

09/08/19

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BEAUFORT COUNTY

LOCATION: REPLACE BRIDGE NO. 40 ON SR 1932
OVER DURHAM CREEK TRIBUTARY

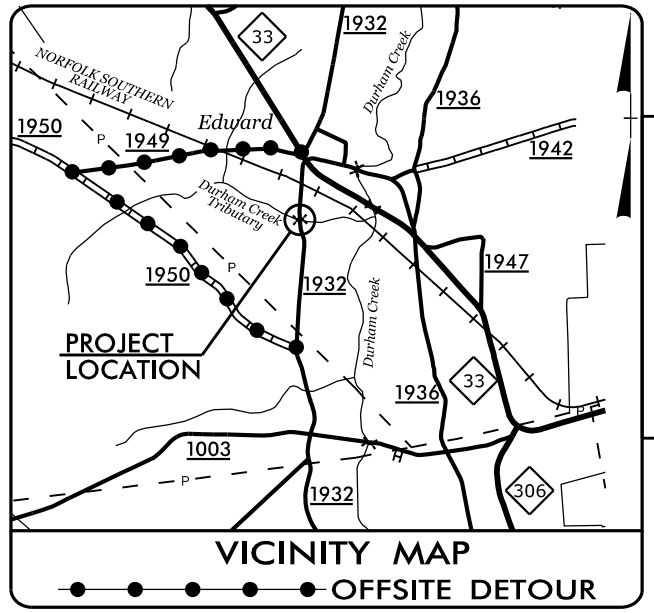
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE

PERMIT DRAWINGS

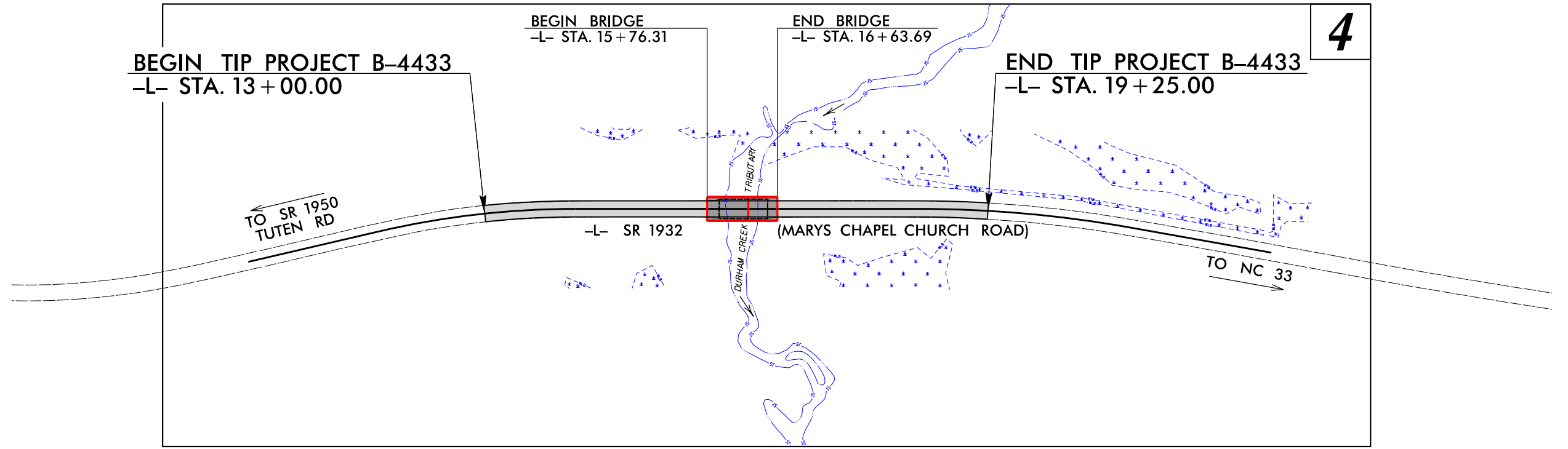
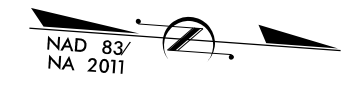
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4433	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38362.1.FD2	BRZ-1932(5)	PE	
38362.2.2	BRZ-1932(5)	RW & UTIL	
38362.3.FD1	BRZ-1932(5)	CONST.	

**PERMIT DRAWING
SHEET 1 OF 8**

TIP PROJECT: B-4433



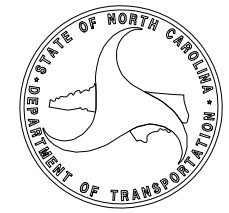
RIGHT OF WAY PLANS



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

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACT:



DESIGN DATA

ADT 2019 =	440
ADT 2039 =	650
V =	60 MPH
TTST =	6%

FUNC CLASS =
LOCAL RURAL
SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4433	=	0.101 mile
LENGTH STRUCTURES TIP PROJECT B-4433	=	0.017 mile
TOTAL LENGTH TIP PROJECT B-4433	=	0.118 mile

Prepared For:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

By:
TGS ENGINEERS
706 HILLSBOROUGH ST
SUITE 200
RALEIGH, NC 27603

PH (919) 773-8887
CORP. LICENSE NO.: C-0275

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
SEPTEMBER 25, 2018

LETTING DATE:
AUGUST 20, 2019

V. MARCUS LOWERY, PE
PROJECT ENGINEER

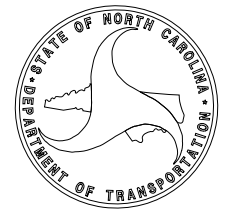
HEATHER C. LANE, P.E.
NCDOT DIVISION 2 CONTACT

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

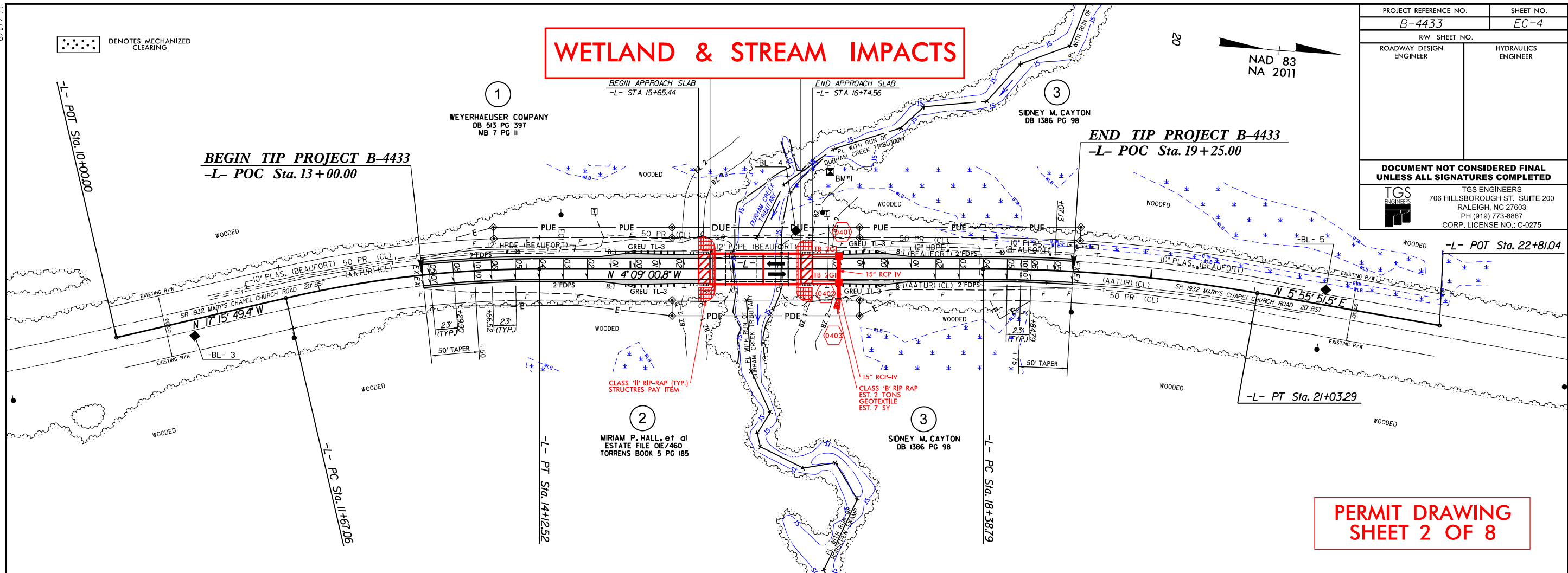
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11/5/2018
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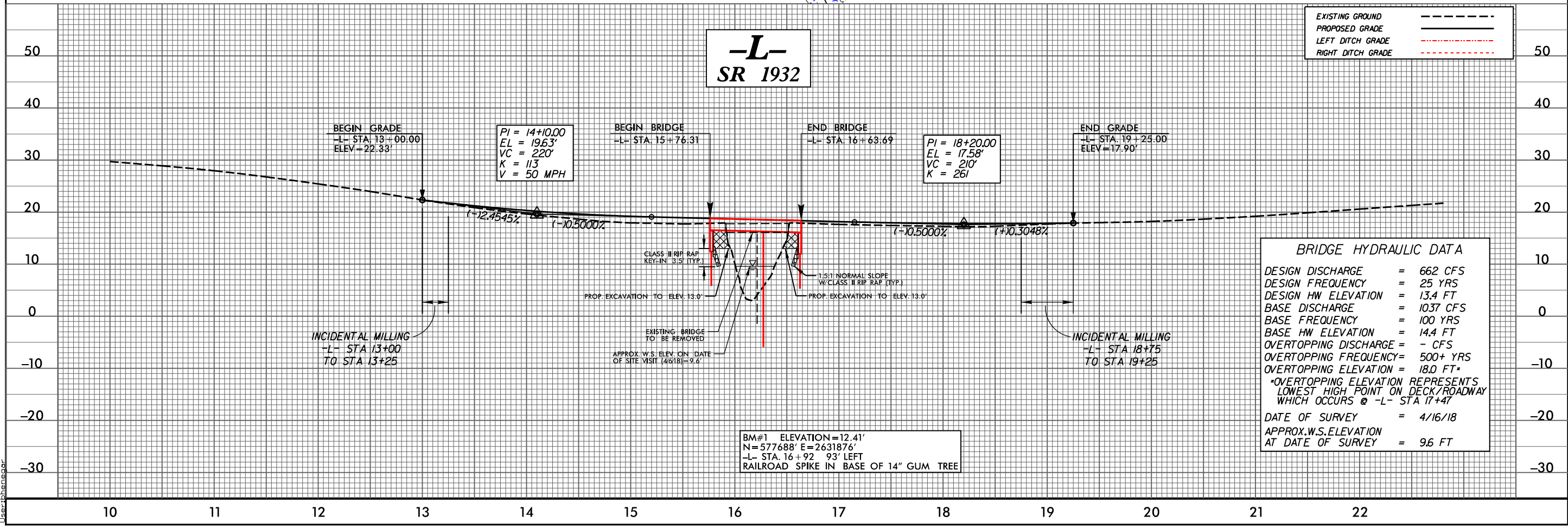
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User: jhansen

WETLAND & STREAM IMPACTS



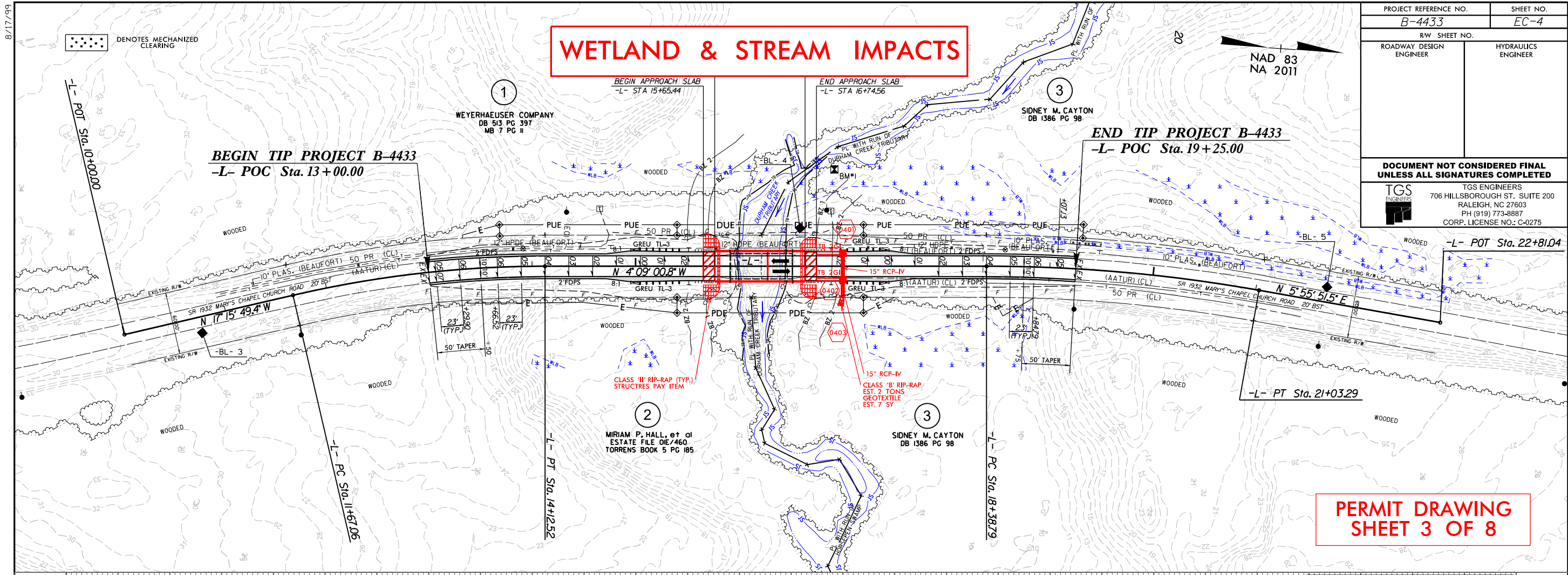
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RW SHEET NO. ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275			

PERMIT DRAWING
SHEET 2 OF 8

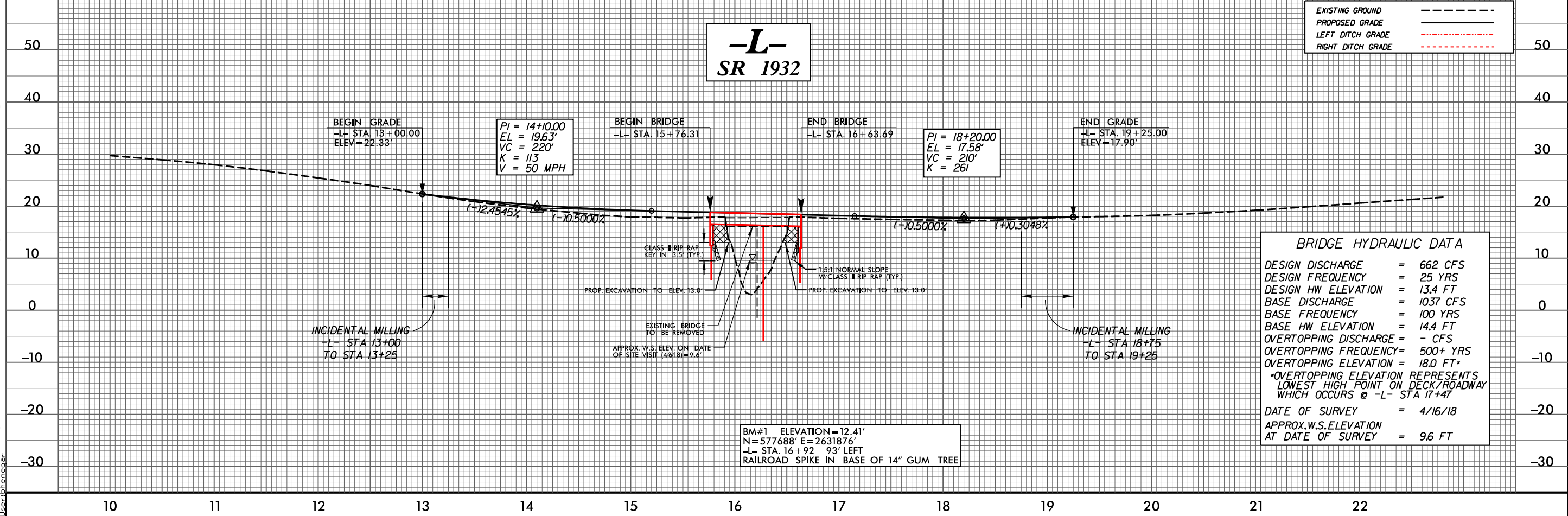


WETLAND & STREAM IMPACTS

PROJECT REFERENCE NO. B-4433		SHEET NO. EC-4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



PERMIT DRAWING
SHEET 3 OF 8



8/17/99
8/17/2018
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User: jhansen

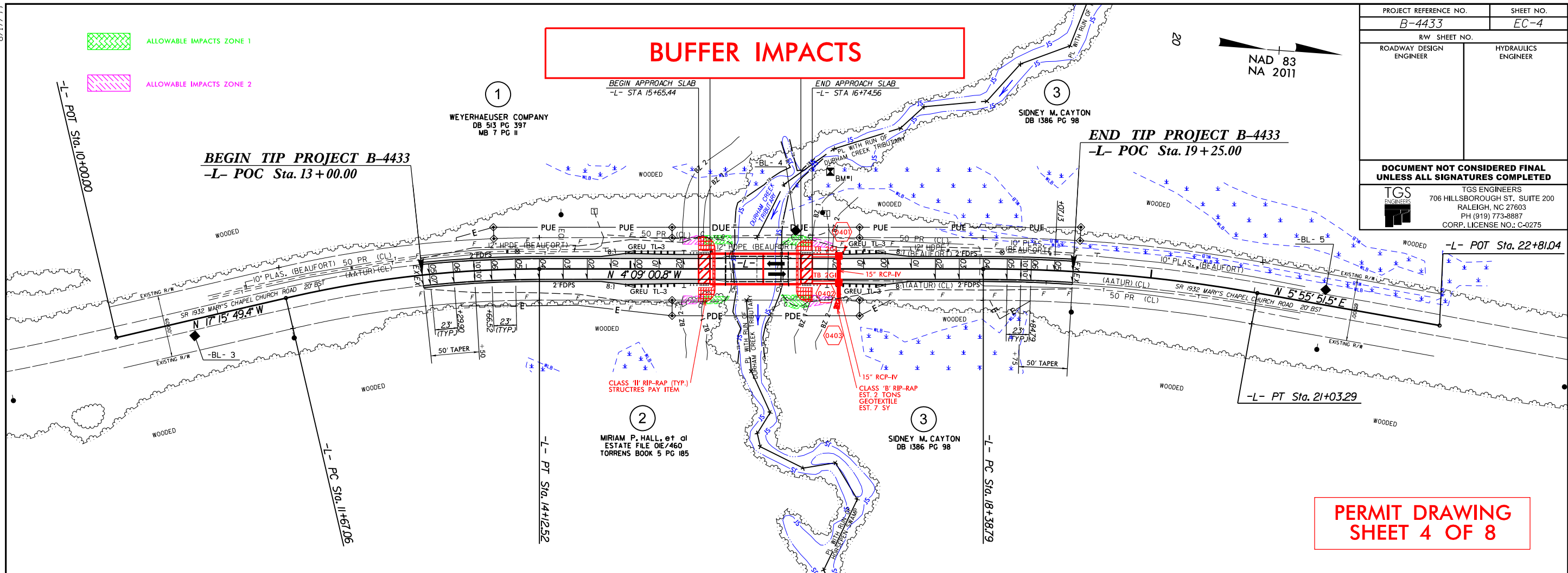
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 User: jhansen

ALLOWABLE IMPACTS ZONE 1
 ALLOWABLE IMPACTS ZONE 2

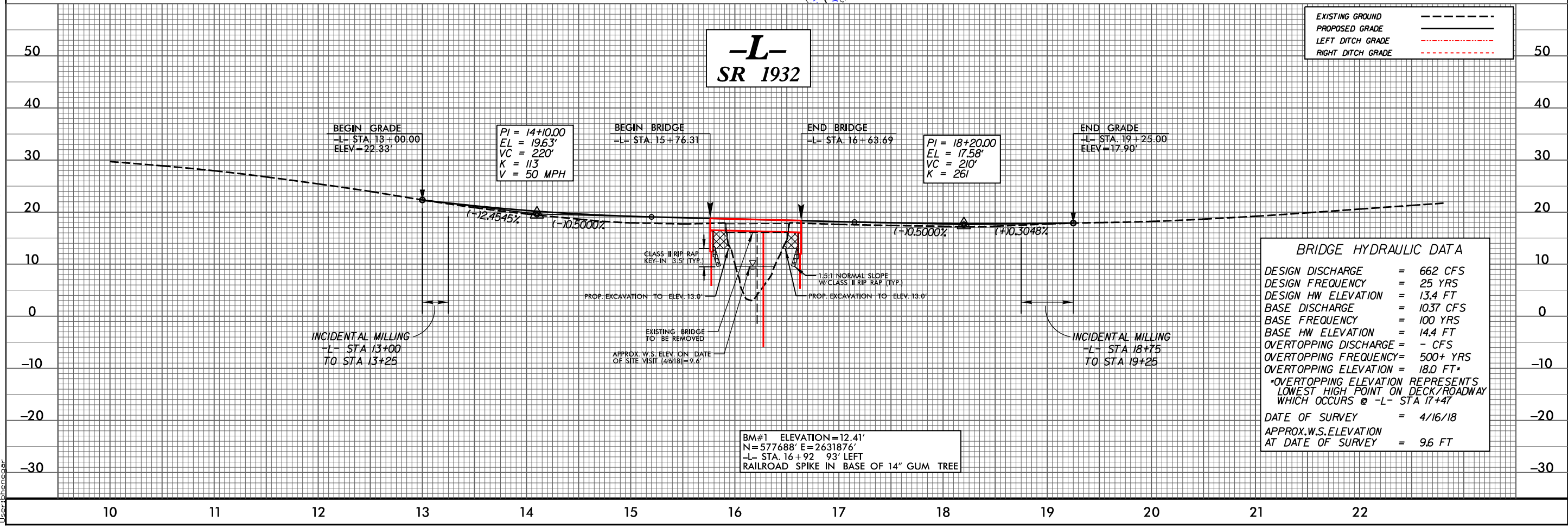
BUFFER IMPACTS

NAD 83
 NA 2011

PROJECT REFERENCE NO. B-4433		SHEET NO. EC-4	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
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PERMIT DRAWING
SHEET 4 OF 8



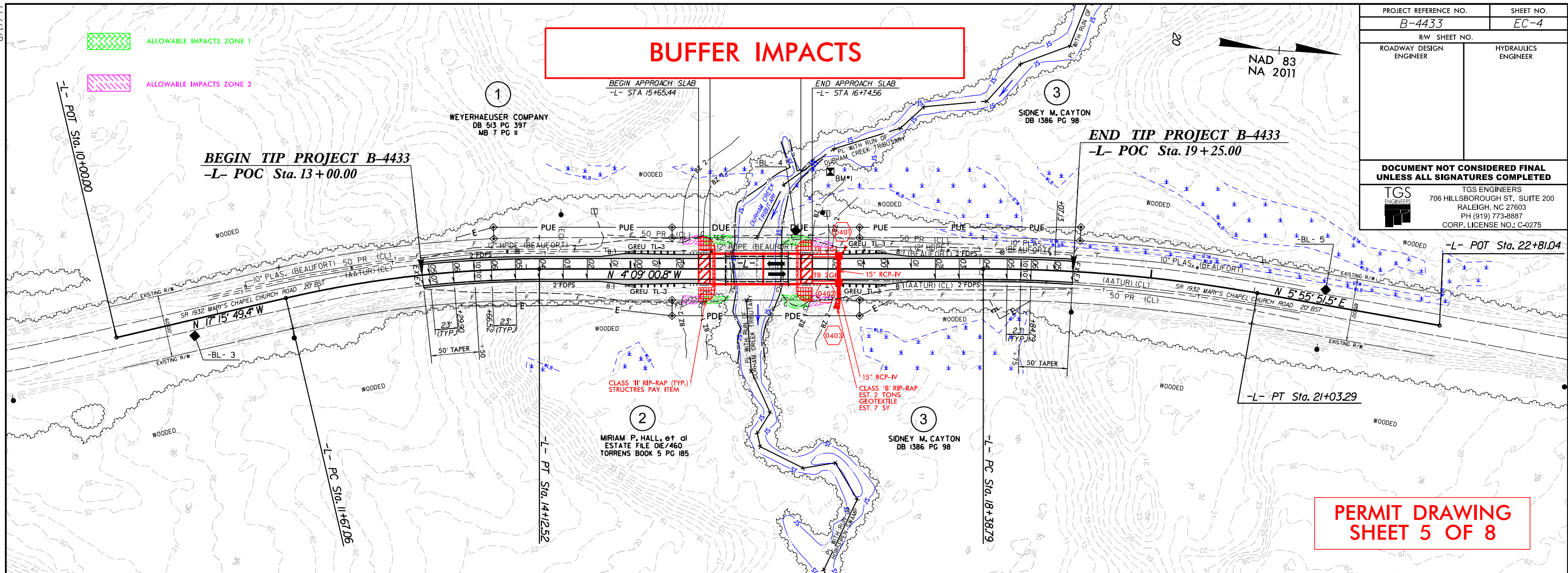
-L-
SR 1932

BM#1 ELEVATION = 12.41'
 N = 577688' E = 2631876'
 -L- STA. 16 + 92 93' LEFT
 RAILROAD SPIKE IN BASE OF 14" GUM TREE

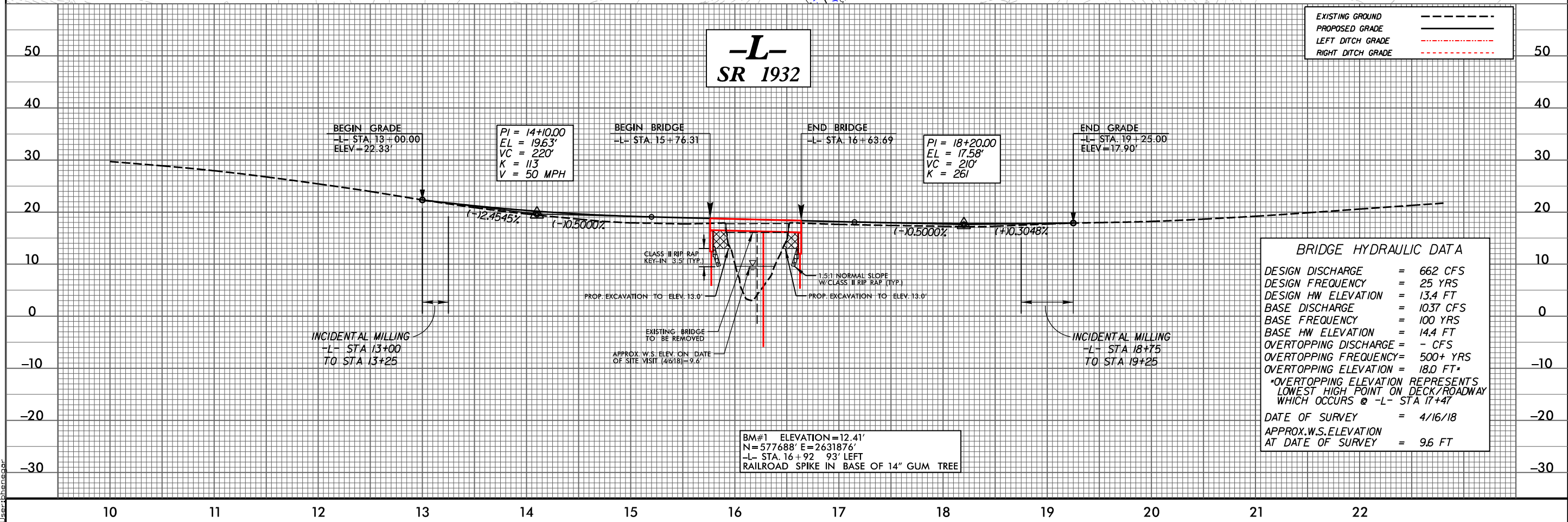
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BUFFER IMPACTS

PROJECT REFERENCE NO. B-4433	SHEET NO. EC-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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**PERMIT DRAWING
SHEET 5 OF 8**



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WETLAND AND SURFACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			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)
	-L- 19+15 to 19+50 LT	1 @ 50', 1@35' CSU Bridge				< 0.01						
TOTALS*:						< 0.01				0	0	0

*Rounded totals are sum of actual impacts

NOTES:
Permanent Wetland Impacts = < 0.01 Ac

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 12/17/18
 Beaufort County
 B-4433
 38362.1.FD2
 SHEET **6** OF **8**

RIPARIAN BUFFER IMPACTS SUMMARY

			IMPACT									BUFFER REPLACEMENT	
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	TYPE			ALLOWABLE			MITIGABLE			ZONE 1 (ft ²)	ZONE 2 (ft ²)
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)		
	1 @ 50', 1 @ 35' CSU Bridge	-L- 15+50 to 16+00 LT		X		225.0	140.0	365.0					
	1 @ 50', 1 @ 35' CSU Bridge	-L- 15+50 to 16+00 RT		X		160.0	150.0	310.0					
	1 @ 50', 1 @ 35' CSU Bridge	-L- 16+45 to 16+95 LT		X		220.0	130.0	350.0					
	1 @ 50', 1 @ 35' CSU Bridge	-L- 16+45 to 16+95 RT		X		300.0	170.0	470.0					
TOTAL:						905.0	590.0	1495.0	0.0	0.0	0.0	0.0	0.0

NOTES:
Total Buffer Impacts = 0.04 Ac

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

Beaufort County
PROJECT: 38362.1.FD2
B-4433

12/17/2018
SHEET **7** OF **8**

WETLANDS IN BUFFER IMPACTS SUMMARY

SITE NO.	STATION (FROM/TO)		WETLANDS IN BUFFERS	
			ZONE 1 (ft ²)	ZONE 2 (ft ²)
			0	0
TOTAL:			0	0

N.C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS

 Beaufort County
 PROJECT: 38362.1.FD2
 B-4433

 12/17/2018
 SHEET **8** OF **8**



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS



(Version 2.08; Released April 2018)

WBS Element: 17BP.2.R.93 TIP No.: B-4433 County(ies): Beaufort Page 1 of 1

General Project Information

WBS Element:	38362.1.FD2	TIP Number:	SF-060040	Project Type:	Bridge Replacement	Date:	5/31/2018
NCDOT Contact:	William (Galen) G. Cail, PE		Contractor / Designer:		TGS Engineers (Ben Henegar, PE)		
Address:	1590 Mail Service Center Raleigh, NC 27699-1590		Address:	706 Hillsborough Street Suite 200 Raleigh, NC 27603			
	Phone: 919-707-6711			Phone: 919-773-8887 ext. 123			
	Email: gcail@ncdot.gov			Email: bhenegar@tgsengineers.com			
City/Town:	Edward		County(ies):	Beaufort			
River Basin(s):	Tar-Pamlico		CAMA County?	Yes			
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	625.00	Surrounding Land Use:	Forest, Cropland, and Rural Residential					
	Proposed Project			Existing Site				
Project Built-Upon Area (ac.)	0.4	ac.	0.3	ac.				
Typical Cross Section Description:	Two 10' paved travel lanes with 2' paved shoulders (4.83' with guardrails).			Two 10' paved travel lanes with 5'-10' grassed shoulders.				
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	300	Year:	2016	Existing:	300	Year:	2016

General Project Narrative:
(Description of Minimization of Water Quality Impacts)

Replacement of Bridge No. 060040 on SR 1932 (Mary's Chapel Church Rd.) over Durham Creek Tributary in Beaufort County, NC. The proposed 85' long by 30' wide two span bridge would replace the existing 61' long by 26' wide two span bridge. The proposed grade will be about 1' above existing ground within the vicinity of the bridge and roughly matching existing ground outside of the bridge.

Bridge No. 060040 is within the Tar-Pamlico River Drainage Basin and shall adhere to the Tar-Pamlico Buffer Rules. The proposed bridge will have no direct discharge into Durham Creek Tributary. Stormwater runoff from the the proposed bridge is to flow to two traffic bearing grated inlets at the north end of the bridge where it will be diffused with a riprap pad at the proposed pipe outlet. All proposed runoff is discharged as far away from the stream and at the lowest velocities as practicable. The proposed deck runoff will outlet outside of buffers.

Waterbody Information

Surface Water Body (1):	Durham Creek Tributary		NCDWR Stream Index No.:	29-21-(1)				
NCDWR Surface Water Classification for Water Body	Primary Classification:		Class C					
	Supplemental Classification:		Nutrient Sensitive Waters (NSW)					
Other Stream Classification:								
Impairments:	None							
Aquatic T&E Species?	No	Comments:						
NRTR Stream ID:	N/A			Buffer Rules in Effect:		Tar-Pamlico		
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	No	Dissipator Pads Provided in Buffer?				No
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)								