

March 30, 2016

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

ATTN: Ms. Crystal Amschler

NCDOT Coordinator

Subject: Application for Section 404 Nationwide Permit 23 and 33 and Section 401

**Water Quality Certification** for the proposed replacement of Bridge No. 8 over Brown Creek on SR 1627 in Anson County, Federal Aid Project No. BRZ-1627(13), Division 10, TIP No. B-2506, Debit \$240 from WBS 32638.1.1.

Dear Madam:

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 8 over Brown Creek with a 125' long, two-span cored slab bridge 13 feet downstream of the existing alignment. Traffic will be maintained during construction via an off-site detour.

As a result of the bridge replacement and slight alignment shift, there will be <0.01 acre (33 linear feet) of temporary stream impacts, 0.09 acre of permanent fill in wetlands and 0.03 acre of mechanized clearing in wetlands.

Please see enclosed copies of the Pre-Construction Notification (PCN), DMS acceptance letter, stormwater management plan, permit drawings and design plans for the above-referenced project. The Categorical Exclusion (CE) was completed on January 29, 2015 and distributed shortly thereafter. Additional copies are available upon request.

This project calls for a letting date of September 20, 2016 and a review date of August 2, 2016; however, the let date may advance as additional funding becomes available.

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 Erin Cheely at (919) 707-6108.

Sincerely,

Philip S. Harris III, P.E., C.P.M. Natural Environment Section Head

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 Corps:	the	⊠ Section 404 Permit ☐ Secti	on 10 Permit		
1b.	Specify Nationwide Permit (NWP	) number: 2	23 & 33 or General Permit (GP) no	umber:		
1c.	Has the NWP or GP number bee	n verified b	y the Corps?	☐ Yes	⊠ No	
1d.	Type(s) of approval sought from	the DWQ (	check all that apply):			
		n – Regula	r Non-404 Jurisdictiona	al General Permi	t	
	☐ 401 Water Quality Certification	n – Expres	s Riparian Buffer Autho	orization		
1e.	Is this notification solely for the rebecause written approval is not r		For the record only for DWQ 401 Certification:	For the record	only for Corps Permit:	
			☐ Yes	☐ 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.	g. Is the project located in any of NC's twenty coastal counties. If yes, answer 1h below.			Yes	⊠ No	
1h.	1h. Is the project located within a NC DCM Area of Environmental Concern (AEC)?			Yes	⊠ No	
2.	Project Information					
2a.	Name of project:	Replacem	nent of Bridge 8 over Brown Creek o	n SR 1627		
2b.	County:	Anson				
2c.	Nearest municipality / town:	Ansonville	)			
2d.	Subdivision name:	not applic	able			
2e.	NCDOT only, T.I.P. or state project no:	B-2506				
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:	eet address: 1598 Mail Service Center				
3e.	City, state, zip:	, state, zip: Raleigh, NC 27699-1598				
3f.	Telephone no.:	(919) 707	-6108			
3g.	Fax no.:	(919) 212	-5785			
3h.	n. Email address: ekcheely@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:				

В.	Project Information and Prior Project History					
1.	Property Identification					
1a.	Property identification no. (tax PIN or parcel ID):	not applicable	1			
1b.	Site coordinates (in decimal degrees):	Latitude: 35.0 (DD.DDD		Longitude: - 80.052803 (-DD.DDDDDD)		
1c.	Property size:	1 acre				
2.	Surface Waters					
2a.	Name of nearest body of water (stream, river, etc.) to proposed project:	Brown Creek				
2b.	Water Quality Classification of nearest receiving water:	С				
2c.	River basin:	Yadkin-Pee D	ee			
3.	Project Description	l				
3a.	Describe the existing conditions on the site and the general lar application:					
	The land use within the vicinity of the project consists of about 60% forest land, 10% developed or disturbed lands (roadsides and residential areas), and 30% cultivated land (agricultural fields and pastures). The project is located within the Pee Dee National Wildlife Refuge.					
3b.	List the total estimated acreage of all existing wetlands on the	property:				
	0.95					
3c.	c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property:  2340					
3d.	d. Explain the purpose of the proposed project:					
	The purpose of this project is to replace a structurally deficient bridge (sufficiency rating 19.2 out of 100).					
3e.	e. Describe the overall project in detail, including the type of equipment to be used:					
	The project involves replacing an 81-foot two-span bridge with of the existing alignment. All traffic will be detoured off-site duas 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: PJD package substituted June 2015. Site visit	⊠ Yes	□No	Unknown		
4b.	with Crystal Amschler on 6/24/15 to confirm resources.  If the Corps made the jurisdictional determination, what type of determination was made?	☐ Preliminary	/ ☐ Final			
<b>4</b> c	If yes, who delineated the jurisdictional areas?	Agency/Const	ultant Company	r		
10.	Name (if known): NCDOT and CEI	Other:	andri Gompani	•		
4d.	d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation.  See 4a above. During the June 2015 JD site visit, we determined that the PJD could be issued during permitting. The					
5.	NCDOT requests a PJD with this permit application.  Project History					
	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.	l				
6.	Future Project Plans					
	Is this a phased project?	Yes	⊠ No			
	If yes explain					

C. Proposed Im	C. Proposed Impacts Inventory					
1. Impacts Sumi	mary					
1a. Which sections	s were completed I	below for your project	(check all that	apply):		
		Streams - tributaries	□в	uffers		
☐ Open Wate	rs 🔲	Pond Construction				
2. Wetland Impa	cts					
•		d on the site, then cor	nplete this que	stion for each wetland	area impacte	ed.
2a.	2b.	2c.	2d.	2e.		2f.
Wetland impact number –	Type of impact	Type of wetland	Forested	Type of jurisd (Corps - 404		Area of impact
Permanent (P) or	Type of impact	(if known)	1 0100104	DWQ – non-404		(acres)
Temporary (T)		WD - Bottomland	⊠ Yes	□ Corps		
Site 1 🛛 P 🗌 T	Fill	Hardwood Forest		□ DWQ		<0.01
Site 1 ⊠ P □ T	Mechanized	WD - Bottomland	⊠ Yes	□ Corps		<0.01
One i Zi Li	Clearing	Hardwood Forest	□ No	DWQ		<b>VO.01</b>
Site 2 ⊠ P □ T	Mechanized Clearing	WE - Bottomland Hardwood Forest	⊠ Yes □ No	☐ Corps		<0.01
0:4- 2 M D D T	,	WC - Bottomland	⊠ Yes	☐ Corps		0.04
Site 3 🛛 P 🗌 T	Fill	Hardwood Forest	□No	☐ DWQ		0.04
Site 3 ⊠ P □ T	Mechanized	WC - Bottomland Hardwood Forest	⊠ Yes	⊠ Corps		<0.01
	Clearing	WB - Bottomland	☐ No ☐ Yes	☐ DWQ ☑ Corps		
Site 4 🛛 P 🗌 T	Fill	Hardwood Forest	□ No	☐ DWQ		0.05
Site 4 ⊠ P □ T	Mechanized	WB - Bottomland				0.02
	Clearing	Hardwood Forest	☐ No	DWQ		
				2g. Total wetla	nd impacts	0.12 Permanent 0 Temporary
2h. Comments: Ro	unded total is sum	of actual impacts. A	II wetlands ripa	rian.		
3. Stream Impac		<u> </u>	•			
If there are perennia	al or intermittent stre	eam impacts (including	temporary impa	acts) proposed on the s	ite, then comp	olete this question
for all stream sites in 3a.	mpacted. 3b.	20	24	20	3f.	3g.
Stream impact	Type of impact	3c. Stream name	3d. Perennial	3e. Type of jurisdiction	Average	Impact length
number -			(PER) or	(Corps - 404, 10	stream	(linear feet)
Permanent (P) or Temporary (T)			intermittent (INT)?	DWQ – non-404, other)	width (feet)	
romporary (1)	_		, , ,	•	(ICCI)	
Site 5 ☐ P ⊠ T	Temporary Work Bridge	Brown Creek	⊠ PER   □ INT	│ ☑ Corps │ ☐ DWQ	35	33
0"	Trom Emage		PER	Corps		
Site P T			☐ INT	☐ DWQ		
Site PDT			PER	Corps		
			☐ INT	☐ DWQ ☐ Corps		
Site PTT			INT	☐ DWQ		
3h. Total stream and tributary impacts						
3i. Comments:						(<0.01 ac Temp)
	t surface water im	pacts due to new pier	s in the water =	= <0.01 acre (21.21 sq	ft)	

4. Open	Water In	npacts									
		ed impacts to lakes dually list all open				ies, sounds	s, the	e Atlantic Od	ean, or	any othe	r open water of
4a. Open v impact nu Permaner Tempora	vater ımber – nt (P) or	4b. Name of waterbody (if applicable)	4c.		of impact		4d. Wa	aterbody typ	e 4e		impact (acres)
01 🗌 F	P□T										
O2 □ F	P 🗌 T										
O3 🗌 F	P 🗌 T										
04 🗌 F	P 🗌 T										
4f. Total open water impacts  0 Permanent 0 Temporary											
4g. Comm	4g. Comments: No open water within construction limits.										
5. Pond	5. Pond or Lake Construction										
If pond or	lake cons	struction proposed	, then com	nplete	the chart b	elow.					
5a.	5b.		5c. V	c. Wetland Impacts (acres)			5d. Stream	mpacts	(feet)	5e. Upland (acres)	
Pond ID number		posed use or pose of pond	Flood	ed	Filled	Excavate	ed	Flooded	Filled	Exca vated	Flooded
P1											
P2											
		5f. Total									
5g. Comm	nents:										
5h. Is a dam high hazard permit required?				□Y	es	□No	lf y	yes, permit I	D no:		
5i. Expected pond surface area (acres):											
5j. Size o	of pond w	atershed (acres):									
5k. Metho	od of cons	struction:									

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 <b>MUST</b> fill out Section D of this form.							
6a. Project is in which	protected basin?	☐ Neuse ☐ Catawba	☐ Tar-Pamlico ☐ Randleman	Other:			
6b.	6c.	6d.	6e.	6f.	6g.		
Buffer impact number – Permanent (P) or Temporary (T)	Reason for impact	Stream name	Buffer mitigation required?	Zone 1 impact (square feet)	Zone 2 impact (square feet)		
B1 □ P □ T			☐ Yes ☐ No				
B2 □ P □ T			☐ Yes ☐ No				
В3 □Р□Т			☐ Yes ☐ No				
6h. Total buffer impacts							
6i. Comments: This project is not located within a protected buffer area.							

D.	Impact Justification and Mitigation				
1.	Avoidance and Minimization				
1a.	. Specifically describe measures taken to avoid or minimize the proposed impacts in designing project.				
	The proposed replacement bridge will be very close to the same alignment as the existing bridge and will be slightly longer. This slightly shifted alignment avoids an archaeological resource just upstream of the existing bridge. Three-foot grassed shoulders will be utilized on each side of the road instead of paved shoulders to maximize vegetative conveyance and allow runoff to remain in a diffuse flow patter to encourage passive stormwater treatment. Deck drains will be installed only over land and none installed over the stream on the new bridge to minimize direct discharge. Deck drain dissipator pads provided under deck drains and rip rap at pipe outlets will provide energy dissipation and encourage diffuse flow pattern.				
1b.	Specifically describe measures taken to avoid or minimize t	he proposed imp	oacts t	hrough construction techniques.	
	Traffic will be maintained via an off-site detour during const causeway which will minimize temporary impacts. Best Ma to attempt to reduce the stormwater impacts to the receiving	nagement Pract	ices (E	BMPs) will be utilized during construction	
2.	Compensatory Mitigation for Impacts to Waters of the U	J.S. or Waters of	of the	State	
2a.	Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?		□ No		
2b.	If yes, mitigation is required by (check all that apply):	⊠ DWQ	⊠ Co	rps	
2c.	If yes, which mitigation option will be used for this project?	<ul> <li>☐ Mitigation bank</li> <li>☑ Payment to in-lieu fee program</li> <li>☐ Permittee Responsible Mitigation</li> </ul>			
3.	. Complete if Using a Mitigation Bank				
3a.	Name of Mitigation Bank: not applicable				
3b.	Credits Purchased (attach receipt and letter)	Туре		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	Co.	ol	
4d.	Buffer mitigation requested (DWQ only):	0 square feet			
4e.	Riparian wetland mitigation requested:	0.12 acre			
4f.	Non-riparian wetland mitigation requested:	0 acres			
4g.	Coastal (tidal) wetland mitigation requested:	0 acres			
The	4h. Comments: The NCDOT does not propose mitigation for the 33 linear feet (<0.01 acre) of temporary stream impacts. These impacts do not require permanent fill in the stream bed and, therefore, under Section 404 of the Clean Water Act, do not constitute Loss of Waters of the U.S. and are not subject to compensatory mitigation.				
	Complete if Using a Permittee Responsible Mitigation F	Plan			
5a.	5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan.				

6. Buffer I	. Buffer Mitigation (State Regulated Riparian Buffer Rules) – required by DWQ						
•	project result in an impact wit uitigation?	n buffer that requires	☐ Yes				
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.							
	6c.	6d.		6e.			
Zone	Reason for impact	Total impact (square feet)	Multiplier	Required mitigation (square feet)			
Zone 1			3 (2 for Catawba)				
Zone 2			1.5				
		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. Commer	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 not, explain why.  Comments: If required from 1a, see attached buffer permit drawings.	☐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.	td. 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?		al Government water Program nit			
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 Suppl ☐ Other:	y Watershed			
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 coul HQW ORW Session La Other:	nties w 2006-246			
4b.	Has the approved Stormwater Management Plan with proof of approval been attached?	Yes	☐ No N/A			
5.	DWQ 401 Unit Stormwater Review					
5a.	Does the Stormwater Management Plan meet the appropriate requirements?	☐ Yes	□ No N/A			
5b.	Have all of the 401 Unit submittal requirements been met?	☐ Yes	□ No N/A			

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.)	⊠ Yes	□No			
	Comments: Categorical Exclusion (CE) approved 1/29/15					
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	of the violation(s):				
3.	Cumulative Impacts (DWQ Requirement)					
За.	Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality?					
3b.	<ul> <li>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.</li> </ul>					
	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 the proposed project, or available capacity of the subject facility.	arge) of wastewate	er generated from			
	not applicable					

5.	Endangered Species and Designated Critical Habitat (Corps Requirement)					
5a.	Will this project occur in or near an arhabitat?	ea with federally protected species or	⊠ Yes	□No		
5b.	Have you checked with the USFWS c impacts?	oncerning Endangered Species Act	Yes	⊠ No		
5c.	5c. If yes, indicate the USFWS Field Office you have contacted.  ☐ Raleigh ☐ Asheville					
5d.	What data sources did you use to dete Habitat?	ermine whether your site would impact Er	ndangered Species or	Designated Critical		
	As of July 14, 2015 the USFWS lists three federally listed species for Anson County. There is no habitat present for the red-cockaded woodpecker. Surveys were conducted for the Carolina heelsplitter by NCDOT biologists and Jay Mays from USFWS in August 2013 and no individuals were found. Surveys were conducted for Schweinitz's sunflower by NCDOT biologists in August 2011, October 2013 and October 2015 and no individuals were found during any of the surveys. This project will have No Effect on all listed species in Anson County.					
	In July 2015, both the shortnose sturgeon and Atlantic sturgeon were removed from the USFWS list for Anson County but remain listed under the jurisdiction of the National Marine Fisheries Service. Communication with the Division of Marine Fisheries in 2010 and 2014 indicated that this project will not affect either of these species.					
6.	Essential Fish Habitat (Corps Requirement)					
6a.	a. Will this project occur in or near an area designated as essential fish habitat?					
6b.	What data sources did you use to dete	ermine whether your site would impact Es	ssential Fish Habitat?			
	NMFS County Index					
7.	Historic or Prehistoric Cultural Res	ources (Corps Requirement)				
7a.	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)?					
7b.	What data sources did you use to dete	ermine whether your site would impact his	storic or archeological	resources?		
	NEPA Documentation					
8. F	8. Flood Zone Designation (Corps Requirement)					
8a. \	Will this project occur in a FEMA-desig	ınated 100-year floodplain?	⊠ Yes	□No		
8b.	If yes, explain how project meets FEM.	A requirements: NCDOT Hydraulics Unit	coordination with FEM	1A		
8c. \	What source(s) did you use to make th	ne floodplain determination? FEMA Maps				
,	Philip S. Harris, III, P.E. Applicant/Agent's Printed Name	Applicant/Agent's Sign (Agent's signature is valid only if an authorizati		63/28/2016 Date		



### DONALD R. VAN DER VAART

Secretary

March 29, 2016

Mr. Philip S. Harris, III, P.E., PLS Project Development and Environmental Analysis Unit North Carolina Department of Transportation 1598 Mail Service Center Raleigh, North Carolina 27699-1598

Dear Mr. Harris:

Subject: Mitigation Acceptance Letter:

B-2506, Replace Bridge 8 on SR 1627 over Brown Creek, Anson County

The purpose of this letter is to notify you that the Division of Mitigation Services (DMS) will provide the compensatory riparian wetland mitigation for the subject project. Based on the information supplied by you on March 23, 2016, the impacts are located in CU 03040104 of the Yadkin River basin in the Southern Piedmont (SP) Eco-Region, and are as follows:

Yadkin 03040104 SP		Stream			Wetlands		Buffer	(Sq. Ft.)
	Cold	Cool	Warm	Riparian	Non- Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	0	0	0	0.12	0	0	0	0

<sup>\*</sup>Some of the stream and/or wetland impacts may be proposed to be mitigated at a 1:1 mitigation ratio. See permit application for details.

DMS commits to implementing sufficient compensatory riparian wetland mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies in accordance with the 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 DMS.

If you have any questions or need additional information, please contact Beth Harmon at 919-707-8420.

Sincerely,

James B. Stanfill

Credit Management Supervisor

cc:

Ms. Crystal Amschler, USACE - Asheville Regulatory Field Office

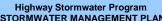
Ms. Amy Chapman, NCDWR

File: B-2506



(If yes, provide justification in the General Project Narrative)

#### **North Carolina Department of Transportation**





General Project Narrative)

STORMWATER MANAGEMENT PLAN FOR NCDOT PROJECTS Version 2.03; Released October 2015) WBS Element: 32638.1.1 TIP No.: B-2506 County(ies): Anson Page **General Project Information** WBS Element: 32638.1.1 TIP Number: Date: 11/23/2015 B-2506 Project Type: Bridge Replacement NCDOT Contact: William S. Zerman, PE Contractor / Designer: Address: NC DOT Hydraulics Unit Address: 1590 Mail Service Center Raleigh, NC 27699 Phone: 919-707-6755 Phone: Email: bzerman@ncdot.gov Email: City/Town: Ansonville County(ies): Anson River Basin(s): Yadkin-Pee Dee CAMA County? No Wetlands within Project Limits? Yes **Project Description** Surrounding Land Use: Rural, Pee Dee Wildlife Refuge Project Length (lin. miles or feet): 0.294 Miles **Proposed Project Existing Site** Project Built-Upon Area (ac.) 8.0 0.6 ac. Two 10 ft. lanes with 2 ft to 5'-10" shoulders. Two 9 ft. lanes with 4 ft wide grassed shoulders Typical Cross Section Description: Annual Avg Daily Traffic (veh/hr/day): Design/Future: Year: 2040 Existina: 200 Year: General Project Narrative: The purpose of this project is to replace the structurally deficient bridge #008 on SR 1627 (Pinkston River Rd.) over Brown Creek in Anson County with a new bridge located 13 feet downstream. Three foot grass shoulders are used on each side instead of paved shoulders to maximize vegetative conveyance and allow runoff to remain in a diffuse (Description of Minimization of Water Quality Impacts) flow pattern to encourage passive stormwater treatment. Deck drains have been placed only over land and none over the body of water to route runoff to natural areas and minimized 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. A temporary work bridge will be used instead of a causeway which will minimize impacts. **Waterbody Information** NCDWR Stream Index No.: Surface Water Body (1): 13-20 Primary Classification: Class C NCDWR Surface Water Classification for Water Body Supplemental Classification: Other Stream Classification: Impairments: Aquatic T&E Species? Comments: NRTR Stream ID: Buffer Rules in Effect: Project Includes Bridge Spanning Water Body? Deck Drains Discharge Over Buffer? Dissipator Pads Provided in Buffer? (If yes, describe in the General Project Narrative; if no, justify in the Deck Drains Discharge Over Water Body? (If yes, provide justification in the General Project Narrative)

See Sheet 1-A For Index of Sheets See Sheet I-B For Convetional Symbols 1627 <u> 1627</u> 1634 PROJECT SITE 1649 1634 (52) VICINITY MAP **OFF-SITE DETOUR** 

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

# ANSON COUNTY

LOCATION: BRIDGE 8 OVER BROWN CREEK ON SR 1627 PINKSTON RIVER ROAD

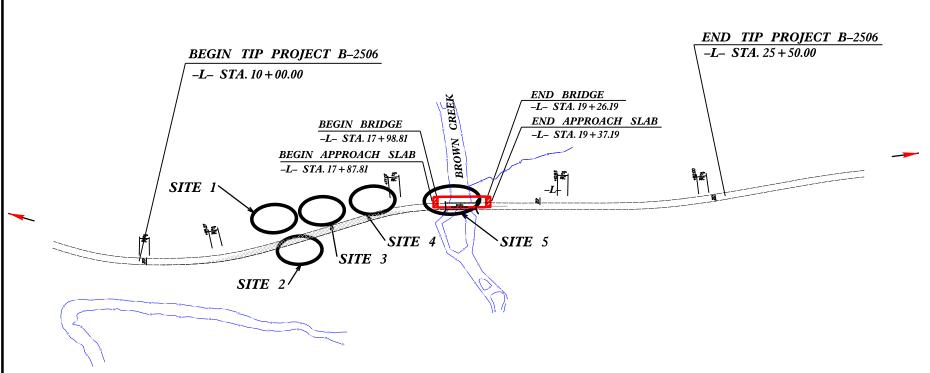
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE

WETLAND AND SURFACE WATER IMPACTS PERMIT

	STATE PROJECT REFERENCE NO.			SHEET NO.	TOTAL SHEETS
N.C.	B-2	2506		1	
STATE	PROJ. NO.	F. A. PROJ. NO.		DESCRIPT	ION
326	38.1.1	BRZ-1627(13)		P.E	
326	38.1.2	BRZ-1627(13)		ROW, U	ITIL

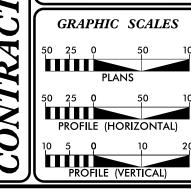
PERMIT DRAWING SHEET 1 OF 7





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



DESIGN DATA ADT 2016 = 200 ADT 2040 = 300DHV = 15 % = 65 % T = 21 % \*V = 60 MPH\* TTST = 2% DUAL 19% FUNC CLASS = RURAL LOCAL SUB-REGIONAL TIER

PROJECT LENGTH

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

2012 STANDARD SPECIFICATIONS RIGHT OF WAY DATE: **SEPTEMBER 18, 2015** 

LETTING DATE: T. F. DUNCAN, PE **SEPTEMBER 20, 2016** 

G. E. BREW, PE

ROADWAY DESIGN **ENGINEER** 

SIGNATURE

HYDRAULICS ENGINEER

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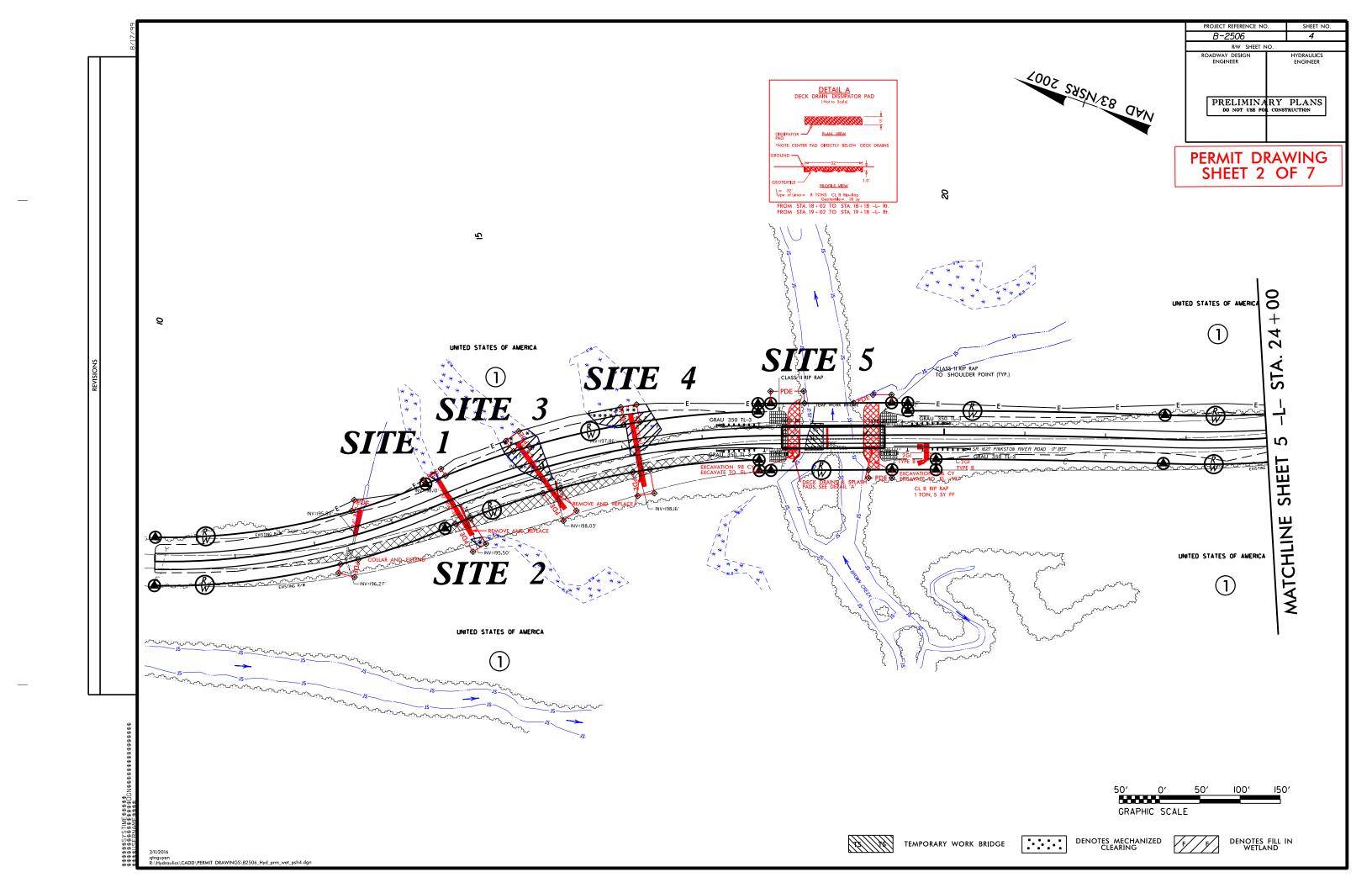
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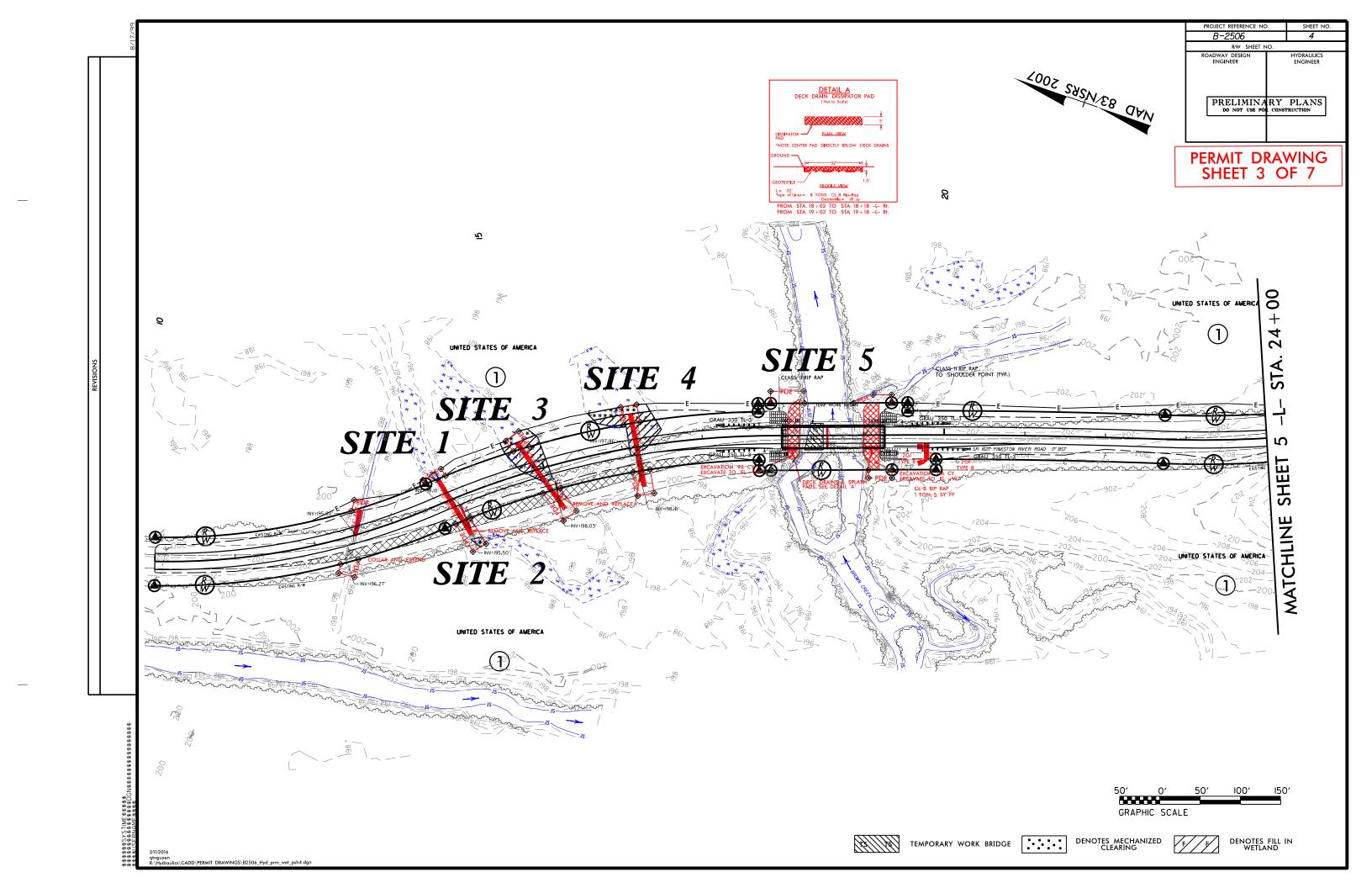
PR

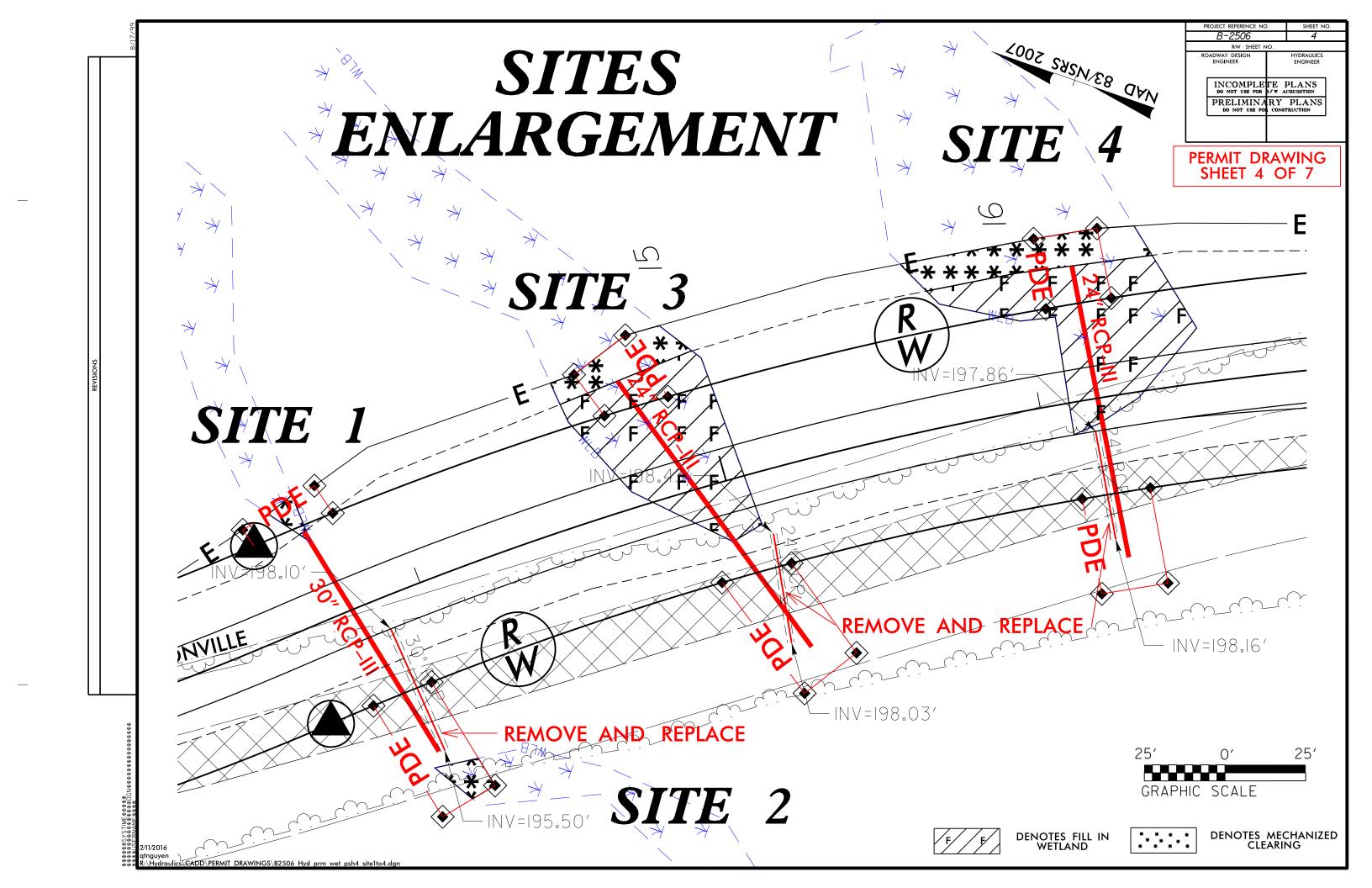
TIP

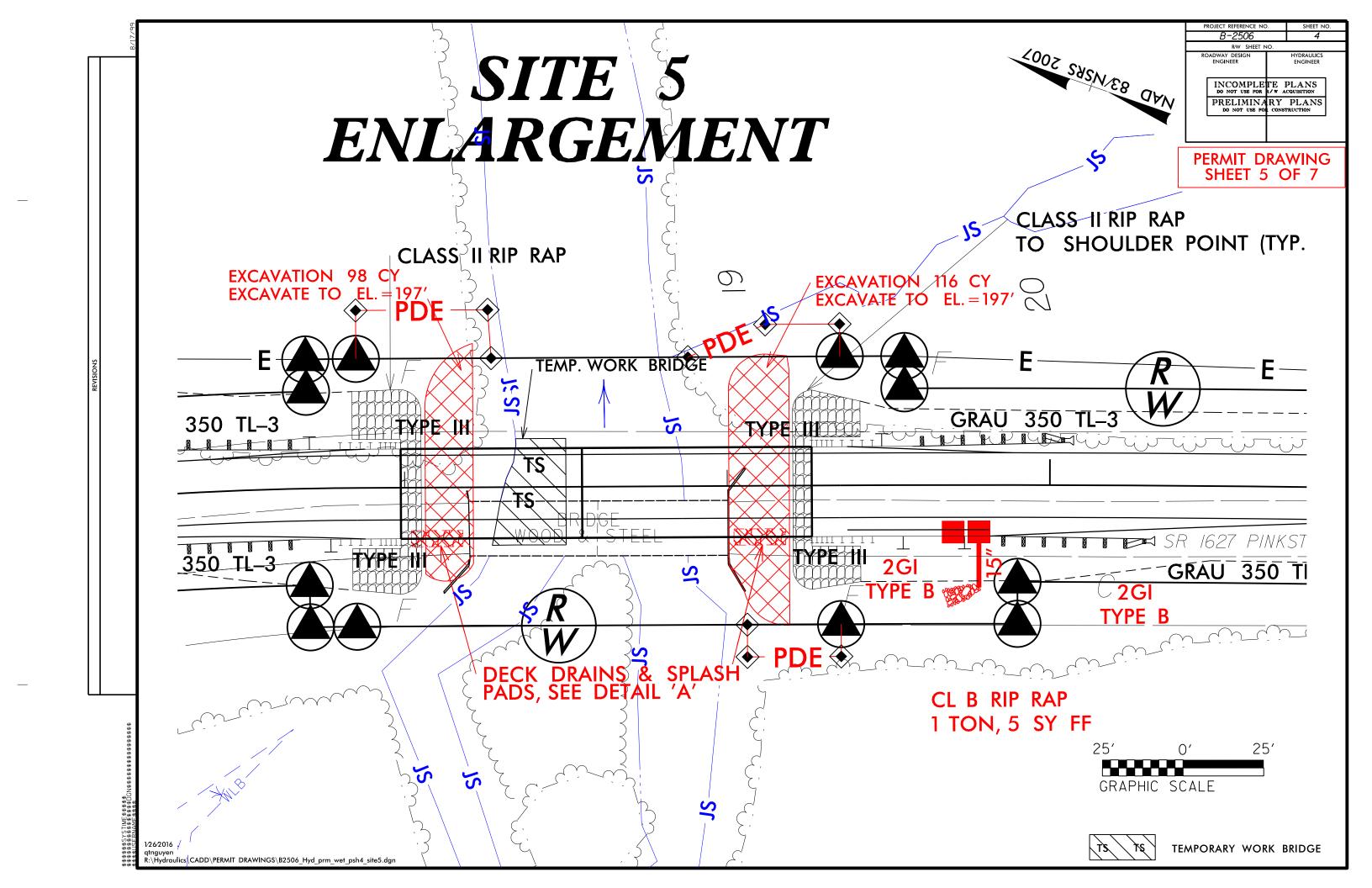
790

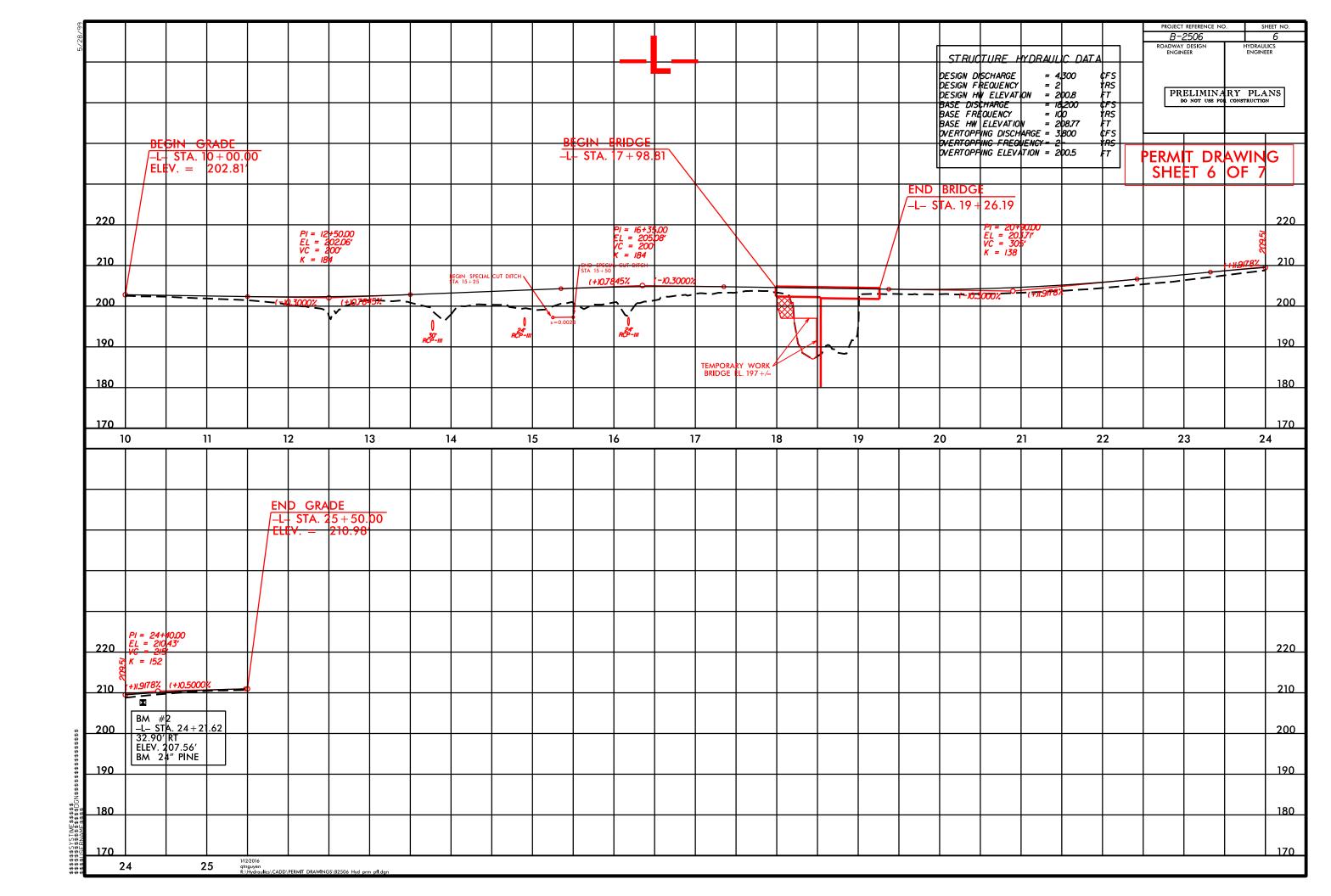
203











					WETLAND	PERMIT IM	PACT SUM	MARY				
					TLAND IMPA			T	SURFA	CE WATER IN	//PACTS	
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	in	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)
1	13+63/13+74 -L-LT	30" RCP	< 0.01	, ,		< 0.01	` ′	` ′		` '	. ,	
2	13+82 / 13+98 -L-RT	WETLAND				< 0.01						
3	14+58 / 15+03 -L-	24" RCP	0.04			< 0.01						
4	15+68/16+51 -L-	24" RCP	0.05			0.02						
5	18+27 / 18+50 -L-	TEMP. WORK BRIDGE							< 0.01		33	
												<u> </u>
TOTALS*	:		0.09			0.03			< 0.01	0	33	0

<sup>\*</sup>Rounded totals are sum of actual impacts

NOTES:

PERMANENT SURFACE WATER IMPACT DUE TO PIER = 21.21 SQ. FT (<0.01 AC)

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
2/11/2016
ANSON
B-2506
32638.1.1

OF

7

7

SHEET

Revised 2013 10 24

See Sheet 1-A For Index of Sheets See Sheet I-B For Convetional Symbols <u>1627</u> <u>1627</u> 2506 1634 PROJECT SITE 1649 2 1634 IE (52)VICINITY MAP OFF-SITE DETOUR BEGIN TIP PROJECT B-2506 -L-STA.10+00.00BEGIN BRIDGE -L- STA. 17 + 98.81 BEGIN APPROACH SLAB -L- STA. 17 + 87.81

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

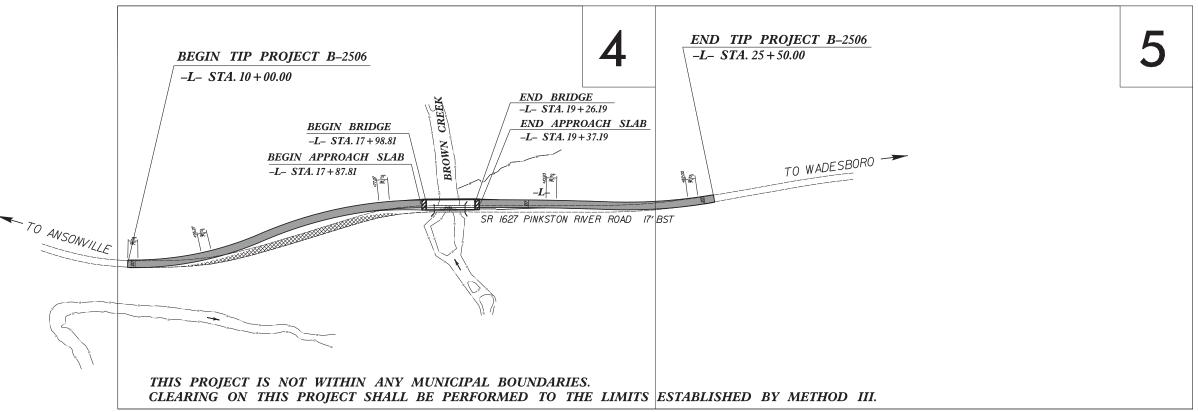
# ANSON COUNTY

LOCATION: BRIDGE 8 OVER BROWN CREEK ON SR 1627 PINKSTON RIVER ROAD

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

STATE	STATE	PROJECT REPERENCE NO.	DESCRIPTI P.E. ROW, U	SHEETS
N.C.	B-2	2506	1	
STAT	E PROJ.NO.	F. A. PROJ. NO.	DESCRIPT	ION
32	638.1.1	BRZ-1627(13)	P.E	
320	638.1.2	BRZ-1627(13)	ROW, U	ITIL





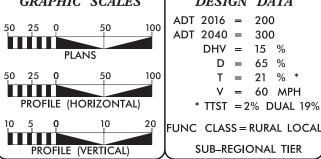
PRELIMINARY PLANS



790

203

GRAPHIC SCALES



DESIGN DATA

ADT 2016 = 200ADT 2040 = 300

DHV = 15 % D = 65 %T = 21 % \*

V = 60 MPH\* TTST = 2% DUAL 19%

SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-2506 = 0.270 MILES LENGTH OF STRUCTURE TIP PROJECT B-2506 = 0.024 MILES LENGTH OF TIP PROJECT B-2506 = 0.294 MILES

2012 STANDARD SPECIFICATIONS RIGHT OF WAY DATE: **SEPTEMBER 18, 2015** 

LETTING DATE: T. F. DUNCAN, PE **SEPTEMBER 20, 2016** 

Prepared in the Office of:

**DIVISION OF HIGHWAYS** 

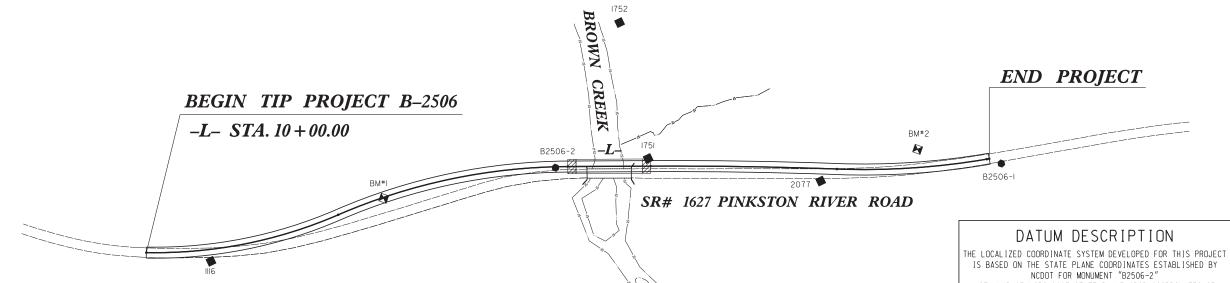
1000 Birch Ridge Dr., Raleigh NC, 27610

G. E. BREW, PE

HYDRAULICS ENGINEER

ROADWAY DESIGN **ENGINEER** 





BL1						
POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1752 E01751	REBAR REBAR	479820.8040 479690.7300	1685245.4020 1685029.8990	199.17 201.07	18+80.35 19+30.84	260.36 LT 13.76 LT
BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1116 2 1751 2077 1	REBAR B2506 - 2 REBAR REBAR B2506 - 1	480377.3210 479843.9240 479690.7300 479382.1030 479083.6230	1684592.9900 1684958.8400 1685029.8990 1685094.3120 1685232.2070	201.67 203.73 201.07 205.95 210.89	11·14.85 17·62.67 19·30.84 22·44.19 OUTSIDE PROJECT	21.65 RT 1.73 RT 13.76 LT 22.86 RT LIMITS

N 480119 E 1684804 L STATION 14+45 2 RIGHT

N 479235 E 1685206 L STATION 24+21 33 LEFT BM 24" PINE

BM 30" OAK

ROW MARKER

ALIGN	STATION	OFFSET	NORTH	EAST
L	10+00.00	-50.00	480508.7101	1684616.9064
L	10+00.00	-32.14	480503.1652	1684599.9331
L	10+59.89	32.24	480424.7894	1684560.1615
L	13+45.78	58.58	480156.7177	1684697.3233
L	13+57.27	-50.00	480221.2108	1684785.4359
L	16+12.48	58.50	479952.5009	1684846.2544
L	17+85.07	-50.00	479840.2292	1685015.2889
L	18+26.78	42.69	479769.9175	1684941.8923
L	19+35.07	-50.00	479698.8692	1685065.4620
L	22+52.00	39.09	479369.8474	1685081.1249
L	22+72.93	-50.00	479376.2087	1685172.4250
L	25+27.19	30.13	479112.9353	1685195.6961
L	25+50.00	-50.00	479131.2363	1685276.9644
L	25+50.00	-30.00	479121.5767	1685259.4519
L	25+50.00	30.00	479092.5976	1685206.9141

NOTE: DRAWING NOT TO SCALE

		_	
TYPE	STATION	NORTH	EAST
PC	10.00.00	480493.1833	1684569.3783
PRC	13+57.27	480187.3251	1684748.6697
PT	17+85.07	479823.5048	1684968.1689
PC	19+35.07	479682.1448	1685018.3420
PRC	22+72.93	479361.4736	1685124.6456
PT	25+45.46	479111.0586	1685230.9924
POT	25+50.00	479107.0871	1685233.1830

#### 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: B2506\_LS\_CONTROL.TXT B2506\_LS\_LOCAL.TXT

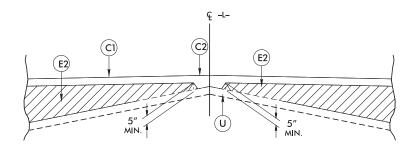
- 2. SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
- 3. PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM, UTILIZING THE NCGS RTN SYSTEM (VRS).

MONUMENTS USED OR SET FOR PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT:

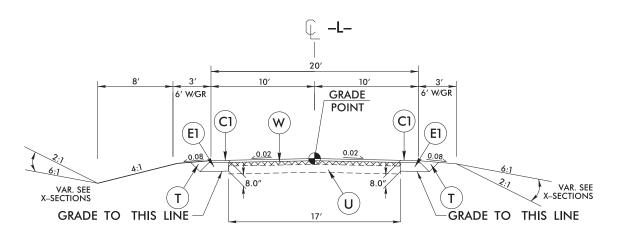
- INDICATES GEODETIC CONTROL MONUMENTS FOR HORIZONTAL CONTROL
- INDICATES BASELINE MONUMENTS FOR HORIZONTAL PROJECT CONTROL
- INDICATES BENCHMARKS FOR VERTICAL CONTROL

Р	A V E M E N T S C H E D U L E
C1	PROP. APPROX. 2.5" 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 1.5" IN DEPTH.
E1	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 5.5" IN DEPTH.
Т	EARTH MATERIAL.
U	EXISTING PAVEMENT.
w	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL).

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



Detail Showing Method of Wedging USE WITH TYPICAL SECTION NO. 1



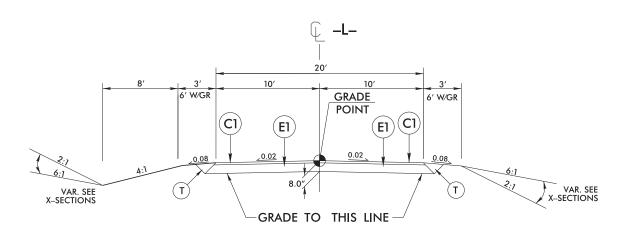
PROJECT REFERENCE NO

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

ROADWAY DESIGN ENGINEER

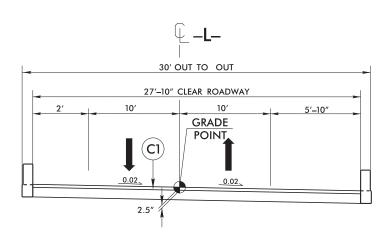
### USE TYPICAL SECTION NO. 1

- -L- STA. 10+00.00 TO STA. 11+50.00 -L- STA. 24+00.00 TO STA. 25+50.00

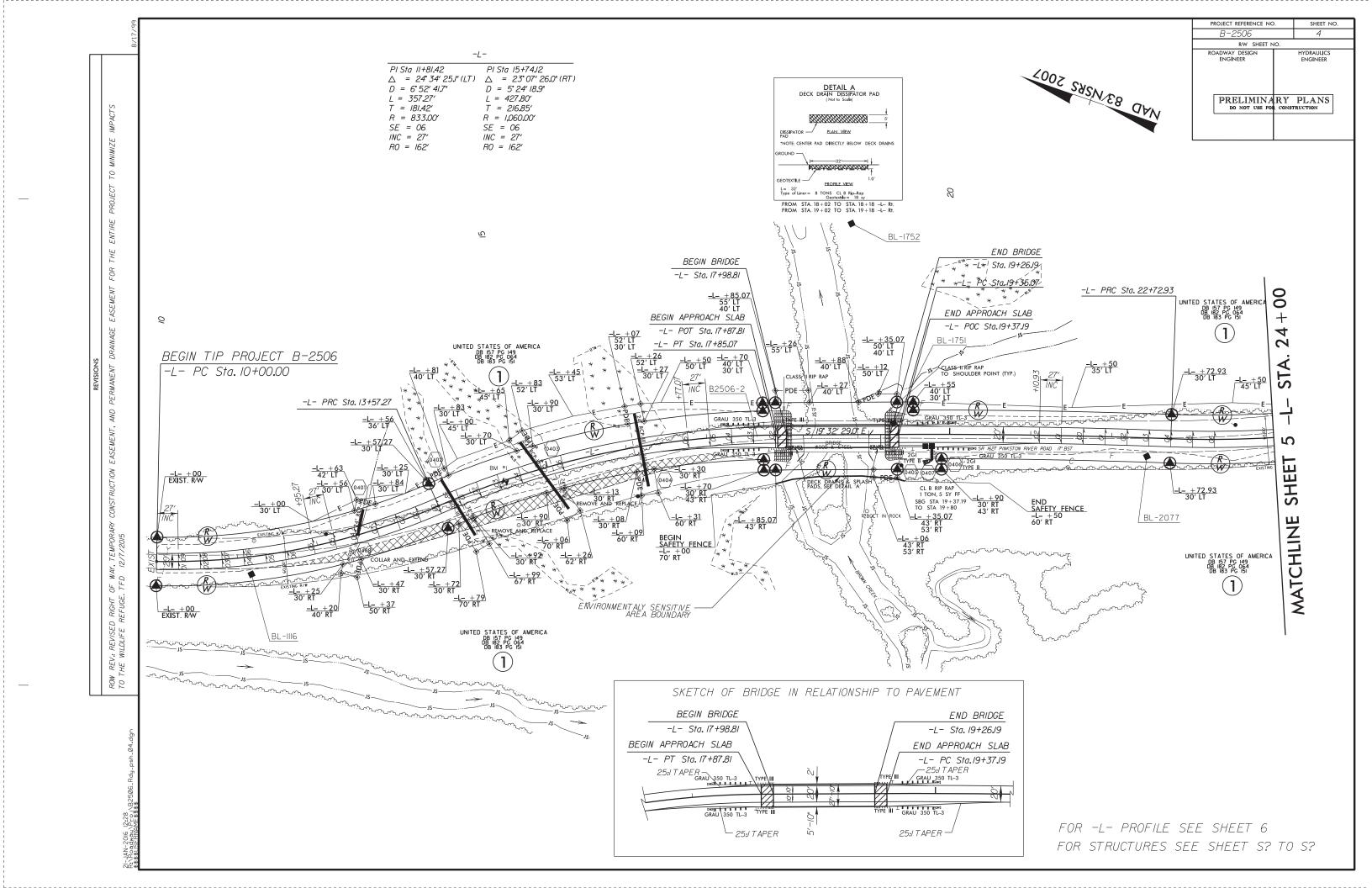


### USE TYPICAL SECTION NO. 2

- -L- STA. 11+50.00 TO STA. 17+98.81 (BEGIN BRIDGE) -L- STA. 19+26.19 (END BRIDGE) TO STA. 24+00.00



USE BRIDGE TYPICAL SECTION NO. 1 -L- STA. 17 + 98.81 TO STA. 19 + 26.19



TOOS SAZNIES DAN

PROJECT REFERENCE NO	٧.	SHEET NO.	
<u>B-2506</u>		<u>5</u>	
R/W SHEET N	10.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINA DO NOT USE POI			

25 END TIP PROJECT B-2506 -L- PT Sta. 25+50.00 -L- PT Sta. 25+45.46 UNITED STATES OF AMERICA DB 157 PG 149 DB 182 PG 064 DB 183 PG 151 24 + 00(1) \_L\_ + 50 / EXIST. R/W STA. 4 SHEET \_\_L\_\_ + 50 EXIST. R/W B2506-I MATCHLINE UNITED STATES OF AMERICA DB 157 PC 149 DB 182 PC 064 DB 183 PC 151 1

 $\begin{array}{rcl}
-L-\\
PI Sta & 24+09.67\\
\Delta & = II^* 44' 26.9'' (LT)\\
D & = 4'' 18' 28.6''\\
L & = 272.54''\\
T & = 136.75''\\
R & = 1,330.00'\\
SE & = 06\\
INC & = 27''\\
R0 & = 162''
\end{array}$ 

FOR THE

CONSTRUCTION EASEMENT.

ROW REV. REVISED RIGHT OF WAY, TEMPORARY TO THE WILDLIFE REFUGE, TFD 12/7/2015

