STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

March 30, 2011

Mr. Tom Steffens
U. S. Army Corps of Engineers
Regulatory Field Office
Post Office Box 1000
Washington, NC 27889-1000

Dear Sir:

Subject: **Application for General Permit 31, Section 401 Water Quality Certification and Neuse Riparian Buffer Authorization Request** for the Replacement of Bridge No. 3 over Great Swamp on SR 1634 in Wilson County; TIP Project B-4328; Federal Aid Project No. BRZ-1634(4); State Project No.8.2342001; Debit $240.00 from WBS 33665.1.1.

Please find enclosed PCN, permit drawings, buffer drawings, and roadway plans for the above referenced project proposed by the North Carolina Department of Transportation (NCDOT). A Categorical Exclusion (CE) was completed for this project on September 28, 2007 and distributed shortly thereafter. An FHWA Right of Way Consultation was completed in June, 2010. Copies of each of these documents are available upon request. The NCDOT proposes to replace existing Bridge No. 3 over Great Swamp on SR 1634 in Wilson County The project involves replacement of the existing functionally obsolete and structurally deficient 103-foot bridge and approaches with a new 141-foot bridge and approaches. The new bridge will feature two 11-foot lanes with 2-foot 11 -inch offset s. The west approach will be approximately 2 97 feet long and the east approach will be approximately 262 feet long. Proposed permanent impacts are 0.01 acre of riparian wetland impacts for fill and 0.01 acre for mechanized clearing. Traffic will be detoured off-site during construction.

This project calls for a letting date of November 15, 2011 and a review date of October 4, 2011; however, the let date may advance as additional funding becomes available.

Regulatory Approvals

Section 404 Permit: All aspects of this project are being processed by the Federal Highway Administration as a "Categorical Exclusion" in accordance with 23 CFR 771.115(b). The NCDOT requests that these activities be authorized by General Permit 198200031.

Section 401 Permit: We anticipate 401 General Certification number 3820 will apply to this project. The NCDOT is requesting written concurrence from the North Carolina Department of Environmental and Natural Resources, Division of Water Quality Therefore, in accordance with 15A NCAC 2H, Section

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

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

WEBSITE: WWW.NCDOT.ORG

LOCATION:
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610-4328

.0500(a), we are providing five copies of this application to the NCDWQ for their review and approval. Authorization to debit the $240 Permit Application Fee from WBS Element 33665.1.1 is hereby given.

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

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 Chris Underwood at (919) 707-6158.

Sincerely,

E. L. Lusk

for Gregory J. Thorpe, Ph.D., Environmental Management Director
Project Development and Environmental Analysis

cc

NCDOT Permit Application Standard Distribution List.

Office Use Only:
Corps action ID no. _____
DWQ project no. _____
Form Version 1.3 Dec 10 2008

Pre-Construction Notification (PCN) Form

A. Applicant Information

1. Processing

1a. Type(s) of approval sought from the Corps:	☒ Section 404 Permit ☐ Section 10 Permit
1b. Specify Nationwide Permit (NWP) number:	or General Permit (GP) number: 31
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 3 over Great Swamp on SR 1634
2b. County:	Wilson
2c. Nearest municipality / town:	Fremont
2d. Subdivision name:	*not applicable*
2e. NCDOT only, T.I.P or state project no:	B-4328

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) 707-6158
3g. Fax no..	(919) 431-2002
3h. Email address:	csunderwood@ncdot.gov

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

B. Project Information and Prior Project History		
1. Property Identification		
1a. Property identification no. (tax PIN or parcel ID):	*not applicable*	
1b. Site coordinates (in decimal degrees):	Latitude: 35.60901 (DD.DDDDDD)	Longitude: - 77.95214 (-DD.DDDDDD)
1c. Property size:	~1.3 acres	
2. Surface Waters		
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Great Swamp	
2b. Water Quality Classification of nearest receiving water:	C Sw NSW	
2c. River basin:	Neuse	
3. Project Description		
3a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: Forest, agriculture and residential.		
3b. List the total estimated acreage of all existing wetlands on the property: ~0.5		
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 120		
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 103-foot bridge with a 141-foot, 3-span bridge on the existing alignment with an off-site detour. Standard road building equipment, such as trucks, dozers, and cranes will be used. Also, a water line will be directionally bored, but no impacts will occur.		
4. Jurisdictional Determinations		
4a. Have jurisdictional wetland or stream determinations by the Corps or State been requested or obtained for this property / project (including all prior phases) in the past? Comments: A Preliminary JD is being requested with application	☐ 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	mech. cl.	riparian	☐ Yes ☒ No	☒ Corps ☐ DWQ	0.01
Site 2 ☒ P ☐ T	fill	riparian	☐ Yes ☒ No	☒ Corps ☐ DWQ	0.01
Site 3 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 4 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 5 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 6 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
				2g. **Total wetland impacts**	0.02 Permanent 0.0 Temporary

2h. Comments:

3. Stream Impacts

If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.

3a. Stream impact number - Permanent (P) or Temporary (T)	3b. Type of impact	3c. Stream name	3d. Perennial (PER) or intermittent (INT)?	3e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	3f. Average stream width (feet)	3g. Impact length (linear feet)
Site 1 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 2 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 3 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 4 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 5 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 6 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
					3h. **Total stream and tributary impacts**	0.0 Perm 0.0 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	0.0 Permanent 0.0 Temporary

4g. Comments:

5. Pond or Lake Construction

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

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

5g. Comments:

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

6. Buffer Impacts (for DWQ)

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

6a. Project is in which protected basin?			☒ Neuse ☐ Catawba	☐ Tar-Pamlico ☐ Randleman	☐ Other:
6b. Buffer impact number – Permanent (P) or Temporary (T)	6c. Reason for impact	6d. Stream name	6e. Buffer mitigation required?	6f. Zone 1 impact (square feet)	6g. Zone 2 impact (square feet)
B1 ☒ P ☐ T	Bridge/Parallel Impact	Great Swamp	☐ Yes ☒ No	4,185	1,258
B2 ☐ P ☐ T			☐ Yes ☐ No		
B3 ☐ P ☐ T			☐ Yes ☐ No		
		6h. **Total buffer impacts**		4,185	1,258
6i. Comments:					

D. Impact Justification and Mitigation		
1. Avoidance and Minimization		
1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing project. The proposed bridge is 38 feet longer than the existing bridge; the proposed bridge will be at approximately the same grade as the existing structure; no deck drains will be used		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques. An off site detour will be used; 3:1 fill slopes where practicable; Design Standards in Sensitive Watersheds will be implemented; preformed scour holes will be utilized; discharges will be outside of buffers, and a turbidity curtain will be used for the bent in the water.		
2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State		
2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?	☐ Yes ☒ No If no, explain: Due to the small amount of impacts (0.02 acre) and the low quality of the wetland, NCDOT is not proposing compensatory mitigation.	
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:	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: if yes, see attached permit drawings.	☒ 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
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? Natural Heritage Program, USFWS, CE document		
6. Essential Fish Habitat (Corps Requirement)		
6a. Will this project occur in or near an area designated as essential fish habitat?	☐ Yes	☒ No
6b. What data sources did you use to determine whether your site would impact Essential Fish Habitat? NMFS County Index		
7. Historic or Prehistoric Cultural Resources (Corps Requirement)		
7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)?	☐ Yes	☒ No
7b. What data sources did you use to determine whether your site would impact historic or archeological resources? NEPA Documentation		
8. Flood Zone Designation (Corps Requirement)		
8a. Will this project occur in a FEMA-designated 100-year floodplain?	☒ Yes	☐ No
8b. If yes, explain how project meets FEMA requirements: NCDOT Hydraulics Unit coordination with FEMA		
8c. What source(s) did you use to make the floodplain determination? FEMA Maps		

Dr. Gregory J. Thorpe, Ph D Applicant/Agent's Printed Name	E. L. Lusk Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	3-30-11 Date

NCDOT Highway Stormwater Program
Released: July 2010 (DRAFT)

North Carolina Department of Transportation
Highway Stormwater Program
STORMWATER MANAGEMENT PLAN

Version 1.1

General Project Information

Project No.:	33665.1.1		Date:	2/28/2011	
City/Town:	n/a		Designer:	Paul Fisher	
County(ies):	Wilson County		Project Manager:	Randy Henegar	
River Basin(s):	Neuse		CAMA County?	no	TVA County? no
Primary Receiving Water:	Great Swamp Creek		NCDWQ Stream Index:		
NCDWQ Surface Water Classification for Primary Receiving Water		Primary:	Class C		
		Supplemental:	Nutrient Sensitive Waters (NSW)		
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?			no		
Description:					
Anadromous Fish Present?	no				
Description:					
Buffer Rules in Effect?	yes		Buffer Rules:	Neuse River Basin	

Existing Site

Description of Existing Project Area:	Bridge (Length =103'-4")
Average Daily Traffic (existing):	1090 vpd
Existing Cross Section:	24.0' curb-to-curb
Surrounding Land Use:	rural
General Comments:	

Project Description

Description of Proposed Project:	Bridge (Length = 140')		
Average Daily Traffic (proposed):	1090 vpd		
Proposed Cross-Section:	29'-10" Clear Roadway		
Interchange Modification:		Median Type:	
Terminus:			
Terminus:			
Project Length (lin. miles/feet):	0.133 miles	Added Impervious Area (ac.):	0.13 acres
General Comments:			

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)
15+00 -L-	Great Swamp Creek	Perennial		Neuse	Class C	15" pipe	preformed scour hole	yes	0.054	0.23	0.30	
19+50 -L-	Great Swamp Creek	Perennial		Neuse	Class C	15" pipe	preformed scour hole	yes	0.094	0.40	0.52	

General Comments:

Stream Relocation

Station	Stream Name	Stream Length (ft)	Additional Information

General Comments:

Jurisdictional Wetlands

Station	Type of Impact	Minimization of Impact
15+75 -L- (Rt.)	Fill in Wetlands and Mechanized Clearing in Wetlands	Yes
General Comments:		

09/08/99

TIP PROJECT: B-4328

CONTRACT:

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4328	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
33665.1.1	BRZ-1634(4)	PE
33665.2.1	BRZ-1634(4)	R/W, UTIL

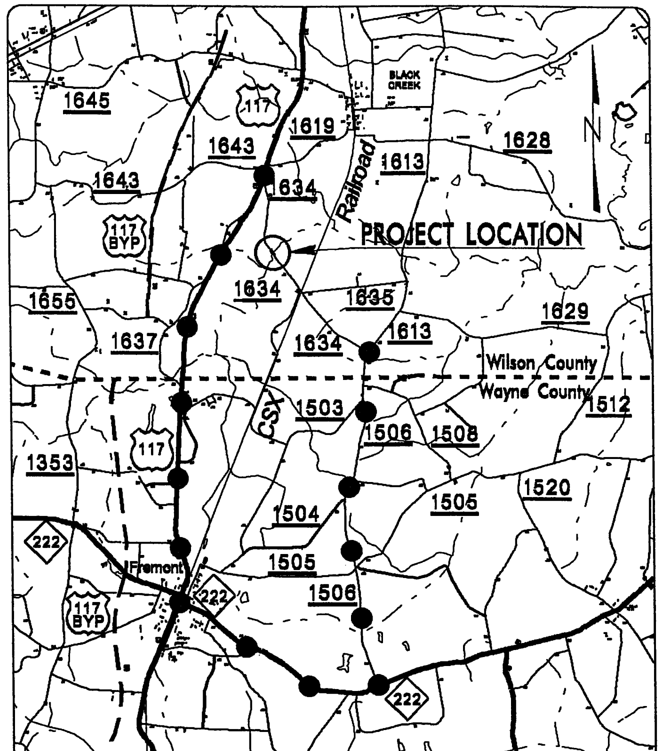
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WILSON COUNTY

LOCATION: BRIDGE No. 3 OVER GREAT SWAMP ON SR 1634

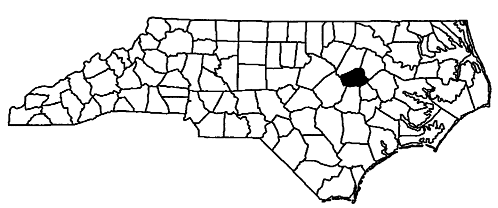
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE

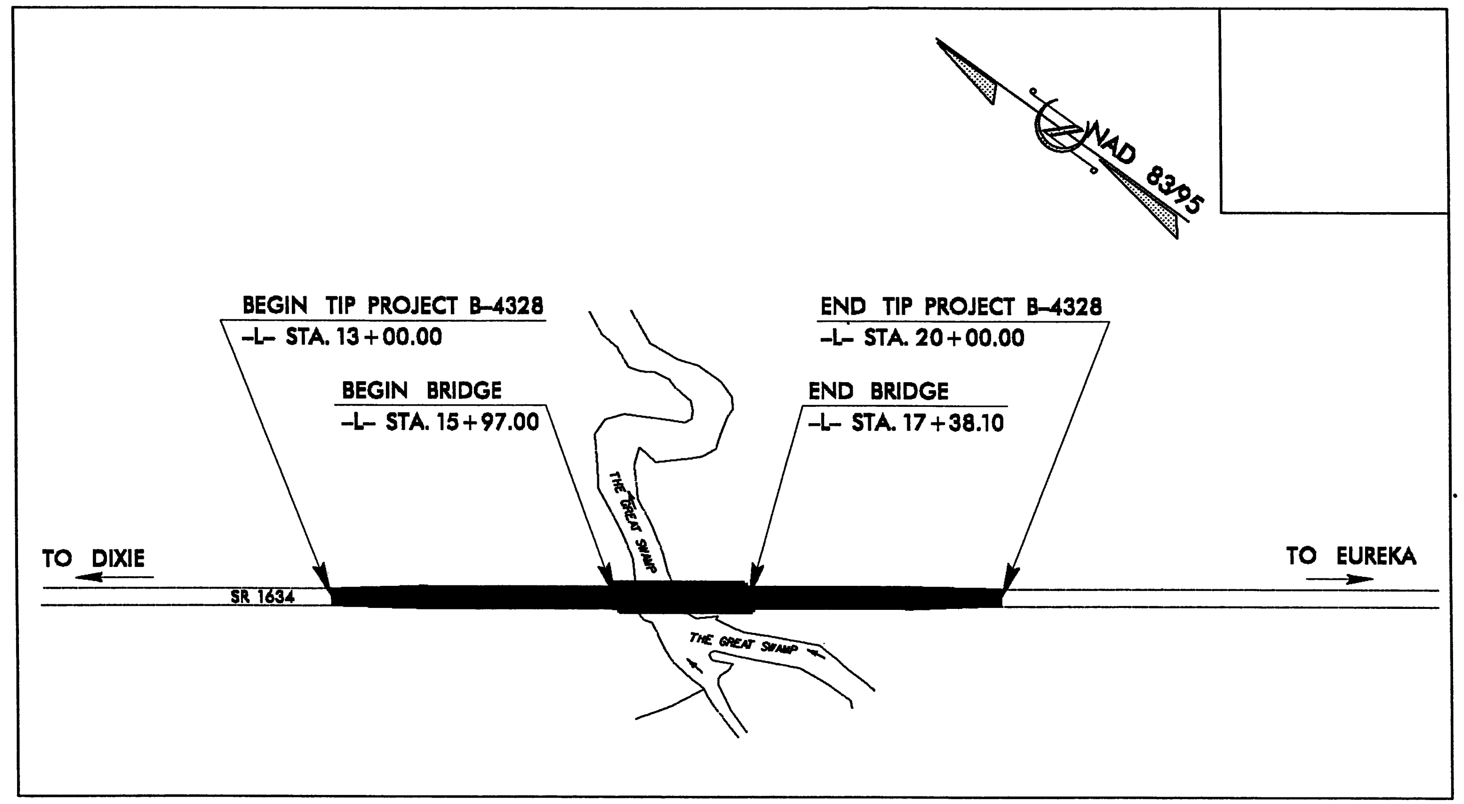
Permit Drawing
Sheet 1 of 11



VICINITY MAP

—●—●—●— OFF-SITE DETOUR ROUTE





WETLAND & STREAM IMPACTS

NOTE: METHOD OF CLEARING III
NOTE: THIS PROJECT IS NOT WITHIN MUNICIPAL BOUNDARIES

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 2011 = 1090 VPD
ADT 2030 = 2000 VPD
DHV = 60 %
D = 13 %
T = 3 % *
V = 60 MPH
* TTST 1 % DUAL 2 %
FUNC. CLASS = LOCAL
SUB REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4328	= 0.106 MI
LENGTH STRUCTURE TIP PROJECT B-4328	= 0.027 MI
TOTAL LENGTH TIP PROJECT B-4328	= 0.133 MI

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: NOVEMBER 9, 2010 — JAMES A. SPEER, P.E., PROJECT ENGINEER

LETTING DATE: NOVEMBER 15, 2011 — NYA K. BOAYUE, P.E., 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

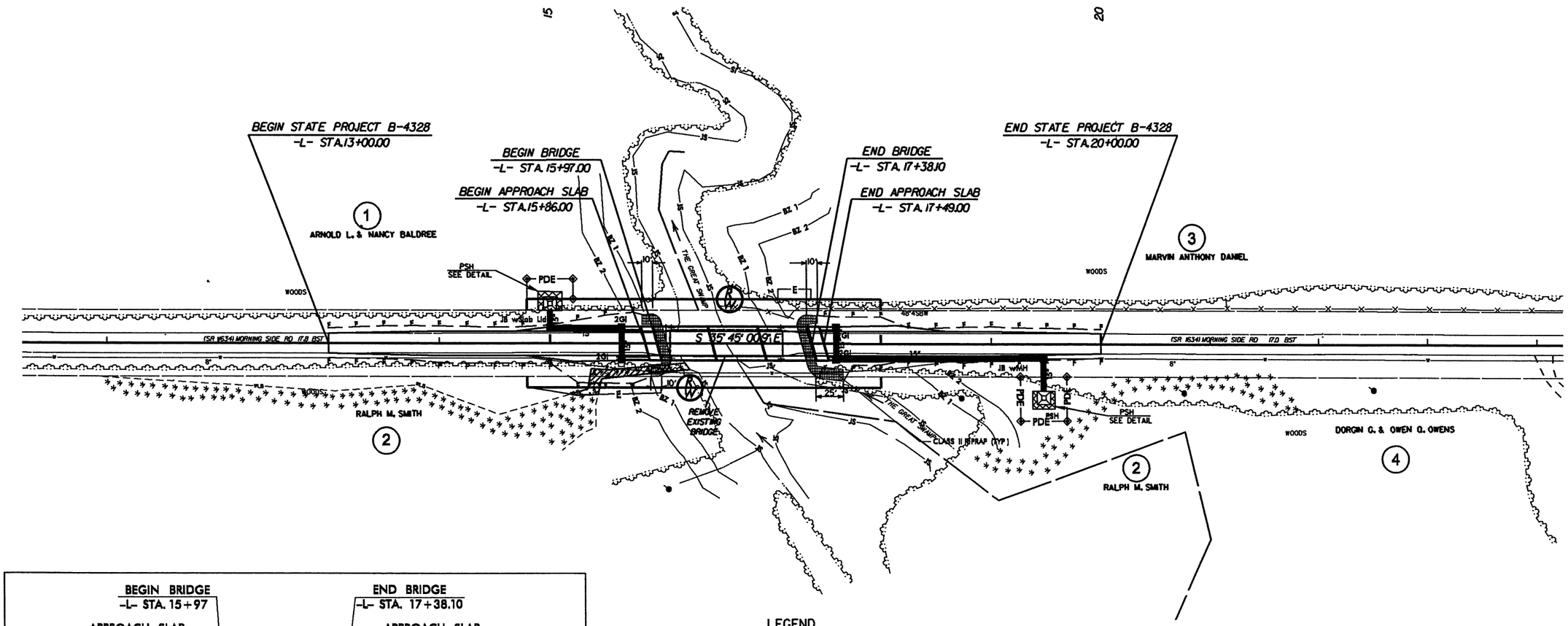
______ P.E.
STATE HIGHWAY DESIGN ENGINEER

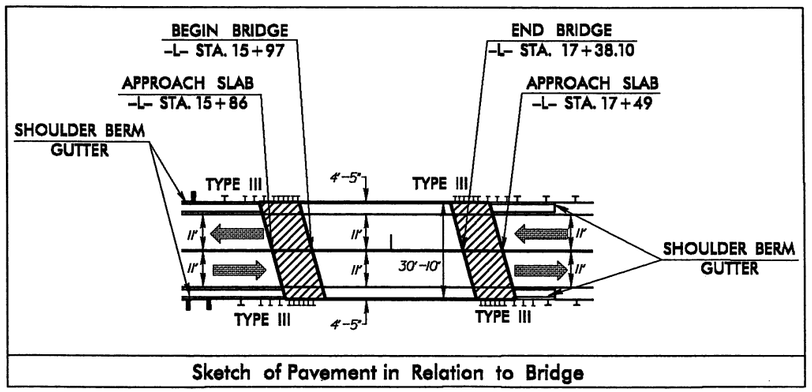
8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
B-4328	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 2 of 11





Sketch of Pavement in Relation to Bridge

LEGEND

- ⁙ DENOTES MECHANIZED CLEARING
- ▨ DENOTES FILL IN WETLAND

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

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-4328	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS

Permit Drawing
Sheet 3 of 11

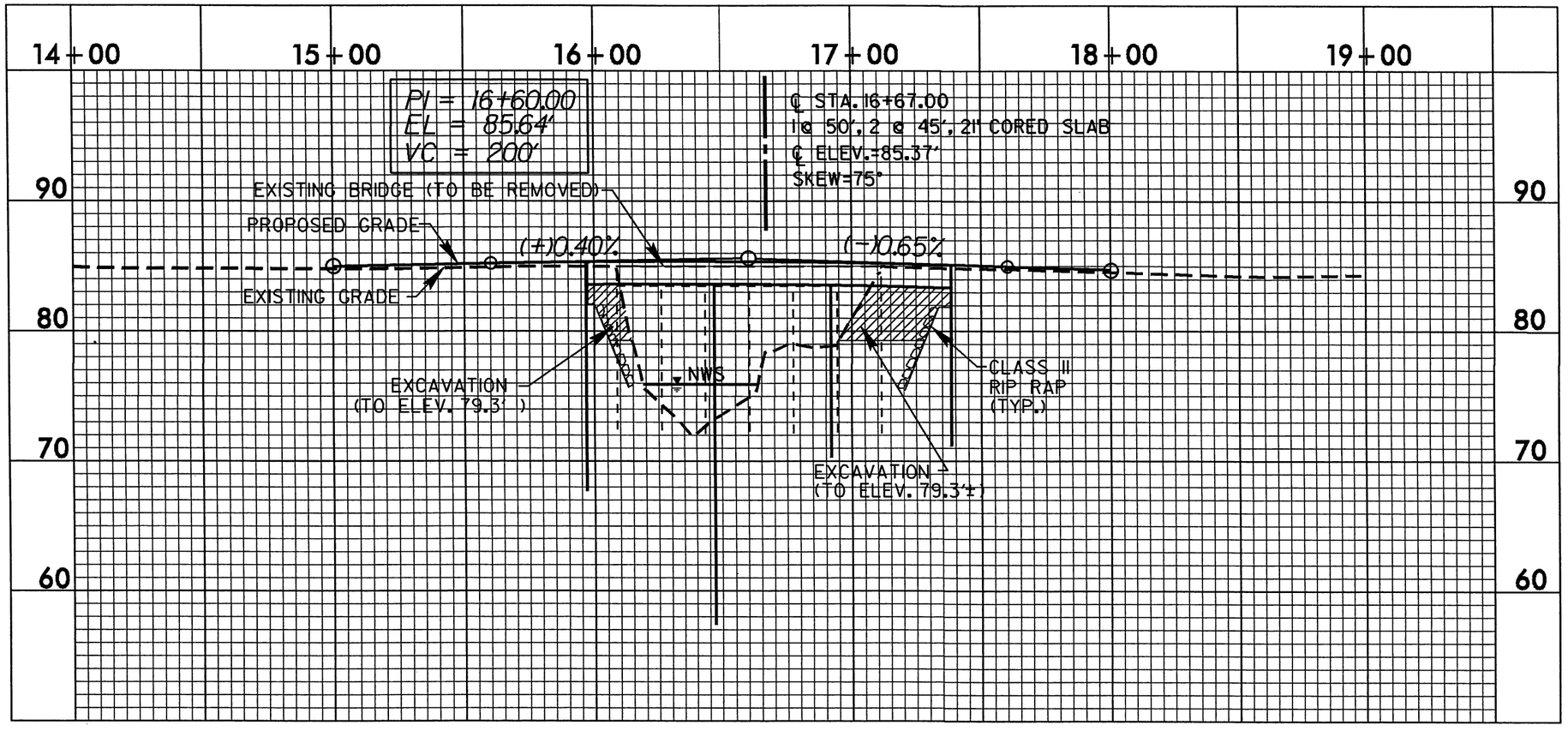
Sketch of Pavement in Relation to Bridge

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

PROJECT REFERENCE NO.	SHEET NO.
B-4328	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 4 of 11

REVISIONS



PROFILE

8/23/99

PROJ. REFERENCE NO.	SHEET NO.
B-4328	X-1

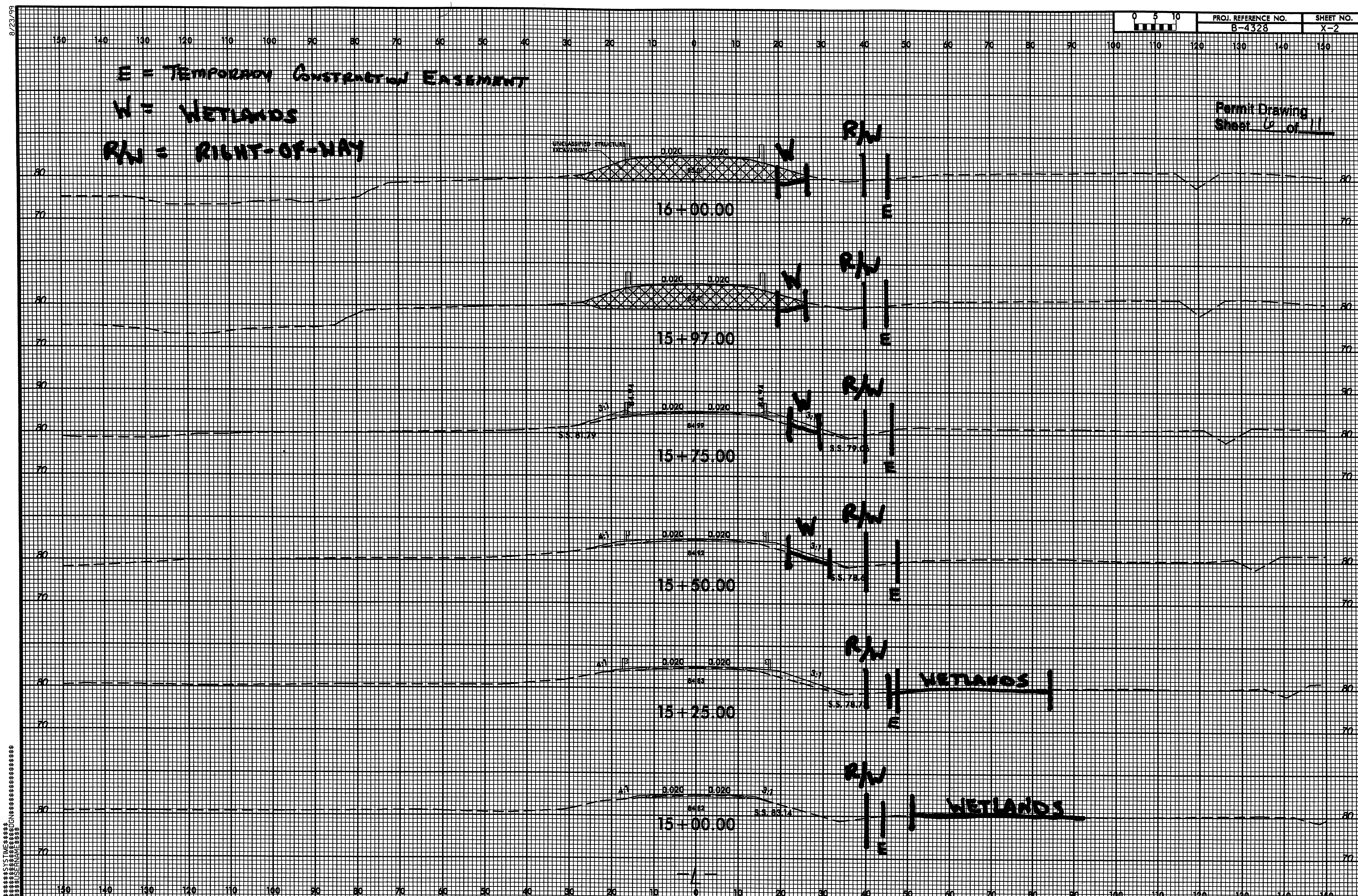
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 5 of 11

NOTE: R/W = CONSTRUCTION LIMITS

Note: Approximate quantities only. Unclassified Excavation, Borrow Excavation, Fine Grading, Clearing and Grubbing, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."

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


8/23/99
PROJ. REFERENCE NO.
B-4328
SHEET NO.
X-2
Permit Drawing
Sheet 6 of 11
E = TEMPORARY CONSTRUCTION EASEMENT
W = WETLANDS
R/W = RIGHT-OF-WAY
UNCLASSIFIED STRUCTURE EXCAVATION
16+00.00
15+97.00
15+75.00
S.S. 81.79
S.S. 79.05
15+50.00
S.S. 78.6
15+25.00
S.S. 78.7
WETLANDS
15+00.00
S.S. 83.14
WETLANDS

PROJ. REFERENCE NO.	SHEET NO.
B-4328	X-3

Permit Drawing
Sheet 7 of 11

W = WETLANDS
R/W = RIGHT-OF-WAY

8/23/99

PROJ. REFERENCE NO.	SHEET NO.
B-4328	X-4

R/W = RIGHT-OF-WAY

Permit Drawing
Sheet 8 of 11

-4-

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

8/23/99

PROJ. REFERENCE NO.	SHEET NO.
B-4328	X-5

R/W = RIGHT-OF-WAY

PDE = PERMANENT DRAINAGE EASEMENT

Permit Drawing
Sheet 9 of 11

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

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	Sta. 16+67 -L-	Bridge	0.01			0.01						
TOTALS:			0.01			0.01						

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

WILSON COUNTY
WBS - 33665.1.1 (B-4328)

SHEET 12/16/2010

ATN Revised 3/31/05

Permit Drawing
Sheet 10 of 11

Property Owner Contact Report

TIP # *B-4328*

Owner Last Name/ Business	*Owner First Name*	*Address*	*City/Town*	*State*	*Zip Code*	*Contact/ Relationship*	*Home Phone*	*Contacted By*	*Contact Date*	*How Contacted*	*Comments*
Baldree	Arnold Lee	6139 Morningside Rd.	Wilson	NC	27893-8025	Self		K.E>Honeycutt	7-8-05	Letter	
Daniel	Marvin Anthony	2803 Deerfield Ln.	Wilson	NC		Self		K.E.Honeycutt	7-8-05	Letter	
Owens	Lynwood David	6342 Morningside Rd.	Wilson	NC	27893-8026	Lynwood Owens Self		R.T.Poythress/K. E.Honeycutt	7-7-05	Phone/Letter	
Smith	Ralph M.			NC							

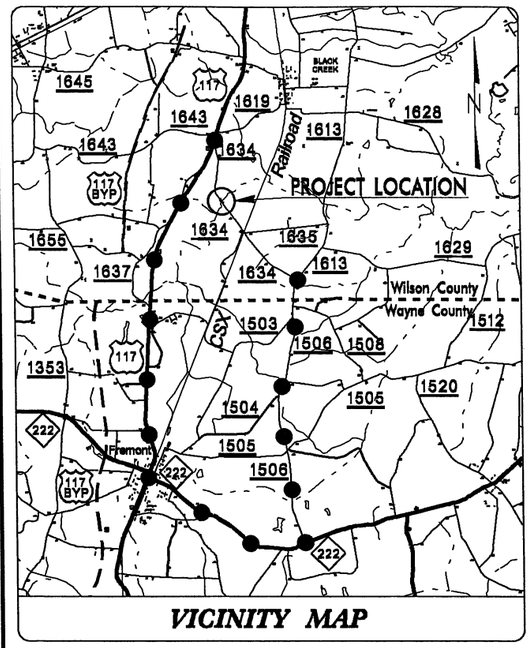
Permit Drawing
Sheet 11 of 11

09/08/99

TIP PROJECT: B-4328

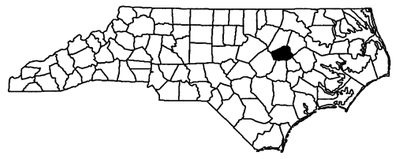
CONTRACT:

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



VICINITY MAP

OFF-SITE DETOUR ROUTE



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WILSON COUNTY

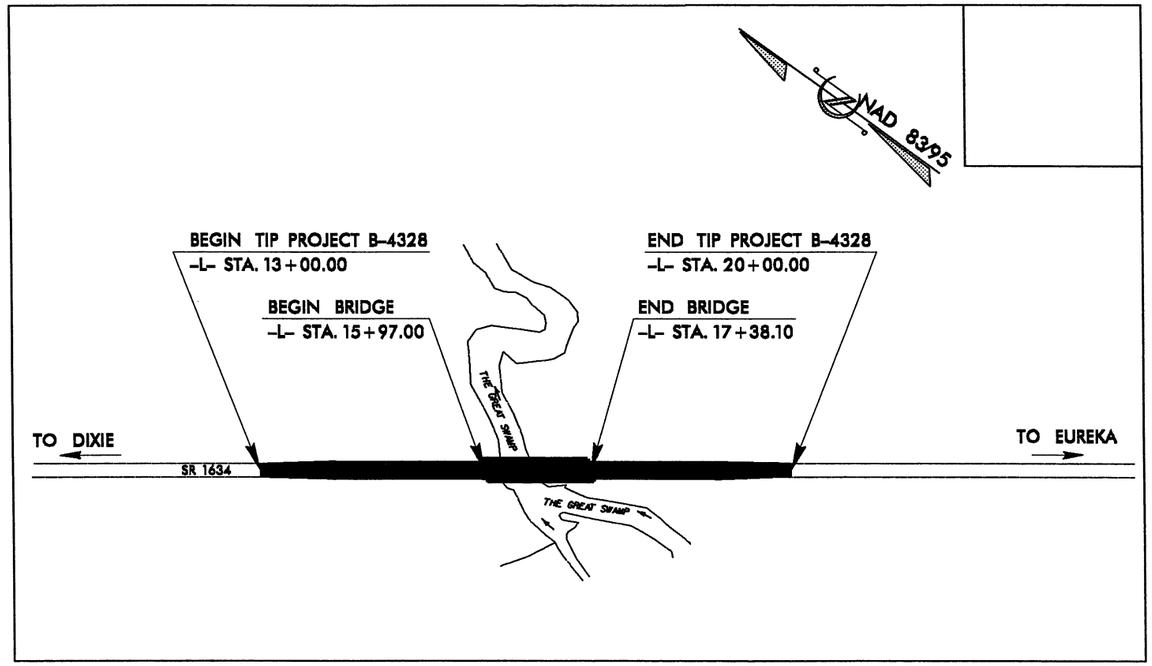
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4328	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
33665.1.1	BRZ-1634(4)	PE
33665.2.1	BRZ-1634(4)	R/W, UTIL

Buffer Drawing
Sheet 1 of 4

LOCATION: BRIDGE No. 3 OVER GREAT SWAMP ON SR 1634

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



BUFFER IMPACTS

NOTE: METHOD OF CLEARING III
NOTE: THIS PROJECT IS NOT WITHIN MUNICIPAL BOUNDARIES

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 2011 = 1090 VPD
ADT 2030 = 2000 VPD
DHV = 60 %
D = 13 %
T = 3 % *
V = 60 MPH
* TTST 1 % DUAL 2 %
FUNC. CLASS = LOCAL
SUB REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4328 = 0.106 MI
LENGTH STRUCTURE TIP PROJECT B-4328 = 0.027 MI
TOTAL LENGTH TIP PROJECT B-4328 = 0.133 MI

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: NOVEMBER 9, 2010

LETTING DATE: NOVEMBER 15, 2011

JAMES A. SPEER, P.E.
PROJECT ENGINEER

NYA K. BOAYUE, P.E.
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

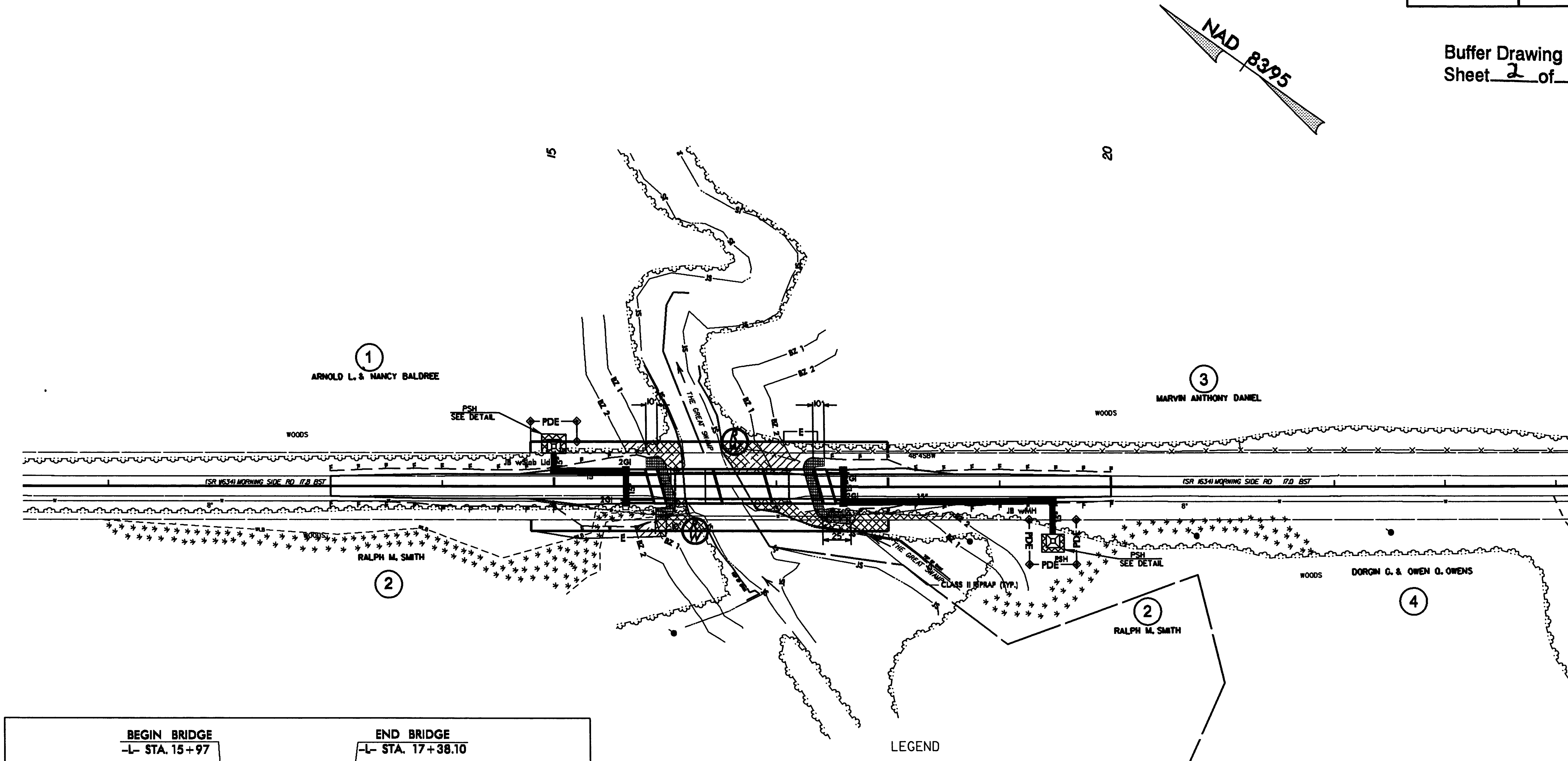
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

P.E.
STATE HIGHWAY DESIGN ENGINEER

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-4328	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

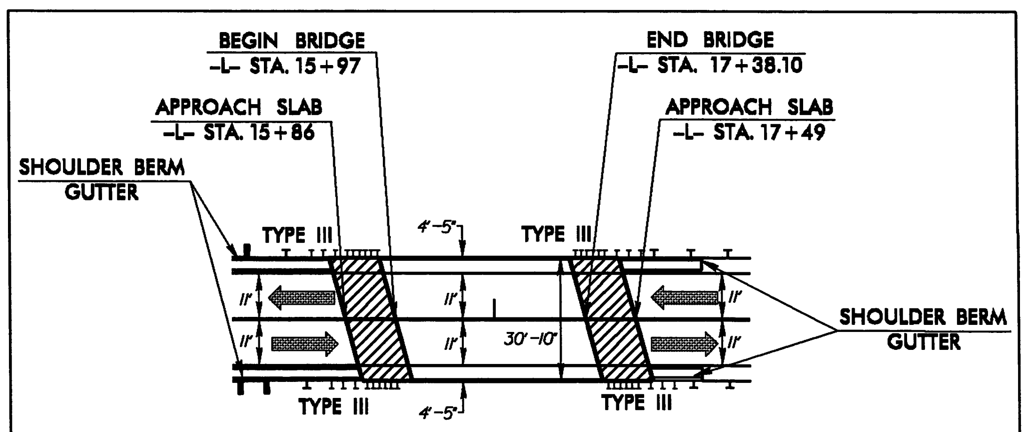
Buffer Drawing
Sheet 2 of 4



LEGEND

ALLOWABLE IMPACTS ZONE 1

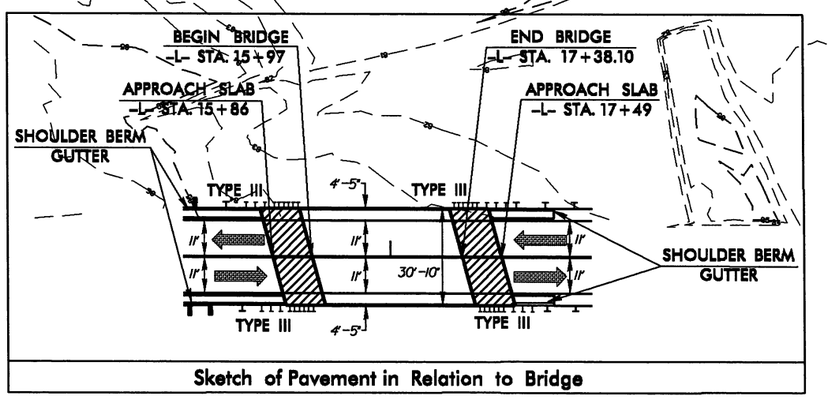
ALLOWABLE IMPACTS ZONE 2



Sketch of Pavement in Relation to Bridge

REVISIONS

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



PROJECT REFERENCE NO.	SHEET NO.
B-4328	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

REVISIONS

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

Buffer Drawing
Sheet 3 of 4

Sketch of Pavement in Relation to Bridge

BUFFER IMPACTS SUMMARY

			IMPACT									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE				
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)
1	BRIDGE	16+67 -L-		X		3196	1081	4277					
1	BRIDGE	16+67 -L-			X	989	177	1166					
TOTALS:						4185	1258	5443					

N.C. DEPT OF TRANSPORTATION
DIVISION OF HIGHWAYS

WILSON COUNTY
PROJECT 33665.1.1 (B-4328)

12/14/2010
SHEET OF

Rev. May 2006

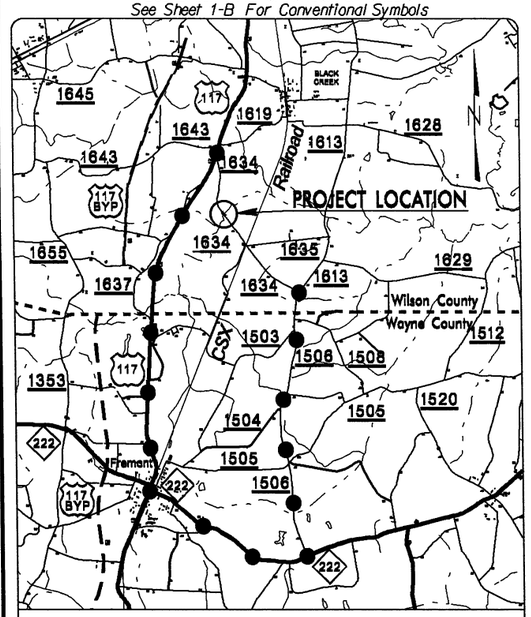
Buffer Drawing
Sheet 4 of 4

09/08/99

TIP PROJECT: B-4328

CONTRACT:

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols



VICINITY MAP

OFF-SITE DETOUR ROUTE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WILSON COUNTY

LOCATION: BRIDGE No. 3 OVER GREAT SWAMP ON SR 1634

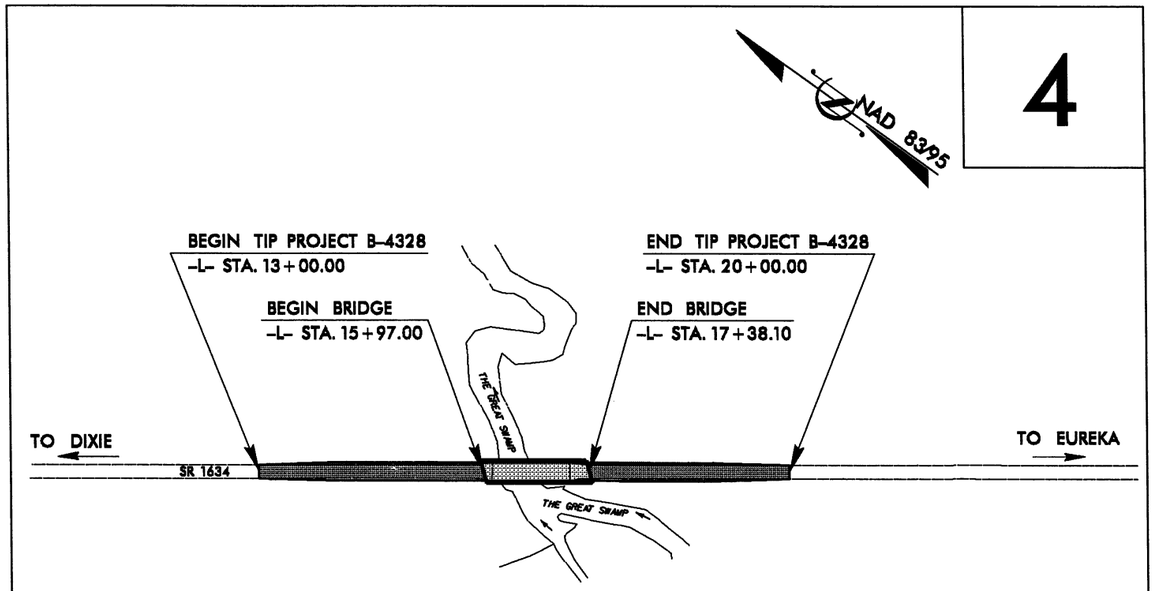
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4328	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
33665.1.1	BRZ-1634(4)	PE
33665.2.1	BRZ-1634(4)	R/W, UTIL

NAD 83/95

4



NOTE: METHOD OF CLEARING III
NOTE: THIS PROJECT IS NOT WITHIN MUNICIPAL BOUNDARIES

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2011 = 1090 VPD
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DHV = 60 %
D = 13 %
T = 3 % *
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* TTST 1 % DUAL 2 %
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SUB REGIONAL TIER

PROJECT LENGTH

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LENGTH STRUCTURE TIP PROJECT B-4328 = 0.027 MI
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Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: NOVEMBER 9, 2010

LETTING DATE: NOVEMBER 15, 2011

JAMES A. SPEER, P.E.
PROJECT ENGINEER

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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

P.E.
STATE HIGHWAY DESIGN ENGINEER

21-DEC-2010 09:53
r:\roadway\proj\b4328_rdy_tsh.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-4328	1-A

ROADWAY DESIGN ENGINEER

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

INDEX OF SHEETS

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C	LOCATION AND SURVEYS
2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
2-	DETAIL SHEETS
3	SUMMARY OF QUANTITIES
3A	SUMMARY OF DRAINAGE QUANTITIES, SUMMARY OF GUARDRAIL, EARTHWORK SUMMARY, AND ASPHALT PAVEMENT REMOVAL SUMMARY, SHOULDER BERM SUMMARY
4	PLAN SHEET
5	PROFILE SHEET
TCP-1 THRU TCP-	TRAFFIC CONTROL PLANS
PM-1 THRU PM-	PAVEMENT MARKING PLANS
L-1 THRU L-	LANDSCAPE PLANS
RF-1 THRU RF-	REFORESTATION PLANS
EC-1 THRU EC-	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-	SIGNING PLANS
U-1 THRU U-	UTILITIES PLANS
X-1A	CROSS-SECTION SUMMARY
X-1 THRU X-	CROSS-SECTIONS
S-1 THRU S-	STRUCTURE PLANS

GENERAL NOTES

STANDARD DRAWINGS

09/08/08

PROJECT REFERENCE NO.	SHEET NO.
B-4328	1-B

Note: Not to Scale

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — IP
- Property Corner
- Property Monument — CM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

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

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Wheel Chair Ramp — WCR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole — HH
- H-Frame Pole
- Recorded U/G Power Line — P
- Designated U/G Power Line (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Booth
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- Recorded U/G Telephone Cable — T
- Designated U/G Telephone Cable (S.U.E.*) — T
- Recorded U/G Telephone Conduit — TC
- Designated U/G Telephone Conduit (S.U.E.*) — TC
- Recorded U/G Fiber Optics Cable — T FO
- Designated U/G Fiber Optics Cable (S.U.E.*) — T FO

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

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

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line — PUTL
- U/G Tank; Water, Gas, Oil
- A/G Tank; Water, Gas, Oil
- U/G Test Hole (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

SURVEY CONTROL SHEET B-4328

BASELINE DATA

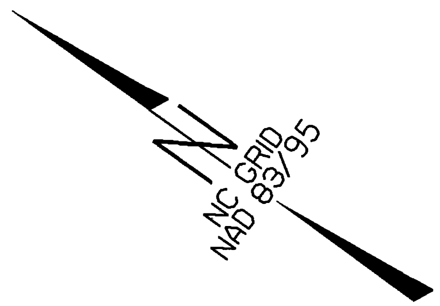
BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
101	BL-101	678678.3250	2311153.5680	85.07	10+24 58	13.72 LT
102	BL-102	678217.9260	2311489.2350	84.07	15+94.34	17.15 LT
103	BL-103	677546.4830	2311971 4760	88.15	24+21 01	16.23 LT

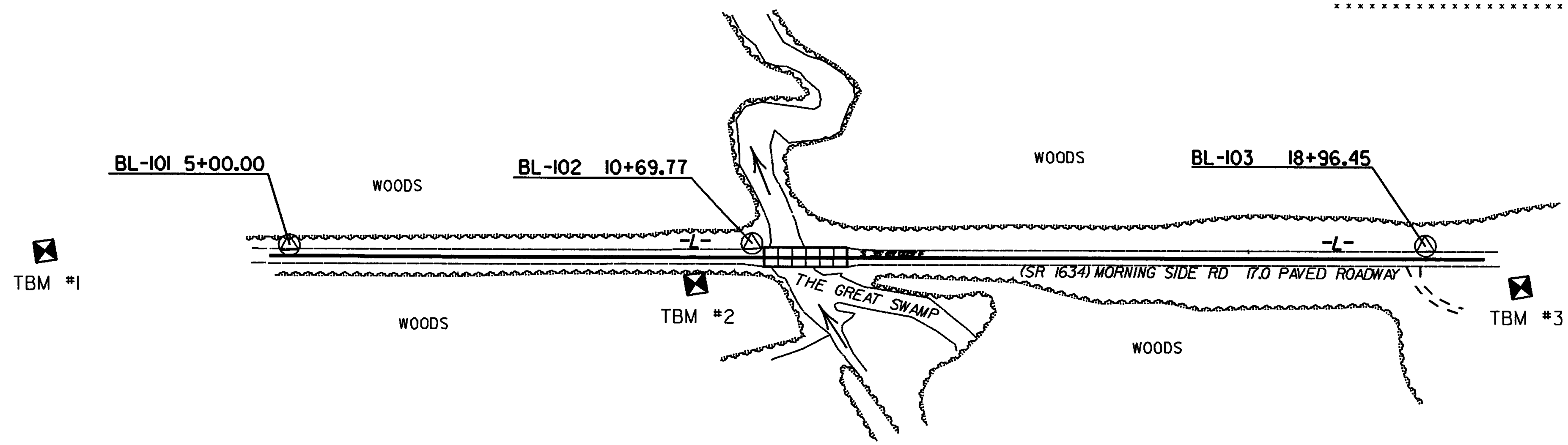
BENCHMARK DATA

TBM #1 ELEVATION = 86.78
N 678918 E 2310970
L STATION 10+00
N 34° 44′ 33.0″ W DIST 276.73
RR SPIKE IN BASE OF 30" OAK

TBM #2 ELEVATION = 81 91
N 678245 E 2311408
L STATION 15+24 33 RIGHT
RR SPIKE IN BASE OF 20" SYCAMORE

TBM #3 ELEVATION = 93.15
N 677422 E 2311998
L STATION 24+93
S 2° 08′ 10.2″ W DIST 56.74
RR SPIKE IN BASE OF POWER POLE





DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS B4328-2" WITH NAD 83/95 STATE PLANE GRID COORDINATES OF NORTHING: 676953.994(ft) EASTING: 2312401.458(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99989306 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS B4328-2" TO -L- STATION 10+00.00 IS N 36°15′23.7″ W 2153.16 FT. ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

NOTE: DRAWING NOT TO SCALE

NOTES:

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

   THE FILES TO BE FOUND ARE AS FOLLOWS: B4328_LS_CONTROL_081121.TXT

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

(symbol) INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING SERVICE (OPUS)

SURVEY CONTROL SHEET B-4328

PRELIMINARY

ROW MONUMENTS

ALIGN	STATION	OFFSET	NORTH	EAST
L	18+00.00	-40.00	678064.3660	2311627 9384
L	18+00.00	-30.00	678058.5234	2311619.8227
L	18+00.00	30.00	678023.4683	2311571.1284
L	18+00.00	40.00	678017.6257	2311563.0127
L	14+79.00	-40.00	678324.8800	2311440.3934
L	14+79.00	-30.00	678319.0375	2311432.2777
L	14+79.00	30.00	678283.9827	2311383.5831
L	14+79.00	40.00	678278.1402	2311375.4674

PERMANENT DRAINAGE EASEMENT POINTS

ALIGN	STATION	OFFSET	NORTH	EAST
L	19+68.00	30.00	677887.1234	2311669.2836
L	19+26.00	30.00	677921.2094	2311644.7449
L	19+26.00	70 00	677897.8393	2311612.2821
L	19+68.00	70.00	677863.7552	2311636.8194
L	14+79.00	-58 00	678335.3957	2311455.0023
L	15+21.00	-58.00	678301.3097	2311479.5409
L	15+21.00	-40.00	678290 7932	2311464.9327
L	14+79 00	-40.00	678324.8800	2311440.3934

DESIGN ALIGNMENT -L-

ALIGN	STATION	OFFSET	NORTH	EAST
L	24+93.30	0.00	677478.3310	2312000.5400
L	10+00.00	0.00	678690.2530	2311128 0730

NOTES:

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

   THE FILES TO BE FOUND ARE AS FOLLOWS: B4328_LS_CONTROL_081114.TXT

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

   PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM. NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING SERVICE (OPUS)

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS B4328-2"
WITH NAD 83/95 STATE PLANE GRID COORDINATES OF
NORTHING: 676953.994(ft) EASTING: 2312401.458(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99989306
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS B4328-2" TO -L- STATION 10+00.00 IS
N 36°15'23.7" W 2153.16 FT.
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

NOTE: DRAWING NOT TO SCALE

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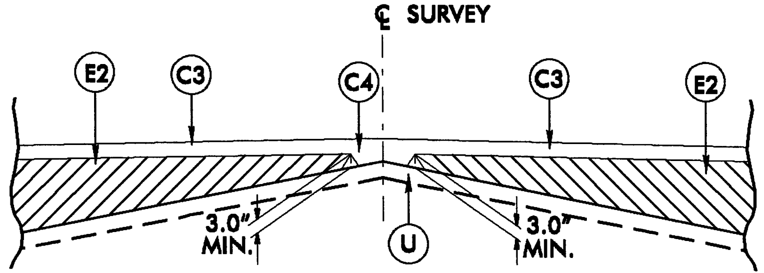
PROJECT REFERENCE NO.	SHEET NO.
B-4328	2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

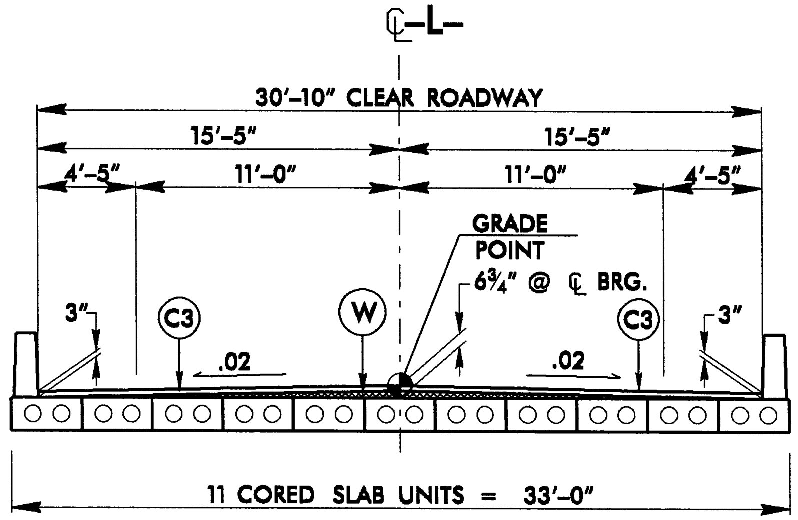
PAVEMENT SCHEDULE

C1	PROP APPROX. 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP APPROX. 2½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C4	PROP VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE DETAIL 1).
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.

NOTE: PAVEMENT EDGE SLOPES ARE 1.1 UNLESS SHOWN OTHERWISE

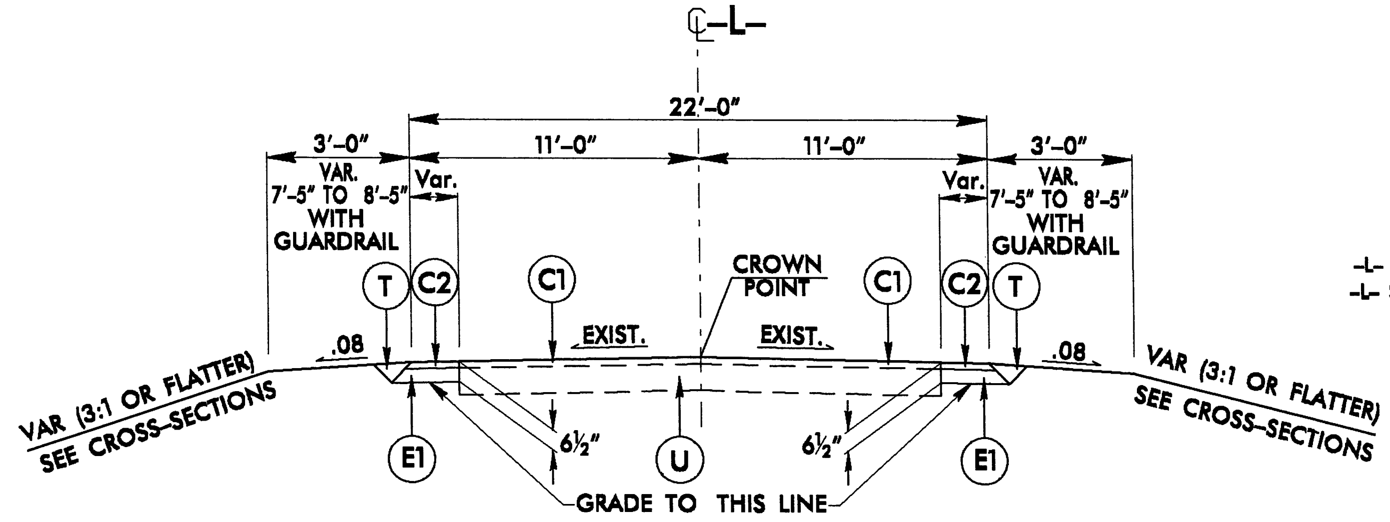


Detail Showing Method of Wedging
DETAIL 1



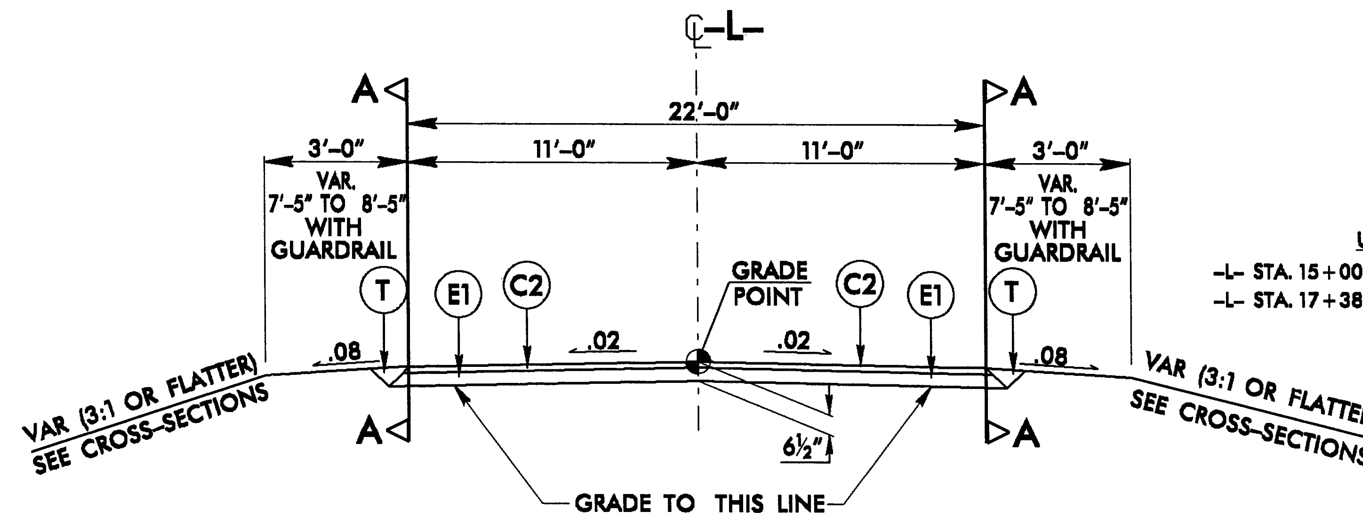
TYPICAL SECTION ON STRUCTURE

-L- STA. 15+97.00 TO -L- STA. 17+38.10



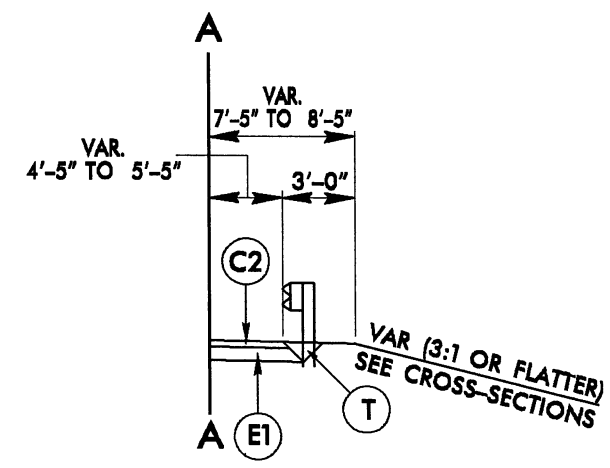
TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1
-L- STA. 13+00.00 to -L- STA. 15+00.00
-L- STA. 18+00.00 to -L- STA. 20+00.00



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2
-L- STA. 15+00.00 TO -L- STA. 15+97.00 (BEG. BRIDGE)
-L- STA. 17+38.10 (END BRIDGE) TO -L- STA. 18+00.00



SECTION A-A

USE SECTION A-A
(PAVED SHOULDERS)
-L- STA. 15+11.62 TO -L- STA. 15+81.87 (LT)
-L- STA. 17+44.87 TO -L- STA. 18+15.22 (LT)
-L- STA. 15+19.88 TO -L- STA. 15+90.13 (RT)
-L- STA. 17+53.13 TO -L- STA. 18+23.48 (RT)

NOTE:
INSTALL SHOULDER BERM GUTTER AS FOLLOWS:
-L- STA. 15+60.00 TO -L- STA. 15+81.87 (LT)
-L- STA. 17+44.87 TO -L- STA. 17+65.00 (LT)
-L- STA. 15+60.00 TO -L- STA. 15+90.13 (RT)
-L- STA. 17+53.13 TO -L- STA. 17+65.00 (RT)
SEE ROADWAY STD. DWG. NO. 846.04

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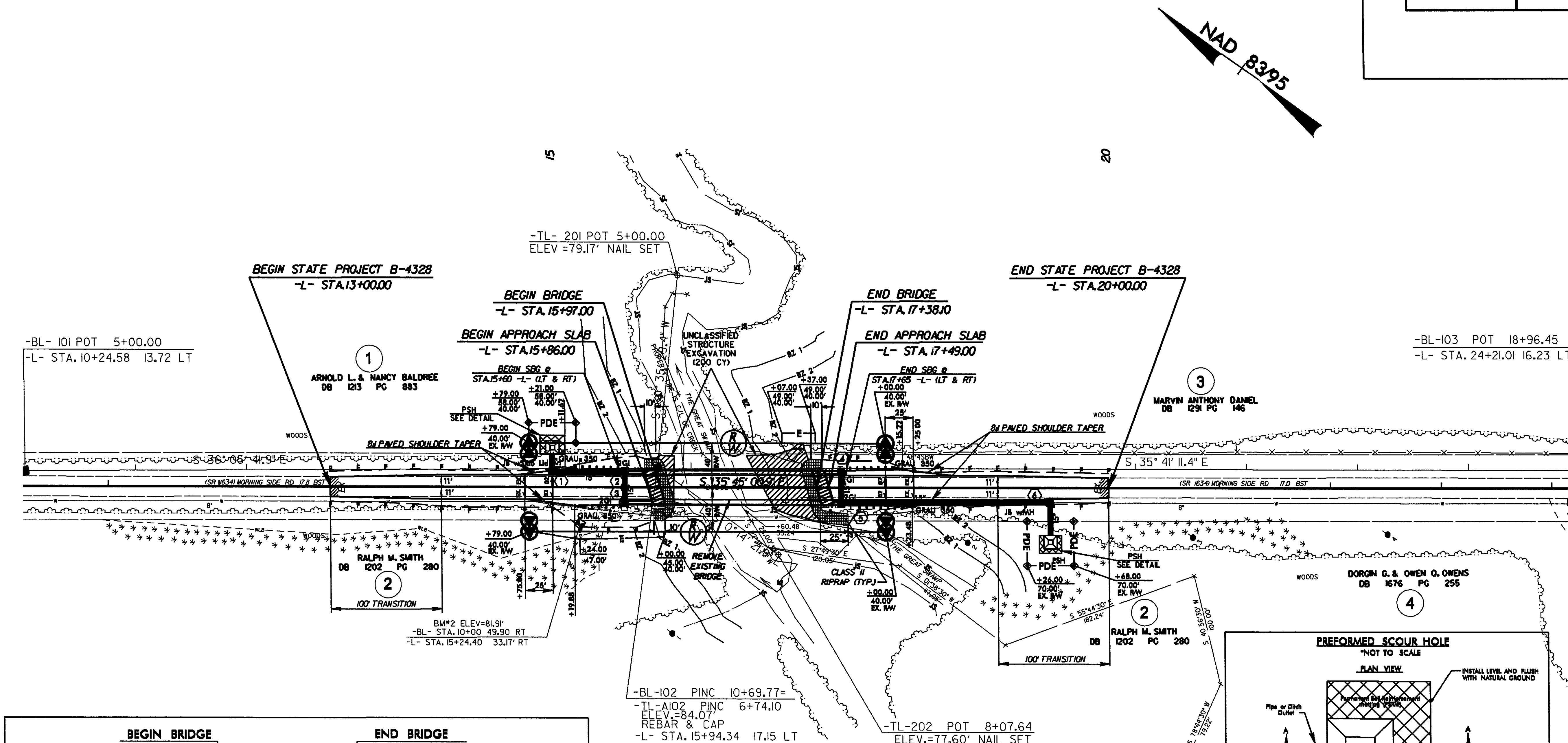
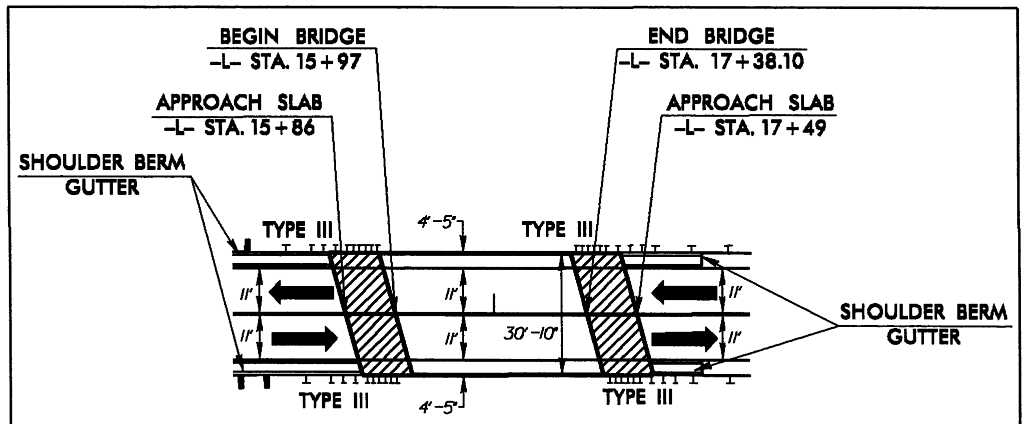
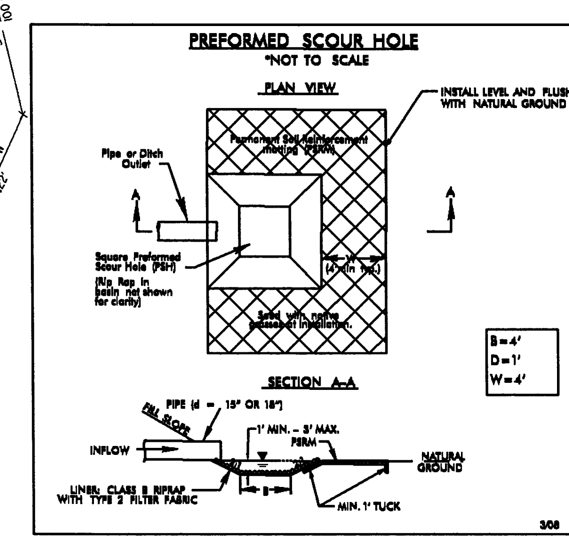
PROJECT REFERENCE NO.	SHEET NO.
B-4328	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION


NAD 83/95
BEGIN STATE PROJECT B-4328
-L- STA.13+00.00
BEGIN BRIDGE
-L- STA. 15+97.00
BEGIN APPROACH SLAB
-L- STA.15+86.00
END BRIDGE
-L- STA. 17+38.10
END APPROACH SLAB
-L- STA. 17+49.00
END STATE PROJECT B-4328
-L- STA.20+00.00
-TL- 201 POT 5+00.00
ELEV =79.17' NAIL SET
-BL- 101 POT 5+00.00
-L- STA. 10+24.58 13.72 LT
-BL-103 POT 18+96.45
-L- STA. 24+21.01 16.23 LT
ARNOLD L. & NANCY BALDREE
DB 1213 PG 883
MARVIN ANTHONY DANIEL
DB 1291 PG 146
RALPH M. SMITH
DB 1202 PG 280
DORGIN G. & OWEN O. OWENS
DB 1676 PG 255
UNCLASSIFIED STRUCTURE EXCAVATION (200 CY)
BEGIN SBG @ STA.15+60 -L- (LT & RT)
END SBG @ STA.17+65 -L- (LT & RT)
8:1 PAVED SHOULDER TAPER
(SR 1634) MORNING SIDE RD 17.8 BST
S 36° 05' 41.9" E
S 35° 41' 11.4" E
REMOVE EXISTING BRIDGE
CLASS II RIPRAP (TYP.)
PSH SEE DETAIL
100' TRANSITION
WOODS
BM#2 ELEV=81.91'
-BL- STA.10+00 49.90 RT
-L- STA. 15+24.40 33.17' RT
-BL-102 PINC 10+69.77=
-TL-A102 PINC 6+74.10
ELEV.=84.07'
REBAR & CAP
-L- STA. 15+94.34 17.15 LT
-TL-202 POT 8+07.64
ELEV.=77.60' NAIL SET



Sketch of Pavement in Relation to Bridge



NOTE: SEE SHEET NO. 5 FOR -L- PROFILE
SEE SHEET S- THRU S- FOR STRUCTURE PLANS

REVISIONS

8/17/99

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5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-4328	5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-L-

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 5000	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 84.8	FT
BASE DISCHARGE	= 7319	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 85.4	FT
OVERTOPPING DISCHARGE	= 5000 +/-	CFS
OVERTOPPING FREQUENCY	= 25	YRS
OVERTOPPING ELEVATION	= 84.8	FT
NORMAL WATER SURFACE ELEVATION	= 77 +/-	FT
DATE OF SURVEY	= 07/22/08	
W.S. ELEVATION AT DATE OF SURVEY	= 75.90'	FT

BEGIN RESURFACING
-L- STA. 13+00.00
EL = 85.27'

BEGIN GRADE
-L- STA. 15+00
EL = 85.00'

PI = 16+60.00
K = 190
EL = 85.64'
VC = 200'

END GRADE
-L- STA. 18+00
EL = 84.73'

END RESURFACING
-L- STA. 20+00.00
EL = 84.22'

BRIDGE ℄ STA. 16+67.00
ELEV. = 85.37'
SKEW = 75°
PROPOSED SPANS 1@ 50', 1@ 45', 1@ 46'-1¼"
CONCRETE CORED SLAB

(-)4.000%

(+)4.500%

UNCLASSIFIED STRUCTURE EXCAVATION

TBM #2 R/R SPIKE IN BASE OF 20" SYCAMORE
-L- STA. 15+24.40 33.17' RT. ELEV = 81.91'
N 678245.2810 E 2311407.5330

NOTE: SEE SHEET 4 FOR -L- DESIGN

100 90 80 70 60 50 40 30 20 10

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

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PROJ. REFERENCE NO.	SHEET NO.
B-4328	X-1

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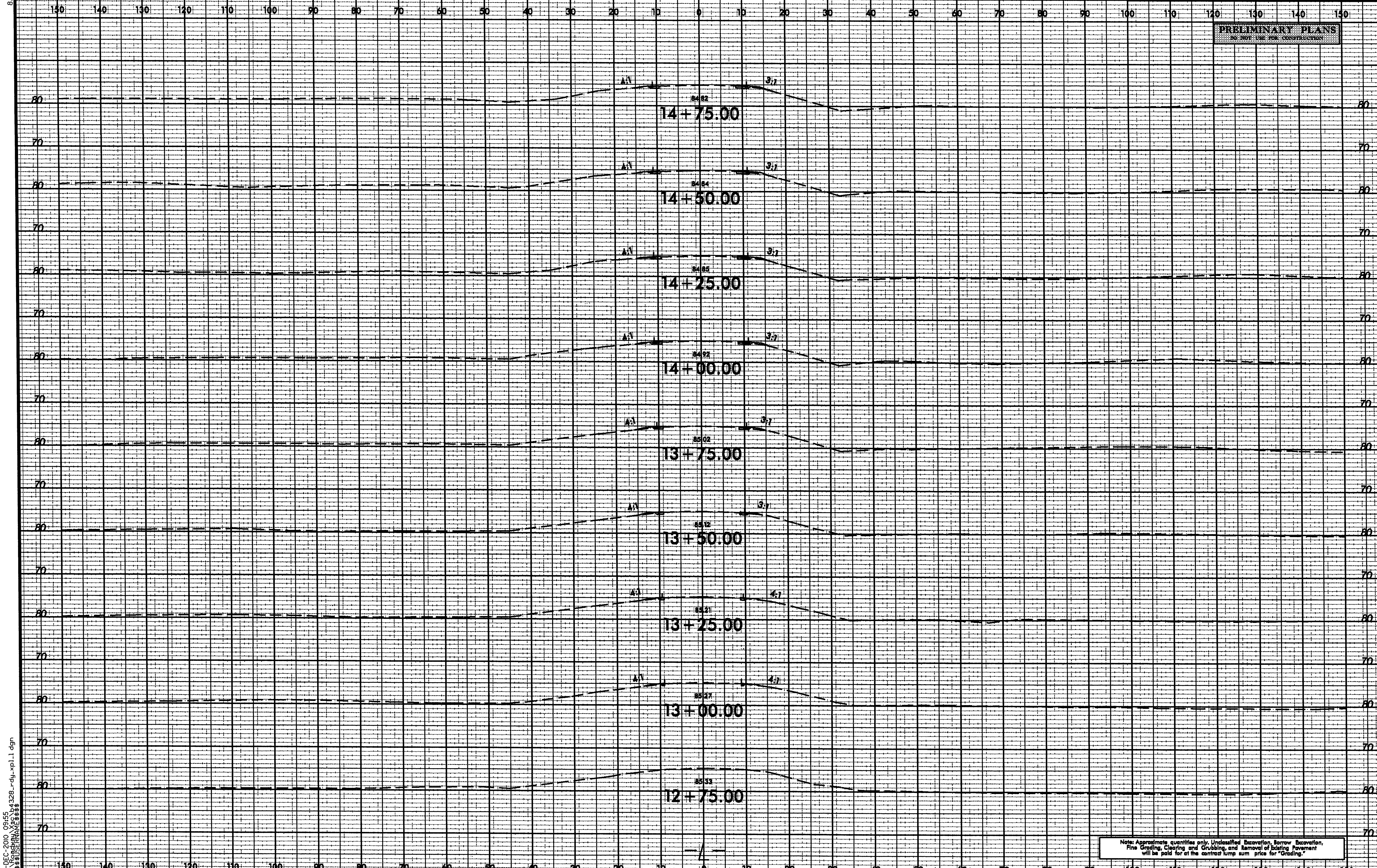
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



Note: Approximate quantities only. Unclassified Excavation, Borrow Excavation, Fine Grading, Clearing and Grubbing, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."

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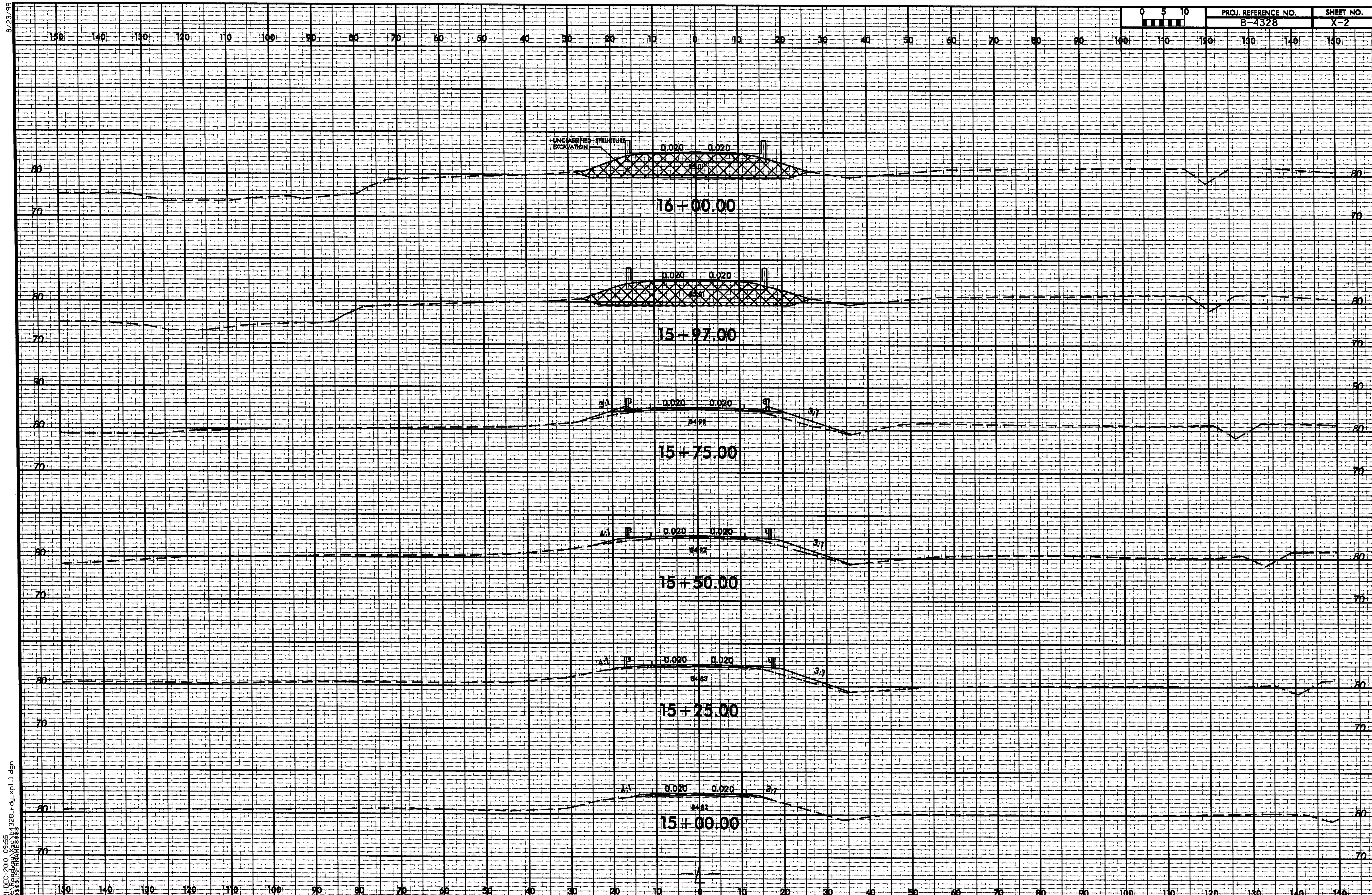

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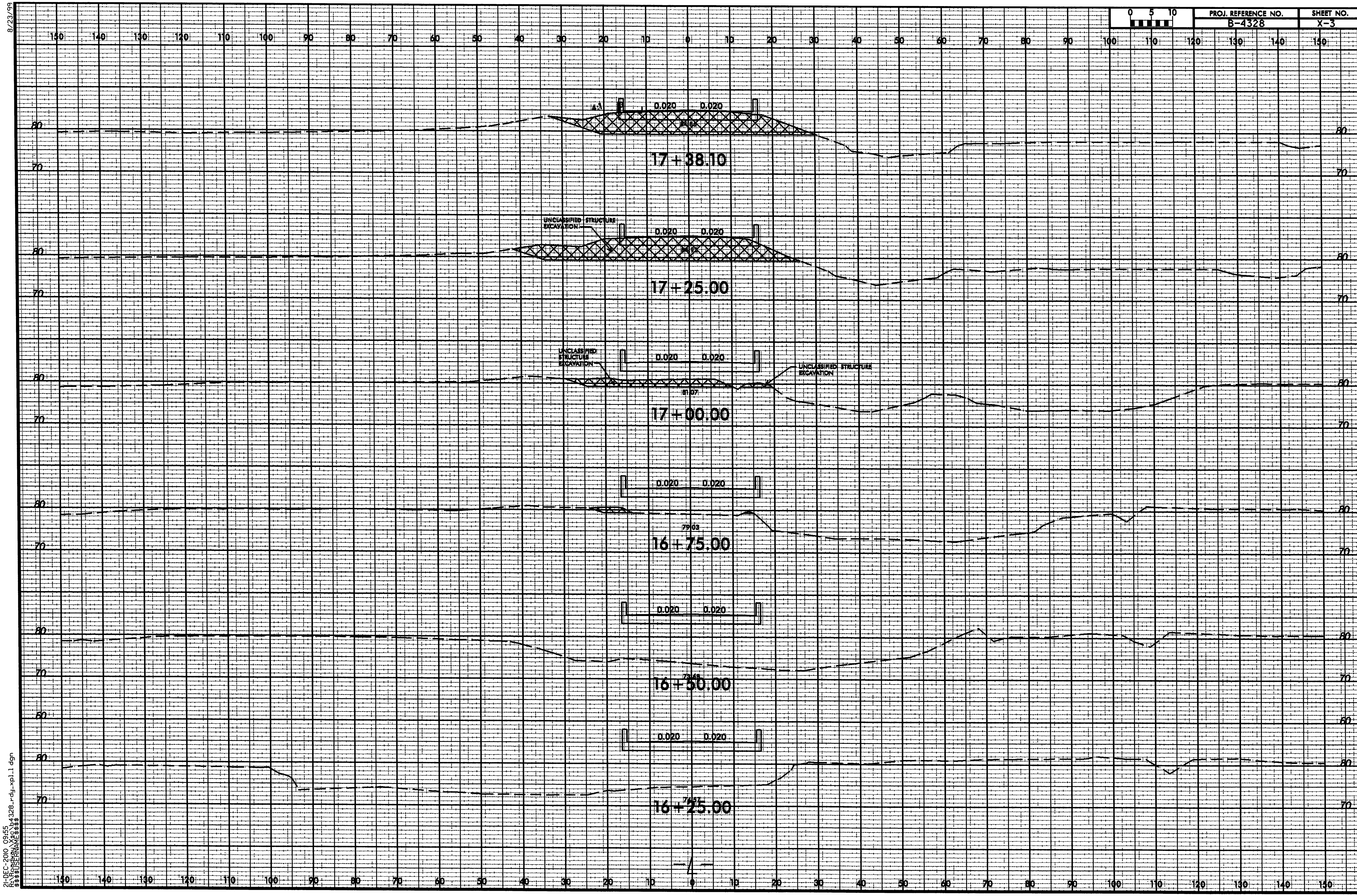
PROJ. REFERENCE NO.	SHEET NO.
B-4328	X-3



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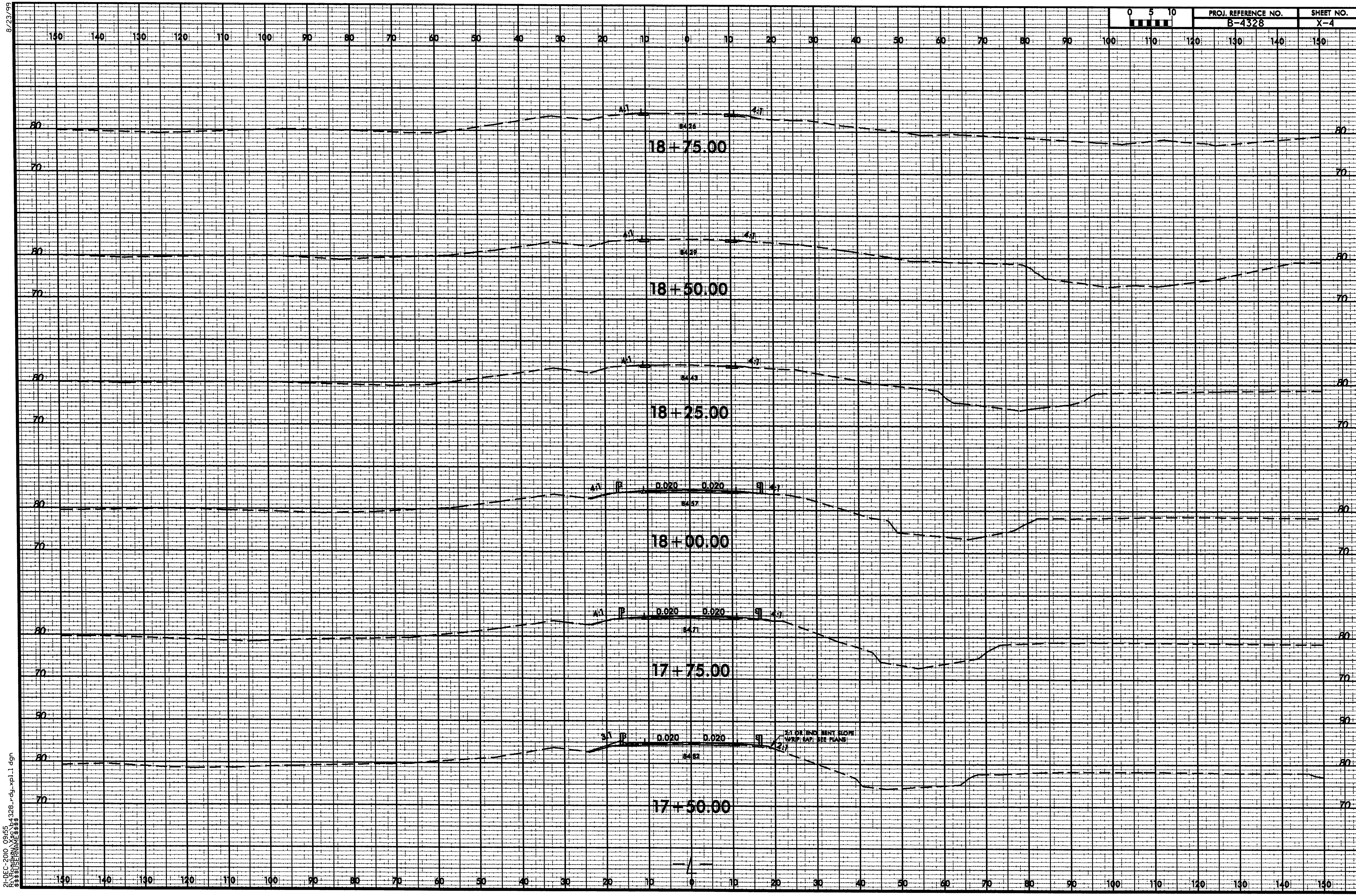
PROJ. REFERENCE NO.	SHEET NO.
B-4328	X-4



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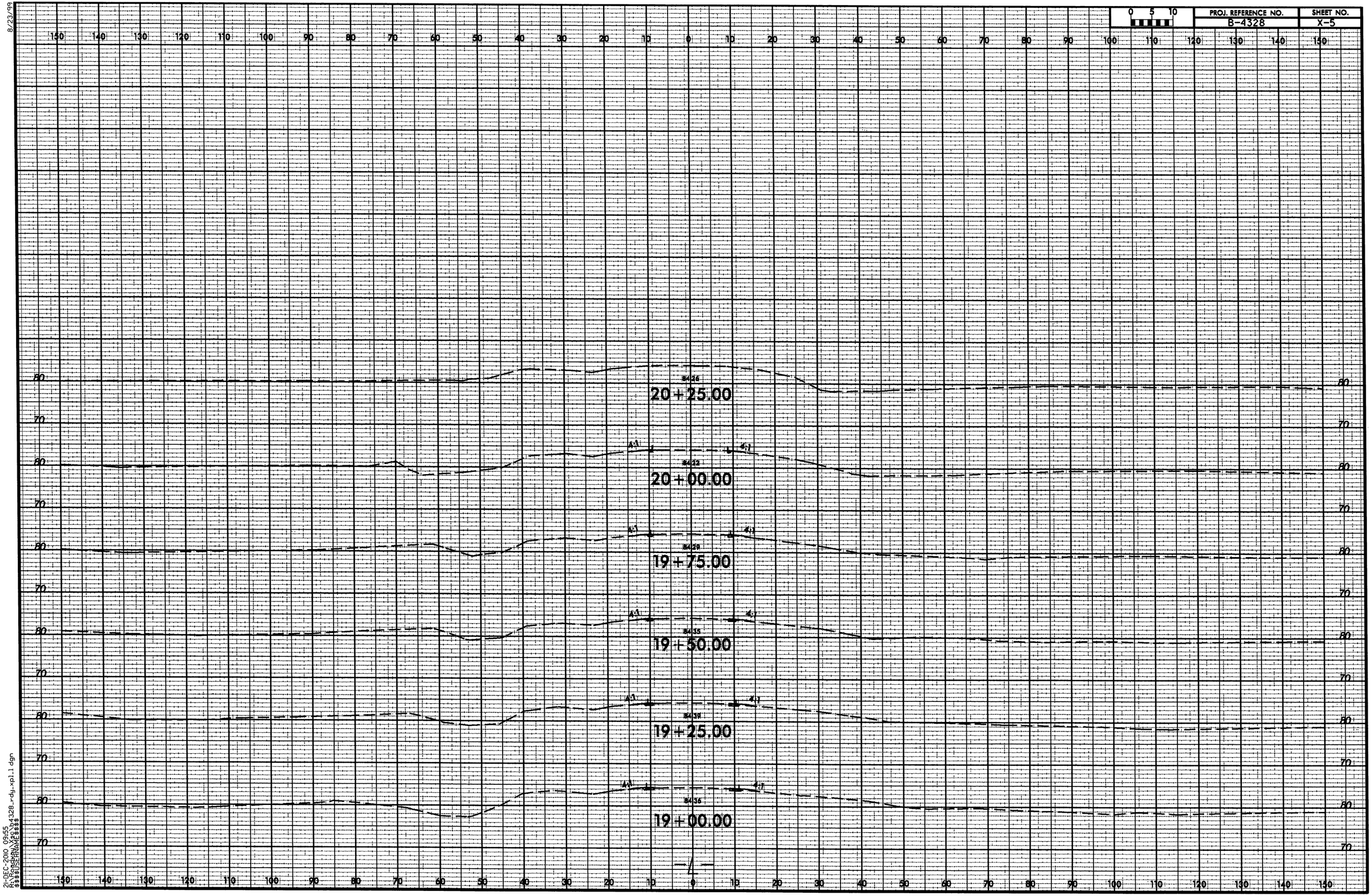
PROJ. REFERENCE NO.	SHEET NO.
B-4328	X-5



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