



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

June 28, 2011

U. S. Army Corps of Engineers
Regulatory Field Office
3331 Heritage Trade Drive, Suite 105
Wake Forest, NC 27587

ATTN: Mr. Monte Matthews
NCDOT Coordinator

Subject: **Application for Section 404 Nationwide Permits 23 and 33** for the proposed replacement of Bridge No. 184 over the Johns River on SR 1356 in Caldwell County, Federal Aid Project No. BRZ-1356(1); Division 11; TIP No. B-3819; WBS 33272.1.1

Dear Mr. Matthews:

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 184, a 76-foot three-span bridge over the Johns River on Old Johns River Road (SR 1356), with a 110-foot long two span bridge. The new structure will be located downstream of the existing bridge. Traffic will use the existing bridge during construction. There will be 15 square feet of permanent stream impacts from bridge bents, 0.06 acre of temporary impacts from temporary work pads and 74 square feet of temporary impacts from a work bridge.

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

Please see enclosed copies of the Pre-Construction Notification (PCN) Form, stormwater management plan, permit drawings and design plans. The Categorical Exclusion (CE) was completed on August 1, 2008. Documents were distributed shortly thereafter. Additional copies are available upon request.

This project calls for a letting date of March 12, 2012 and a review date of January 31, 2012; however the let date may advance as additional funding becomes available.

If you have any questions or need additional information, please call Brett Feulner at (919) 707-6116. A copy of this permit application and distribution list will be posted on the NCDOT Website at: <http://www.ncdot.org/doh/preconstruct/pe/neu/permit.html>

Sincerely,



fev

Gregory J. Thorpe, Ph.D., Branch Manager
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: 23 & 33 or General Permit (GP) number:		
1c. Has the NWP or GP number been verified by the Corps?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1d. Type(s) of approval sought from the DWQ (check all that apply):		
<input 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 type="checkbox"/> Riparian Buffer Authorization		
1e. Is this notification solely for the record because written approval is not required?	For the record only for DWQ 401 Certification: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	For the record only for Corps Permit: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
1f. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts? If so, attach the acceptance letter from mitigation bank or in-lieu fee program.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1g. Is the project located in any of NC's twenty coastal counties. If yes, answer 1h below.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1h. Is the project located within a NC DCM Area of Environmental Concern (AEC)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
2. Project Information		
2a. Name of project:	Replacement of Bridge no. 184 on SR 1356	
2b. County:	Caldwell	
2c. Nearest municipality / town:	Collettsville	
2d. Subdivision name:	<i>not applicable</i>	
2e. NCDOT only, T.I.P. or state project no:	B-3819	
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) 707-6000	
3g. Fax no.:	(919) 212-5785	
3h. Email address:	bmfeulner@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: 35.94412 (DD.DDDDDD) Longitude: -81.70096 (-DD.DDDDDD)
1c. Property size:	2 acres
2. Surface Waters	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Johns River
2b. Water Quality Classification of nearest receiving water:	C
2c. River basin:	Catawba
3. Project Description	
3a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: Traffic currently uses a one lane low water bridge that is overtopped by water several times a year. The land use surrounding the proposed bridge replacement consists of hardwood forests and maintained communities.	
3b. List the total estimated acreage of all existing wetlands on the property: 0	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 350	
3d. Explain the purpose of the proposed project: To replace a functionally obsolete and structurally deficient wooden one lane bridge that is approaching the end of its useful life	
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing a three span 76 foot bridge with a 110 foot long two span bridge. Traffic will use the existing bridge during construction of the new bridge. Standard road building equipment, such as trucks, dozers, and cranes will be used. Construction will require the use of work pads and a work bridge. One work pad on the east side of the river will be required to install the bents for the new bridge. Two work pads, one on the east and one on the west side of the river, will be required for the removal of the old bridge. One work bridge will be required in order to move equipment too large for the existing bridge during construction.	
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:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
4b. If the Corps made the jurisdictional determination, what type of determination was made?	<input type="checkbox"/> Preliminary <input type="checkbox"/> Final
4c. If yes, who delineated the jurisdictional areas? Name (if known): NCDOT	Agency/Consultant Company: Other:
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation.	
5. Project History	
5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
5b. If yes, explain in detail according to "help file" instructions.	

6. Future Project Plans

6a. Is this a phased project?

Yes

No

6b. If yes, explain.

C. Proposed Impacts Inventory						
1. Impacts Summary						
1a. Which sections were completed below for your project (check all that apply):						
<input type="checkbox"/> Wetlands <input checked="" type="checkbox"/> Streams - tributaries <input 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 type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 2 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 4 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 5 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 6 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
2g. Total wetland impacts					0 Permanent 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 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Bents/New Bridge	Johns River	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	75	15 square feet (0.0003 acre)
Site 2 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Work Pads	Johns River	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	75	0.06 acre
Site 3 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Bents-Work Bridge	Johns River	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	75	74 square feet (0.0017 acre)
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					Perm: <0.1 acre Temp: 0.062 acre	
3i. Comments:						

4. Open Water Impacts

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

4a. Open water impact number – Permanent (P) or Temporary (T)	4b. Name of waterbody (if applicable)	4c. Type of impact	4d. Waterbody type	4e. Area of impact (acres)
O1 <input 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 type="checkbox"/> Neuse <input type="checkbox"/> Tar-Pamlico <input type="checkbox"/> Other: <input type="checkbox"/> Catawba <input type="checkbox"/> Randleman			
6b. Buffer impact number – Permanent (P) or Temporary (T)	6c. Reason for impact	6d. Stream name	6e. Buffer mitigation required?	6f. Zone 1 impact (square feet)	6g. Zone 2 impact (square feet)
B1 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
B2 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
B3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
6h. Total buffer impacts					
6i. Comments:					

D. Impact Justification and Mitigation		
1. Avoidance and Minimization		
1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing project. No deck drains will discharge into the Johns River. The new bridge elevation will be raised to allow for larger flows of the Johns River to pass under the bridge.		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques. Best Management Practices will be followed during construction. Construction will be phased such that no more than half of the channel will be blocked by the work pads.		
2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State		
2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If no, explain: The only permanent impacts that occur are from bridge bents. All other impacts are temporary.	
2b. If yes, mitigation is required by (check all that apply):	<input type="checkbox"/> DWQ <input type="checkbox"/> Corps	
2c. If yes, which mitigation option will be used for this project?	<input type="checkbox"/> Mitigation bank <input type="checkbox"/> Payment to in-lieu fee program <input type="checkbox"/> Permittee Responsible Mitigation	
3. Complete if Using a Mitigation Bank		
3a. Name of Mitigation Bank: not applicable		
3b. Credits Purchased (attach receipt and letter)	Type	Quantity
3c. Comments:		
4. Complete if Making a Payment to In-lieu Fee Program		
4a. Approval letter from in-lieu fee program is attached.	<input type="checkbox"/> Yes	
4b. Stream mitigation requested:	linear feet	
4c. If using stream mitigation, stream temperature:	<input type="checkbox"/> warm <input type="checkbox"/> cool <input type="checkbox"/> cold	
4d. Buffer mitigation requested (DWQ only):	0 square feet	
4e. Riparian wetland mitigation requested:	0 acres	
4f. Non-riparian wetland mitigation requested:	0 acres	
4g. Coastal (tidal) wetland mitigation requested:	0 acres	
4h. Comments:		
5. Complete if Using a Permittee Responsible Mitigation Plan		
5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan.		

6. Buffer Mitigation (State Regulated Riparian Buffer Rules) – required by DWQ

6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation? Yes No

6b. If yes, then identify the square feet of impact to each zone of the riparian buffer that requires mitigation. Calculate the amount of mitigation required.

Zone	6c. Reason for impact	6d. Total impact (square feet)	Multiplier	6e. Required mitigation (square feet)
Zone 1			3 (2 for Catawba)	
Zone 2			1.5	
6f. Total buffer mitigation required:				

6g. If buffer mitigation is required, discuss what type of mitigation is proposed (e.g., payment to private mitigation bank, permittee responsible riparian buffer restoration, payment into an approved in-lieu fee fund).

6h. Comments:

E. Stormwater Management and Diffuse Flow Plan (required by DWQ)	
1. Diffuse Flow Plan	
1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
1b. If yes, then is a diffuse flow plan included? If no, explain why. Comments: NA	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. Stormwater Management Plan	
2a. What is the overall percent imperviousness of this project?	N/A
2b. Does this project require a Stormwater Management Plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2c. If this project DOES NOT require a Stormwater Management Plan, explain why:	
2d. If this project DOES require a Stormwater Management Plan, then provide a brief, narrative description of the plan: See attached	
2e. Who will be responsible for the review of the Stormwater Management Plan?	<input type="checkbox"/> Certified Local Government <input type="checkbox"/> DWQ Stormwater Program <input checked="" type="checkbox"/> DWQ 401 Unit
3. Certified Local Government Stormwater Review	
3a. In which local government's jurisdiction is this project?	not applicable
3b. Which of the following locally-implemented stormwater management programs apply (check all that apply):	<input type="checkbox"/> Phase II <input type="checkbox"/> NSW <input type="checkbox"/> USMP <input type="checkbox"/> Water Supply Watershed <input type="checkbox"/> Other:
3c. Has the approved Stormwater Management Plan with proof of approval been attached?	<input type="checkbox"/> Yes <input type="checkbox"/> No
4. DWQ Stormwater Program Review	
4a. Which of the following state-implemented stormwater management programs apply (check all that apply):	<input type="checkbox"/> Coastal counties <input type="checkbox"/> HQW <input type="checkbox"/> ORW <input type="checkbox"/> Session Law 2006-246 <input type="checkbox"/> Other:
4b. Has the approved Stormwater Management Plan with proof of approval been attached?	<input type="checkbox"/> Yes <input type="checkbox"/> No
5. DWQ 401 Unit Stormwater Review	
5a. Does the Stormwater Management Plan meet the appropriate requirements?	<input type="checkbox"/> Yes <input type="checkbox"/> No 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 impacts resulting from this bridge replacement, this project will neither influence nearby land uses nor stimulate growth. Therefore, a detailed indirect and 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 type="checkbox"/> Raleigh	<input checked="" type="checkbox"/> Asheville
5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? USFWS web page of T&E species for Caldwell County; NHP database of elemental occurrences. Surveys conducted May 2010 for the dwarf flowered heartleaf and no specimens were found.		

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? Memo dated from the NC Department of Cultural Resources, dated August 12, 2004		

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: By building the new bridge downstream of the existing bridge allowed the new bridge to be longer and higher than the existing bridge.		
8c. What source(s) did you use to make the floodplain determination? NCDOT Hydraulics Unit Coordination w/ FEMA		

<p><u>Dr. Gregory J. Thorpe, Ph D</u> Applicant/Agent's Printed Name</p>	 Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	<p>7-12-11 5/15/2011 Date</p>
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STORMWATER MANAGEMENT PLAN

Project: B-3819 (33272.1.2)
County: Caldwell
Hydraulics Project Manager: Jay Twisdale, PE

October 23, 2009

ROADWAY DESCRIPTION

The project involves the replacement of Br. No. 184 over Johns River on SR 1356. The overall length of the project is 0.13 mi., and the existing 75'-long low-water type bridge is being replaced with a 110'-long low-water type bridge on new location just downstream of the existing bridge. The proposed roadway utilizes shoulder section throughout, with cut ditches in all four quadrants draining towards the river. There is only one major crossing.

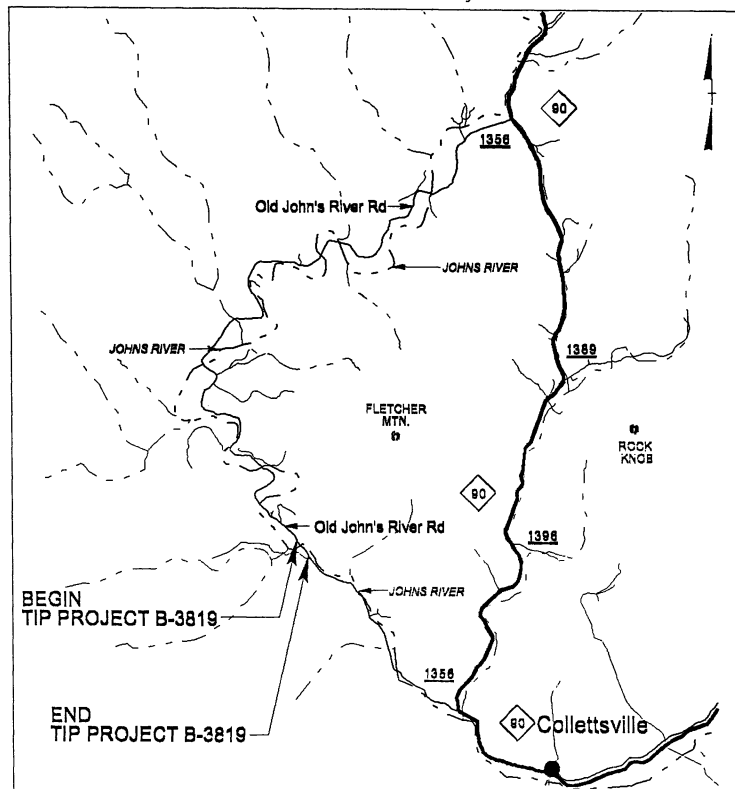
ENVIRONMENTAL DESCRIPTION

The project is located in the Catawba River Basin. There are no wetlands within project limits, and the Johns River (which is perennial) is the only jurisdictional waters to be impacted by the project. The best usage classification Johns River is Class C (aquatic life, secondary recreation, fresh). There are no riparian buffers.

BEST MANAGEMENT PRACTICES

Due to the reduced project length and lowered grade, opportunities for Best Management Practices (BMPs) and measures to reduce stormwater impacts are minimal. No bridge deck drainage is being discharged directly into Johns River. Due to the frequent road overtopping that will continue to occur at this project, no storm drain systems are being installed. Since the project is almost entirely in cut, no other measures are feasible.

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



VICINITY MAP SHOWING LOCATION OF PROJECT B-3819

WETLAND/SURFACE WATER PERMIT DRAWINGS

THIS PROJECT WAS DESIGNED USING THE SUB REGIONAL TIER DESIGN GUIDELINES FOR BRIDGE PROJECTS

THERE IS NO CONTROL OF ACCESS ON THIS PROJECT
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

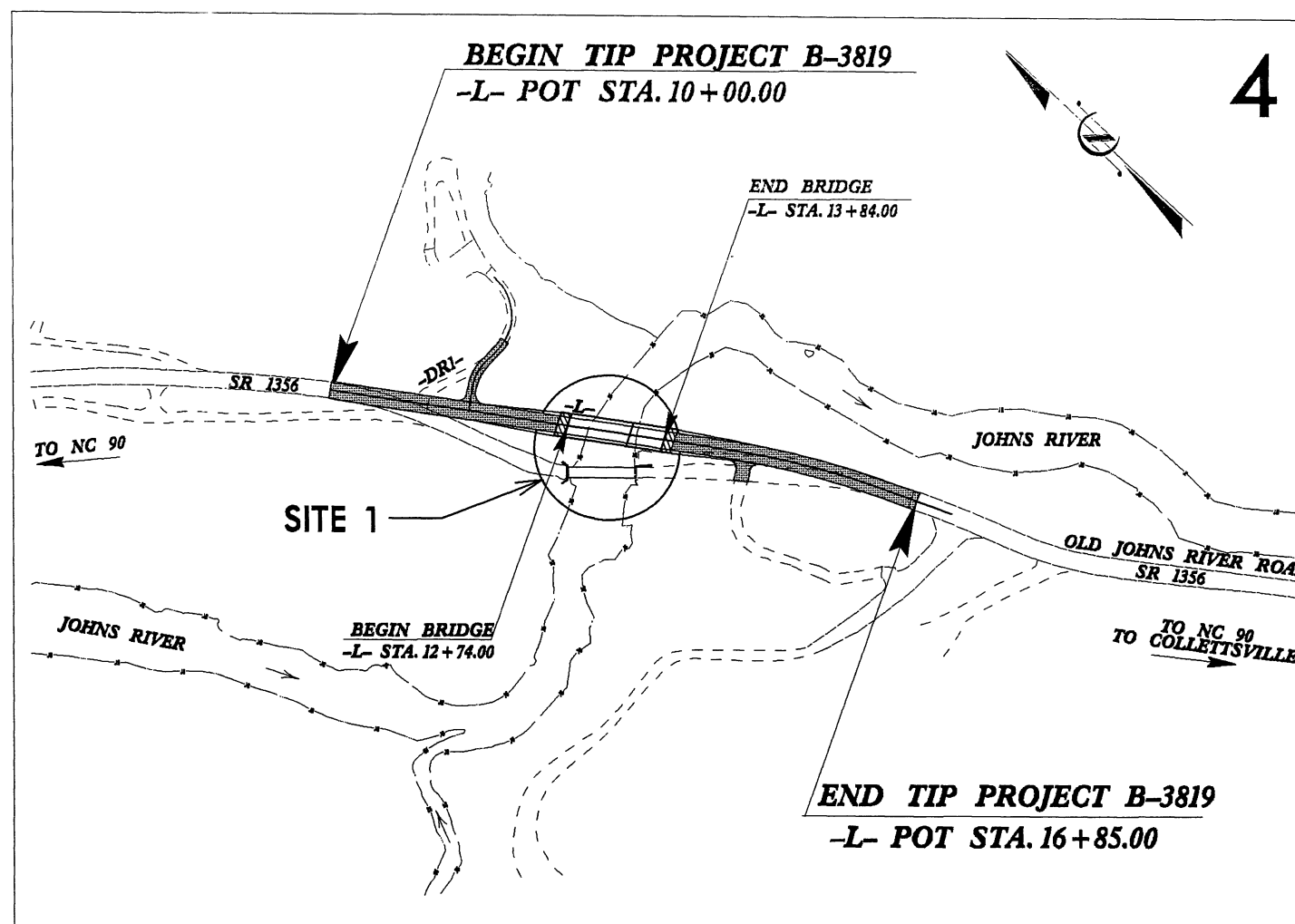
CALDWELL COUNTY

LOCATION: BRIDGE NO. 184 OVER THE JOHNS RIVER
ON SR 1356 (OLD JOHNS RIVER ROAD)

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

ENGLISH

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3819	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33272.1.1	BRZ-1356 (1)	PE	
33272.2.1	BRZ-1356 (1)	ROW & UTIL	

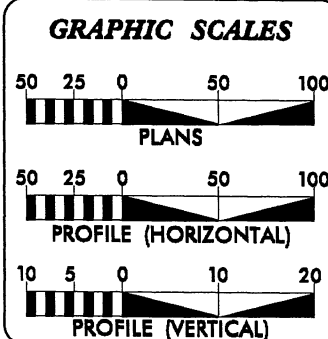


Permit Drawing
Sheet 1 of 6

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

TIP PROJECT: B-3819

CONTRACT:



DESIGN DATA

ADT 2012 =	515
ADT 2032 =	800
DHV =	12 %
D =	60 %
T =	3 % *
V =	35 MPH
* TTST 1 %	DUAL 2 %
FUNC. CLASS =	RURAL LOCAL

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-3819 =	0.109 MILES
LENGTH OF STRUCTURE TIP PROJECT B-3819 =	0.021 MILES
TOTAL LENGTH OF TIP PROJECT B-3819 =	0.130 MILES

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MARCH 14, 2011	TONY HOUSER, PE PROJECT ENGINEER
LETTING DATE: MARCH 20, 2012	LEE ANN MOORE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

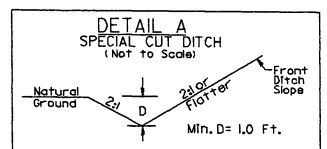
SIGNATURE: _____ P.E.

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

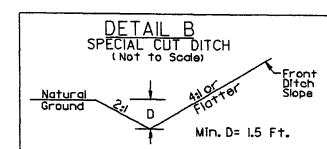
STATE HIGHWAY DESIGN ENGINEER P.E.

\$\$\$\$ SYSTEM TIME \$\$\$
\$\$\$ CADD DESIGN \$\$\$
\$\$\$ USER NAME \$\$\$

5/14/99

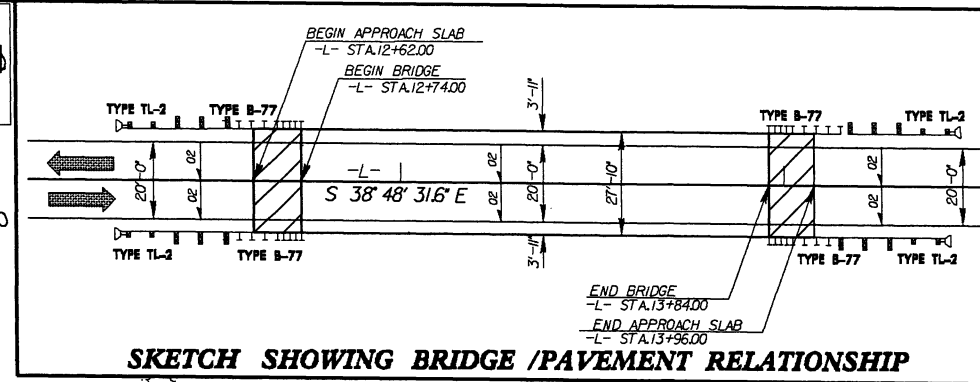


STA. 11+00 TO STA. 12+50 -L- LT.(SEE X-SECTIONS)
 STA. 13+82 TO STA. 18+00 -L- LT.(SEE X-SECTIONS)



STA. 13+79 TO STA. 15+50 -L- RT.

ENGLISH

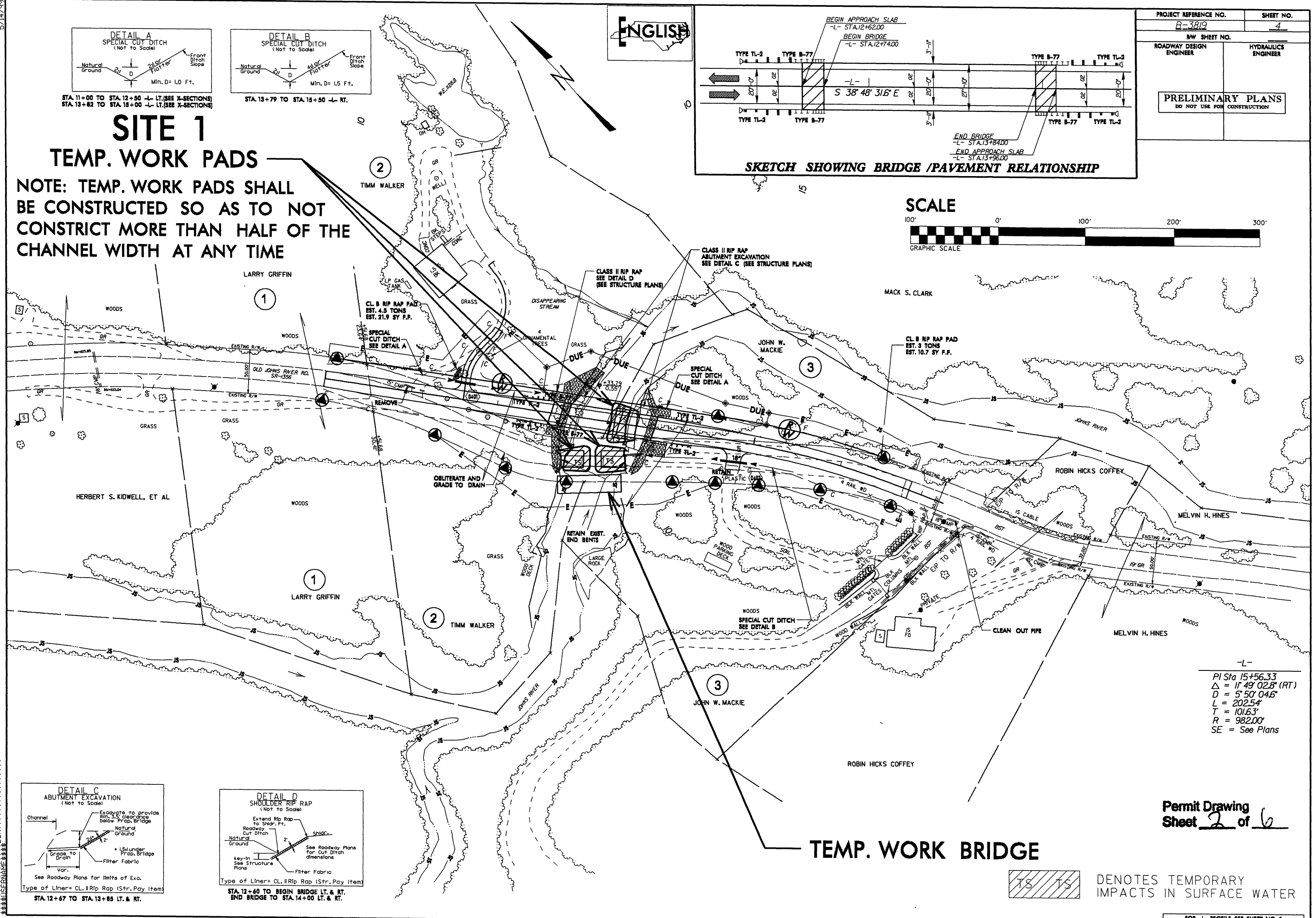
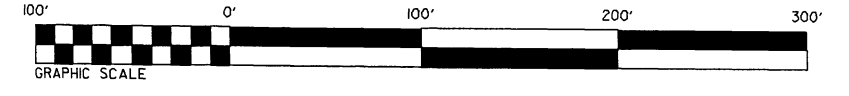


PROJECT REFERENCE NO. B-3819	SHEET NO. 4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

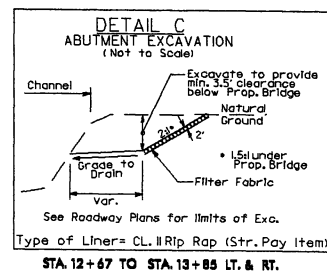
SITE 1 TEMP. WORK PADS

NOTE: TEMP. WORK PADS SHALL BE CONSTRUCTED SO AS TO NOT CONSTRICT MORE THAN HALF OF THE CHANNEL WIDTH AT ANY TIME

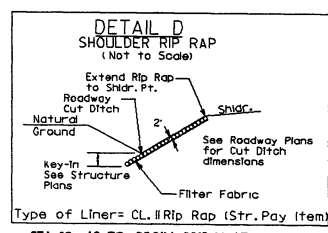
SCALE



-L-
 PI Sta 15+56.33
 $\Delta = 11' 49' 02.8''$ (RT)
 $D = 5' 50' 04.6''$
 $L = 202.54'$
 $T = 101.63'$
 $R = 982.00'$
 SE = See Plans

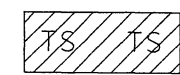


See Roadway Plans for Limits of Exc.
 Type of Liner= CL II Rip Rap (Str. Pay Item)
 STA. 12+67 TO STA. 13+85 LT. & RT.



Type of LIner= CL II Rip Rap (Str. Pay Item)
 STA. 12+60 TO BEGIN BRIDGE LT. & RT.
 END BRIDGE TO STA. 14+00 LT. & RT.

TEMP. WORK BRIDGE

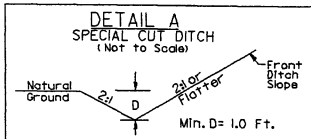


TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

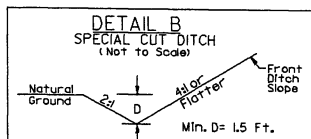
Permit Drawing
 Sheet 2 of 6

FOR -L- PROFILE, SEE SHEET NO. 5

5/14/98



STA. 11+00 TO STA. 12+50 -L- (SEE X-SECTIONS)
 STA. 13+82 TO STA. 15+00 -L- (SEE X-SECTIONS)



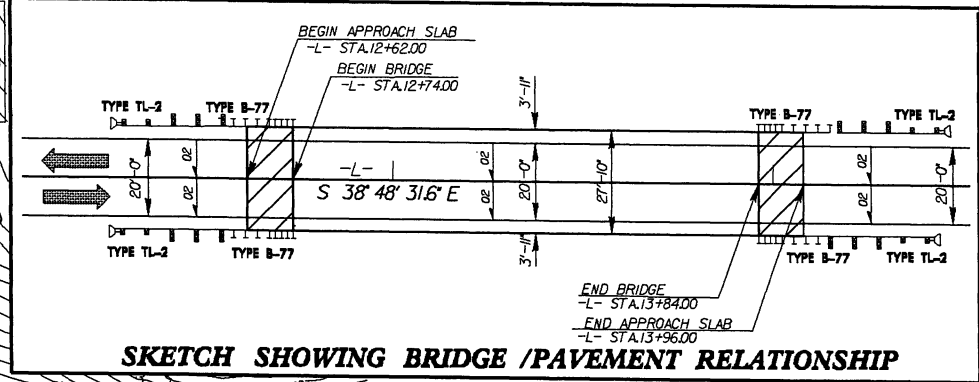
STA. 13+79 TO STA. 15+50 -L- NT.

SITE 1

TEMP. WORK PADS

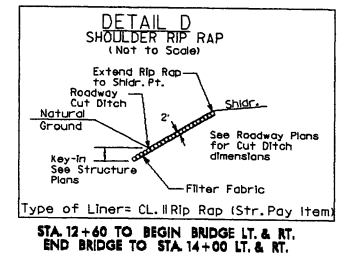
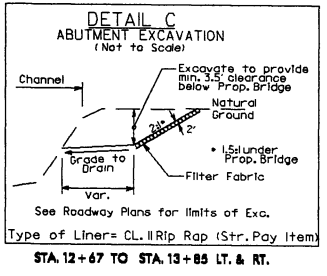
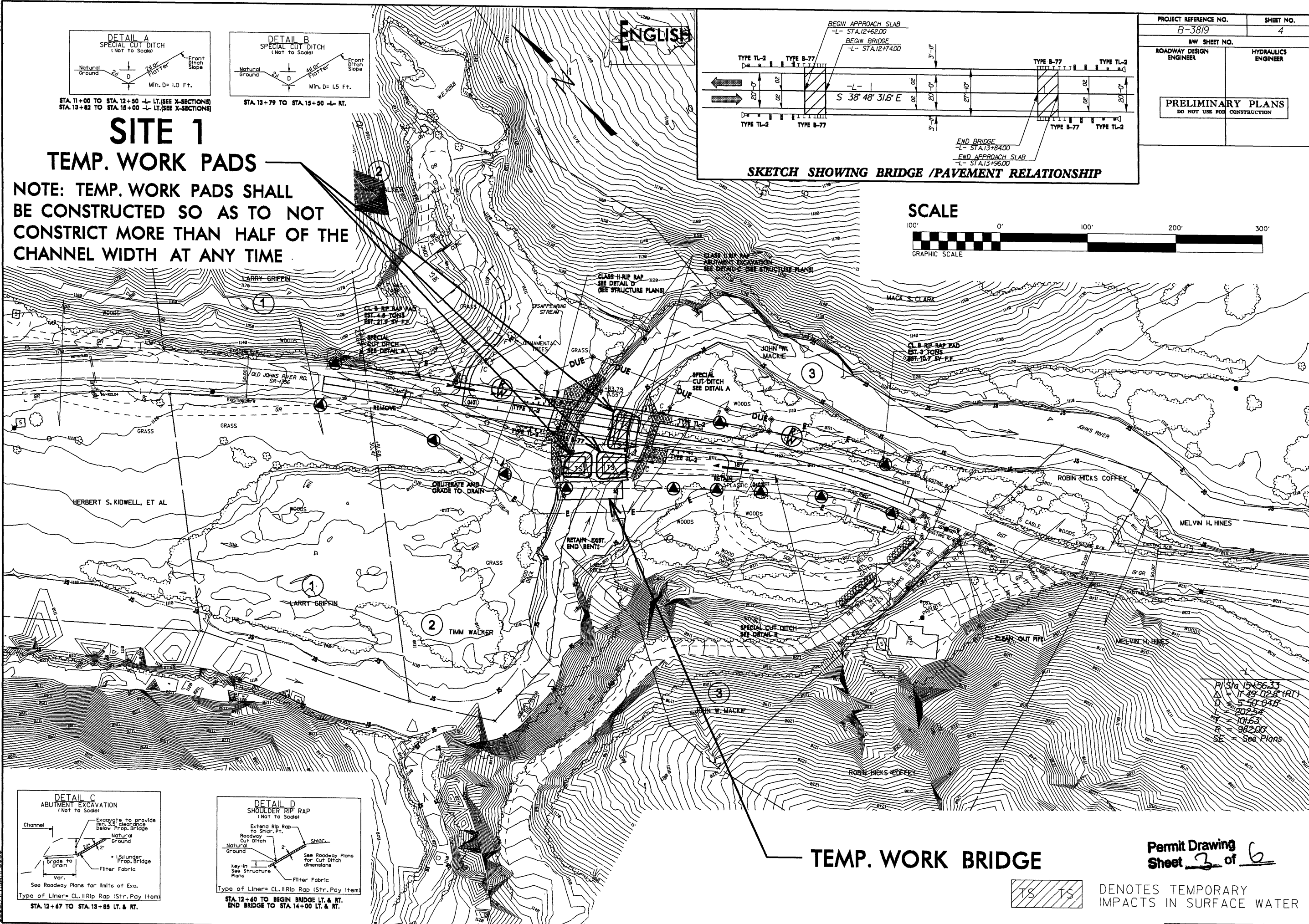
NOTE: TEMP. WORK PADS SHALL BE CONSTRUCTED SO AS TO NOT CONSTRICT MORE THAN HALF OF THE CHANNEL WIDTH AT ANY TIME

ENGLISH

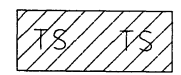


PROJECT REFERENCE NO. B-3819	SHEET NO. 4
RW SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SCALE



TEMP. WORK BRIDGE



DENOTES TEMPORARY IMPACTS IN SURFACE WATER

Permit Drawing
Sheet 3 of 6

FOR -L- PROFILE, SEE SHEET NO. 5

Property ID #	Courtesy Title	Last Name	First Name	Address	City/Town	State	Zip Code
Parcel 2	Mr. and Mrs.	Walker	Timm & Jeanie B.	2096 Old Johns River Rd	Collettsville	NC	28611
Parcel 3	Mr. and Mrs.	Mackie	John W. & Nancy	2562 Riverfork Rd	Clover	SC	29710

NCDOT
Caldwell County
WBS 33272.1.1 (B-3819)

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3819	1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
33272.1.1	BRZ-1356 (1)	PE	
33272.2.1	BRZ-1356 (1)	ROW & UTIL	

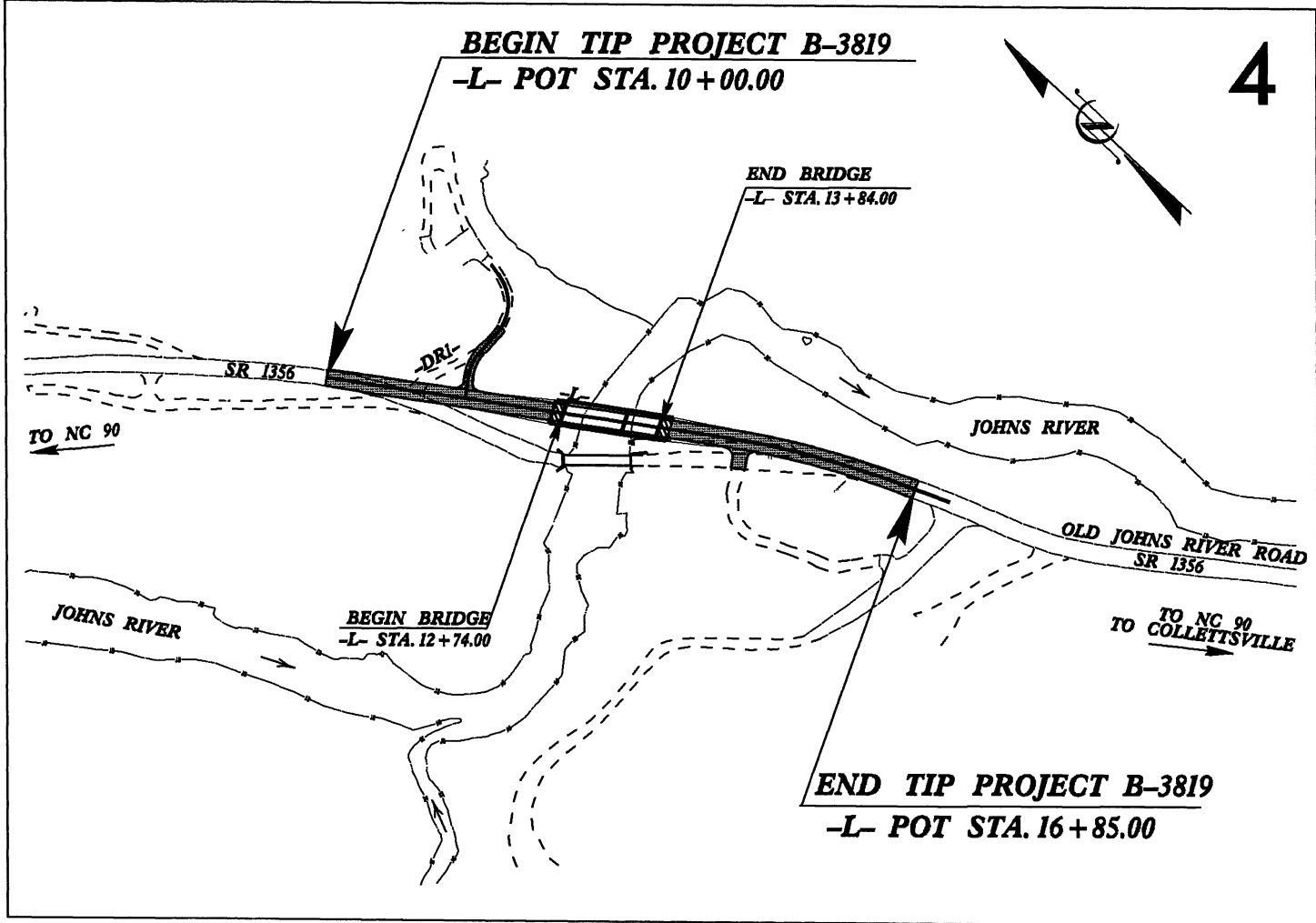
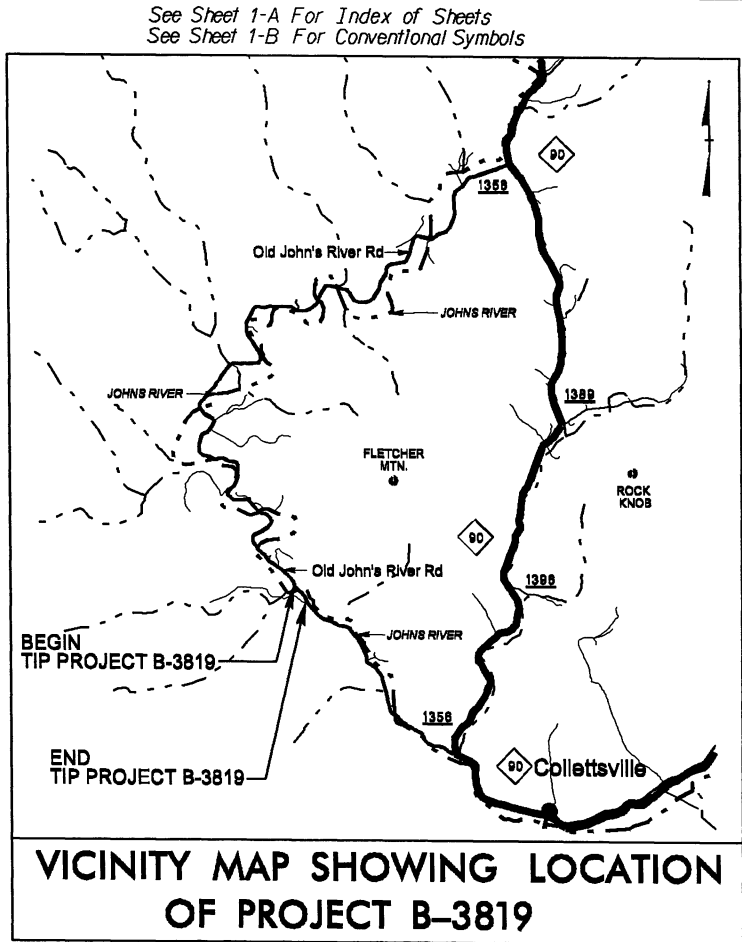
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CALDWELL COUNTY

**LOCATION: BRIDGE NO. 184 OVER THE JOHNS RIVER
ON SR 1356 (OLD JOHNS RIVER ROAD)**

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

TIP PROJECT: B-3819

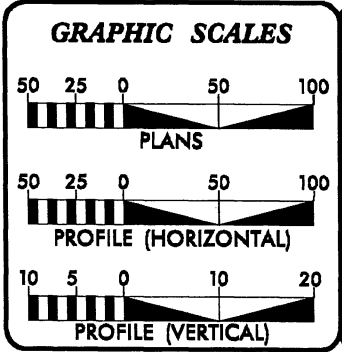


THIS PROJECT WAS DESIGNED USING
THE SUB REGIONAL TIER DESIGN GUIDELINES
FOR BRIDGE PROJECTS

THERE IS NO CONTROL OF ACCESS ON THIS PROJECT
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONTRACT:



DESIGN DATA

ADT 2012 =	515
ADT 2032 =	800
DHV =	12 %
D =	60 %
T =	3 % *
V =	35 MPH
* TTST 1 %	DUAL 2 %
FUNC. CLASS =	RURAL LOCAL

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-3819 =	0.109 MILES
LENGTH OF STRUCTURE TIP PROJECT B-3819 =	0.021 MILES
TOTAL LENGTH OF TIP PROJECT B-3819 =	0.130 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
1900 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: MARCH 14, 2011	TONY HOUSER, PE PROJECT ENGINEER
LETTING DATE: MARCH 20, 2012	LEE ANN MOORE 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

05-APR-2011 11:58 R:\Roadway\APR01\B3819_rdy_rsh.dgn \$\$\$USERNAME\$\$\$

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	Ⓜ
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	-----
Buffer Zone 1	-----
Buffer Zone 2	-----
Flow Arrow	←
Disappearing Stream	-----
Spring	○
Wetland	-----
Proposed Lateral, Tail, Head Ditch	-----
False Sump	-----

RAILROADS:

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

RIGHT OF WAY:

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

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-----
Proposed Slope Stakes Fill	-----
Proposed Wheel Chair Ramp	-----
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	⊗
VEGETATION:	
Single Tree	⊕
Single Shrub	⊕
Hedge	-----
Woods Line	-----
Orchard	-----
Vineyard	-----

EXISTING STRUCTURES:

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

UTILITIES:

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

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

MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	⊠
Utility Located Object	○
Utility Traffic Signal Box	⊠
Utility Unknown U/G Line	-----
U/G Tank; Water, Gas, Oil	⊠
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.

6/2/09

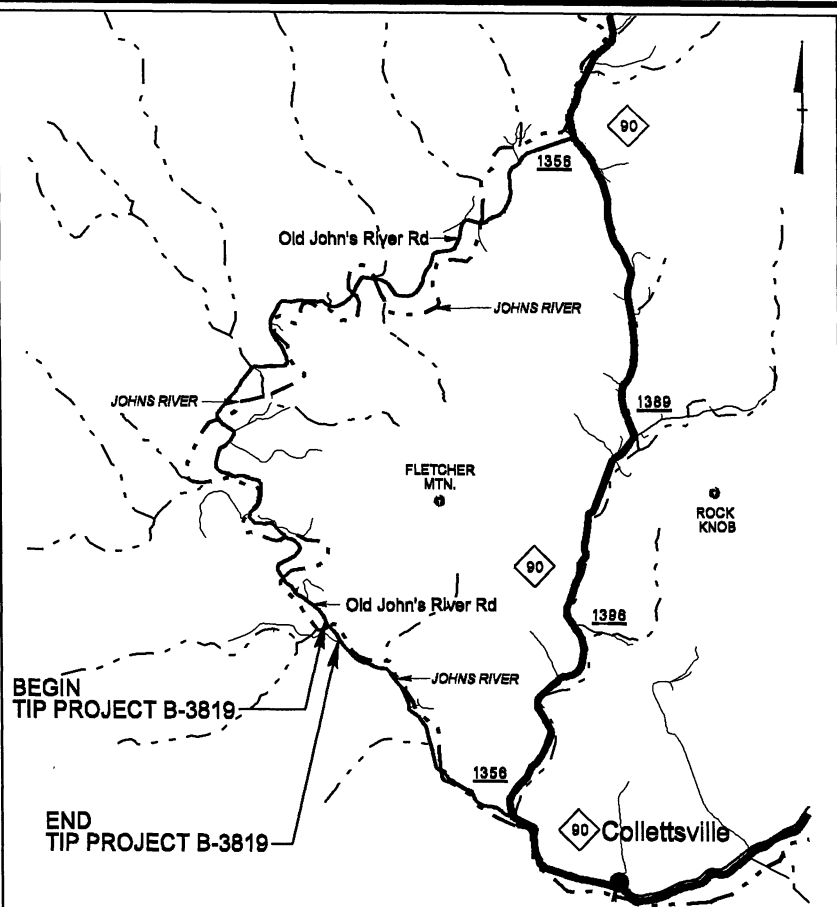
SURVEY CONTROL SHEET B-3819

PROJECT REFERENCE NO.	SHEET NO.
B-3819	1C
Location and Surveys	

BL	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
BL3		BL-3	810032.3143	1200110.1584	1127.84		OUTSIDE PROJECT LIMITS
BL4		BL-4	809845.9717	1200368.4105	1127.12		OUTSIDE PROJECT LIMITS
BL5		BL-5	809448.6747	1200591.1041	1113.13	12+70.92	75.24 RT
BL6		BL-6	809247.2850	1200855.3162	1109.53	15+91.92	14.14 LT
BL7		BL-7	809039.3537	1200931.0405	1115.21		OUTSIDE PROJECT LIMITS
B38191		GPS 3819-1	808549.4380	1201337.6750	1117.35		OUTSIDE PROJECT LIMITS

 BM1 ELEVATION = 1117.77'
 N 809676. E 1200381.
 L STATION 10+00
 S 72° 54' 46.8" W DIST 103.93'
 8" SPIKE IN BASE OF 8" WALNUT

 BM2 ELEVATION = 1110.37'
 N 809264. E 1200763.
 L STATION 15+27 54' RIGHT
 8" SPIKE IN BASE OF 24" SYCAMORE



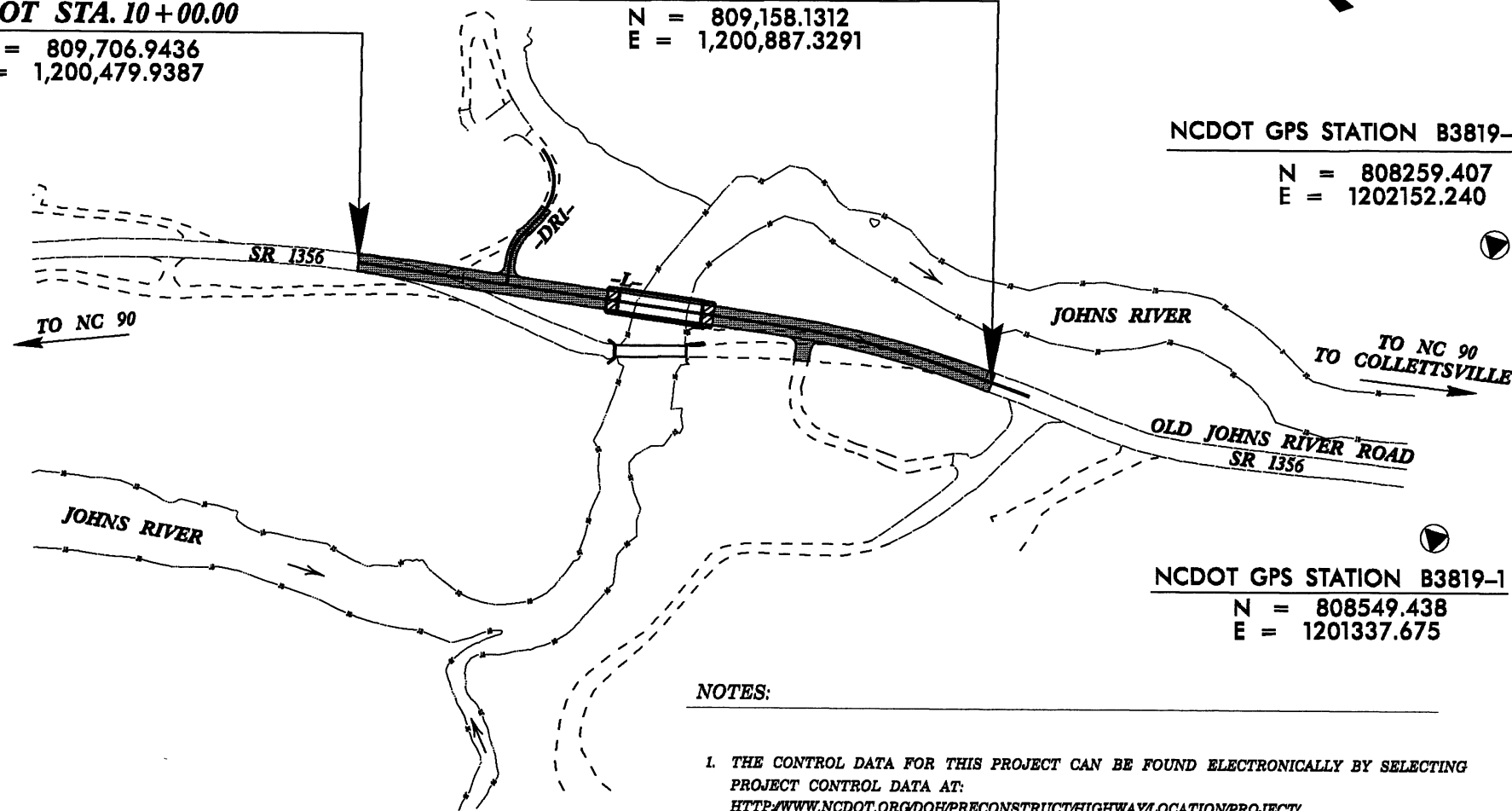
VICINITY MAP SHOWING LOCATION OF PROJECT B-3819

BEGIN TIP PROJECT B-3819
-L- POT STA. 10+00.00

N = 809,706.9436
 E = 1,200,479.9387

END TIP PROJECT B-3819
-L- POT STA. 16+85.00

N = 809,158.1312
 E = 1,200,887.3291



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B3819-1" WITH NAD 83 STATE PLANE GRID COORDINATES OF
 NORTHING: 808549.4380(±) EASTING: 1201337.6750(±)
 ELEVATION: 1117.35'(±)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99989678
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B3819-1" TO -L- STATION 10+00 IS
 N 36° 32' 21" W 1440.67
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NAVD 88

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](http://www.ncdot.org/doh/preconstruct/highway/location/project)

THE FILES TO BE FOUND ARE AS FOLLOWS:
 B3819_LS_CONTROL_HTML

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

© 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)
 SEE GPS CALIBRATION SHEET FOR HORIZONTAL AND VERTICAL COORDINATE VALUES.

NOTE: DRAWING NOT TO SCALE

05-APR-2011 11:58
 C:\PROJECTS\NAD83\B3819-1.s-1c.dgn

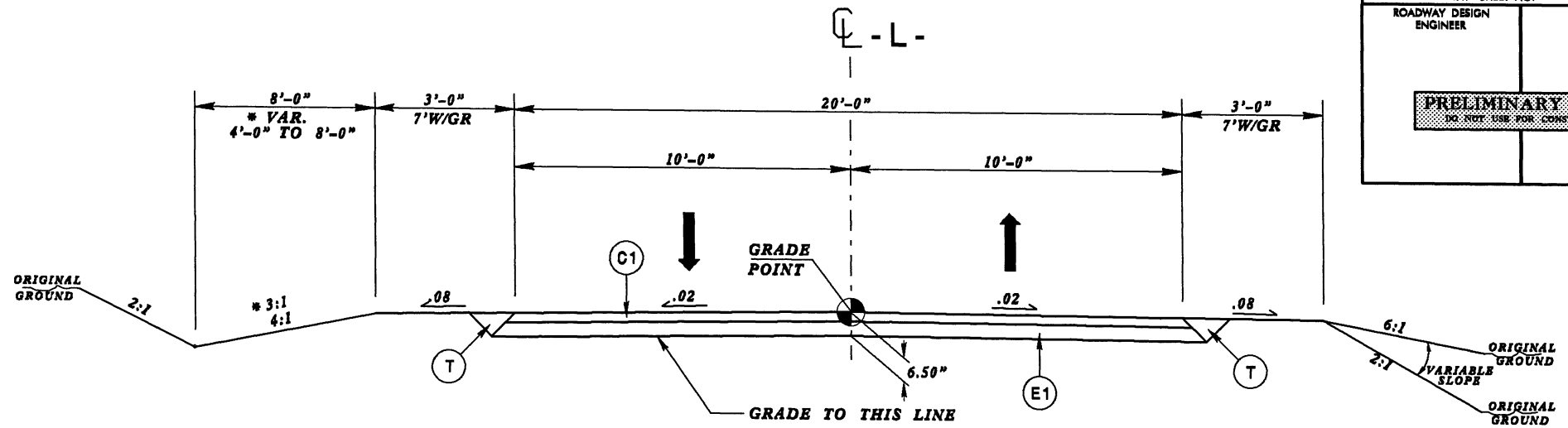
5/14/99

05-APR-2011 11:59 AM
 C:\PROJECTS\B-3819\RDY_TUP.dgn
 \$\$\$\$\$\$BENRAGE\$\$\$\$\$\$

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 2.5" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
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 LESS THAN 1" OR GREATER THAN 1.5" IN DEPTH.
E1	PROP. APPROX. 4.0" 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 5.5" IN DEPTH.
J1	PROP. 6" AGGREGATE BASE COURSE
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

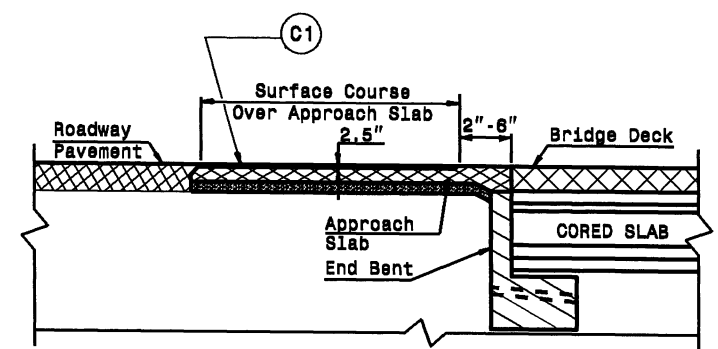
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

PROJECT REFERENCE NO. B-3819	SHEET NO. 2
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

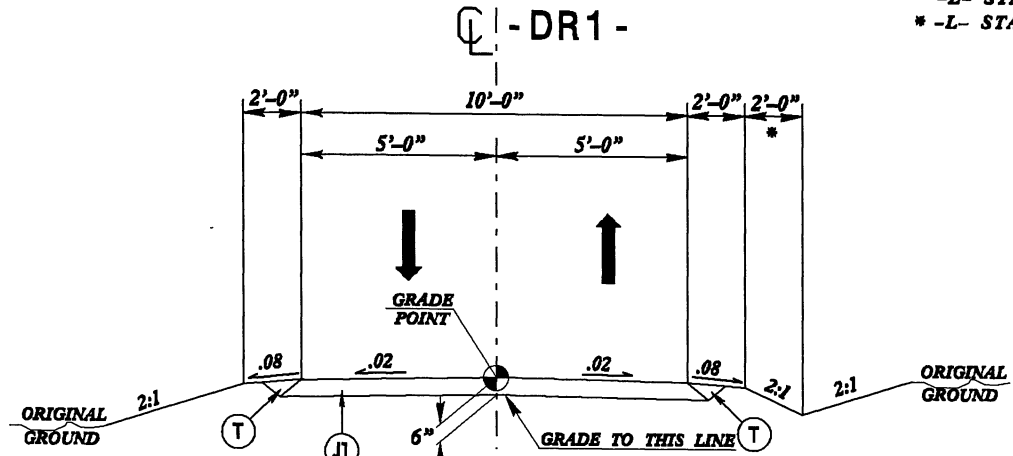


TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1:
 -L- STA. 10+00.00 TO 12+74.00 (BEG. BRIDGE)
 -L- STA. 13+84.00 (END BRIDGE) TO 16+85.00
 * -L- STA. 10+25.00 TO 12+74.00 (LEFT)

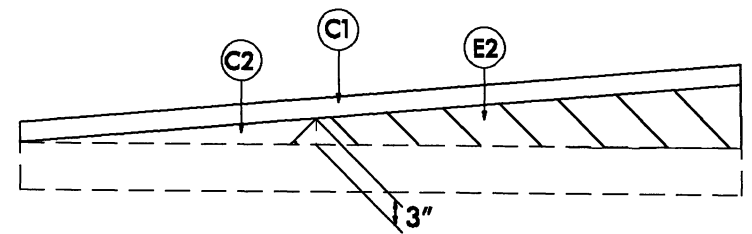


Detail of Asphalt Wearing Surface on Approach Slab

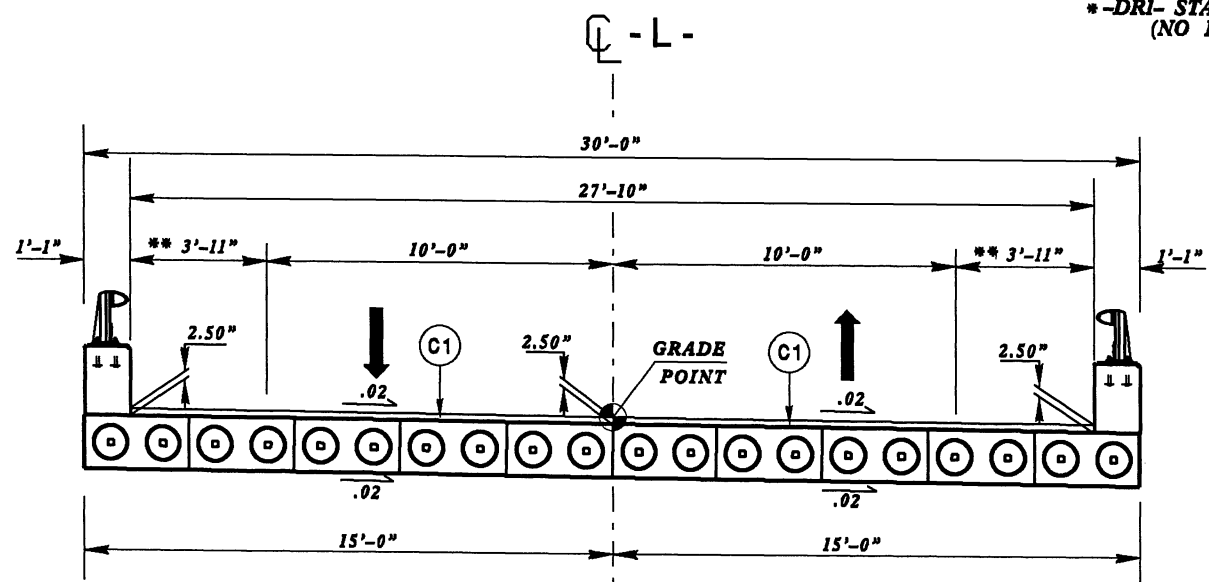


TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2:
 -DRI- STA. 10+80.00 TO 11+63.75
 * -DRI- STA. 10+80.00 TO 11+20.00
 (NO DITCH, TIE TO EXIST. SLOPE)



Show Wedging Detail



TYPICAL SECTION ON BRIDGE

USE BRIDGE TYPICAL:
 -L- STA. 12+74.00 (BEG. BRIDGE) TO STA. 13+84.00 (END BRIDGE)
 ** BRIDGE SHOULDER WIDTH REQUIRED FOR HYDRAULIC SPREAD

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

Table with columns: STATION, UNCL. EXCAV., EMBANK. +%, BORROW, WASTE. Rows include station ranges like -L- 10+00.00 to -L- 12+74.00 and a GRAND TOTALS row.

PER GEOTECH RECOMMENDATION
EST. 100 CY EMBANKMENT STABILITY UNDERCUT
EST. 20 CY GRADE POINT UNDERCUT
EST. 100 CY CONTINGENCY UNDERCUT
EST. 149 CY PAVEMENT STRUCTURE VOLUME

PAVEMENT REMOVAL SUMMARY

Table with columns: SURVEY LINE, STATION, LOCATION L/R/T/CL, YD'. Includes a row for station 10+00.00 to 12+81.00 at location RT, totaling 570 SY.

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48" & UNDER)

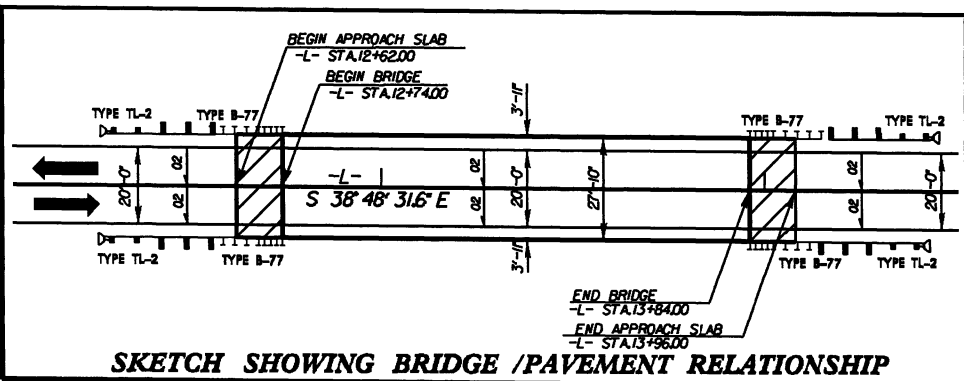
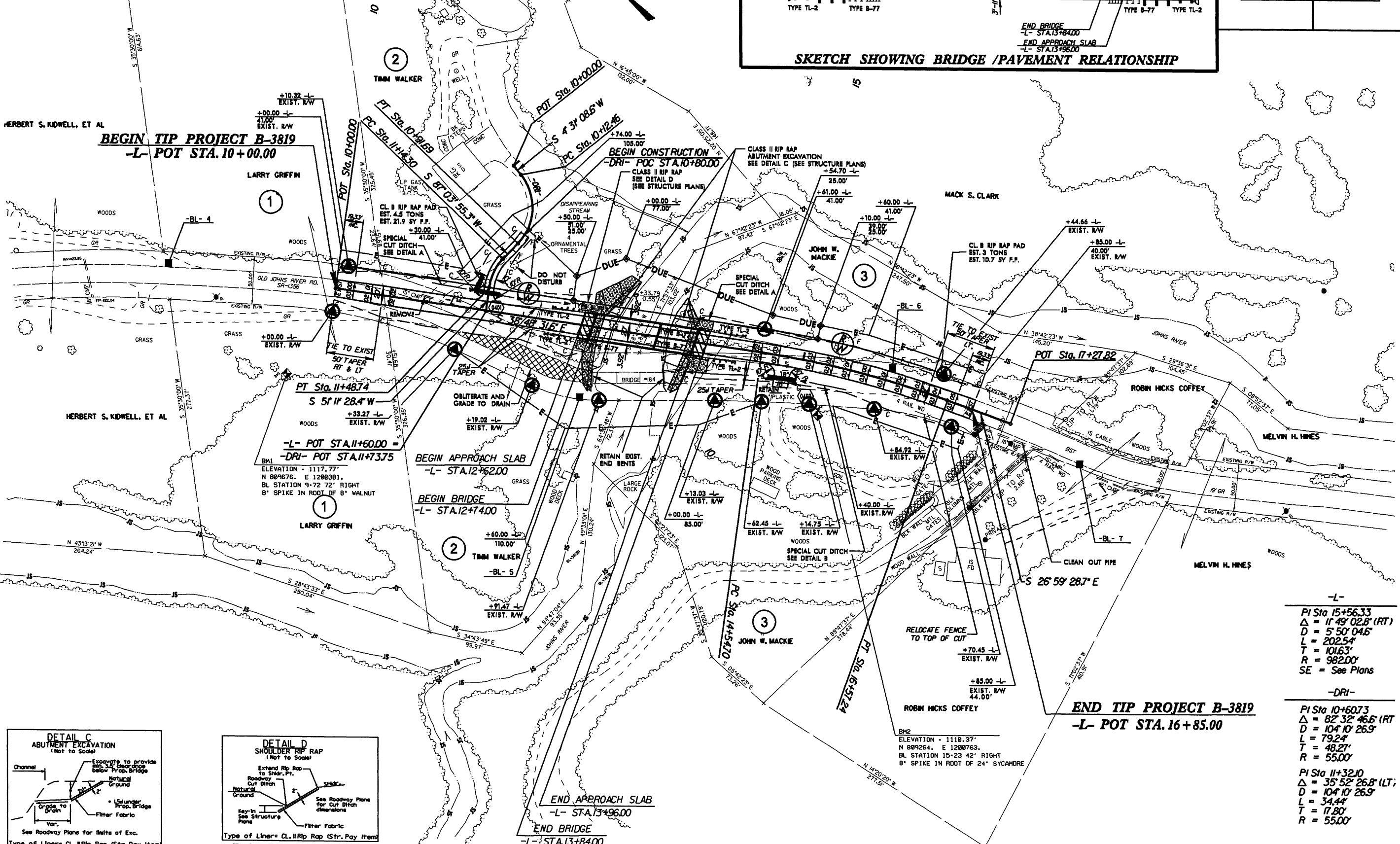
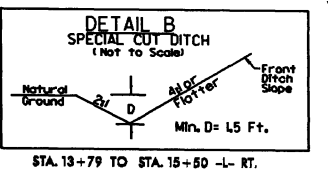
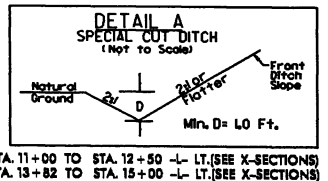
Large multi-column table listing pipe types (DRAINAGE PIPE, C.S. PIPE, CLASS III R.C. PIPE), sizes, materials, and quantities for various stations.

GUARDRAIL SUMMARY

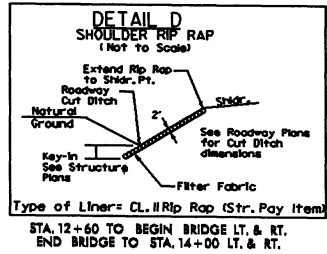
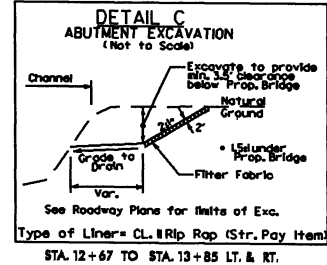
Table with columns: SURVEY LINE, BEG. STA., END STA., LOCATION, LENGTH, WARRANT POINT, FLARE LENGTH, ANCHORS, IMPACT ATTENUATOR, etc. Includes a calculation section for guardrail posts: TYPE TL - 2 : 4 @ 31.25 = 125 and TYPE B - 77 : 4 @ 18.75 = 75.

Vertical text on the left margin: \$\$\$\$ USERNAME: \$\$\$\$ 05-APR-2011 14:58 R:\Roadskey\Proj\B3819-rd-summ.dgn

05-APR-2011 10:58 AM C:\PROJECTS\B-3819\1-dy-psh.t.dgn



PROJECT REFERENCE NO. B-3819	SHEET NO. 4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



-L-

PI Sta 15+56.33	$\Delta = 11' 49' 02.8''$ (RT)
D = 5' 50' 04.6"	L = 202.54'
T = 101.63'	R = 982.00'
SE = See Plans	

-DRI-

PI Sta 10+60.73	$\Delta = 82' 32' 46.6''$ (RT)
D = 104' 10' 26.9"	L = 79.24'
T = 48.27'	R = 55.00'

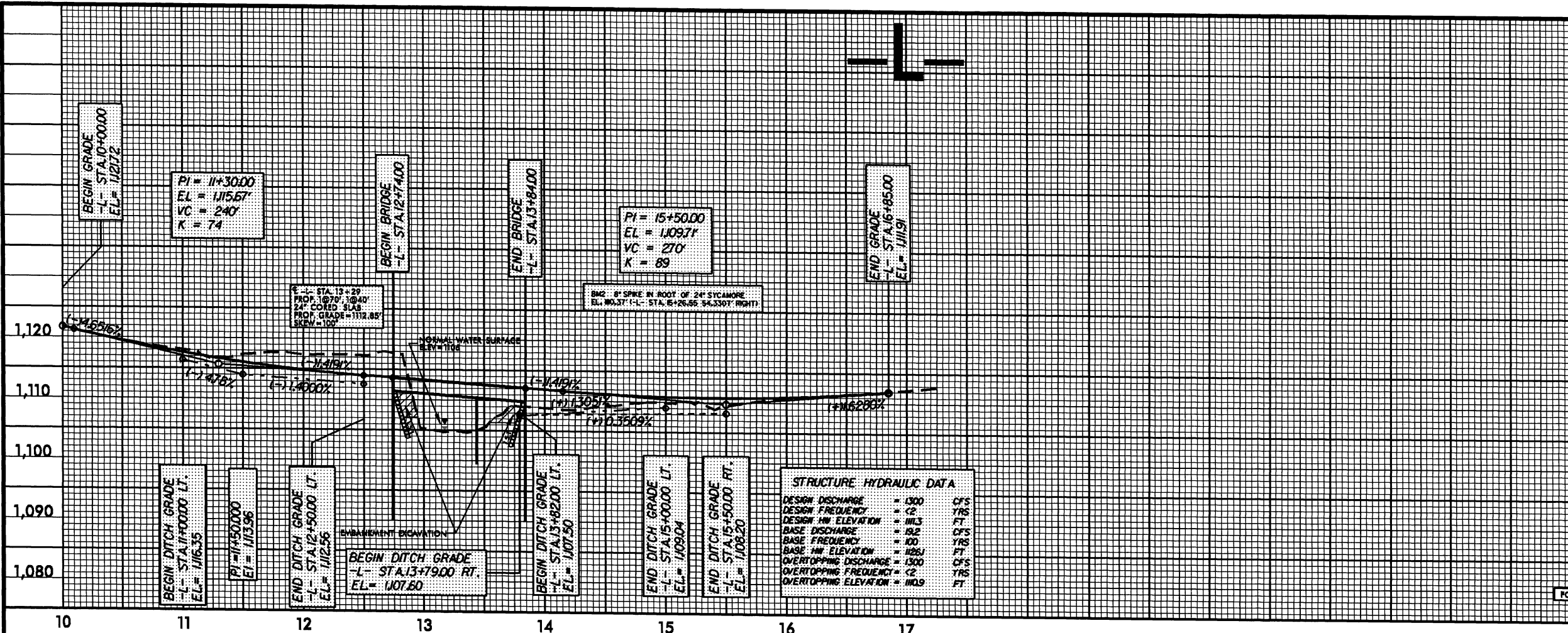
PI Sta 11+32.10	$\Delta = 35' 52' 26.8''$ (LT);
D = 104' 10' 26.9"	L = 34.44'
T = 17.80'	R = 55.00'

PAVEMENT REMOVAL
FOR -L- PROFILE, SEE SHEET NO. 5

5/28/99

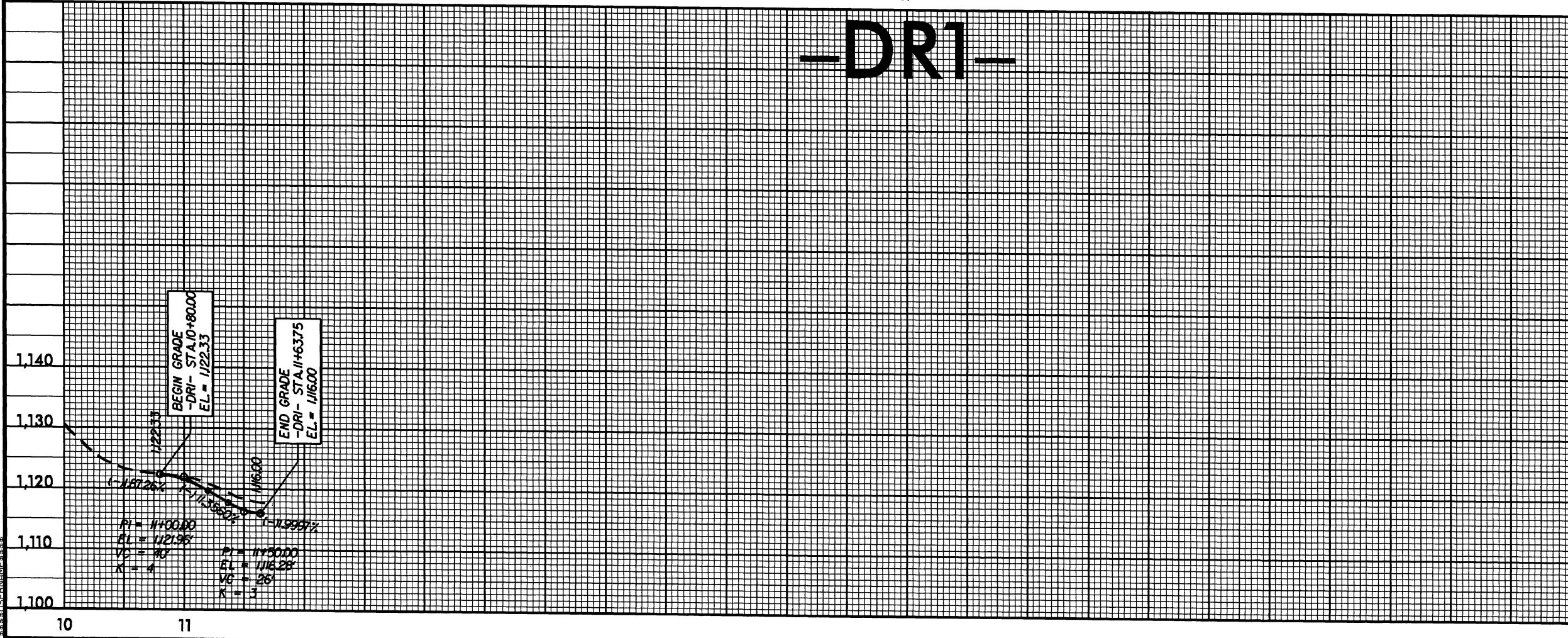
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5/28/99

PROJECT REFERENCE NO. B-3819	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS <small>NO. NOT FOR CONSTRUCTION</small>	



FOR -L- PLAN VIEW, SEE SHEET NO. 4

-DRI-

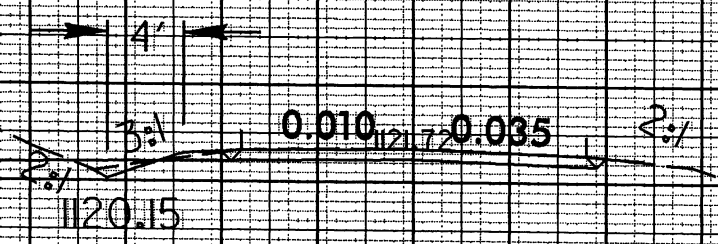
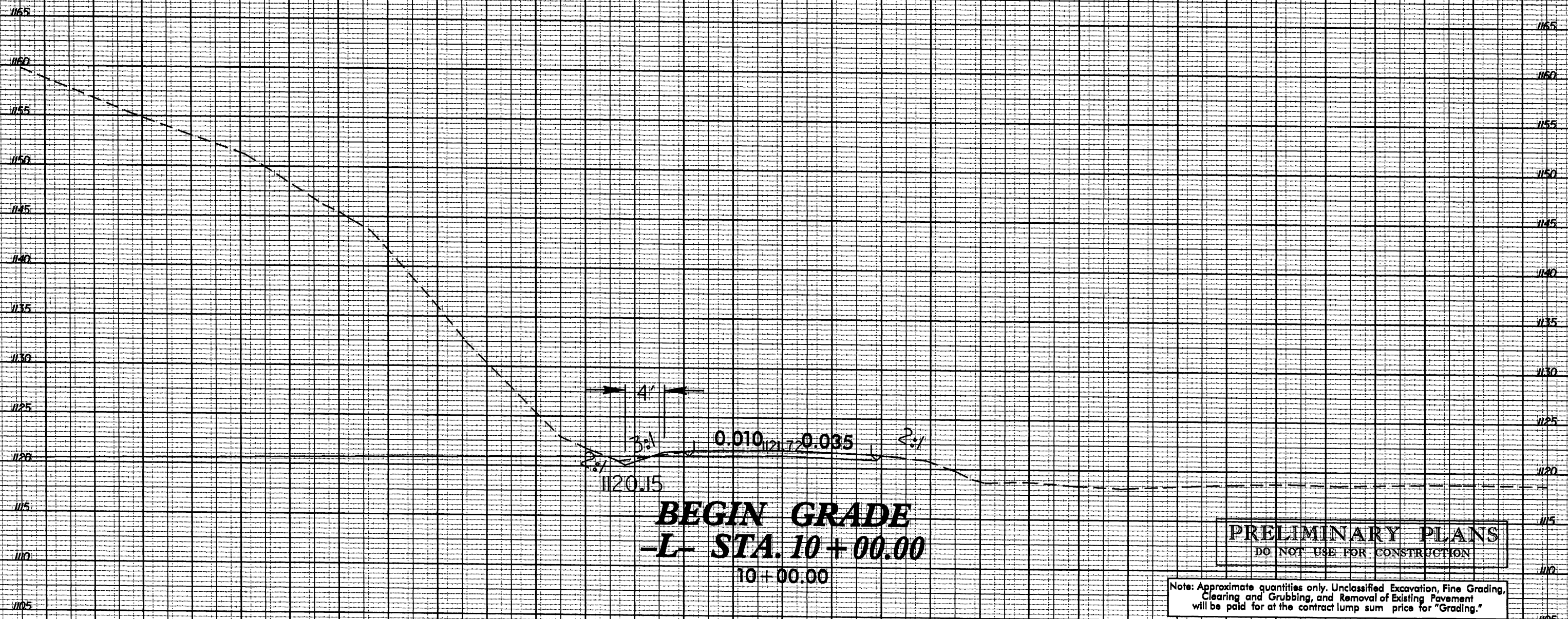


8/23/99

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



PROJ. REFERENCE NO. B-3819 SHEET NO. X-1



BEGIN GRADE
-L- STA. 10+00.00
10+00.00

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

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

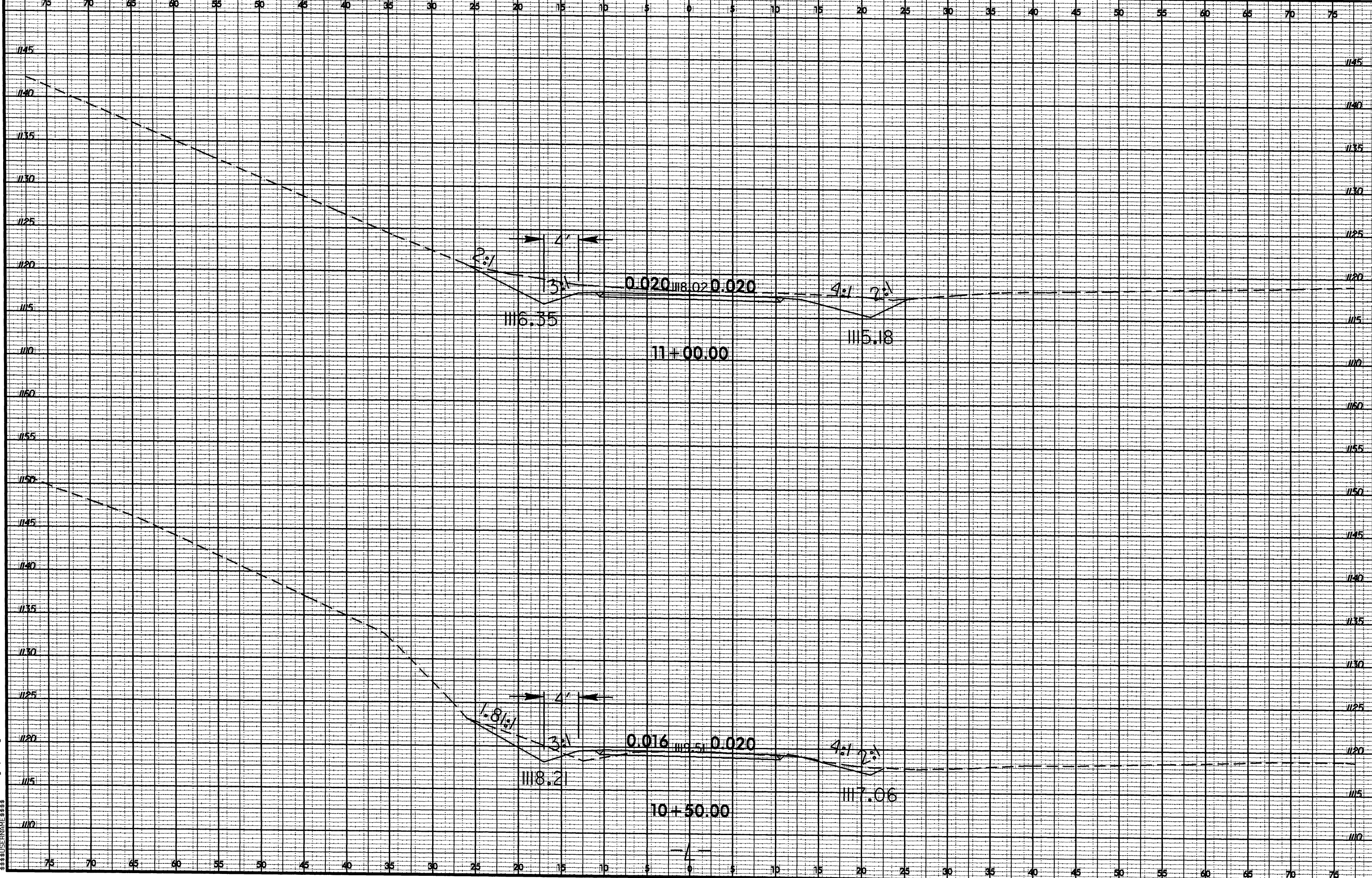
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8/23/99

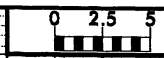


PROJ. REFERENCE NO. B-3819 SHEET NO. X-2



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SUBSERVANT

8/23/99



PROJ. REFERENCE NO.	SHEET NO.
B-3819	X-3

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1125 1125

1120 1120

1115 1115

1110 1110

1105 1105

1125 1125

1120 1120

1115 1115

1110 1110

1105 1105

1130 1130

1125 1125

1120 1120

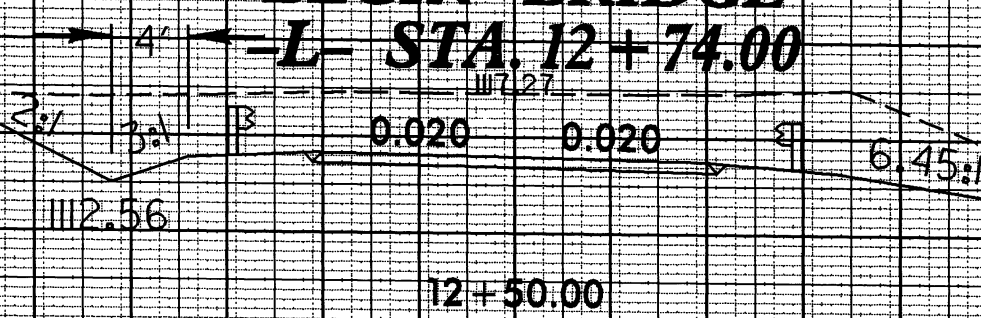
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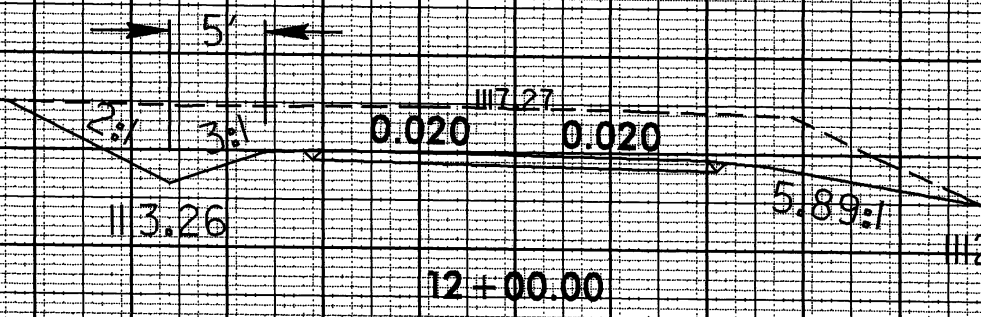
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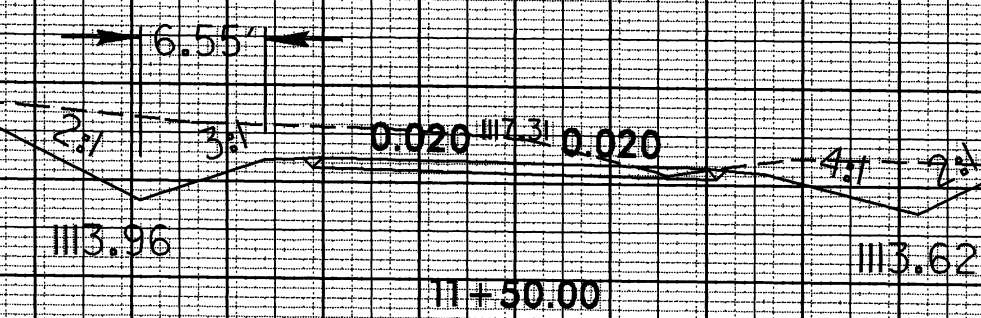
BEGIN BRIDGE
-L- STA. 12+74.00



12+50.00



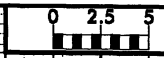
12+00.00



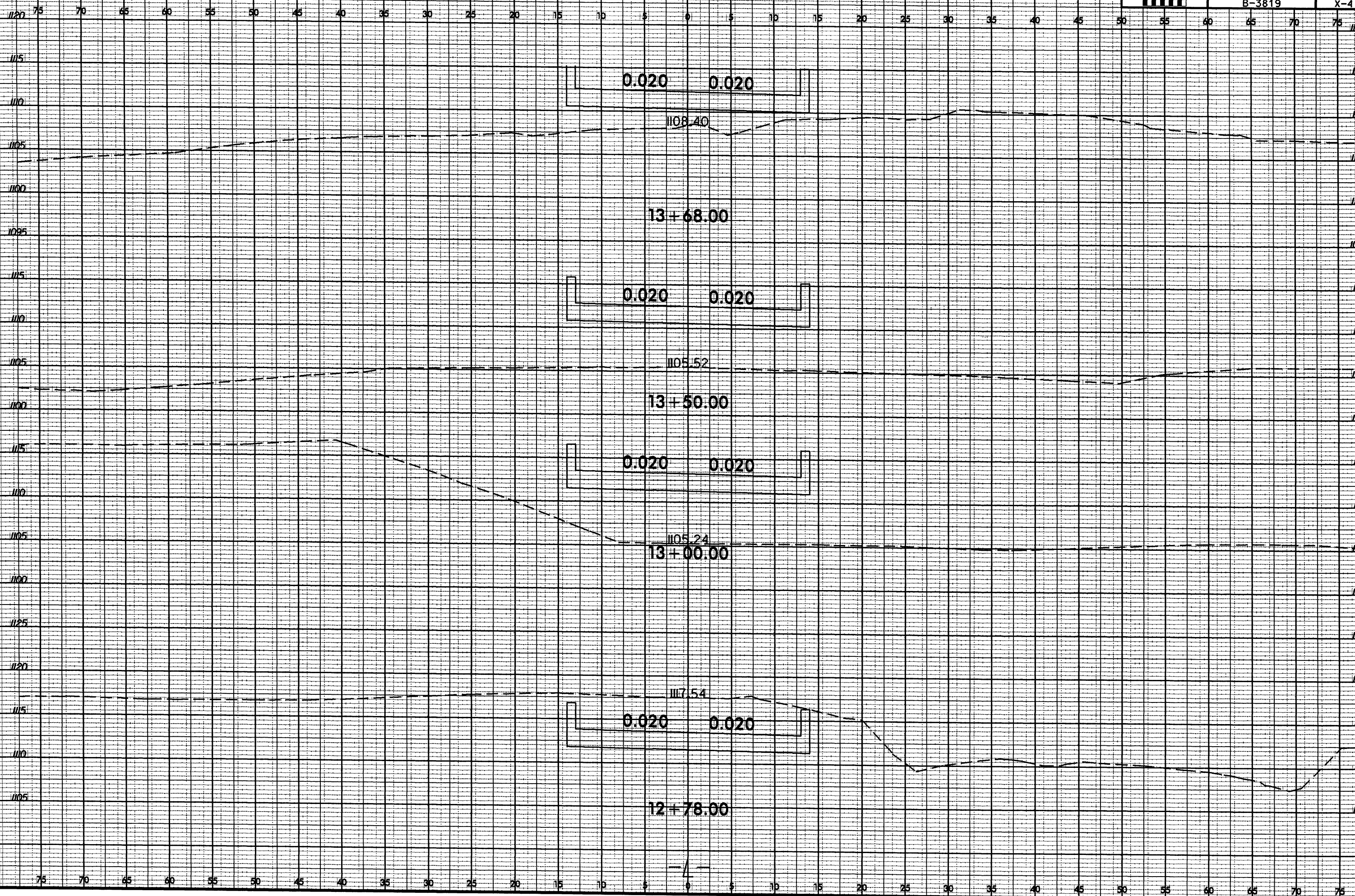
11+50.00

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8/23/99

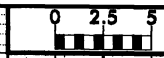


PROJ. REFERENCE NO. B-3819 SHEET NO. X-4

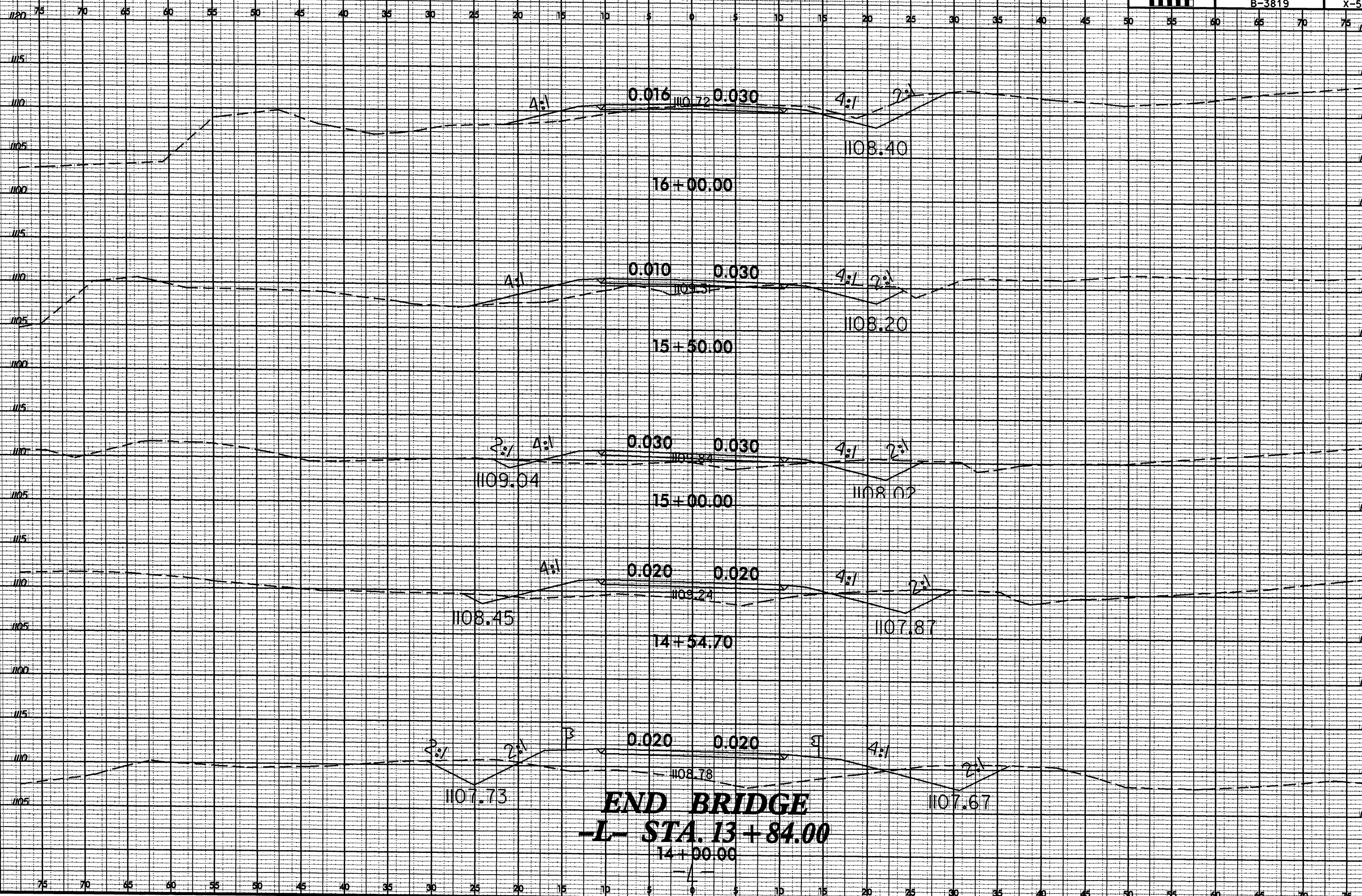


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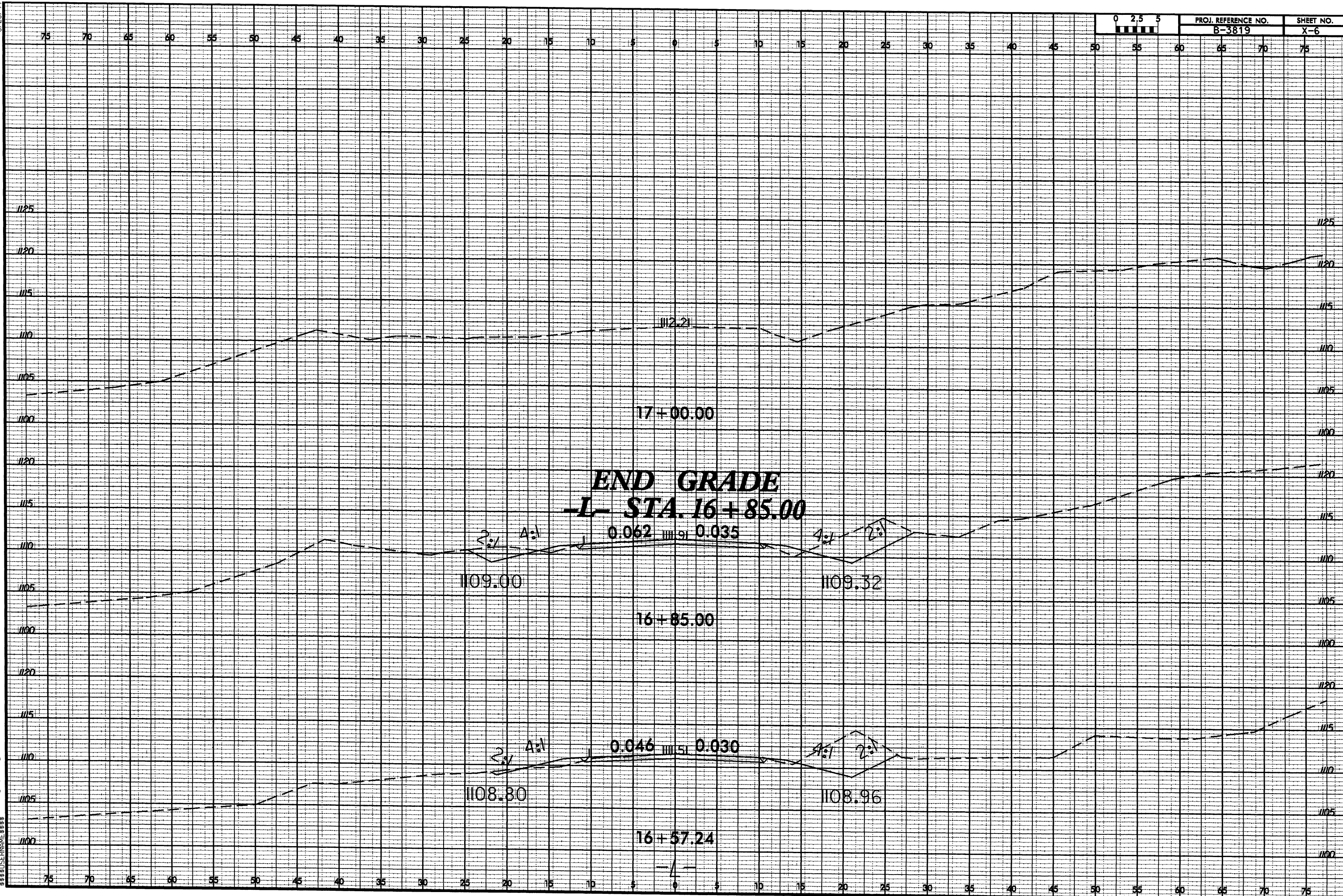


PROJ. REFERENCE NO. B-3819 SHEET NO. X-5

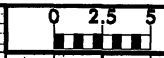


END BRIDGE
-L- STA. 13 + 84.00
14 + 00.00

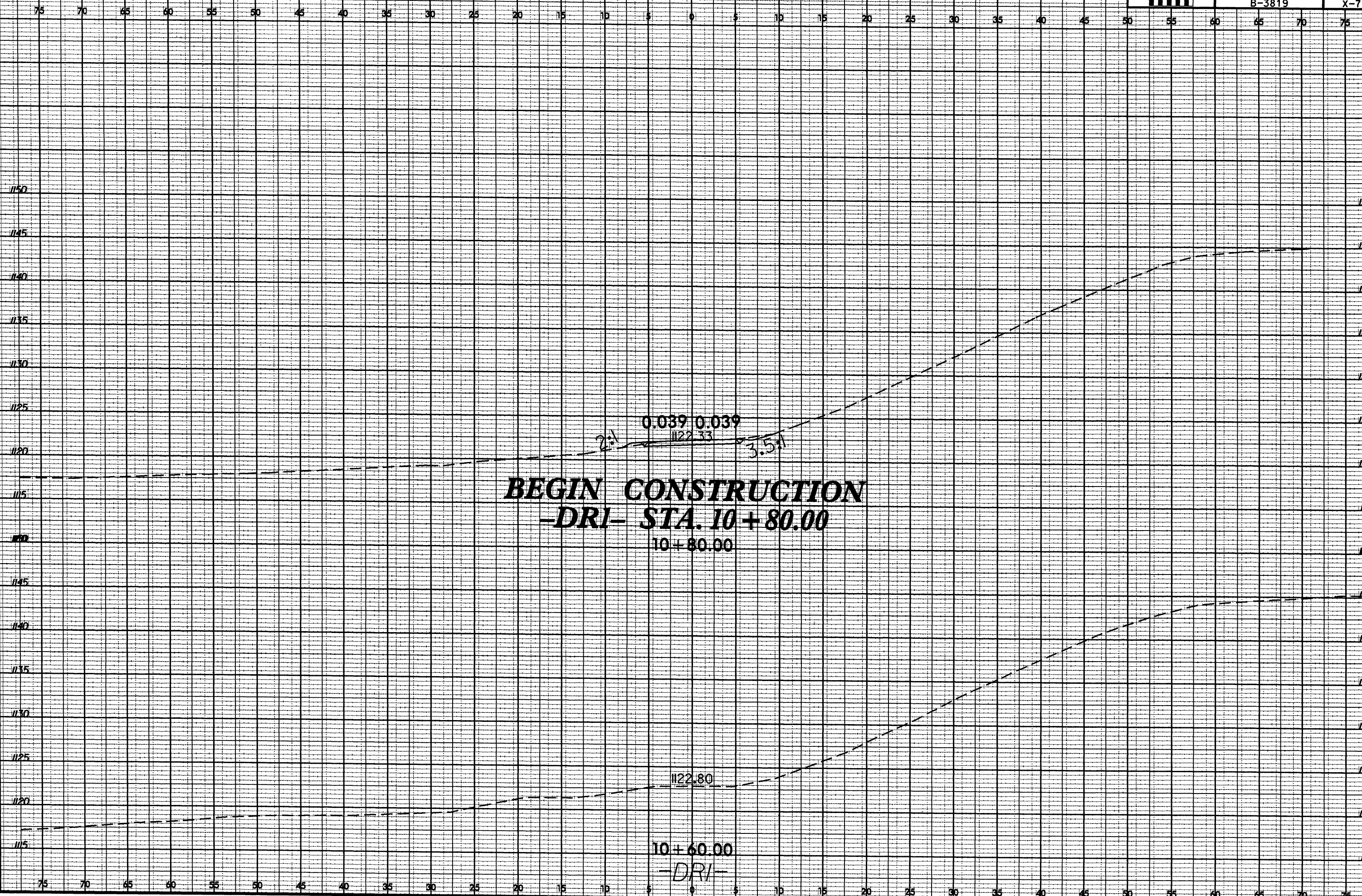
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PROJ. REFERENCE NO.	SHEET NO.
B-3819	X-7



2:1 0.039 0.039
 1122.33 3.5:1

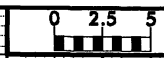
BEGIN CONSTRUCTION
-DRI- STA. 10+80.00
 10+80.00

1122.80

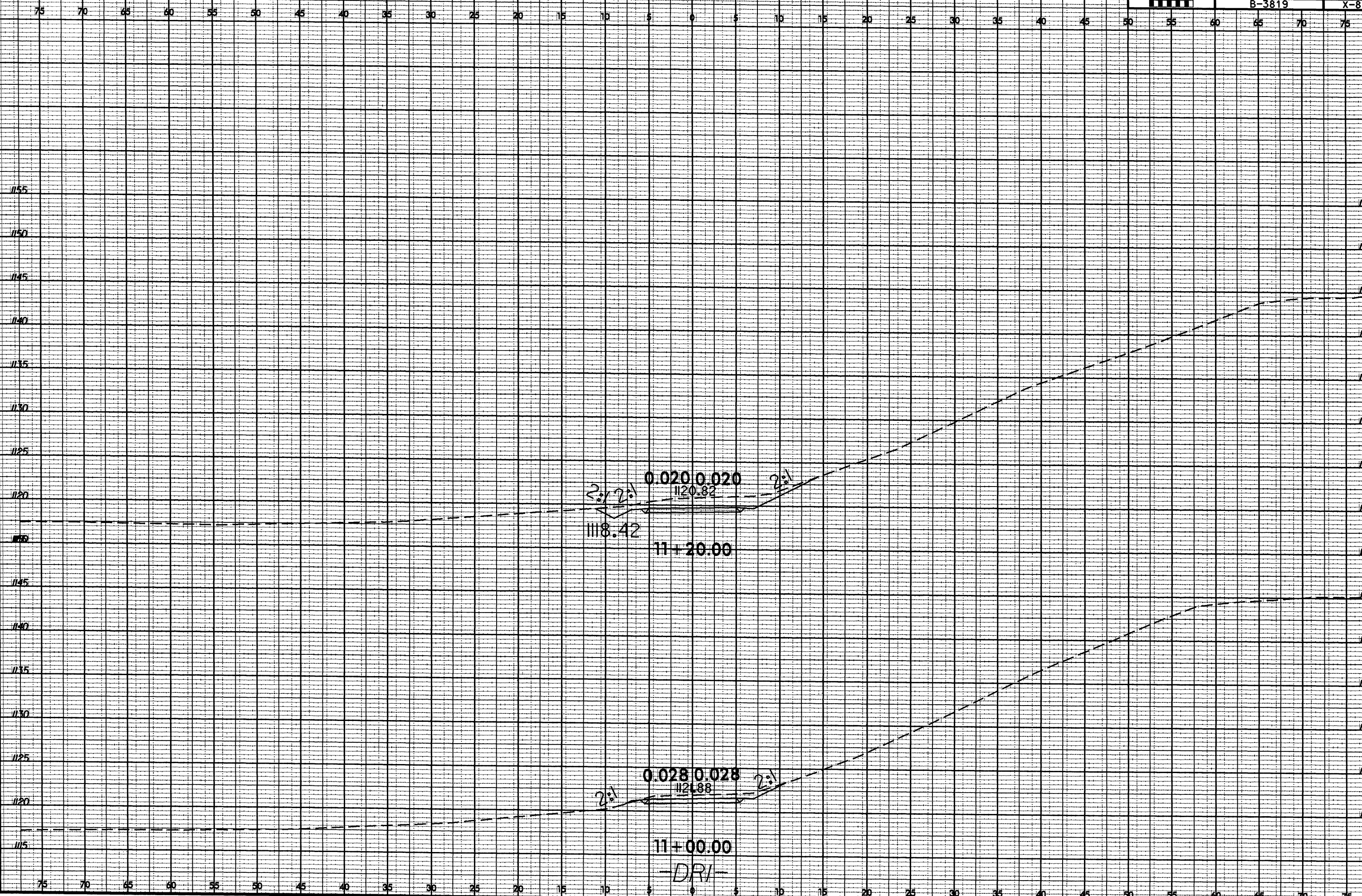
10+60.00
 -DRI-

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 \$\$\$USERNAME\$\$\$

8/23/99

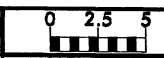


PROJ. REFERENCE NO.	SHEET NO.
B-3819	X-8



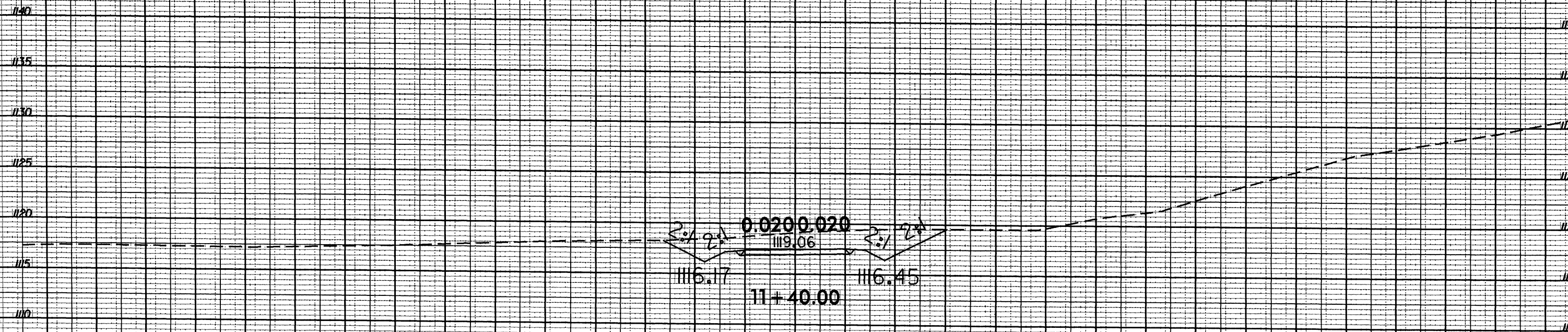
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8/23/99



PROJ. REFERENCE NO.	SHEET NO.
B-3819	X-9

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