
		<div>North Carolina Department of Transportation</div> <div>Highway Stormwater Program</div> <div>STORMWATER MANAGEMENT PLAN</div> <div>FOR NCDOT PROJECTS</div>									
(Version 2.07; Released October 2016)											
WBS Element: B-4425		TIP No.: 17BP.2.R.87		County(ies): Beaufort			Page 1 of 2				
General Project Information											
WBS Element:		B-4425		TIP Number:		17BP.2.R.87		Project Type: Bridge Replacement		Date: 3/27/2018	
NCDOT Contact:		Jay B. Johnson				Contractor / Designer:		MI Engineering / Gregory Cols, PE			
		Address: 1037 W.H. Smith Blvd PO BOX 1587 Greenville, NC 27835						Address: 1011 Schaub Drive Suite 100 Raleigh, NC 27606			
		Phone: 252-439-2821						Phone: 919-851-6606			
		Email: <a href="mailto:bjohnson@ncdot.gov">bjohnson@ncdot.gov</a>						Email: <a href="mailto:gcols@mi-engineers.com">gcols@mi-engineers.com</a>			
City/Town:		Chocowinity				County(ies):		Beaufort			
River Basin(s):		Tar-Pamlico				CAMA County?		Yes			
Wetlands within Project Limits?		Yes									
Project Description											
Project Length (lin. miles or feet):		.093 miles		Surrounding Land Use:		Rural					
		Proposed Project						Existing Site			
Project Built-Up Area (ac.)		0.35		ac.		0.27		ac.			
Typical Cross Section Description:		2 lane undivide highway with 11' lanes at normal crown and 4.5' paved shoulders				2 lane undivide highway with 11' lanes at normal crown and 1' paved shoulders					
Annual Avg Daily Traffic (veh/hr/day):		Design/Future: 5000		Year: 2038		Existing: 2800		Year: 2018			
General Project Narrative: (Description of Minimization of Water Quality Impacts)		Existing 2-span (2@30.5') prestressed channel bridge on SR 1136 (Gray road) spans Maple Branch (near Chocowinity). Existing bridge will be replaced while the road is closed (no detour bridge). The replacement bridge is a 2-span (1@30', 1@50') 21" CSU with spill through abutments and 2.5' caps. The proposed bridge has no deck drains to minimize direct discharge into the stream. The stream is classified as swamp water, nutrient sensitive water, and class C. Bridge drainage is collected at lower end of bidge on Southwest side and discharged into a rip rap pad at outlet and is dispersed into floodplain outside of buffer. The approach drainage ditches on the West side of the project drain and disperse into the floodplain outside of the buffer. The approach drainage on the Southeast side of the project drains through a 65' long grass lined 2' base ditch with 3:1 side slopes and a 90' long grass lined v ditch with 3:1 side slopes and then into Maple Branch. Rip Rap is used at the embankment where the ditch ties into Maple Branch. Approximately 0.02 acre of pavement is added to this ditch from the project. The v ditch has been designed to meet grass swale criteria although it is not long enough to treat offsite drainge area. The approach drainage on the Northeast side of the project drains through the existing roadway ditch and then through approximately 75' of rip rap toe protection before turning out into the floodplain at the edge of Buffer zone 1. This minimizes the impact to the buffer. Approximately .02 ac of additional pavement is added to this ditch from the project. Drainage has been designed to minimize impacts to the buffer to the maximum extent practicable.									
Waterbody Information											
Surface Water Body (1):		MAPLE BRANCH (NEAR CHOCOWINITY)				NCDWR Stream Index No.:		29-6-2-1-7			
NCDWR Surface Water Classification for Water Body				Primary Classification:		Class C					
				Supplemental Classification:		Swamp Waters (Sw)					
Other Stream Classification:		None									
Impairments:		None									
Aquatic T&E Species?		No		Comments:							
NRTR Stream ID:								Buffer Rules in Effect:		Tar-Pamlico	
Project Includes Bridge Spanning Water Body?		Yes		Deck Drains Discharge Over Buffer?		No		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)									

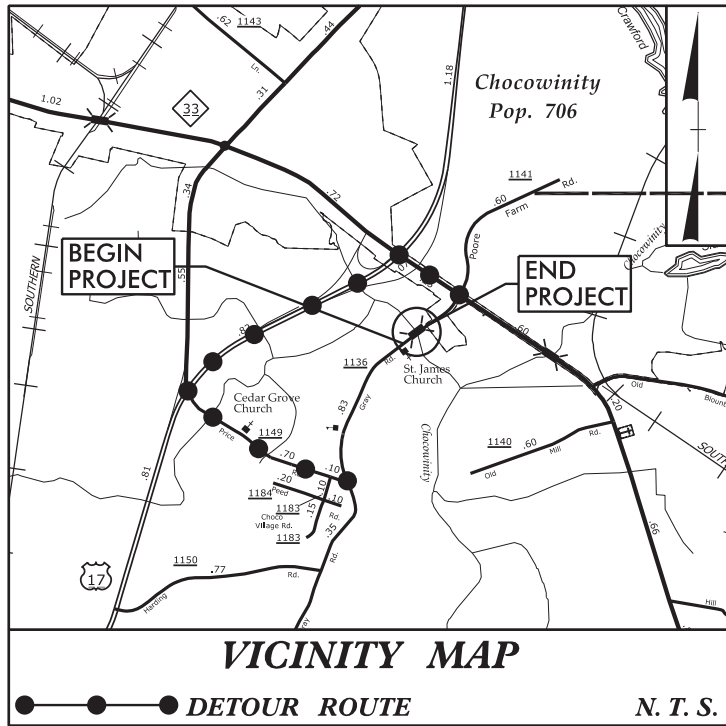
### Additional Comments

09/08/19

TIP PROJECT: B-4425

CONTRACT:

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



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

BEAUFORT COUNTY

LOCATION: REPLACE BRIDGE 69 OVER MAPLE BRANCH  
ON SR 1136 (GRAY ROAD)

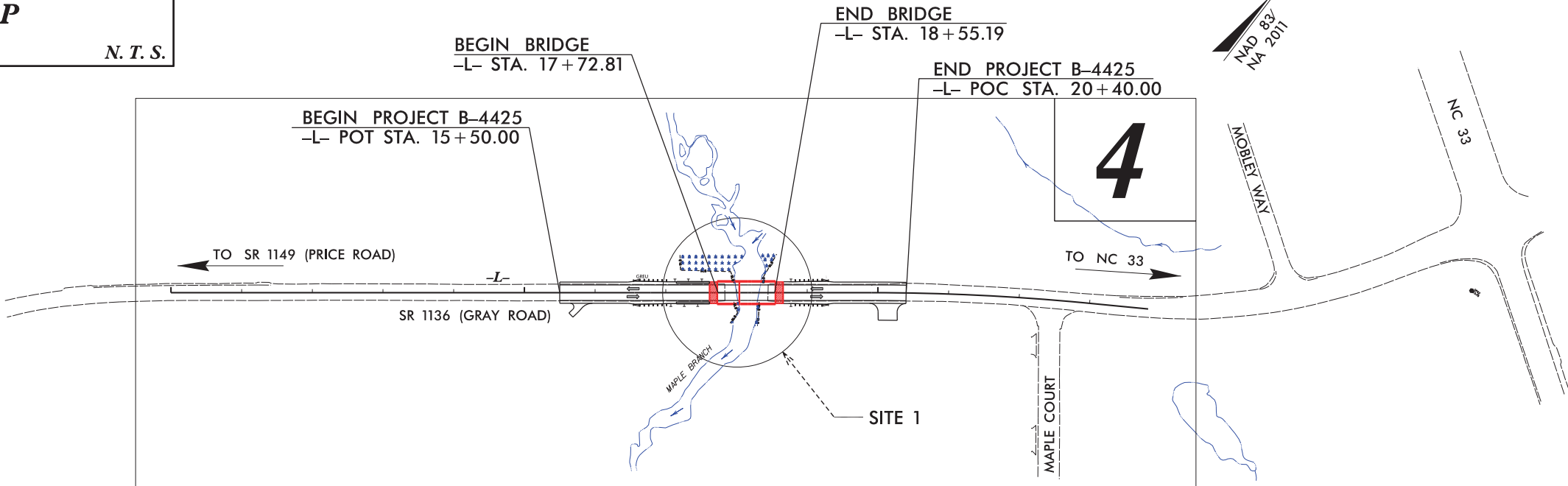
TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

BUFFER IMPACTS PERMIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4425	1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
17BP.2.R.87	N/A	P. E.	

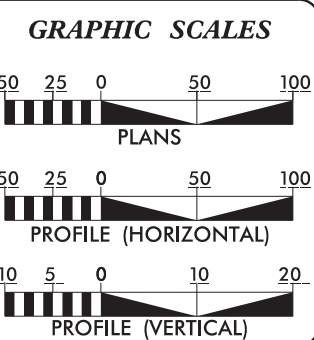
RIGHT OF WAY PLANS

BUFFER DRAWING  
SHEET 3 OF 10



CLEARING ON THIS PROJECT SHALL BE PERFORMED  
TO THE LIMITS ESTABLISHED BY MODIFIED METHOD II.

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

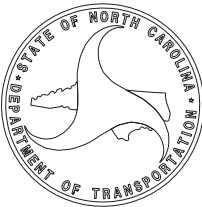


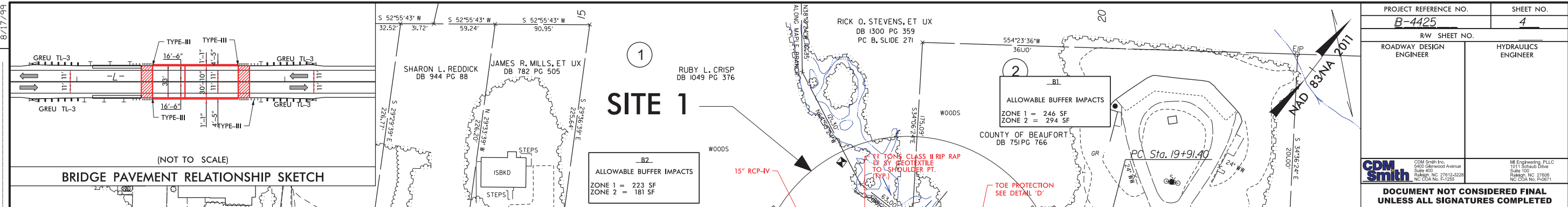
DESIGN DATA	
ADT 2018	= 2800 VPD
ADT 2038	= 5000 VPD
K	= NA %
D	= NA %
T	= 12 % *
V	= 50 MPH
* TTST	= __ DUAL __
FUNC CLASS	=
LOCAL	
SUB-REGIONAL TIER	

PROJECT LENGTH	
LENGTH ROADWAY TIP PROJECT B-4425	= 0.077 MILES
LENGTH BRIDGE TIP PROJECT B-4425	= 0.016 MILES
TOTAL LENGTH TIP PROJECT B-4425	= 0.093 MILES

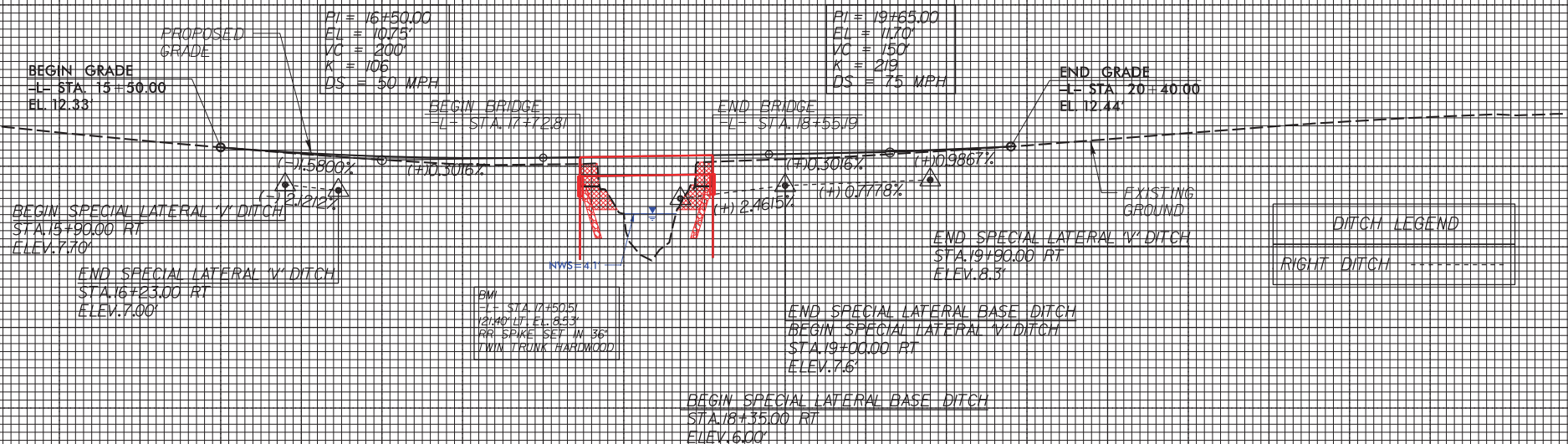
Prepared in the Office of: <b>CDM Smith</b> FOR THE NORTH CAROLINA DEPT. OF TRANSPORTATION 2018 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: MARCH 5, 2018	DAVID Z. KEISER, P. E. PROJECT ENGINEER
LETTING DATE: SEPTEMBER 5, 2018	KIT A. PERSIANI, P. E. PROJECT DESIGN ENGINEER
	HEATHER C. LANE, P. E. NCDOT CONTACT

HYDRAULICS ENGINEER	
SIGNATURE:	P.E.
ROADWAY DESIGN ENGINEER	
SIGNATURE:	P.E.





BRIDGE HYDRAULIC DATA		
DESIGN DISCHARGE	= 430	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 56	FT
BASE DISCHARGE	= 660	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 61	FT
OVERTOPPING DISCHARGE	= 3470	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 110	FT
DATE OF SURVEY	= 10/30/17	
W.S.ELEVATION		
AT DATE OF SURVEY	= 3.9	FT



**BUFFER DRAWING  
SHEET 4 OF 10**

**-L- PROFILE**  
SCALE: 1" = 50' HORIZ.  
1" = 10' VERT.

## DITCH LEGEND

RIGHT DITCH

## REVISIONS

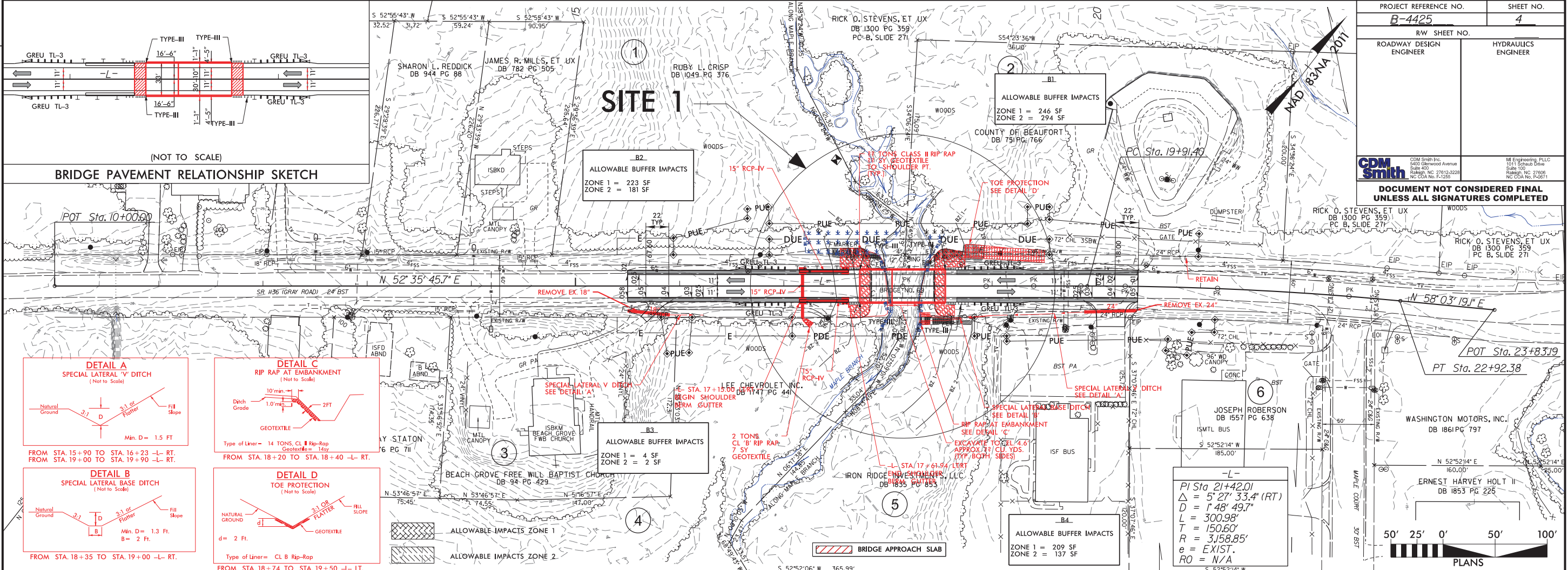
8/17/99

\$\$\$\$\$SYTIME\$\$\$\$\$  
\$\$\$\$\$DGN\$\$\$\$\$



8/17/99

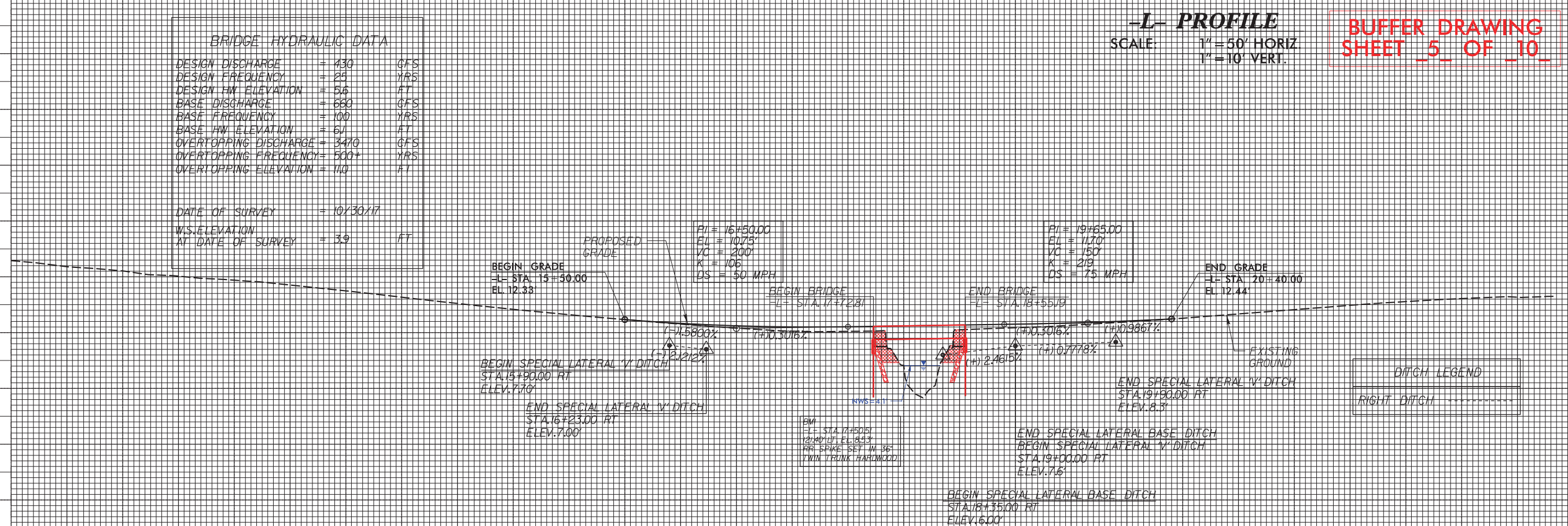
REVISIONS



BRIDGE HYDRAULIC DATA		
DESIGN DISCHARGE	= 430	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 5.6	FT
BASE DISCHARGE	= 660	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 6.1	FT
OVERTOPPING DISCHARGE	= 3470	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 11.0	FT
DATE OF SURVEY	= 10/30/17	
W.S. ELEVATION AT DATE OF SURVEY	= 3.9	FT

**-L- PROFILE**  
SCALE: 1" = 50' HORIZ  
1" = 10' VERT.

**BUFFER DRAWING  
SHEET 5 OF 10**





## RIPARAIN BUFFER IMPACTS SUMMARY

[illegible]

N.C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS

BEAUFORT COUNTY  
PROJECT: WBS 17BP.2.R.87 (B-4425)

DATE: 03/12/2018  
SHEET 7 OF 10

## WETLANDS IN BUFFER IMPACTS SUMMARY

			WETLANDS IN BUFFERS	
SITE NO.	STATION (FROM/TO)		ZONE 1	ZONE 2
			(ft <sup>2</sup> )	(ft <sup>2</sup> )
1	17+41/17+95 -L-		125	110
<b>TOTAL:</b>			125	110

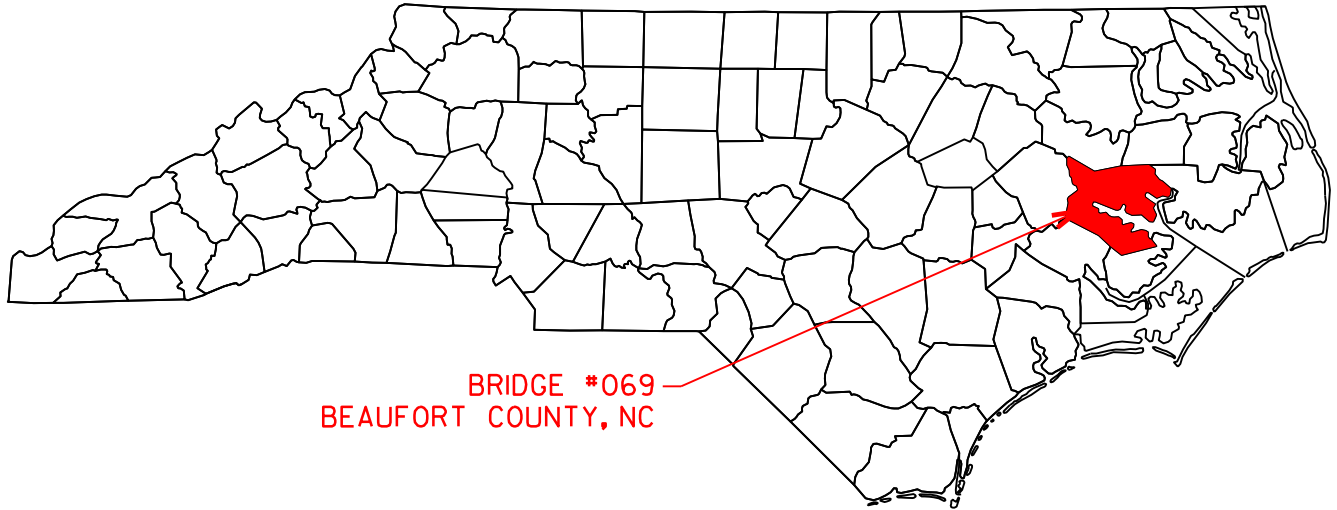
N.C. DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

BEAUFORT COUNTY  
PROJECT: WBS 17BP.2.R.87 (B-4425)

DATE: 03/12/2018  
SHEET 8 OF 10

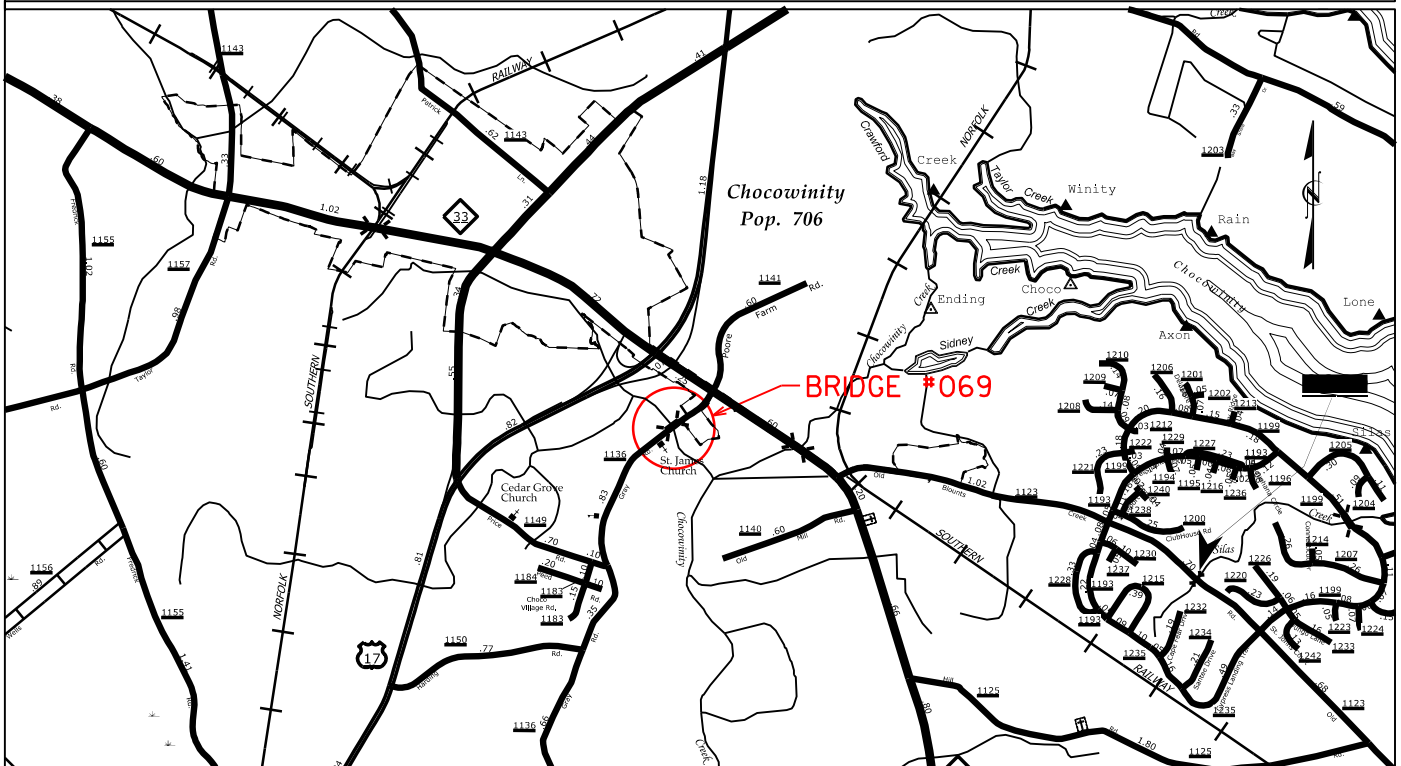


# NORTH CAROLINA



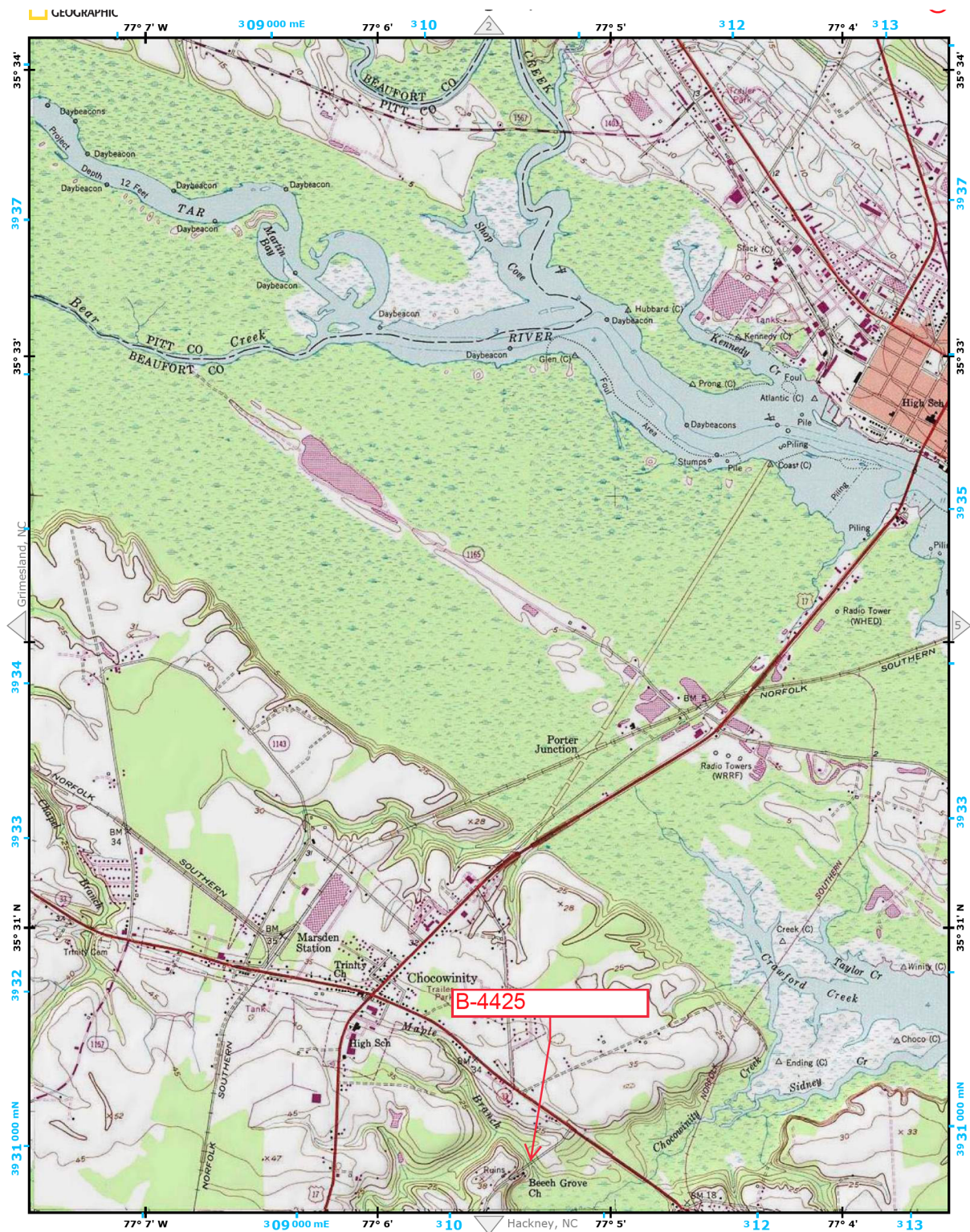
BRIDGE #069  
BEAUFORT COUNTY, NC

BUFFER DRAWING  
SHEET 9 OF 10



VICINITY  
MAPS  
NOT TO SCALE

NCDOT  
DIVISION OF HIGHWAYS  
BEAUFORT COUNTY  
PROJECT: 17BP.2.R.87 (B-4425)  
REPLACE BRIDGE #069  
ON SR 1136 OVER  
MAPLE BRANCH



BUFFER DRAWING  
SHEET 10 OF 10

USGS  
MAP  
NOT TO SCALE

NCDOT  
DIVISION OF HIGHWAYS  
BEAUFORT COUNTY  
PROJECT: 17BP.2R.87 (B-4425)  
REPLACE BRIDGE #069  
ON SR 1136 OVER  
MAPLE BRANCH