☐ cold	
4d. Buffer mitigation requested (DWQ only):	n/a square feet	
4e. Riparian wetland mitigation requested:	0.02 acre @ 2:1= 0.04 acre	
4f. Non-riparian wetland mitigation requested:	0 acres	
4g. Coastal (tidal) wetland mitigation requested:	0 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).

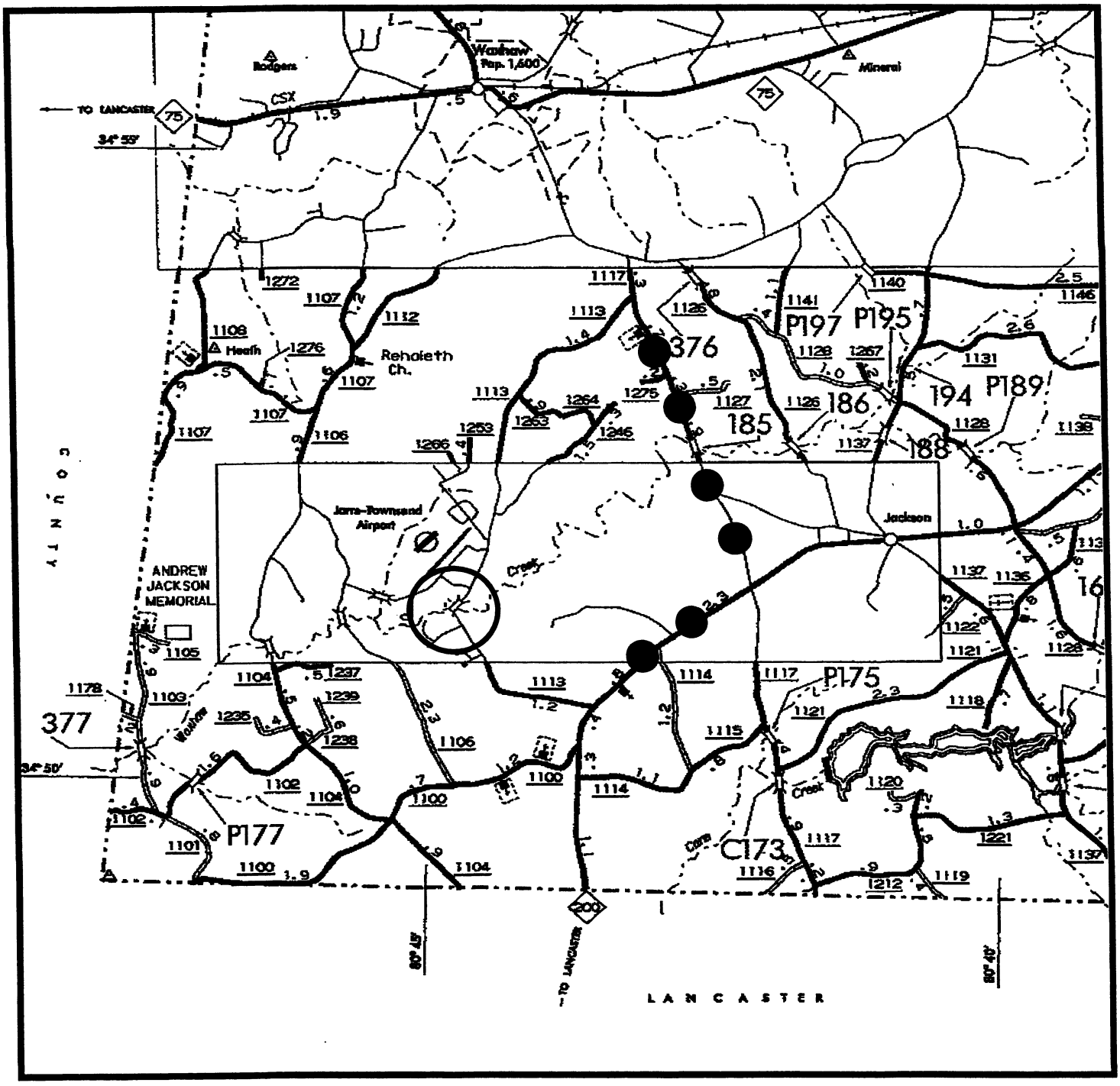
6h. Comments:

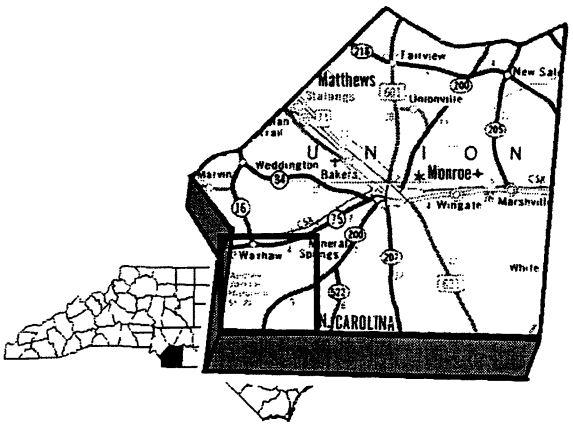
E. Stormwater Management and Diffuse Flow Plan (required by DWQ)	
1. Diffuse Flow Plan	
1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?	☐ Yes ☒ No
1b. If yes, then is a diffuse flow plan included? If no, explain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

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

5. Endangered Species and Designated Critical Habitat (Corps Requirement)		
5a. Will this project occur in or near an area with federally protected species or habitat?	☒ Yes	☐ No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	☒ Yes	☐ No
5c. If yes, 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? A BA/ BO is required for this project due to the Critical Area designation for the Carolina Heelsplitter by the USFWS. The remaining species include Michaux's sumac and Schweinitz's sunflower which were last surveyed for in 2009 and received a biological conclusion of No Effect.		
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?		
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?		
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 coordination with FEMA		
8c. What source(s) did you use to make the floodplain determination? FEMA Maps		

Gregory J. Thorpe, PhD Applicant/Agent's Printed Name	E. L. Lusk for – Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	July 5, 2011 Date





Studied offsite Detour

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS BRANCH

UNION COUNTY
REPLACE BRIDGE NO. 184 ON SR 1113
OVER WAXHAW CREEK
B-4294

Figure 1

Permit Drawing
Sheet 1 of 9

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
3	ARTHUR & LOUISE WYSE	6717 DAVIS RD. WAXHAW, NC 28173
5	WYCLIFFE BIBLE TRANSLATORS, INC.	WYCLIFFE–JAARS CENTER WAXHAW, NC 28106

Permit Drawing
Sheet 2 of 9

NCDOT

DIVISION OF HIGHWAYS

UNION COUNTY

PROJECT: 33632.1.1 (B-4294)

BRG. # 184 OVER

WAXHAW CREEK AND

APPROACHES ON SR 1113

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)
1	18+15 to 18+65 -L- RT.	Bank Stabilization						<0.01		10		
	18+53 -L-	Abut Removal							<0.01		20	
	19+65 to 20+42 -L- RT.		<0.01			0.02						
TOTALS:						0.02				10	20	

Temporary causeway is not required to construct proposed bridge or remove existing bridge/piers.

Proposed bridge is single span (no piers).

Permit Drawing Sheet 3 of 9

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

UNION COUNTY
WBS - 33632.1.1 (B-4294)

SHEET 12/09/10

ATN Revised 3/31/05

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4294	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
33632.1.1	BRZ-1113(3)	P.E.

See Sheet 1-A For Index of Sheets

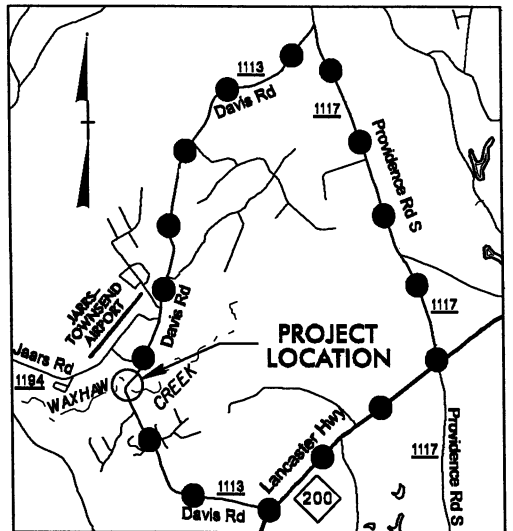
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UNION COUNTY

LOCATION: BRIDGE NO. 184 OVER WAXHAW CREEK AND APPROACHES ON SR 1113 (DAVIS ROAD)

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

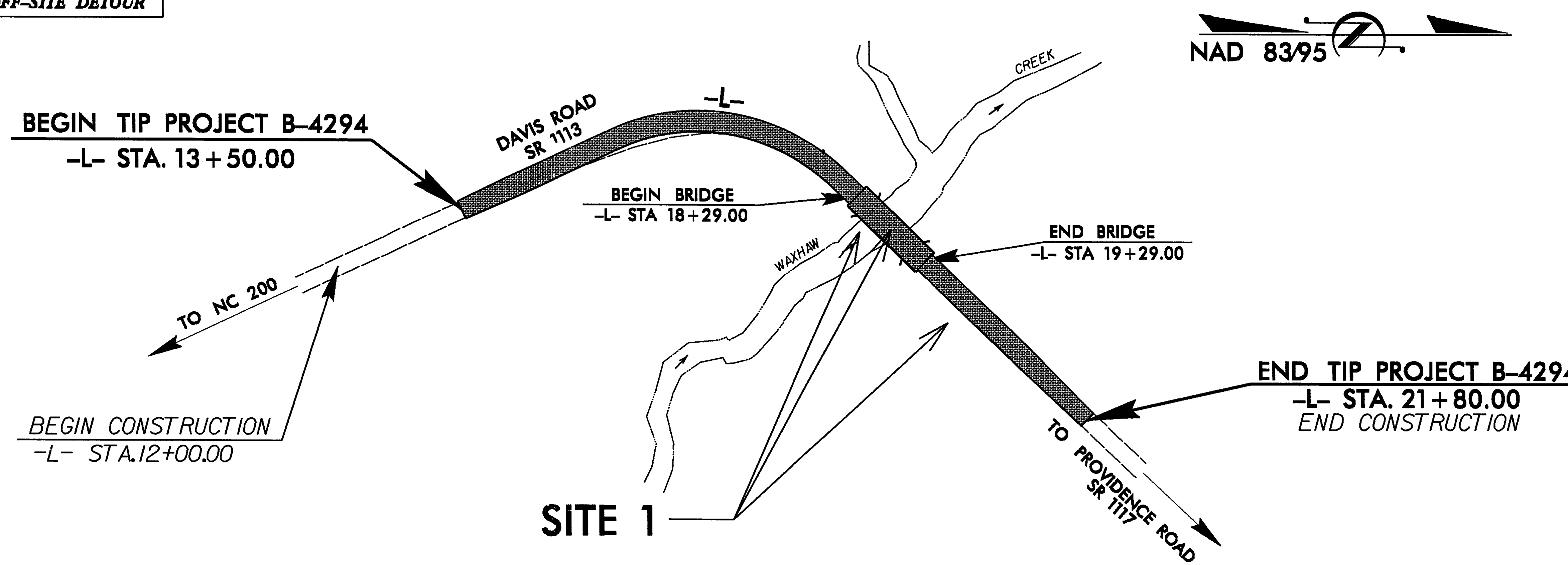
Permit Drawing
Sheet 4 of 9



VICINITY MAP

—●—●— = OFF-SITE DETOUR

WETLAND/STREAM IMPACTS



** DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

50 25 0 50 100 — PLANS

50 25 0 50 100 — PROFILE (HORIZONTAL)

10 5 0 10 20 — PROFILE (VERTICAL)

DESIGN DATA

ADT 2008 = 1,790
ADT 2025 = 2,600
DHV = 10 %
D = 60 %
T = 4 %*
**V = 30 MPH
* (TTST 1% + DUAL 3%)
FUNC CLASS = LOCAL

PROJECT LENGTH

LENGTH ROADWAY TIP PROJ. B-4294 = 0.138 mile
LENGTH STRUCTURE TIP PROJ. B-4294 = 0.019 mile
TOTAL LENGTH OF TIP PROJ. B-4294 = 0.157 mile

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: NOT AUTHORIZED

LETTING DATE: NOVEMBER 15, 2011

ROGER D. THOMAS, P.E. — PROJECT ENGINEER

SAMUEL L. ST. CLAIR — PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER P.E.

TIP PROJECT: B-4294

CONTRACT:

09/08/99

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

8/17/99

REVISIONS

December 9, 2010
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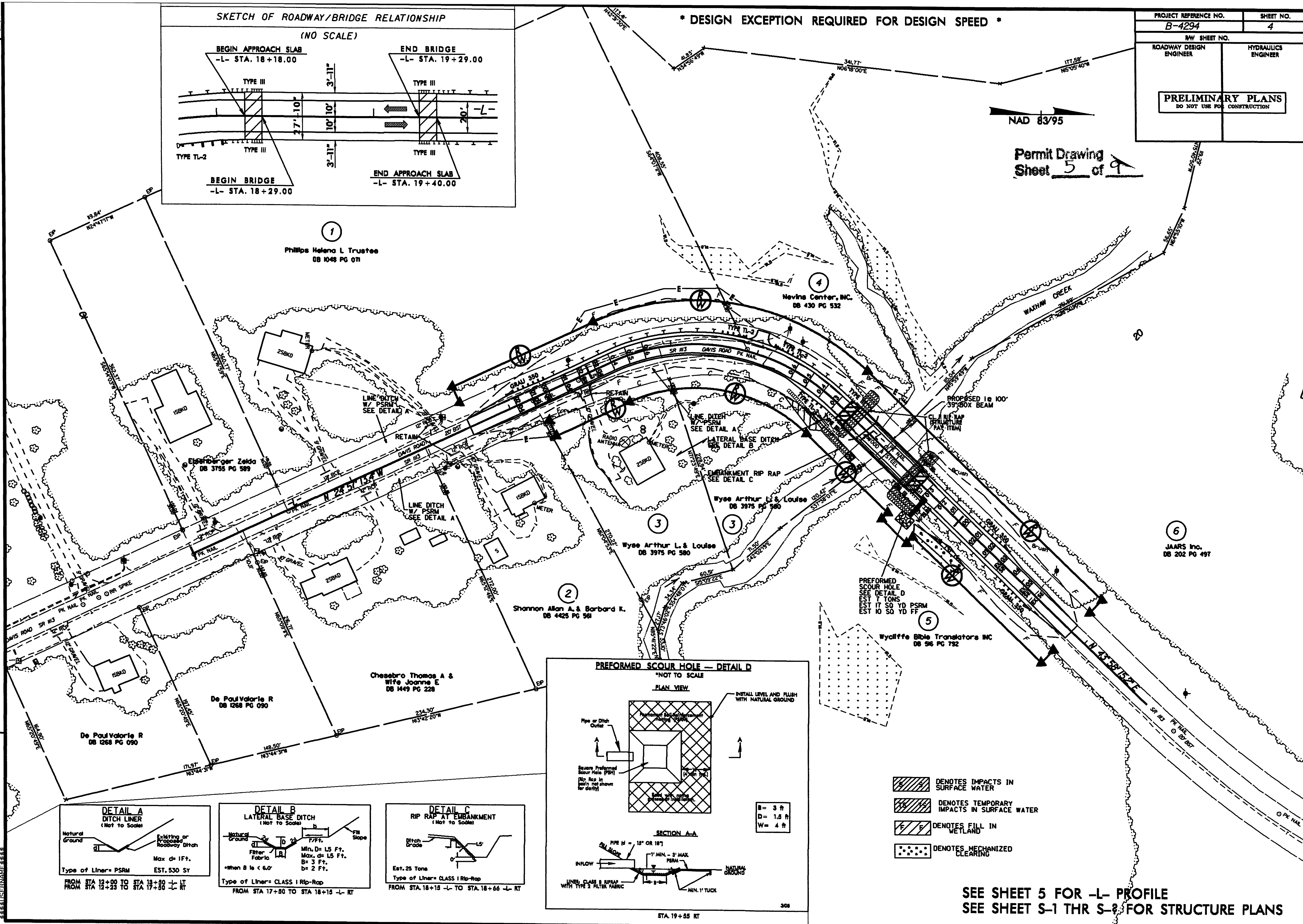
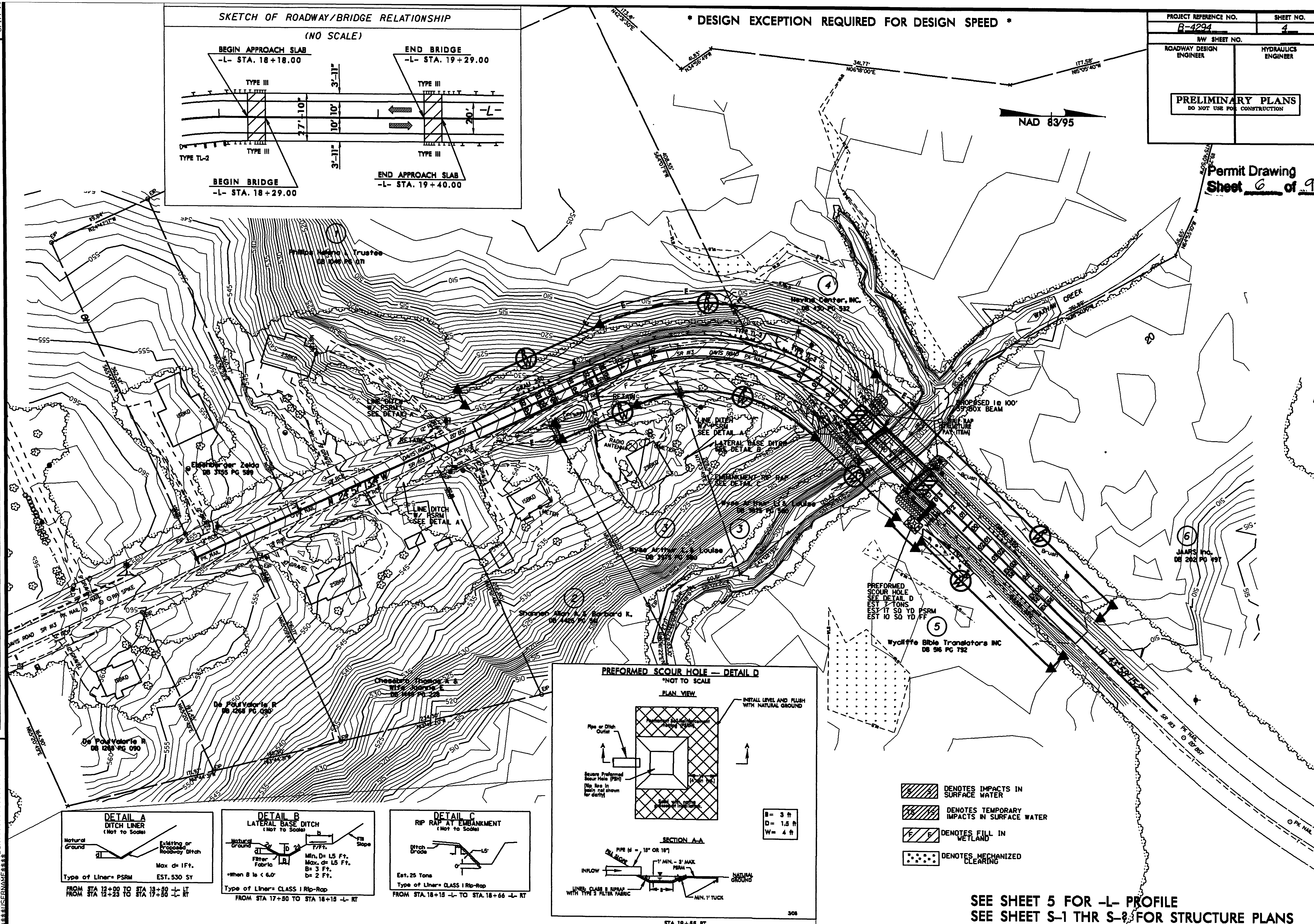
$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$





8/17/99
REVISIONS
December 9, 2010
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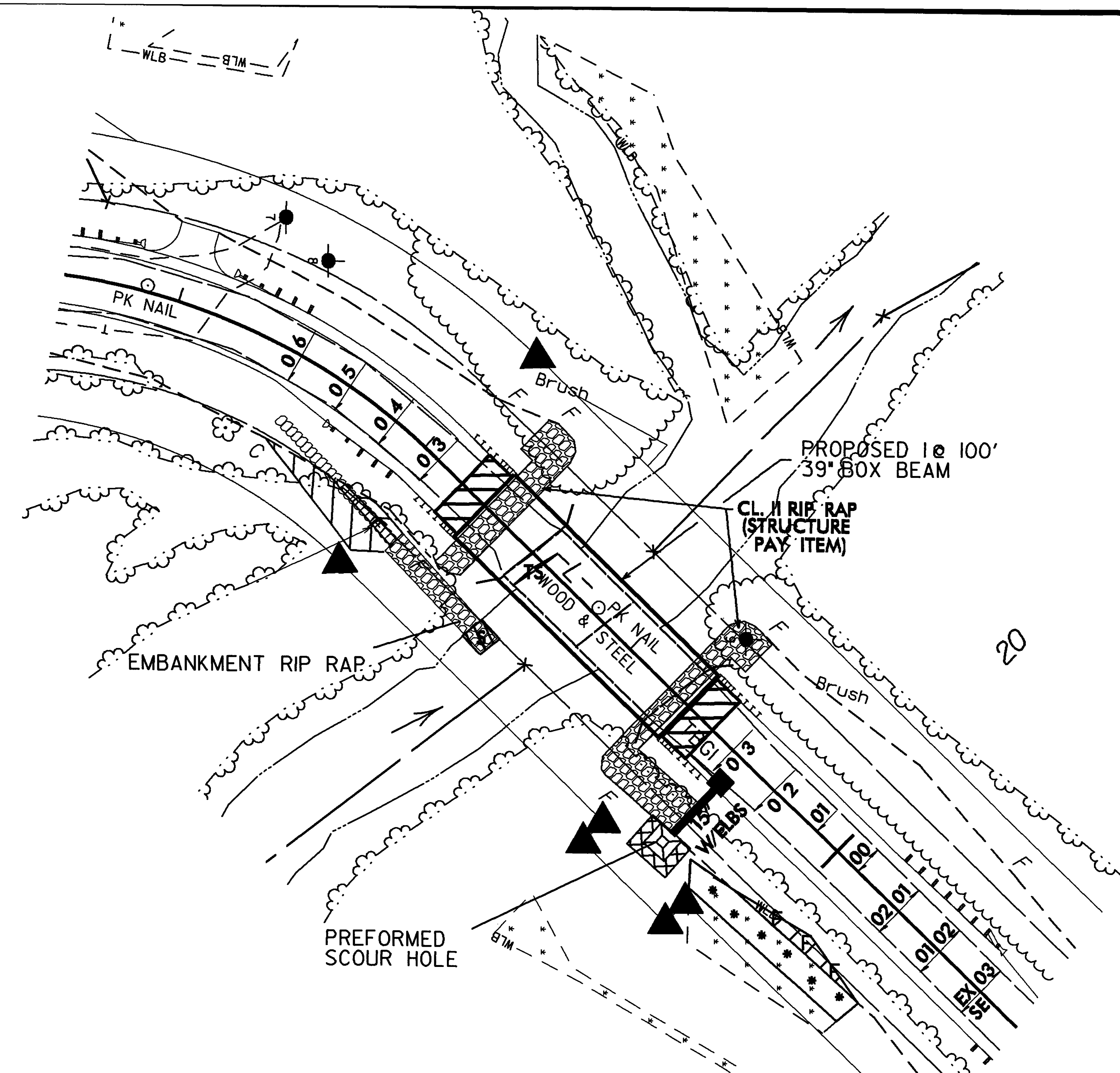
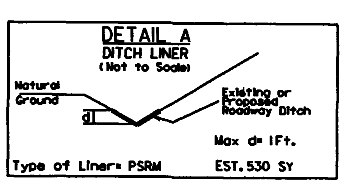
PROJECT REFERENCE NO.	SHEET NO.
B-4294	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

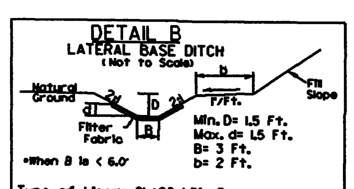
NAD 83/95

Permit Drawing
Sheet 7 of 9

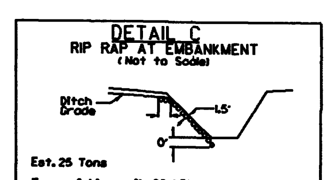




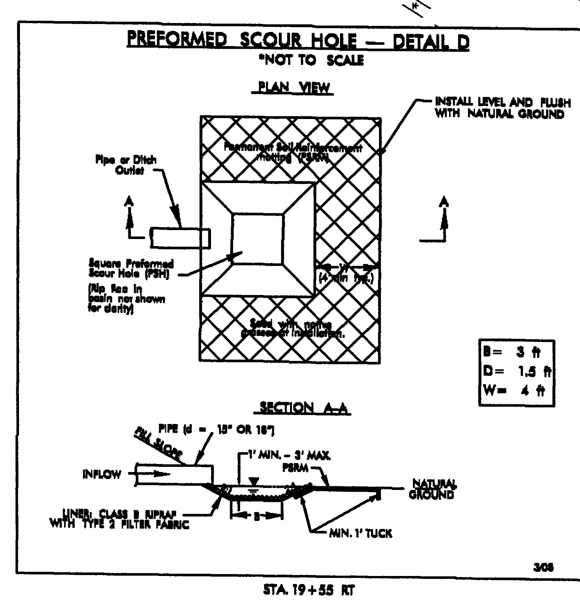
FROM STA 12+00 TO STA 13+50 -L- LT
FROM STA 12+23 TO STA 17+50 -L- RT



FROM STA 17+50 TO STA 18+15 -L- RT



FROM STA. 18+15 -L- TO STA. 18+66 -L- RT



STA. 19+55 RT

50' 0' 50' 100' 150'
GRAPHIC SCALE

DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

8/17/99

REVISIONS

December 9, 2010
R:\Hydraulics\PERMITS_Environmental\Drawings\B4294_Hyd_prm_wet.dgn

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

PROJECT REFERENCE NO.	SHEET NO.
B-4294	5

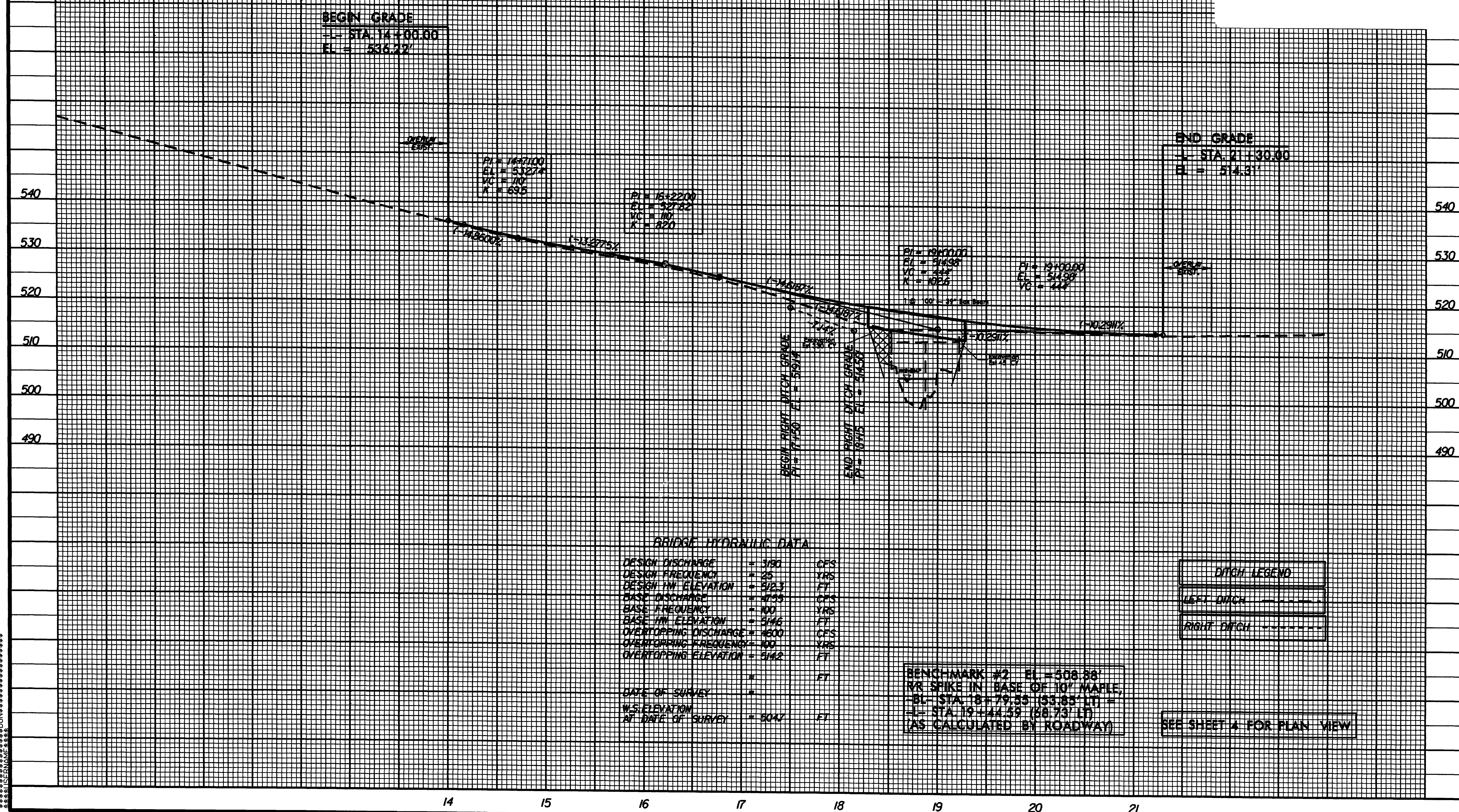
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 8 of 9

* DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED *

-L-



BRIDGE HYDRAULIC DATA

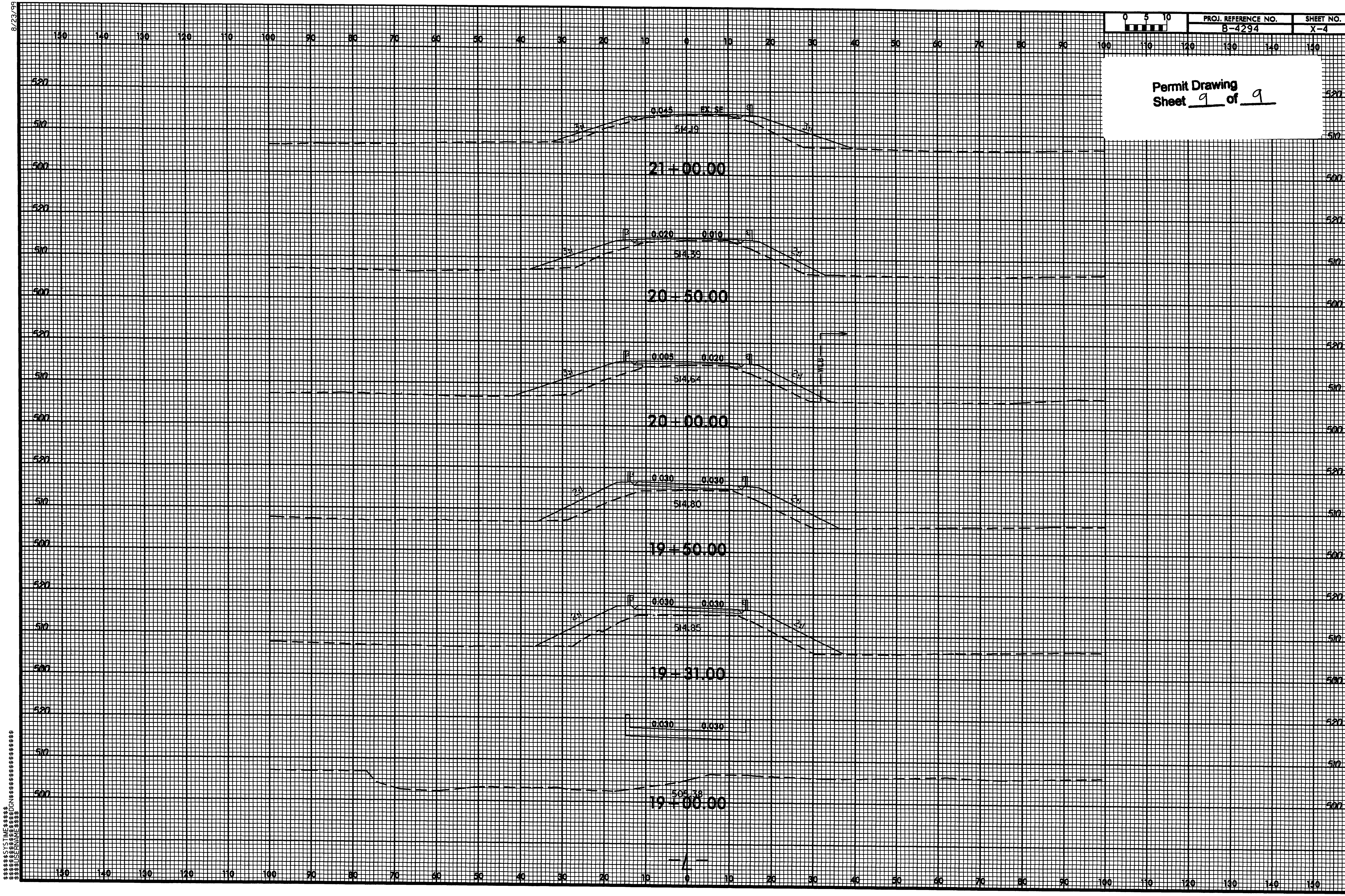
DESIGN DISCHARGE	=	3190	CFS
DESIGN FREQUENCY	=	25	YRS
DESIGN HW ELEVATION	=	512.3	FT
BASE DISCHARGE	=	4755	CFS
BASE FREQUENCY	=	100	YRS
BASE HW ELEVATION	=	514.6	FT
OVERTOPPING DISCHARGE	=	4600	CFS
OVERTOPPING FREQUENCY	=	100	YRS
OVERTOPPING ELEVATION	=	514.2	FT
	=		FT
DATE OF SURVEY	=		
W.S. ELEVATION AT DATE OF SURVEY	=	504.7	FT

BENCHMARK #2 EL = 508.38'
R/R SPIKE IN BASE OF 10" MAPLE,
-BL- STA. 18+79.55 (53.85' LT) =
-L- STA. 19+44.59 (68.73' LT)
(AS CALCULATED BY ROADWAY)

DITCH LEGEND	
LEFT DITCH	— - - — -
RIGHT DITCH	- - - - - - -

SEE SHEET 4 FOR PLAN VIEW

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


PROJ. REFERENCE NO.
B-4294
SHEET NO.
X-4
0 5 10
Permit Drawing
Sheet 9 of 9
0.045
EX. SE
3:1
514.19
21+00.00
0.020
0.010
514.39
20+50.00
0.005
0.020
WLB
514.64
20+00.00
0.030
0.030
2:1
514.80
19+50.00
514.85
19+31.00
505.38
19+00.00
8/23/99
$$$$$$SYSTIME$$$$$
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$$$$USERNAME$$$$

Released: July 2010 (DRAFT)

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

Version 1.1

General Project Information

Project No.:	33632.1.1 (B-4294)		**Date:**	12/10/2010		
City/Town:	Waxhaw, NC		**Designer:**	Galen Cail, PE		
County(ies):	Union County		**Project Manager:**	Galen Cail, PE		
River Basin(s):	**Catawba**		**CAMA County?**	no	**TVA County?**	no
Primary Receiving Water:	Waxhaw Creek		**NCDWQ Stream Index:**	C		
NCDWQ Surface Water Classification for Primary Receiving Water		**Primary:**	Class C			
		Supplemental:				
Other Stream Classification:						
303(d) Stream?	no	**Type(s) of Impairment:**				
State Stormwater Permit Required?	no	**If yes, why?**				
Could the Project Impact Threatened or Endangered Species?			yes			
Description:	Carolina Heelsplitter -- BA/BO is in progress for an anticipated May Affect Not Likely to Adversely Affect biological conclusion.					
Anadromous Fish Present?	**no**					
Description:						
Buffer Rules in Effect?	no		**Buffer Rules:**			

Existing Site

Description of Existing Project Area:	Two Lane SR 1113; Existing Bridge #184 is a 2 span bridge (70' total length)
Average Daily Traffic (existing):	1790 vpd
Existing Cross Section:	10' Travel Lanes; 2'-4' Grass Shoulders
Surrounding Land Use:	Swamp,Wooded
General Comments:	

Project Description

Description of Proposed Project:	Replacement of Bridge #184 with roadway approach work; Prop 1 span bridge (100' total length)		
Average Daily Traffic (proposed):	2,600 (2025)		
Proposed Cross-Section:	10' Travel Lanes; 2' Paved Shoulders; 2' Grass Shoulders, 2:1 Side Slopes		
Interchange Modification:	no	**Median Type:**	None
Terminus:	NA		
Terminus:	NA		
Project Length (lin. miles/feet):	0.157mi.	**Added Impervious Area (ac.):**	0.11ac
General Comments:	Propose embankment Class I rip-rap on creek bank to stabilize existing ditch erosion. Propose soil mat in existing approach ditch to stabilize existing erosion. Propose preformed scour hole at pipe outlet. Eliminating existing pier in creek. Increase bridge opening/conveyance. Decrease bridge/channel velocities.		

NCDOT Highway Stormwater Program

Released: July 2010 (DRAFT)

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

Version 1.1

Environmental Summary

Riparian Buffer and Jurisdictional Stream Impacts and Associated SCMs

Station	Stream Name	Stream Type	Jurisdict. Stream	Buffer?	Classific-ation?	Proposed Structure	SCM Type	Checklist Complete?	DA (ac.)	Q_2 (ft^3/s)	Q_{10} (ft^3/s)	WQv^c (ft^3)
17+10-L- LT.	Waxhaw Creek	Perennial	RPW	No	Class C	1 @ 100' -- 39" Box Beam						

General Comments:

Jurisdictional Wetlands

Station	Type of Impact	Minimization of Impact
19+65 to 20+42 -L- RT	Fill; Mechanized Clearing	2:1 side slopes; Proposing preformed scour hole at outlet outside of wetland boundary.

General Comments:

09/08/99

See Sheet 1-A For Index of Sheets

TIP PROJECT: B-4294

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4294	1	

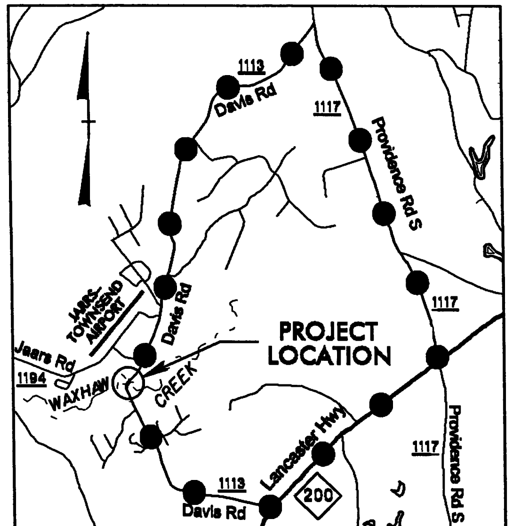
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
33632.1.1	BRZ-1113(3)	P.E.
33632.2.1	BRZ-1113(3)	ROW & UTIL
33632.3.1	BRZ-1113(3)	CONST.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UNION COUNTY

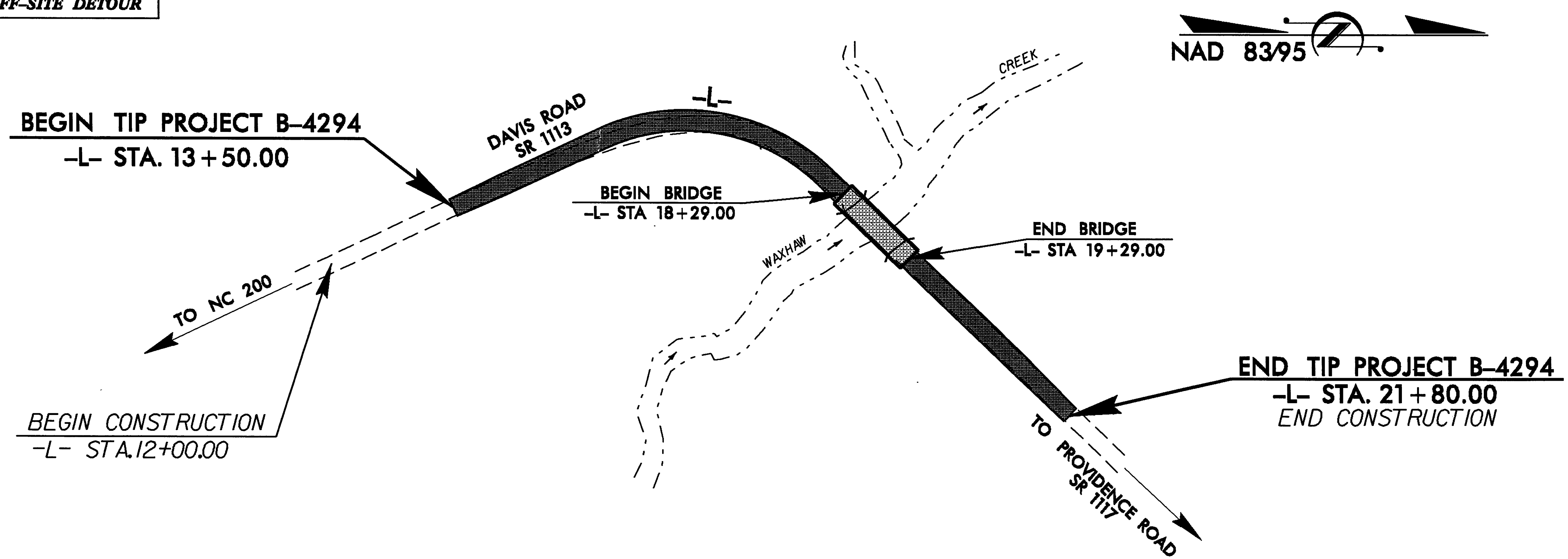
LOCATION: BRIDGE NO. 184 OVER WAXHAW CREEK AND APPROACHES ON SR 1113 (DAVIS ROAD)

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



VICINITY MAP

●——● = ***OFF-SITE DETOUR***



** DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2008 = 1,790
ADT 2025 = 2,600
DHV = 10 %
D = 60 %
T = 4 %*
**V = 30 MPH
* (TTST 1% + DUAL 3%)
FUNC CLASS = LOCAL
SUB - REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJ. B-4294 = 0.138 mile
LENGTH STRUCTURE TIP PROJ. B-4294 = 0.019 mile
TOTAL LENGTH OF TIP PROJ. B-4294 = 0.157 mile

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
OCTOBER 07, 2010

LETTING DATE:
NOVEMBER 15, 2011

REKHA PATEL, P.E.
PROJECT ENGINEER

SAMUEL L. ST. CLAIR
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY DESIGN ENGINEER P.E.

CONTRACT:

02-MAR-2011 07:41
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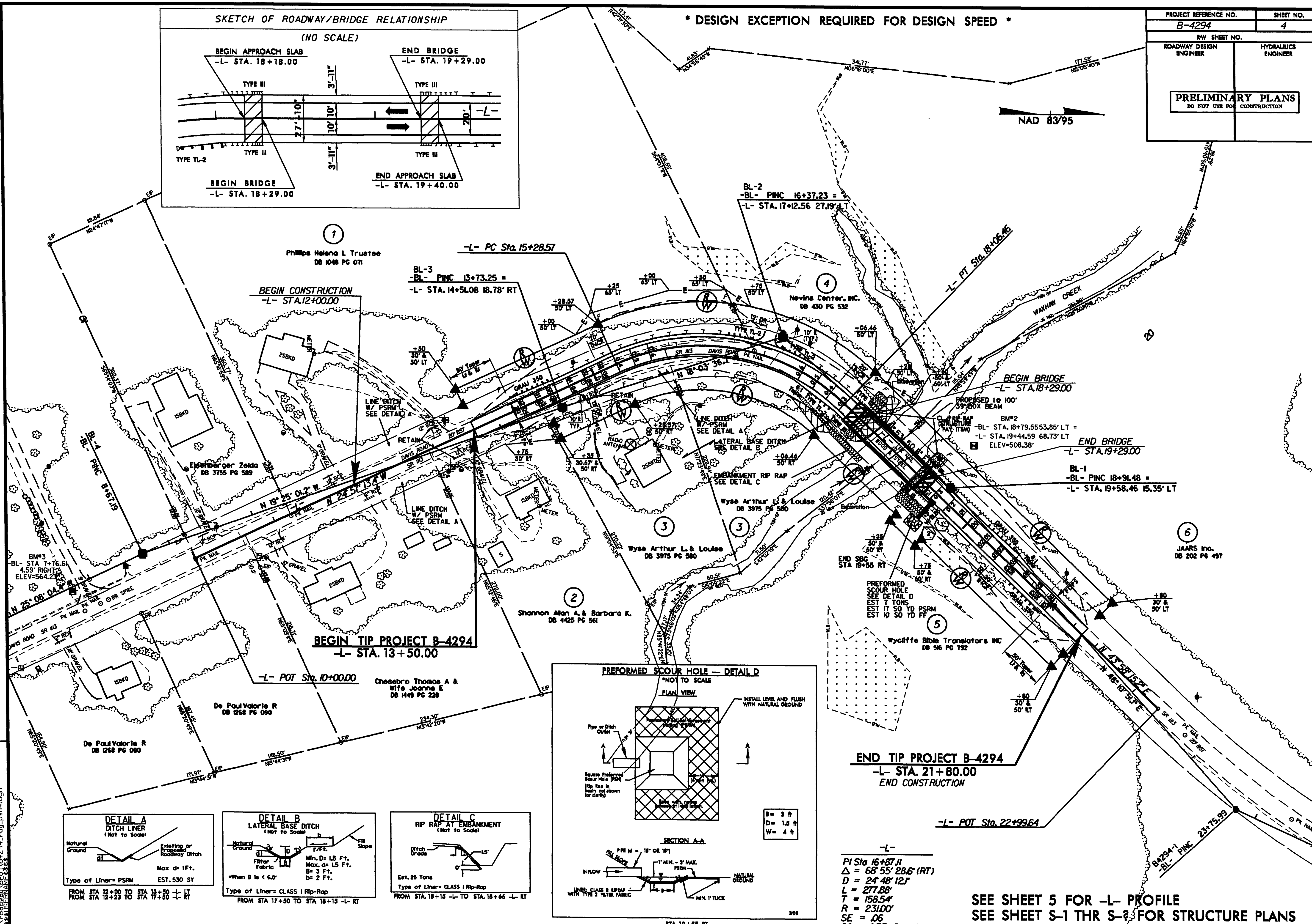
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-4294	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

* DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED *



SEE SHEET 5 FOR -L- PROFILE
SEE SHEET S-1 THR S-? FOR STRUCTURE PLANS

REVISIONS

8/17/99

02-MAR-2011 07:42 b4294_rdy_psh4.dgn

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

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

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: B-4294 (Bridge No. 184 over Waxhaw Creek on SR 1113.)

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State:NC County/parish/borough: Union City: Waxhaw
Center coordinates of site (lat/long in degree decimal format): Lat. 34.857260° N, Long. -80.746087° W.
Universal Transverse Mercator:
Name of nearest waterbody: Waxhaw Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Catawba River
Name of watershed or Hydrologic Unit Code (HUC): 03050103
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☒ Field Determination. Date(s): 03/25/2003

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Appear to be no *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There Are *"waters of the U.S."* within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☒ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 500 linear feet: 30-40 width (ft) and/or acres.
      Wetlands: 0.04 acres.

   c. **Limits (boundaries) of jurisdiction** based on: Established by OHWM.
      Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

---

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW
Identify TNW: **Catawba River.**

Summarize rationale supporting determination: Catawba River is 120 - 200 feet wide and as much as twenty feet deep. This river supports boat traffic and historically barge traffic.

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:
Watershed size: Pick List
Drainage area: Pick List
Average annual rainfall: inches
Average annual snowfall: inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☒ Tributary flows directly into TNW.
☐ Tributary flows through Pick List tributaries before entering TNW.

Project waters are Pick List river miles from TNW.
Project waters are Pick List river miles from RPW.
Project waters are Pick List aerial (straight) miles from TNW.
Project waters are Pick List aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW[5]: .

---

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: feet
Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):

☐ Silts	☐ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Pick List**. Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

■ High Tide Line indicated by:	■ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

---

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: Pick List. Explain: .

Surface flow is: Pick List

Characteristics: .

Subsurface flow: Pick List. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are Pick List river miles from TNW.

Project waters are Pick List aerial (straight) miles from TNW.

Flow is from: Pick List.

Estimate approximate location of wetland as within the Pick List floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: Pick List

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Waxhaw Creek and its UTs have NCDWQ stream rating scores greater than 30.
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
- ☒ Tributary waters: **500** linear feet **30-40** width (ft).
- ☐ Other non-wetland waters: acres.
  Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
   ☒ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **The impacted wetland is within the floodplain of Waxhaw Creek.**

   ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   - ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   - ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   - ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
- ☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- ☐ which are or could be used for industrial purposes by industries in interstate commerce.
- ☐ Interstate isolated waters. Explain: .
- ☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

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[8] See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

Provide estimates for jurisdictional waters in the review area (check all that apply):
- ☐ Tributary waters: linear feet width (ft).
- ☐ Other non-wetland waters: acres.
  - Identify type(s) of waters: .
- ☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  - ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- ☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- ☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
- ☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
- ☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
- ☐ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
- ☐ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: .
- ☐ Corps navigable waters' study: .
- ☐ U.S. Geological Survey Hydrologic Atlas: .
  - ☐ USGS NHD data.
  - ☐ USGS 8 and 12 digit HUC maps.
- ☐ U.S. Geological Survey map(s). Cite scale & quad name: .
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
- ☐ National wetlands inventory map(s). Cite name: .
- ☐ State/Local wetland inventory map(s): .
- ☐ FEMA/FIRM maps: .
- ☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- ☐ Photographs: ☐ Aerial (Name & Date): .
  - or ☐ Other (Name & Date): .
- ☐ Previous determination(s). File no. and date of response letter: .
- ☐ Applicable/supporting case law: .
- ☐ Applicable/supporting scientific literature: .
- ☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

Ecosystem Enhancement PROGRAM

June 14, 2011

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

Dear Dr. Thorpe:

Subject: EEP Mitigation Acceptance Letter:

B-4294, Replace Bridge Number 184 over Waxhaw Creek on SR 1113, Union County

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the compensatory riparian wetland mitigation for the subject project. Based on the information supplied by you on June 8, 2011, the impacts are located in CU 03050103 of the Catawba River Basin in the Southern Piedmont (SP) Eco-Region, and are as follows:

Catawba 03050103 SP	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	0	0	0	0.02	0	0	0	0

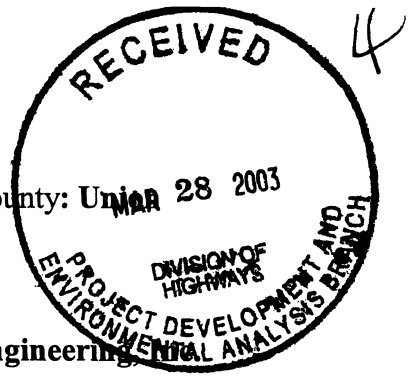
EEP commits to implementing sufficient compensatory riparian wetland mitigation credits to offset the impacts associated with this project in accordance with the N.C. Department of Environment and Natural Resources' Ecosystem Enhancement Program In-Lieu Fee Instrument dated July 28, 2010 **and consistent with the Guidance for Expanded Service Area for Mitigating Impacts within the Lower Catawba River Basin adopted by the PACG-TC on September 12, 2006, and renewed on October 8, 2008.** If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from EEP.

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

Sincerely,

William D. Gilmore, P.E.
EEP Director

cc: Ms. Liz Hair, USACE – Asheville Regulatory Field Office
Mr. Brian Wrenn, Division of Water Quality, Wetlands/401 Unit
File: B-4294



4

U.S. ARMY CORPS OF ENGINEERS
Wilmington District

Action ID: 200330477 County: **Union**

Notification of Jurisdictional Determination

Property Owner: NCDOT
Address: Gregory J. Thorpe, Project Development and Environmental Analysis
1548 Mail Service Center
Raleigh, NC 27699-1548
Telephone: 919-733-3141

Authorized Agent: HDR Engineering, Inc.
Attn: Phillip May
Address: 128 S Tryon Street, Suite 1400
Charlotte, NC 28202-5004
Telephone:704-338-6700

Size and Location of Property (waterbody, Highway name/number, town, etc.):
LL **TIP No. B-4294, Bridge on SR 1113 over Waxhaw Creek near Waxhaw**
MT **TIP No. B-4296, Bridge on SR 1321 over West Fork Twelve Mile Creek near Waxhaw**

Basis for Determination: Delineation Maps dated Feb. 24, 2003 and Data Forms dated December 18, 2002 identifying hydrophytic vegetation, wetland hydrology, hydric soil and ordinary high water lines

Indicate Which of the Following apply:

◊ The surface waters and wetlands on this project have been delineated and the limits of the Corps jurisdiction have been explained to you. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

Placement of dredged or fill material in wetlands on this property without a Department of the Army permit is in most cases a violation of Section 301 of the Clean Water Act (33 USC 1311). A permit is not required for work on the property restricted entirely to existing high ground. If you have any questions regarding the Corps of Engineers regulatory program, please contact Steven W. Lund **at** 828-271-7980 x 4.

Project Manager Signature Steven W. Lund
Date: March 25, 2003 **Expiration Date: March 25, 2007**

SURVEY PLAT OR FIELD SKETCH OF DESCRIBED PROPERTY AND THE WETLAND DELINEATION FORM MUST BE ATTACHED TO THIS FORM.

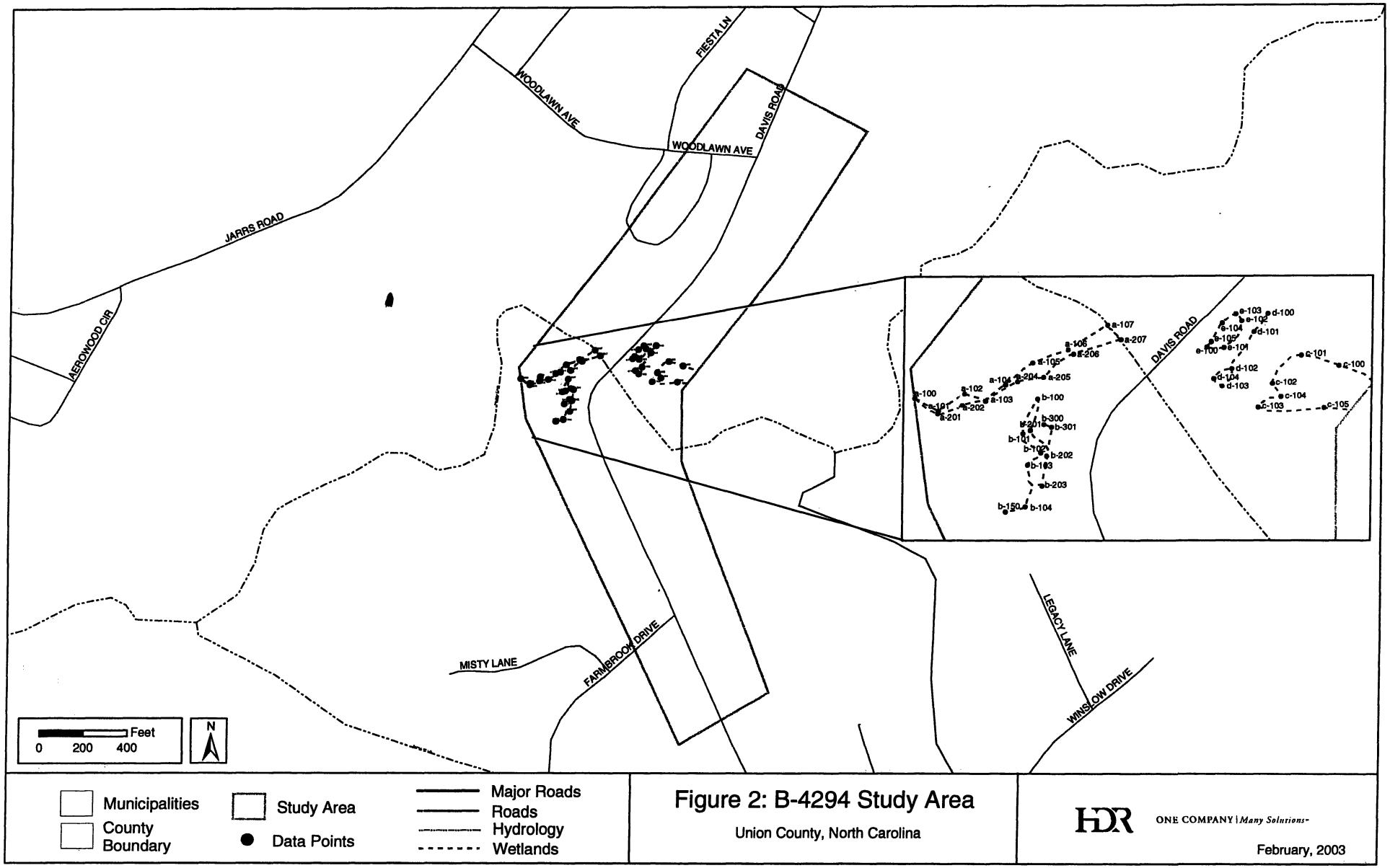


Figure 2: B-4294 Study Area

Union County, North Carolina

HDR ONE COMPANY | *Many Solutions*

February, 2003