

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT L. MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

July 28, 2014

U.S. Army Corps of Engineers
Wilmington District Office
69 Darlington Avenue
Wilmington, NC 28403

ATTN: Ms. Sarah Elizabeth Hair
NCDOT Division 8 Project Coordinator

SUBJECT: **Application for Section 404 Nationwide Permit Nos. 13, 23, and 33 and Section 401 Water Quality Certification** for the replacement of Bridge No. 22 over Richland Creek on SR 1111 (Lilly's Bridge Road), Montgomery County, North Carolina. Federal Aid Project No. BRZ-1111(8), TIP No. B-4780.

Debit \$240.00 from WBS Element No. 38551.1.1

Please find enclosed the Pre-Construction Notification (PCN), Preliminary Jurisdictional Determination (JD), North Carolina Ecosystem Enhancement Program (EEP) Mitigation Acceptance Letter, Stormwater Management Plan, permit drawings, and roadway design plans for the subject project. A Programmatic Categorical Exclusion (PCE) was completed for this project in October 2013.

The proposed let date for this project is July 21, 2015, with a let review date of June 2, 2015. However, Richland Creek flows into Lake Tillery, which is managed by Duke Energy and subject to Federal Energy Regulatory Commission (FERC) licensing. B-4780 is within Duke Energy's full pond storage limits and must go through a review by FERC to assure that NCDOT is not affecting their storage capacity or other terms of their license. Therefore, we are expediting the design and permitting process for this project in order to ensure that FERC has the required information and sufficient time to review the project prior to Let.

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


TELEPHONE: 919-707-6100
FAX: 919-212-5785
WEBSITE: WWW.NCDOT.ORG

PHYSICAL ADDRESS:
Century Center - Building B
1020 Birch Ridge Dr
Raleigh, NC 27610-4328

A copy of this permit application will be posted on the NCDOT Website at <https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx>, under *Quick Links > Permit Applications*. A copy of the PCE is also available at the above website address under *Quick Links > Environmental Documents*. Thank you for your assistance with this project. If you have any questions or need additional information, please contact Jim Mason at either jsmason@ncdot.gov or (919) 707-6136.

Sincerely,



 Richard W. Hancock, P.E., 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: 13 23 33 or General Permit (GP) number:		
1c. Has the NWP or GP number been verified by the Corps?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1d. Type(s) of approval sought from the DWQ (check all that apply): <input checked="" type="checkbox"/> 401 Water Quality Certification – Regular <input type="checkbox"/> 401 Water Quality Certification – Express <input type="checkbox"/> Non-404 Jurisdictional General Permit <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:	Replacement of Bridge No. 22 over Richland Creek on SR 1111 (Lilly's Bridge Road)
2b. County:	Montgomery
2c. Nearest municipality / town:	Mount Gilead
2d. Subdivision name:	not applicable
2e. NCDOT only, T.I.P. or state project no:	B-4780

3. Owner Information

3a. Name(s) on Recorded Deed:	North Carolina Department of Transportation
3b. Deed Book and Page No.	not applicable
3c. Responsible Party (for LLC if applicable):	not applicable
3d. Street address:	1598 Mail Service Center
3e. City, state, zip:	Raleigh, NC 27699-1598
3f. Telephone no.:	(919) 707-6136
3g. Fax no.:	(919) 212-5785
3h. Email address:	jsmason@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: 35.2540 (DD.DDDDDD) Longitude: - 80.0717 (-DD.DDDDDD)
1c. Property size:	1.5 acres
2. Surface Waters	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Richland Creek
2b. Water Quality Classification of nearest receiving water:	WS-IV&B CA
2c. River basin:	Yadkin-Pee Dee
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: SR 1111 (Lilly's Bridge Rd) is classified as a Rural Local Route in the Statewide Functional Classification System and is not a National Highway System Route. Land use within the vicinity includes Forested Land, Low- to Mid-Density Residential, Silviculture, and Recreation.	
3b. List the total estimated acreage of all existing wetlands on the property: 0 acres	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 210 linear feet	
3d. Explain the purpose of the proposed project: To replace a structurally deficient and functionally obsolete bridge.	
3e. Describe the overall project in detail, including the type of equipment to be used: The project consists of replacing the existing one-span, 29.25-foot long bridge with a 55.5-foot long double 12-foot by 9-foot Reinforced Concrete Box Culvert (RCBC) on the existing alignment. The proposed culvert is 26 feet wide. Traffic will be maintained via 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: Action ID No. SAW-2009-01696	<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 checked="" type="checkbox"/> Preliminary <input type="checkbox"/> Final
4c. If yes, who delineated the jurisdictional areas? Name (if known): Principal Investigator: Lindsey Riddick	Agency/Consultant Company: NCDOT Other:
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation. September 15, 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 <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 <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 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ	
2g. Total wetland impacts					0 ac Perm. 0 ac Temp.
2h. Comments:					

3. Stream Impacts						
If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.						
3a. Stream impact number - Permanent (P) or Temporary (T)	3b. Type of impact	3c. Stream name	3d. Perennial (PER) or intermittent (INT)?	3e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	3f. Average stream width (feet)	3g. Impact length (linear feet)
Site 1 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Perm. Fill (RCBC)	Richland Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	15-20	52
Site 1 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Bank Stabilization	Richland Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	15-20	66
Site 1 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Temporary Fill	Richland Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	15-20	53
Site <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
3h. Total stream and tributary impacts						118 ft Perm. 53 ft Temp.
3i. Comments: The 66 linear ft of bank stabilization is associated with the Reinforced Concrete Box Culvert (RCBC). At both the inlet and the outlet of the RCBC, the existing stream bank will be excavated, widening the stream channel and creating newly set back stream banks. The new stream banks, de-stabilized by the excavation, will require rip rap bank stabilization, which will be keyed-in one foot below the newly widened stream bed.						

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				
4f. Total open water impacts				0 Permanent 0 Temporary

4g. Comments:

5. Pond or Lake Construction

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

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

5g. Comments:

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

6. Buffer Impacts (for DWQ)

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

6a. Project is in which protected basin?			<input type="checkbox"/> Neuse <input type="checkbox"/> Catawba	<input type="checkbox"/> Tar-Pamlico <input type="checkbox"/> Randleman	<input type="checkbox"/> Other:
6b. Buffer impact number – Permanent (P) or Temporary (T)	6c. Reason for impact	6d. Stream name	6e. Buffer mitigation required?	6f. Zone 1 impact (square feet)	6g. Zone 2 impact (square feet)
B1 <input 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				0	0
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. Based on the drainage area and design discharges, a 2@ 12-foot wide by 9-foot high RCBC was determined to be adequate from a hydraulics standpoint. The culvert will be designed such that the slope, low flow velocities, and low flow channel designs are consistent with the existing stream. Because culverts generally cost less, require less maintenance throughout their service life, and last longer than bridges, a culvert is the preferred structure type; An off-site detour will be employed; A temporary Stilling Basin will be used to dewater the culvert construction area; Two class B rip rap pads will be placed adjacent to the road, northeast of the culvert. The purpose of these pads is to reduce stormwater velocity and create diffuse flow.		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques. NCDOT Best Management Practices for Construction and Maintenance Activities and Best Management Practices for the Protection of Surface Waters will be employed.		
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:	52 linear feet @ 2:1 = 104 linear feet	
4c. If using stream mitigation, stream temperature:	<input checked="" type="checkbox"/> warm <input type="checkbox"/> cool <input type="checkbox"/> cold	
4d. Buffer mitigation requested (DWQ only):	0 square feet	
4e. Riparian wetland mitigation requested:	0 acres	
4f. Non-riparian wetland mitigation requested:	0 acres	
4g. Coastal (tidal) wetland mitigation requested:	0 acres	
4h. Comments:		
5. Complete if Using a Permittee Responsible Mitigation Plan		
5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan.		

6. Buffer Mitigation (State Regulated Riparian Buffer Rules) – required by DWQ				
6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6b. If yes, then identify the square feet of impact to each zone of the riparian buffer that requires mitigation. Calculate the amount of mitigation required.				
Zone	6c. Reason for impact	6d. Total impact (square feet)	Multiplier	6e. Required mitigation (square feet)
Zone 1			3 (2 for Catawba)	
Zone 2			1.5	
6f. Total buffer mitigation required:				0
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:	<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 checked="" type="checkbox"/> Other: CA; The project is within the Critical Area for a hazardous spill basin. Due to the location of this project being parallel to NC 73, truck traffic would be low; therefore, no basins are anticipated.
4b. Has the approved Stormwater Management Plan with proof of approval been attached?	<input type="checkbox"/> Yes <input type="checkbox"/> No N/A
5. DWQ 401 Unit Stormwater Review	
5a. Does the Stormwater Management Plan meet the appropriate requirements?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

5b. Have all of the 401 Unit submittal requirements been met?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
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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
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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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5c. If yes, indicate the USFWS Field Office you have contacted.	<input checked="" type="checkbox"/> Raleigh <input type="checkbox"/> Asheville	
5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? NC Natural Heritage Program data, USFWS website, NCDOT field surveys		
6. Essential Fish Habitat (Corps Requirement)		
6a. Will this project occur in or near an area designated as essential fish habitat?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
6b. What data sources did you use to determine whether your site would impact Essential Fish Habitat? NMFS County Index		
7. Historic or Prehistoric Cultural Resources (Corps Requirement)		
7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
7b. What data sources did you use to determine whether your site would impact historic or archeological resources? NEPA Documentation		
8. Flood Zone Designation (Corps Requirement)		
8a. Will this project occur in a FEMA-designated 100-year floodplain?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
8b. If yes, explain how project meets FEMA requirements: NCDOT Hydraulics Unit coordination with FEMA		
8c. What source(s) did you use to make the floodplain determination? FEMA Maps		
for <u>Richard W. Hancock, P.E.</u> Applicant/Agent's Printed Name	 Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	<u>7-28-14</u> Date

RECEIVED

AUG 24 2009

REGULATORY
WILM.FLD.OFC.

ATTACHMENT

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

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

September 15, 2009

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:

Lindsey Riddick
NCDOT
1598 Mail Service Center
Raleigh, NC 27699-1598
(919) 431-6602

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:CESAW-RG-R;

SAW-2009-01696; NCDOT/B-4780, bridge No. 22 on Lilly's Bridge Road

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

B-4780, SR 1111 over Richland Creek, Montgomery County, NC

(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: North Carolina County/parish/borough: Montgomery City:

Center coordinates of site (lat/long in degree decimal format):

Lat. 35.254056° N, Long. -80.071799° W.

Universal Transverse Mercator: zone 17

Name of nearest waterbody: Richland Creek

Identify (estimate) amount of waters in the review area:

Non-wetland waters: 300' linear feet: various width (ft) and/or acres.

Cowardin Class:

Stream Flow: intermittent and perennial

Wetlands: acres.

Cowardin Class:

Name of any water bodies on the site that have been identified as Section 10 waters:

Tidal:

Non-Tidal:

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

☒ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

September 15, 2009

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply

- checked items should 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: NCDOT

☒ 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: Morrow Mountain; 1:24000.

☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at <http://websoilsurvey.nrcs.usda.gov/> (Accessed: May 6, 2009).

☒ National wetlands inventory map(s). Cite name: SAW shapefile.

☐ State/Local wetland inventory map(s):

☐ FEMA/FIRM maps:

☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)

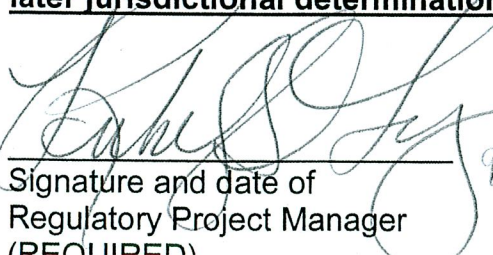
☐ Photographs: ☐ Aerial (Name & Date):

or ☐ Other (Name & Date):


☐ Previous determination(s). File no. and date of response letter:

☐ Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.


Signature and date of
Regulatory Project Manager
(REQUIRED)

9/15/09


Signature and date of
person requesting preliminary JD
(REQUIRED, unless obtaining
the signature is impracticable)

Site number	Latitude	Longitude	Cowardin Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
SA	35.254719	-80.072404		200'	
					stream
Richland Creek	35.253989	-80.071776		100'	
					stream

Copies Furnished:

NCDOT, Div. 8, Art King, 902 N. Sandhills Blvd, PO Box 1067
Aberdeen, NC 28315
NCDENR, DWG, Ken Avenette, 225 Green Street, Suite 714
Fayetteville, NC 28301-5043



North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

Michael Ellison, Director
Ecosystem Enhancement Program

John E. Skvarla, III
Secretary

July 17, 2014

Mr. Richard W. Hancock, P.E.
Project Development and Environmental Analysis Unit
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Mr. Hancock:

Subject: EEP Mitigation Acceptance Letter:

B-4780, Replace Bridge Number 22 over Richland Creek on SR 1111 (Lilly's Bridge Road),
Montgomery 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 July 10, 2014, the impacts are located in CU 03040104 of the Yadkin River basin in the Central Piedmont (CP) Eco-Region, and are as follows:

Yadkin 03040104 CP	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non- Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	0	0	52.0	0	0	0	0	0

*Some of the stream impacts may be proposed to be mitigated at a 1:1 mitigation ratio. See permit application for details.

This impact and associated mitigation need were under projected by the NCDOT in the 2014 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 Beth Harmon at 919-707-8420.

Sincerely,

James B. Stanfill
EEP Asset Management Supervisor

cc: Ms. Liz Hair, USACE – Wilmington Regulatory Field Office
Mr. David Wainwright, NCDWQ – Raleigh Office
Ms. Linda Fitzpatrick, NCDOT – PDEA
File: B-4780



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR LINEAR ROADWAY PROJECTS

(Version 1.2; Released July 2012)

Project/TIP No.: 38551.1.1

County(ies): Montgomery

Page 1 of 2

General Project Information

Project No.:	38551.1.1	Project Type:	Bridge Replacement	Date:	
NCDOT Contact:	Bill Zerman	Contractor / Designer:	Mulkey Engineers & Consultants		
Address:	Hydraulics Unit	Address:	6750 Tryon Road		
	1020 Birch Ridge Road		Cary, NC 27518		
	Raleigh, NC 27610				
Phone:	919-707-6713	Phone:	919-858-1873		
Email:	bzerman@ncdot.gov	Email:	dduffield@mulkeyinc.com		
City/Town:	Mount Gilead	County(ies):	Montgomery		
River Basin(s):	Yadkin-Pee Dee	CAMA County?	No		
Primary Receiving Water:	Richland Creek	NCDWQ Stream Index No.:			
NCDWQ Surface Water Classification for Primary Receiving Water	Primary:	Water Supply IV (WS-IV)	Class B	Class CA	
	Supplemental:				
Other Stream Classification:	None				
303(d) Impairments:	None				
Buffer Rules in Effect	N/A				

Project Description

Project Length (lin. Miles or feet):	0.11	Surrounding Land Use:	Undeveloped, rural		
	Proposed Project		Existing Site		
Project Built-Upon Area (ac.)	0.47	ac.	0.33	ac.	
Typical Cross Section Description:	2 Lane shoulder section with paved shoulders		2 Lane Shoulder section		
Average Daily Traffic (veh/hr/day):	Design/Future:	2000	Existing:	1310	

General Project Narrative: This project involves replacing a 2 lane bridge with a timber deck with asphalt wearing surface. The existing bridge allows water to sheet flow off the deck and directly into the stream. The replacement structure is a reinforced double barrel box culvert with grassy fill slopes for treatment and the proposed ditches from the roadway typical tie into the existing ditches way outside the limits of the culvert but within the project limits. In addition a phase construction plan will involves building double barrel box culvert with impervious dike upstream and downstream along with a temporary construction pipe to allow for phasing. These impervious dikes will allow for effluent to be pumped to a stilling basin. It is the intent of the project to remove the old bridge and construct the proposed double barrel box culvert using current construction practices for removal and construction. The permanent stream impacts are 95 feet while the temporary stream impacts are 78 feet. No wetlands are present and there for no wetland impacts are anticipated.

References



(Version 1.2; Released July 2012)

2

[illegible]

Have minimum design criteria, as presented in the NCDOT Best Management Practices Toolbox (2008), NCDOT Standard Details, or FHWA HEC-14 (July 2006), been met and verified, as applicable? If No, provide further explanation of why design criteria was not met.

FEDERAL COMMENTS	

* Refer to the NCDOT Best Management Practices Toolbox, Version 1 (March 2008), NCDOT Standard Details, the Federal Highway Administration (FHWA) Hydraulic Engineering Circular No. 14 (HEC-14), Third Edition, Hydraulic Design of Energy Dissipators for Culverts and Channels (July 2006), as applicable, for design guidance and criteria.

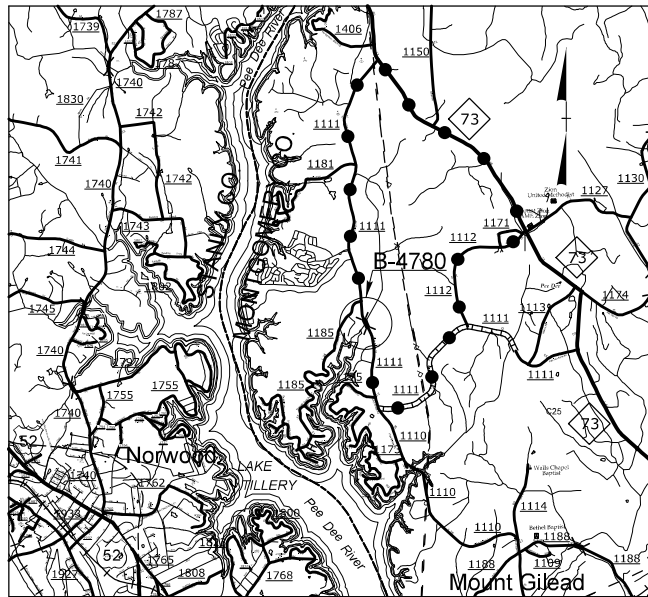
09/08/99

9/10/2013
R:\HydroQuals\PERMITS\Environmental\Drawings\B4780_hyd.prm_tsh.dgn
6:03:15 PM

TIP PROJECT: B-4780

CONTRACT:

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



VICINITY MAP

● ● ● OFFSITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

MONTGOMERY COUNTY

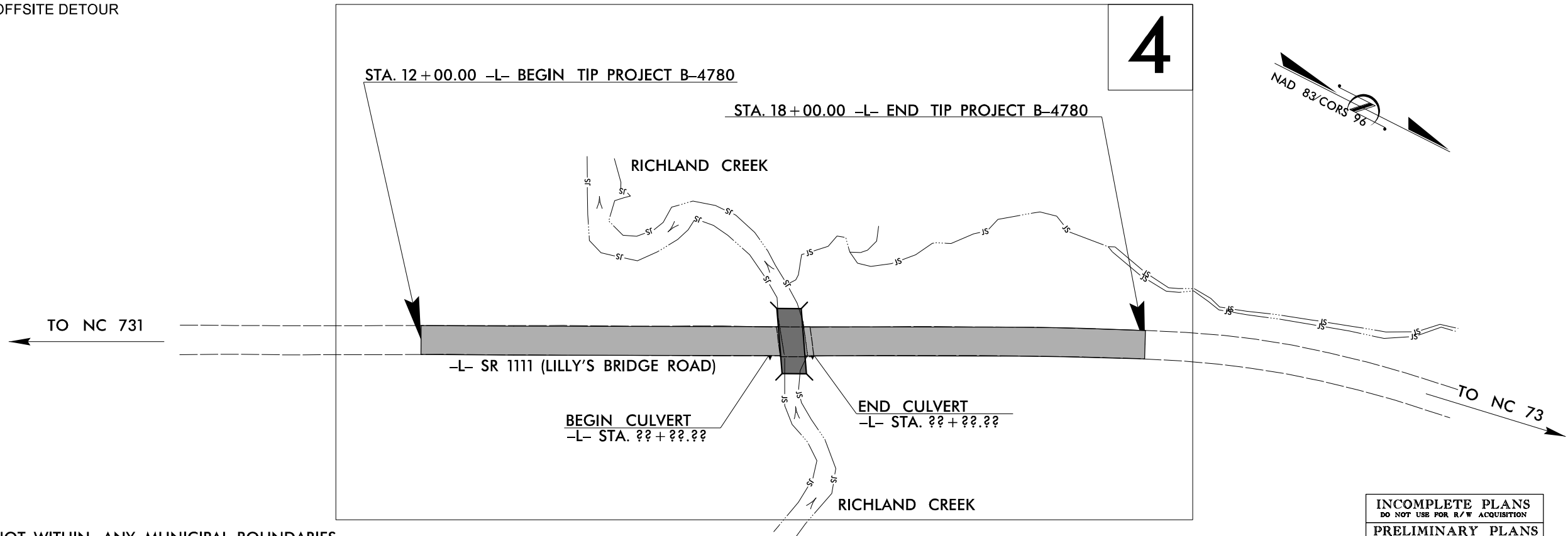
LOCATION: BRIDGE NO. 22 ON SR 1111 (LILLY'S BRIDGE ROAD)
OVER RICHLAND CREEK.

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

WETLAND AND SURFACE WATER IMPACTS PERMIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4780	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38551.1.1	BRZ-1111(8)	PE	

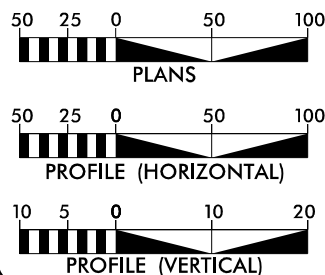
PERMIT DRAWING
SHEET 1 OF 5



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD __.

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

GRAPHIC SCALES



DESIGN DATA

ADT 2015 = 1310
ADT 2035 = 2000
DHV = 8 %
D = 60 %
T = 11 % *
V = 55 MPH
* TTST=3% DUAL=8%
FUNC CLASS=RURAL LOCAL
"SUBREGIONAL TIER"

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4780 = 0.114 MILES
LENGTH STRUCTURE TIP PROJECT B-4780 = 0.114 MILES
TOTAL LENGTH OF TIP PROJECT B-4780 = 0.114 MILES

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JUNE 20, 2014

LETTING DATE:
JULY 21, 2015

JAMES A. SPEER, PE
PROJECT ENGINEER

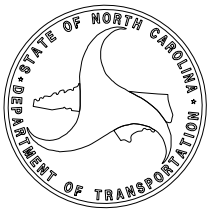
DANIEL W. GARDNER, JR., PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN
ENGINEER

SIGNATURE: P.E.

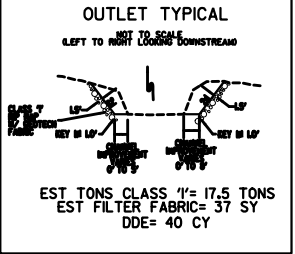
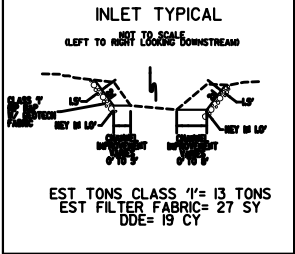
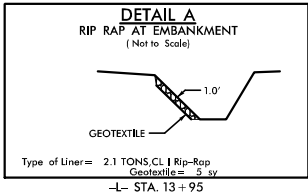
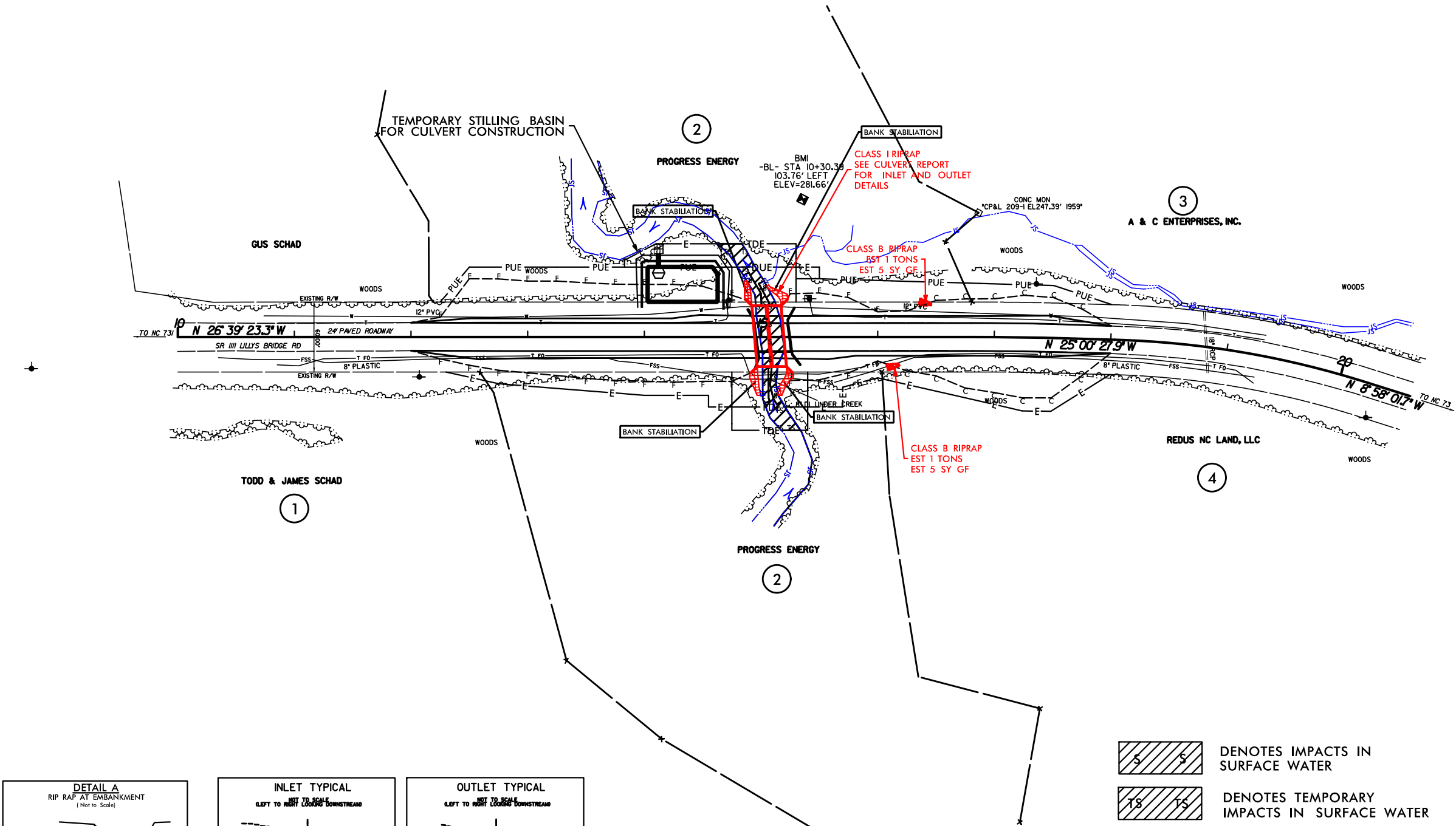


-L-	
PI Sta 17+21.68	PI Sta 19+44.51
$\Delta = 1' 38'' 55.4''$ (RT)	$\Delta = 16' 02'' 26.3''$ (RT)
D = 2' 00' 00.0"	D = 7' 15' 00.0"
L = 82.44'	L = 221.25'
T = 41.22'	T = 111.35'
R = 2864.79'	R = 790.29'



PROJECT REFERENCE NO.	SHEET NO.
B-4780	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING
SHEET 2 OF 5

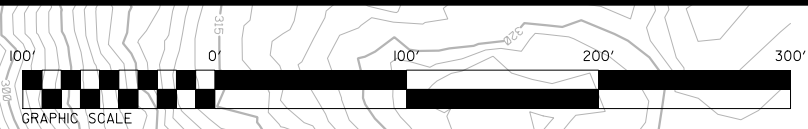


- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

- NOTE 1: WEDGE EXISTING PAVEMENT FROM -L- STA. 12+50 TO STA. 13+75 LT. TO ELIMINATE EXCESSIVE CROSS-SLOPE AND TO MATCH THE 0.02 CROSS-SLOPE AT -L- STA. 13+75 LT. (BEGIN GRADE).
- NOTE 2: TRANSITION PAVED SHOULDER TO EXISTING
-L- STA. 12+00 TO STA. 12+50 LT. & RT.
-L- STA. 17+50 TO STA. 18+00 LT. & RT.

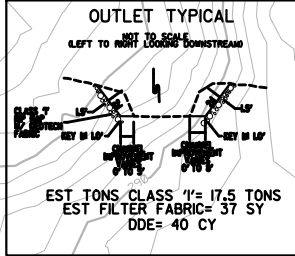
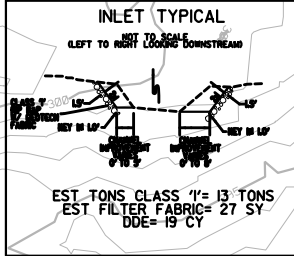
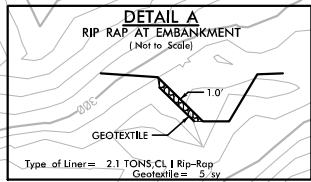
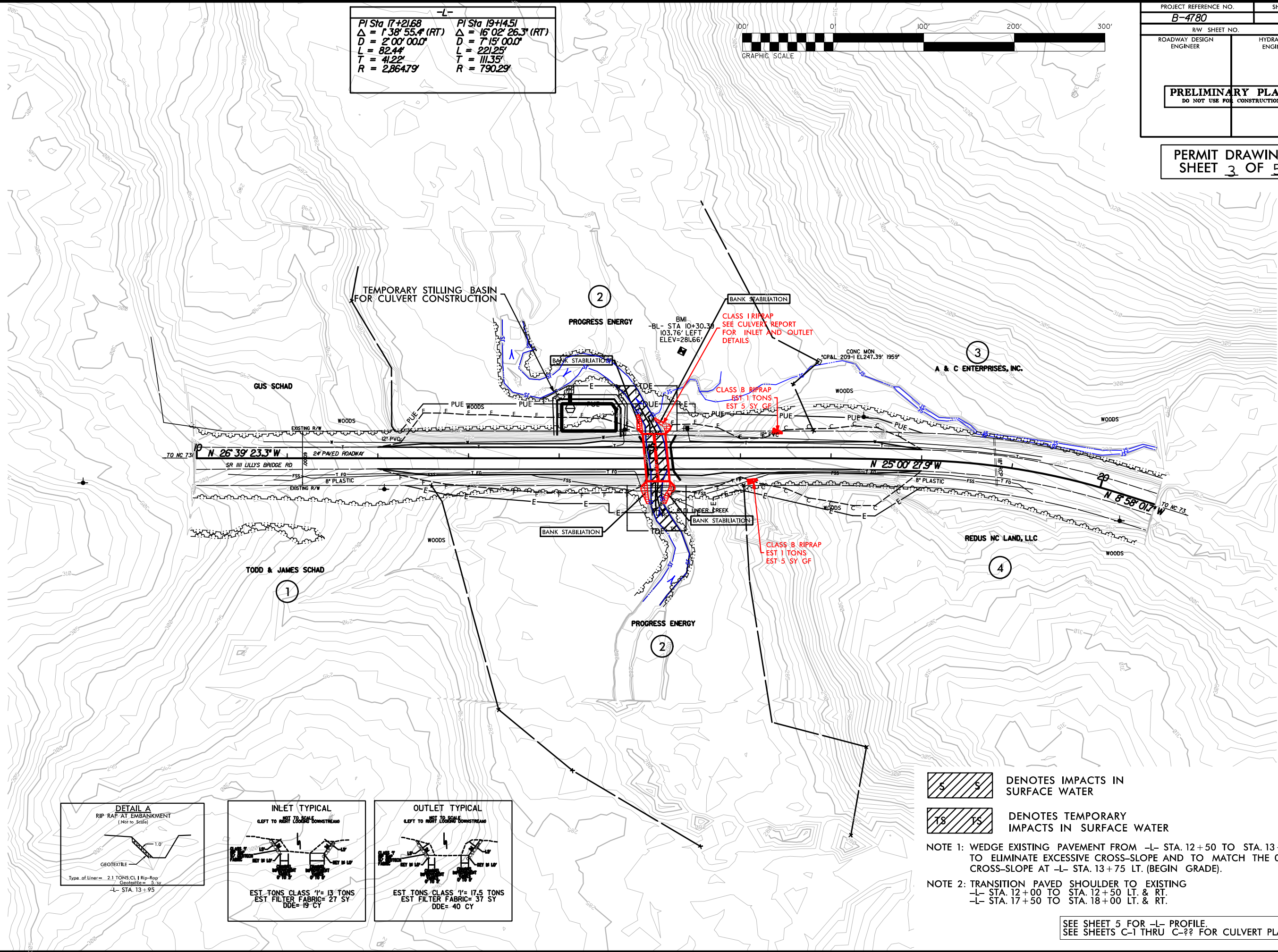
SEE SHEET 5 FOR -L- PROFILE.
SEE SHEETS C-1 THRU C-?? FOR CULVERT PLANS

-L-	
PI Sta 17+21.68	PI Sta 19+14.51
$\Delta = 1' 38'' 55.4''$ (RT)	$\Delta = 16' 02'' 26.3''$ (RT)
$D = 2' 00'' 00.0''$	$D = 7' 15'' 00.0''$
$L = 82.44'$	$L = 221.25'$
$T = 41.22'$	$T = 111.35'$
$R = 2864.79'$	$R = 790.29'$



PROJECT REFERENCE NO. B-4780	SHEET NO. 4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

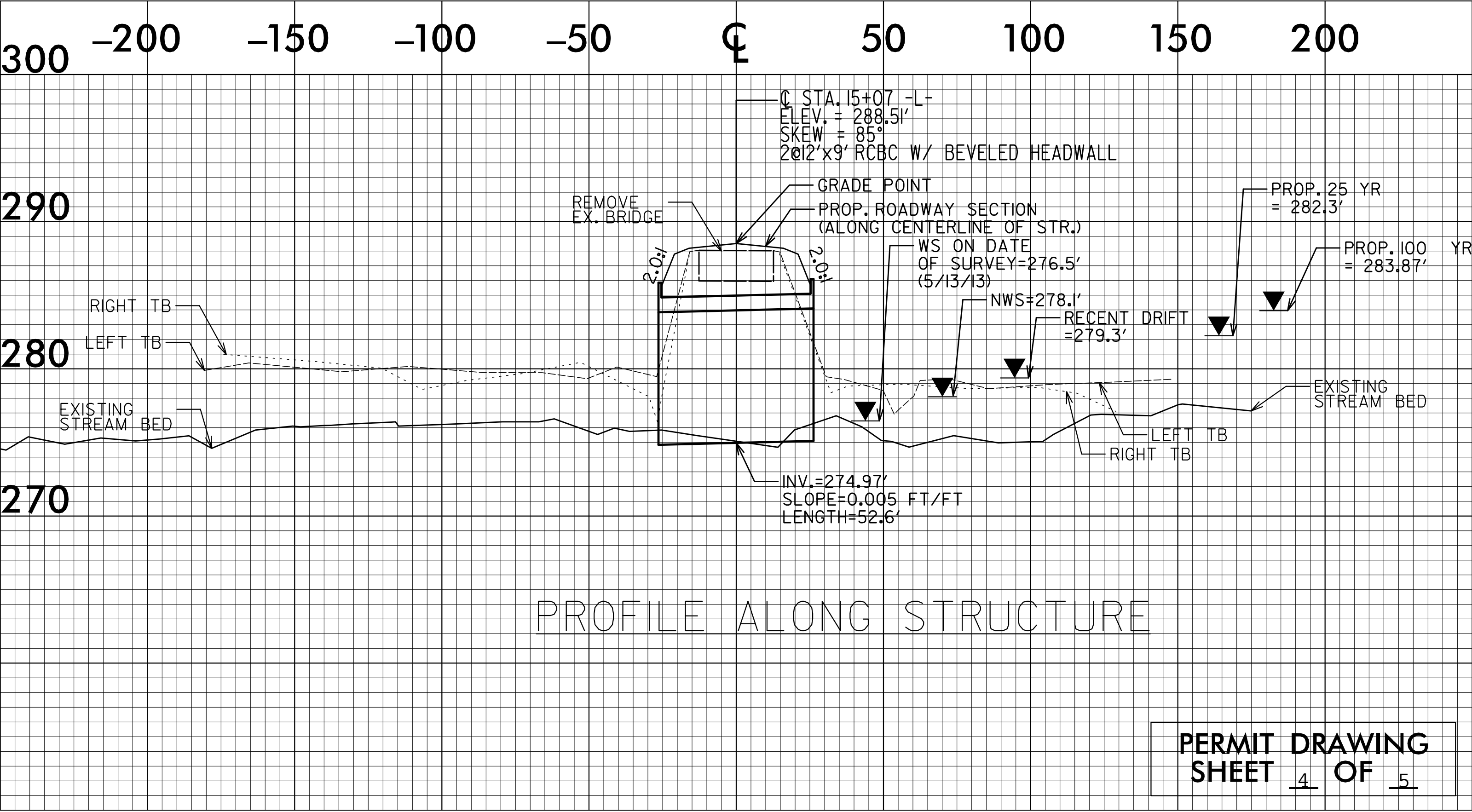
PERMIT DRAWING
SHEET 3 OF 5



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

- NOTE 1: WEDGE EXISTING PAVEMENT FROM -L- STA. 12+50 TO STA. 13+75 LT. TO ELIMINATE EXCESSIVE CROSS-SLOPE AND TO MATCH THE 0.02 CROSS-SLOPE AT -L- STA. 13+75 LT. (BEGIN GRADE).
- NOTE 2: TRANSITION PAVED SHOULDER TO EXISTING
-L- STA. 12+00 TO STA. 12+50 LT. & RT.
-L- STA. 17+50 TO STA. 18+00 LT. & RT.

SEE SHEET 5 FOR -L- PROFILE.
SEE SHEETS C-1 THRU C-?? FOR CULVERT PLANS



WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
	From 14+85 to 15+20	2@12'x9' RCBC						0.02	0.02	52	53	
		Bank Stabilization						0.01		66		
TOTALS:								0.04	0.02	118	53	

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

MONTGOMERY COUNTY
WBS - 38551.1.1 (B-4780)

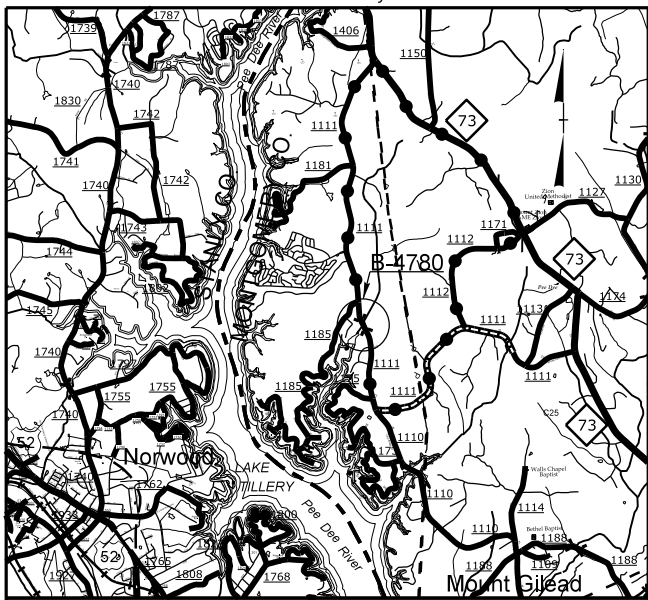
MONTGOMERY COUNTY
WBS - 38551.1.1 (B-4780)

09/08/99

TIP PROJECT: B-4780

CONTRACT:

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



VICINITY MAP

● ● ● OFFSITE DETOUR

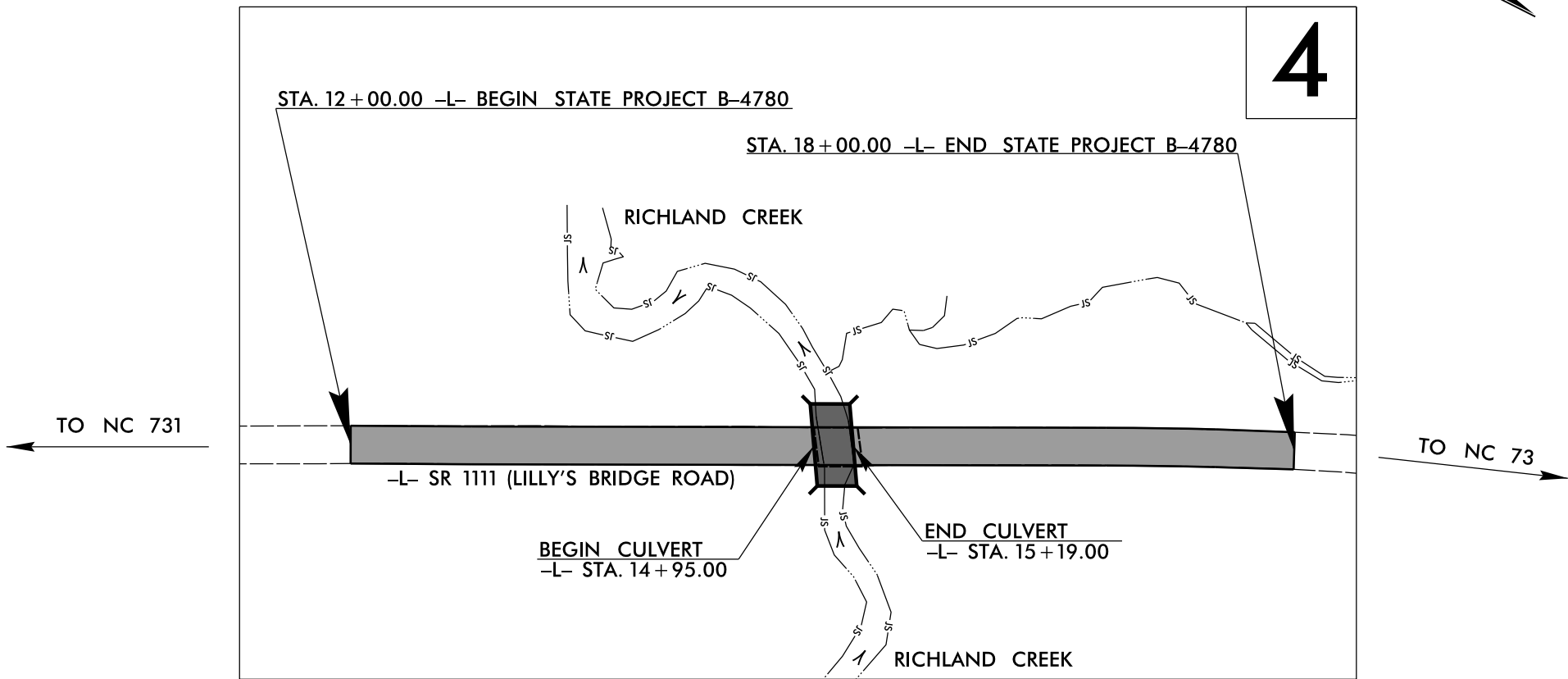
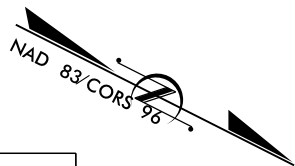
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

MONTGOMERY COUNTY

LOCATION: BRIDGE NO. 22 ON SR 1111 (LILLY'S BRIDGE ROAD)
OVER RICHLAND CREEK

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4780	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38551.1.1	BRZ-1111(8)	PE	
38551.2.FD1	BRZ-1111(8)	R/W & UTILITIES	
38551.3.FD1	BRZ-1111(8)	CONST.	



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES



PLANS



PROFILE (HORIZONTAL)



PROFILE (VERTICAL)

DESIGN DATA

ADT 2015 = 1310
ADT 2035 = 2000
DHV = 8 %
D = 60 %
T = 11 % *
V = 55 MPH
* TTST=3% DUAL=8%

FUNC CLASS=RURAL LOCAL

"SUBREGIONAL TIER"

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4780 = 0.109 MILES
LENGTH STRUCTURE TIP PROJECT B-4780 = 0.005 MILES
TOTAL LENGTH OF TIP PROJECT B-4780 = 0.114 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS

1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
FEBRUARY 17, 2014

LETTING DATE:
JULY 21, 2015

JAMES A. SPEER, PE
PROJECT ENGINEER

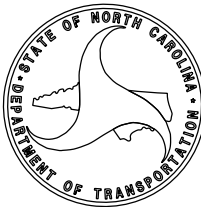
DANIEL W. GARDNER, JR., PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN
ENGINEER

SIGNATURE: P.E.



Note: Not to Scale

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EP
Property Corner	-----✕
Property Monument	□ EDM
Parcel/Sequence Number	⑫3
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	---WLB---
Proposed Wetland Boundary	WLB
Existing Endangered Animal Boundary	---EAB---
Existing Endangered Plant Boundary	---EPB---
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	○ W
Small Mine	✕
Foundation	□
Area Outline	□
Cemetery	□ †
Building	□
School	□
Church	□
Dam	-----

HYDROLOGY:

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

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ MILEPOST 35
Switch	SWITCH
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

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

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 Curb Ramp	CR
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	---S---

UTILITIES:

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

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	①
Telephone Booth	②
Telephone Pedestal	③
Telephone Cell Tower	Ⓣ
U/G Telephone Cable Hand Hole	□
Recorded U/G Telephone Cable	---T---
Designated U/G Telephone Cable (S.U.E.*)	---T---
Recorded U/G Telephone Conduit	---TC---
Designated U/G Telephone Conduit (S.U.E.*)	---TC---
Recorded U/G Fiber Optics Cable	---T FO---
Designated U/G Fiber Optics Cable (S.U.E.*)	---T FO---

WATER:

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

TV:

TV Satellite Dish	☼
TV Pedestal	Ⓣ
TV Tower	⊗
U/G TV Cable Hand Hole	□
Recorded U/G TV Cable	---TV---
Designated U/G TV Cable (S.U.E.*)	---TV---
Recorded U/G Fiber Optic Cable	---TV FO---
Designated U/G Fiber Optic Cable (S.U.E.*)	---TV FO---

GAS:

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

SANITARY SEWER:

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

MISCELLANEOUS:

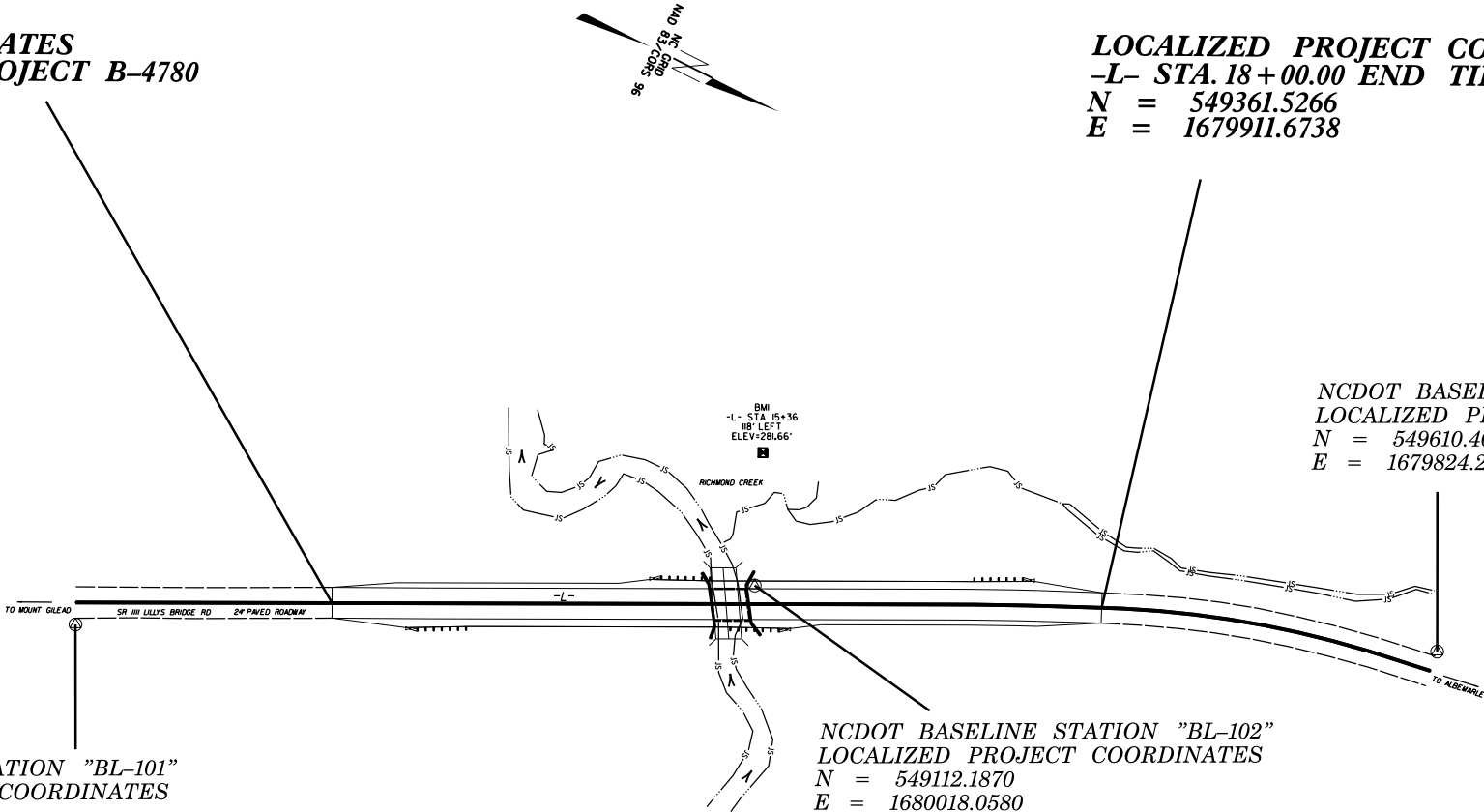
Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	Ⓢ
Utility Unknown U/G Line	---TUTL---
U/G Tank; Water, Gas, Oil	□
Underground Storage Tank, Approx. Loc.	UST
A/G Tank; Water, Gas, Oil	□
Geoenvironmental Boring	Ⓜ
U/G Test Hole (S.U.E.*)	Ⓜ
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

SURVEY CONTROL SHEET B-4780

PRELIMINARY

LOCALIZED PROJECT COORDINATES
-L- STA. 12+00.00 BEGIN TIP PROJECT B-4780
N = 548824.3120
E = 1680178.8320

LOCALIZED PROJECT COORDINATES
-L- STA. 18+00.00 END TIP PROJECT B-4780
N = 549361.5266
E = 1679911.6738



NCDOT BASELINE STATION "BL-101"
LOCALIZED PROJECT COORDINATES
N = 548653.2260
E = 1680283.8900

NCDOT BASELINE STATION "BL-102"
LOCALIZED PROJECT COORDINATES
N = 549112.1870
E = 1680018.0580

NCDOT BASELINE STATION "BL-103"
LOCALIZED PROJECT COORDINATES
N = 549610.4070
E = 1679824.2630

TYPE	STATION	NORTH	EAST
POT	10+00.00	548645.5695	1680268.5600
PC	16+80.46	549253.7852	1679963.2782
PT	17+62.98	549327.9810	1679927.3593
PC	18+03.16	549364.3904	1679918.3380
PT	20+24.41	549575.2966	1679845.9080
POT	20+62.22	549612.6485	1679840.0140

BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
101	BL-101	548653.2260	1680283.8900	301.16	OUTSIDE PROJECT LIMITS	
102	BL-102	549112.1870	1680018.0580	287.86	15+29.41	14.53 LT
103	BL-103	549610.4070	1679824.2630	296.88	OUTSIDE PROJECT LIMITS	

.....
BM1 ELEVATION = 281.66
N 549071 E 1679923
L STATION 15+36.00 118 LEFT
RR-SPIKE IN BASE OF 8IN ELM TREE
.....

PERMANENT EASEMENT REBAR				
ALIGN	STATION	OFFSET	NORTH	EAST
L	14+75.00	30.00	549083.5421	1680082.2673
L	14+75.00	60.00	549097.0013	1680104.0787
L	15+40.00	60.00	549155.8926	1680074.9170
L	15+40.00	30.00	549141.6334	1680053.1057
L	14+75.00	-30.00	549056.6237	1680028.6445
L	14+75.00	-60.00	549043.1645	1680001.8332
L	15+30.00	-60.00	549082.3187	1679977.1579
L	15+30.00	-30.00	549105.7779	1680003.9693
L	12+50.00	-60.00	548842.0742	1680102.7772
L	12+25.00	-30.00	548833.1956	1680140.8846
L	15+30.00	-50.00	549096.8051	1679986.0951
L	15+50.00	-50.00	549114.6793	1679977.1223
L	17+50.00	-45.00	549297.8197	1679892.1419
L	18+00.00	-30.00	549348.8444	1679884.4863

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4780-1"

WITH NAD 83/CORS96 STATE PLANE GRID COORDINATES OF
NORTHING: 546982.4100(ft) EASTING: 1680398.8900(ft)
ELEVATION: 312.070(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998620950

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4780-1" TO -L- STATION 12+00.00 IS
N 6°48'46.9" W 1855.00'

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:
[HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION/](https://connect.ncdot.gov/resources/location/)

THE FILES TO BE FOUND ARE AS FOLLOWS:
B4780_LS_CONTROL.TXT

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

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

NOTE: DRAWING NOT TO SCALE

DO NOT USE FOR CONSTRUCTION

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



-L- STA. 16+50.00 TO STA. 18+00.00



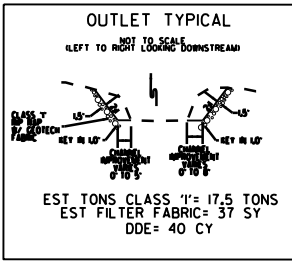
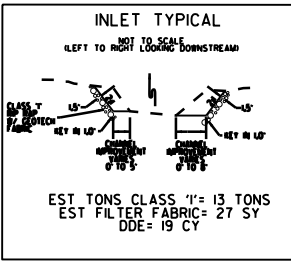
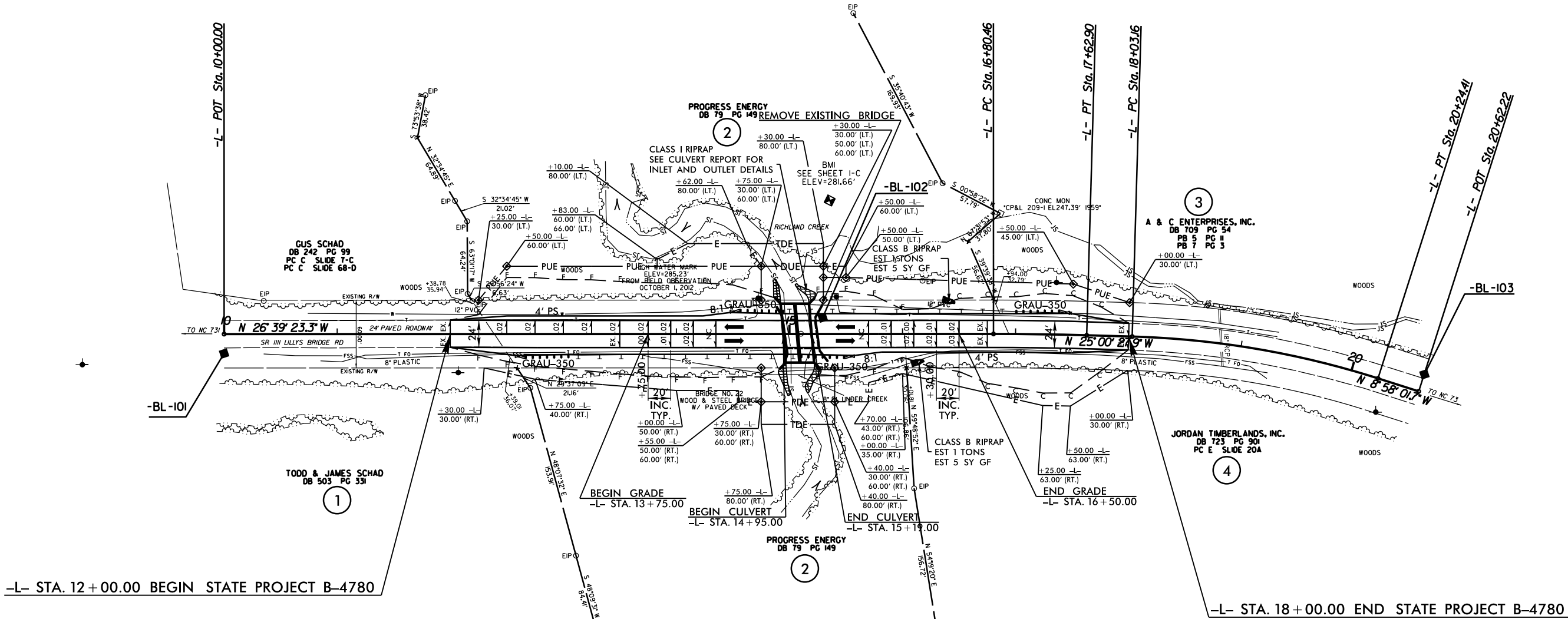
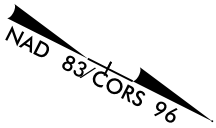
-L- STA. 13+75.00 TO STA. 16+50.00

NOTE: 1) SR 1111 (LILLY'S BRIDGE ROAD) IS A STATE DESIGNATED SANDHILLS BICYCLE ROUTE.
2) SEE PAVEMENT MARKING PLANS FOR LANE WIDTH TRANSITIONS.

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-4780	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L-	
PI Sta 17+2168	PI Sta 19+1451
$\Delta = 1' 38'' 55.4''$ (RT)	$\Delta = 16' 02'' 26.3''$ (RT)
$D = 2' 00'' 00.0''$	$D = 7' 15'' 00.0''$
$L = 82.44'$	$L = 221.25'$
$T = 41.22'$	$T = 111.35'$
$R = 2.86479'$	$R = 790.29'$



NOTE 1: WEDGE EXISTING PAVEMENT FROM -L- STA. 12+50 TO STA. 13+75 LT. TO ELIMINATE EXCESSIVE CROSS-SLOPE AND TO MATCH THE 0.02 CROSS-SLOPE AT -L- STA. 13+75 LT. (BEGIN GRADE).

NOTE 2: TRANSITION PAVED SHOULDER TO EXISTING
-L- STA. 12+00 TO STA. 12+50 LT. & RT.
-L- STA. 17+50 TO STA. 18+00 LT. & RT.

SEE SHEET 5 FOR -L- PROFILE.
SEE SHEETS C-1 THRU C-?? FOR CULVERT PLANS

17-JUN-2014 13:29
R:\Roadway\Proj\B4780_Rdy_pah.dgn
\$\$\$\$\$

5/14/99

PROJECT REFERENCE NO.
B-4780

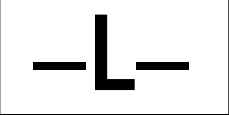
SHEET NO.
5

ROADWAY DESIGN
ENGINEER

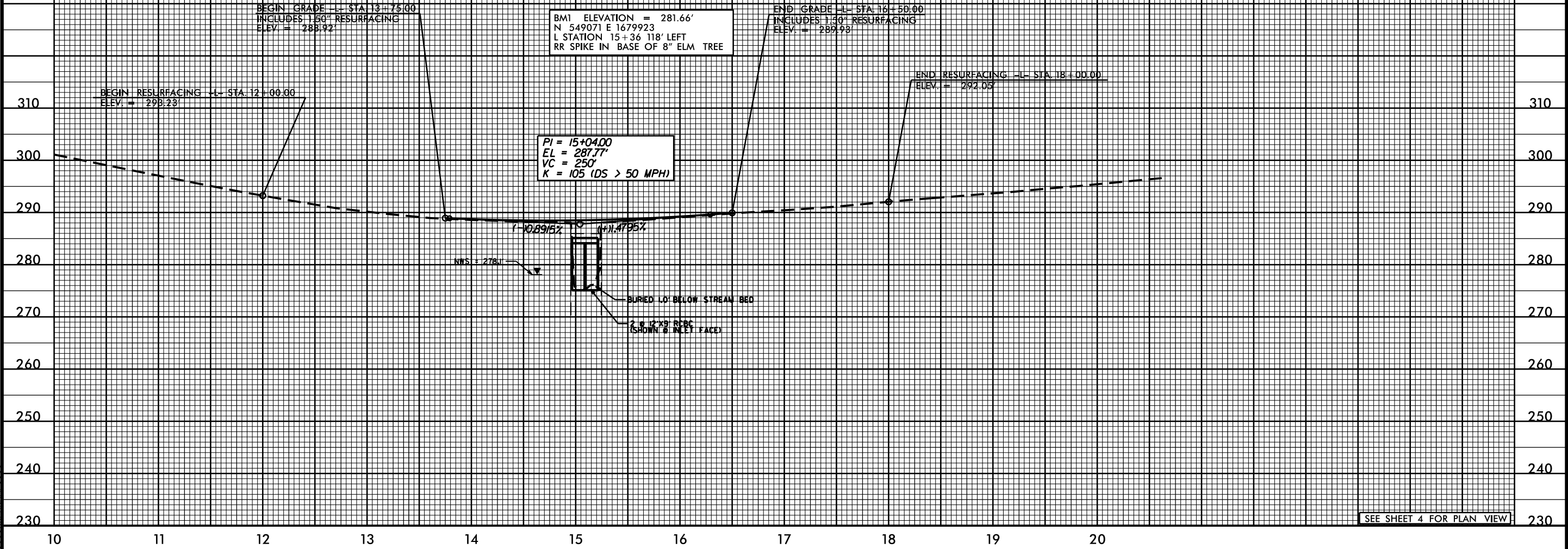
HYDRAULICS
ENGINEER

PRELIMINARY PLANS

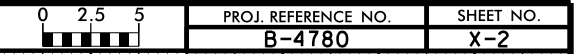
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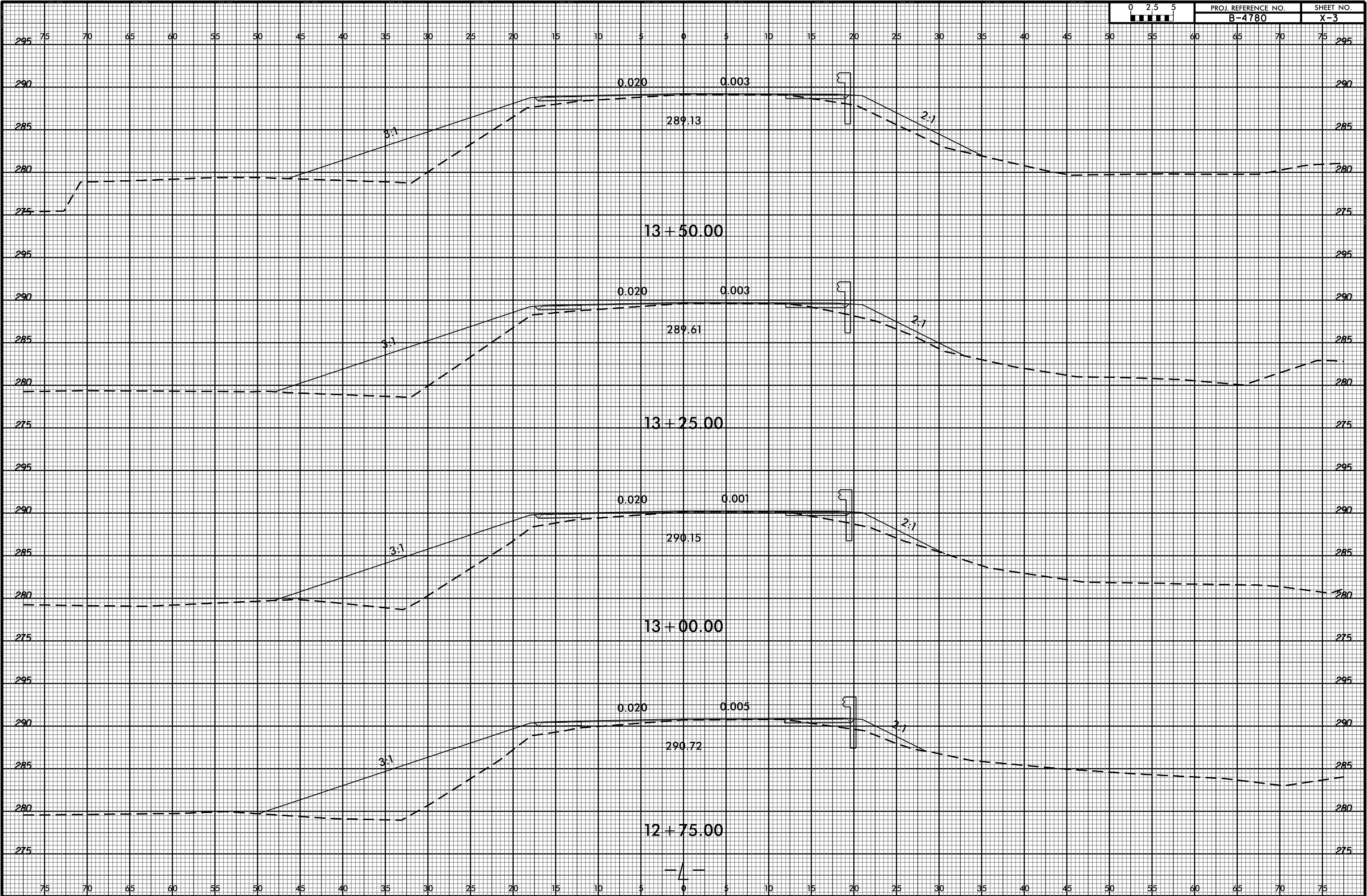


CULVERT HYDRAULIC DATA		
DESIGN DISCHARGE	= 1000	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 282.3	FT
BASE DISCHARGE	= 1500	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 283.87	FT
OVERTOPPING DISCHARGE	= 2800	CFS
OVERTOPPING FREQUENCY	= 500	YRS
OVERTOPPING ELEVATION	= 288.5	FT

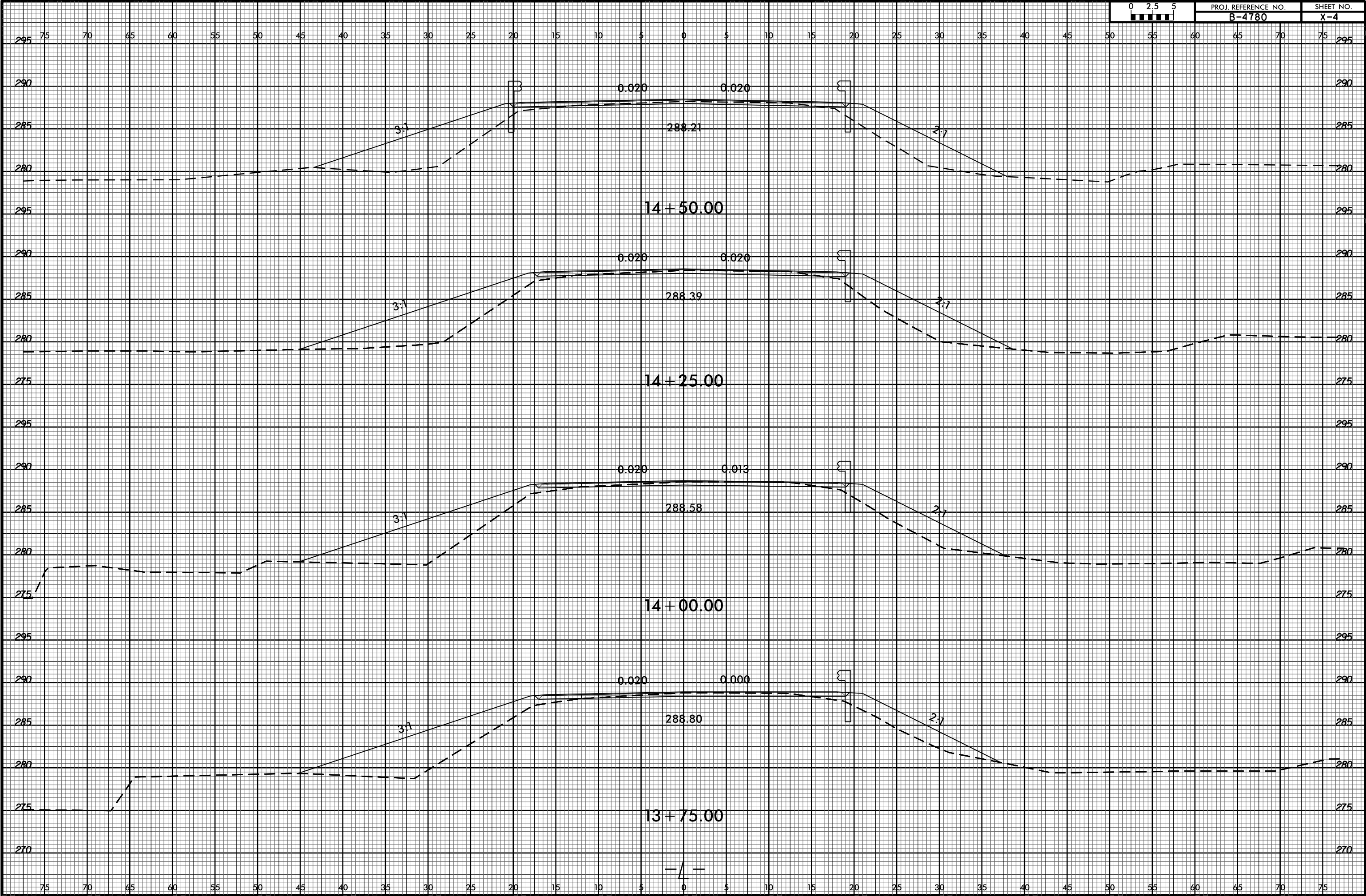


SEE SHEET 4 FOR PLAN VIEW

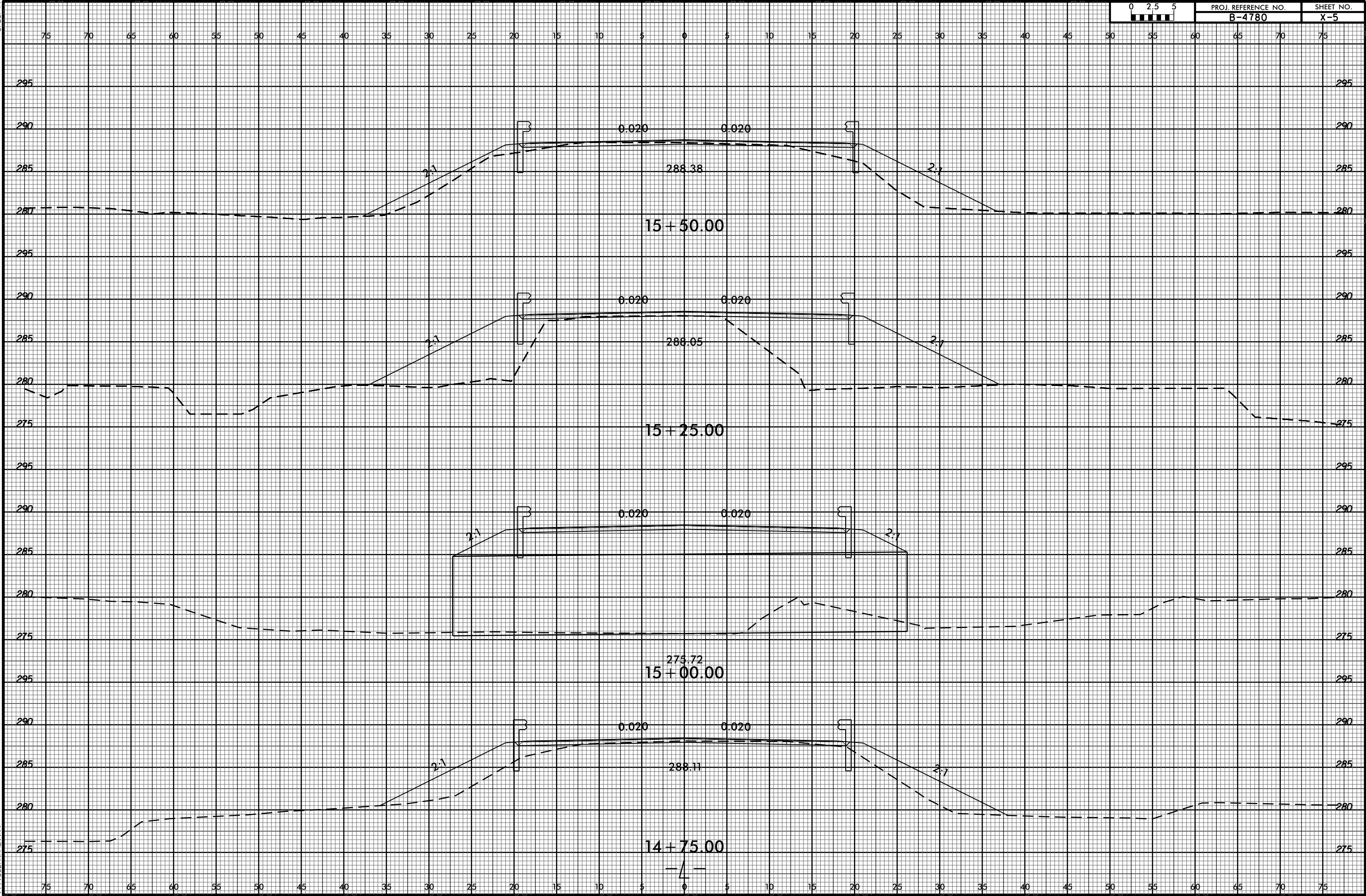




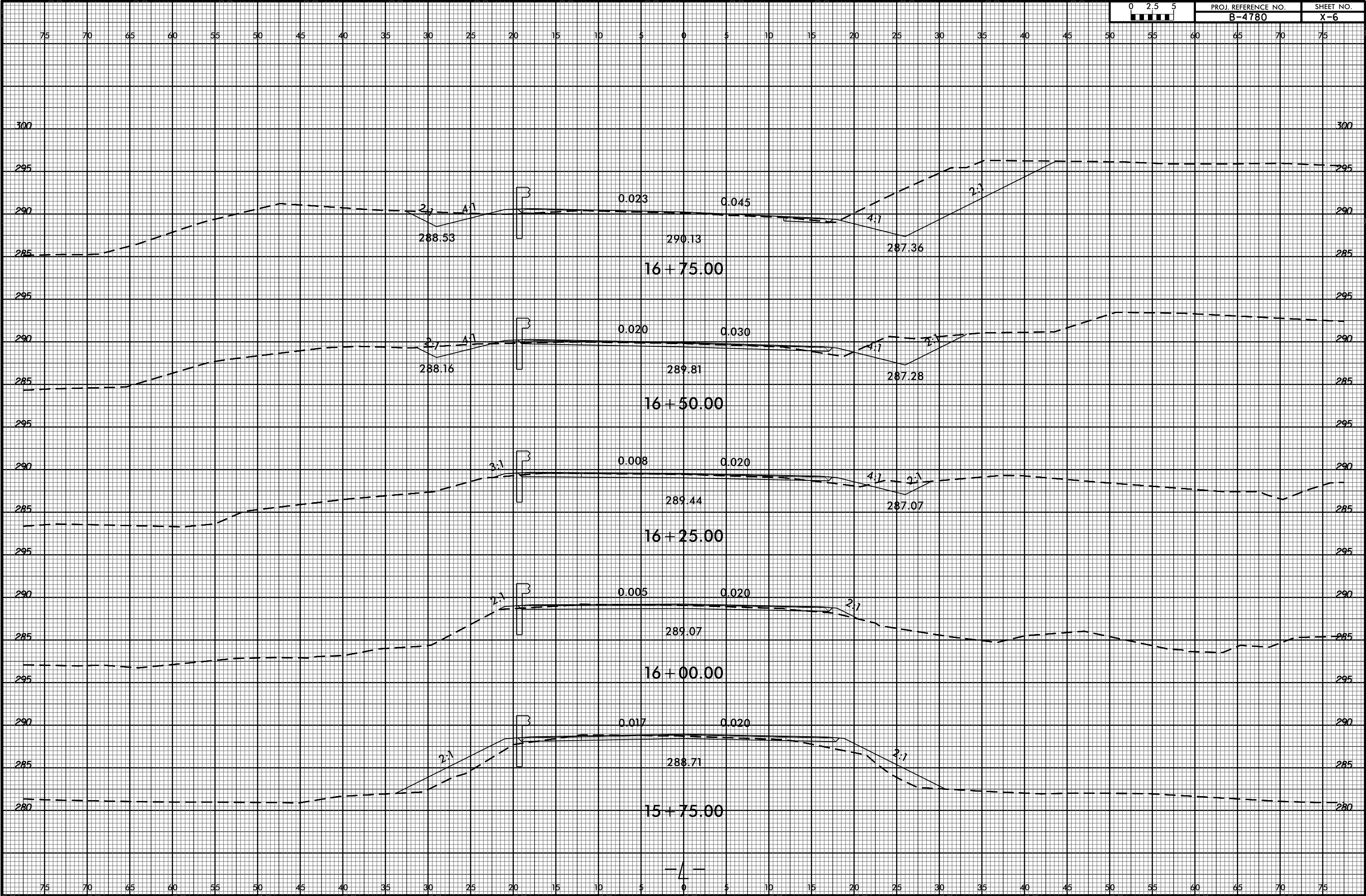
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8/23/99



8/23/99

