



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

April 6, 2011

U. S. Army Corps of Engineers
Regulatory Field Office
PO Box 1000
Washington, NC 27899-1000

ATTN: Mr. Tom Steffens
NCDOT Coordinator

Dear Sir:

Subject: Application for Section 404 General Permit 31, Section 401 Water Quality Certification, and Tar-Pamlico Riparian Buffer Authorization for the replacement of Bridge No. 69 over West Bear Creek on SR 1501 in Lenior County. State Project No. 8.2200701; Debit \$240 from WBS 33774.1.1; Federal Aid Project Number BRZ-1501(6); TIP No. B-4567.

The North Carolina Department of Transportation (NCDOT), Division of Highways, in consultation with the Federal Highway Administration (FHWA), proposes to replace Bridge No. 69 in Lenior County. The proposed let date for the project is December 20, 2011 with a review date of November 1, 2011; however, the let date may advance as additional funds become available.

Please find enclosed a Pre-Construction Notification (PCN) form, permit drawings, buffer drawings, utility drawings, roadway plans, and a copy of the State Stormwater Management Plan. A Programmatic Categorical Exclusion (PCE) was completed for this project on January 8, 2007, and distributed shortly thereafter. Additional copies are available upon request.

Regulatory Approvals

Section 404 Permit: NCDOT requests that a General Permit 198200031 be issued to authorize the impacts resulting from this project in accordance with 23 CFR 771.115(b).

Section 401 Permit: We anticipate 401 Certification number 3820 will apply to this project. All general conditions of the Water Quality Certification will be met and we are requesting written approval from NCDWQ. In accordance with 15A NCAC 2H, Section .0500(a), we are providing three copies of this application to the NCDWQ for their approval.

Tar-Pamlico River Basin Buffer Authorization: NCDOT requests that the NC Division of Water Quality review this application and issue a written approval for a Tar-Pamlico 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 call or email Dr. Lance P. Fontaine at 919-707-6118 or lpfontaine@ncdot.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "G. J. Thorpe". The signature is written in a cursive style with a large initial "G".

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

cc:

NCDOT Permit Application Standard Distribution List



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

Pre-Construction Notification (PCN) Form

A. Applicant Information

1. Processing

1a. Type(s) of approval sought from the Corps:	<input checked="" type="checkbox"/> Section 404 Permit	<input type="checkbox"/> Section 10 Permit
1b. Specify Nationwide Permit (NWP) number:	or General Permit (GP) number: 198200031	
1c. Has the NWP or GP number been verified by the Corps?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1d. Type(s) of approval sought from the DWQ (check all that apply):		
<input checked="" type="checkbox"/> 401 Water Quality Certification – Regular <input type="checkbox"/> Non-404 Jurisdictional General Permit <input type="checkbox"/> 401 Water Quality Certification – Express <input checked="" type="checkbox"/> Riparian Buffer Authorization		
1e. Is this notification solely for the record because written approval is not required?	For the record only for DWQ 401 Certification: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	For the record only for Corps Permit: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
1f. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts? If so, attach the acceptance letter from mitigation bank or in-lieu fee program.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1g. Is the project located in any of NC's twenty coastal counties. If yes, answer 1h below.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1h. Is the project located within a NC DCM Area of Environmental Concern (AEC)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

2. Project Information

2a. Name of project:	Replacement of Bridge 69 over West Bear Creek on SR 1501
2b. County:	Lenior
2c. Nearest municipality / town:	La Grange
2d. Subdivision name:	<i>not applicable</i>
2e. NCDOT only, T.I.P or state project no:	B-4567

3. Owner Information

3a. Name(s) on Recorded Deed:	North Carolina Department of Transportation
3b. Deed Book and Page No.	<i>not applicable</i>
3c. Responsible Party (for LLC if applicable):	<i>not applicable</i>
3d. Street address:	1598 Mail Service Center
3e. City, state, zip:	Raleigh, NC 27699-1598
3f. Telephone no.:	(919) 707-6118
3g. Fax no.:	(919) 212-5785
3h. Email address:	lfontaine@ncdot.gov

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

B. Project Information and Prior Project History	
1. Property Identification	
1a. Property identification no. (tax PIN or parcel ID):	<i>not applicable</i>
1b. Site coordinates (in decimal degrees):	Latitude: 35.345162 (DD.DDDDD) Longitude: - 77.819477 (-DD.DDDDD)
1c. Property size:	1.5 acres
2. Surface Waters	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	West Bear Creek
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: Existing conditions on the site include mostly forested and timbered areas with maintained/disturbed roadside shoulders and access to West Bear Creek. Land use in the project vicinity is predominantly agriculture.	
3b. List the total estimated acreage of all existing wetlands on the property: 0.02	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 80	
3d. Explain the purpose of the proposed project: To replace a structurally deficient and functionally obsolete existing bridge.	
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing a 81-foot bridge with a 100-foot, 2-span bridge on the existing alignment with an off-site detour. Standard road building equipment, such as trucks, dozers, and cranes will be used. Overhead powerline utility will be relocated away from bridge and water line will be relocated via directional bore (trenchless method) without impacts to wetland areas or West Bear Creek.	
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: Mike Bell from USACE performed field review on 02 Nov 2004.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
4b. If the Corps made the jurisdictional determination, what type of determination was made?	<input type="checkbox"/> Preliminary <input checked="" type="checkbox"/> Final
4c. If yes, who delineated the jurisdictional areas? Name (if known): E. Workman	Agency/Consultant Company: RK&K Consultant Other:
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation. Mike Bell from USACE performed field review on 02 Nov 2004. Mr. Bell made changes to the initial delineation based on field visit but no tear sheet was provided. RK&K provided revised wetland boundaries and maps based on Mr. Bell's changes and approval.	
5. Project History	
5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
5b. If yes, explain in detail according to "help file" instructions.	

6. Future Project Plans

6a. Is this a phased project?

Yes

No

6b. If yes, explain.

C. Proposed Impacts Inventory						
1. Impacts Summary						
1a. Which sections were completed below for your project (check all that apply):						
<input checked="" type="checkbox"/> Wetlands		<input checked="" type="checkbox"/> Streams - tributaries		<input checked="" type="checkbox"/> Buffers		
<input type="checkbox"/> Open Waters		<input type="checkbox"/> Pond Construction				
2. Wetland Impacts						
If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.						
2a. Wetland impact number – Permanent (P) or Temporary (T)	2b. Type of impact	2c. Type of wetland (if known)	2d. Forested	2e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	2f. Area of impact (acres)	
Site 1 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Fill	Riparian	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	0.01	
Site 2 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Mechanized clearing	Riparian	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	0.01	
Site 3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 4 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 5 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 6 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
2g. Total wetland impacts					0.02 Permanent 0.00 Temporary	
2h. Comments: Impacts due to improvement of canal access road.						
3. Stream Impacts						
If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.						
3a. Stream impact number - Permanent (P) or Temporary (T)	3b. Type of impact	3c. Stream name	3d. Perennial (PER) or intermittent (INT)?	3e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	3f. Average stream width (feet)	3g. Impact length (linear feet)
Site 1 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Pipe	West Bear Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	30	5
Site 2 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 4 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 5 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 6 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
3h. Total stream and tributary impacts					5 Perm 0 Temp	
3i. Comments: In NW quad, replace existing 24" corrugated metal pipe (pipe) with 48" reinforced concrete pipe. Flatten slope of pipe at outlet and incorporate drop structure to reduce velocity into stream. Impacts of piers to surface waters = 0.9 sf.						

4. Open Water Impacts

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

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

4g. Comments:

5. Pond or Lake Construction

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

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

5g. Comments:

5h. Is a dam high hazard permit required?	<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, permit ID no:
5i. Expected pond surface area (acres):	
5j. Size of pond watershed (acres):	
5k. Method of construction:	

6. Buffer Impacts (for DWQ)

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


6a. Project is in which protected basin?			<input checked="" type="checkbox"/> Neuse <input type="checkbox"/> Catawba	<input type="checkbox"/> Tar-Pamlico <input type="checkbox"/> Randleman	<input type="checkbox"/> 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 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Access Road	West Bear Creek	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1,012	510
B2 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Road Fill	West Bear Creek	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	171	455
B3 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Bridge	West Bear Creek	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1,175	0
6h. Total buffer impacts				2,358	965
6i. Comments: As discussed during on-site field meeting March 23, 2011: Pipe in NW quad replaces existing pipe. Pipe in NE quad discharges into existing roadside ditch.					

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 19 feet longer than the existing bridge; the proposed bridge will be at approximately the same grade as the existing structure; an off site detour will be used, 3:1 fill slopes where practicable. In NW quad, replacing existing 24" corrugated metal pipe (pipe) with 48" reinforced concrete pipe; flattening slope of pipe at outlet and incorporating a drop structure to reduce velocity into stream. In NE quad, direct outlet to an existing roadway ditch to rip rap pad, not in buffer. Ditches in NW and SW quads will be grassy swales that are directed to existing ditches outside of buffer. Reduce overhead power poles in buffer zone and replace outside of buffer zone. No deck drains. No new or created ditches in buffer zones. Increased bridge opening for improved hydrological conveyance. Design Standards in Sensitive Watersheds will also be implemented.		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques. Top-down construction; water utility will use trenchless method (directional bore) to place facility under West Bear Creek;		
2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State		
2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If no, explain: Due to minimal impacts to Water of the U.S., NCDOT is not proposing compensatory mitigation.	
2b. If yes, mitigation is required by (check all that apply):	<input type="checkbox"/> DWQ <input type="checkbox"/> Corps	
2c. If yes, which mitigation option will be used for this project?	<input type="checkbox"/> Mitigation bank <input type="checkbox"/> Payment to in-lieu fee program <input type="checkbox"/> Permittee Responsible Mitigation	
3. Complete if Using a Mitigation Bank		
3a. Name of Mitigation Bank: not applicable		
3b. Credits Purchased (attach receipt and letter)	Type	Quantity
3c. Comments:		
4. Complete if Making a Payment to In-lieu Fee Program		
4a. Approval letter from in-lieu fee program is attached.	<input type="checkbox"/> Yes	
4b. Stream mitigation requested:	linear feet	
4c. If using stream mitigation, stream temperature:	<input type="checkbox"/> warm <input type="checkbox"/> cool <input type="checkbox"/> cold	
4d. Buffer mitigation requested (DWQ only):	square feet	
4e. Riparian wetland mitigation requested:	acres	
4f. Non-riparian wetland mitigation requested:	acres	
4g. Coastal (tidal) wetland mitigation requested:	acres	
4h. Comments:		
5. Complete if Using a Permittee Responsible Mitigation Plan		
5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan.		

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

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

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

5. Endangered Species and Designated Critical Habitat (Corps Requirement)		
5a. Will this project occur in or near an area with federally protected species or habitat?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5c. If yes, indicate the USFWS Field Office you have contacted.	<input checked="" type="checkbox"/> Raleigh	<input type="checkbox"/> Asheville
5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? NCNHP, USFWS, field surveys.		
6. Essential Fish Habitat (Corps Requirement)		
6a. Will this project occur in or near an area designated as essential fish habitat?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
6b. What data sources did you use to determine whether your site would impact Essential Fish Habitat? NMFS County Index		
7. Historic or Prehistoric Cultural Resources (Corps Requirement)		
7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
7b. What data sources did you use to determine whether your site would impact historic or archeological resources? NEPA Documentation		
8. Flood Zone Designation (Corps Requirement)		
8a. Will this project occur in a FEMA-designated 100-year floodplain?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
8b. If yes, explain how project meets FEMA requirements: NCDOT Hydraulics Unit coordination with FEMA		
8c. What source(s) did you use to make the floodplain determination? FEMA Maps		
<u>Dr. Gregory J. Thorpe, Ph D</u> Applicant/Agent's Printed Name	 Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	<u>4-5-11</u> Date



General Project Information

Project No.: 33774.1.1 (B-4567)
 City/Town: Best, NC
 Date: 2/3/2011
 Designer: Galen Call, PE
 County(ies): Lenoir County
 Project Manager: Galen Call, PE
 River Basin(s): Neuse
 CAMA County? no
 TVA County? no
 NCDWQ Stream Index: Bear Creek
 NCDWQ Stream Index: C,Sw,NSW
 Primary Receiving Water: Bear Creek
 Primary: Class C
 Supplemental: Nutrient Sensitive Waters (NSW)

Other Stream Classification: Areas of Environmental Concern
 303(d) Stream? yes
 Type(s) of Impairment: Fair Bioclassification
 Aquatic Life
 State Stormwater Permit Required? no
 If yes, why?
 Could the Project Impact Threatened or Endangered Species? yes

Description: No Effect
 Anadromous Fish Present? no
 Description:
 Buffer Rules in Effect? yes
 Buffer Rules: Neuse River Basin

Existing Site

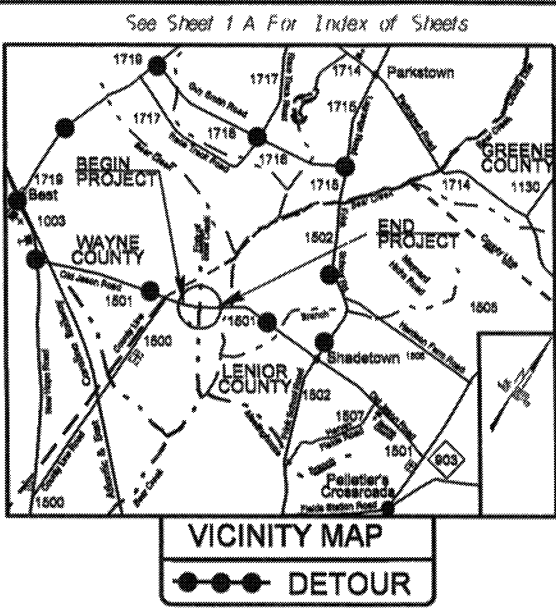
Description of Existing Project Area: SR 1501 (Old Jason Rd)
 Average Daily Traffic (existing): 390
 Existing Cross Section: 10' Travel Lanes, 3' Grass Shoulders
 Surrounding Land Use: Agriculture, Wooded
 General Comments:

Project Description

Description of Proposed Project: Replacement of Bridge #69 on SR 1501 (Old Jason Rd) over Fork of Bear Creek
 Average Daily Traffic (proposed): 700 (2030)
 Proposed Cross-Section: 11' Travel Lanes, 3' (6' w/guardrail) Grass Shoulders, 3.1 Side Slopes
 Interchange Modification: no
 Median Type: None
 Terminus: NA
 Terminus: NA
 Project Length (lin. miles/feet): 0.158mi.
 Added Impervious Area (ac.): 0.07ac

General Comments: No deck drains. No created ditches in buffer zones. Propose flattening slope of pipe outlet in NW quad and using drop structure to reduce velocity at stream. In NE quad, direct outlet to an existing roadway ditch to rip rap pad, not in buffer. Ditches in NW and SW quads will be grassy swales that are directed to existing ditches outside of buffer. Use 3:1 fill slopes thru wetland. Increased bridge opening for improved hydrological conveyance.

CONTRACT NO.: 33774.2.1 TIP PROJECT No.: B-4567

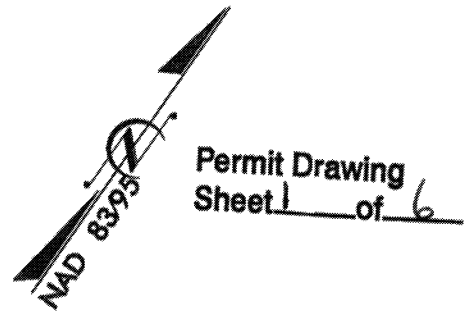


STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
LENOIR COUNTY

LOCATION: REPLACEMENT OF BRIDGE No. 69 ON SR 1501
 (OLD JASON ROAD) OVER A FORK OF WEST BEAR CREEK.

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

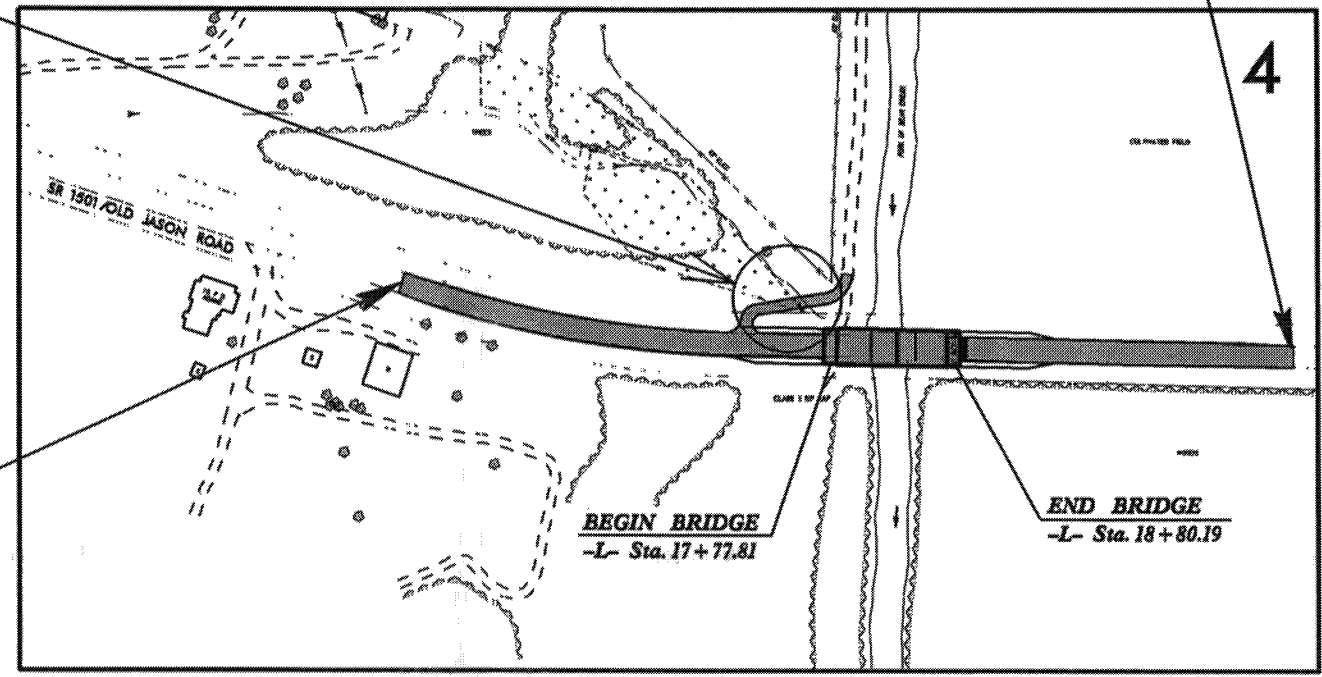
STATE PROJECT REFERENCE NO. B-4567	SHEET NO. I	TOTAL SHEETS
STATE PROJ. NO. 33774.1.1 33774.2.1	F.A. PROJ. NO. BRZ-1501 (6) BRZ-1501 (6)	DESCRIPTION P.E. RW, UTILITIES



WETLAND AND STREAM IMPACTS

END STATE PROJECT B-4567
 END F.A. PROJECT No. BRZ-1501 (6)
 -L- POT Sta. 22+00.00

SITE 1

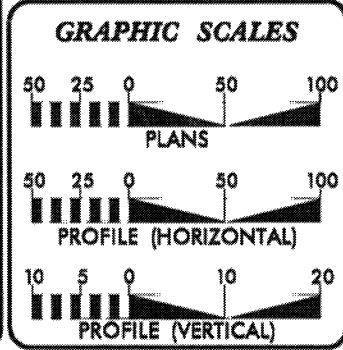


BEGIN STATE PROJECT B-4567
 BEGIN F.A. PROJECT No. BRZ-1501 (6)
 -L- POT Sta. 13+65.00

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

THIS PROJECT IS NOT WITH-IN ANY MUNICIPAL BOUNDARIES.

PRELIMINARY PLANS
 DO NOT USE FOR CONSTRUCTION



DESIGN DATA

ADT 2009 = 389
ADT 2030 = 700
DHV = 10 %
D = 60 %
T = 3 % *
V = 55 MPH
* TTST 1% DUAL 2%

PROJECT LENGTH

LENGTH OF ROADWAY PROJECT TIP No. B-4567 = 0.143 miles
LENGTH OF STRUCTURE PROJECT TIP No. B-4567 = 0.015 miles
TOTAL LENGTH OF PROJECT TIP No. B-4567 = 0.158 miles

THIS PROJECT DESIGNED USING SUB-TIER GUIDELINES.

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
 NOVEMBER 2, 2010

LETTING DATE:
 DECEMBER 20, 2011

JIMMY GOODNIGHT, PE
 PROJECT ENGINEER

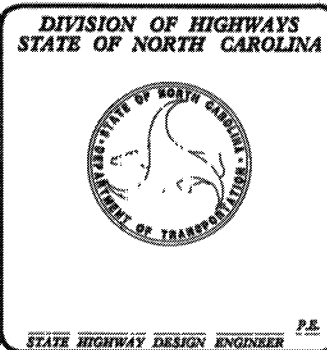
STEVE KENDALL, PE
 PROJECT DESIGN ENGINEER

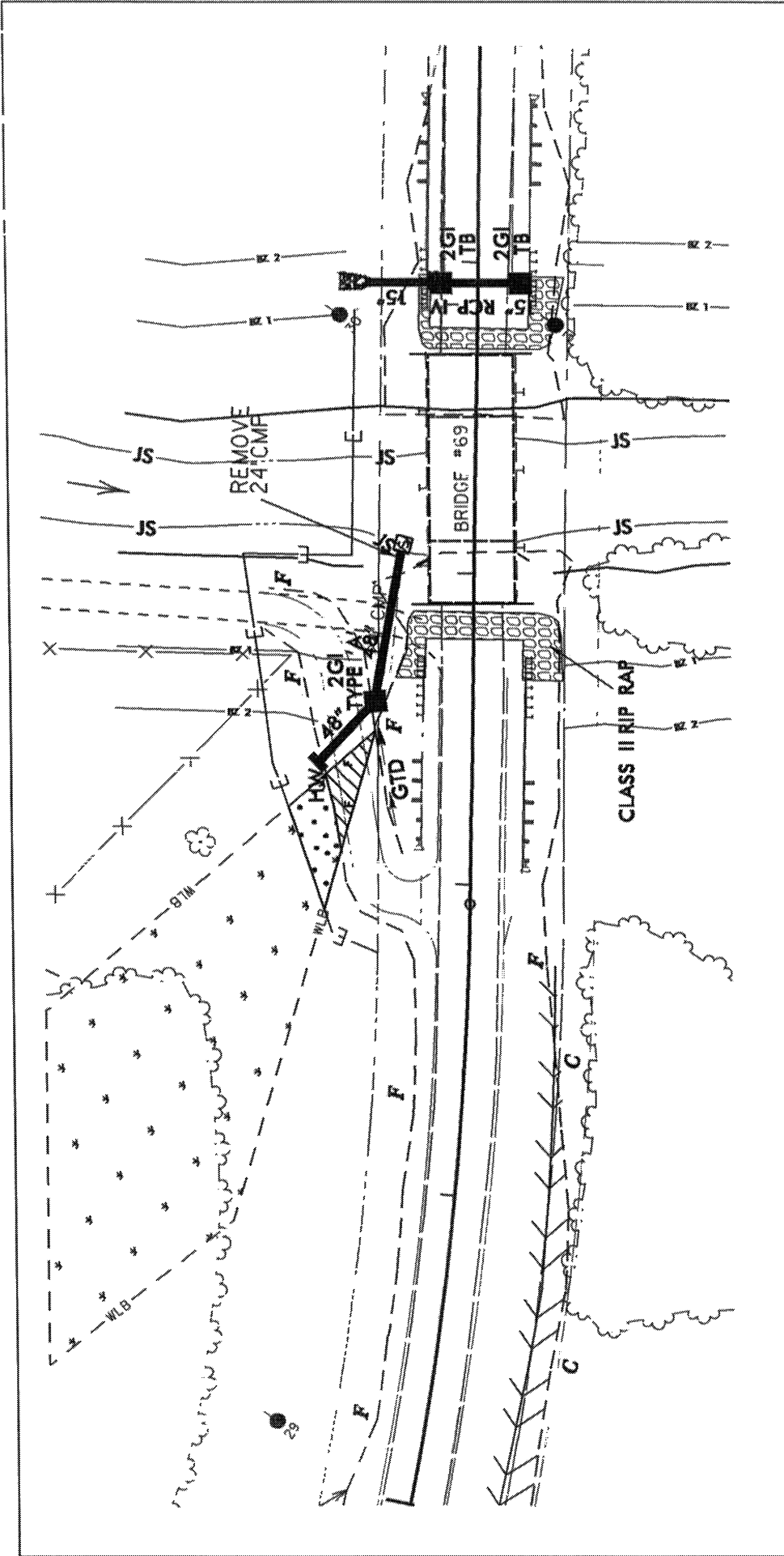
HYDRAULICS ENGINEER


SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER


SIGNATURE: _____ P.E.





 DENOTES FILL IN WETLAND

 DENOTES MECHANIZED CLEARING

 DENOTES IMPACTS IN SURFACE WATER

PLAN VIEW

Permit Drawing
Sheet 2 of 6

NCDOT

DIVISION OF HIGHWAYS

LENOIR COUNTY

PROJECT: 33774.1.1 (B-4667)

REPLACEMENT OF BRG. 69

ON SR-1501 (OLD JASON RD.) OVER

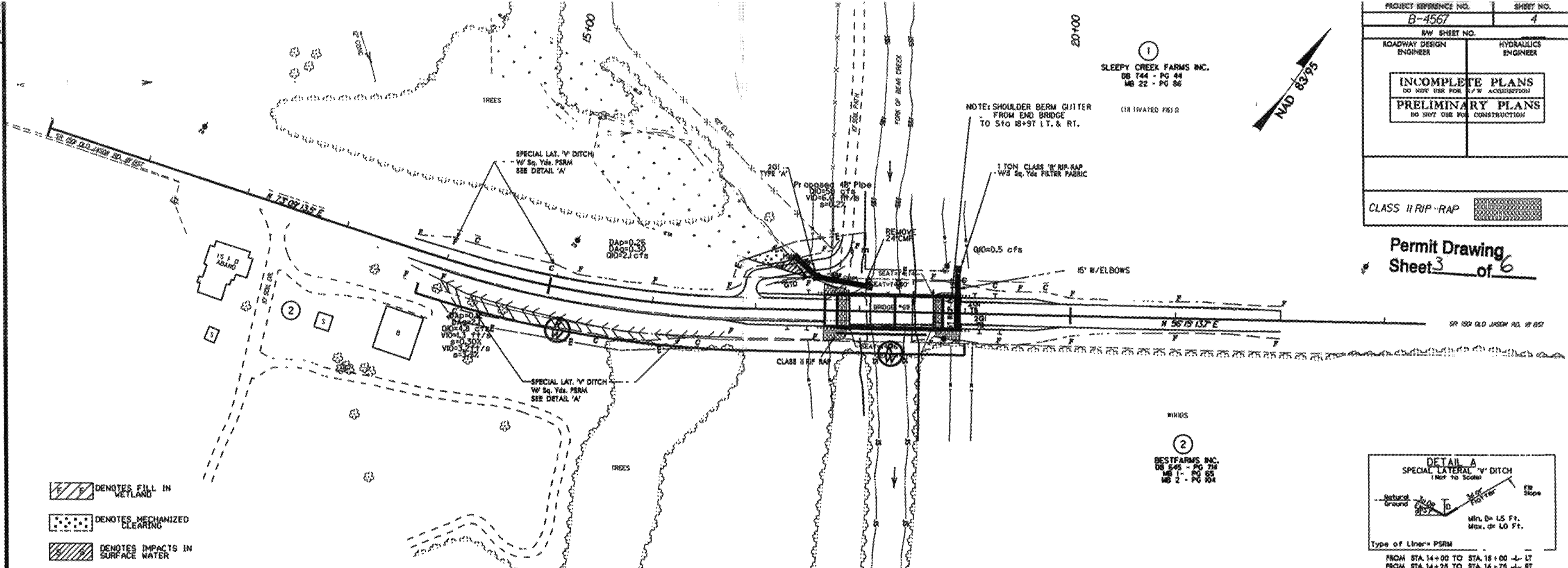
FORK OF WEST BEAR CRK.

February 9, 2011 Submitted to NEU

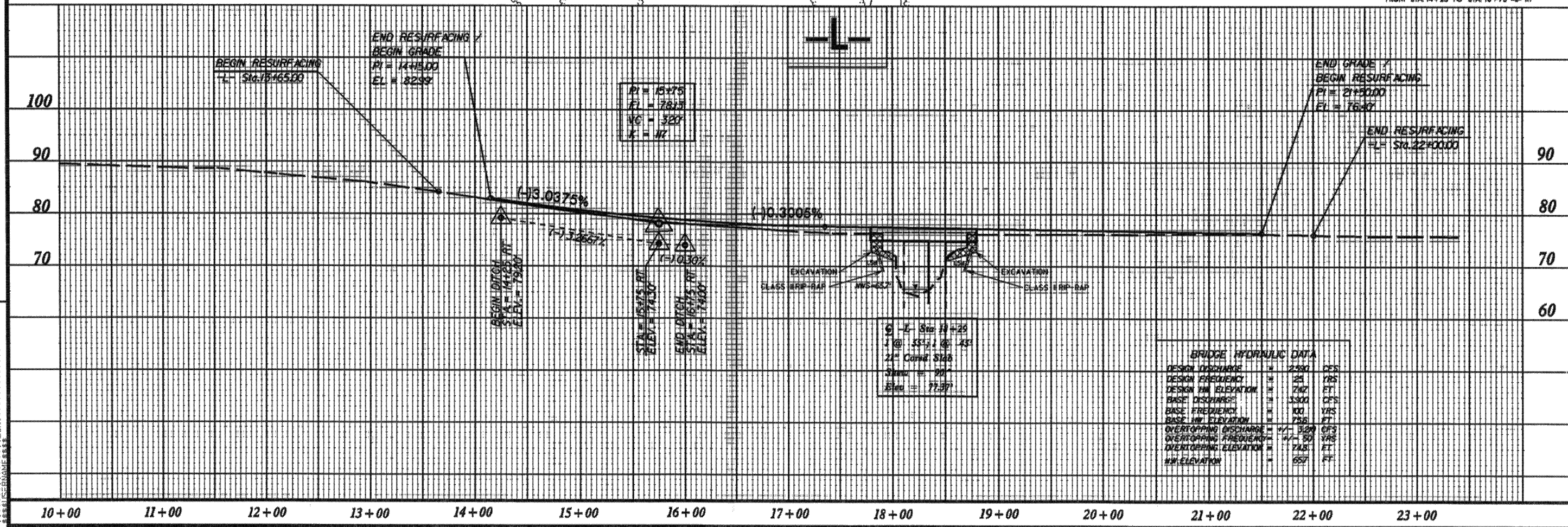
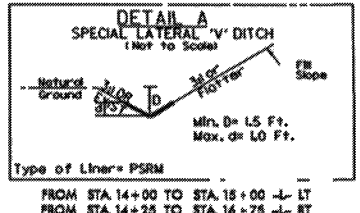
R/W REVISION - LETTER DATED FEBRUARY 21, 2011 BY T. BURNS
 1. ADDED PERMANENT UTILITY EASEMENT (PUE) ON PARCEL No. 2.
 2. CHANGED PERMANENT UTILITY EASEMENT (PUE) ON PARCEL No. 1 TO TEMPORARY UTILITY EASEMENT (TUE).

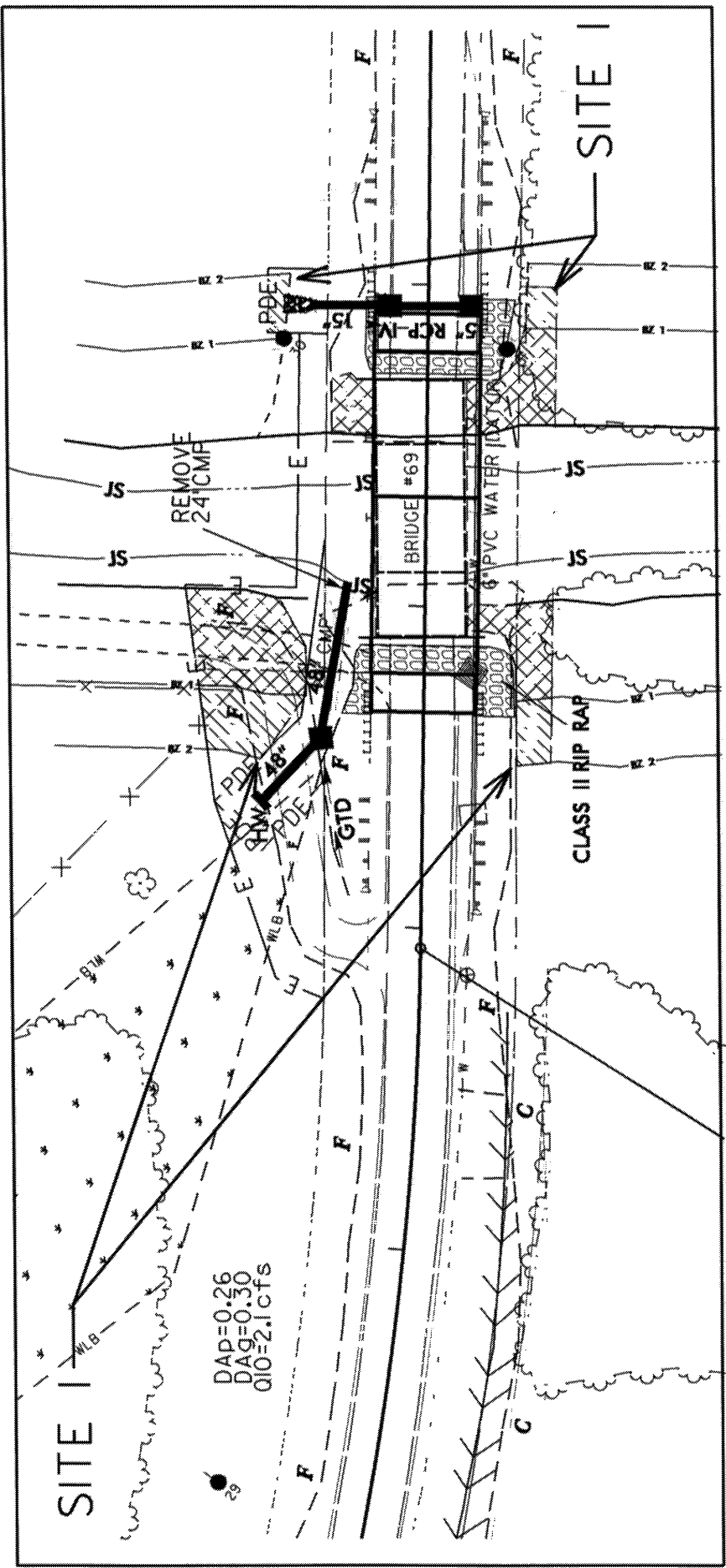
PROJECT REFERENCE NO. B-4567	SHEET NO. 4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
CLASS II RIP-RAP	



Permit Drawing
 Sheet 3 of 6



- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING
- DENOTES IMPACTS IN SURFACE WATER





-  ALLOWABLE IMPACTS ZONE 1
-  ALLOWABLE IMPACTS ZONE 2

PLAN VIEW

Buffer Drawing
Sheet 2 of 5

NCDOT
 DIVISION OF HIGHWAYS
 LENOIR COUNTY
 PROJECT: 33774.1.I (B-4667)
 REPLACEMENT OF BRG. 69
 ON SR-1501 (OLD JASON RD.) OVER
 FORK OF WEST BEAR CRK.

PROPERTY OWNERS
NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
①	SLEEPY CREEK FARMS INC.	PO DRAWER 10009 GOLDSBORO NC 27532
②	BESTFARMS INC.	1361 NEW HOPE RD. LAGRANGE NC 28551

Buffer Drawing
Sheet 4 of 5

NCDOT
DIVISION OF HIGHWAYS
LENOIR COUNTY
PROJECT: 33774.1.1 (B-4567)
REPLACEMENT OF BRG. 69
ON SR-1501 (OLD JASON RD.) OVER
FORK OF WEST BEAR CRK.

2/9/11

09/08/09

08-MAR-2011 15:39
R:\UTILITIES\WV\U\Proj\B4567_NEU_title_sheet (1-20-11).dgn
\$\$\$\$\$SERVNAME\$\$\$\$\$

TIP PROJECT:

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

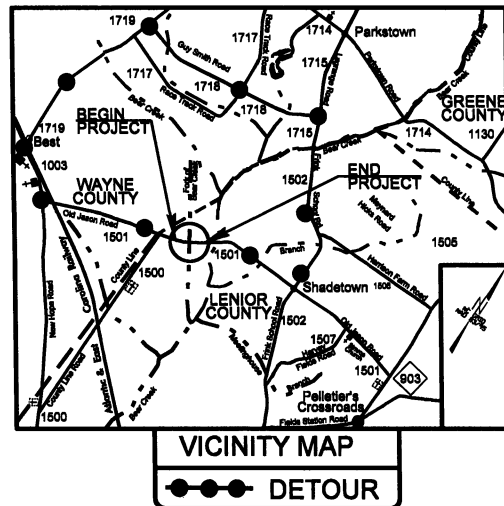
**UTILITIES CONSTRUCTION
LENOIR COUNTY**

**LOCATION: BRIDGE NO. 69 OVER A FORK OF WEST BEAR
CREEK ON SR-1501 (OLD JASON ROAD)**

TYPE OF WORK: WATER AND POWER RELOCATIONS

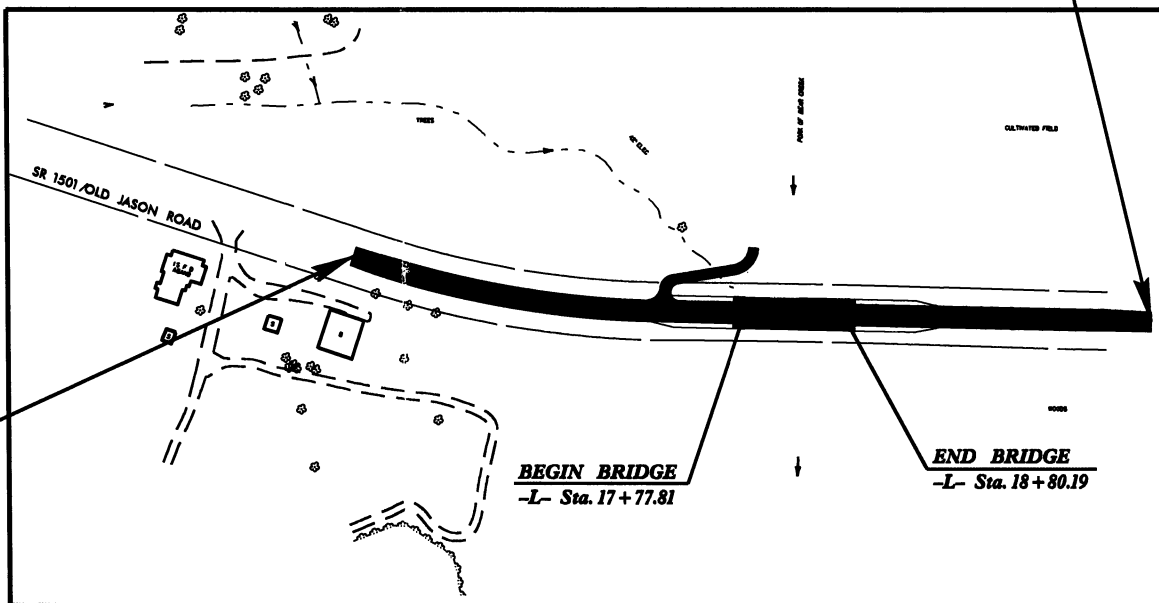
TIP NO	SHEET NO
B-4567	UT-1

Utility Permit Drawing
Sheet 1 of 3



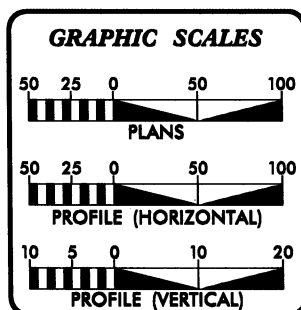
**NEU PERMIT PLANS
MARCH 8, 2011**

**BEGIN STATE PROJECT B-4567
BEGIN F.A. PROJECT No. BRZ-1501 (6)
-L- POT Sta. 13 + 65.00**



**END STATE PROJECT B-4567
END F.A. PROJECT No. BRZ-1501 (6)
-L- POT Sta. 22 + 00.00**

**INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION**



INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UT-1	TITLE SHEET
UT-2	PLAN SHEET

UTILITY OWNERS ON PROJECT
(1) TRI-COUNTY EMC (POWER)
(2) NORTH LENOIR WATER CORPORATION (WATER)

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

1591 MAIL SERVICES CENTER
 RALEIGH, NC 27699-1591
 PHONE (919) 256-4128
 FAX (919) 256-4119

Roger Worthington, P.E. UTILITIES SECTION ENGINEER
Corey Bousquet, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER
Eric Haugaard, P.E. UTILITIES PROJECT DESIGNER

PROJECT REFERENCE NO.	SHEET NO.
B-4567	UC-2
DESIGNED BY: EWH	
DRAWN BY: EWH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

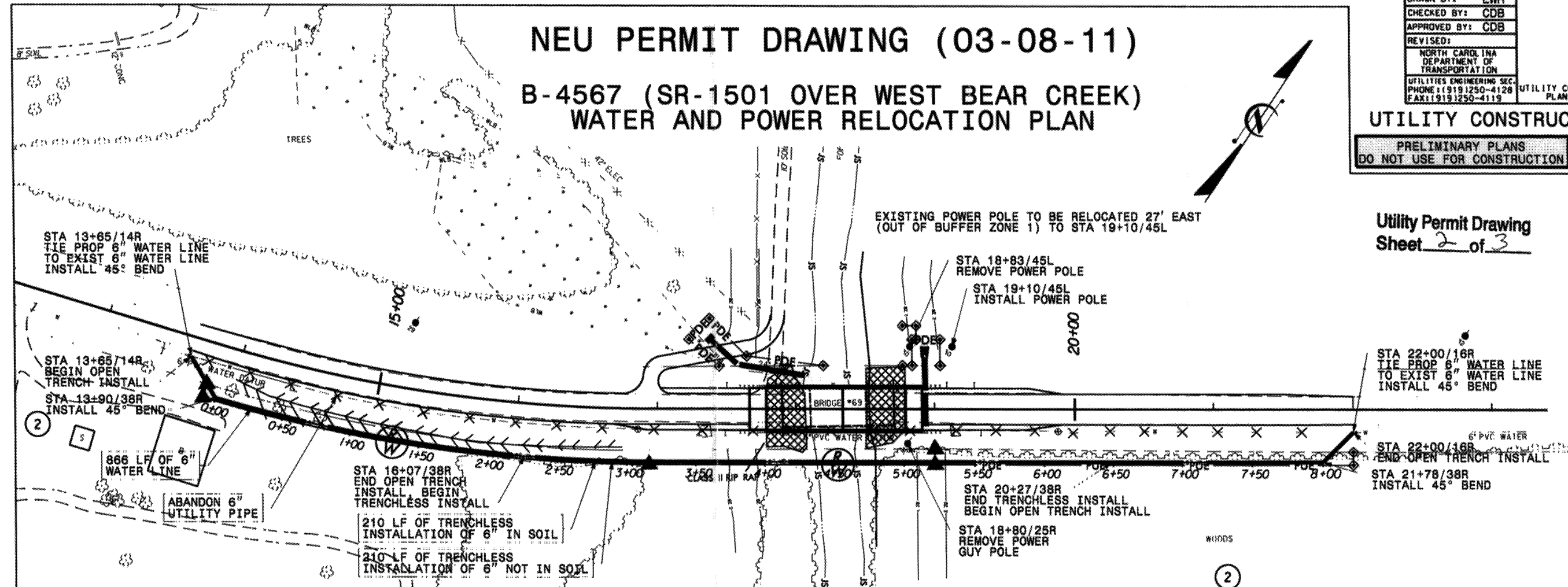
NEU PERMIT DRAWING (03-08-11)

B-4567 (SR-1501 OVER WEST BEAR CREEK) WATER AND POWER RELOCATION PLAN

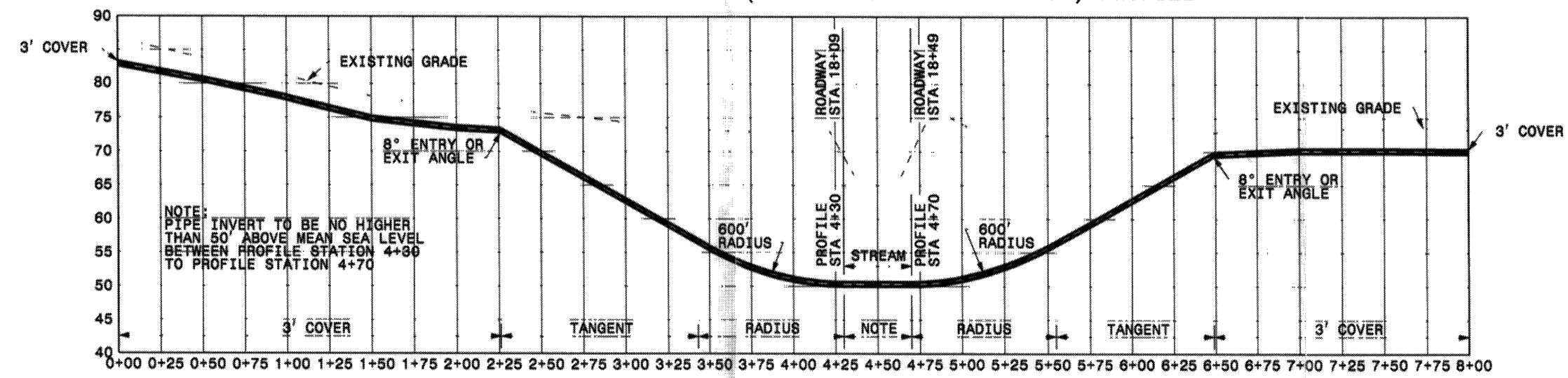
UTILITY CONSTRUCTION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Utility Permit Drawing
Sheet 2 of 3



PROPOSED WATER LINE (TRENCHLESS INSTALLATION) PROFILE



WATER LINE PROFILE NOTE:
 PROFILE SHOWN IS FOR ENVIRONMENTAL PERMITTING AND REFERENCE ONLY. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATIONS. NO DAMAGE IS ALLOWED TO THE STREAM, BUFFER ZONES, OR WETLANDS AS A RESULT OF TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO DESIGN THE VERTICAL ALIGNMENT, ENGINEER THE INSTALLATION METHOD, AND PROVIDE ON-SITE OVERSIGHT.

PLAN SCALE:
 1"=40' (FULL-SIZE)
 1"=80' (HALF-SIZE)

08-MAR-2011 16:26 R:\UTILITIES\NEU\03-08-11.dgn

B-4567 NEU Narrative

March 8, 2011

Ref: Bridge replacement project over West Bear Creek on SR-1501, Lenoir County

- Existing Utilities
 - Potable water...owned by North Lenoir Water Corporation...6" water line runs along right/south side of roadway (under shoulder) for entire length of roadway project
 - New water line will be installed on right/south side of roadway for entire length of project...it will be moved out/away from roadway to just inside R/W and will be laid in open trench except for length under river which will be installed by directional drill...the boring will begin and end approximately 200' on each side of creek with no impacts to any buffer zones or wetland areas
 - Overhead power line...owned by Tri-County EMC runs along left/north side of roadway for entire length of roadway project
 - Power pole (#30) will be moved 27' east from its current location (Sta 18+83/45L) to Sta 19+10/45L
 - Power guy pole (#31) will be removed permanently from its current location at Sta 18+80/25R
 - There will be no clearing (hand or mechanized), fill, or excavations inside any wetlands or buffer zones associated with power line relocations

Summary: no environmental impacts due to utility relocations

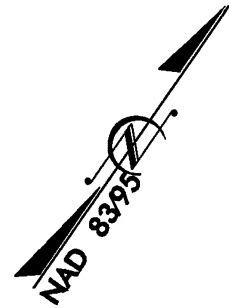
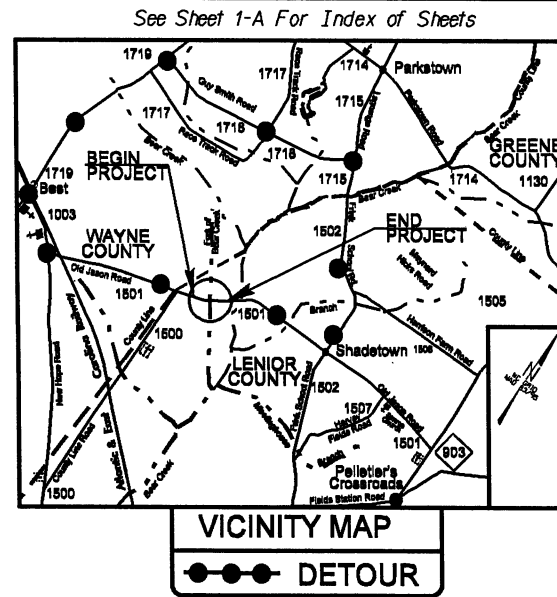
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4567	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33774.1.1	BRZ-1501 (6)	P.E.	
33774.2.1	BRZ-1501 (6)	RW, UTILITIES	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

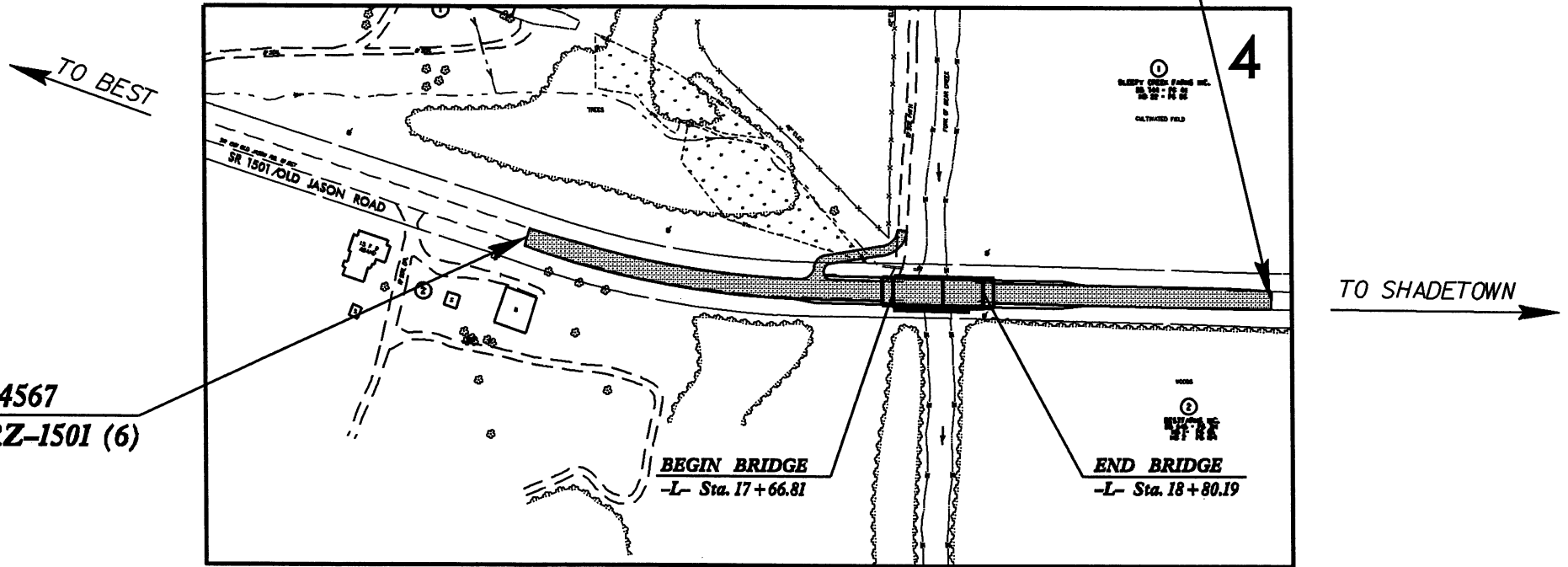
LENOIR COUNTY

LOCATION: REPLACEMENT OF BRIDGE No. 69 ON SR 1501
(OLD JASON ROAD) OVER A FORK OF WEST BEAR CREEK.

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



END STATE PROJECT B-4567
END F.A. PROJECT No. BRZ-1501 (6)
-L- POT Sta. 22+00.00

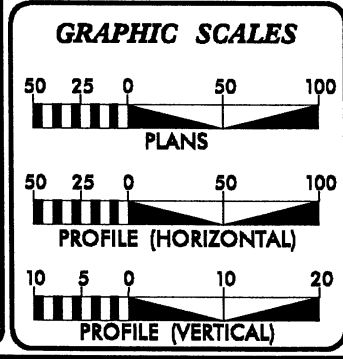


BEGIN STATE PROJECT B-4567
BEGIN F.A. PROJECT No. BRZ-1501 (6)
-L- POT Sta. 13+65.00

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

THIS PROJECT IS NOT WITH-IN ANY MUNICIPAL BOUNDARIES.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



DESIGN DATA

ADT 2009 =	389
ADT 2030 =	700
DHV =	10 %
D =	60 %
T =	3 % *
V =	55 MPH
* TTST 1%	DUAL 2%

PROJECT LENGTH

LENGTH OF ROADWAY PROJECT TIP No. B-4567 =	0.143 miles
LENGTH OF STRUCTURE PROJECT TIP No. B-4567 =	0.015 miles
TOTAL LENGTH OF PROJECT TIP No. B-4567 =	0.158 miles

THIS PROJECT DESIGNED USING SUB-TIER GUIDELINES.

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: NOVEMBER 2, 2010	JIMMY GOODNIGHT, PE PROJECT ENGINEER
LETTING DATE: DECEMBER 20, 2011	STEVE KENDALL, PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER

02-MAR-2011 07:56
 R:\PROJECTS\4567\4567_rdy_tsh.dgn
 \$\$\$USERNAME\$\$\$

CONTRACT NO.: 33774.2.1 **TIP PROJECT No.: B-4567**

09/08/09

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○
Property Corner	⊗
Property Monument	□
Parcel/Sequence Number	②③
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	-----
Proposed Wetland Boundary	-----
Existing Endangered Animal Boundary	-----
Existing Endangered Plant Boundary	-----

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	⊙
Well	⊙
Small Mine	⊗
Foundation	□
Area Outline	□
Cemetery	⊕
Building	□
School	⊕
Church	⊕
Dam	▬

HYDROLOGY:

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

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	⊙
Switch	⊙
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

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

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	CONC
Bridge Wing Wall, Head Wall and End Wall	CONC WW
MINOR:	
Head and End Wall	CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	⊙
Storm Sewer	S

UTILITIES:

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

Gas Valve	⊙
Gas Meter	⊙
Recorded U/G Gas Line	-----
Designated U/G Gas Line (S.U.E.*)	-----
Above Ground Gas Line	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	⊙
Utility Unknown U/G Line	UTIL
U/G Tank; Water, Gas, Oil	□
AG Tank; Water, Gas, Oil	□
U/G Test Hole (S.U.E.*)	⊙
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

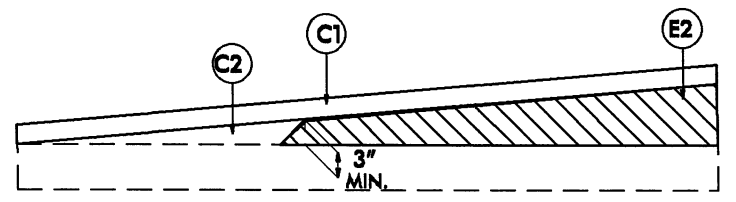
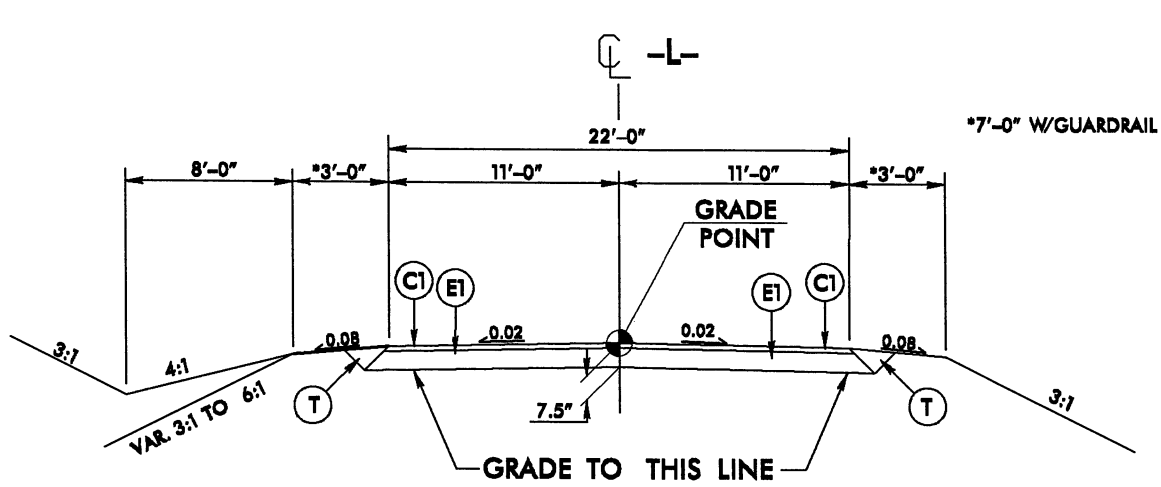
6/2/99

PROJECT REFERENCE NO. B-4567	SHEET NO. 2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS <small>DO NOT USE FOR CONSTRUCTION</small>	

PAVEMENT SCHEDULE			
C1	PROP. APPROX. 2 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 197.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS	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 6 1/2" IN DEPTH.
C2	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 1 1/2" IN DEPTH	T	EARTH MATERIAL.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.	W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL)

NOTE:
RESURFACE WITH 1.25" OF SF9.5A
-L- Sta. 13+65.00 to Sta. 14+15.00
-L- Sta. 21+50.00 to Sta. 22+00.00

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



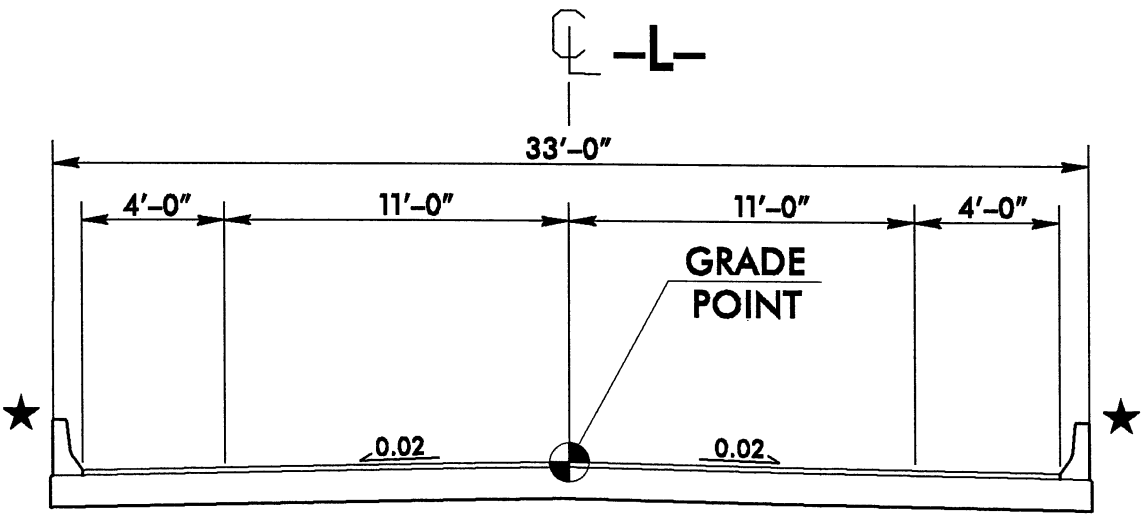
-L- Wedging Detail For Resurfacing

TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1

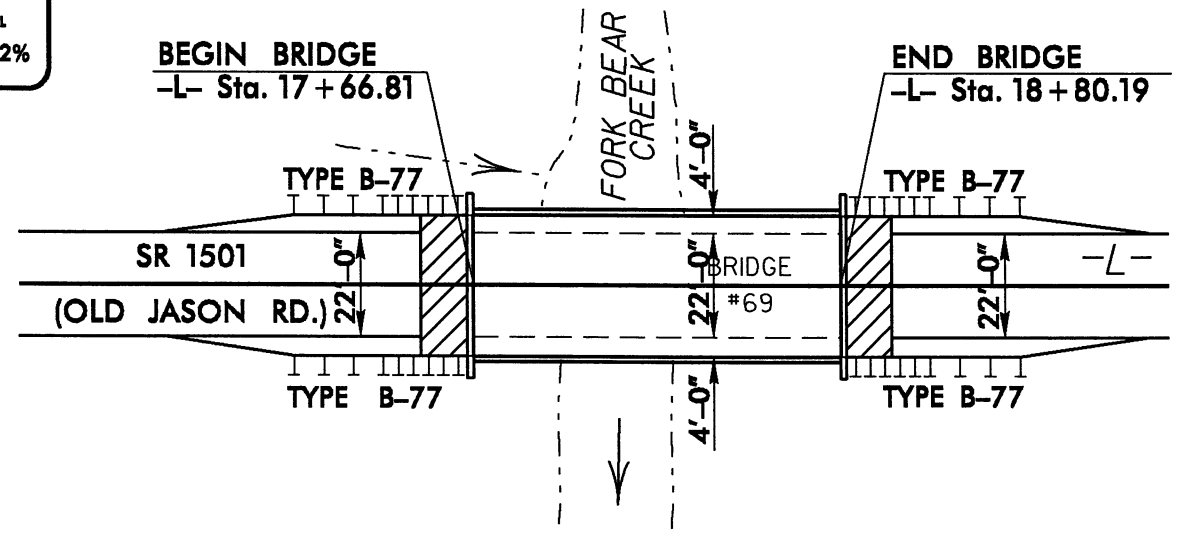
-L- Sta. 14+15 to Sta. 17+79
-L- Sta. 18+79 to Sta. 21+50

STRUCTURE TYPICAL SECTION



DESIGN DATA	
ADT 2003 =	300
ADT 2030 =	700
DHV =	10 %
D =	60 %
T =	3 % *
V =	55 MPH
FUNCTIONAL CLASSIFICATION =	LOCAL
* TTST 1 %	DUAL 2%

SKETCH SHOWING PAVEMENT WIDTH TO BRIDGE WIDTH RELATIONSHIP



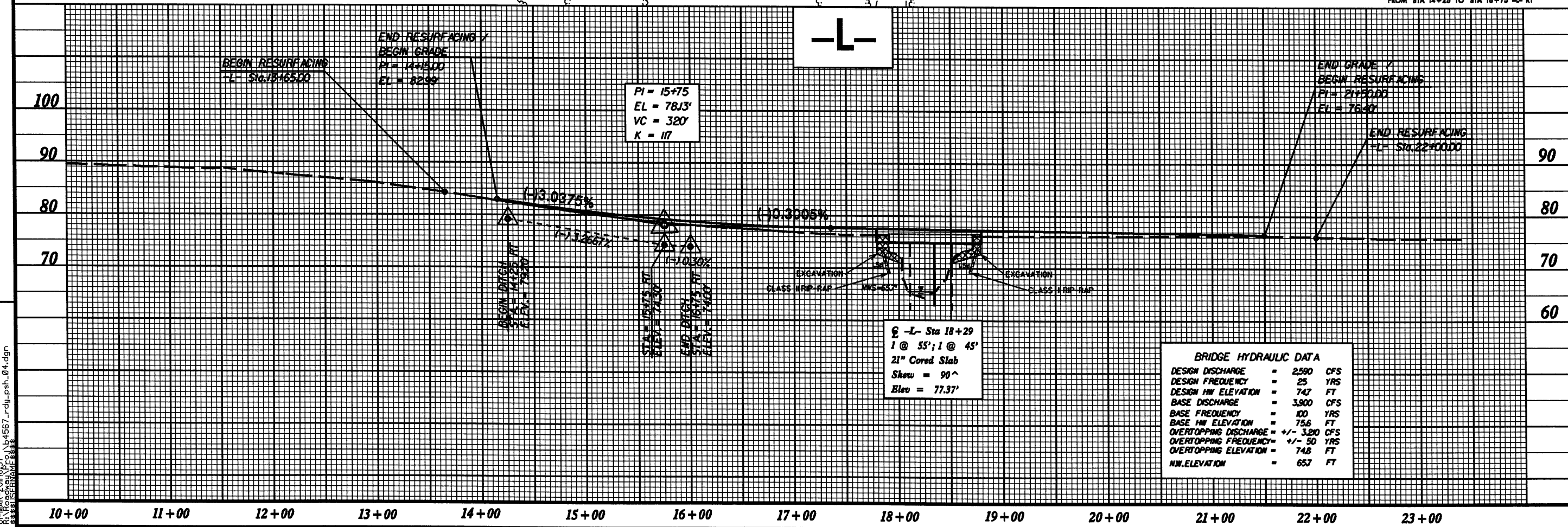
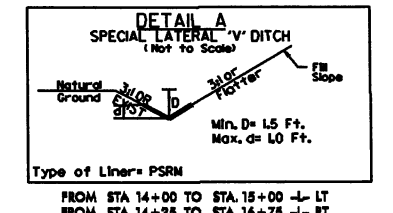
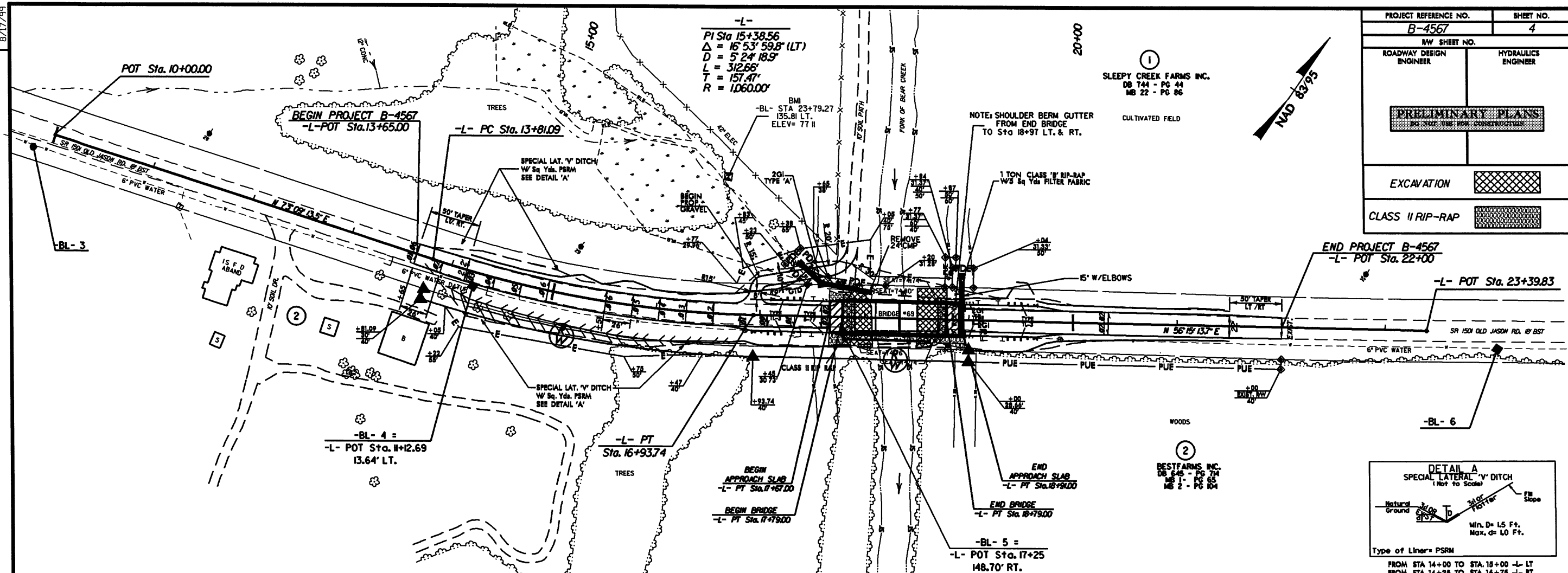
★ BRIDGE RAIL TO BE DETERMINED BY STRUCTURE DESIGN UNIT

02-MAR-2011 08:02
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8/17/99

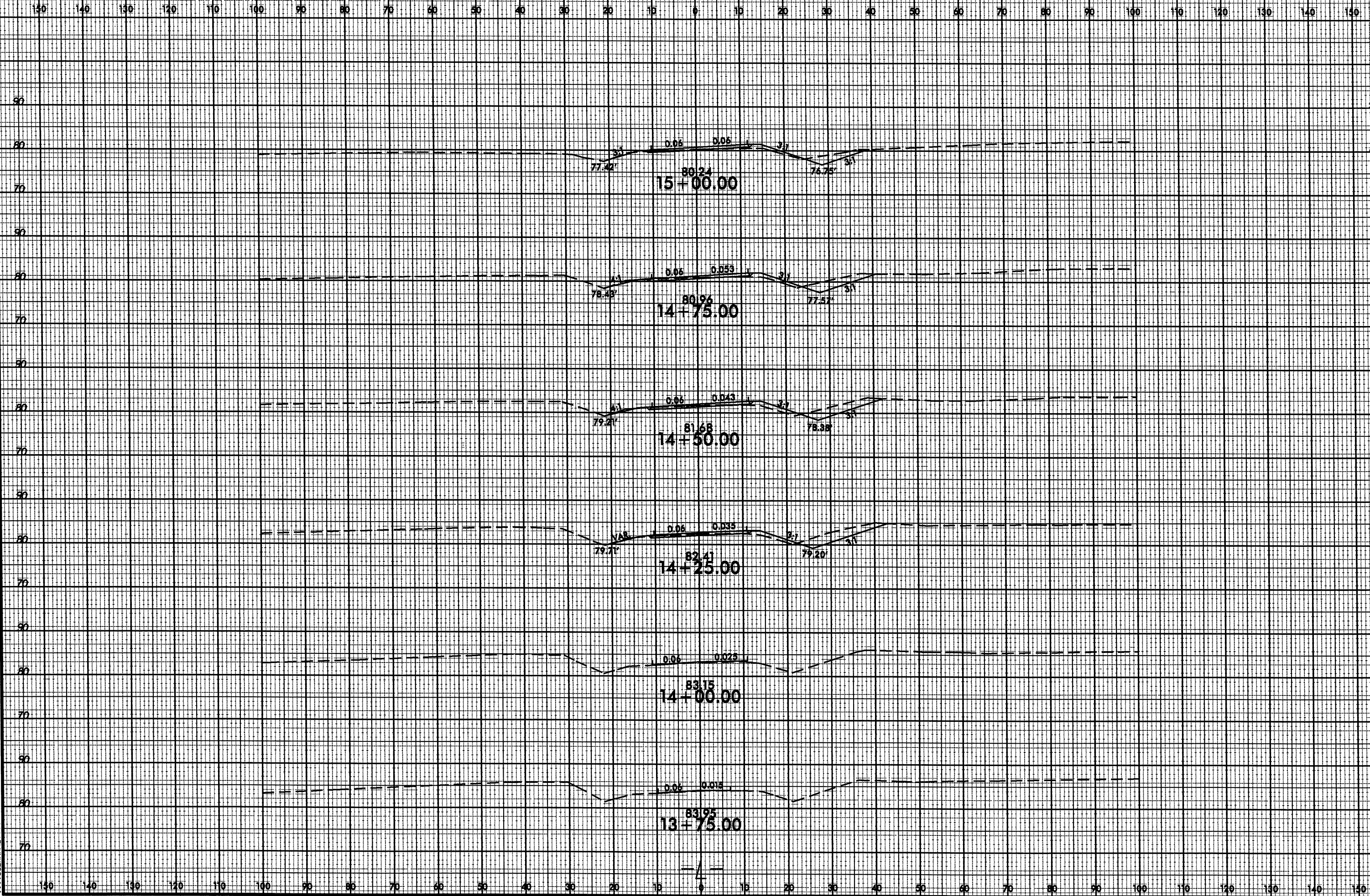
PROJECT REFERENCE NO. B-4567	SHEET NO. 4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS <small>DO NOT USE FOR CONSTRUCTION</small>	
EXCAVATION	
CLASS II RIP-RAP	

R/W REVISION - LETTER DATED FEBRUARY 21, 2001 BY T. BURNS
 1. ADDED PERMANENT UTILITY EASEMENT (PUE) ON PARCEL No. 2.
 2. CHANGED PERMANENT UTILITY EASEMENT (PUE) ON PARCEL No. 1 TO TEMPORARY UTILITY EASEMENT (TUE).



BRIDGE HYDRAULIC DATA	
DESIGN DISCHARGE	= 2,590 CFS
DESIGN FREQUENCY	= 25 YRS
DESIGN HW ELEVATION	= 74.7 FT
BASE DISCHARGE	= 3,900 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 75.6 FT
OVERTOPPING DISCHARGE	= +/- 3.80 CFS
OVERTOPPING FREQUENCY	= +/- 50 YRS
OVERTOPPING ELEVATION	= 74.8 FT
NW. ELEVATION	= 65.7 FT

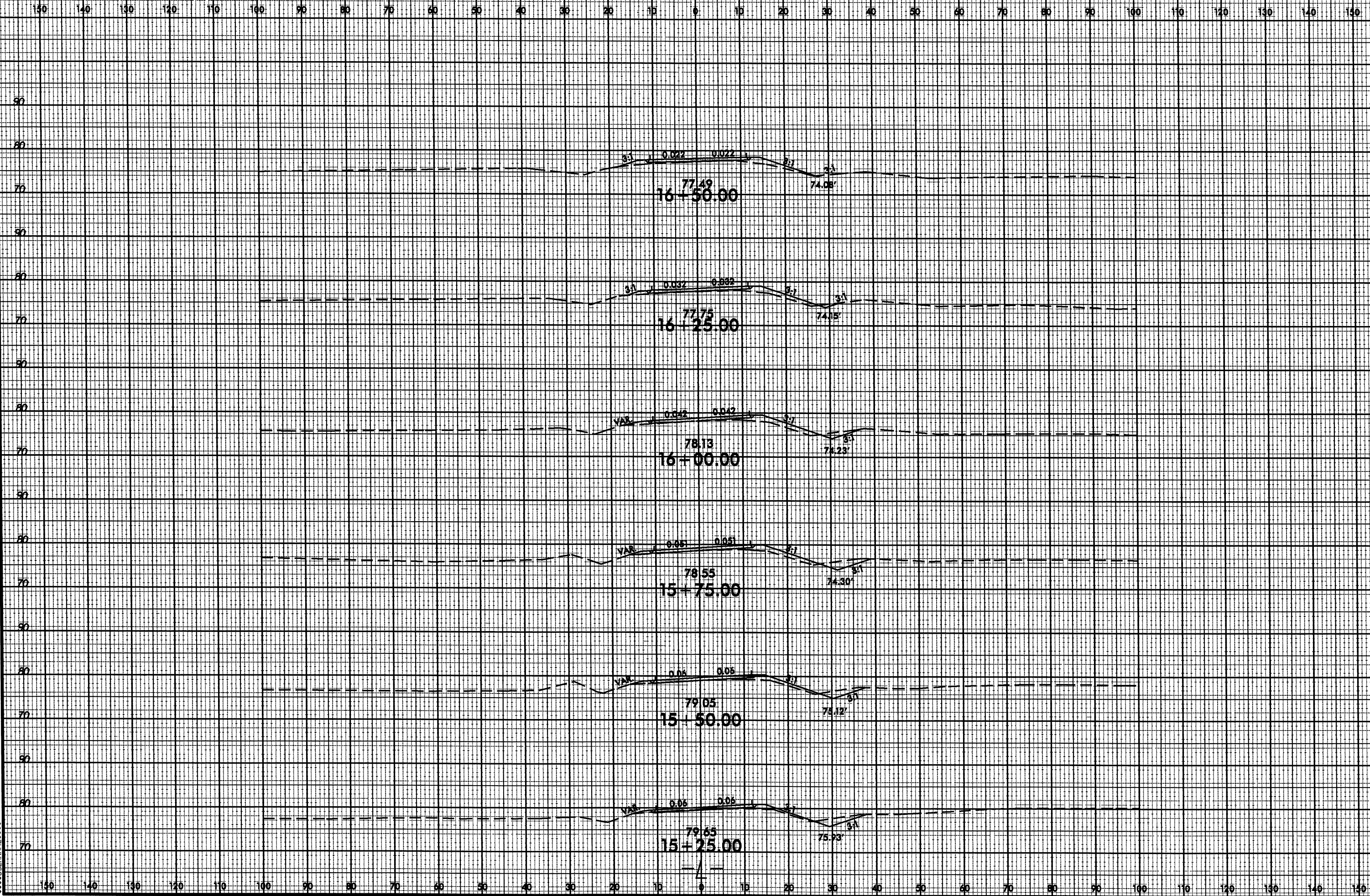
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 8/17/99



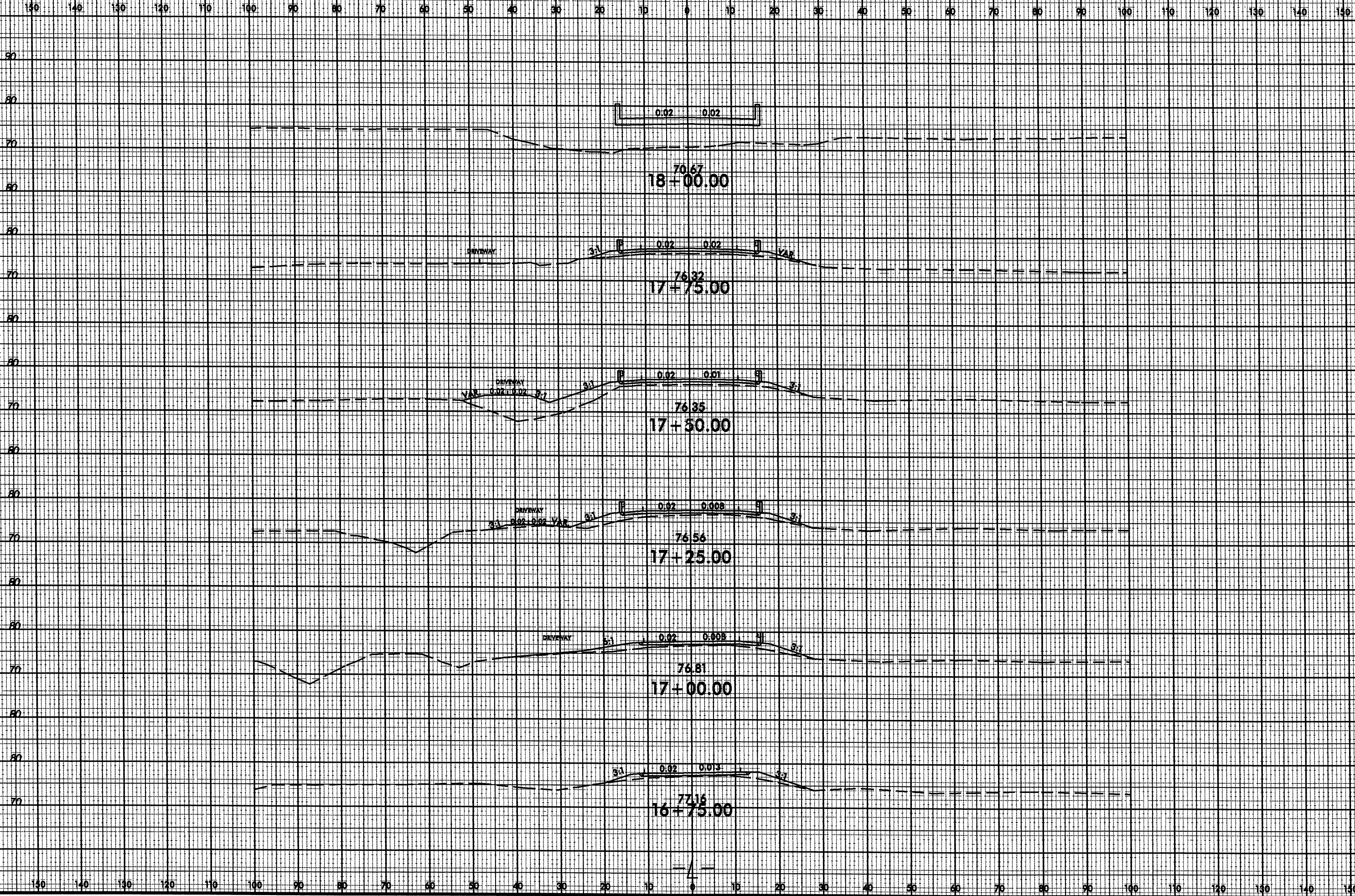
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PROJ. REFERENCE NO.	SHEET NO.
B-4567	X-3



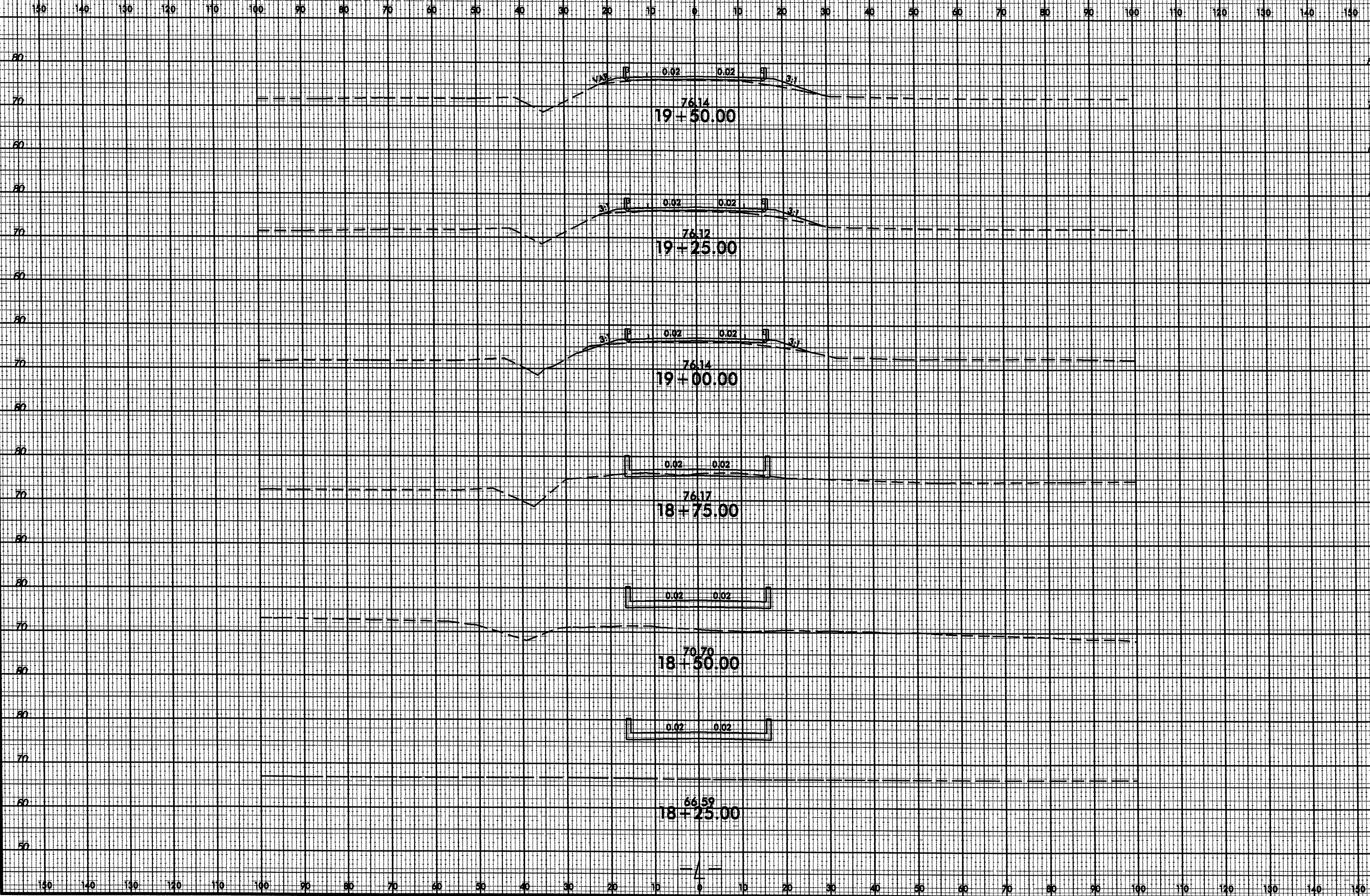
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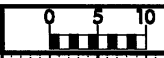


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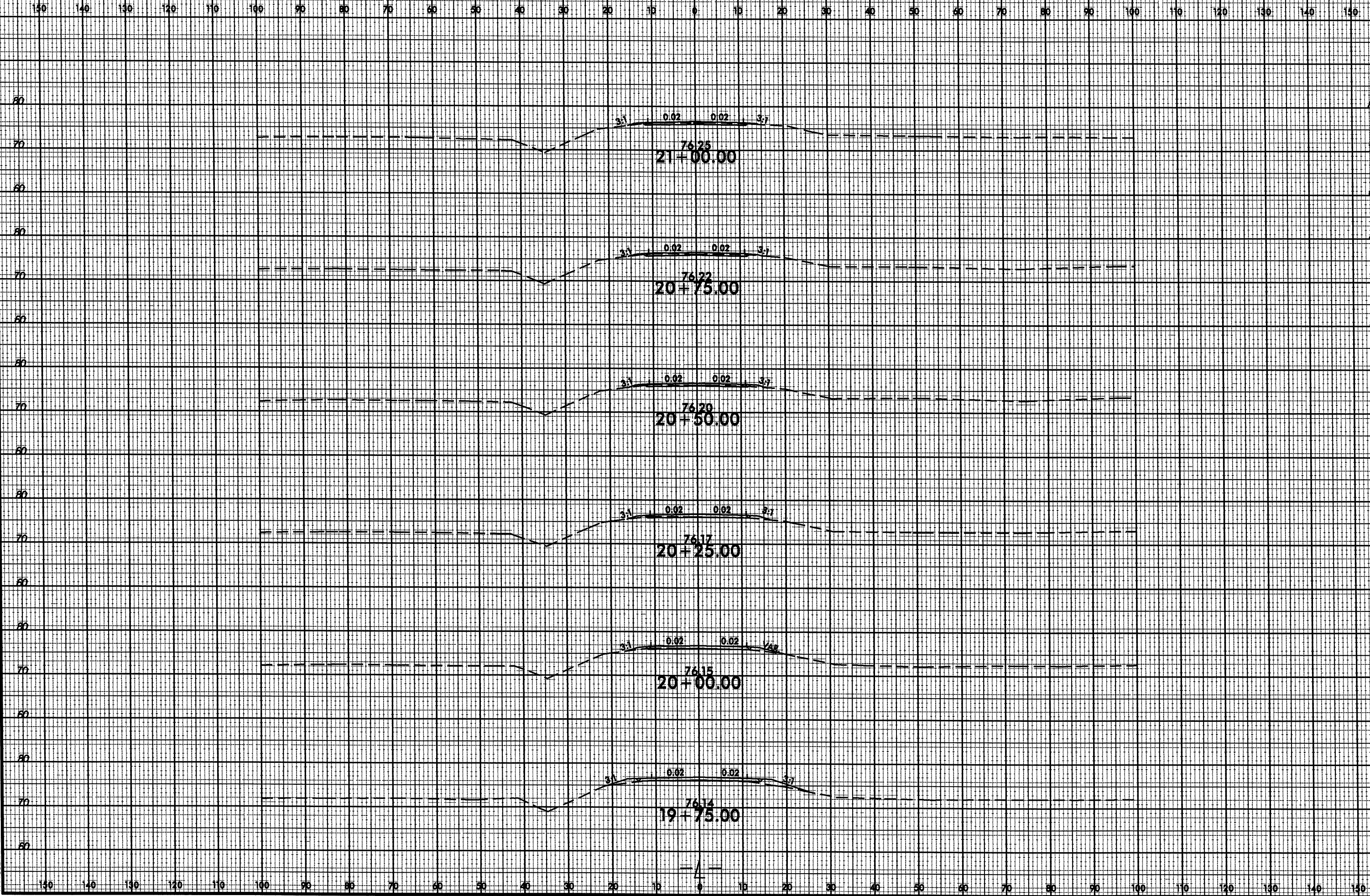


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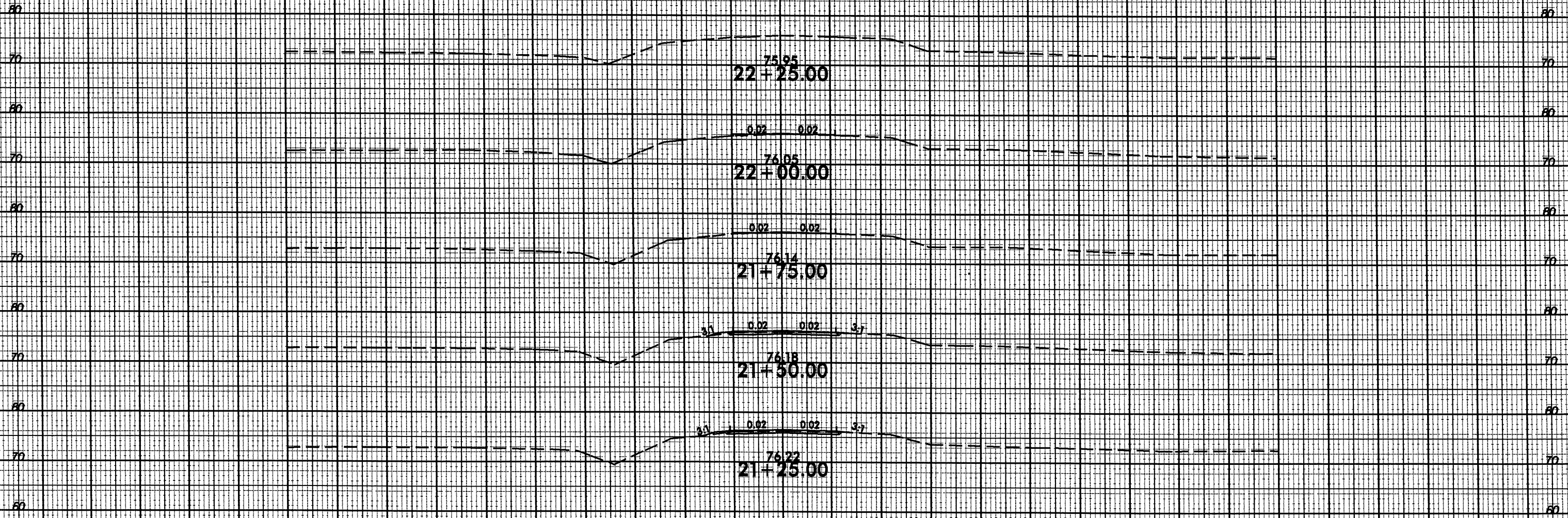
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PROJ. REFERENCE NO.	SHEET NO.
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