



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

July 11, 2011

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

ATTN: Ms. Loretta Beckwith
NCDOT Coordinator

Subject: **Application for Section 404 Nationwide Permits 23, 33 and Section 401 Water Quality Certification and Modification of Nationwide Permits 13 and 25** for the proposed replacement of Bridge No. 81 over Long Creek on SR 1117 (Moose Branch Road) in Graham County, Federal Aid Project No. BRZ-1117(8); Division 14; TIP No. B-4122
\$240.00 debit WBS 33475.1.1

Dear Madam:

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 81 over Long Creek on SR 1117. There will be 42 linear feet of impacts from the crown span structure and 103 linear feet of impacts from bank stabilization, for a total of 145 linear feet of permanent impacts to Long Creek. The crown span structure will have a concrete slab floor. There will be 40 linear feet of temporary impacts for construction purposes during the placement of bank stabilization. The installation of utility piers for the waterline on the project will result in 7 square feet of impacts.

Section 404 and Section 401 permits were received for this project in the spring of 2010. At the time of these issuances, NCDOT had proposed to replace Bridge No. 81 with a new bridge at the same location. This permit allowed for 175 linear feet of bank stabilization impacts. Subsequent investigations and continuing involvement with the public in the Robbinsville area have brought to the attention of NCDOT the importance of a significantly large oak tree located adjacent to the current bridge. NCDOT, using context sensitive solutions, deemed it important to protect this unique white oak specimen.

Several designs were evaluated for their potential of saving the tree, while minimizing the impacts to Long Creek, including different structure types and shifting the alignment. All other structure types negatively impact the white oak. Shifting the alignment upstream, away from the tree would negatively impact 4F facilities in the southeast quadrant. Therefore, the crownspan on the current alignment is the best option. The crownspan allows for a smaller "footprint" of the structure and allows for minimal excavation near the root system of the white oak. Also, the use of the crownspan allows NCDOT to leave the wooden abutment of the existing bridge in place, further protecting the tree. Currently, roots from this tree are growing through the abutment. The crownspan will need a concrete slab floor due to the lack of adequate bedrock for keying in the span.

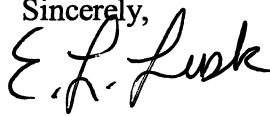
Please see enclosed copies of the Pre-Construction Notification (PCN), NCEEP mitigation acceptance letter, jurisdictional determination form, stormwater management plan, permit drawings, utility permit drawings and design plans for the above mentioned project. Also included is a memorandum from Bob Kopetsky (NCDOT-Roadside Environmental Unit) concerning the value of the tree. The Categorical Exclusion (CE) was completed in February 2011 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 May 15, 2012 and a review date of March 27, 2012; however, the let date may advance as additional funding becomes available.

A copy of this permit application 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 Jason Dilday at (919) 707-6111.

Sincerely,



 Gregory J. Thorpe, Ph.D., 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:	☒ Section 404 Permit ☐ Section 10 Permit
1b. Specify Nationwide Permit (NWP) number: 13 23 ,25, 33 or General Permit (GP) number:	
1c. Has the NWP or GP number been verified by the Corps?	☐ Yes ☒ No
1d. Type(s) of approval sought from the DWQ (check all that apply): ☒ 401 Water Quality Certification – Regular ☐ Non-404 Jurisdictional General Permit ☐ 401 Water Quality Certification – Express ☐ Riparian Buffer Authorization	
1e. Is this notification solely for the record because written approval is not required?	For the record only for DWQ 401 Certification: ☐ Yes ☒ No
For the record only for Corps Permit: ☐ Yes ☒ No	
1f. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts? If so, attach the acceptance letter from mitigation bank or in-lieu fee program.	☒ Yes ☐ No
1g. Is the project located in any of NC's twenty coastal counties. If yes, answer 1h below.	☐ Yes ☒ No
1h. Is the project located within a NC DCM Area of Environmental Concern (AEC)?	☐ Yes ☒ No

2. Project Information

2a. Name of project:	Replacment of Bridge 81 over Long Creek on SR 1117
2b. County:	Graham
2c. Nearest municipality / town:	Robbinsville
2d. Subdivision name:	<i>not applicable</i>
2e. NCDOT only, T.I.P. or state project no:	B-4122

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) 707-6111
3g. Fax no.:	(919) 212-5785
3h. Email address:	jldilday@ncdot.gov

4. Applicant Information (if different from owner)	
4a. Applicant is:	☐ Agent ☐ 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: 35.25188 (DD.DDDDDD)	Longitude: - 83.811307 (-DD.DDDDDD)
1c. Property size:	3.5 acres	
2. Surface Waters		
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Long Creek	
2b. Water Quality Classification of nearest receiving water:	C Tr	
2c. River basin:	Little Tennessee	
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: Residential and minor commercial development. Narrow wooded buffer adjacent to stream.		
3b. List the total estimated acreage of all existing wetlands on the property: 0.0		
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 175 feet perennial (Long Creek), 132 feet intermittent (piped section of UT)		
3d. Explain the purpose of the proposed project: To replace a structurally deficient bridge (Sufficiency rating of 35.9 out of 100).		
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing a 41-foot bridge with a 36-foot crownspan with a concrete slab floor on the existing alignment with an off-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: Jurisdictional determination for intermittent stream expired on 2/26/08. Stream identified in JD (Mauney Branch), near the project site will not be impacted during construction. Final JD requested with the permit.	☒ Yes ☐ No ☐ Unknown	
4b. If the Corps made the jurisdictional determination, what type of determination was made?	☐ Preliminary ☒ Final	
4c. If yes, who delineated the jurisdictional areas? Name (if known):	Agency/Consultant Company: H. W. Lochner, Inc. Other: John Hendrix (USACE)	
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation. March 7, 2003		
5. Project History		
5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?	☒ Yes ☐ No ☐ Unknown	
5b. If yes, explain in detail according to "help file" instructions. B-4122 received NW 13 and 25 permits (SAW-2010-0268) from the USACE issued 4/28/2010. 401 Water Quality Certification (Proj. 20100107) was received from NCDWQ on 3/10/2010. Design changes for the project have necessitated the need for acquisition of new permits and modification of existing permits.		

6. Future Project Plans	
6a. Is this a phased project?	☐ Yes ☒ No
6b. If yes, explain.	

C. Proposed Impacts Inventory						
1. Impacts Summary						
1a. Which sections were completed below for your project (check all that apply):						
☐ Wetlands		☒ Streams - tributaries		☐ Buffers		
☐ Open Waters		☐ Pond Construction				
2. Wetland Impacts						
If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.						
2a. Wetland impact number – Permanent (P) or Temporary (T)	2b. Type of impact	2c. Type of wetland (if known)	2d. Forested	2e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	2f. Area of impact (acres)	
Site 1 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ		
Site 2 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ		
Site 3 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ		
Site 4 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ		
Site 5 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ		
Site 6 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ		
2g. Total wetland impacts					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 ☒ P ☐ T	Bank Stabilization	Long Creek	☒ PER ☐ INT	☒ Corps ☐ DWQ	28	103
Site 2 ☒ P ☐ T	Crownspan	Long Creek	☒ PER ☐ INT	☒ Corps ☐ DWQ	28	42
Site 3 ☐ P ☒ T	Placement of bank stabilization	Long Creek	☒ PER ☐ INT	☒ Corps ☐ DWQ	28	40
Site 4 ☒ P ☐ T	Utility Piers	Long Creek	☒ PER ☐ INT	☒ Corps ☐ DWQ	28	7 ft. sq.
Site 5 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 6 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
3h. Total stream and tributary impacts						145 Perm 40 Temp
3i. Comments: Piers due to utility relocation results in 7 feet square impact.						

4. Open Water Impacts

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

4a. Open water impact number – Permanent (P) or Temporary (T)	4b. Name of waterbody (if applicable)	4c. Type of impact	4d. Waterbody type	4e. Area of impact (acres)
O1 ☐ P ☐ T				
O2 ☐ P ☐ T				
O3 ☐ P ☐ T				
O4 ☐ P ☐ T				
4f. Total open water impacts				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?			☐ Neuse ☐ Catawba	☐ Tar-Pamlico ☐ Randleman	☐ Other:
6b. Buffer impact number – Permanent (P) or Temporary (T)	6c. Reason for impact	6d. Stream name	6e. Buffer mitigation required? ☐ Yes ☐ No	6f. Zone 1 impact (square feet)	6g. Zone 2 impact (square feet)
B1 ☐ P ☐ T			☐ Yes ☐ No		
B2 ☐ P ☐ T			☐ Yes ☐ No		
B3 ☐ P ☐ T			☐ Yes ☐ No		
6h. Total buffer impacts					
6i. Comments:					

D. Impact Justification and Mitigation		
1. Avoidance and Minimization		
1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing project. The proposed structure will be at approximately the same grade as the existing structure; an off site detour will be used; no deck drains will discharge directly into Long Creek. Catch basins placed downstream will capture stormwater from the roadway surface and crownspan deck. Outlet pipes will be placed on minimum grades to minimize velocities. A grassed shoulder along with a grass swale will be utilized to provide treatment of stormwater from the roadway prior to Long Creek. Riprap pads will be placed at pipe outlets to dissipate energy prior to reaching the creek. Design Standards for Sensitive Watersheds will be employed in all phases of construction. Several designs were evaluated for their potential of saving a significantly large white oak tree, while minimizing the impacts to Long Creek, including different structure types and shifting the alignment. All other structure types negatively impact the white oak. Shifting the alignment upstream, away from the tree would negatively impact 4F facilities in the southeast quadrant. Therefore, the crownspan on the current alignment is the best option. The crownspan allows for a smaller "footprint" of the structure and allows for minimal excavation near the roots system of the white oak. Also, the use of the crownspan allows NCDOT to leave the wooden abutment of the existing bridge in place, further protecting the tree.		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques. Design Standards in Sensitive Watersheds will be used in all phases of construction. A trout moratorium will prohibit In-stream work between October 15 - April 15. The use of NCDOT's Best Management Practices for Bridge Demolition and Removal and Best Management Practices for Construction and Maintenance Activities.		
2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State		
2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?	☒ Yes ☐ No If no, explain:	
2b. If yes, mitigation is required by (check all that apply):	☐ DWQ ☒ Corps	
2c. If yes, which mitigation option will be used for this project?	☐ Mitigation bank ☒ Payment to in-lieu fee program ☐ Permittee Responsible Mitigation	
3. Complete if Using a Mitigation Bank		
3a. Name of Mitigation Bank: not applicable		
3b. Credits Purchased (attach receipt and letter)	Type	Quantity
3c. Comments:		
4. Complete if Making a Payment to In-lieu Fee Program		
4a. Approval letter from in-lieu fee program is attached.	☒ Yes	
4b. Stream mitigation requested:	42 linear feet @ 2:1	
4c. If using stream mitigation, stream temperature:	☐ warm ☐ cool ☒ cold	
4d. Buffer mitigation requested (DWQ only):	square feet	
4e. Riparian wetland mitigation requested:	acres	
4f. Non-riparian wetland mitigation requested:	acres	
4g. Coastal (tidal) wetland mitigation requested:	acres	
4h. Comments:		
5. Complete if Using a Permittee Responsible Mitigation Plan		

5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan.				
6. Buffer Mitigation (State Regulated Riparian Buffer Rules) – required by DWQ				
6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation?				☐ Yes ☐ No
6b. If yes, then identify the square feet of impact to each zone of the riparian buffer that requires mitigation. Calculate the amount of mitigation required.				
Zone	6c. Reason for impact	6d. Total impact (square feet)	Multiplier	6e. Required mitigation (square feet)
Zone 1			3 (2 for Catawba)	
Zone 2			1.5	
6f. Total buffer mitigation required:				
6g. If buffer mitigation is required, discuss what type of mitigation is proposed (e.g., payment to private mitigation bank, permittee responsible riparian buffer restoration, payment into an approved in-lieu fee fund).				
6h. Comments:				

E. Stormwater Management and Diffuse Flow Plan (required by DWQ)**1. Diffuse Flow Plan**

1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?

☐ Yes ☒ No

1b. If yes, then is a diffuse flow plan included? If no, explain why.
Comments: if yes, see attached permit drawings.

☐ Yes ☐ No

2. Stormwater Management Plan

2a. What is the overall percent imperviousness of this project?

N/A

2b. Does this project require a Stormwater Management Plan?

☒ Yes ☐ No

2c. If this project DOES NOT require a Stormwater Management Plan, explain why:

2d. If this project DOES require a Stormwater Management Plan, then provide a brief, narrative description of the plan:
See attached permit drawings.

2e. Who will be responsible for the review of the Stormwater Management Plan?

☐ Certified Local Government
☐ DWQ Stormwater Program
☒ DWQ 401 Unit

3. Certified Local Government Stormwater Review

3a. In which local government's jurisdiction is this project?

not applicable

3b. Which of the following locally-implemented stormwater management programs apply (check all that apply):

☐ Phase II
☐ NSW
☐ USMP
☐ Water Supply Watershed
☐ Other:

3c. Has the approved Stormwater Management Plan with proof of approval been attached?

☐ Yes ☐ No

4. DWQ Stormwater Program Review

4a. Which of the following state-implemented stormwater management programs apply (check all that apply):

☐ Coastal counties
☐ HQW
☐ ORW
☐ Session Law 2006-246
☐ Other:

4b. Has the approved Stormwater Management Plan with proof of approval been attached?

☐ Yes ☐ No

5. DWQ 401 Unit Stormwater Review

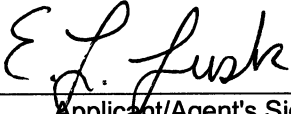
5a. Does the Stormwater Management Plan meet the appropriate requirements?

☐ Yes ☐ No N/A

5b. Have all of the 401 Unit submittal requirements been met?

☐ Yes ☐ No N/A

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

5. Endangered Species and Designated Critical Habitat (Corps Requirement)		
5a. Will this project occur in or near an area with federally protected species or habitat?	☒ Yes	☐ No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	☒ Yes	☐ No
5c. If yes, indicate the USFWS Field Office you have contacted.	☐ Raleigh ☒ Asheville	
5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? USFWS web page of T/E species for Graham County and the NHP database of element occurrences. Numerous field surveys for Appalachian elktoe were conducted by NCDOT and NCWRC biologists of Long Creek and the surrounding area resulting in no mussels being found. The last survey was conducted on May 5, 2004. A biological conclusion of "No Effect" was rendered. It was determined that no additional surveys were needed due to poor habitat.		
6. Essential Fish Habitat (Corps Requirement)		
6a. Will this project occur in or near an area designated as essential fish habitat?	☐ Yes	☒ No
6b. What data sources did you use to determine whether your site would impact Essential Fish Habitat? NMFS County Index		
7. Historic or Prehistoric Cultural Resources (Corps Requirement)		
7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)?	☐ Yes	☒ No
7b. What data sources did you use to determine whether your site would impact historic or archeological resources? NEPA Documentation		
8. Flood Zone Designation (Corps Requirement)		
8a. Will this project occur in a FEMA-designated 100-year floodplain?	☒ Yes	☐ No
8b. If yes, explain how project meets FEMA requirements: NCDOT Hydraulics 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.)	July 11, 2011 Date



June 21, 2011

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

Dear Dr. Thorpe:

Subject: EEP Mitigation Acceptance Letter:

**B-4122, Replace Bridge Number 81 over Long Creek on SR 1117 (Moose Branch Road),
Graham 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 June 20, 2011, the impacts are located in CU 06010204 of the Little Tennessee River Basin in the Southern Mountains (SM) Eco-Region, and are as follows:

Little Tennessee 06010204 SM	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non- Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	42	0	0	0	0	0	0	0

EEP commits to implementing sufficient compensatory stream mitigation credits to offset the impacts associated with this project in accordance with the N.C. Department of Environment and Natural Resources' Ecosystem Enhancement Program In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from EEP.

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

Sincerely,

William D. Gilmore, P.E.
EEP Director

cc: Mr. Lori Beckwith, USACE – Asheville Regulatory Field Office
Mr. Brian Wrenn, Division of Water Quality, Wetlands/401 Unit
File: B-4122

Restoring... Enhancing... Protecting Our State





STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

June 8, 2011

MEMORANDUM TO: Anthony Houser, P.E.
Roadway Project Engineer

FROM: Bob Kopetsky, RLA
Roadside Environmental Unit

SUBJECT: B-4122, Bridge 81 over Long Creek in Robbinsville
Tree Preservation

Our Roadside field staff has reviewed the project and the large tree adjacent to the bridge and creek. We have not found it to be registered as a "North Carolina Champion Tree" or a "National Register of Big Trees". Although not registered, the tree has unique characteristics of size and age which may set apart as a tree of significance.

Observations:

Tree species: Quercus alba, White Oak
Circumference: 14.2'
Spread: 88'
Height: 65'
Estimated Age: 270 yrs..
Notes: The tree has been found to be in good general health.

Comments:

It being a White Oak of significant size and age (in and of itself) makes it unique and special. It more than likely stood in place while the Cherokee hunted in surrounding forests. It would have first sprouted as settlers reached in to western North Carolina. It stood throughout the Civil War (1861), the establishment of Graham Co (1872) and the construction of Robbinsville's first courthouse (1874); it therefore would be much older than the automobile or paved roads. Its location adjacent to Long Creek also gives it environmental significance of anchoring the slope and providing shade and shelter along its banks.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
ROADSIDE ENVIRONMENTAL UNIT
1557 MAIL SERVICE CENTER
RALEIGH NC 27699-1557

TELEPHONE: 919-733-2920
FAX: 919-733-9810

WEBSITE: WWW.NCDOT.GOV

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

Recommendations:

The tree's environmental significance is important and measurable. Its historic significance is immeasurable and irreplaceable. NCDOT's greatest effort would be to develop construction plans and establish measures to protect and minimize impacts to the stream and tree.

Central and Division Roadside staff can work together, and in conjunction with the construction project, for the planned preservation of the tree. Measures to prepare the tree for construction (i.e. pruning and fertilization), protection during construction (i.e. minimal impacts to the trees root system), and planned integrated maintenance post construction should help greatly to assist in the health and welfare of the tree.

¹ estimated age is based on the formula: average diameter of the tree x species factor. As defined, the age is only an estimate. Greater clarity through physical observation of local tree growth patterns, the specific tree characteristics of branching, bark development and size can more accurately define age (by certified Arborist specializing in tree age estimating).

cc: Ed Ingle, CPESC, Roadside Field operations Engineer
Connie Morgan, Roadside Environmental Designer
Richard Queen, Div 14 Roadside Environmental Engineer

STORMWATER MANAGEMENT PLAN

Project: 33346.1.1 / TIP B-4122

March 23, 2011

Graham County

Hydraulics Designer: Carlas Sharpless, PE

Hydraulics Project Manager: Jerry L. Lindsey, PE, NCDOT Hydraulics Unit

RECEIVED

MAR 24 2011

DIVISION OF HIGHWAYS
NCDOT OFFICE OF NATURAL ENVIRONMENT

ROADWAY DESCRIPTION

The project involves replacing Bridge No. 81 on SR 1117 (Moose Branch Rd.) over Long Creek in Graham County. The overall project length is 0.103 MI. The existing roadway has 18 feet of pavement with 4 feet of grassed shoulder on each side. The existing structure, built in 1962, consists of a timber floor on I-Beams and vertical abutments with a total length of 41 feet and a clear roadway width of 19'. The proposed road will have 20 feet of pavement for two ten foot travel lanes. The upstream or right side of the project will remain shoulder section while the downstream or left side of the project will become curb and gutter with a sidewalk for pedestrian use. The existing bridge will be replaced with a 36 feet long 1@40'x7.5' crownspan structure with a floorslab with a clear roadway width of 33'5". An offsite detour will be utilized during the construction of this project.

ENVIRONMENTAL DESCRIPTION

Land Use

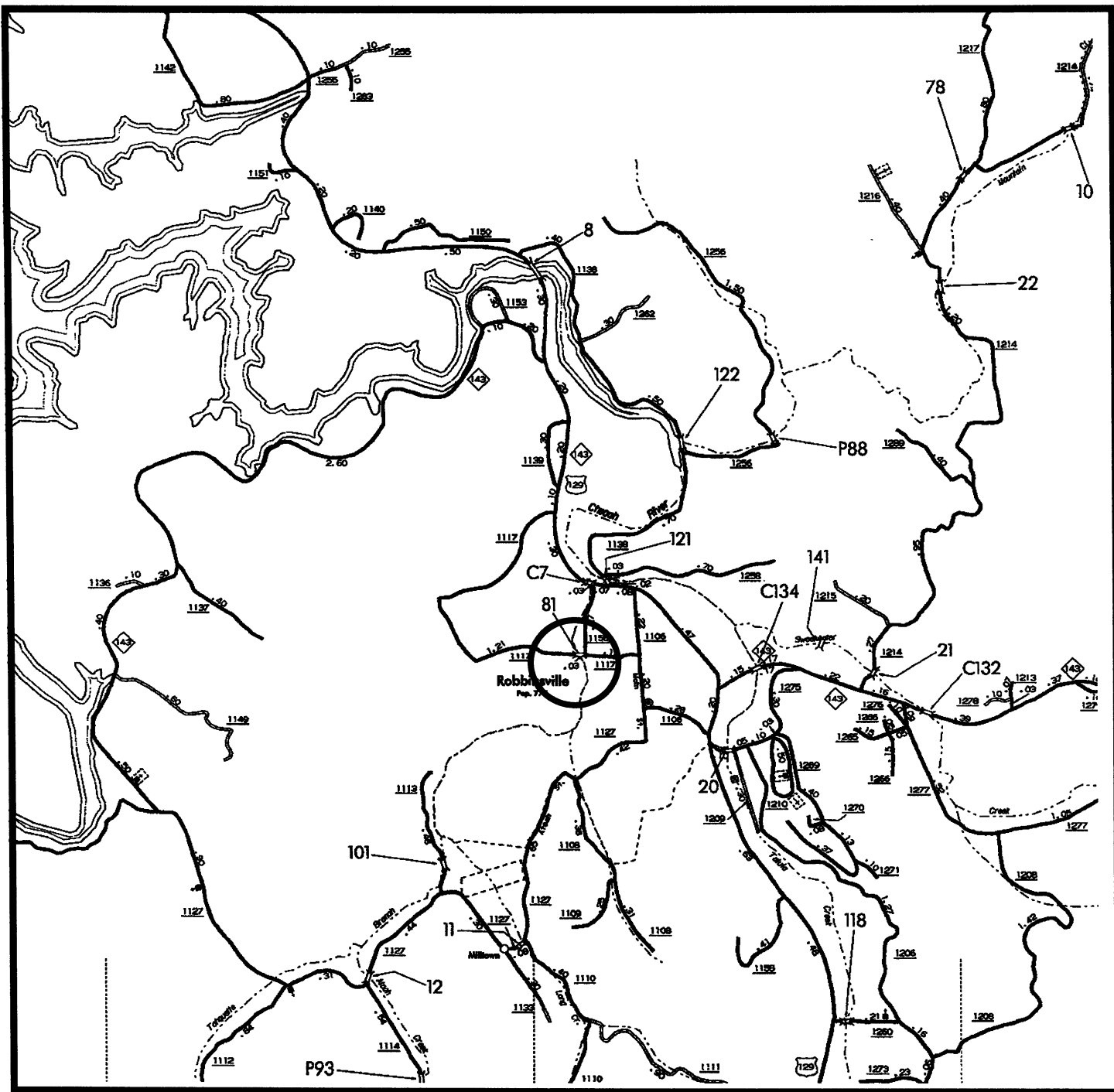
The project location is located just outside of the Robbinsville city limit on a low speed state route. The area is mainly residential with schools and recreational facilities in the near vicinity. The 11.2 square mile watershed is mainly rural.

Topography and Water Resources

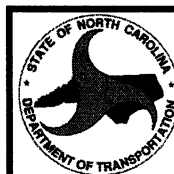
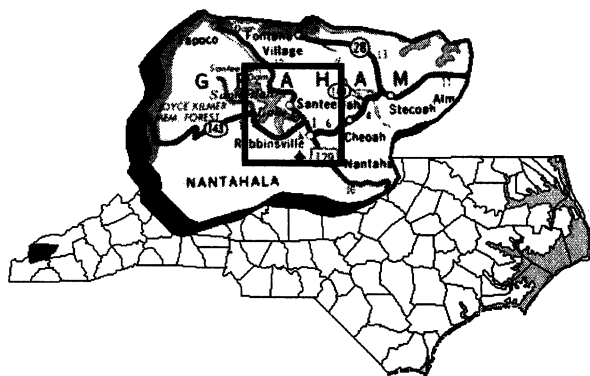
This project is located in the Little Tennessee River Drainage Basin. Long Creek has a "C, Tr" stream classification. This stream is not on the 303d list. The total wetland impacts shown on this project is 0.04 Ac.

BEST MANAGEMENT PRACTICES

For this project the proposed crownspan structure will not have deck drains directly over the surface waters of Long Creek. Catch basins placed down station will capture stormwater from the roadway surface and crownspan deck. Outlet pipes will be placed on minimum grades to minimize velocities. Rip-Rap pads will be placed at pipe outlets at Sta. 12+92 LT. and Sta. 13+45 Rt. to dissipate energy prior to reaching the creek. A grassed shoulder along with a grass swale will be utilized from -L- Sta.10+50 RT. to -L- 12+50 RT. to provide treatment of the storm water from the roadway prior to the bridge. The proposed structure is a 1@40'x7.5' crownspan, which will provide more conveyance area and a smaller footprint when compared to the existing 1@ 41' structure. This will allow the structure to be shifted slightly to minimize the impacts to the tree at the northeast quadrant of the project.



Permit Drawing
Sheet 1 of 6



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

GRAHAM COUNTY
REPLACE BRIDGE NO. 81 ON SR 1117
OVER LONG CREEK
B-4122

Figure 1

B-4122 Property Owner List

1. Mr. Jasper Moose
Mrs. Wilma Moose
PO Box 1077
Robbinsville, NC 28771
2. Leanne Ghormley Ayres
Daniel B. Ghormley
Myrtle Ghormley
194 Moose Branch Rd.
Robbinsville, NC 28771
3. Graham County
Board of Education
52 Moose Branch Rd.
Robbinsville, NC 28771
4. Herve Cody
Claudene Cody
PO Box 218
Robbinsville, NC 28771

WETLAND IMPACTS

SURFACE WATER IMPACTS

[illegible]

Permit Drawing of 10
set 3 of 10

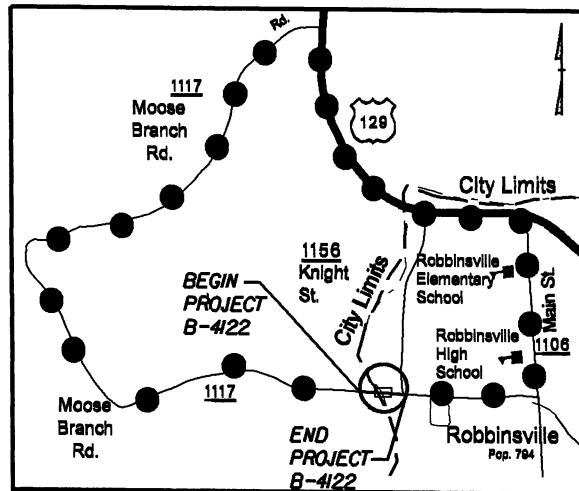
NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GRAHAM COUNTY
WBS - 33475.1.1 (B-4122)

09/08/99

TIP PROJECT: B-4122

CONTRACT: C202429

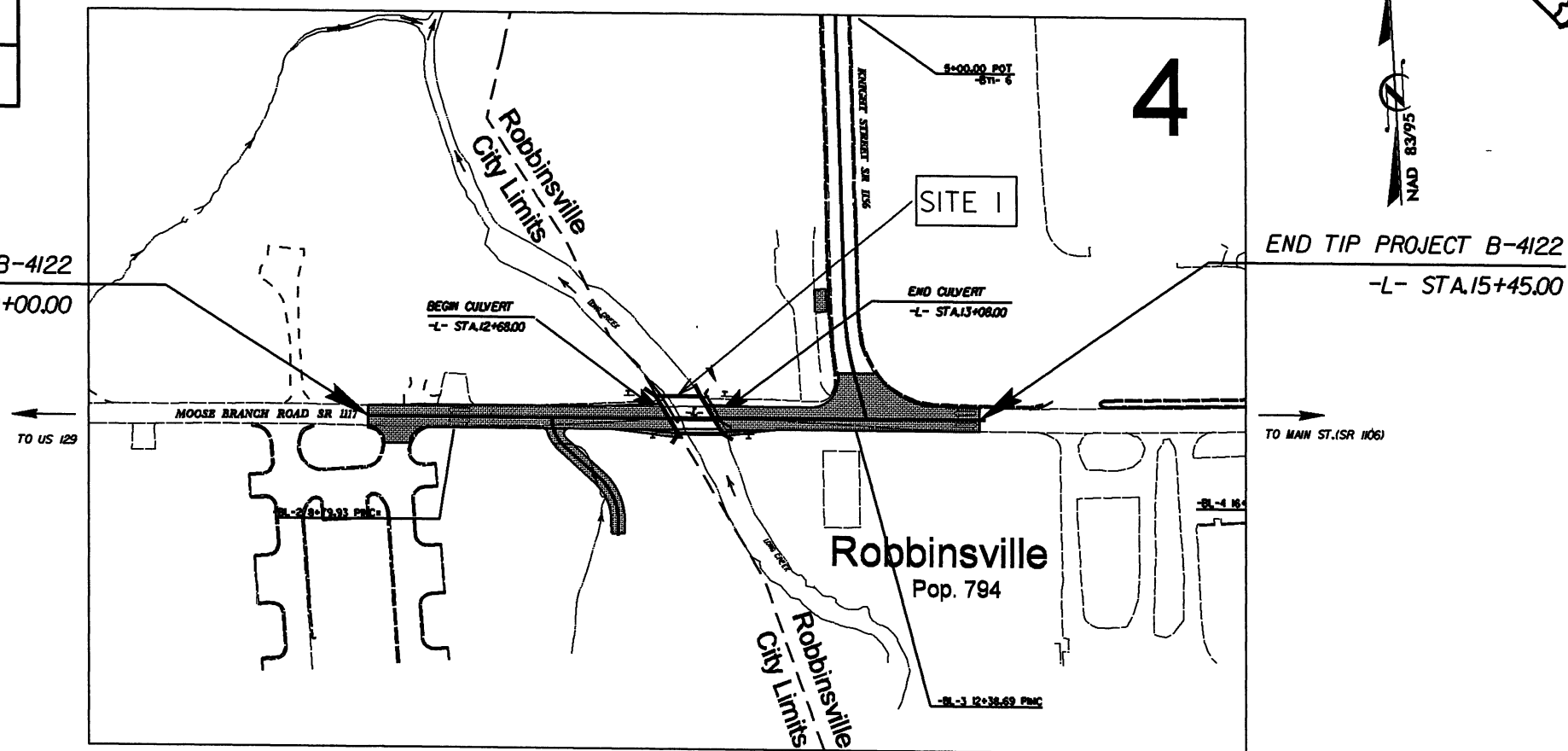
See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols



DETOUR
VICINITY MAP

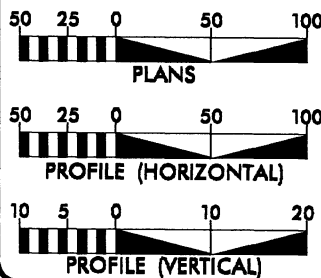
BEGIN TIP PROJECT B-4122
-L- STA.10+00.00

WETLAND/STREAM
PERMIT



THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.
THIS PROJECT IS WITHIN MUNICIPAL BOUNDARIES OF ROBBINSVILLE.
CLEARING ON THIS PROJECT SHOULD BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.
PROJECT DESIGN FOLLOWS SUB REGIONAL TIER DESIGN GUIDELINES.

GRAPHIC SCALES



DESIGN DATA

ADT 2010 = 740 VPD
ADT 2030 = 1087 VPD
DHV = 10 %
D = 60 %
T = 4 % *
V = 40 MPH
CLASS = LOCAL
* TTST 2% DUAL 2%

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-4122 = 0.095 MI.
LENGTH OF STRUCTURE TIP PROJECT B-4122 = 0.008 MI.
TOTAL LENGTH OF TIP PROJECT B-4122 = 0.103 MI.

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JULY 8, 2009

LETTING DATE:
MAY 15, 2012

TONY HOUSER, PE
PROJECT ENGINEER

JASON TALLEY, PE
PROJECT DESIGN ENGINEER

HYDRAULICS
ENGINEER

ROADWAY DESIGN
ENGINEER

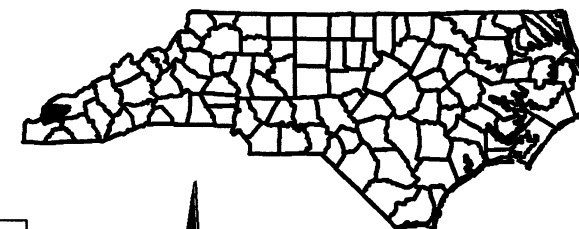
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA



STATE HIGHWAY DESIGN ENGINEER

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4122	1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
33475.1.1	BRZ-1117(8)	PE	
33475.2.1	BRZ-1117(8)	RAW, UTIL.	

Permit Drawing
Sheet 4 of 6



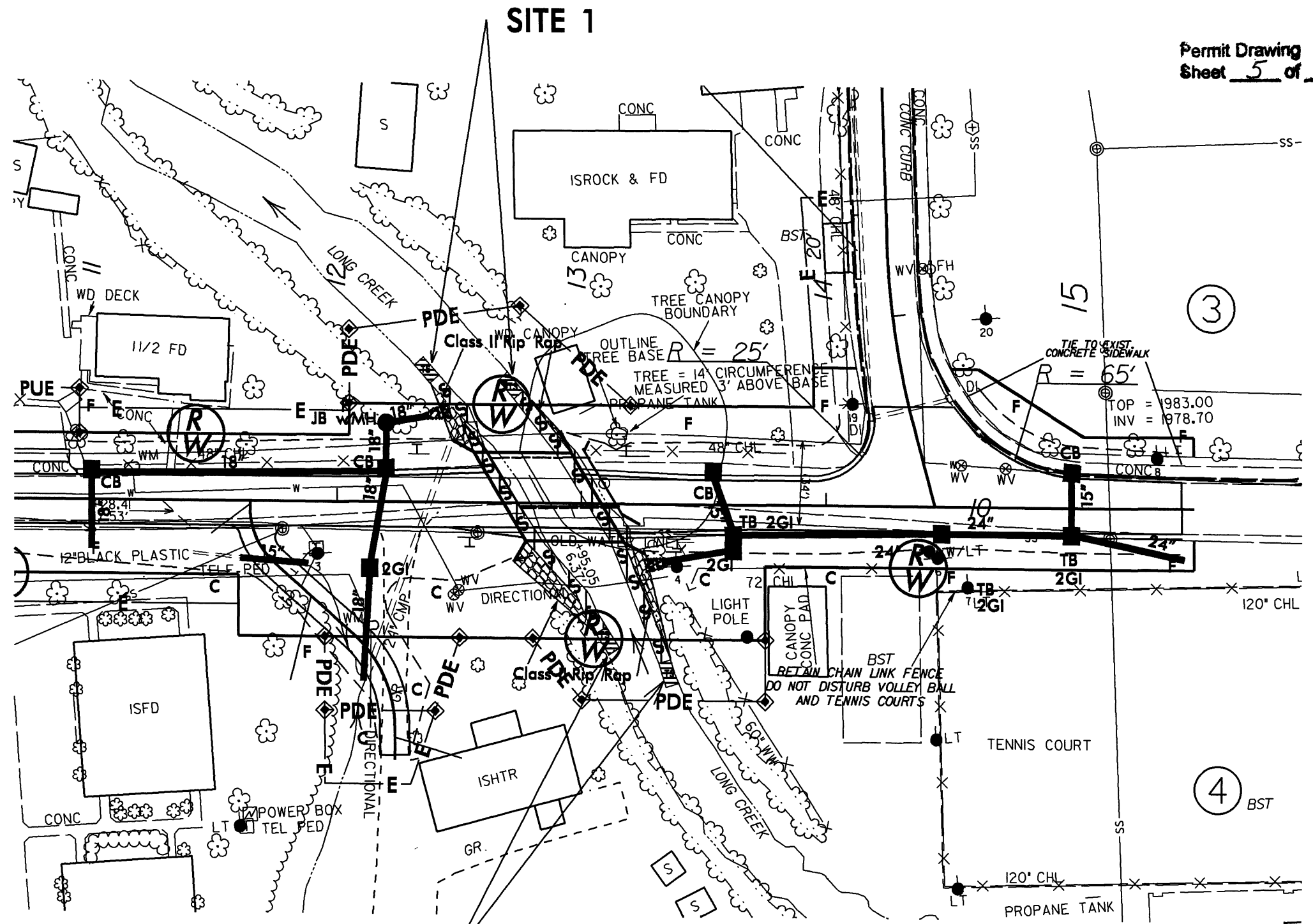
END TIP PROJECT B-4122
-L- STA.15+45.00

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DCN\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

PROJECT REFERENCE NO. B-4122	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

Permit Drawing
Sheet 5 of 6

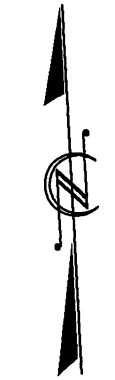
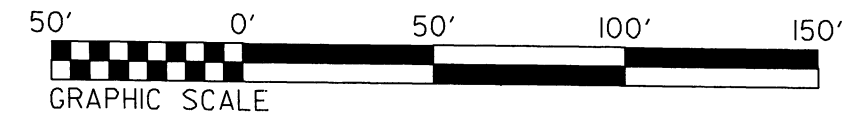


Site 1

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

PLAN VIEW

Scale: 1"=50'



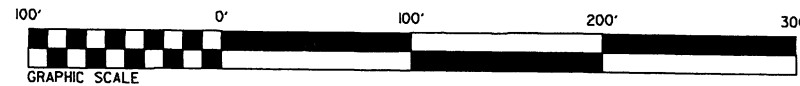
N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
GRAHAM COUNTY
PROJECT: 33475.1.1
(B4122)
BRIDGE NO. 81
SR 1117

REVISIONS

DATE: 11/11/11
DRAWN BY: J. L. BARNETT
CHECKED BY: J. L. BARNETT
APPROVED BY: J. L. BARNETT

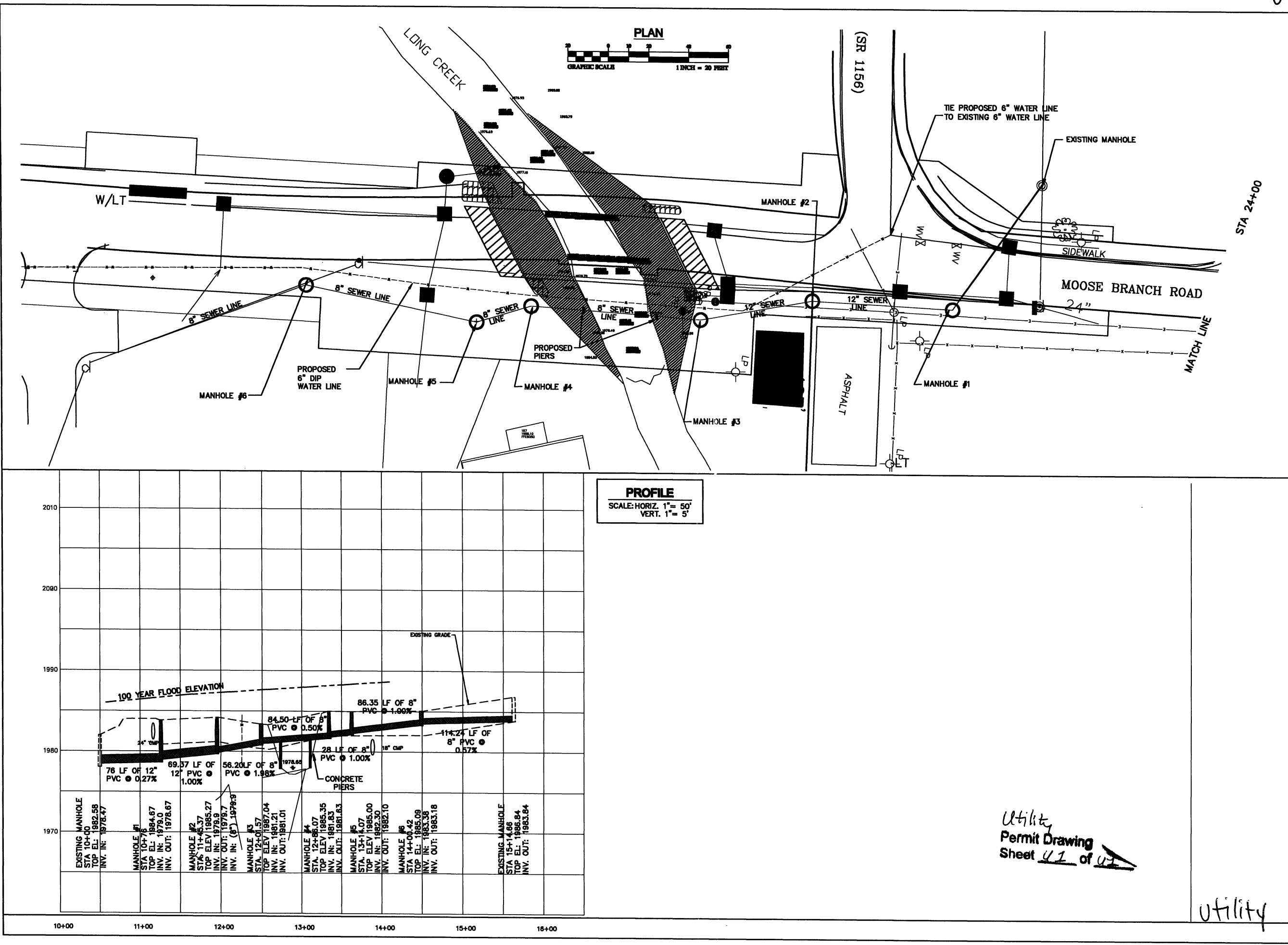


Scale: 1" = 100'



N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
GRAHAM COUNTY
PROJECT: 33475.1.1
(B4122)
BRIDGE NO. 81 ON SR 1117
LONG CREEK

Utility



**MOOSE BRANCH ROAD
BRIDGE REPLACEMENT**
TOWN OF ROBBINSVILLE
GRAHAM COUNTY, NORTH CAROLINA

JOB NO.: 08.00371
DATE: DECEMBER, 2008
DESIGNED BY: MC
CADD BY: BW
DESIGN REVIEW: JM
CONST. REVIEW: RA
MooseBranchDesign_JEV9-3-09

**WATER AND SEWER
RELOCATION**

**SHEET
C1**

Utility
Permit Drawing
Sheet 41 of 47

Utility

Long Creek

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

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

SECTION I: BACKGROUND INFORMATION

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

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: B-4122 (Replacement of Bridge No. 81 over Long Creek on SR 1117)

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: NC County/parish/borough: Graham City: Robbinsville
Center coordinates of site (lat/long in degree decimal format): Lat. 35.25188° N, Long. 83.811307° W.
Universal Transverse Mercator:

Name of nearest waterbody: Long Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Cheoah River

Name of watershed or Hydrologic Unit Code (HUC): 06010204

- ☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- ☐ Office (Desk) Determination. Date:
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Appear to be no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- ☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

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

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- ☐ TNWs, including territorial seas
☐ Wetlands adjacent to TNWs
☒ Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
☐ Non-RPWs that flow directly or indirectly into TNWs
☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
☐ Impoundments of jurisdictional waters
☐ Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: 400 linear feet: 28 width (ft) and/or acres.
Wetlands: acres.

c. Limits (boundaries) of jurisdiction based on: Established by OHWM.

Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):³

- ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is “adjacent”: .

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

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

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

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

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

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

(i) General Area Conditions:

Watershed size: **Pick List**

Drainage area: **Pick List**

Average annual rainfall: inches

Average annual snowfall: inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☒ Tributary flows directly into TNW.

☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.

Project waters are **Pick List** river miles from RPW.

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

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

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

Identify flow route to TNW⁵: .

Tributary stream order, if known: .

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

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

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

Tributary properties with respect to top of bank (estimate):

Average width: feet
Average depth: feet
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .

Presence of run/riffle/pool complexes. Explain: .

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): %

(c) **Flow:**

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime: .

Other information on duration and volume: .

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

Subsurface flow: **Pick List. Explain findings:** .

☐ Dye (or other) test performed: .

Tributary has (check all that apply):

☐ Bed and banks	
☐ OHWM ⁶ (check all indicators that apply):	
☐ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	
☐ Discontinuous OHWM. ⁷ Explain: .	

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

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

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: .

Identify specific pollutants, if known: .

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

⁷Ibid.

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

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

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

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

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

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

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

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

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

Flow is from: **Pick List**.

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

(ii) **Chemical Characteristics:**

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

Identify specific pollutants, if known: .

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

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

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

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

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

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

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

C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

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

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

☐ TNWs: li near feet width (ft), Or, acres.

☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Long Creek has a NCDWQ stream rating scores greater than 30.

☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☒ Tributary waters: **400** linear feet **28** width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

- ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

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

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

- ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

- ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

7. Impoundments of jurisdictional waters.⁹

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰

- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

⁸See Footnote # 3.

⁹To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: linear feet width h (ft).
- ☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
- ☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

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

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): li near feet width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): li near feet, width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

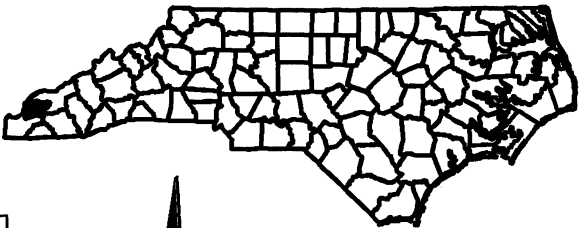
SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

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

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4122	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33475.1.1	BRZ-1117(8)	PE	
33475.2.1	BRZ-1117(8)	RW, UTIL.	

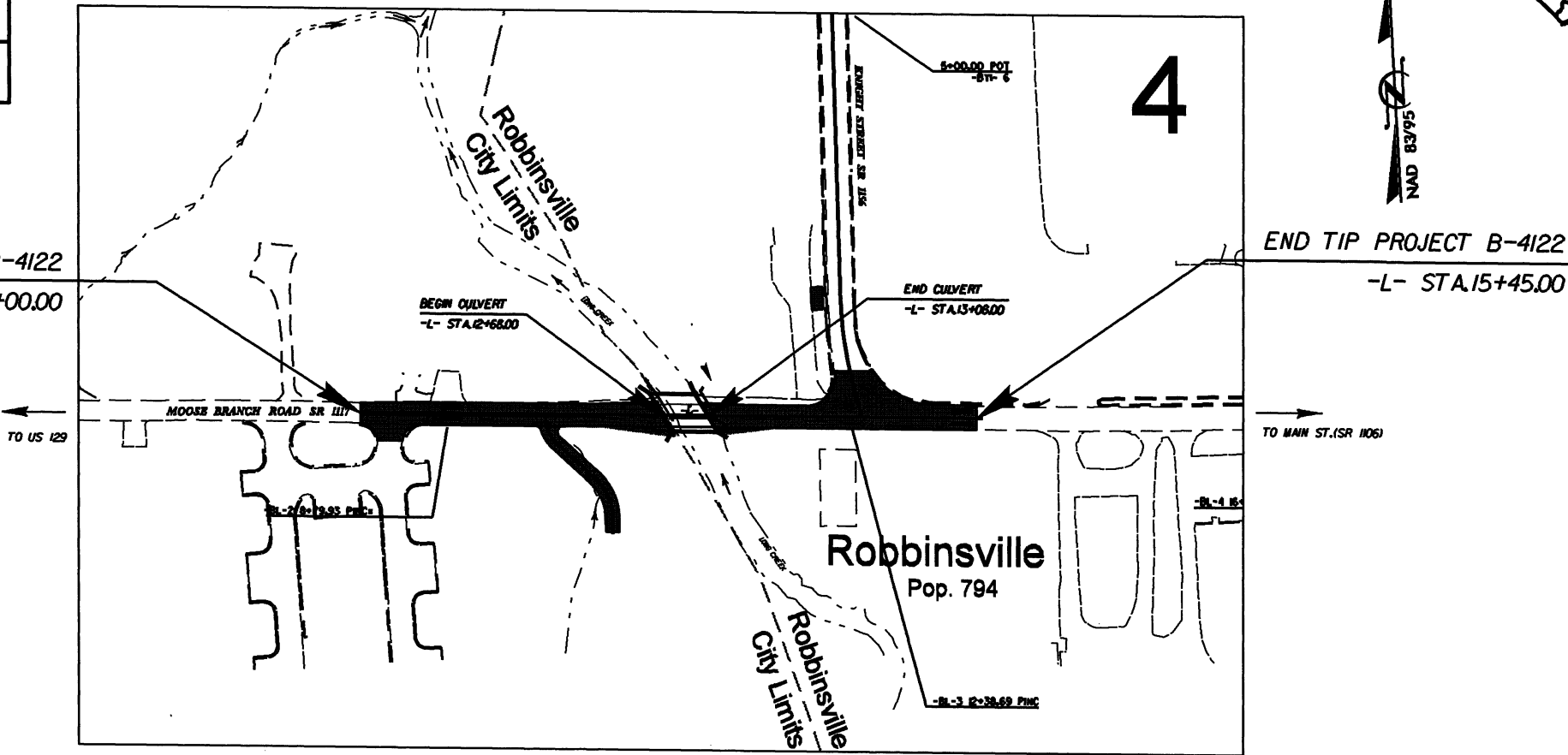
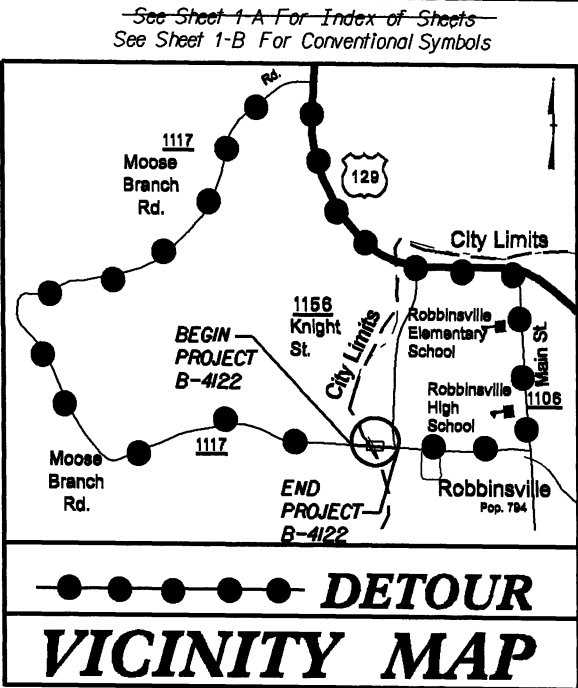


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GRAHAM COUNTY

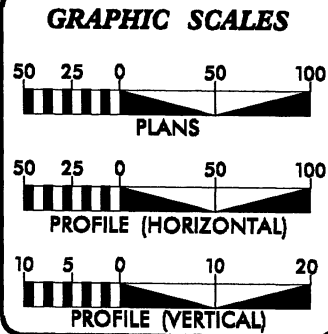
LOCATION: BRIDGE No. 81 OVER LONG CREEK ON SR 1117

TYPE OF WORK: GRADING, PAVING, DRAINAGE, GUARDRAIL,
AND CULVERT



THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.
THIS PROJECT IS WITHIN MUNICIPAL BOUNDARIES OF ROBBINSVILLE.
CLEARING ON THIS PROJECT SHOULD BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.
PROJECT DESIGN FOLLOWS SUB REGIONAL TIER DESIGN GUIDELINES.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



DESIGN DATA

ADT 2010 =	740	VPD
ADT 2030 =	1087	VPD
DHV =	10	%
D =	60	%
T =	4	% *
V =	40	MPH
CLASS =	LOCAL	
* TTST 2%	DUAL 2%	

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-4122 =	0.095 MI.
LENGTH OF STRUCTURE TIP PROJECT B-4122 =	0.008 MI.
TOTAL LENGTH OF TIP PROJECT B-4122 =	0.103 MI.

Prepared In the Office of: DIVISION OF HIGHWAYS 1000 Birch Ridge Dr., Raleigh NC, 27610	
2008 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: JULY 8, 2009	TONY HOUSER, PE PROJECT ENGINEER
LETTING DATE: MAY 15, 2012	JASON TALLEY, PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER	SIGNATURE: _____
ROADWAY DESIGN ENGINEER	SIGNATURE: _____

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

STATE HIGHWAY DESIGN ENGINEER

09/08/99

15-MAR-2011 10:52
R:\Roadway\Projects\B-4122_rdy_tsh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$

TIP PROJECT: B-4122

CONTRACT: C202429

09/08/09

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.
B-4122

SHEET NO.
1-B

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	123
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	-----

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

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

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○
Switch	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	TDE
Proposed Permanent Drainage Easement	PDE
Proposed Permanent Drainage / Utility Easement	DUE
Proposed Permanent Utility Easement	PUE
Proposed Temporary Utility Easement	TUE
Proposed Permanent Easement with Iron Pin and Cap Marker	◆

ROADS AND RELATED FEATURES:

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

EXISTING STRUCTURES:

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

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	A/G Gas

SANITARY SEWER:

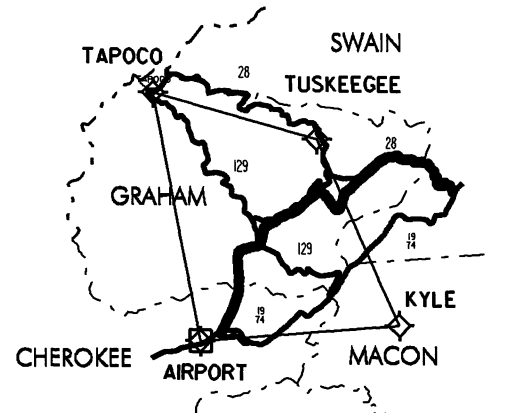
Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	-----
Above Ground Sanitary Sewer	A/G Sanitary Sewer
Recorded SS Forced Main Line	-----
Designated SS Forced Main Line (S.U.E.*)	-----

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.

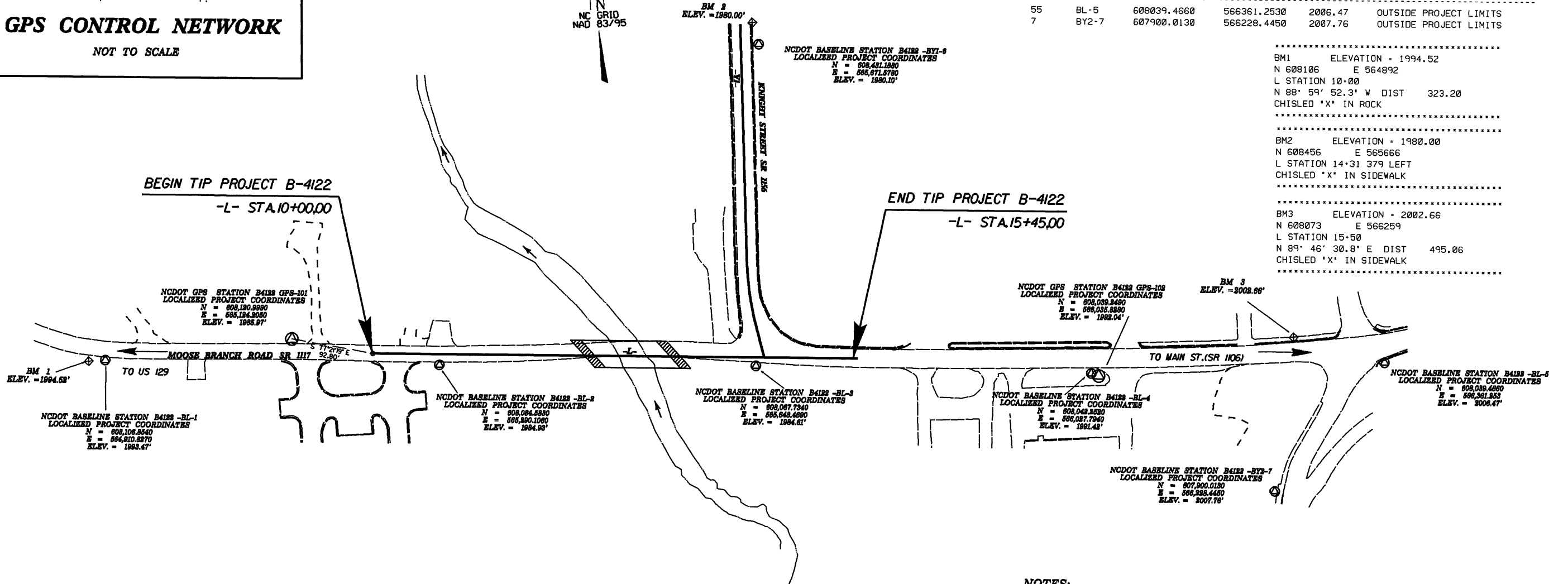
SURVEY CONTROL SHEET B-4122

PROJECT REFERENCE NO.	SHEET NO.
33475.1.1	1C
Location and Surveys	



GPS CONTROL NETWORK
NOT TO SCALE

BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1	BL-1	608106.8540	564910.8270	1993.47	OUTSIDE PROJECT LIMITS	
2	BL-2	608084.5830	565290.1060	1984.93	10+76.11	12.01 RT
3	BL-3	608067.7340	565648.4690	1984.61	14+34.86	9.48 RT
4	BL-4	608042.2520	566027.7940	1991.42	OUTSIDE PROJECT LIMITS	
5	BL-5	608039.4660	566361.2530	2006.47	OUTSIDE PROJECT LIMITS	
BY1 POINT	DESC.	NORTH	EAST	ELEVATION	Y1 STATION	OFFSET
6	BY1-6	608431.1880	565671.5780	1980.10	10+22.87	20.10 LT
33	BL-3	608067.7340	565648.4690	1984.61	OUTSIDE PROJECT LIMITS	
BY2 POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	
55	BL-5	608039.4660	566361.2530	2006.47	OUTSIDE PROJECT LIMITS	
7	BY2-7	607900.0130	566228.4450	2007.76	OUTSIDE PROJECT LIMITS	



BM1 ELEVATION = 1994.52
N 608106 E 564892
L STATION 10+00
N 88° 59' 52.3" W DIST 323.20
CHISLED "X" IN ROCK

BM2 ELEVATION = 1980.00
N 608456 E 565666
L STATION 14+31 379 LEFT
CHISLED "X" IN SIDEWALK

BM3 ELEVATION = 2002.66
N 608073 E 566259
L STATION 15+50
N 89° 46' 30.8" E DIST 495.06
CHISLED "X" IN SIDEWALK

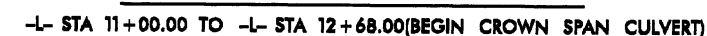
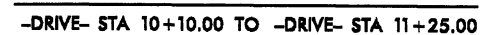
DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B-4122 GPS-101" WITH NAD 83/95 STATE PLANE GRID COORDINATES OF NORTHING: 608,120.9990(ft) EASTING: 565,124.2050(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99978297 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B-4122 GPS-101" TO -L- STATION 10+00.00 IS S 77°21'19" E 92.80' 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:
B4122_LS_CONTROL_080623.TXT
B4122_LS_1C_080623.DGN
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 EXISTING HARN MONUMENTATION

NOTE: DRAWING NOT TO SCALE

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

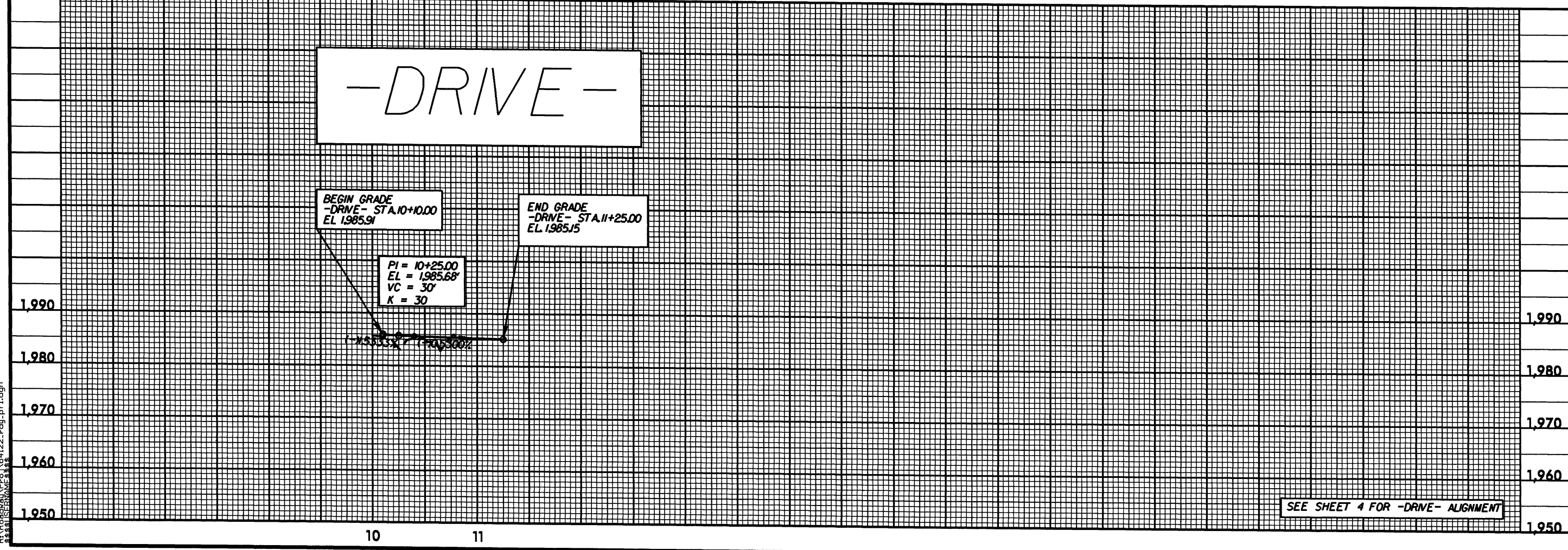
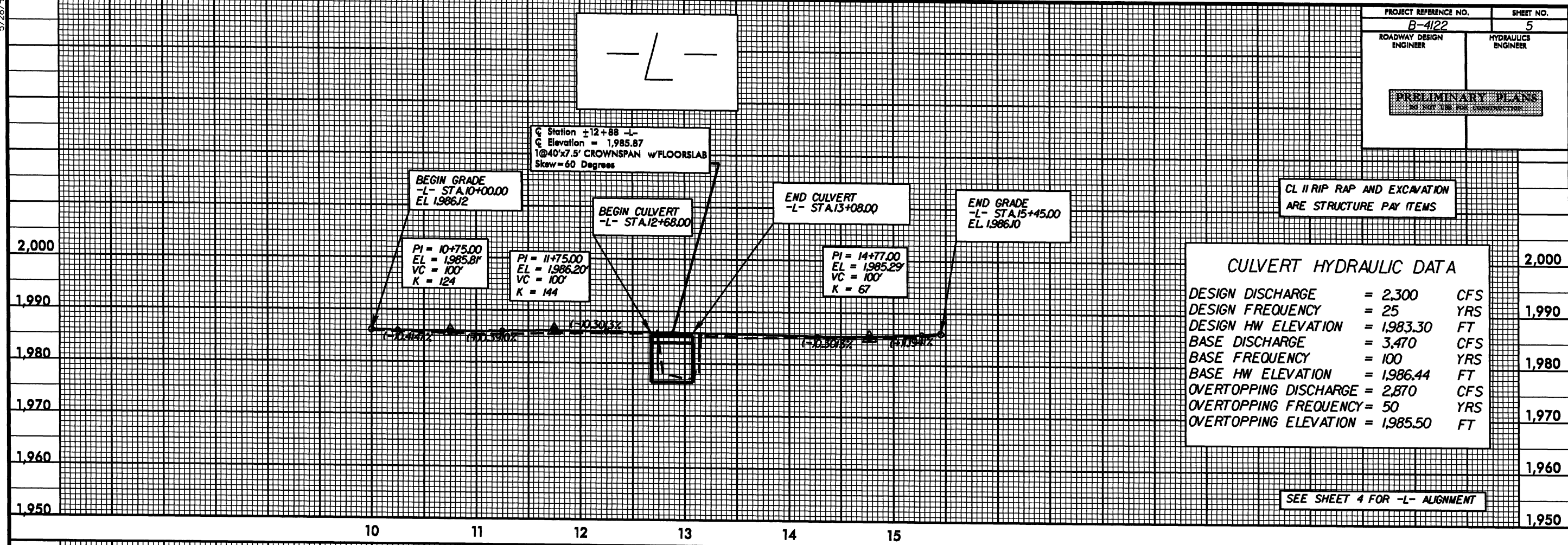


**** 2'-9" CURB & GUTTER USED TO MINIMIZE IMPACTS TO SCHOOL PROPERTY**

5/28/99

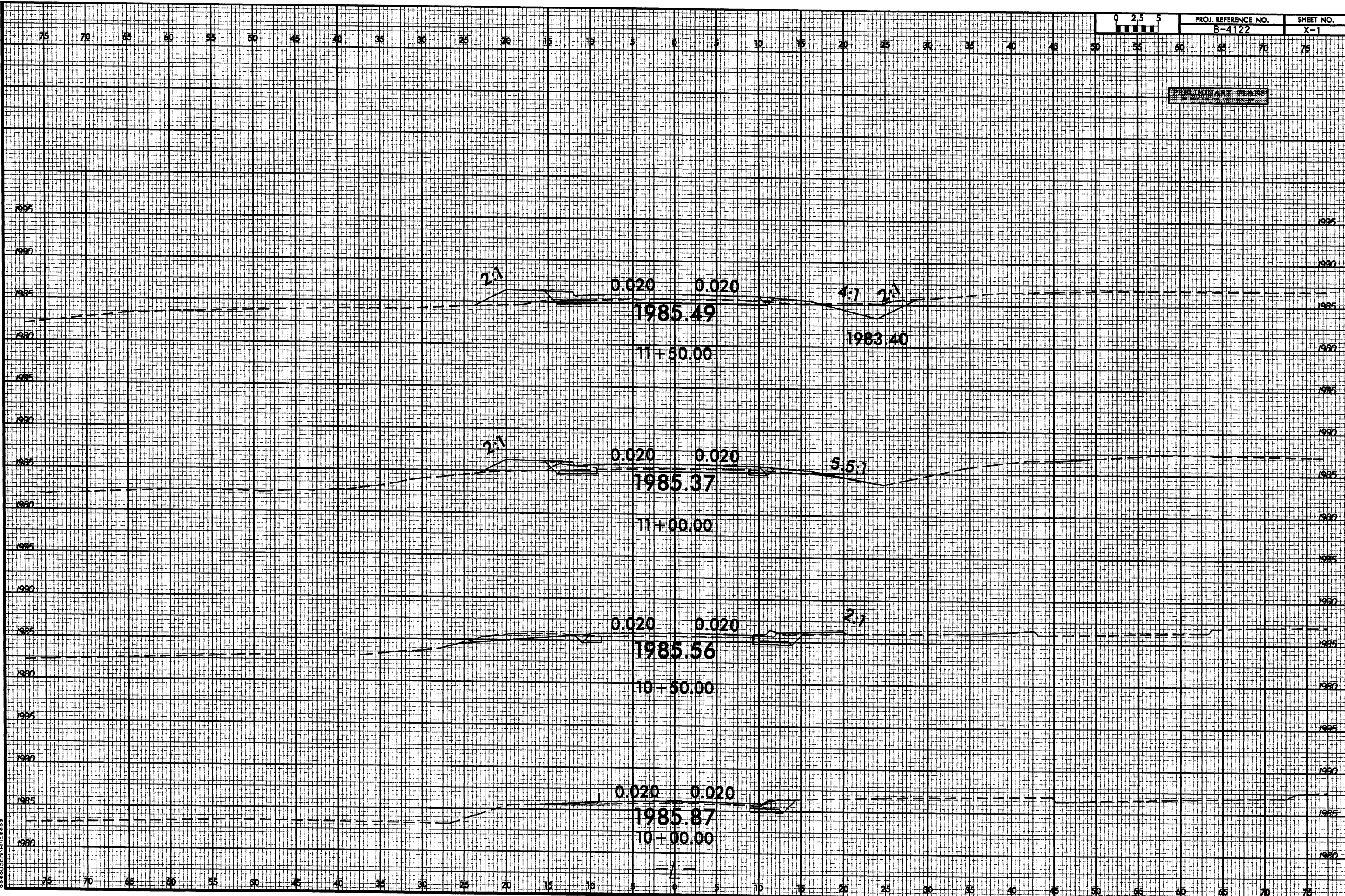
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*****REVENANT*****

PROJECT REFERENCE NO. B-4122	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS NOT FOR CONSTRUCTION	



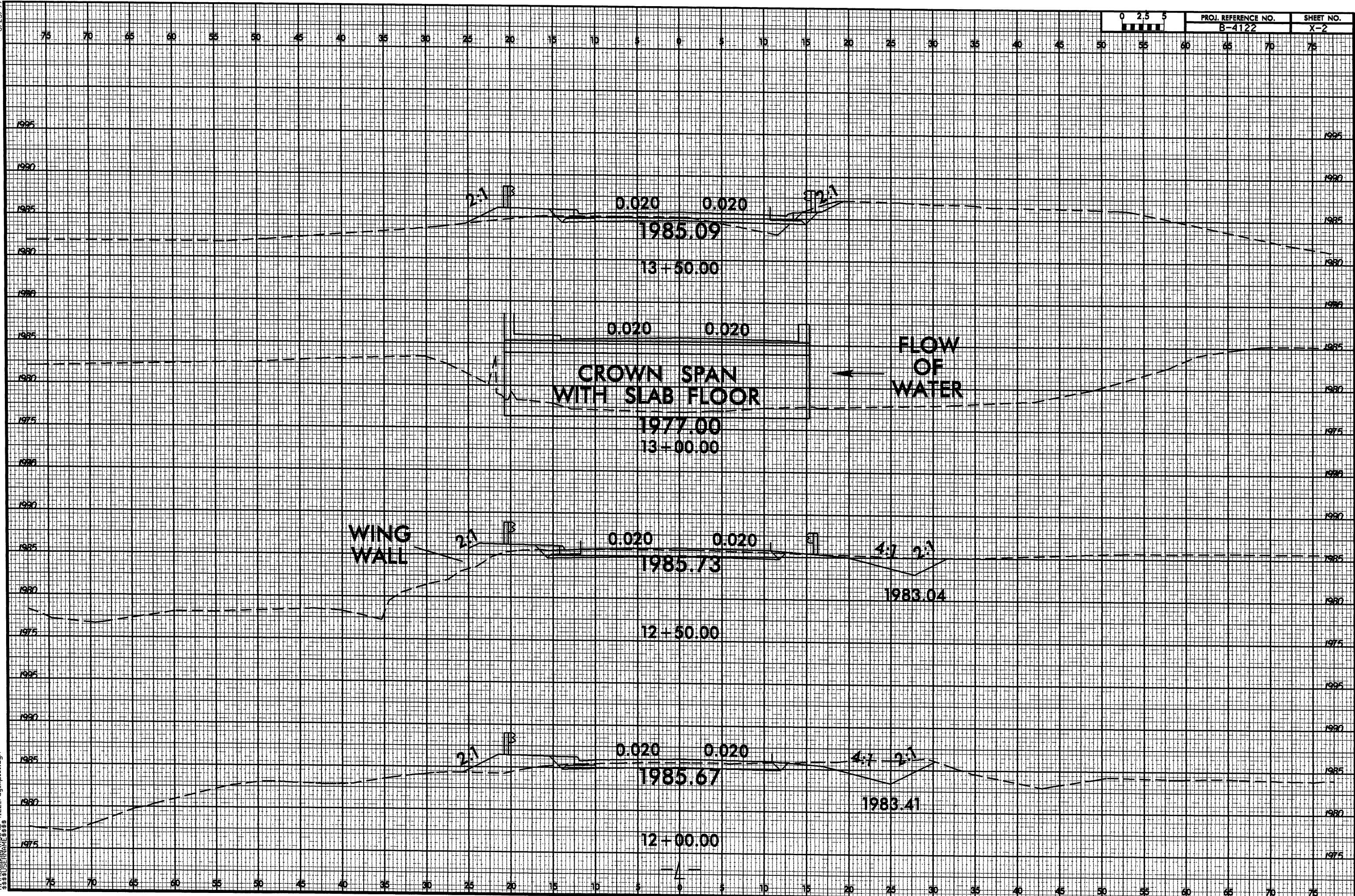
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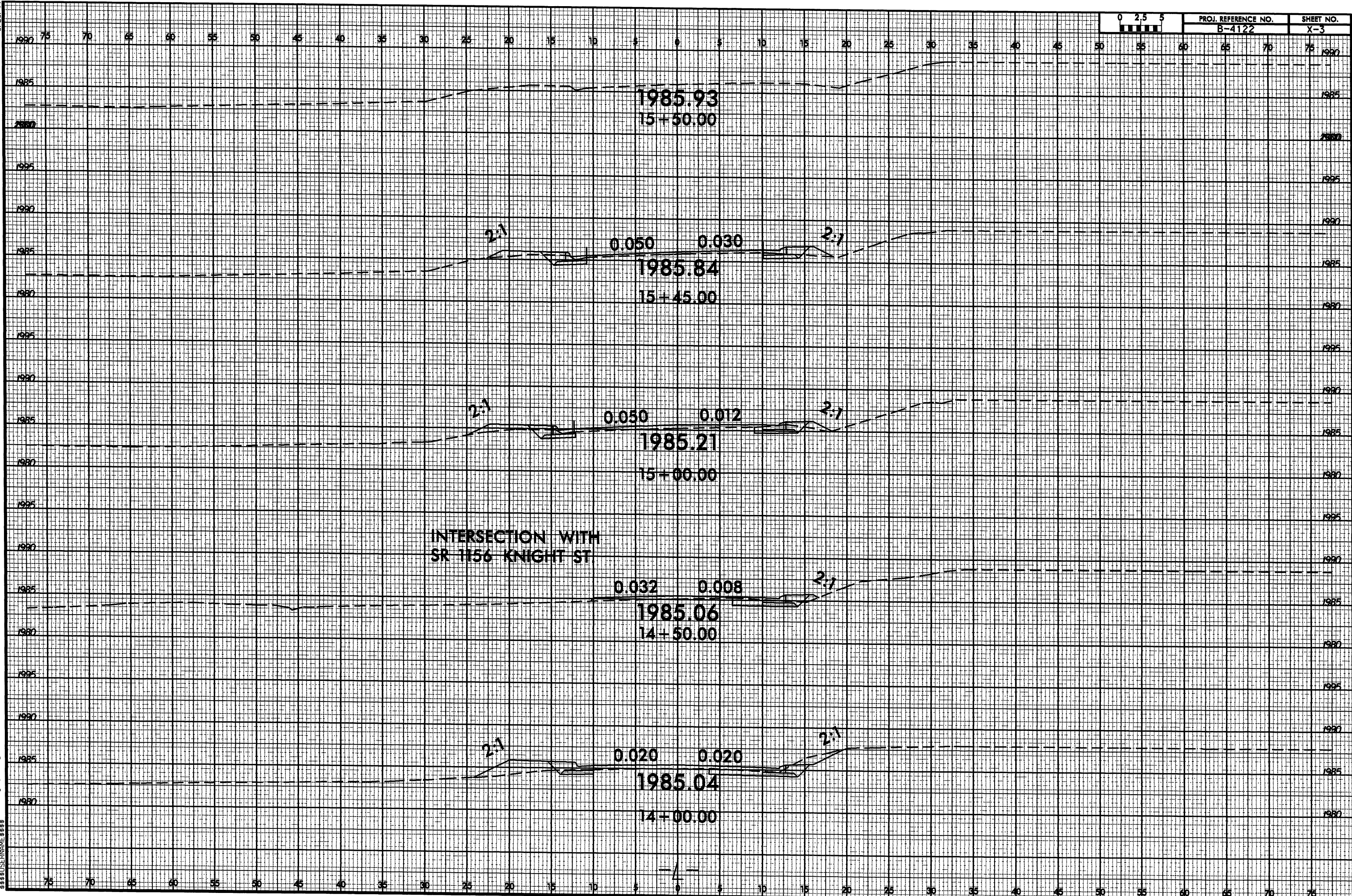
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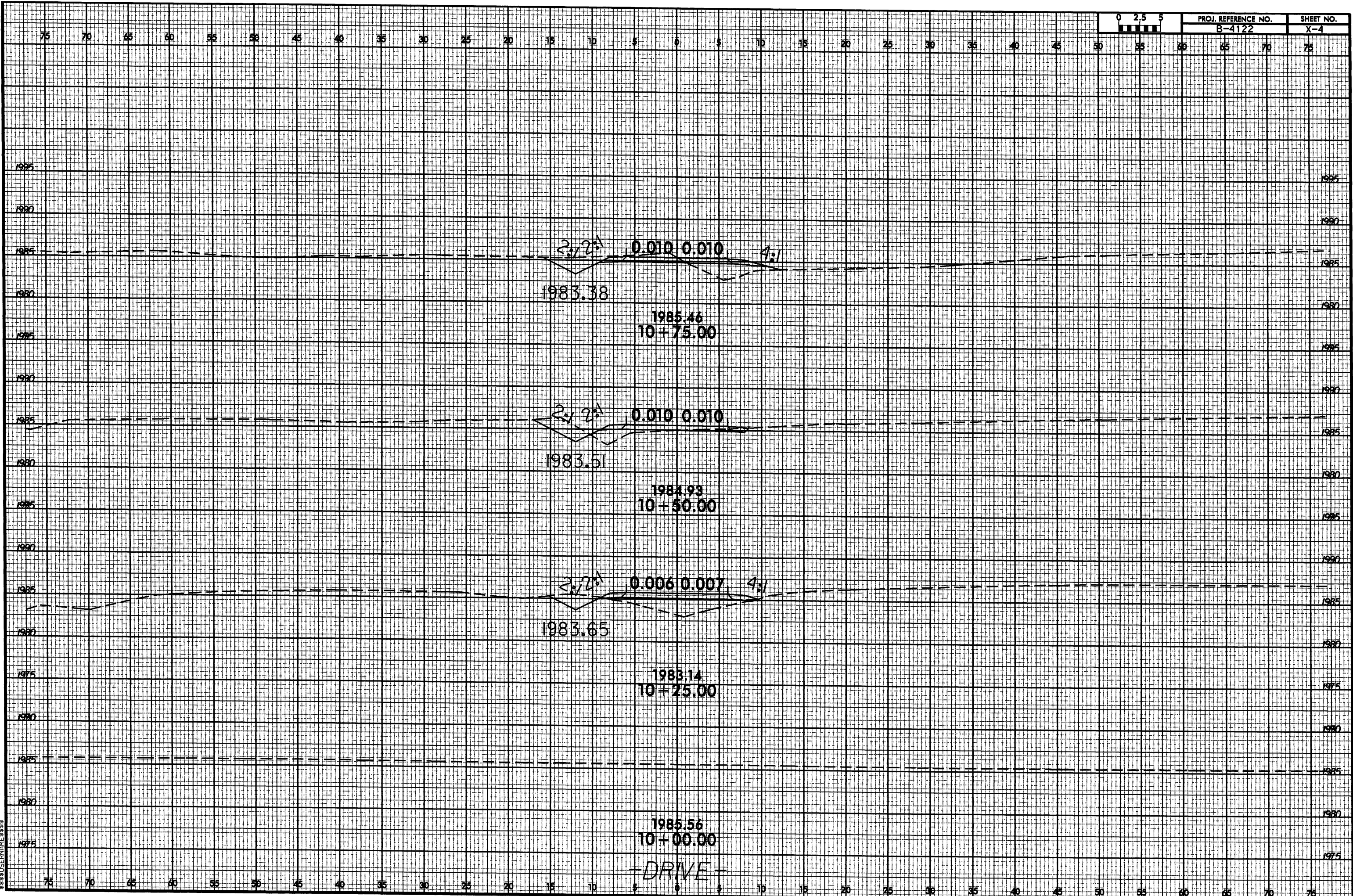
8/23/99

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8/23/99

15-MAR-2010 10:53
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8/23/99

I5-MAR-2011 10:53
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9909SERIALS\B4122

