



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT L. MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

March 6, 2013

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

ATTN: Ms. Loretta Beckwith
NCDOT Coordinator

Subject: **Application for Section 404 Nationwide Permit 13, 23 & 33 and Section 401 Water Quality Certification** for the proposed replacement of Bridge No. 113 over Kyles Creek on SR 1574 (Fruitland Road) in Henderson County, Federal Aid Project No. BRZ-1547(2); Division 14; TIP No. B-4765 \$570.00 debit WBS No. 38537.1.1

Dear Madam:

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 113 over Kyles Creek on SR 1574 with a 65-foot long, single-span, 2-foot cored slab bridge. There will be 120 linear feet of permanent impacts to a UT to Kyles Creek for filling and relocation associated with the bridge replacement, and 92 linear feet of bank stabilization impacts to Kyles Creek. There will be a total of 0.06 acre (282 linear feet) of temporary impacts to streams associated with the on-site temporary detour.

Please see enclosed copies of the Pre-Construction Notification (PCN), EEP acceptance letter, Stormwater Management Plan, permit drawings, and design plans. A Notification of Jurisdictional Determination was received from the USACE, dated August 25, 2009. A Categorical Exclusion (CE) was completed in February 2012 and distributed shortly thereafter. Additional copies are available upon request.

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 attachments, 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.

This project calls for a letting date of October 15, 2013 and a review date of August 27, 2013; however, the let date may advance as additional funding becomes available.

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 Bill Barrett at (919) 707-6103.

Sincerely,

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

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 13	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 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 checked="" type="checkbox"/> Yes <input 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:	Replacment of Bridge 113 over Kyles Creek on SR 1574
2b. County:	Henderson
2c. Nearest municipality / town:	Fruitland
2d. Subdivision name:	<i>not applicable</i>
2e. NCDOT only, T.I.P. or state project no:	TIP No. B-4765

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) 707-6103
3g. Fax no.:	(919) 212-5785
3h. Email address:	wabarrett@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: 35.393694 (DD.DDDDDD) Longitude: - 82.39575 (-DD.DDDDDD)
1c. Property size:	1.781 acres
2. Surface Waters	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Kyles Creek
2b. Water Quality Classification of nearest receiving water:	C;Tr
2c. River basin:	French Broad
3. Project Description	
3a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: Rural, with single-family homes	
3b. List the total estimated acreage of all existing wetlands on the property: N/A	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 993	
3d. Explain the purpose of the proposed project: To replace a structurally deficient (sufficiency rating of 32.5 out of 100) and functionally obsolete (deck geometry appraisal of 2 out of 9) bridge.	
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing a 52-foot long bridge with a 65-foot, single-span bridge on the existing alignment with an on-site detour. Standard road building equipment, such as trucks, dozers, and cranes will be used.	
4. Jurisdictional Determinations	
4a. Have jurisdictional wetland or stream determinations by the Corps or State been requested or obtained for this property / project (including all prior phases) in the past? Comments:	<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): Bill Barrett	Agency/Consultant Company: NCDOT Other:
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation. Corps SAW-2009-1526 (August 25, 2009), NCDWQ (September 8, 2009)	
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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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 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					X Permanent X 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 type="checkbox"/> P <input checked="" type="checkbox"/> T	Pipe for on-site detour	UT to Kyles Creek (SC)	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	3	55
Site 2 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Pipe for on-site detour	UT to Kyles Creek (SB)	<input type="checkbox"/> PER <input checked="" type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	3	82
Site 3 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Pipe & de-watering for on-site detour	Kyles Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	12	85
Site 3 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Bank stabilization	Kyles Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	12	15
Site 3 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Bank stabilization	Kyles Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	12	92
Site 4 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Fill	UT to Kyles Creek (SA)	<input type="checkbox"/> PER <input checked="" type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	2	120
Site 4 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Pipe for on-site detour	UT to Kyles Creek (SA)	<input type="checkbox"/> PER <input checked="" type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	2	45
3h. Total stream and tributary impacts					212 Perm 282 Temp	
3i. Comments: 92 LF of the total of 212 LF of permanent stream impact is from bank stabilization.						

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?

Yes No If yes, permit ID no:

5i. Expected pond surface area (acres):

5j. Size of pond watershed (acres):

5k. Method of construction:

6. Buffer Impacts (for DWQ)

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

6a. Project is in which protected basin?		<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. The proposed bridge is 13 feet longer than the existing bridge; the existing bridge has two bents in the stream, while the new bridge will span the stream; the proposed bridge will be at approximately the same grade as the existing structure; 3:1 fill slopes where practicable; there will be no direct discharge from impervious surfaces into the receiving water.		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques. Use of Best Management Practices (BMP) and measures used in the project are non-structural and are an attempt to reduce the stormwater impacts to the receiving stream due to erosion and runoff as well as attenuate and disperse stormwater before entering the receiving waters.		
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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, explain:	
2b. If yes, mitigation is required by (check all that apply):	<input type="checkbox"/> DWQ <input checked="" type="checkbox"/> Corps	
2c. If yes, which mitigation option will be used for this project?	<input type="checkbox"/> Mitigation bank <input checked="" 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 checked="" type="checkbox"/> Yes	
4b. Stream mitigation requested:	120 linear feet	
4c. If using stream mitigation, stream temperature:	<input type="checkbox"/> warm <input type="checkbox"/> cool <input checked="" 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: Mitigation not required for the bank stabilization impacts.		
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 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:				

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 not, explain why. Comments: If required from 1a, see attached buffer permit drawings.	<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 permit drawings.	
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 N/A
5b. Have all of the 401 Unit submittal requirements been met?	<input type="checkbox"/> Yes <input type="checkbox"/> No N/A

F. Supplementary Information	
1. Environmental Documentation (DWQ Requirement)	
1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land?	<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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5c. If yes, indicate the USFWS Field Office you have contacted.	<input 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? NHP database and NCDOT field surveys. Surveys for bunched arrowhead and mountain sweet pitcher plant conducted on April 27, 2009. Survey for small whorled pogonia conducted on June 17, 2009. Survey for white irisette conducted on May 19, 2011. No individuals of any of the species identified. No populations located within one mile of project, per NHP.		
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		
Dr. Gregory J. Thorpe, Ph D Applicant/Agent's Printed Name	 Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	3-7-13 Date

* Action Id. SAW-2009-1501

Placement of dredged or fill material within waters of the US and/or wetlands without a Department of the Army permit may constitute a violation of Section 301 of the Clean Water Act (33 USC § 1311). If you have any questions regarding this determination and/or the Corps regulatory program, please contact **David Baker** at **828-271-7980, extension 225**.

C. Basis For Determination

The project study area contains stream channels that exhibit indicators of ordinary high water marks. Kyles Creek and the unnamed tributaries are tributary to the French Broad River which flows into the Broad River which is a Section 10 navigable-in-fact waterway (TNW).

D. Remarks

E. Appeals Information (This information applies only to approved jurisdictional determinations as indicated in B. above)

Attached to this verification is an approved jurisdictional determination. If you are not in agreement with that approved jurisdictional determination, you can make an administrative appeal under 33 CFR 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and request for appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the following address:

District Engineer, Wilmington Regulatory Program
Attn: David Baker, Project Manager
151 Patton Avenue, Room 208
Asheville, North Carolina 28801

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by October 26, 2008.

****It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this correspondence.****

Corps Regulatory Official: David Baker

Issue Date: **August 25, 2009**

Expiration Date: **August 25, 2014**

SURVEY PLATS, FIELD SKETCH, WETLAND DELINEATION FORMS, PROJECT PLANS, ETC., MUST BE ATTACHED TO THE FILE COPY OF THIS FORM, IF REQUIRED OR AVAILABLE.



PROGRAM

February 12, 2013

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

Dear Dr. Thorpe:

Subject: EEP Mitigation Acceptance Letter:

B-4765, Replace Bridge Number 113 over Tazwell Creek on SR 1574, Henderson County

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the compensatory stream mitigation for the subject project. Based on the information supplied by you on February 8, 2013, the impacts are located in CU 06010105 of the French Broad River basin in the Southern Mountains (SM) Eco-Region, and are as follows:

French Broad 06010105 SM	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	120	0	0	0	0	0	0	0

This impact and associated mitigation need were under projected by the NCDOT in the 2013 impact data. EEP will commit to implement sufficient compensatory stream mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies using the delivery timeline listed in Section F.3.c.iii of the N.C. Department of Environment and Natural Resources' Ecosystem Enhancement Program In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from EEP.

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

Sincerely,

Suzanne Klimek
EEP Acting Director

cc: Ms. Lori Beckwith, USACE – Asheville Regulatory Field Office
Ms. Amy Chapman, Division of Water Quality, Wetlands/401 Unit
File: B-4765

Restoring... Enhancing... Protecting Our State



STORMWATER MANAGEMENT PLAN

B-4765, WBS No. 38537.1.1

HENDERSON COUNTY

Hydraulics Project Manager: Stephen R. Morgan, PE

Date: 01/30/2013

ROADWAY DESCRIPTION

The project involves the replacement of bridge number 113 over Kyles Creek on SR 1574 (Fruitland RD.) in Henderson County. The overall length of the project is 0.147 mile. The project will replace an existing 52 foot length bridge with a 65 foot single span 24" Cored Slab. An on-site detour will be required.

ENVIRONMENTAL DESCRIPTION

The project is located within the French Broad River Basin. The proposed bridge is over Kyles Creek which is classified as C-Tr. Three unnamed tributaries (UTs) to Kyles Creek are located within the project and will be impacted. Land uses include agriculture and rural residential.

IMPACTS

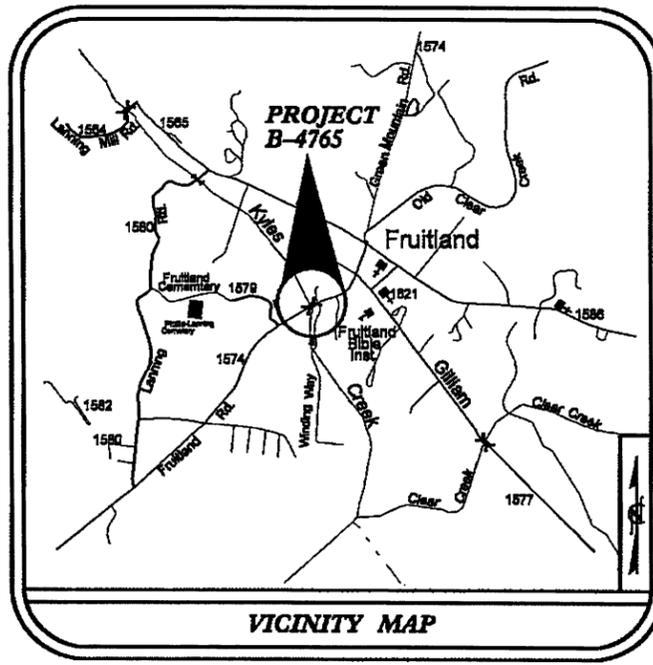
282 feet of stream will be temporarily impacted due to the on-site detour. Permanent impacts include a relocation of 120' of an unnamed tributary to Kyles Creek and 92' of stream bank stabilization along Kyle's Creek. Following the detour phase, the site will be graded to pre-project contours outside of the proposed roadway footprint.

BEST MANAGEMENT PRACTICES AND MAJOR STRUCTURES

Best Management Practices (BMPs) and measures used in the project are non-structural and are an attempt to reduce the storm water impacts to the receiving stream due to erosion and runoff as well as attenuate and disperse storm water before entering the receiving waters. The primary storm water system conveyance is open ditches and sheet flow. A short pipe system with rip rap ditch outfall will convey storm water along the southwest quadrant. In this location the existing roadway ditch and minor stream channel are eroded and unstable. There is no direct discharge from impervious surfaces into the receiving water.

09/08/99

See Sheet 1-A For Index of Sheets



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HENDERSON COUNTY

LOCATION: BRIDGE NO. 113 ON SR 1574 (FRUITLAND ROAD)
OVER KYLES CREEK (A.K.A. TAZEWELL CREEK).

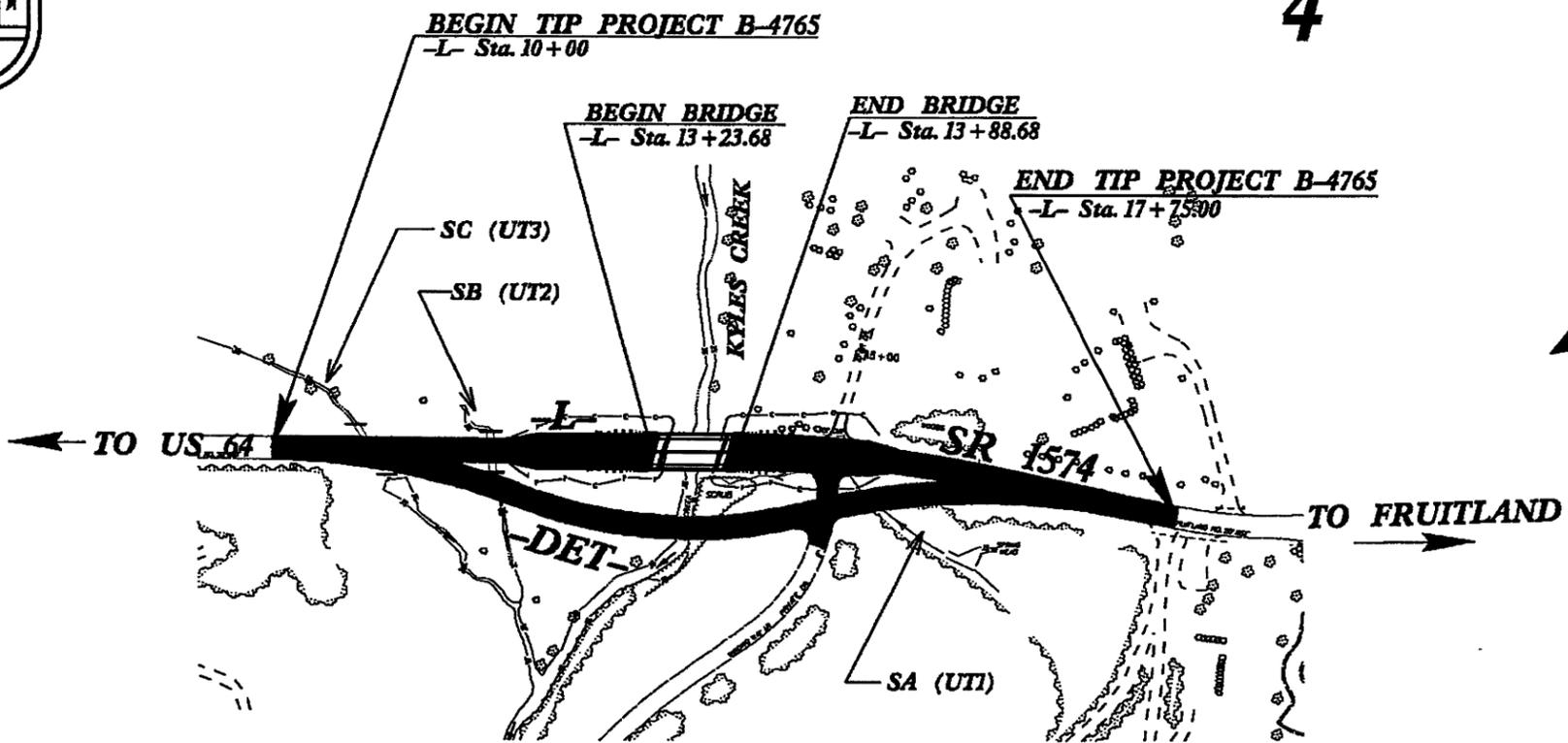
TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE.

SURFACE WATER IMPACTS

4

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4765	1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
38537.1.1	BRZ-1574(2)	P.E.	
38537.2.1	BRZ-1574(4)	RAW & UTIL.	

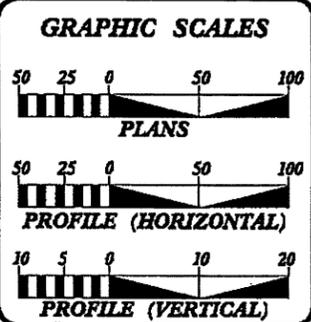
Permit Drawing
Sheet 1 of 11



CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II. THERE IS NO CONTROL OF ACCESS ON THIS PROJECT. THIS PROJECT IS NOT WITHIN ANY MUNICIPALITIES.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONTRACT: TIP PROJECT: B-4765



DESIGN DATA

ADT 2013 = 4662
ADT 2035 = 10500
DHV = 10 %
D = 65 %
T = 5 %
V = 30 MPH
* TTST = 1 DUAL 4
FUNC CLASS = LOCAL
SUB REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4765 = 0.135 Mi.
LENGTH STRUCTURE TIP PROJECT B-4765 = 0.012 Mi.
TOTAL LENGTH TIP PROJECT B-4765 = 0.147 Mi.

Prepared in the Office of:
DIVISION OF HIGHWAYS
1600 Birch Ridge Dr., Raleigh NC, 27610

RIGHT OF WAY DATE: AUGUST 23, 2012	JIMMY GOODNIGHT, P.E. PROJECT ENGINEER
LETTING DATE: OCTOBER 14, 2013	MARK HUSSEY PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



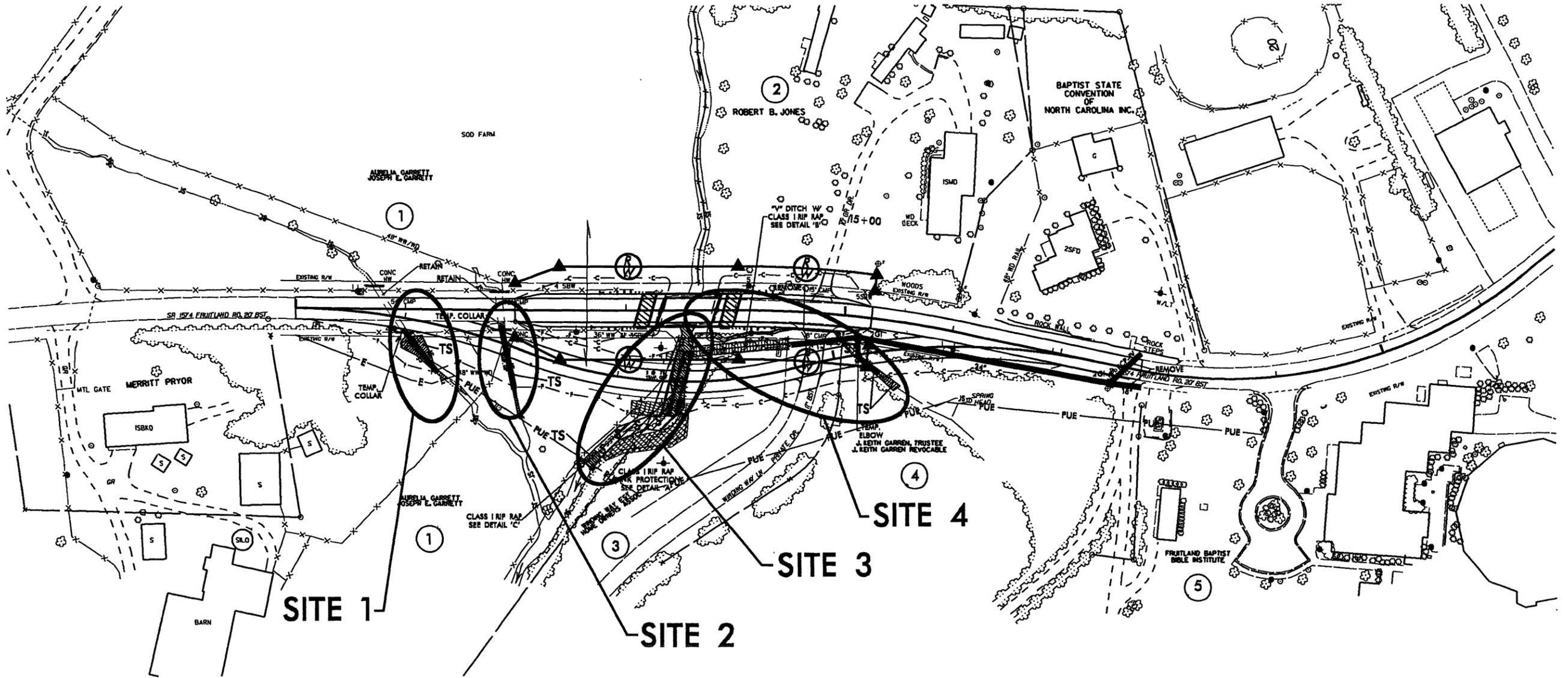
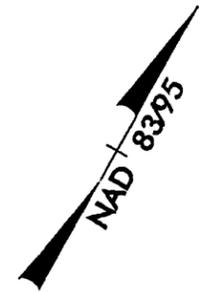
*****SYSTEMS*****
*****STATE*****
*****DESIGN*****
*****DRAWING*****
*****USER*****

8/17/99

REVISIONS

PROJECT REFERENCE NO. B-4765	SHEET NO. 4
HW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

Permit Drawing Sheet 2 of 11



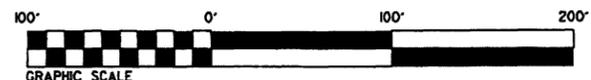
DENOTES IMPACTS IN SURFACE WATER



OR



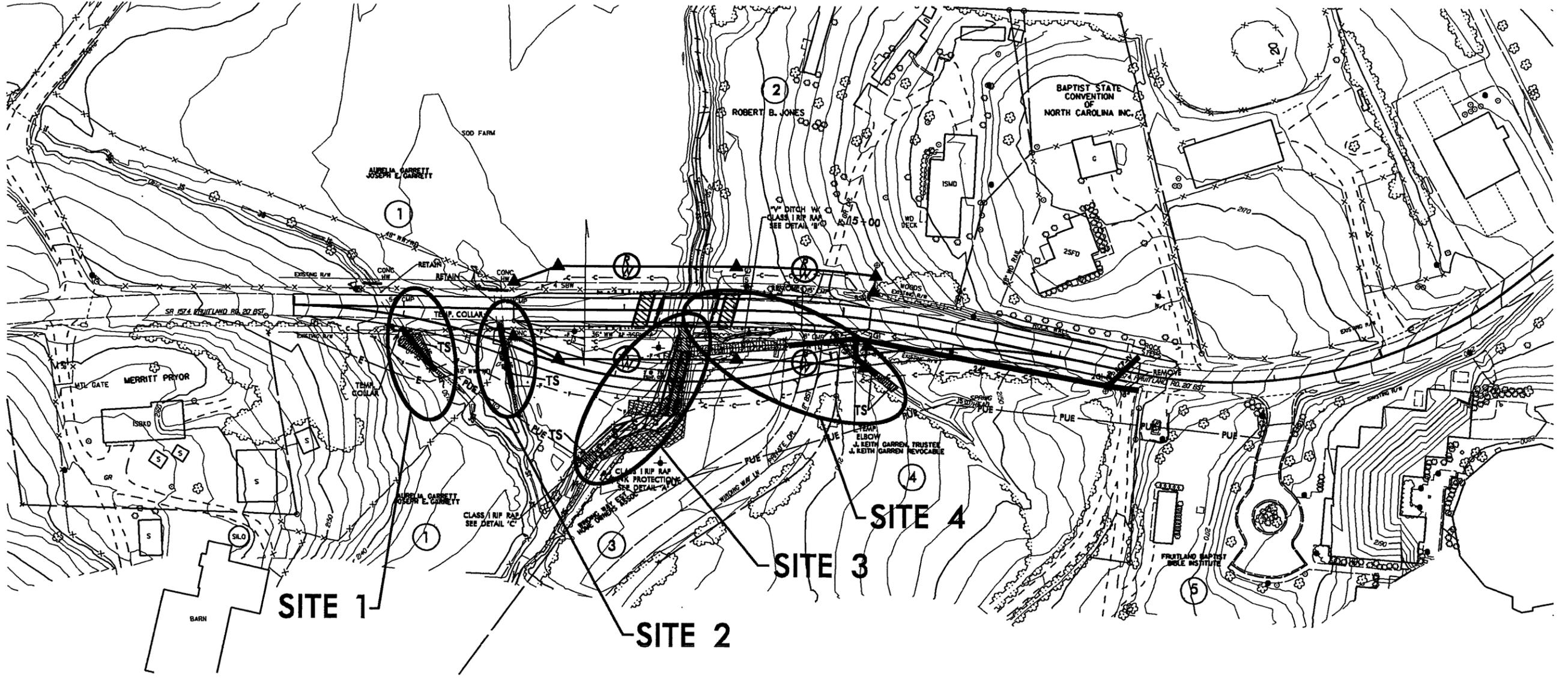
DENOTES TEMPORARY IMPACTS IN SURFACE WATER



 SYSTEMS DESIGN

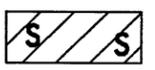
PROJECT REFERENCE NO. B-4765	SHEET NO. 4
RAW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

Permit Drawing
Sheet 3 of 11



REVISIONS

ADDITION



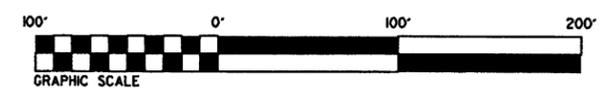
DENOTES IMPACTS IN SURFACE WATER



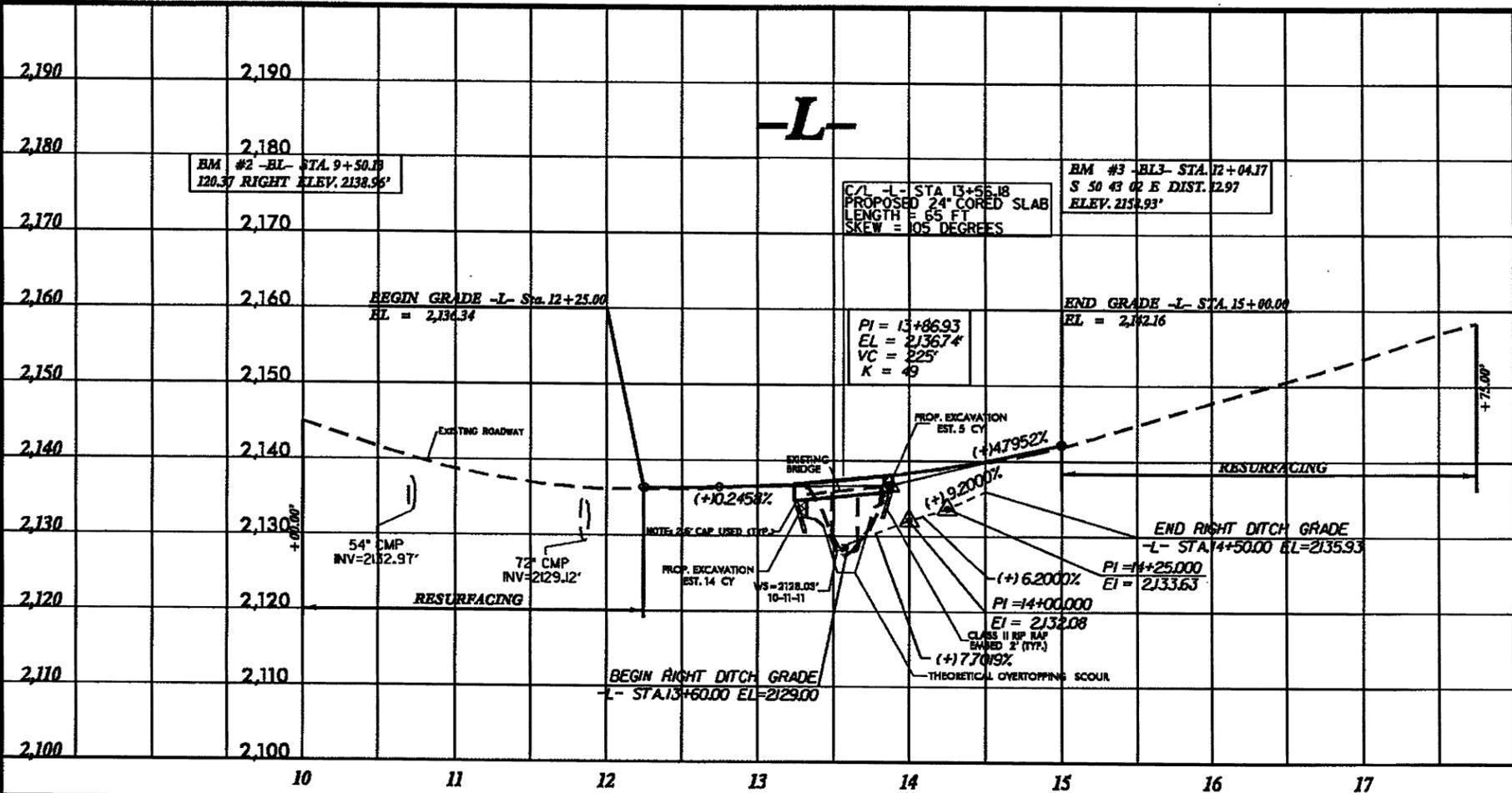
OR



DENOTES TEMPORARY IMPACTS IN SURFACE WATER

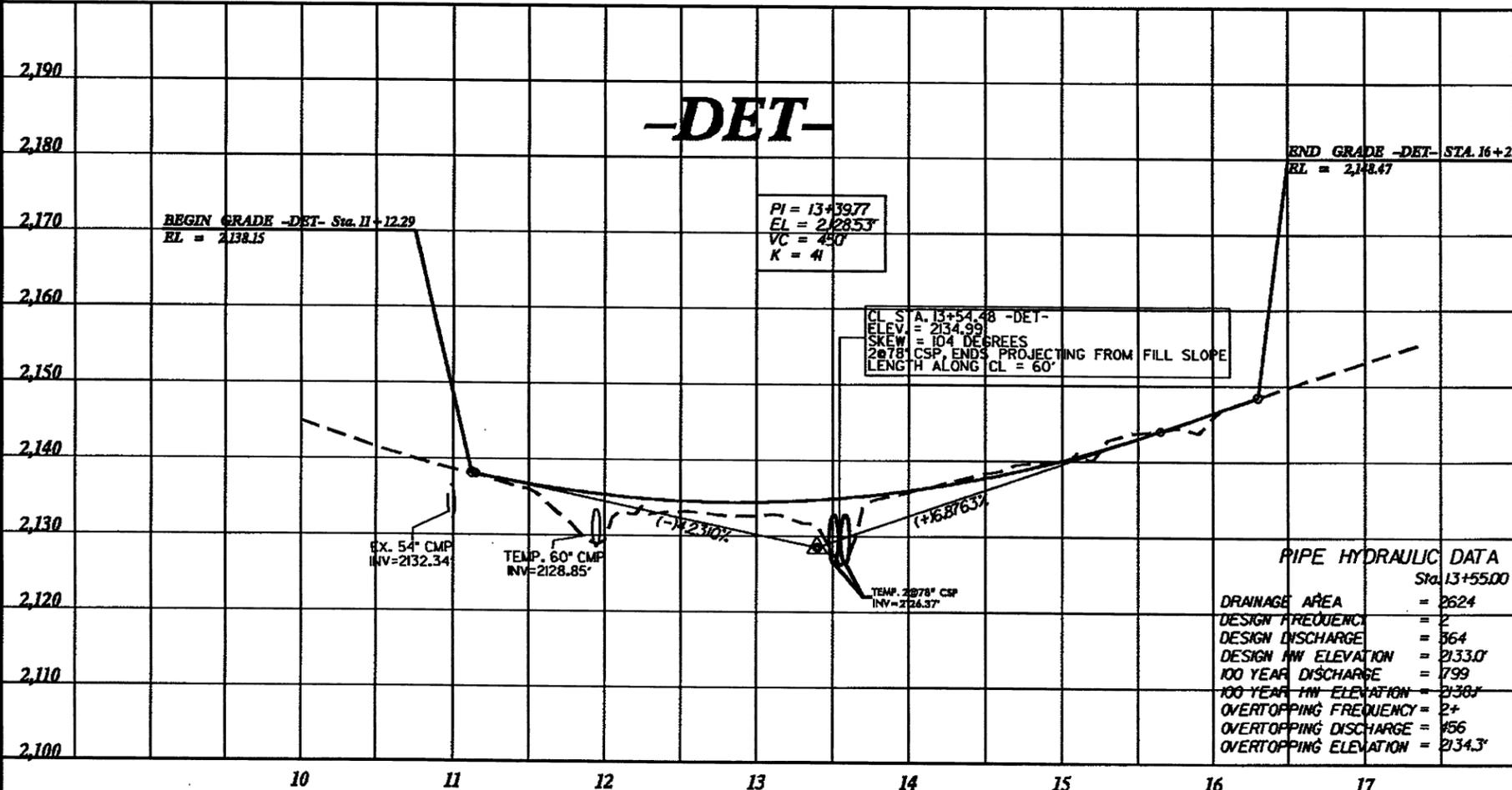


5/28/95



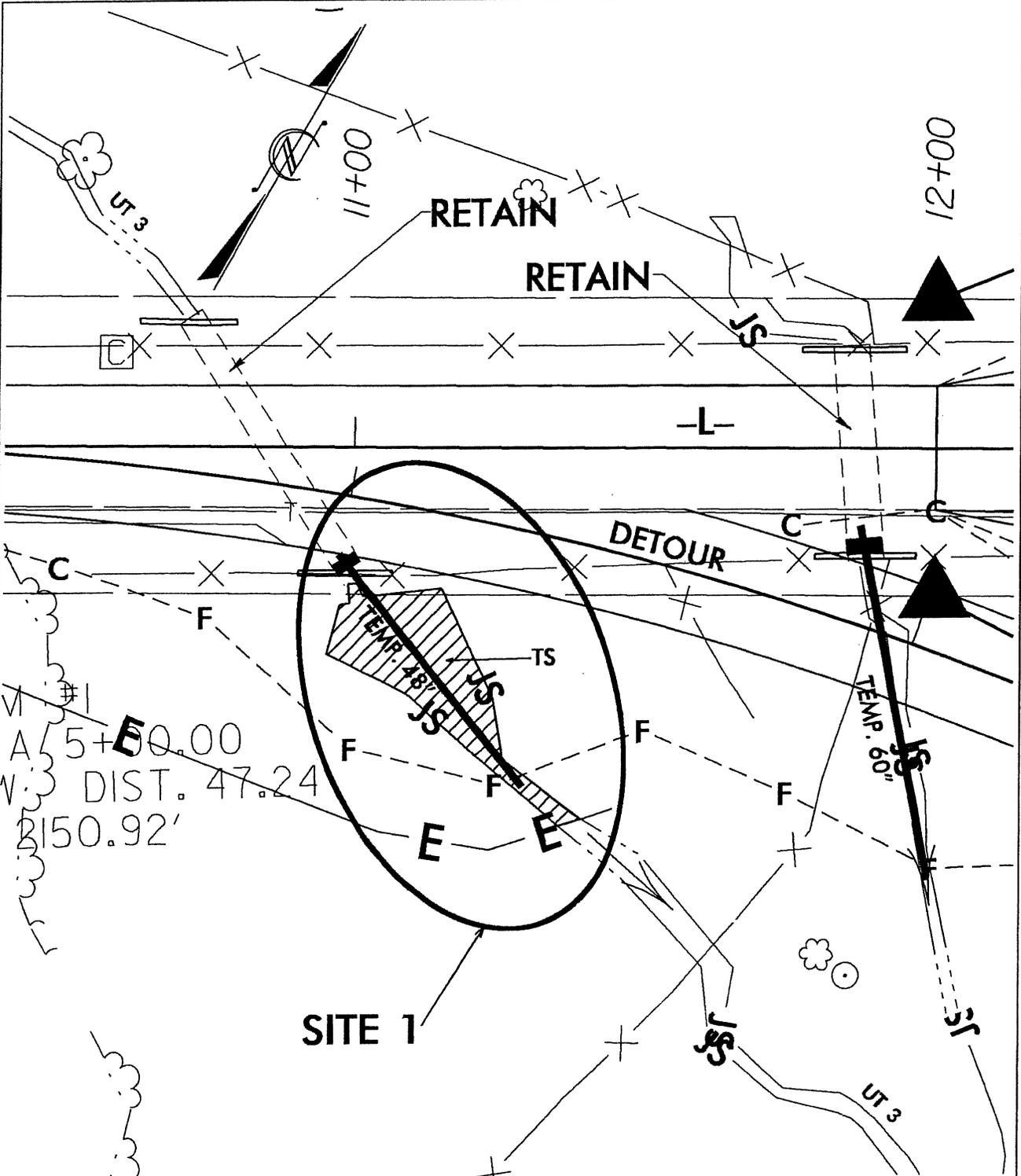
BRIDGE HYDRAULIC DATA		
DESIGN DISCHARGE	= 850	CFS
DESIGN FREQUENCY	= 10	YRS
DESIGN HW ELEVATION	= 2135.1	FT
BASE DISCHARGE	= 799	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 2136.7	FT
OVERTOPPING DISCHARGE	= 955	CFS
OVERTOPPING FREQUENCY	= 10+/-	YRS
OVERTOPPING ELEVATION	= 2136.3	FT
DATE OF SURVEY	= 10/11/11	FT
W.S. ELEVATION AT DATE OF SURVEY	= 2128.03	FT

PROJECT REFERENCE NO. B-4765	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
Permit Drawing Sheet 4 of 11	



PIPE HYDRAULIC DATA		
Sta. 13+55.00		
DRAINAGE AREA	= 2624	AC
DESIGN FREQUENCY	= 2	YRS
DESIGN DISCHARGE	= 364	CFS
DESIGN HW ELEVATION	= 2133.0	FT
100 YEAR DISCHARGE	= 799	CFS
100 YEAR HW ELEVATION	= 2138.7	FT
OVERTOPPING FREQUENCY	= 2+	YRS
OVERTOPPING DISCHARGE	= 956	CFS
OVERTOPPING ELEVATION	= 2134.3	FT

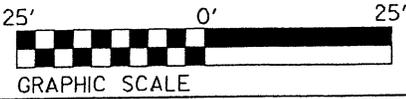
*****SYSTEMS*****
*****CDON*****
*****SERIALS*****



IMPACT ENLARGEMENT

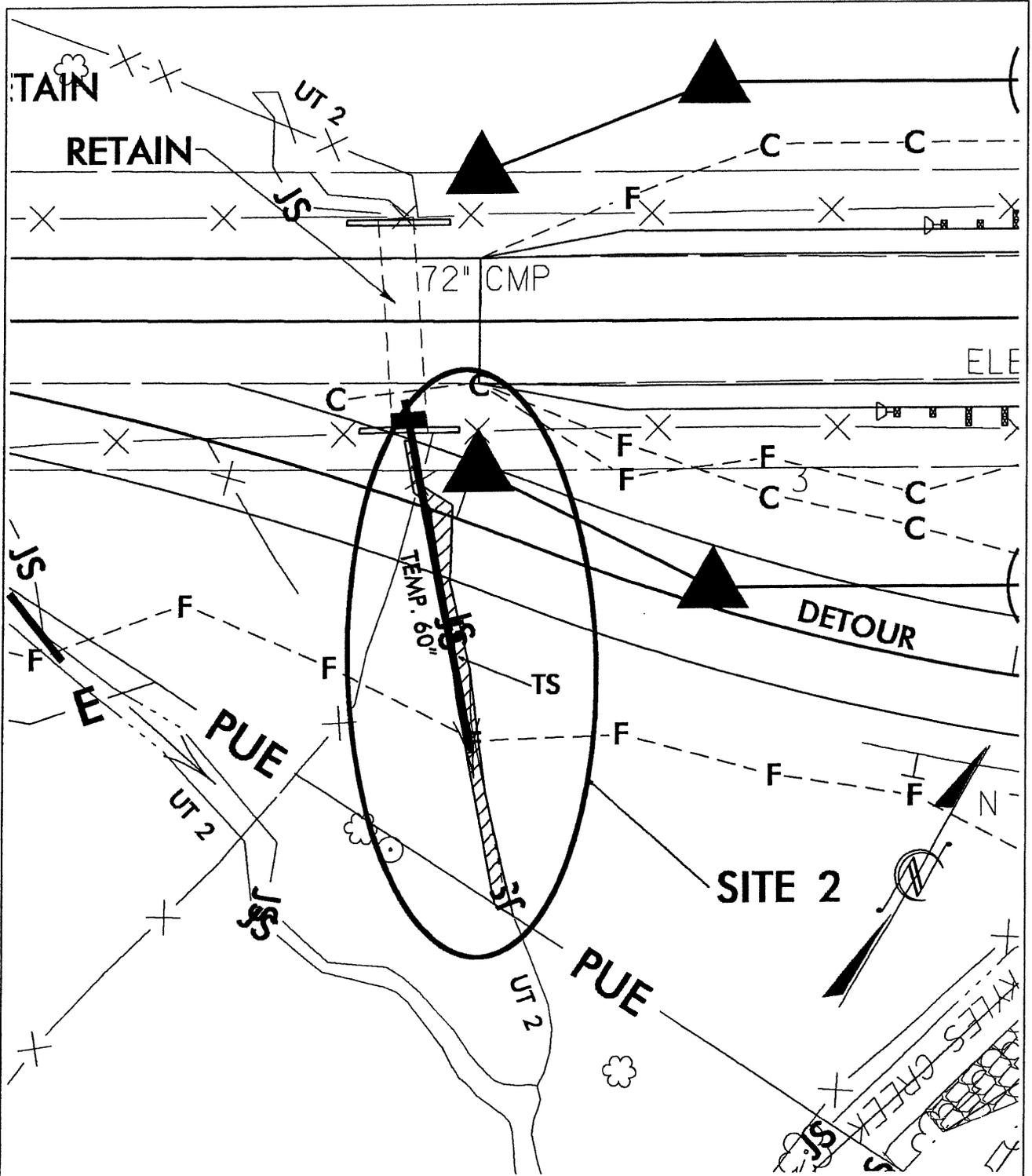


DENOTES TEMPORARY IMPACTS IN SURFACE WATER



NCDOT

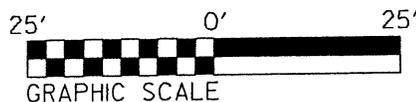
DIVISION OF HIGHWAYS
 HENDERSON COUNTY
 PROJECT: 38537.11 (B-4765)
 BRIDGE NO. 113
 ON SR 1574 (FRUITLAND RD.)
 BETWEEN SR 1579 AND SR 1577



IMPACT ENLARGEMENT



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



NCDOT

DIVISION OF HIGHWAYS
HENDERSON COUNTY

PROJECT: 38537.1.1 (B-4765)

BRIDGE NO. 113

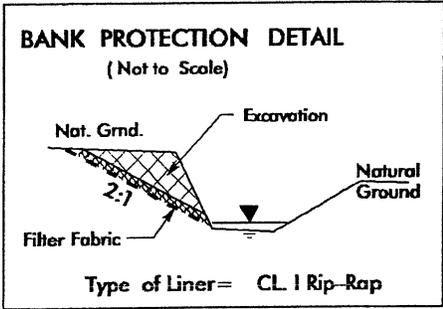
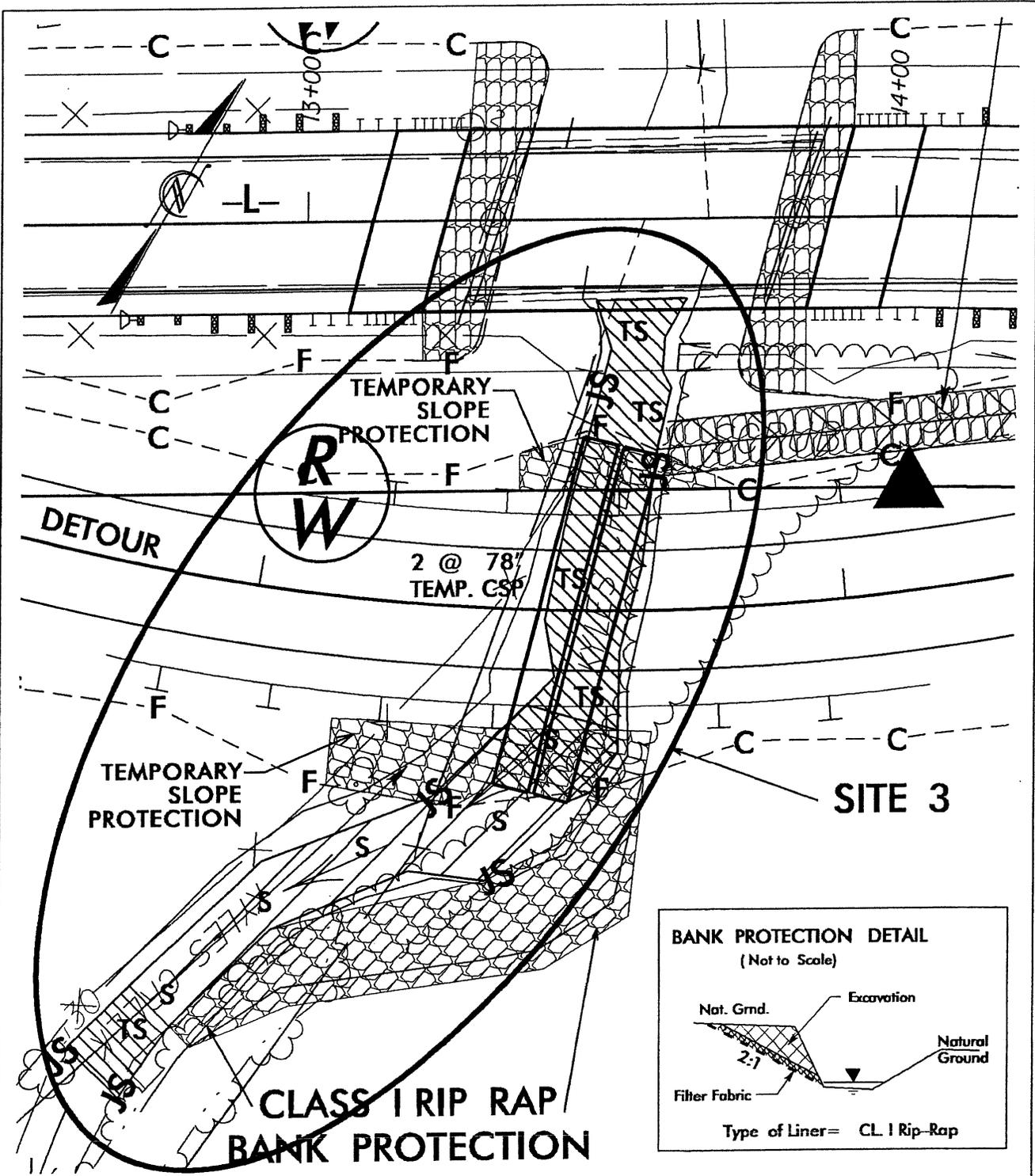
ON SR 1574 (FRUITLAND RD.)
BETWEEN SR 1579 AND SR 1577

SHEET

OF

11 / 07 / 12

Permit Drawing
Sheet 6 of 11



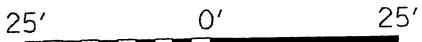
IMPACT ENLARGEMENT



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



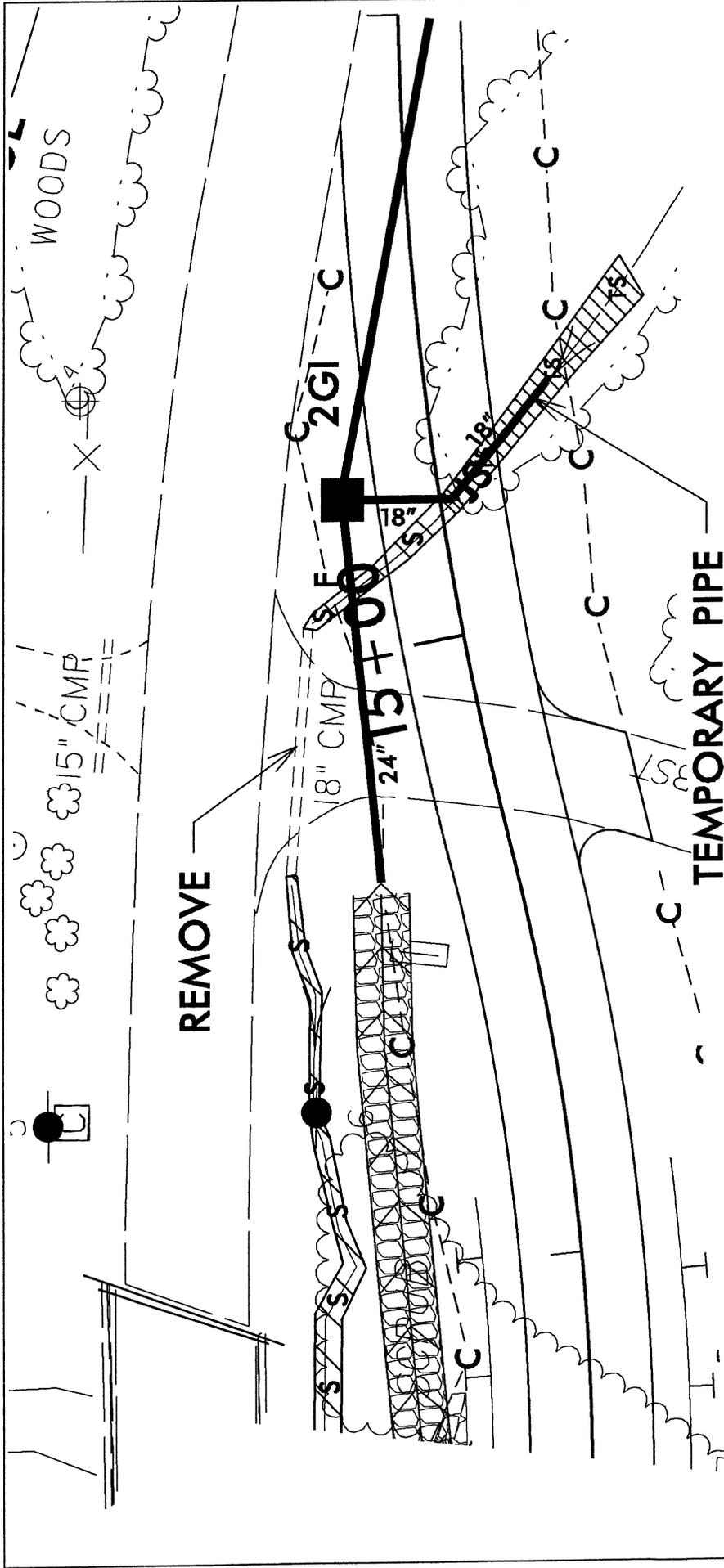
DENOTES IMPACTS IN SURFACE WATER



GRAPHIC SCALE

NCDOT
 DIVISION OF HIGHWAYS
 HENDERSON COUNTY
 PROJECT: 38537.1.1 (B-4765)
 BRIDGE NO. 113
 ON SR 1574 (FRUITLAND RD)
 BETWEEN SR 1579 AND SR 1577

SHEET OF 11 / 07 / 12



SITE 4 DETOUR PHASE IMPACT ENLARGEMENT

-  DENOTES IMPACTS IN SURFACE WATER
-  DENOTES TEMPORARY IMPACTS IN SURFACE WATER



NCDOT
 DIVISION OF HIGHWAYS
 HENDERSON COUNTY
 PROJECT: 38537.1.1 (B-4766)
 BRIDGE NO. 113
 ON SR 1574 (FRUITLAND RD.)
 BETWEEN SR 1579 AND SR 1577

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
1	AURELIA, JOSEPH E. GARRETT	2291 GOODRUM LANE MARIETTA, GA 30066
2	ROBERT B. JONES	50 J P GARREN DR. HENDERSON, NC 28792
3	WINDING WAY EST HOME OWNERS ASSOC	305 WIDING WAY LANE HENDERSON, NC 28792
4	TRUSTEE J. KEITH GARREN REVOCABLE	2741 WILLOW RD. HENDERSON, NC 28739

NCDOT

DIVISION OF HIGHWAYS

HENDERSON COUNTY

PROJECT: 38537.1.1 (B-4765)

BRIDGE NO. 113

ON SR 1574 (FRUITLAND RD)

BETWEEN SR 1579 AND 1577

SHEET

OF

11 / 07 / 12

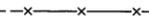
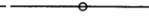
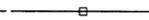
Permit Drawing
Sheet 11 of 11

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	_____
County Line	_____
Township Line	_____
City Line	_____
Reservation Line	_____
Property Line	_____
Existing Iron Pin	_____ 
Property Corner	_____ 
Property Monument	_____ 
Parcel/Sequence Number	_____ 
Existing Fence Line	_____ 
Proposed Woven Wire Fence	_____ 
Proposed Chain Link Fence	_____ 
Proposed Barbed Wire Fence	_____ 
Existing Wetland Boundary	_____ 
Proposed Wetland Boundary	_____ 
Existing Endangered Animal Boundary	_____ 
Existing Endangered Plant Boundary	_____ 
Known Soil Contamination: Area or Site	_____ 
Potential Soil Contamination: Area or Site	_____ 

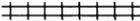
BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

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

RAILROADS:

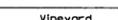
Standard Gauge	_____ 
RR Signal Milepost	_____ 
Switch	_____ 
RR Abandoned	_____ 
RR Dismantled	_____ 

RIGHT OF WAY:

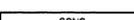
Baseline Control Point	_____ 
Existing Right of Way Marker	_____ 
Existing Right of Way Line	_____ 
Proposed Right of Way Line	_____ 
Proposed Right of Way Line with Iron Pin and Cap Marker	_____ 
Proposed Right of Way Line with Concrete or Granite R/W Marker	_____ 
Proposed Control of Access Line with Concrete CA Marker	_____ 
Existing Control of Access	_____ 
Proposed Control of Access	_____ 
Existing Easement Line	_____ 
Proposed Temporary Construction Easement	_____ 
Proposed Temporary Drainage Easement	_____ 
Proposed Permanent Drainage Easement	_____ 
Proposed Permanent Drainage / Utility Easement	_____ 
Proposed Permanent Utility Easement	_____ 
Proposed Temporary Utility Easement	_____ 
Proposed Aerial Utility Easement	_____ 
Proposed Permanent Easement with Iron Pin and Cap Marker	_____ 

ROADS AND RELATED FEATURES:

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

Orchard	_____ 
Vineyard	_____ 

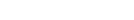
EXISTING STRUCTURES:

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	_____ 

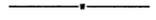
UTILITIES:

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.*)	_____ 

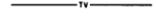
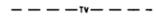
TELEPHONE:

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	_____ 

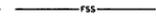
TV:

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:

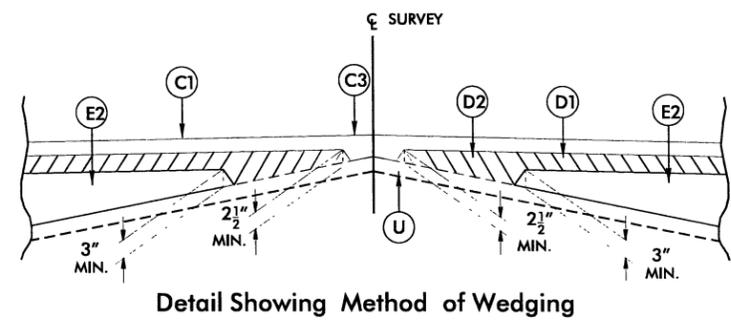
Sanitary Sewer Manhole	_____ 
Sanitary Sewer Cleanout	_____ 
U/G Sanitary Sewer Line	_____ 
Above Ground Sanitary Sewer	_____ 
Recorded SS Forced Main Line	_____ 
Designated SS Forced Main Line (S.U.E.*)	_____ 

MISCELLANEOUS:

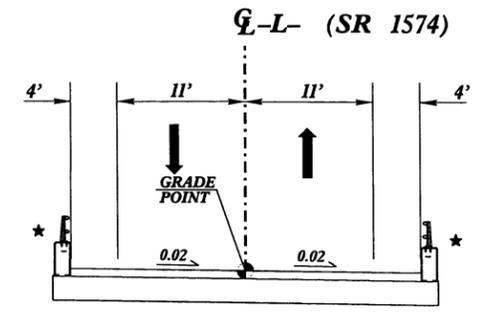
Utility Pole	_____ 
Utility Pole with Base	_____ 
Utility Located Object	_____ 
Utility Traffic Signal Box	_____ 
Utility Unknown U/G Line	_____ 
U/G Tank; Water, Gas, Oil	_____ 
Underground Storage Tank, Approx. Loc.	_____ 
A/G Tank; Water, Gas, Oil	_____ 
Geoenvironmental Boring	_____ 
U/G Test Hole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

FINAL PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROP. APPROX. 2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.
F	ASPHALT SURFACE TREATMENT, STRAIGHT SEAL
J	PROP. 10" AGGREGATE BASE COURSE.
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL)

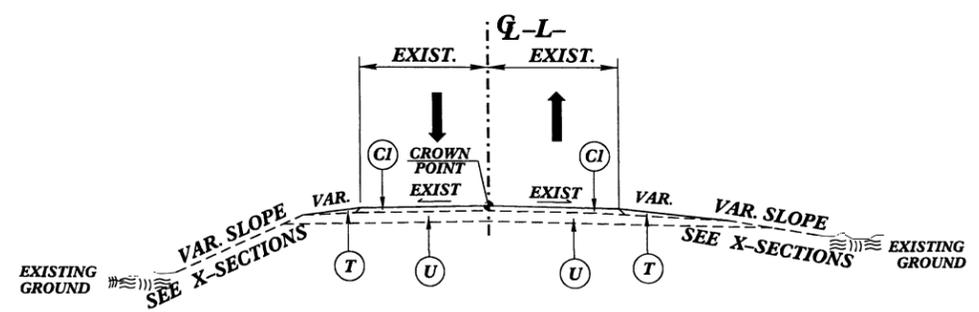
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



Detail Showing Method of Wedging

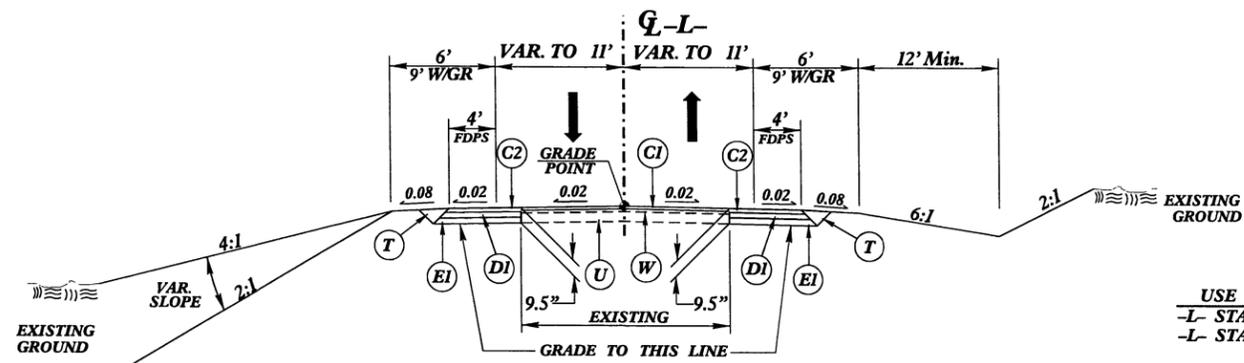


TYPICAL SECTION ON BRIDGE
★ Bicycle Safe Rails Required



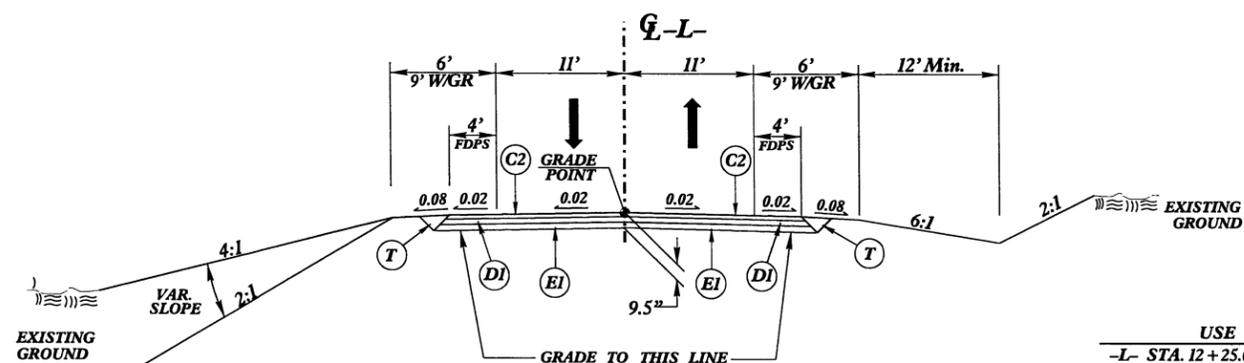
TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1
-L- STA. 10+00.00 TO STA. 12+00.00
-L- STA. 15+25.00 TO STA. 17+75.00



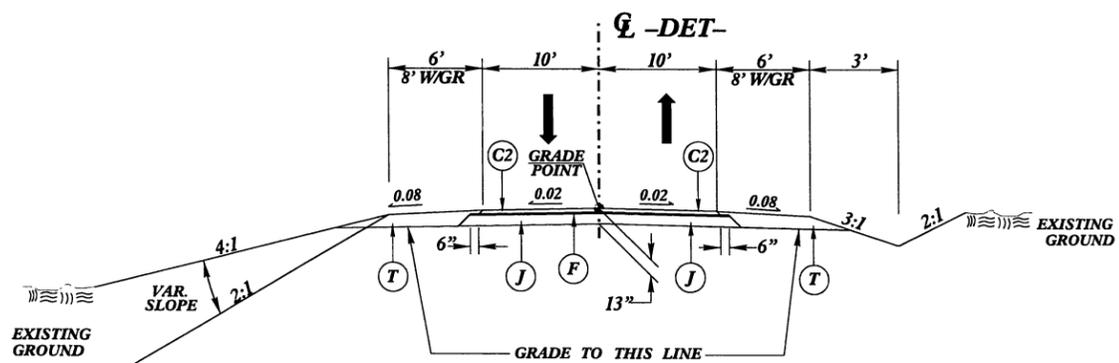
TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2
-L- STA. 12+00.00 TO STA. 12+25.00
-L- STA. 15+00.00 TO STA. 15+25.00



TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3
-L- STA. 12+25.00 TO STA. 13+23.68 (BEGIN BRIDGE)
-L- STA. 13+88.68 (END BRIDGE) TO STA. 15+00.00



TYPICAL SECTION NO. 4

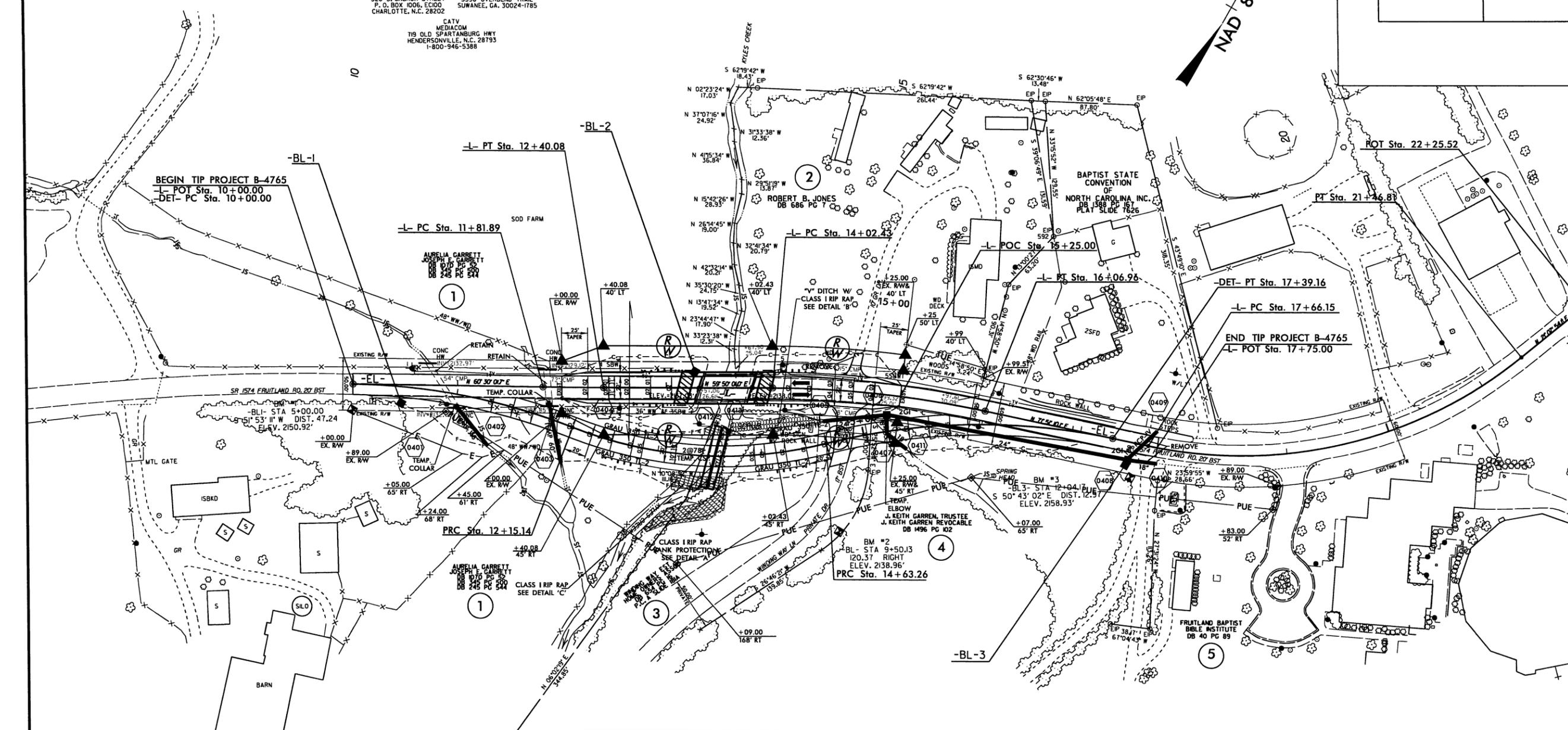
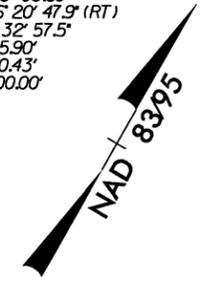
USE TYPICAL SECTION NO. 4
-DET- STA. 10+00.00 TO -DET- STA. 17+39.16

PROJECT REFERENCE NO. B-4765	SHEET NO. 2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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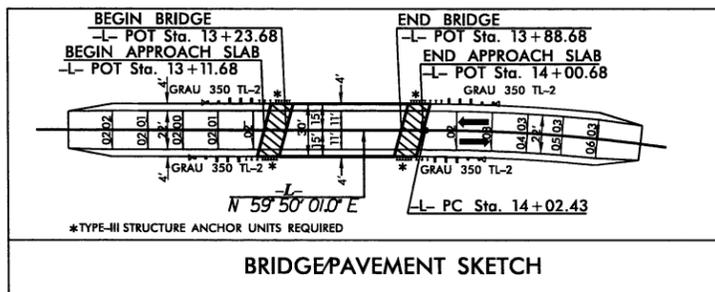
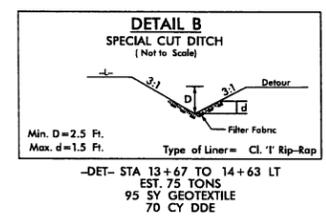
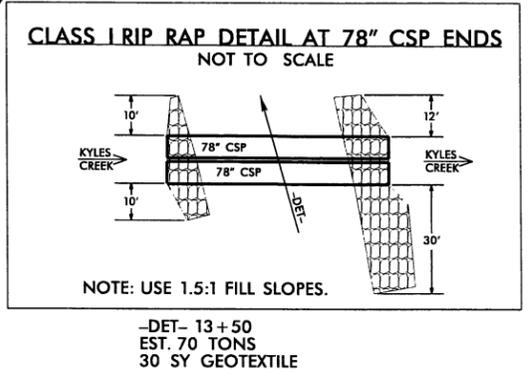
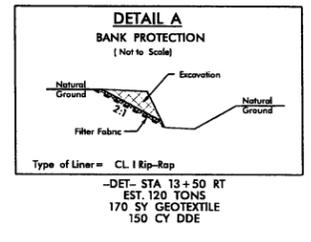
PROJECT REFERENCE NO.	SHEET NO.
B-4765	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

BRIDGE DESCRIPTION		-L-		-DET-	
CONCRETE DECK WITH BSF SURFACE		PI Sta 12+10.98	PI Sta 15+05.07	PI Sta 11+08.74	PI Sta 13+43.34
CONCRETE RAILS		$\Delta = 0' 40' 00.7''$ (LT)	$\Delta = 12' 01' 09.0''$ (RT)	$\Delta = 20' 32' 41.4''$ (RT)	$\Delta = 35' 32' 21.0''$ (LT)
2 WOOD COLUMNS		$D = 1' 08' 45.3''$	$D = 5' 52' 35.4''$	$D = 9' 32' 57.5''$	$D = 14' 19' 26.2''$
19 6"x12" TREATED BEAMS		$L = 58.9'$	$L = 204.53'$	$L = 215.4'$	$L = 248.1'$
WOOD HEADWALL		$T = 29.10'$	$T = 102.64'$	$T = 108.74'$	$T = 128.19'$
WOOD WING WALLS		$R = 5,000.00'$	$R = 975.00'$	$R = 600.00'$	$R = 400.00'$
HIGH WATER ELEV. 2132.00'					
UTILITY OWNERS					
POWER	TELEPHONE				
DUKE ENERGY CORP 526 S. CHURCH STREET P. O. BOX 1006, EC100 CHARLOTTE, N.C. 28202	AT&T COMMUNICATION 5390 OVERBEND TRAIL SUMANEE, GA. 30024-1785				
CATV					
MEDIACOM 719 OLD SPARTANBURG HWY HENDERSONVILLE, N.C. 28793 1-800-946-5388					



REVISIONS

11-01-2012 09:35
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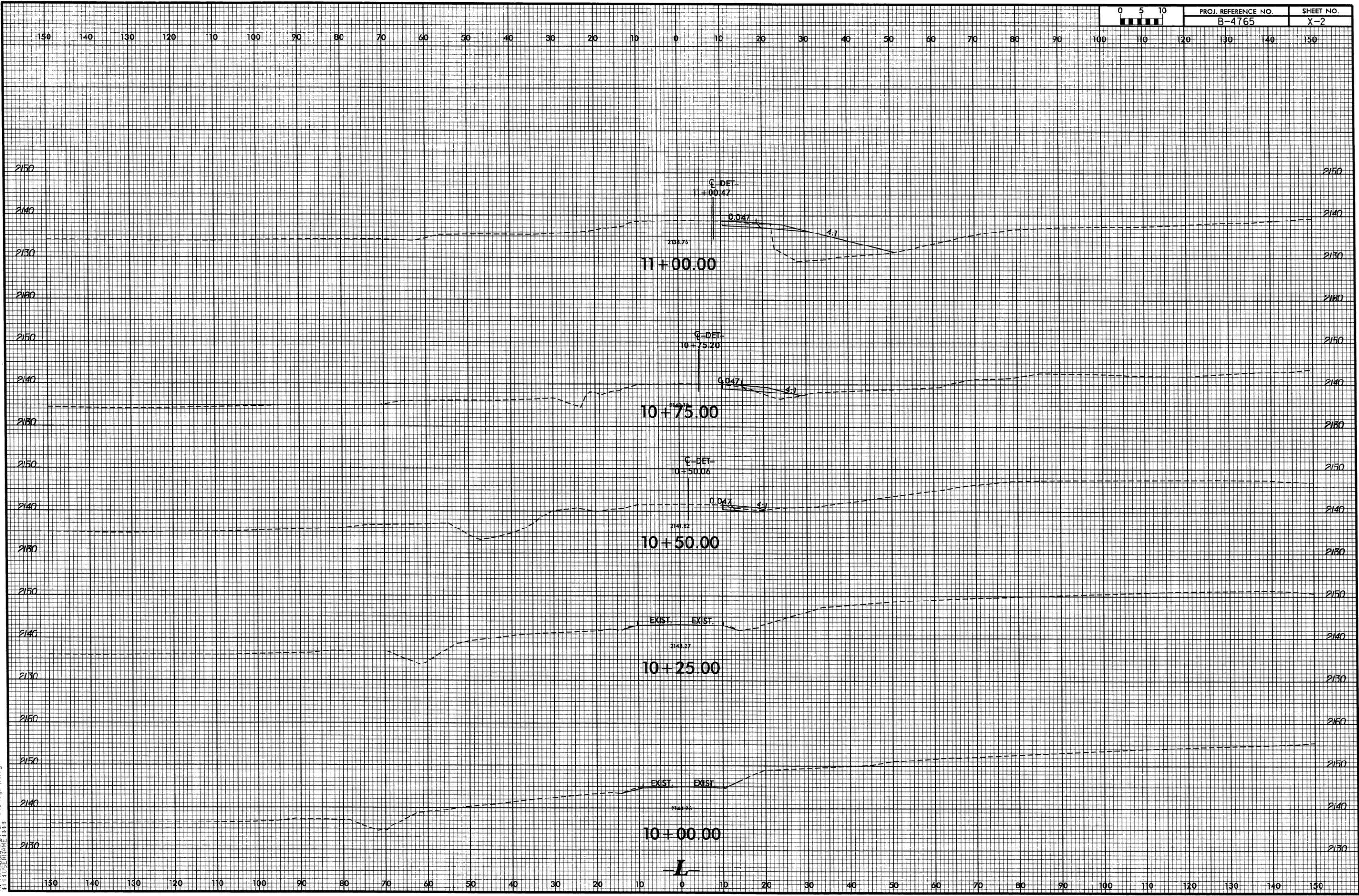


8. 2.1-90

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PROJ. REFERENCE NO.
B-4765

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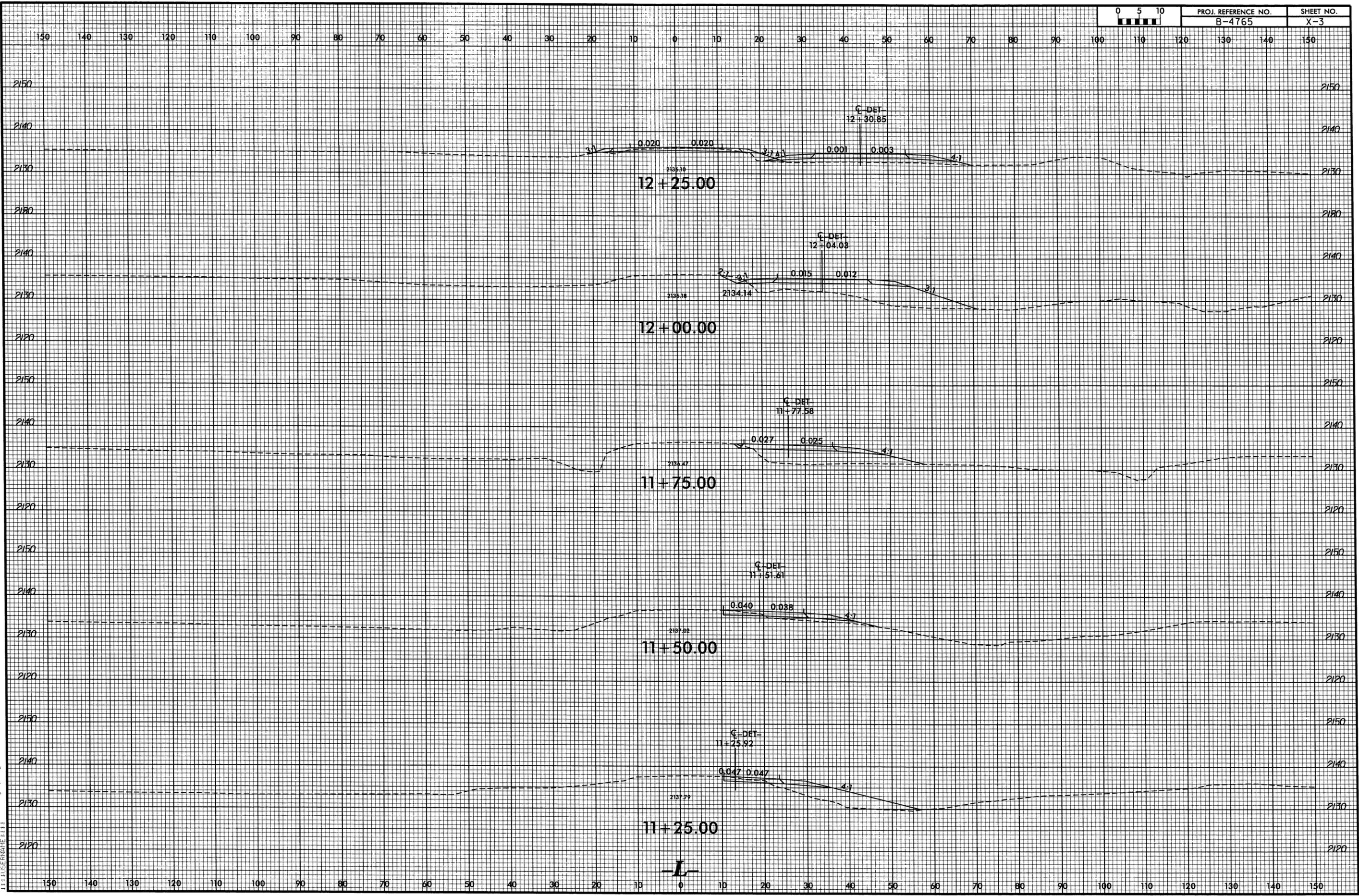


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B-4765

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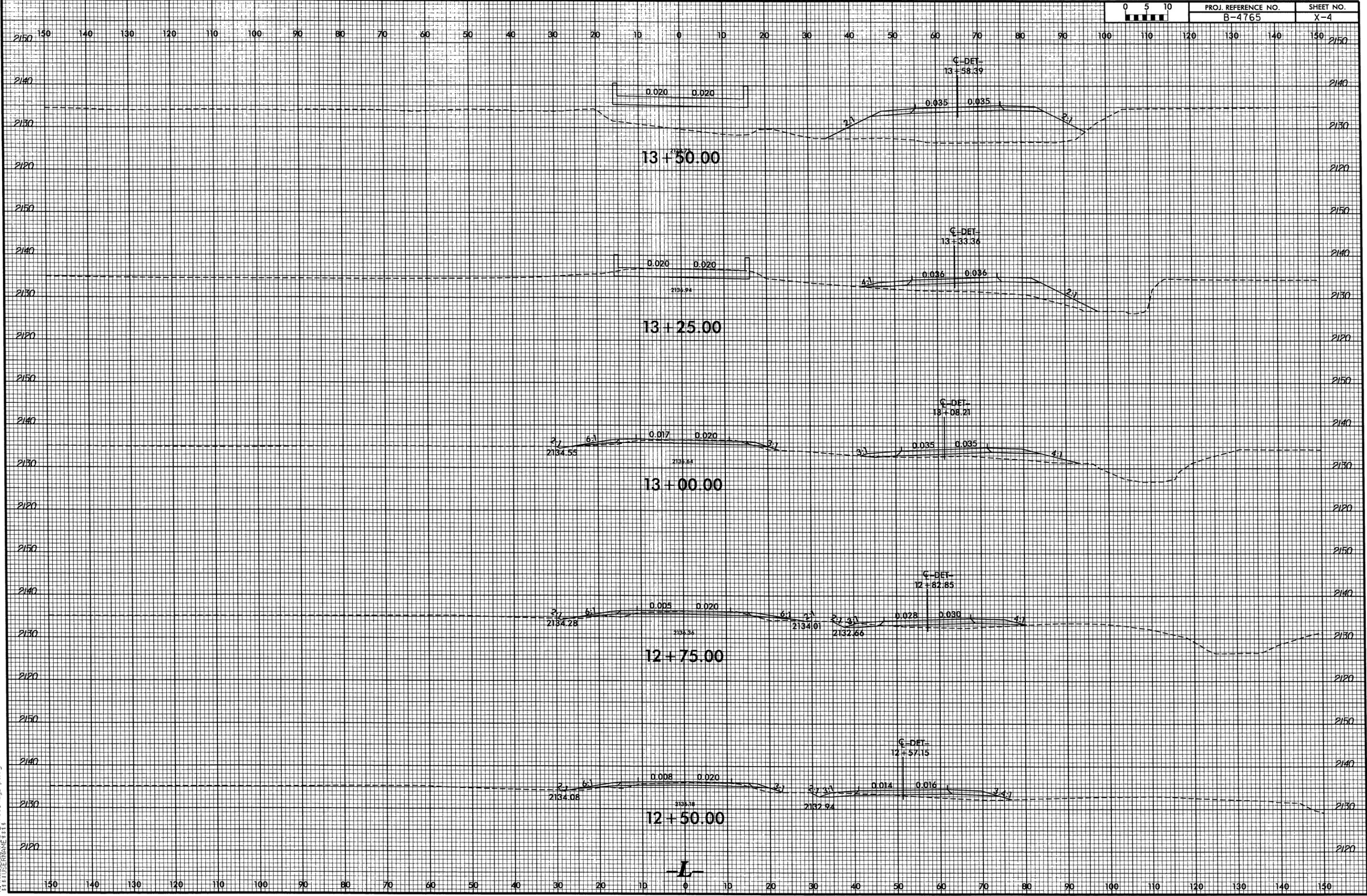


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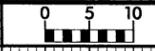
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B-4765

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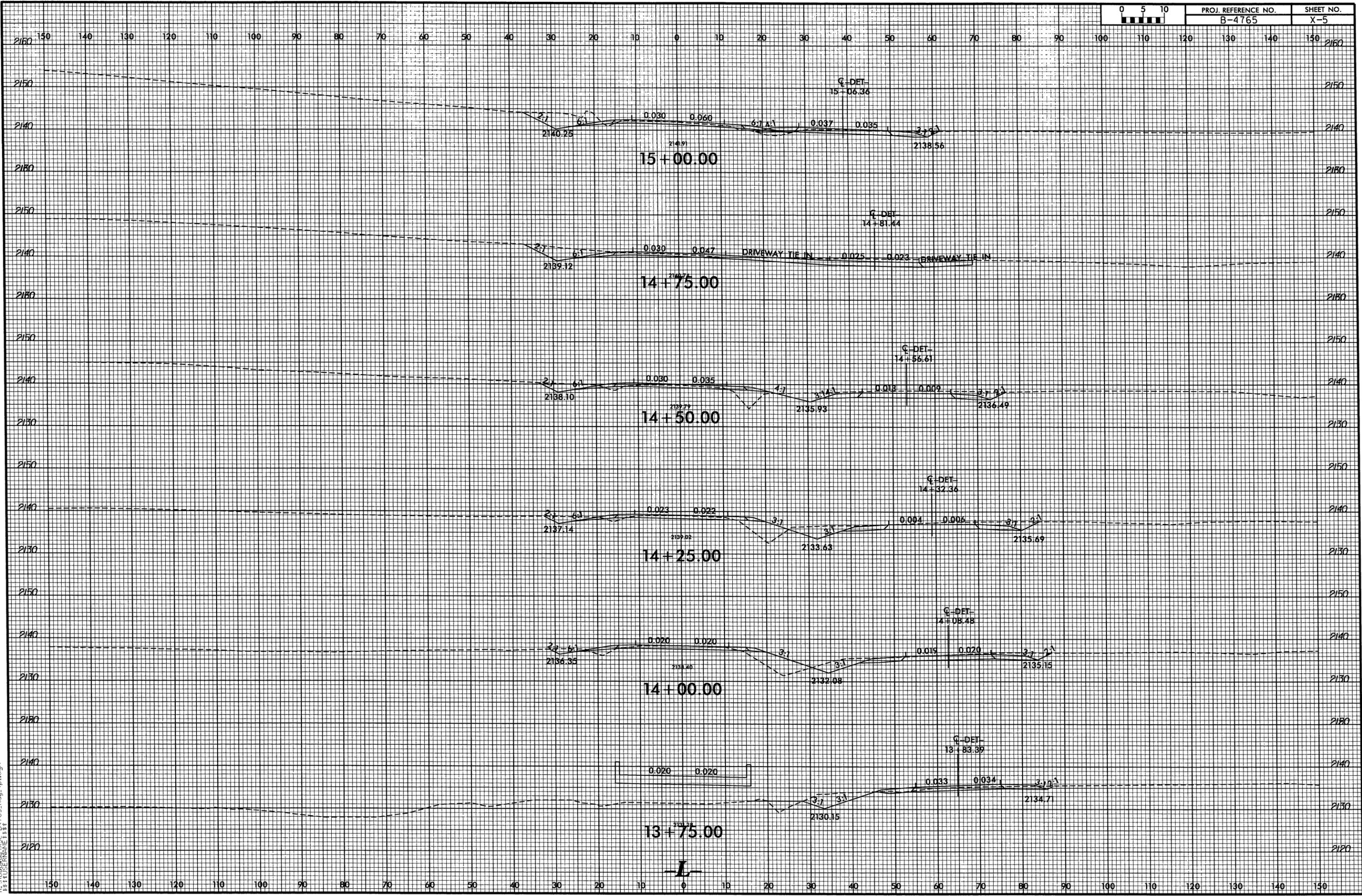
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23-AUG-2012 1:41 PM
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BY: FUSE/RYAN/E/13164765



PROJ. REFERENCE NO.
B-4765

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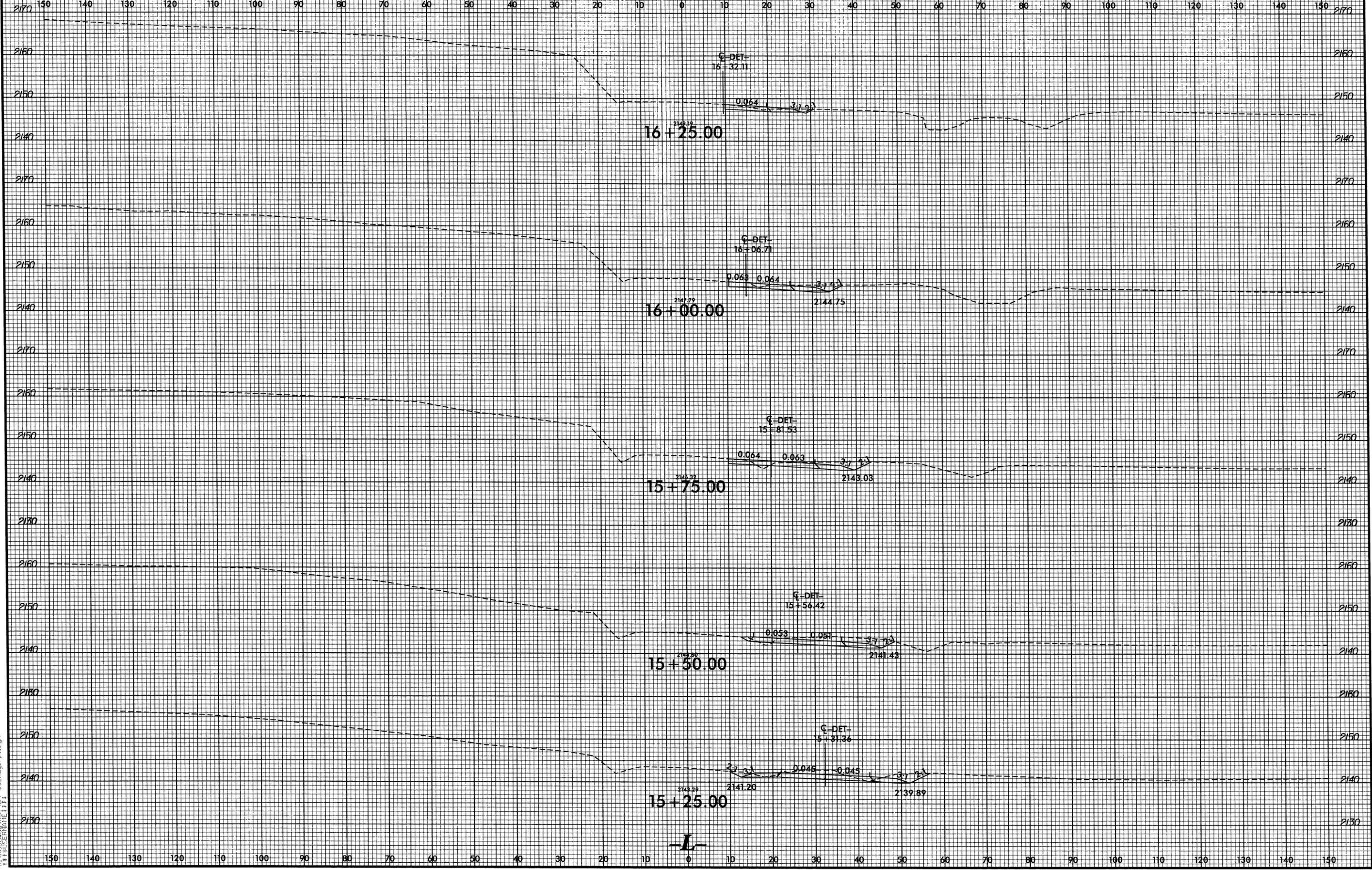


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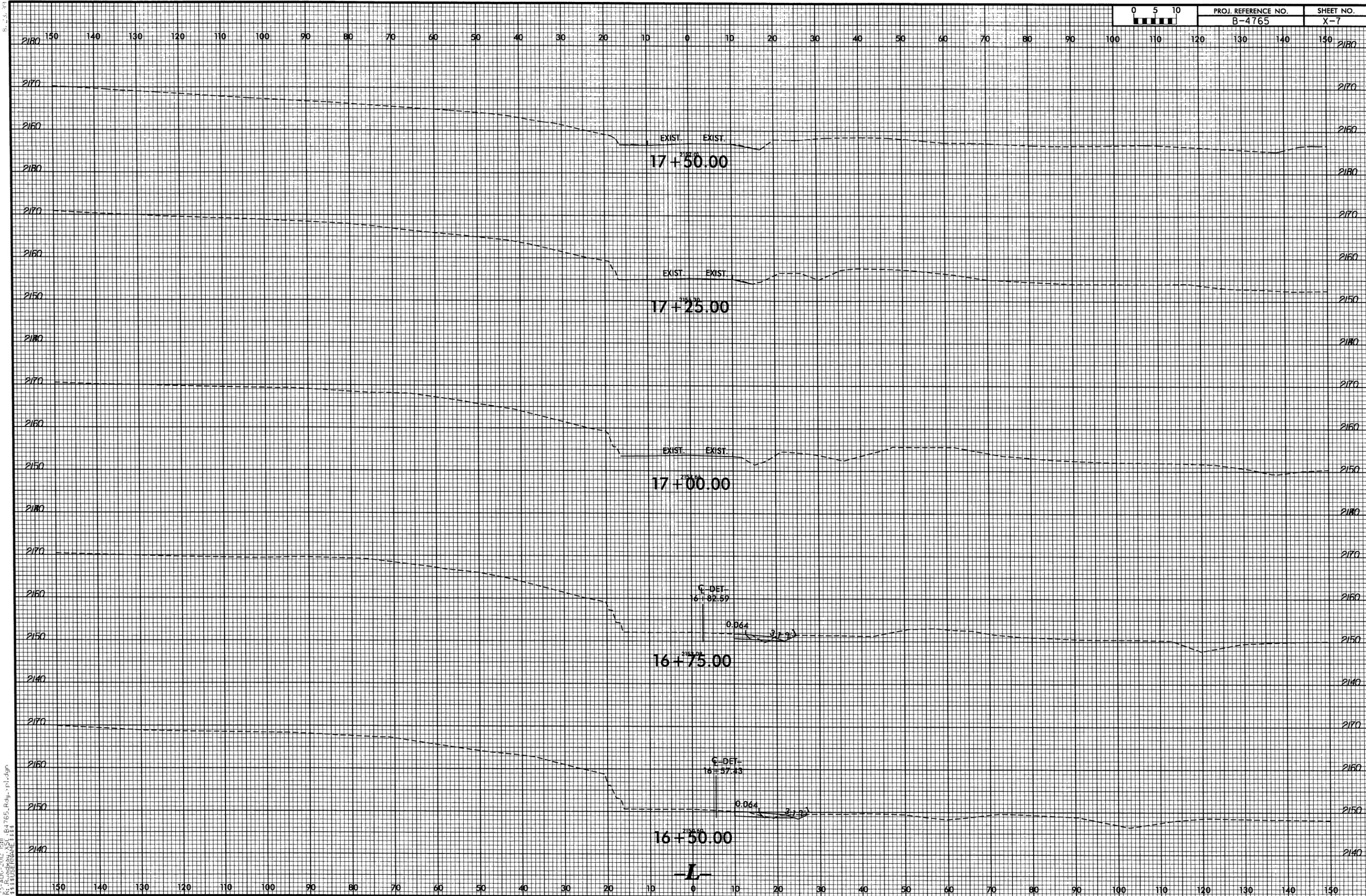


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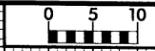


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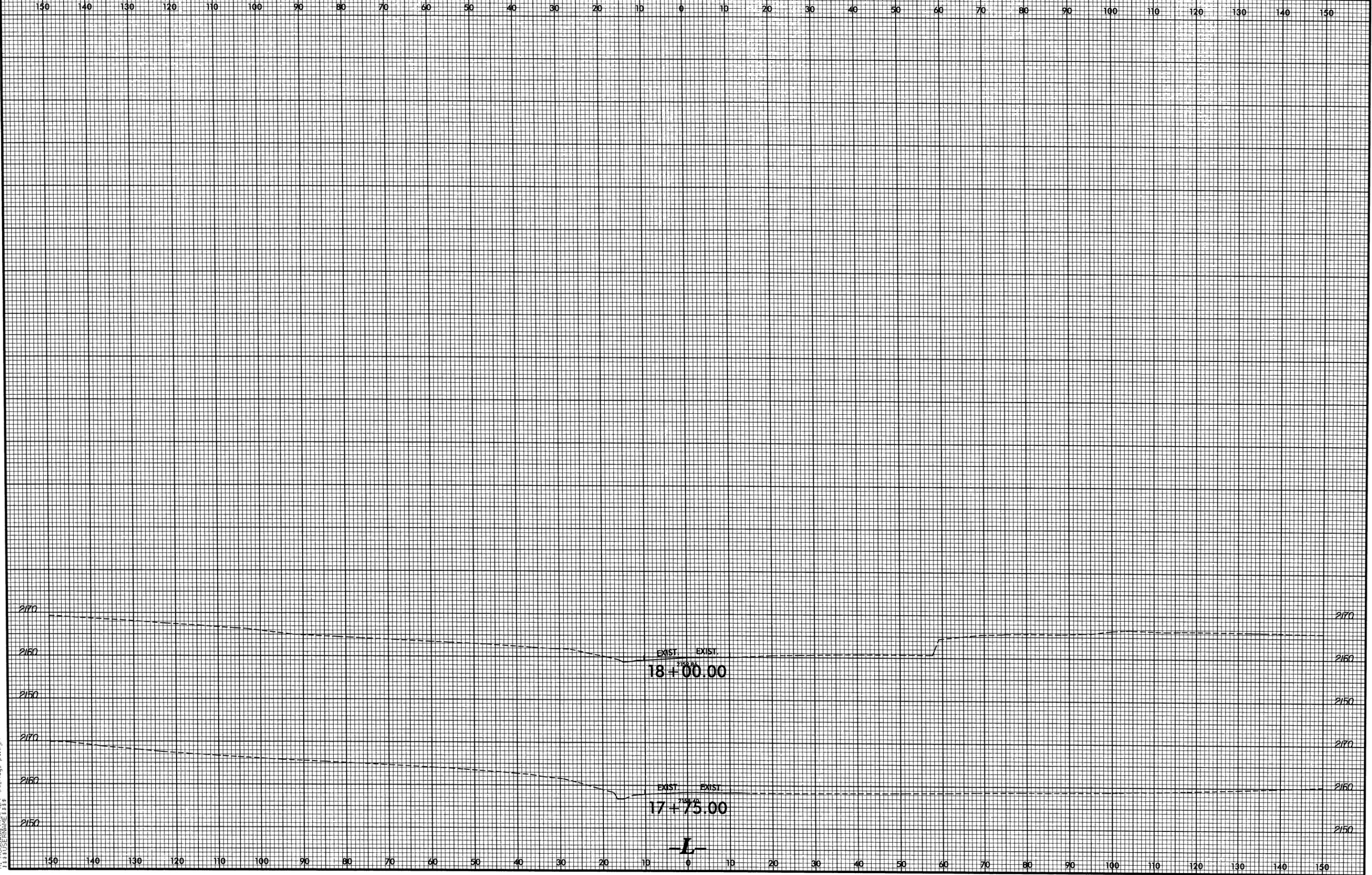


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8.2.15.11



PROJ. REFERENCE NO.	SHEET NO.
B-4765	X-8



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