STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

April 21, 2017

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

ATTN: Mr. Steven L. Kichefski
NCDOT Coordinator

Subject: Application for Section 404 Nationwide Permit 33 for the Proposed Replacement of Bridge 82 on SR 1154 over South Prong Lewis Fork in Wilkes County, Federal Aid Project No. BRZ-1154(6); TIP B-4978, Division 11; WBS Element 39897.1.1.

Dear Sir:

The North Carolina Department of Transportation (NCDOT) proposes to replace bridge number 82 on SR 1154 (Mount Pleasant Road) over South Prong Lewis Creek in Wilkes County with a single span, 105 feet long box beam bridge on the existing alignment. An offsite detour will be utilized during construction. There will be 0.01 acres (34 lf) of temporary impacts to surface waters from two work pads to construct the new bridge. There will be no permanent impacts to surface waters resulting from this action; therefore, no mitigation will be acquired for this project.

Please see enclosed copies of the Pre-Construction Notification (PCN), Stormwater Management Plan, Permit Drawings, and Roadway Plansheets. A Programmatic Categorical Exclusion (PCE) was completed in February 2016 and distributed shortly thereafter. Additional copies are available upon request.

This project is located in a trout county; therefore comments from the NCWRC will be required prior to authorization by the Corps of Engineers. By copy of this letter and attachment, NCDOT hereby requests NCWRC Review. NCDOT requests that NCWRC forward their comments to the Corps of Engineers and the NCDOT within 30 calendar days of receipt of this application.

This project calls for a letting date of November 21, 2017 and a review date of October 3, 2017.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
NATURAL ENVIRONMENT SECTION
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

Telephone: (919) 707-6000
Fax: (919) 212-5785
Customer Service: 1-877-368-4968
Website: www.ncdot.gov

Location:
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610

A copy of this permit application and its distribution list will be posted on the NCDOT Website at: http://connect.ncdot.gov/resources/Environmental. If you have any questions or need additional information, please call Jeff Hemphill at (919) 707-6126.

Sincerely,

for Philip S. Harris, 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:	☒ Section 404 Permit	☐ Section 10 Permit
1b. Specify Nationwide Permit (NWP) number: 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:	Replacement of Bridge 82 over South Prong Lewis Fork Creek on SR 1154 (Mount Pleasant Road)
2b. County:	Wilkes
2c. Nearest municipality / town:	Champion
2d. Subdivision name:	*not applicable*
2e. NCDOT only, T.I.P. or state project no:	B-4978

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) 707-6126
3g. Fax no.:	(919) 212-5785
3h. Email address:	jhemphill@ncdot.gov

4. Applicant Information (if different from owner)	
4a. Applicant is:	☐ Agent ☐ Other, specify:
4b. Name:	*not applicable*
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:	*not applicable*
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):	*not applicable*	
1b. Site coordinates (in decimal degrees):	Latitude: 36.15465 (DD.DDDDDD)	Longitude: - 81.32978 (-DD.DDDDDD)
1c. Property size:	0.57 acre	
2. Surface Waters		
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	South Prong Lewis Fork Creek	
2b. Water Quality Classification of nearest receiving water:	C	
2c. River basin:	Yadkin	
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: Forested, rural residential.		
3b. List the total estimated acreage of all existing wetlands on the property: 0 acre		
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 75 lf		
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 involves replacing a three span 91-foot timber deck & steel I beam bridge with a single span, 105-foot box beam bridge on the existing alignment. An offsite detour will be utilized for this project. 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:	☐ 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: Other: NCDOT	
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation.		
5. Project History		
5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?	☐ Yes	☒ No ☐ Unknown
5b. If yes, explain in detail according to “help file” instructions.		
6. Future Project Plans		
6a. Is this a phased project?	☐ Yes	☒ No
6b. If yes, explain.		

C. Proposed Impacts Inventory

1. Impacts Summary

1a. Which sections were completed below for your project (check all that apply):

☐ 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 2 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
				2g. **Total wetland impacts**	

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	Work pads	South Prong Lewis Fork Creek	☒ PER ☐ INT	☒ Corps ☒ DWQ		34
Site ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
				3h. **Total stream and tributary impacts**		0lf Perm 34lf temp

. Comments:

4. Open Water Impacts

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

4a. Open water impact number – Permanent (P) or Temporary (T)	4b. Name of waterbody (if applicable)	4c. Type of impact	4d. Waterbody type	4e. Area of impact (acres)
O1 ☐ P ☐ T				
O1 ☐ P ☐ T				
O3 ☐ P ☐ T				
O4 ☐ P ☐ T				
		4f. Total open water impacts		Permanent 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?	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.

See Stormwater Management Plan. Grass shoulders are used on each side instead of paved shoulders to maximize vegetative conveyance and allow runoff to remain in a diffuse flow pattern to encourage passive stormwater treatment. Deck drains have been placed only over land and none over body of water to route runoff to natural areas and minimize direct discharge. Deck drain dissipator pads provided under deck drains and rip rap at pipe outlets provides energy dissipation and encourages a diffuse flow pattern. Design maintains existing flow patterns to minimize impacts. New bridge spans creek.

1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques.

Best Management Practices for Surface Waters will be used during all phases of construction.

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
	☐ 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:	0 linear feet
4c. If using stream mitigation, stream temperature:	☐ warm ☐ cool ☐ cold
4d. Buffer mitigation requested (DWQ only):	0 square feet
4e. Riparian wetland mitigation requested:	
4f. Non-riparian wetland mitigation requested:	0 acres
4g. Coastal (tidal) wetland mitigation requested:	0 acres

4h. Comments:

5. Complete if Using a Permittee Responsible Mitigation Plan

5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan.

6. Buffer Mitigation (State Regulated Riparian Buffer Rules) – required by DWQ				
6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation?			☐ Yes	☒ No
6b. If yes, then identify the square feet of impact to each zone of the riparian buffer that requires mitigation. Calculate the amount of mitigation required.				
Zone	6c. Reason for impact	6d. Total impact (square feet)	Multiplier	6e. Required mitigation (square feet)
Zone 1				
Zone 2				
	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:	☐ 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.	
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 NA
5. DWQ 401 Unit Stormwater Review	
5a. Does the Stormwater Management Plan meet the appropriate requirements?	☐ Yes ☐ No NA
5b. Have all of the 401 Unit submittal requirements been met?	☐ Yes ☐ No NA

F. Supplementary Information		
1. Environmental Documentation (DWQ Requirement)		
1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land?	☒ 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? N.C. Natural Heritage Program database; USFWS-website; biological surveys for protected species listed for Wilkes County. A bat survey report dated June 14, 2016 determined NCDOT is in compliance with the 4(d) rules for this project. The report was sent via email to USFWS on October 5, 2016.		
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 Unit coordination with FEMA		
8c. What source(s) did you use to make the floodplain determination? FEMA Maps		

/s/ Phillip S. Harris III, P.E., C.P.M. Applicant/Agent's Printed Name	Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	04-21-2017 Date

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS

(Version 2.07; Released October 2016)

WBS Element: 39897.1.1 **TIP No.:** B-4978 **County(ies):** Wilkes

General Project Information

WBS Element:	39897.1.1	**TIP Number:**	B-4978	**Project Type:**	Bridge Replacement	**Date:**	12/7/2016
NCDOT Contact:	William S. Zerman, PE			**Contractor / Designer:**			
Address:	NC DOT Hydraulics Unit 1590 Mail Service Center Raleigh, NC 27699			**Address:**			
Phone:	919-707-6755			**Phone:**			
Email:	bzerman@ncdot.gov			**Email:**			
City/Town:	Ferguson			**County(ies):**	Wilkes		
River Basin(s):	Yadkin-Pee Dee			**CAMA County?**	No		
Wetlands within Project Limits?	No						

Project Description

Project Length (lin. miles or feet):	0.063 mi	**Surrounding Land Use:**	Rural

	Proposed Project	**Existing Site**
Project Built-Upon Area (ac.)	0.24 ac.	0.20 ac.
Typical Cross Section Description:	Two 10 ft. lanes with 3 ft to 7 ft shoulders	Two 9 ft lanes with grassed shoulders
Annual Avg Daily Traffic (veh/hr/day):	Design/Future: 309 Year: 2037	Existing: 218 Year: 2017
General Project Narrative: (Description of Minimization of Water Quality Impacts)	The purpose of this project is to replace the structurally deficient bridge #082 over South Prong Lewis Fork Creek on SR 1154 (Mt. Pleasant Rd.) in Wilkes County with a new bridge. Grass shoulders are used on each side instead of paved shoulders to maximize vegetative conveyance and allow runoff to remain in a diffuse flow pattern to encourage passive stormwater treatment. Deck drains have been placed only over land and none over body of water to route runoff to natural areas and minimize direct discharge. Deck drain dissipator pads provided under deck drains and rip rap at pipe outlets provides energy dissipation and encourages a diffuse flow pattern. Design maintains existing flow patterns to minimize impacts.	

Waterbody Information

Surface Water Body (1):	South Prong Lewis Fork Creek		**NCDWR Stream Index No.:**	12-31-2-(6)	
NCDWR Surface Water Classification for Water Body		**Primary Classification:**	Class C		
		Supplemental Classification:	None		
Other Stream Classification:					
Impairments:	None				
Aquatic T&E Species?		Comments:			
NRTR Stream ID:				**Buffer Rules in Effect:**	N/A
Project Includes Bridge Spanning Water Body?	yes	**Deck Drains Discharge Over Buffer?**	N/A	**Dissipator Pads Provided in Buffer?**	N/A
Deck Drains Discharge Over Water Body?	no	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)					

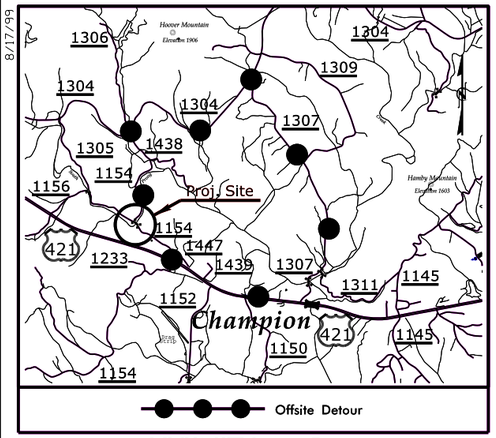
09/26/99

TIP PROJECT: B-4978

CONTRACT:

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

8/17/99



VICINITY MAP

CFI PLANS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

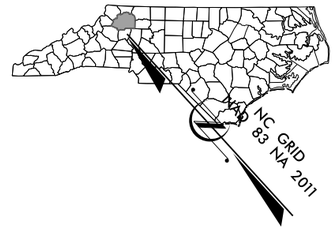
WILKES COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4978	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
39897.1.1	BRZ-1154(6)	P.E.
39897.2.1		R/W, UTIL

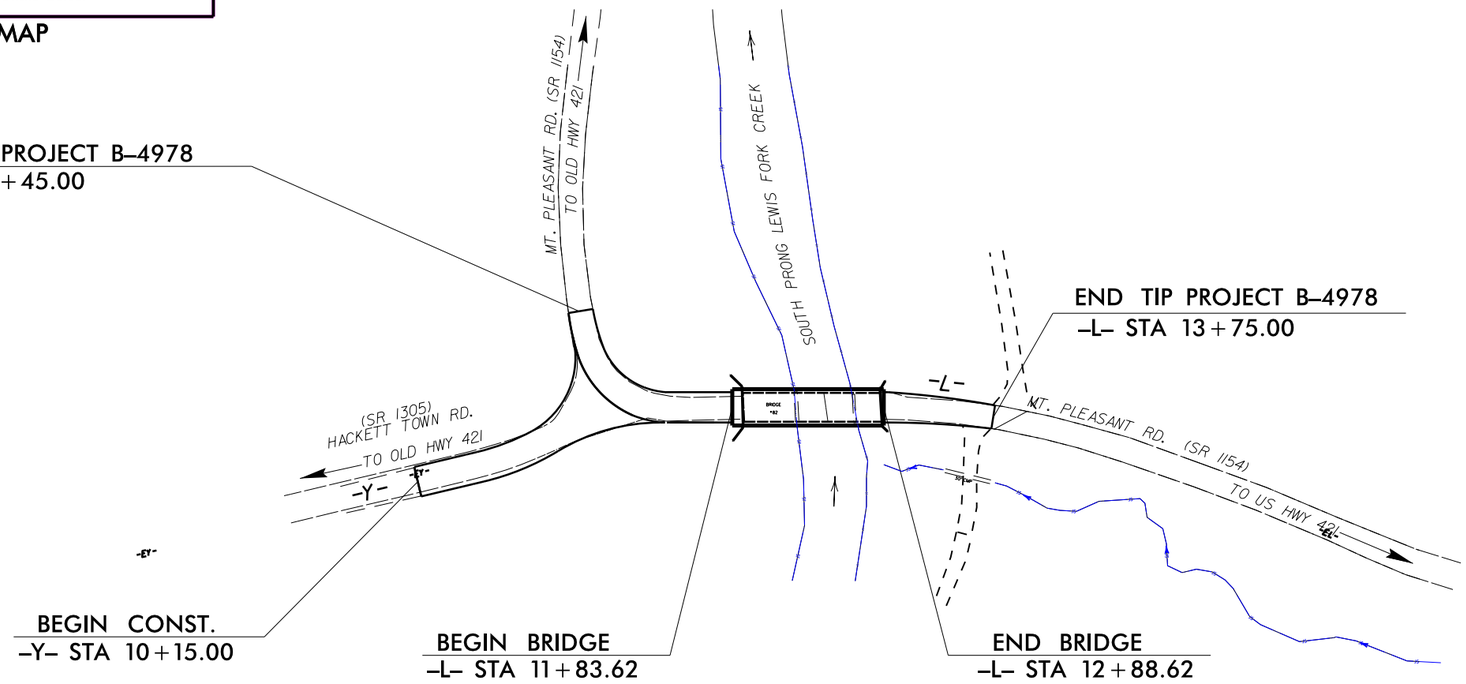
LOCATION: BRIDGE 82 OVER SOUTH PRONG LEWIS FORK CREEK ON SR 1154

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURES



SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 1 OF 4



BEGIN TIP PROJECT B-4978
-L- STA 10+45.00

END TIP PROJECT B-4978
-L- STA 13+75.00

BEGIN CONST.
-Y- STA 10+15.00

BEGIN BRIDGE
-L- STA 11+83.62

END BRIDGE
-L- STA 12+88.62

THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
A DESIGN EXCEPTION IS REQUIRED FOR DESIGN SPEED (15 MPH) AND HORIZONTAL STOPPING SIGHT DISTANCE.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

20 10 0 20 40
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2017 = 218 ADT
ADT 2037 = 309 ADT
K = 10 %
D = 60 %
T = 5 % *
V = 15 MPH
* TTST =2% DUAL 3%
FUNC CLASS = LOCAL

SUB REGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-4978 = 0.043 MI.

LENGTH OF STRUCTURES TIP PROJECT B-4978 = 0.020 MI.

TOTAL LENGTH OF TIP PROJECT B-4978 = 0.063 MI.

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
NOVEMBER 18, 2016

LETTING DATE:
NOVEMBER 21, 2017

GARY LOVERING, PE
PROJECT ENGINEER

BRYAN KEY, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

12/8/2016
rtnguyen
R:\Hydraulics\CADD\PERMIT DRAWINGS\B-4978_Hyd_1sh.dgn
$$$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$$$DGNS$$$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-4978	4

RW SHEET NO.

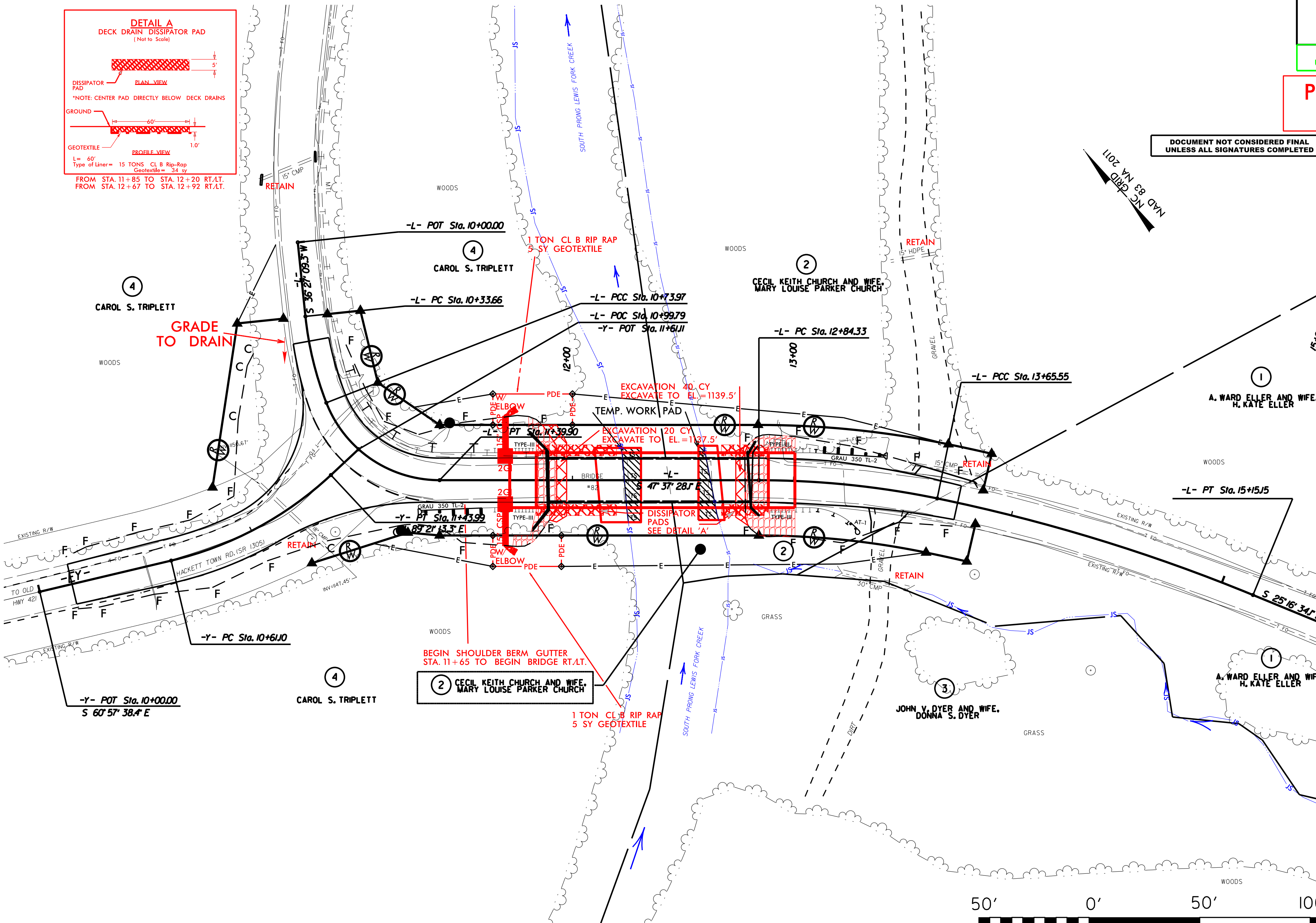
ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING SHEET 2 OF 4

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



50' 0' 50' 100' 150'

GRAPHIC SCALE

TS TS TEMPORARY WORK BRIDGE

12/14/2016
qtnguyen
R:\Hydraulics\CADD\PERMIT DRAWINGS\B4978_Hyd_prm_wet.dgn

REVISIONS

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-4978	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING SHEET 3 OF 4

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83 NAD 2011 NC GRID

REVISIONS

8/17/99

DETAIL A
DECK DRAIN DISSIPATOR PAD
(Not to Scale)

PLAN VIEW
DISSIPATOR PAD
*NOTE: CENTER PAD DIRECTLY BELOW DECK DRAINS
GROUND
GEOTEXTILE
PROFILE VIEW
L= 60'
Type of Liner = 15 TONS CL B Rip-Rap
Geotextile = 34 sy

FROM STA. 11+85 TO STA. 12+20 RT./LT.
FROM STA. 12+67 TO STA. 12+92 RT./LT.

GRADE TO DRAIN

RETAIN

15" CMP

WOODS

-L- POT Sta. 10+00.00

1 TON CL B RIP RAP
5 SY GEOTEXTILE

SOUTH PRONG LEWIS FORK CREEK

4 CAROL S. TRIPLETT

S 36° 27' 09.5" W

-L- PC Sta. 10+33.66

-L- PCC Sta. 10+73.97

-L- POC Sta. 10+99.79

-Y- POT Sta. 11+61.11

2 CECIL KEITH CHURCH AND WIFE, MARY LOUISE PARKER CHURCH

-L- PC Sta. 12+84.33

-L- PCC Sta. 13+65.55

1 A. WARD ELLER AND WIFE, H. KATE ELLER

-L- PT Sta. 15+15.15

S 25° 16' 34" E

12+00

13+00

15+00

EXCAVATION 40 CY
EXCAVATE TO EL.=1139.5'

TEMP. WORK PAD

-L- PT Sta. 11+39.90

EXCAVATION 120 CY
EXCAVATE TO EL.=1137.5'

-L-
S 47° 37' 28" E

DISSIPATOR PADS
SEE DETAIL 'A'

-Y- PT Sta. 11+43.99
S 89° 21' 43.3" E

HACKETT TOWN RD. (SR 1305)

TO OLD HWY 421

-Y- PC Sta. 10+61.10

-Y- POT Sta. 10+00.00
S 60° 57' 38.4" E

BEGIN SHOULDER BERM GUTTER
STA. 11+65 TO BEGIN BRIDGE RT./LT.

1 TON CL B RIP RAP
5 SY GEOTEXTILE

3 JOHN V. DYER AND WIFE, DONNA S. DYER

GRASS

GRAVEL

RETAIN

30" CMP

15" HDPE

50' 0' 50' 100' 150'

GRAPHIC SCALE

TS TS TEMPORARY WORK BRIDGE

12/14/2016
qtnguyen
R:\Hydraulics\CADD\PERMIT DRAWINGS\B4978_Hyd_prm_wet.dgn

$$$$$$SYSTIME$$$$$$
$$$$$$USERNAME$$$$$$

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)
	12+23 / 12+31 -L-	TEMP. WORK PAD							0.01		34	
	12+57 / 12+62 -L-											
TOTALS*:									0.01	0	34	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
12/12/2016
WILKES
B-4978
39897.1.1
SHEET 4 OF 4

Revised 2013 10 24

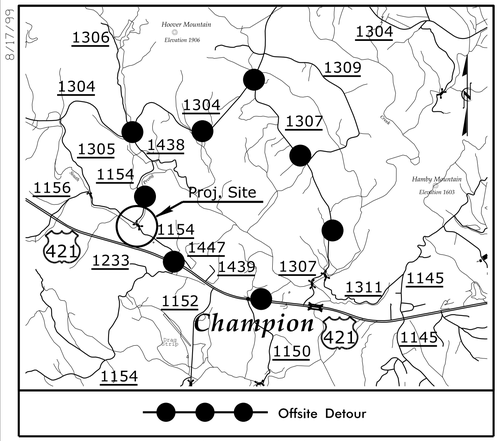
09/08/99

TIP PROJECT: B–4978

CONTRACT:

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

8/17/99



VICINITY MAP

CFI PLANS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WILKES COUNTY

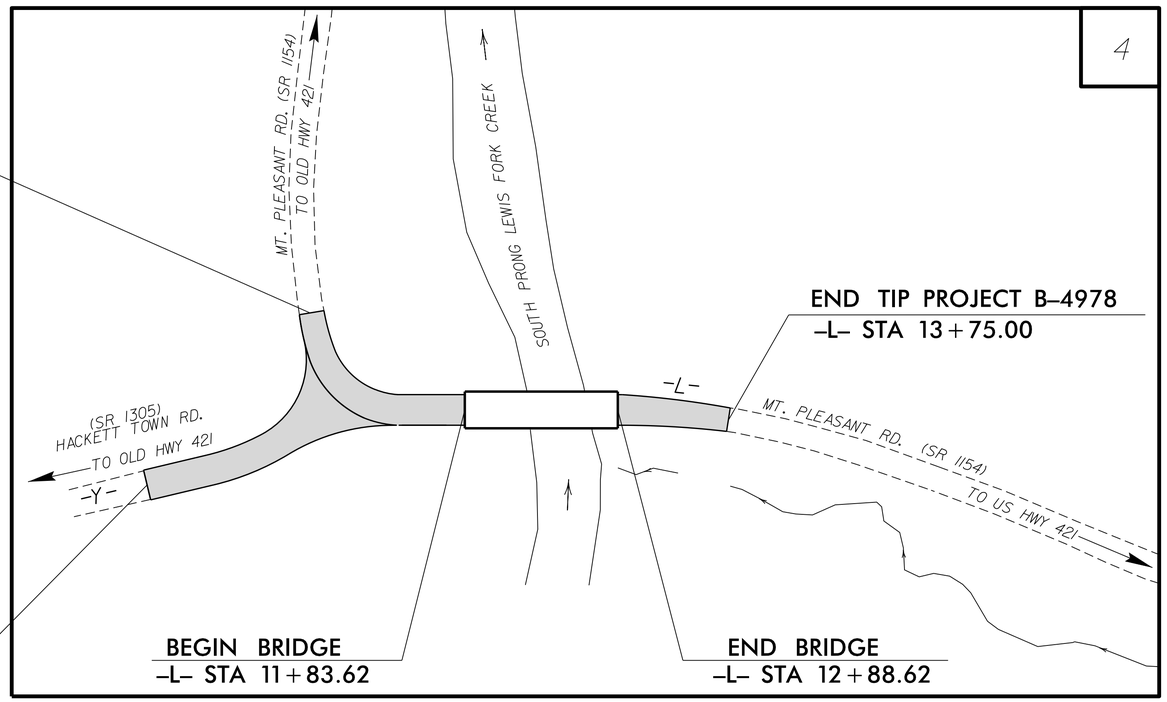
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B–4978	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
39897.1.1	BRZ–1154(6)	P.E.
39897.2.1		R/W, UTIL

LOCATION: BRIDGE 82 OVER SOUTH PRONG LEWIS FORK CREEK ON SR 1154

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURES

NAD NC GRID 83 NA 2011



BEGIN TIP PROJECT B–4978
–L– STA 10+45.00

END TIP PROJECT B–4978
–L– STA 13+75.00

BEGIN CONST.
–Y– STA 10+15.00

BEGIN BRIDGE
–L– STA 11+83.62

END BRIDGE
–L– STA 12+88.62

THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
A DESIGN EXCEPTION IS REQUIRED FOR DESIGN SPEED (15 MPH) AND HORIZONTAL STOPPING SIGHT DISTANCE.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

20 10 0 20 40
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2017 = 218 ADT
ADT 2037 = 309 ADT
K = 10 %
D = 60 %
T = 5 % *
V = 15 MPH
* TTST = 2% DUAL 3%
FUNC CLASS = LOCAL

SUB REGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B–4978 = 0.043 MI.

LENGTH OF STRUCTURES TIP PROJECT B–4978 = 0.020 MI.

TOTAL LENGTH OF TIP PROJECT B–4978 = 0.063 MI.

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
NOVEMBER 18, 2016

LETTING DATE:
NOVEMBER 21, 2017

GARY LOVERING, PE
PROJECT ENGINEER

BRYAN KEY, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ *P.E.*

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ *P.E.*

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

06-JAN-2017 13:39
R:\Roadway_Proj\B-4978_Rdy_tsh.dgn
$$$$USERNAME$$$$

04/06/15

PROJECT REFERENCE NO.	SHEET NO.
B-4978	1B

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale **S.U.E. = Subsurface Utility Engineering*

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- 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
- Existing Historic Property Boundary — HPB
- Known Contamination Area: Soil
- Potential Contamination Area: Soil
- Known Contamination Area: Water
- Potential Contamination Area: Water
- Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- 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 — CSX TRANSPORTATION
- 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 — RW
- Proposed Right of Way Line with Iron Pin and Cap Marker — RW
- Proposed Right of Way Line with Concrete or Granite R/W Marker — RW
- Proposed Control of Access Line with Concrete C/A Marker — CA
- Existing Control of Access — CA
- Proposed Control of Access — CA
- 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

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 — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H-Frame Pole
- U/G Power Line LOS B (S.U.E.*) — P
- U/G Power Line LOS C (S.U.E.*) — P
- U/G Power Line LOS D (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- U/G Telephone Cable LOS B (S.U.E.*) — T
- U/G Telephone Cable LOS C (S.U.E.*) — T
- U/G Telephone Cable LOS D (S.U.E.*) — T
- U/G Telephone Conduit LOS B (S.U.E.*) — TC
- U/G Telephone Conduit LOS C (S.U.E.*) — TC
- U/G Telephone Conduit LOS D (S.U.E.*) — TC
- U/G Fiber Optics Cable LOS B (S.U.E.*) — T FO
- U/G Fiber Optics Cable LOS C (S.U.E.*) — T FO
- U/G Fiber Optics Cable LOS D (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line LOS B (S.U.E.*) — W
- U/G Water Line LOS C (S.U.E.*) — W
- U/G Water Line LOS D (S.U.E.*) — W
- Above Ground Water Line — A/G Water

TV:

- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- U/G TV Cable LOS B (S.U.E.*) — TV
- U/G TV Cable LOS C (S.U.E.*) — TV
- U/G TV Cable LOS D (S.U.E.*) — TV
- U/G Fiber Optic Cable LOS B (S.U.E.*) — TV FO
- U/G Fiber Optic Cable LOS C (S.U.E.*) — TV FO
- U/G Fiber Optic Cable LOS D (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- U/G Gas Line LOS B (S.U.E.*) — G
- U/G Gas Line LOS C (S.U.E.*) — G
- U/G Gas Line LOS D (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
- SS Forced Main Line LOS B (S.U.E.*) — FSS
- SS Forced Main Line LOS C (S.U.E.*) — FSS
- SS Forced Main Line LOS D (S.U.E.*) — FSS

MISCELLANEOUS:

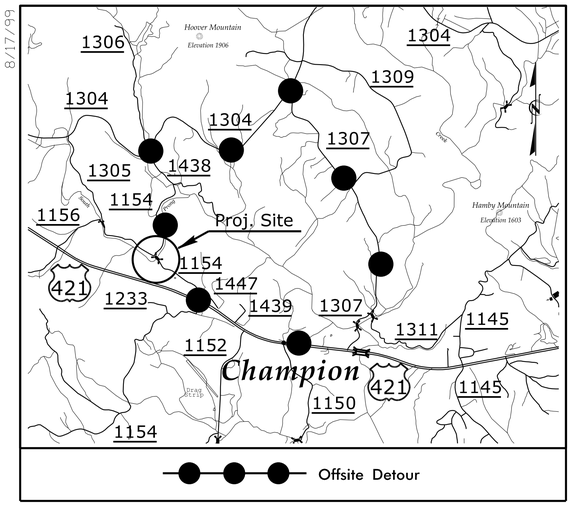
- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line LOS B (S.U.E.*) — ?UTL
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- U/G Test Hole LOS A (S.U.E.*)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

6/2/99

PROJECT REFERENCE NO.	SHEET NO.
B-4978	1C-1
Location and Surveys	

SURVEY CONTROL SHEET B-4978

8/17/99



VICINITY MAP

BL

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
B49781	GPS B4978-1	883053.7970	1312385.8196	1162.92	14+71.52	13.69 RT
B49782	GPS B4978-2	883335.2056	1312148.2752	1151.56	11+04.45	15.72 RT
BL3	BL-3	883648.1842	1312448.2410	1141.40	OUTSIDE PROJECT LIMITS	

****

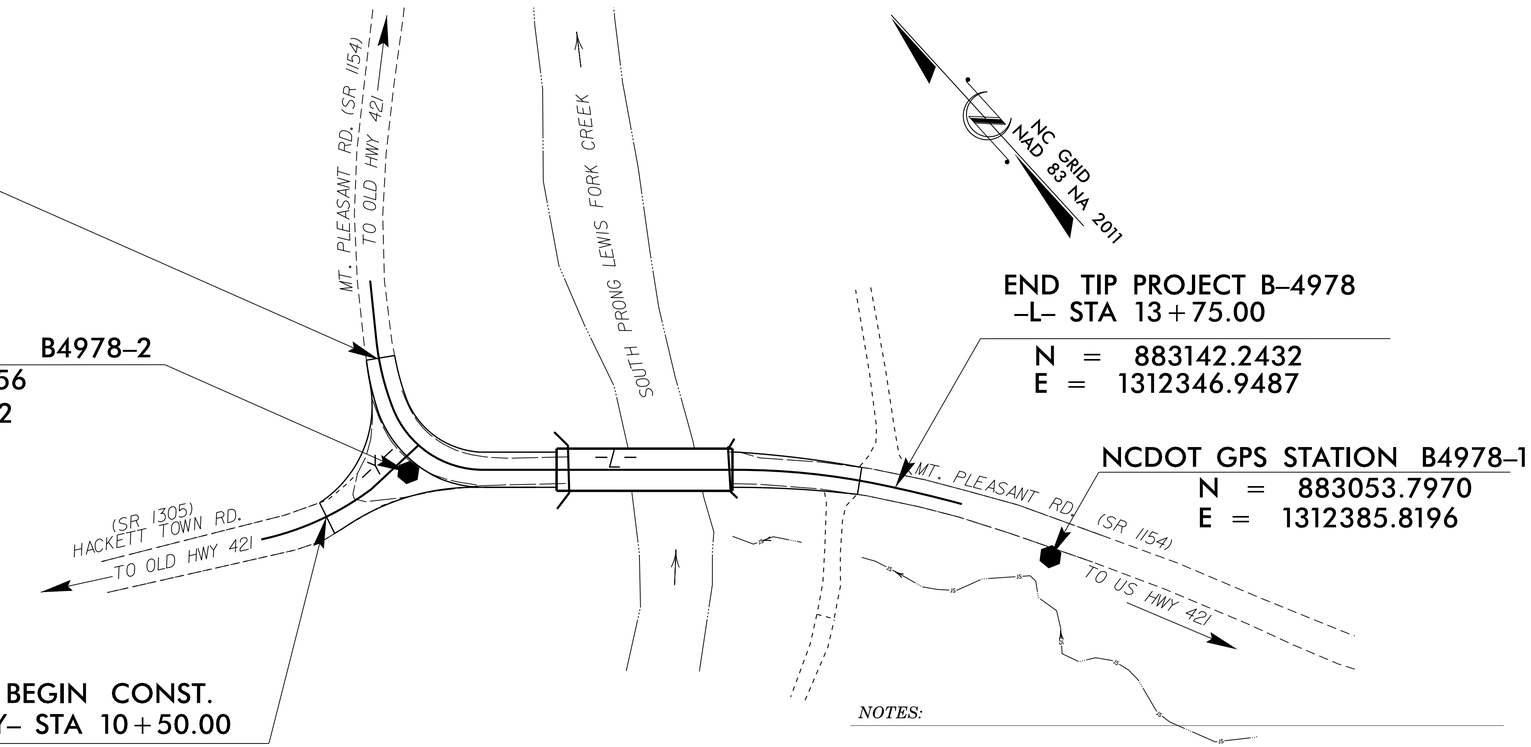
BM1 ELEVATION = 1144.56
N 883300 E 1312094
L STATION 11+15.00 78 RIGHT
8" SPIKE IN ROOT OF 20" POPLAR

****

BEGIN TIP PROJECT B-4978
-L- STA 10+45.00
N = 883393.9610
E = 1312179.3846

NCDOT GPS STATION B4978-2
N = 883335.2056
E = 1312148.2752

BEGIN CONST.
-Y- STA 10+50.00
N = 883366.2323
E = 1312055.7613



END TIP PROJECT B-4978
-L- STA 13+75.00
N = 883142.2432
E = 1312346.9487

NCDOT GPS STATION B4978-1
N = 883053.7970
E = 1312385.8196

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "b4978-2" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 883335.2056(ft) EASTING: 1312148.2752(ft) ELEVATION: 1151.56(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9999468806 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "b4978-2" TO -L- STATION 10+45.00 IS N 27°54'00" E 66.48' ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

NOTE: DRAWING NOT TO SCALE

NOTES:

1. *THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT: HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION/*

   THE FILES TO BE FOUND ARE AS FOLLOWS: B4978_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.
SEE GPS CALIBRATION SHEET FOR HORIZONTAL AND VERTICAL COORDINATE VALUES.

06-JAN-2017 13:39
R:\Location\Surveys\b4978_ls_lc-1.dgn
$$$$USERNAME$$$$

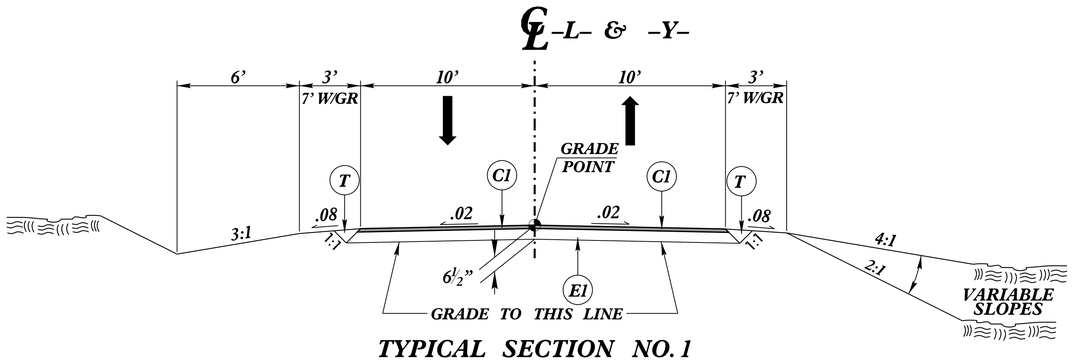
6/2/99

PROJECT REFERENCE NO.	SHEET NO.
B-4978	2A
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

FINAL PAVEMENT SCHEDULE	
C1	PROP. APPROX. 2½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
T	EARTH MATERIAL.

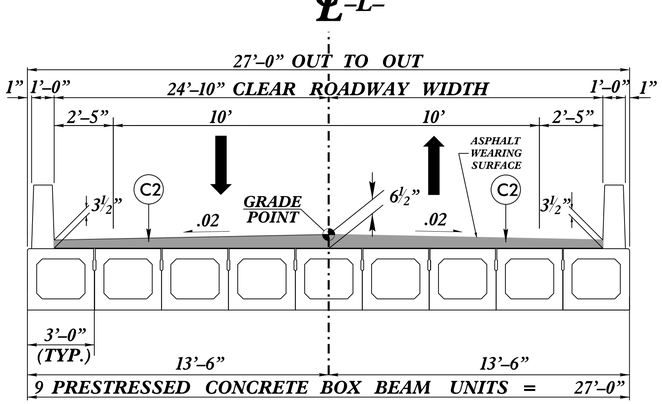
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1 AT THE FOLLOWING LOCATIONS:

–L– STA. 11+39.90 TO STA. 11+83.62 (BEGIN BRIDGE)
–L– STA. 12+88.62 (END BRIDGE) TO STA. 13+15.00
–Y– STA. 10+15.00 TO STA. 11+52.82
NOTE: TRANSITION TO EXISTING
–L– STA. 10+45.00 TO STA. 11+39.90
–L– STA. 13+15.00 TO STA. 13+75.00



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2 AT THE FOLLOWING LOCATION:

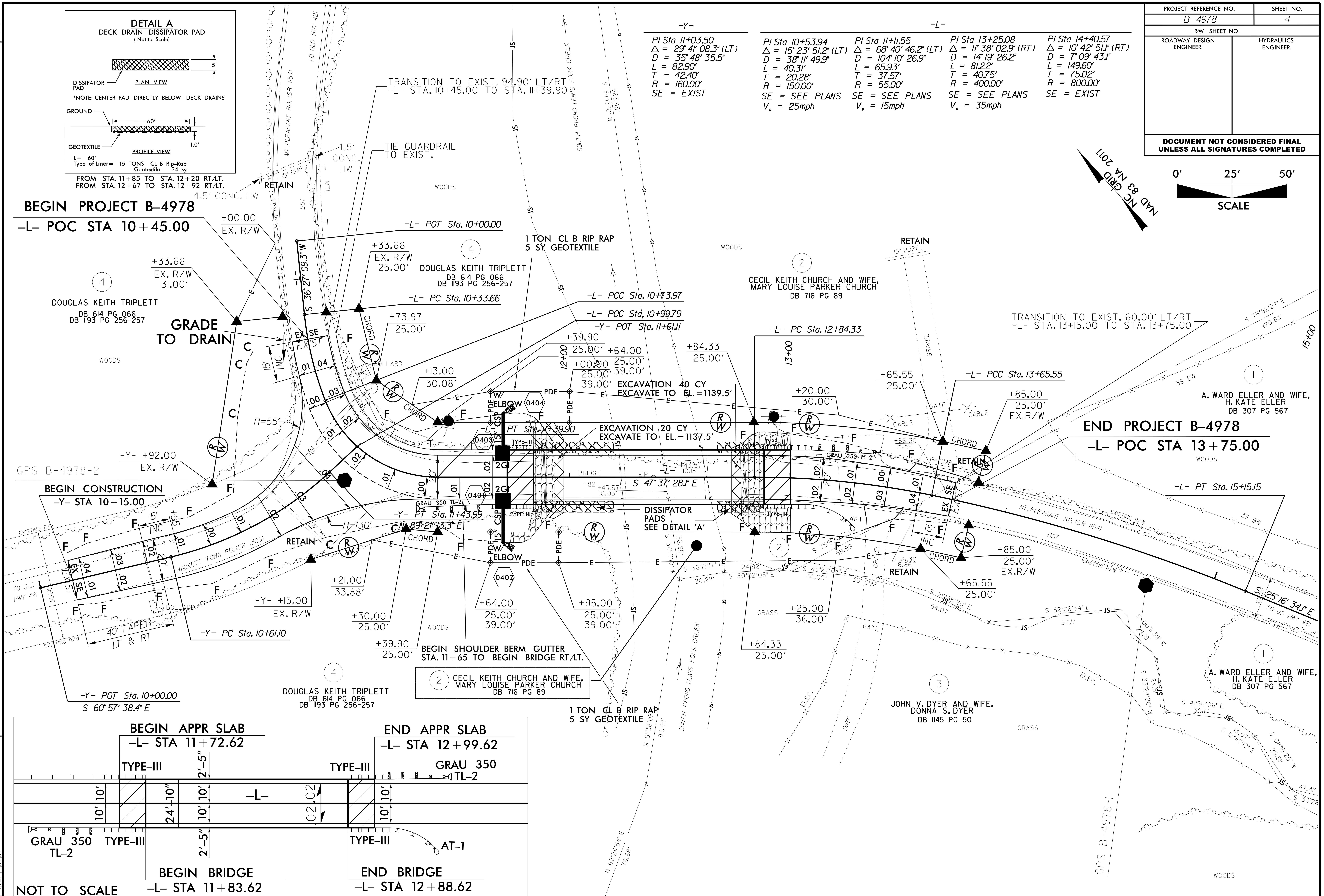
–L– STA. 11+83.62 (BEGIN BRIDGE) TO STA. 12+88.62 (END BRIDGE)

06-JAN-2017 13:39
n:\roadway\proj\b-4978_Rdy_typ.dgn
mstidham
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-4978	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

	-Y-	-L-	-L-	-L-	-L-
PI Sta	11+03.50	10+53.94	11+11.55	13+25.08	14+40.57
Δ	29° 41' 08.3" (LT)	15° 23' 51.2" (LT)	68° 40' 46.2" (LT)	11° 38' 02.9" (RT)	10° 42' 51.1" (RT)
D	35° 48' 35.5"	38° 11' 49.9"	104° 10' 26.9"	14° 19' 26.2"	7° 09' 43.1"
L	82.90'	40.31'	65.93'	81.22'	149.60'
T	42.40'	20.28'	37.57'	40.75'	75.02'
R	160.00'	150.00'	55.00'	400.00'	800.00'
SE	EXIST	SEE PLANS	SEE PLANS	SEE PLANS	EXIST
V		25mph	15mph	35mph	



DETAIL A
DECK DRAIN DISSIPATOR PAD
(Not to Scale)
DISSIPATOR PAD
PLAN VIEW
*NOTE: CENTER PAD DIRECTLY BELOW DECK DRAINS
GROUND
GEOTEXTILE
PROFILE VIEW
L= 60'
Type of Liner = 15 TONS CL B Rip-Rap
Geotextile = 34 sy
FROM STA. 11+85 TO STA. 12+20 RT./LT.
FROM STA. 12+67 TO STA. 12+92 RT./LT.
BEGIN PROJECT B-4978
-L- POC STA 10+45.00
END PROJECT B-4978
-L- POC STA 13+75.00
BEGIN CONSTRUCTION
-Y- STA 10+15.00
TRANSITION TO EXIST. 94.90' LT/RT
-L- STA. 10+45.00 TO STA. 11+39.90
TRANSITION TO EXIST. 60.00' LT/RT
-L- STA. 13+15.00 TO STA. 13+75.00
TIE GUARDRAIL TO EXIST.
GRADE TO DRAIN
DOUGLAS KEITH TRIPLETT
DB 614 PG 066
DB 1193 PG 256-257
CECIL KEITH CHURCH AND WIFE, MARY LOUISE PARKER CHURCH
DB 716 PG 89
A. WARD ELLER AND WIFE, H. KATE ELLER
DB 307 PG 567
JOHN V. DYER AND WIFE, DONNA S. DYER
DB 1145 PG 50
1 TON CL B RIP RAP
5 SY GEOTEXTILE
EXCAVATION 40 CY
EXCAVATE TO EL. =1139.5'
EXCAVATION 20 CY
EXCAVATE TO EL. =1137.5'
DISSIPATOR PADS
SEE DETAIL 'A'
BEGIN SHOULDER BERM GUTTER
STA. 11+65 TO BEGIN BRIDGE RT./LT.
MT. PLEASANT RD. (SR 1154)
HACKETT TOWN RD. (SR 1305)
SOUTH PRONG LEWIS FORK CREEK
GPS B-4978-2
GPS B-4978-1
NAD 83 NC GRID NA 2011
0' 25' 50'
SCALE
BEGIN APPR SLAB
-L- STA 11+72.62
END APPR SLAB
-L- STA 12+99.62
BEGIN BRIDGE
-L- STA 11+83.62
END BRIDGE
-L- STA 12+88.62
GRAU 350 TL-2
TYPE-III
AT-1
NOT TO SCALE
RELATIONSHIP OF BRIDGE TO ROADWAY

SEE SHEET 5 FOR -L- AND -Y- PROFILES
SEE SHEET S- TO S- FOR STRUCTURE PLANS

REVISIONS
R/W REV. - PARCEL NAME CHANGE. BCK 03/15/17

8/17/99

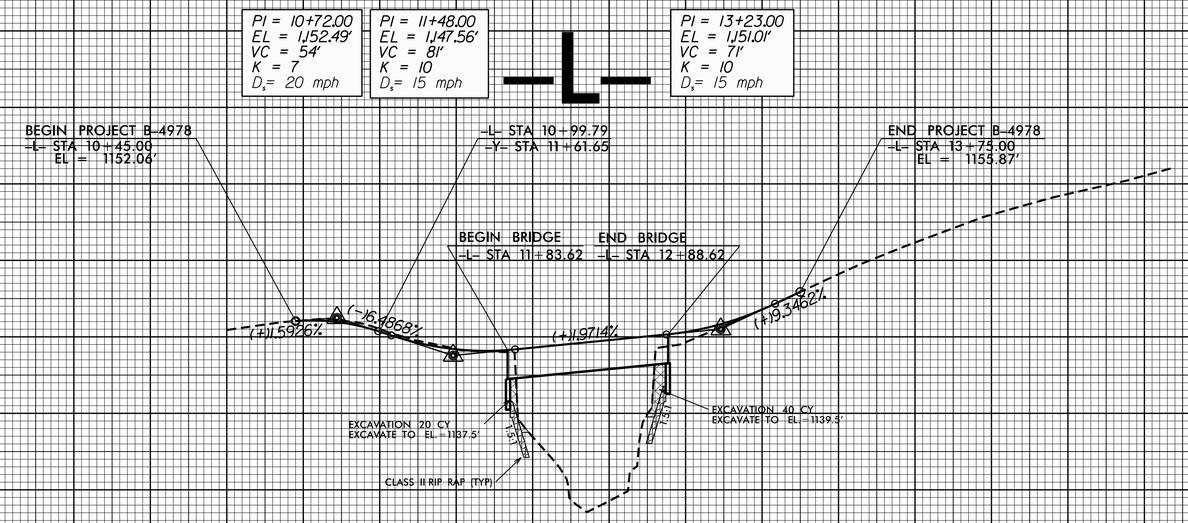
5/28/99

PROJECT REFERENCE NO.	SHEET NO.
B-4978	5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

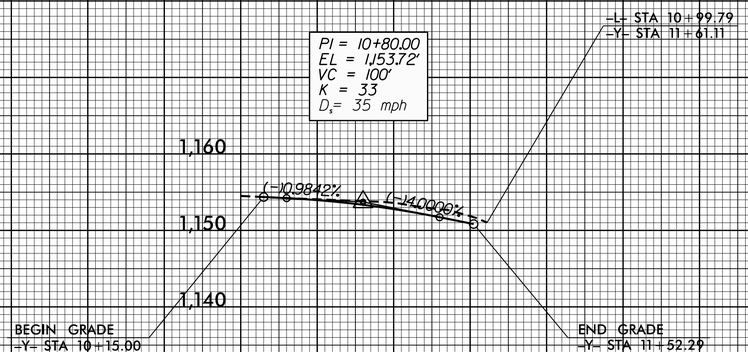
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 4,400	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 1139.2	FT
BASE DISCHARGE	= 13,806	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 1148.36	FT
OVERTOPPING DISCHARGE	= 11,763	CFS
OVERTOPPING FREQUENCY	= 100-	YRS
OVERTOPPING ELEVATION	= 1148.16	FT
	=	FT
DATE OF SURVEY	= 10/7/2015	
W.S.ELEVATION AT DATE OF SURVEY	= 1129.6	FT



SEE SHEET 4 FOR PLANS



SEE SHEET 4 FOR PLANS