



## North Carolina Department of Transportation

Highway Stormwater Program  
STORMWATER MANAGEMENT PLAN  
FOR NCDOT PROJECTS

(Version 2.07; Released October 2016)

WBS Element: 17BP.5.R.96 TIP No.: B-4833 County(ies): Wake Page 1 of 1

## General Project Information

WBS Element:		17BP.5.R.96	TIP Number:		B-4833	Project Type:		Bridge Replacement	Date:		2/26/2018
NCDOT Contact:		Chris Murray				Contractor / Designer:		MI Engineering / Gregory Cols, PE			
	Address:		2612 North Duke Street Durham, NC 27704				Address:		1011 Schaub Drive Suite 100 Raleigh, NC 27606		
	Phone:		919-220-4660				Phone:		919-851-6606		
	Email:		cmurray@ncdot.gov				Email:		gcols@mi-engineers.com		
City/Town:						County(ies):		Wake			
River Basin(s):		Neuse				CAMA County?		No			
Wetlands within Project Limits?		Yes									

## Project Description

Project Length (lin. miles or feet):		0.25	Surrounding Land Use:		rural
		Proposed Project			Existing Site
Project Built-Up Area (ac.)		0.8	ac.		0.6 ac.
Typical Cross Section Description:		2 lanes undivided secondary road with 11' lanes and 5' shoulders (2' of shoulder is paved).			2 lanes undivided secondary road with 9.0' to 10' lanes and grass shoulder.
Annual Avg Daily Traffic (veh/hr/day):		Design/Future: 2000	Year: 2040		Existing: 1100 Year: 2015
General Project Narrative: (Description of Minimization of Water Quality Impacts)		The existing bridge over Little Black Creek is a 3 span bridge (1@17.5', 1@17', 1@17.5' , total length of 52') with concrete deck on timber beams, on timber caps and piles. The existing bridge will be replaced while the road is closed (off-site detour route used). Drainage from the existing bridge discharges directly into Little Black Creek from the bridge deck. The replacement structure is a single span (1@70') Cored Slab Unit Bridge with 90degree skew. Discharge from the new bridge is collected into a 2GI drainage inlet at the southwest corner of the bridge and outlets into a rip rap pad into wetland outside the buffer. Multiple jurisdictional streams exist along the roadway on the south approaches. Due to necessary roadway and shoulder widening and curve realignment, some of the streams are impacted. Stream "SB" enters the project area at the southeast corner. The existing stream has divided flow under the roadway through a 36" CMP and along the east side of the road. The portion that crosses the road thru the 36" CMP drains along the left side of the road (identified as "SC") and discharges into Little Black Creek on the west side of the bridge. This stream is being removed and flow will be accommodated through a 3ft base ditch with countersunk rip rap which will discharge into Little Black Creek near the bridge. The portion that remains on the east side of the road drains (identified as "SB") into wetland approx. 150' south of the bridge on the east side. This stream is being removed and flow will be accommodated through a 3ft base ditch with countersunk rip rap, which will discharge into wetland near the bridge at non-erosive velocities. Stream "SD" is near the project area and is not impacted. North of the bridge, existing offsite and roadway drainage is carried through grassed-lined ditches on both sides of the road and discharges into wetlands (NW corner) or turns out into floodplain area (NE corner). Due to necessary roadway and shoulder widening, these ditches are relocated further from the roadway. Proposed ditches discharge with dissipater pads into wetland (NW corner) or into floodplain (NE corner) at non-erosive velocities. Erosion control on the project will be designed to sensitive watershed standards.			

## Waterbody Information

Surface Water Body (1):		Little Black Creek		NCDWR Stream Index No.:		27-45-3			
NCDWR Surface Water Classification for Water Body			Primary Classification:		Class C				
			Supplemental Classification:		Nutrient Sensitive Waters (NSW)				
Other Stream Classification:		None							
Impairments:		None							
Aquatic T&E Species?		No		Comments:					
NRTR Stream ID:		N/A				Buffer Rules in Effect:		Neuse	
Project Includes Bridge Spanning Water Body?		Yes		Deck Drains Discharge Over Buffer?		No		Dissipator Pads Provided in Buffer?	
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)									

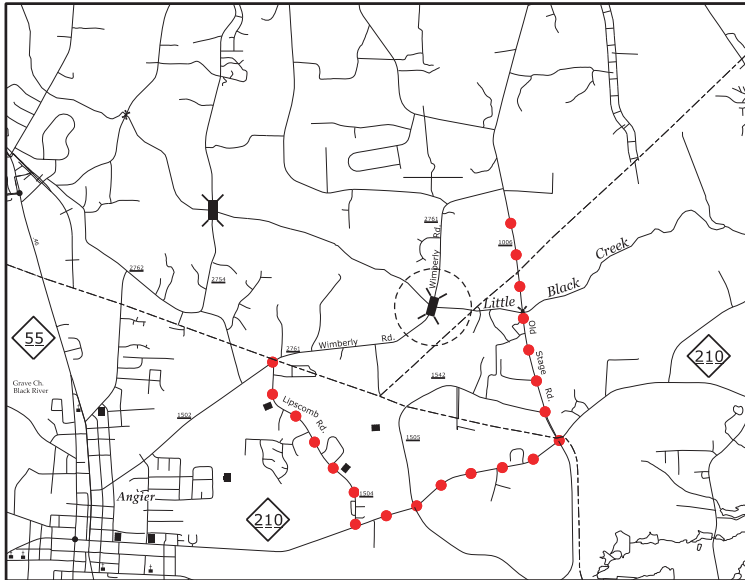
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CONTRACT: DE00256

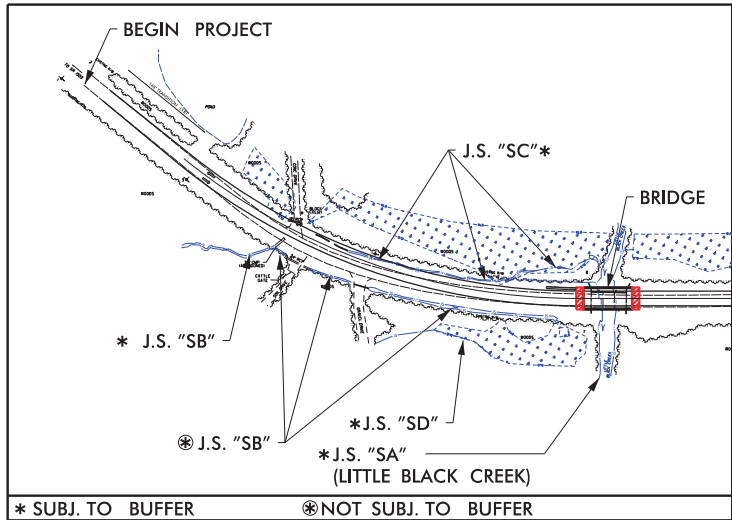
TIP PROJECT: B-4833

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



VICINITY MAP

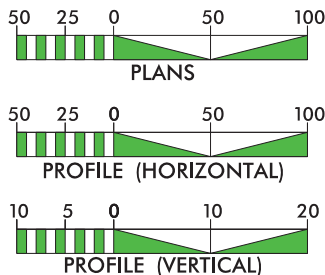
• • • • • DETOUR ROUTE



SCHEMATIC OF JURISDICTIONAL STREAMS AND BUFFERS  
NEAR PROJECT (NOT TO SCALE)

\*DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED OF 50 MPH  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III

GRAPHIC SCALES



DESIGN DATA

ADT 2015 = 1,100  
ADT 2040 = 2,000  
DHV = 9%  
D = 65%  
T = 5%\*  
\*\* V = 50 MPH  
\* TTST = 1% DUAL 4%  
FUNC CLASS = LOCAL  
SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY PROJECT B-4833 = 0.245 MILES  
LENGTH STRUCTURE PROJECT B-4833 = 0.014 MILES  
TOTAL LENGTH PROJECT B-4833 = 0.259 MILES

NCDOT CONTACT: LISA GILCHRIST, E.I.  
DIVISION 5 - BRIDGE PROGRAM MANAGER  
PH: 919-733-4699

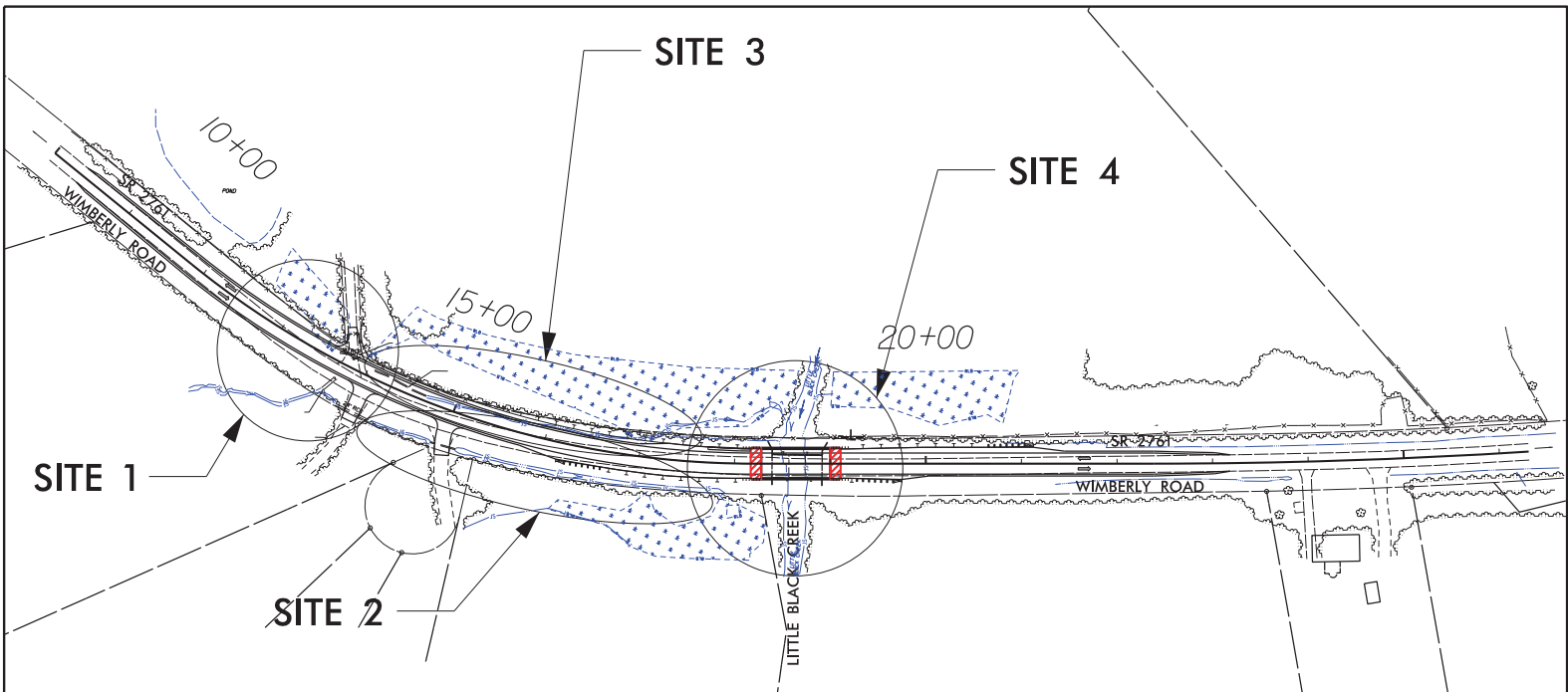
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

WAKE COUNTY

LOCATION: BRIDGE NO. 376 OVER LITTLE BLACK CREEK  
ON SR 2761 (WIMBERLY ROAD)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, & STRUCTURE

WETLAND AND SURFACE WATER IMPACTS PERMIT



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4833	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38603.1.FD1	BRZ-2761 (1)	PE, UTIL.	
17BP.5.R.96	N/A	UTIL., CONST.	

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING  
SHEET 2 OF 7

SUBMITTAL: UPDATED PLANS  
DATE: 04/24/18



Prepared In the Office of:  
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2018 STANDARD SPECIFICATIONS

NOVEMBER 15, 2017  
RIGHT OF WAY DATE:  
SEPTEMBER 26, 2018  
LETTING DATE:

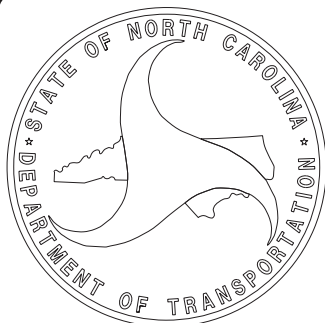
CLAUDETTE M.K. ROQUE, P.E.  
PROJECT ENGINEER

G. SCOTT SALLADE, E.I.  
PROJECT DESIGNER

HYDRAULICS ENGINEER

SIGNATURE:  
ROADWAY DESIGN ENGINEER

SIGNATURE:





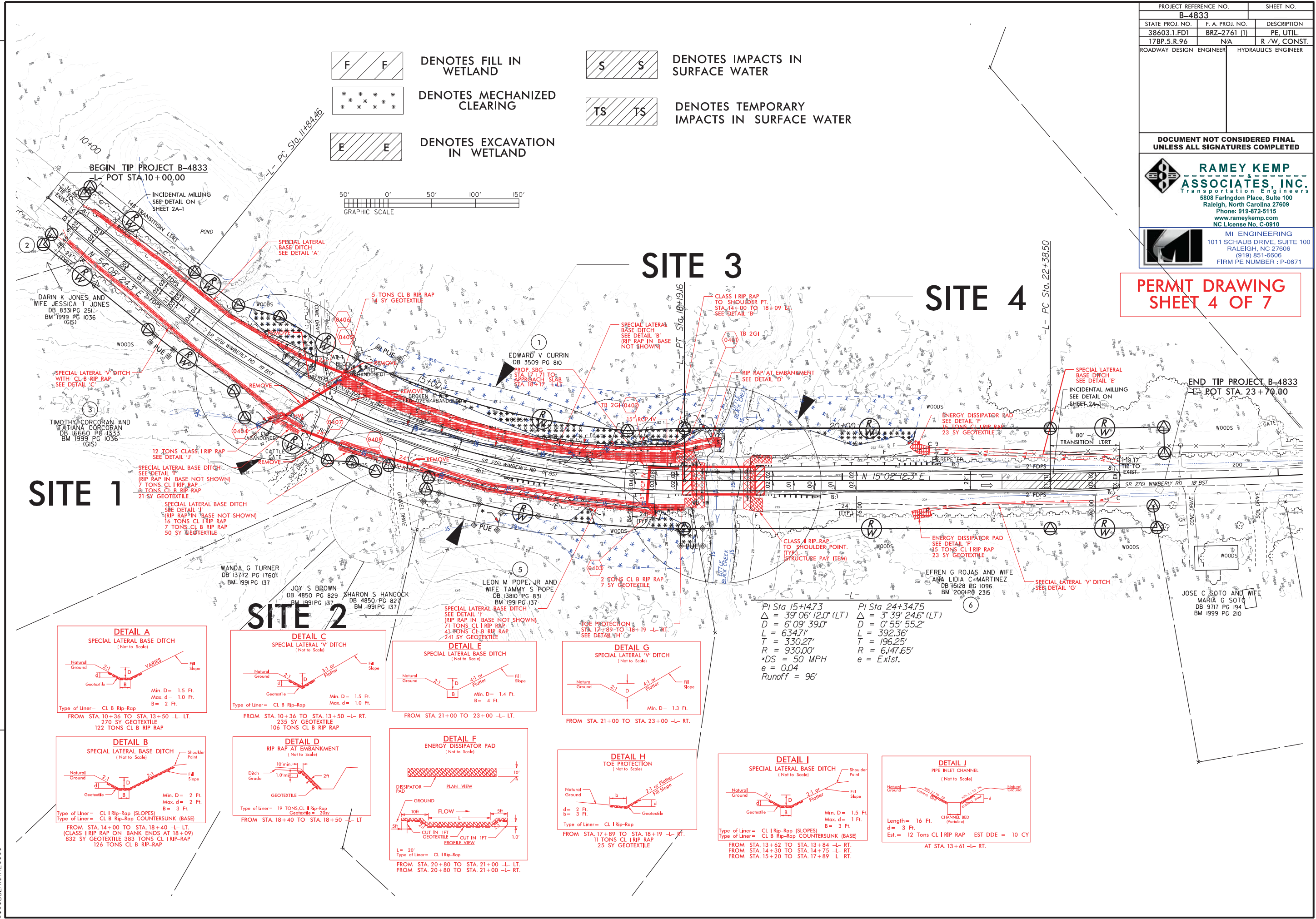
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ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

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FIRM PE NUMBER: P-0671

**PERMIT DRAWING  
SHEET 4 OF 7**





PROJECT REFERENCE NO.		SHEET NO.	
B-4833			
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**PERMIT DRAWING  
SHEET 3 OF 7**

