



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

July 27, 2017

Wilmington Regulatory Field Office
US Army Corps of Engineers
69 Darlington Avenue
Wilmington, North Carolina 28403

ATTN: Ms. Sarah Hair
NCDOT Coordinator

Subject: **Application for Section 404 Nationwide Permit 3 and Section 401 Water Quality Certification** for the Proposed Replacement of Bridges Nos. 133 and 134 over Black River and Black River Overflow on SR 1722 (Three Bridge Road) in Harnett County, North Carolina; TIP No. B-4544; Federal Aid Project No. BRZ-1722 (7); Debit \$275 from WBS No. 38406.1.2

Dear Sirs,

The North Carolina Department of Transportation (NCDOT) proposes to replace the existing 54-foot, three-span bridges Nos. 133 and 134 with 80-foot and 90-foot single-span bridges on existing alignment. Traffic will be maintained using an off-site detour. Permanent impacts to riparian wetlands total 0.2 acre. An additional 21 linear feet of permanent stream impact will occur to the Black River due to bank stabilization. There will be no jurisdictional impacts due to utility relocations.

Please see enclosed copies of the Pre-Construction Notification (PCN), Division of Mitigation Services Acceptance Letter, permit drawings, stormwater management plan, and roadway plans for the above referenced project. A Programmatic Categorical Exclusion (PCE) was completed in August 2016, and distributed shortly after. Additional copies are available at the NCDOT website:

<http://207.4.62.65/PDEA/EnvironmentalDocs/>

This project was let on July 18, 2017 has an availability date of August 28, 2017.

Regulatory Approvals

Section 404 Permit: We anticipate that the bridge replacement, including all approach work will be authorized under Section 404 Nationwide Permit 3 in accordance with Section 404 of the Clean Water Act (33 U.S.C. 1344).

Section 401 Permit: We anticipate 401 General Certification number 4085 will apply to this project. NCDOT is requesting written concurrence from the North Carolina Department of Environmental Quality, Division of Water Resources.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
ENVIRONMENT ANALYSIS UNIT
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 will be posted on the NCDOT Website at <https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx>, under *Quick Links > Permit Applications*. Should you have any questions regarding this information, please contact Jason Dilday at (919) 707-6111 or jldilday@ncdot.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read 'PHS', with a long horizontal flourish extending to the right.

for Philip S. Harris III, P.E., C.P.M., Unit Head
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:	<input checked="" type="checkbox"/> Section 404 Permit	<input type="checkbox"/> Section 10 Permit
1b. Specify Nationwide Permit (NWP) number: 3 or General Permit (GP) number:		
1c. Has the NWP or GP number been verified by the Corps?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1d. Type(s) of approval sought from the DWQ (check all that apply):		
<input checked="" type="checkbox"/> 401 Water Quality Certification – Regular <input type="checkbox"/> Non-404 Jurisdictional General Permit <input type="checkbox"/> 401 Water Quality Certification – Express <input type="checkbox"/> 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: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	For the record only for Corps Permit: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
1g. Is the project located in any of NC's twenty coastal counties. If yes, answer 1h below.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1h. Is the project located within a NC DCM Area of Environmental Concern (AEC)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

2. Project Information

2a. Name of project:	Replacement of Bridges Nos. 133 and 134 on SR 1722 over Black River and Black River Overflow
2b. County:	Harnett
2c. Nearest municipality / town:	Dunn
2d. Subdivision name:	<i>not applicable</i>
2e. NCDOT only, T.I.P. or state project no.:	B-4544

3. Owner Information

3a. Name(s) on Recorded Deed:	North Carolina Department of Transportation
3b. Deed Book and Page No.	<i>not applicable</i>
3c. Responsible Party (for LLC if applicable):	<i>not applicable</i>
3d. Street address:	1598 Mail Service Center
3e. City, state, zip:	Raleigh, NC 27699-1598
3f. Telephone no.:	(919) 707-6111
3g. Fax no.:	(919) 212-5785
3h. Email address:	jldilday@ncdot.gov

4. Applicant Information (if different from owner)	
4a. Applicant is:	<input type="checkbox"/> Agent <input type="checkbox"/> Other, specify:
4b. Name:	<i>not applicable</i>
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:	<i>not applicable</i>
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):	<i>not applicable</i>
1b. Site coordinates (in decimal degrees):	Latitude: 35.347735 (DD.DDDDDD) Longitude: -78.624827 (-DD.DDDDDD)
1c. Property size:	2.4 acres
2. Surface Waters	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Black River
2b. Water Quality Classification of nearest receiving water:	C; Sw
2c. River basin:	Cape Fear
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: The land use is mostly agriculture interspersed with rural residences along roadways and forestland along stream corridors.	
3b. List the total estimated acreage of all existing wetlands on the property: 3.2	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 500 feet perennial	
3d. Explain the purpose of the proposed project: To replace structurally deficient bridges.	
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing the existing 54-foot, three span bridges 133 and 134 with an 80-foot and 90-foot single span structures. The bridges will be replaced on the existing alignment with an off-site detour. 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:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
4b. If the Corps made the jurisdictional determination, what type of determination was made?	<input type="checkbox"/> Preliminary <input type="checkbox"/> Final
4c. If yes, who delineated the jurisdictional areas? Name (if known):	Agency/Consultant Company: Other:
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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
5b. If yes, explain in detail according to "help file" instructions.	
6. Future Project Plans	
6a. Is this a phased project?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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):						
<input checked="" type="checkbox"/> Wetlands		<input checked="" type="checkbox"/> Streams - tributaries		<input type="checkbox"/> Buffers		
<input checked="" type="checkbox"/> Open Waters		<input type="checkbox"/> 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 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Fill/Mechanized Clearing	Riparian	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	0.02	
Site 1 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Excavation	Riparian	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	<0.01	
Site 2 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Fill/Mechanized Clearing	Riparian	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	0.17	
Site 3 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Fill/Mechanized Clearing	Riparian	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	<0.01	
Site <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 1 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
2g. Total wetland impacts					0.20 Permanent	
2h. Comments: See Wetland Permit Impact Summary sheet for details. Hand clearing in riparian wetlands totals 0.04 ac.						
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 2 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Fill	Black River	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	40	21 ft
Site 4 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Fill	Black River	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	40	<0.01 ac
Site 4 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Fill	Black River	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	40	0.02 ac.
Site 4 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 5 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 6 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
3h. Total stream and tributary impacts					21 ft P 0.02 ac.T	

3i. 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)
O2 <input checked="" type="checkbox"/> P <input type="checkbox"/> T		Fill slope	Borrow pit	0.05
O2 <input checked="" type="checkbox"/> P <input type="checkbox"/> T		Fill slope	Swamp/Open water	<0.01
O3 <input type="checkbox"/> P <input checked="" type="checkbox"/> T		Fill slope	Borrow pit/swamp	0.02
O4 <input type="checkbox"/> P <input type="checkbox"/> T				
4f. Total open water impacts				0.05 Permanent 0.02 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?	<input type="checkbox"/> Yes	<input type="checkbox"/> 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?			<input type="checkbox"/> Neuse <input type="checkbox"/> Catawba	<input type="checkbox"/> Tar-Pamlico <input type="checkbox"/> Randleman	<input type="checkbox"/> Other: Jordan
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 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
B1 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
B3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> 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.

The proposed bridges will be longer than the existing bridges; the replacement bridges will be a single spans, so no bents in the water; the proposed bridges will be at approximately the same grade and alignment as the existing structures; the new bridges will have no deck drains or direct discharge to Black River. An off-site detour will be used during construction. 3:1 slopes will be used in wetlands. See Stormwater Management Plan for additional measures.

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

NCDOT Best Management Practices for Construction and Maintenance Activities will be implemented.

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

If no, explain

2b. If yes, mitigation is required by (check all that apply):

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: linear feet

4c. If using stream mitigation, stream temperature: warm cool cold

4d. Buffer mitigation requested (DWQ only): square feet

4e. Riparian wetland mitigation requested: 0.20 acres

4f. Non-riparian wetland mitigation requested: acres

4g. Coastal (tidal) wetland mitigation requested: 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			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. 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
1b. If yes, then is a diffuse flow plan included? If no, explain why. Comments:	<input type="checkbox"/> Yes <input type="checkbox"/> 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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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 permit drawings.	
2e. Who will be responsible for the review of the Stormwater Management Plan?	<input type="checkbox"/> Certified Local Government <input type="checkbox"/> DWQ Stormwater Program <input checked="" type="checkbox"/> DWQ 401 Unit
3. Certified Local Government Stormwater Review	
3a. In which local government's jurisdiction is this project?	N/A
3b. Which of the following locally-implemented stormwater management programs apply (check all that apply):	<input type="checkbox"/> Phase II <input type="checkbox"/> NSW <input type="checkbox"/> USMP <input type="checkbox"/> Water Supply Watershed <input type="checkbox"/> Other:
3c. Has the approved Stormwater Management Plan with proof of approval been attached?	<input type="checkbox"/> Yes <input type="checkbox"/> No
4. DWQ Stormwater Program Review	
4a. Which of the following state-implemented stormwater management programs apply (check all that apply):	<input type="checkbox"/> Coastal counties <input type="checkbox"/> HQW <input type="checkbox"/> ORW <input type="checkbox"/> Session Law 2006-246 <input type="checkbox"/> Other:
4b. Has the approved Stormwater Management Plan with proof of approval been attached?	<input type="checkbox"/> Yes <input type="checkbox"/> No
5. DWQ 401 Unit Stormwater Review	
5a. Does the Stormwater Management Plan meet the appropriate requirements?	<input type="checkbox"/> Yes <input type="checkbox"/> No N/A
5b. Have all of the 401 Unit submittal requirements been met?	<input type="checkbox"/> Yes <input type="checkbox"/> 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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2b. Is this an after-the-fact permit application?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5c. If yes, indicate the USFWS Field Office you have contacted.	<input type="checkbox"/> Raleigh <input type="checkbox"/> 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 Heritage Program database; USFWS website; biological surveys for protected species		
6. Essential Fish Habitat (Corps Requirement)		
6a. Will this project occur in or near an area designated as essential fish habitat?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> 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?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> 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		
for <u>Philip S. Harris III, P.E., C.P.M.</u> Applicant/Agent's Printed Name	_____ Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	<u>07-27-2017</u> Date



ROY COOPER
Governor

June 1, 2017

Mr. Philip S. Harris, III, P.E., CPM
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-4544, Replace Bridge Numbers 133 and 134 over the Black River and the Black River Overflow on SR 1722 (Three Bridge Road), Harnett 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 May 31, 2017, the impacts are located in CU 03030004 of the Cape Fear River basin in the Southern Inner Coastal Plain (SICP) Eco-egion, and are as follows:

Cape Fear 03030004 SICP	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	0	0	0	0.20	0	0	0	0

*Some of the 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 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. Liz Hair, USACE – Wilmington Regulatory Field Office
Ms. Amy Chapman, NCDWR
File: B-4544





North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS



(Version 2.06; Released June 2016)

WBS Element: 38406.1.2 TIP No.: B-4544 County(ies): Harnett Page 1 of 1

General Project Information

WBS Element:	38406.1.2	TIP Number:	B-4544	Project Type:	Bridge Replacement	Date:	3/15/2017
NCDOT Contact:	Paul Atkinson		Contractor / Designer:	Rajender Gaddam, PE, CFM Will Weathersbee, PE			
Address:	1020 Birch Ridge Rd. Raleigh, NC 27610		Address:	1520 South Blvd, Suite 200 Charlotte, NC 28203			
	Phone:	919-707-6707		Phone:	704-940-4785		
	Email:	patkinson@ncdot.gov		Email:	rajender.gaddam@rsandh.com will.weathersbee@rsandh.com		
City/Town:	Dunn		County(ies):	Harnett			
River Basin(s):	Cape Fear		CAMA County?	No			
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	1070 ft.	Surrounding Land Use:	Woods, Residential, Agricultural					
	Proposed Project		Existing Site					
Project Built-Upon Area (ac.)	0.6	ac.	0.5	ac.				
Typical Cross Section Description:	Two 11' lanes with 2' shoulders on the approach, and two 11' lanes with 4'-5" shoulders on the bridge			Two 10' lanes with variable shoulders on the approach, and two 10' lanes with 2' shoulders on the bridge.				
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	1782	Year:	2038	Existing:	1236	Year:	2018
General Project Narrative: (Description of Minimization of Water Quality Impacts)	<p>This is a bridge replacement project. Existing bridge 133 is 3 span and 53' long; existing bridge 134 is 3 span and 53'-6" long. Proposed bridge 133 is a 80' long 33" box beam bridge; proposed bridge 134 is a 90' long 33" box beam bridge.</p> <p>No deck drains were used on either bridge replacement. Both bridges will have 2 drop inlets at the downgrade end of the approach slab to collect deck drainage with a single outlet to the downstream side of the bridge. 3:1 fill slopes are used where practicable to minimize impacts.</p> <p>NCDOT will attempt to avoid and minimize impacts to streams and wetlands to the greatest extent practicable during project design.</p>							

Waterbody Information

Surface Water Body (1):	Black River		NCDWR Stream Index No.:	18-68-12-1			
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:	Black River			Buffer Rules in Effect:	N/A		
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)							

09/28/19

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

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4544	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38406.1.2	BRZ-1722(7)	PE	

HARNETT COUNTY

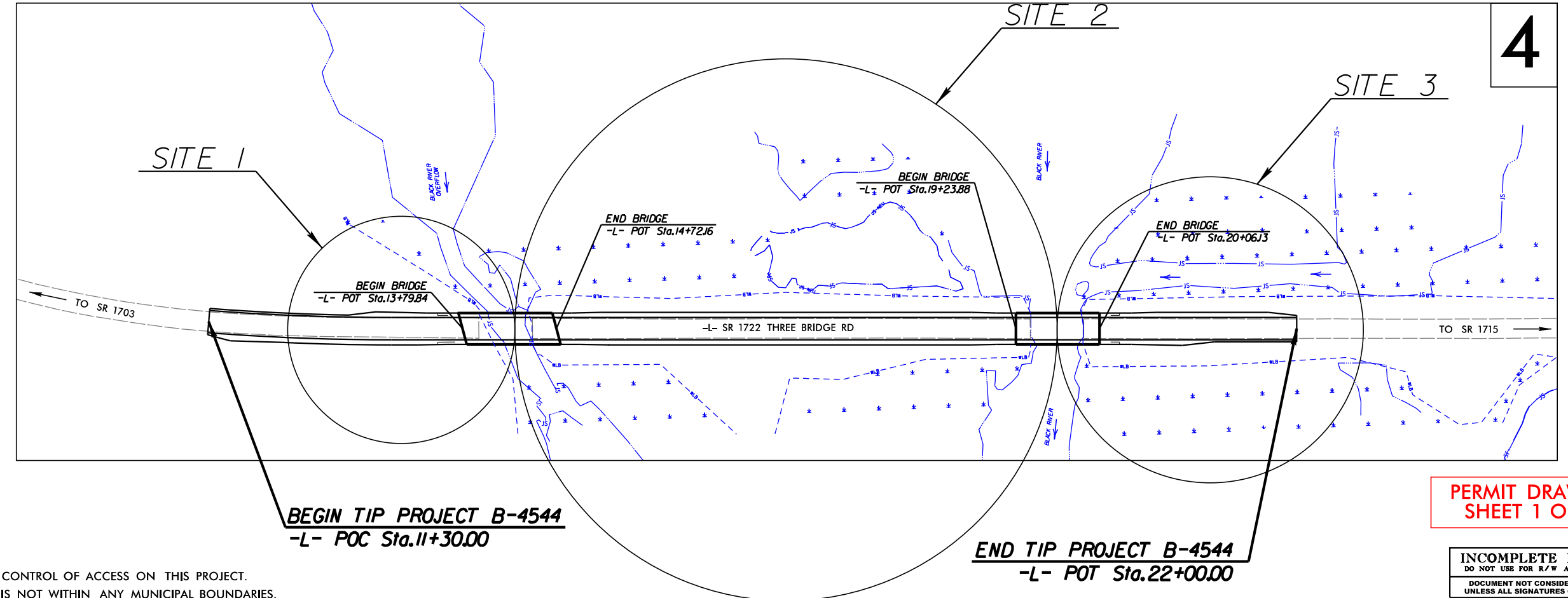
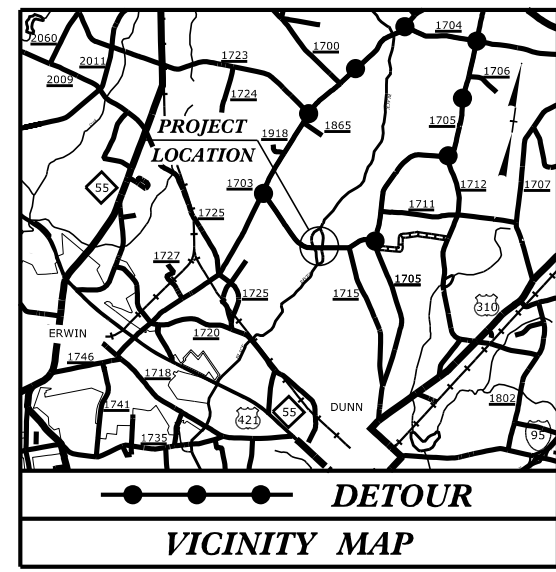
**LOCATION: REPLACE BRIDGES 133 AND 134 OVER
 BLACK RIVER AND BLACK RIVER OVERFLOW
 ON SR 1722 (THREE BRIDGE ROAD)**

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

WETLAND AND SURFACE WATER IMPACTS PERMIT



TIP PROJECT: B-4544

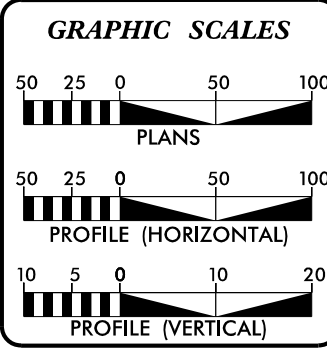


**PERMIT DRAWING
 SHEET 1 OF 10**

**INCOMPLETE PLANS
 DO NOT USE FOR R/W ACQUISITION
 DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.
 THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
 CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II "MODIFIED" W/HAND CLEARING DONE BEYOND THE SLOPE STAKES

CONTRACT:



DESIGN DATA

ADT 2018 =	1,236
ADT 2038 =	1,782
K =	10 %
D =	60 %
T =	6 % *
V =	60 MPH
*(TTST=1% + DUAL=5%)	
FUNC CLASS =	LOCAL
SUB-REGIONAL TIER	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4544	=	0.176 MILES
LENGTH STRUCTURE TIP PROJECT B-4544	=	0.027 MILES
TOTAL LENGTH TIP PROJECT B-4544	=	0.203 MILES

PLANS PREPARED BY:
RS&H 8601 SIX FORKS RD, SUITE 260
 RALEIGH, NC 27615
 919-926-4100

FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
 FEBRUARY 17, 2017

LETTING DATE:
 FEBRUARY 20, 2018

JENNIFER FARINO, PE
 PROJECT ENGINEER

JARED BOND, PE
 PROJECT DESIGN ENGINEER

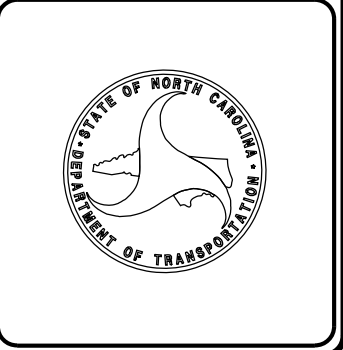
GARY LOVERING, PE
 NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



3/16/2017 R:\Hydrolics\PERMITS_Environmental\Drawings\B4544_hdy_prm_tsh_l.dgn 4:58:25 PM

PROJECT REFERENCE NO. B-4544	SHEET NO. 4
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

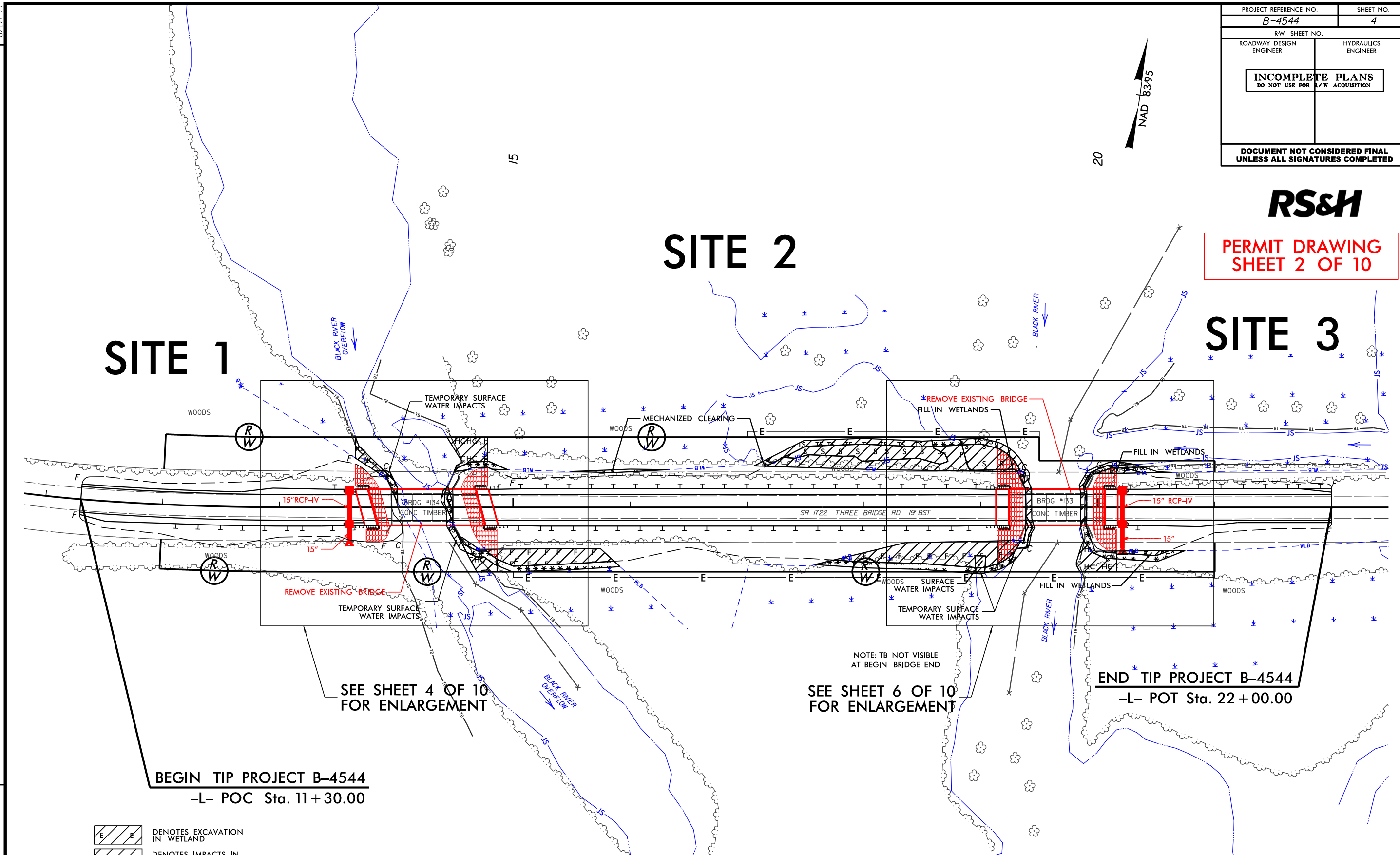
RS&H

PERMIT DRAWING
SHEET 2 OF 10

SITE 3

SITE 2

SITE 1



BEGIN TIP PROJECT B-4544
-L- POC Sta. 11+30.00

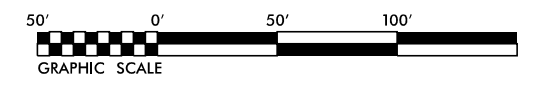
SEE SHEET 4 OF 10
FOR ENLARGEMENT

SEE SHEET 6 OF 10
FOR ENLARGEMENT

END TIP PROJECT B-4544
-L- POT Sta. 22+00.00

NOTE: TB NOT VISIBLE
AT BEGIN BRIDGE END

- DENOTES EXCAVATION IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES FILL IN WETLAND
- DENOTES HAND CLEARING
- DENOTES MECHANIZED CLEARING



REVISIONS
 7/20/2017
 R:\11\1101\1101\PERMITS\Environmental\Drawings\B4544_bud.ecm.psh_2.dgn
 B4544.dwg

8/17/99

PROJECT REFERENCE NO. B-4544	SHEET NO. 4
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

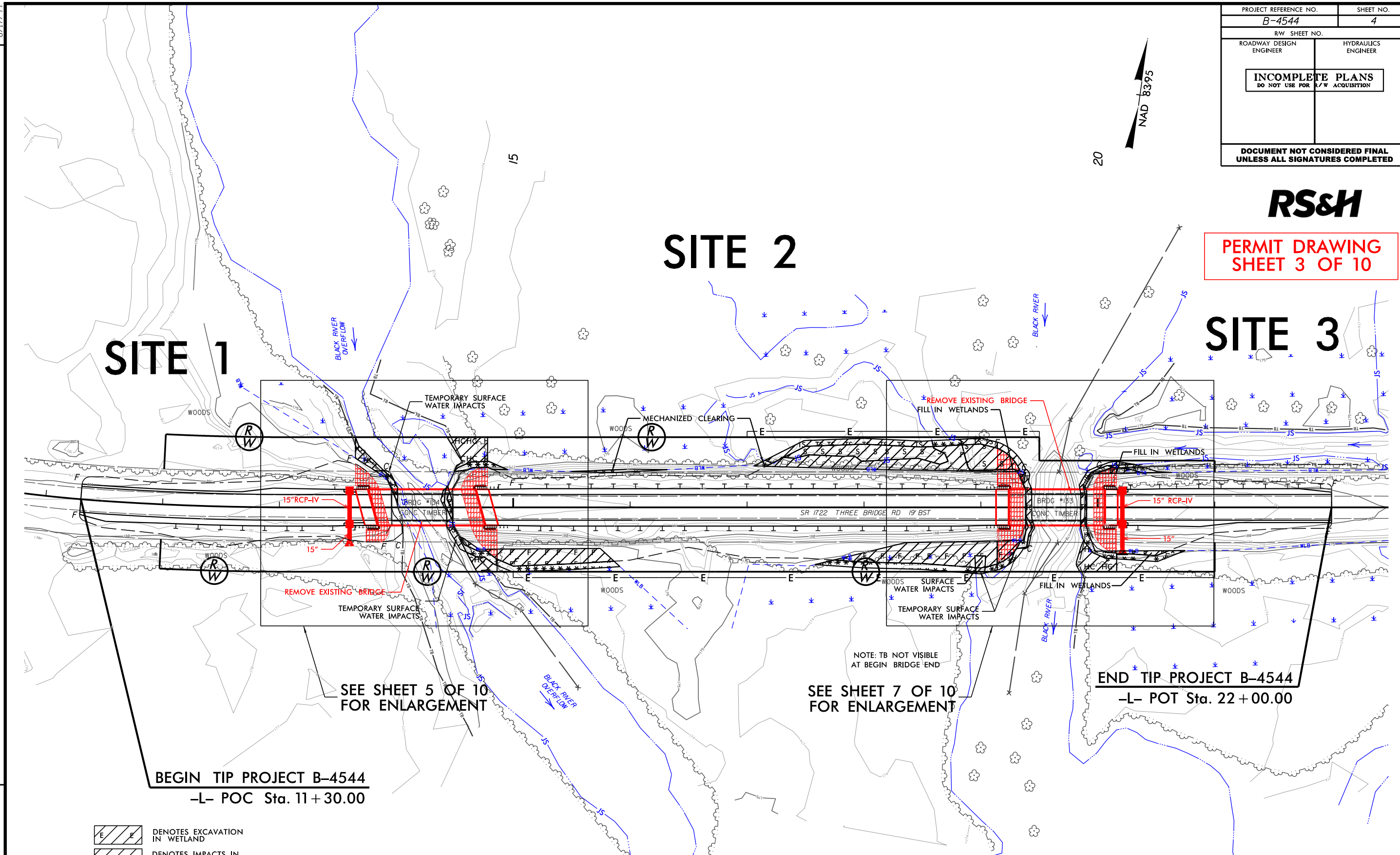
RS&H

PERMIT DRAWING
SHEET 3 OF 10

SITE 3

SITE 2

SITE 1



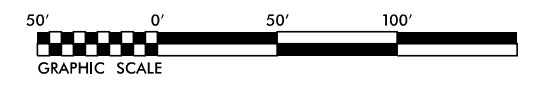
BEGIN TIP PROJECT B-4544
-L- POC Sta. 11 + 30.00

SEE SHEET 5 OF 10
FOR ENLARGEMENT

SEE SHEET 7 OF 10
FOR ENLARGEMENT

END TIP PROJECT B-4544
-L- POT Sta. 22 + 00.00

- DENOTES EXCAVATION IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES FILL IN WETLAND
- DENOTES HAND CLEARING
- DENOTES MECHANIZED CLEARING



REVISIONS

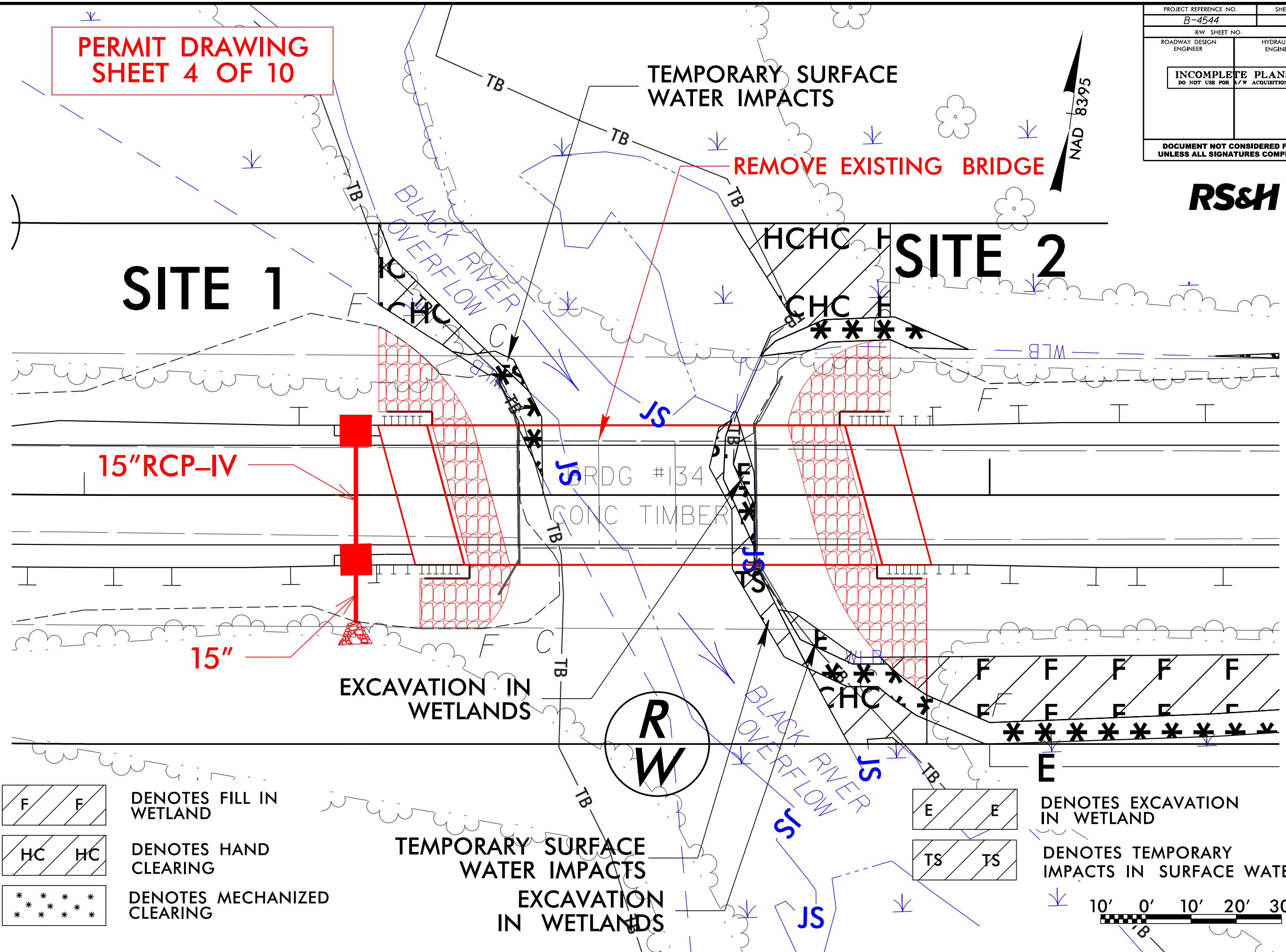
7/28/2017
 R:\1141\114101\PERMITS\Environmental\Drawings\B4544_bud.pcm_psh_3_cont.dgn
 8/17/99


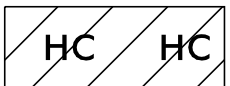
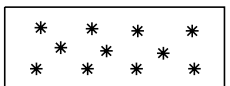
**PERMIT DRAWING
SHEET 4 OF 10**



PROJECT REFERENCE NO. B-4544	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

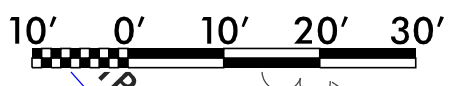
RS&H

NAD 8395



-  DENOTES FILL IN WETLAND
-  DENOTES HAND CLEARING
-  DENOTES MECHANIZED CLEARING

-  DENOTES EXCAVATION IN WETLAND
-  DENOTES TEMPORARY IMPACTS IN SURFACE WATER

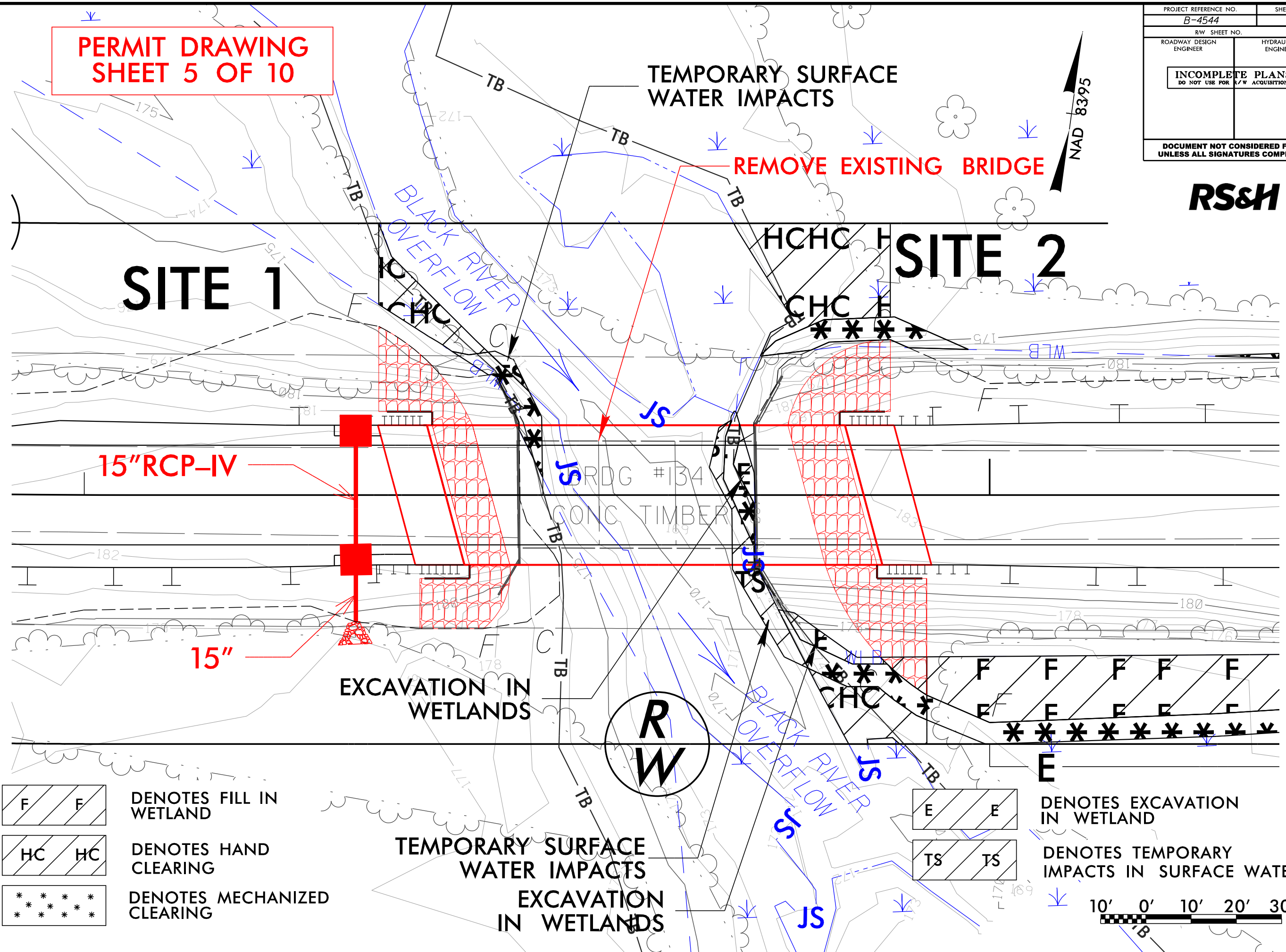


REVISIONS

8/17/99
 3/16/2017
 R:\Projects\PERMITS_Environmental\Drawings\B4544_hyd.ecm_pah_4_enl.ecadgn
 5/24/15

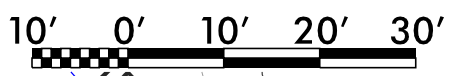
**PERMIT DRAWING
SHEET 5 OF 10**

PROJECT REFERENCE NO. B-4544	SHEET NO. 4
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



- DENOTES FILL IN WETLAND
- DENOTES HAND CLEARING
- DENOTES MECHANIZED CLEARING

- DENOTES EXCAVATION IN WETLAND
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER



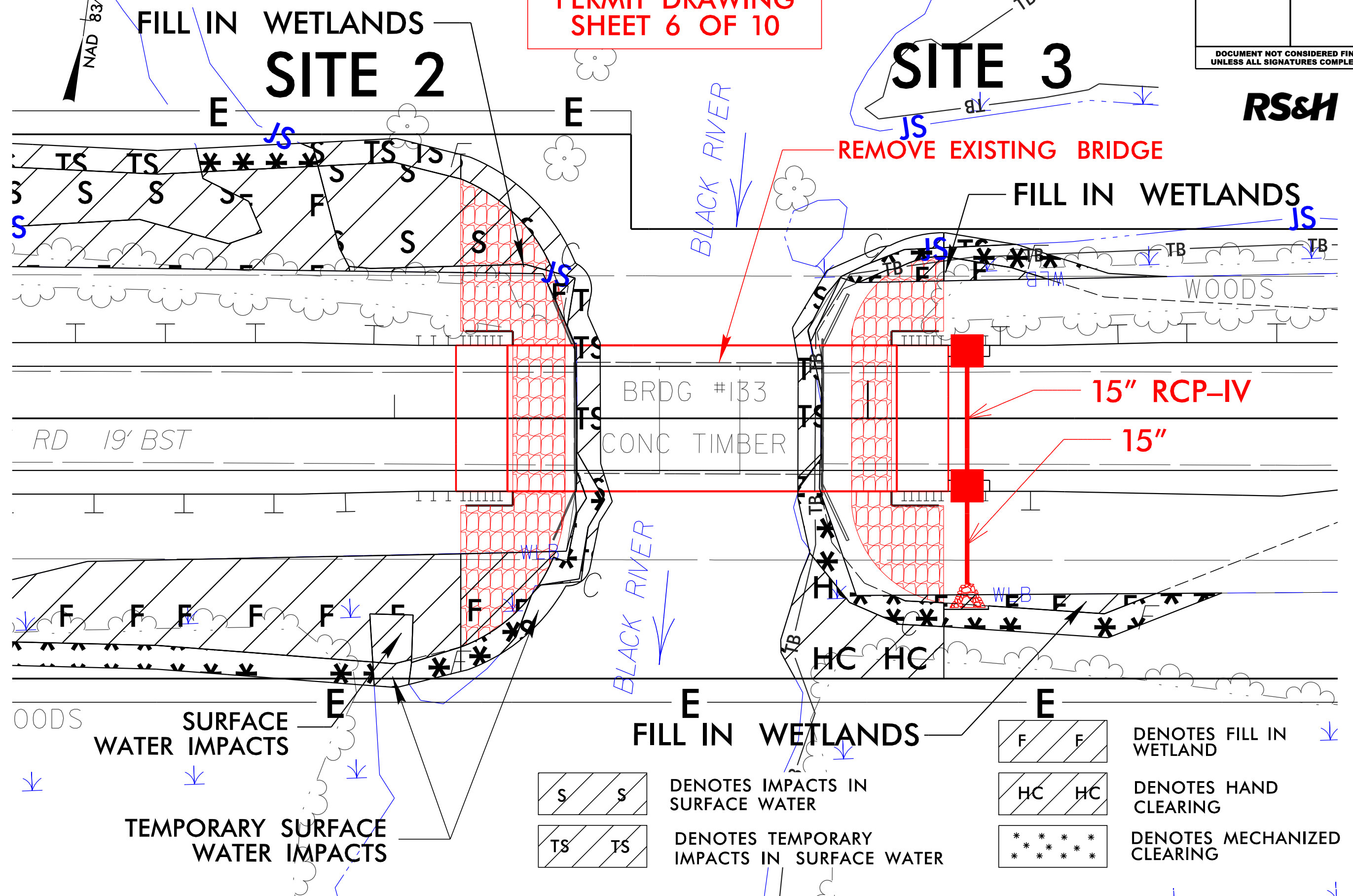
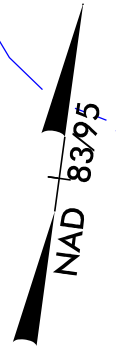
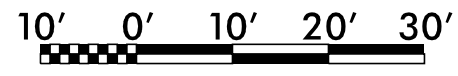
REVISIONS

3/16/2017
R:\Hydro\Projects\PERMITS_Environmental\Drawings\B4544_hyd_perm_pah_4_enlcp_com.dgn
5/20/15 PM

PROJECT REFERENCE NO. B-4544	SHEET NO. 4
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

RS&H

**PERMIT DRAWING
SHEET 6 OF 10**



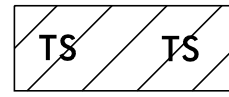
SURFACE WATER IMPACTS

TEMPORARY SURFACE WATER IMPACTS

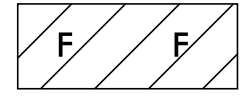
FILL IN WETLANDS



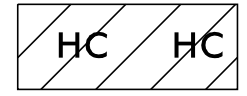
DENOTES IMPACTS IN SURFACE WATER



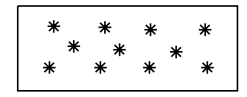
DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES FILL IN WETLAND



DENOTES HAND CLEARING



DENOTES MECHANIZED CLEARING

REVISIONS

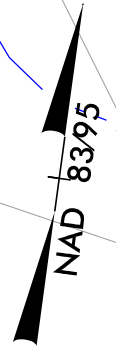
7/20/2017
R:\Projects\PERMITS_Environmental\Drawings\B4544_hyd_perm_psh_4_enr.dgn
8:50:51 AM

PROJECT REFERENCE NO. B-4544	SHEET NO. 4
RW SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

RS&H

**PERMIT DRAWING
SHEET 7 OF 10**

10' 0' 10' 20' 30'

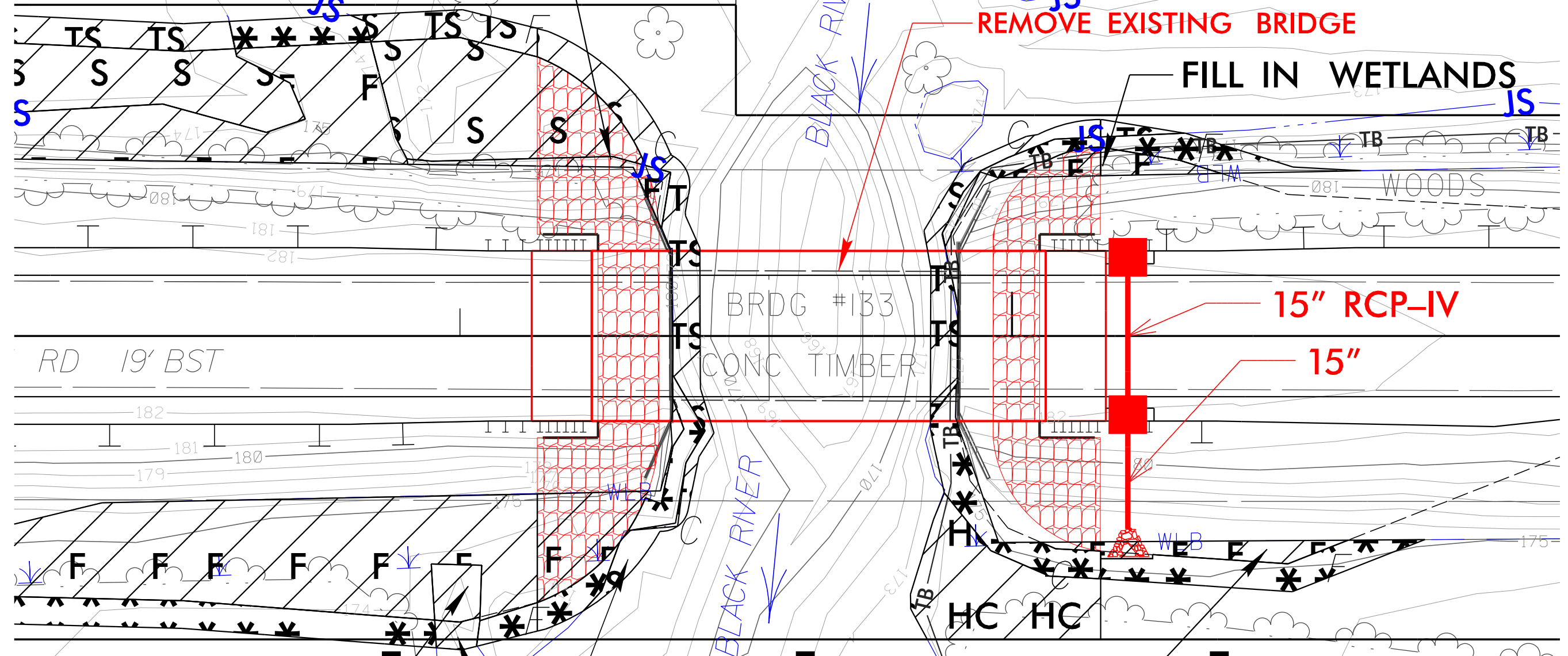


**FILL IN WETLANDS
SITE 2**

SITE 3

REMOVE EXISTING BRIDGE

FILL IN WETLANDS



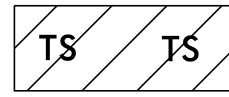
SURFACE WATER IMPACTS

TEMPORARY SURFACE WATER IMPACTS

FILL IN WETLANDS



DENOTES IMPACTS IN SURFACE WATER



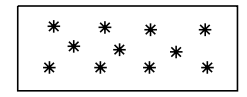
DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES FILL IN WETLAND



DENOTES HAND CLEARING



DENOTES MECHANIZED CLEARING

REVISIONS

7/20/2017 R:\Projects\PERMITS_Environmental\Drawings\B4544_hyd_perm_psh_4_enl.dgn

5/14/99

PROJECT REFERENCE NO. B-4544	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



STRUCTURE HYDRAULIC DATA

DRAINAGE AREA	= 37.4	SQ.MI.
DESIGN DISCHARGE	= 2200	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 177.4	FT
BASE DISCHARGE	= 3300	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 178.3	FT
OVERTOPPING DISCHARGE	= 5575	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 179.2	FT
ESTIMATED NORMAL WATER		
SURFACE ELEVATION	= 173.9 +/-	FT
DATE OF SURVEY	= 12/9/15	
W.S. ELEV. AT DATE OF SURVEY	= 173.9 +/-	FT

STRUCTURE HYDRAULIC DATA

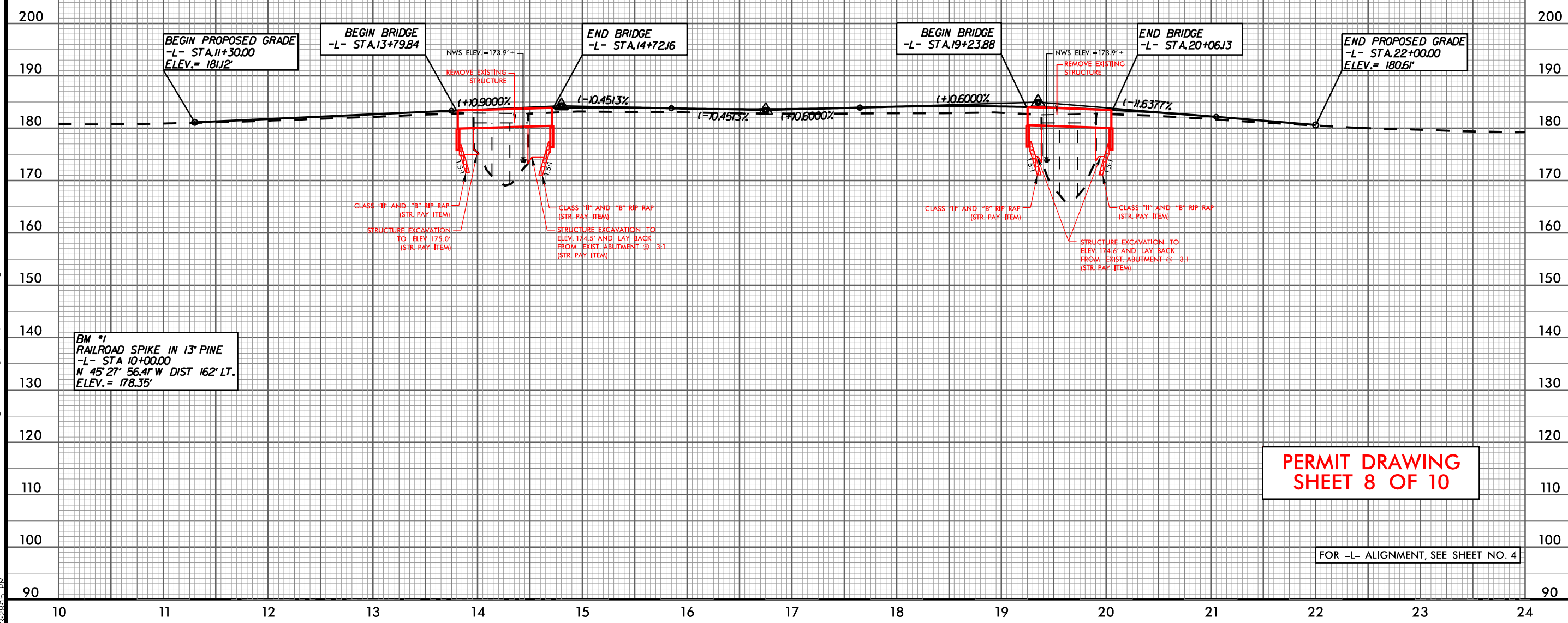
DRAINAGE AREA	= 37.4	SQ.MI.
DESIGN DISCHARGE	= 2200	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 177.4	FT
BASE DISCHARGE	= 3300	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 178.3	FT
OVERTOPPING DISCHARGE	= 5575	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 179.2	FT
ESTIMATED NORMAL WATER		
SURFACE ELEVATION	= 174.2 +/-	FT
DATE OF SURVEY	= 12/9/15	
W.S. ELEV. AT DATE OF SURVEY	= 173.9 +/-	FT

-L-

PI = 14+80.00
EL = 184.27'
VC = 210'
K = 155

PI = 16+75.00
EL = 183.39'
VC = 180'
K = 171

PI = 19+35.00
EL = 184.95'
VC = 340'
K = 152



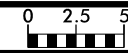
B.M. #1
RAILROAD SPIKE IN 13" PINE
-L- STA 10+00.00
N 45° 27' 56.4" W DIST 162' LT.
ELEV. = 178.35'

**PERMIT DRAWING
SHEET 8 OF 10**

FOR -L- ALIGNMENT, SEE SHEET NO. 4

3/16/2017
 R:\Hydraulics\PERMITS_Environmental\Drawings\B4544_hyd_perm.pfl_6_new.dgn
 3:28:56 PM

WETLAND IMPACTS



PROJ. REFERENCE NO.
B4544

SHEET NO.
X-1

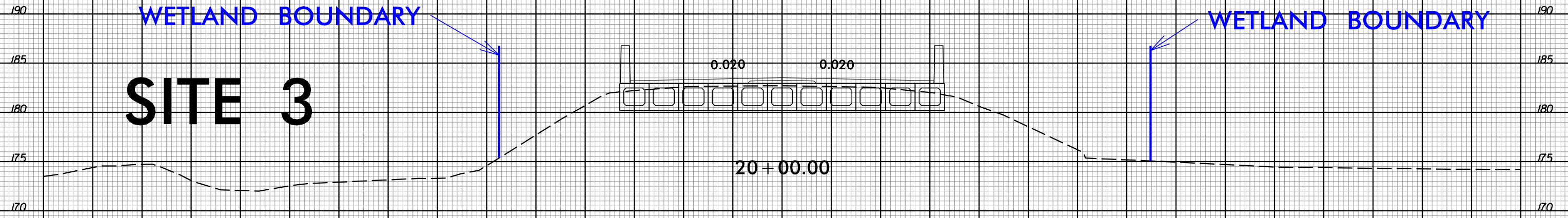
RS&H

**PERMIT DRAWING
SHEET 9 OF 10**

SITE 3

WETLAND BOUNDARY

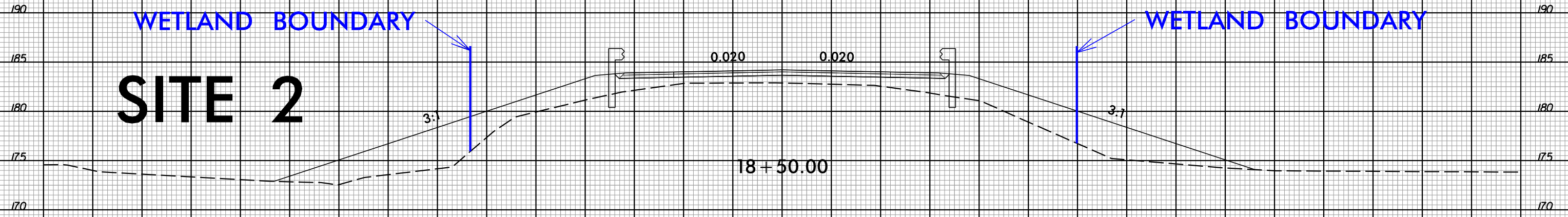
WETLAND BOUNDARY



SITE 2

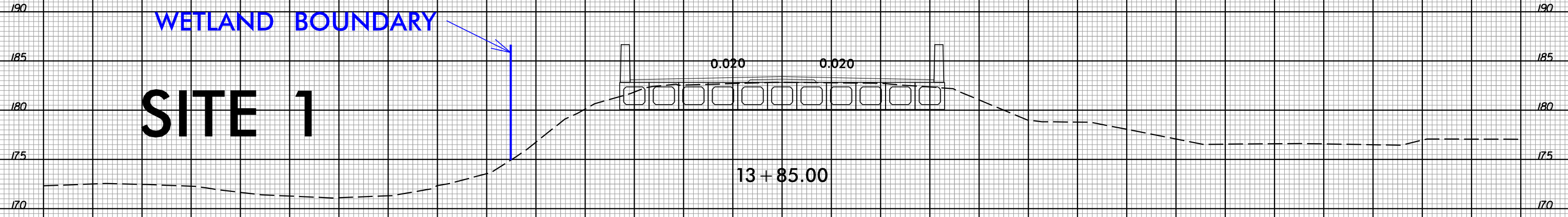
WETLAND BOUNDARY

WETLAND BOUNDARY



SITE 1

WETLAND BOUNDARY



-4-

6/23/16

3/16/2017
S:\Projects\B4544\Drawings\New XPLs\B4544_Hyd_XPL_perm.dgn

WETLAND PERMIT IMPACT 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)
Site 1/2	-L- 13+60 to 14+86	Bridge 134	< 0.01		< 0.01	0.01	0.02		< 0.01		97	
Site 2	-L- 14+86 to 19+14	Roadway Fill Slope	0.11			0.03		0.05	0.02			
Site 2/3	-L- 19+14 to 20+16	Bridge 133	< 0.01			0.01	0.01	< 0.01	0.02	21	81	
Site 3	-L- 20+16 to 20+75	Roadway Fill Slope	< 0.01			< 0.01			< 0.01			
TOTALS*:			0.13		< 0.01	0.07	0.04	0.05	0.04	21	178	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 7/20/2017
 Harnett County
 B-4544
 38406.1.2
 SHEET 10 OF 10

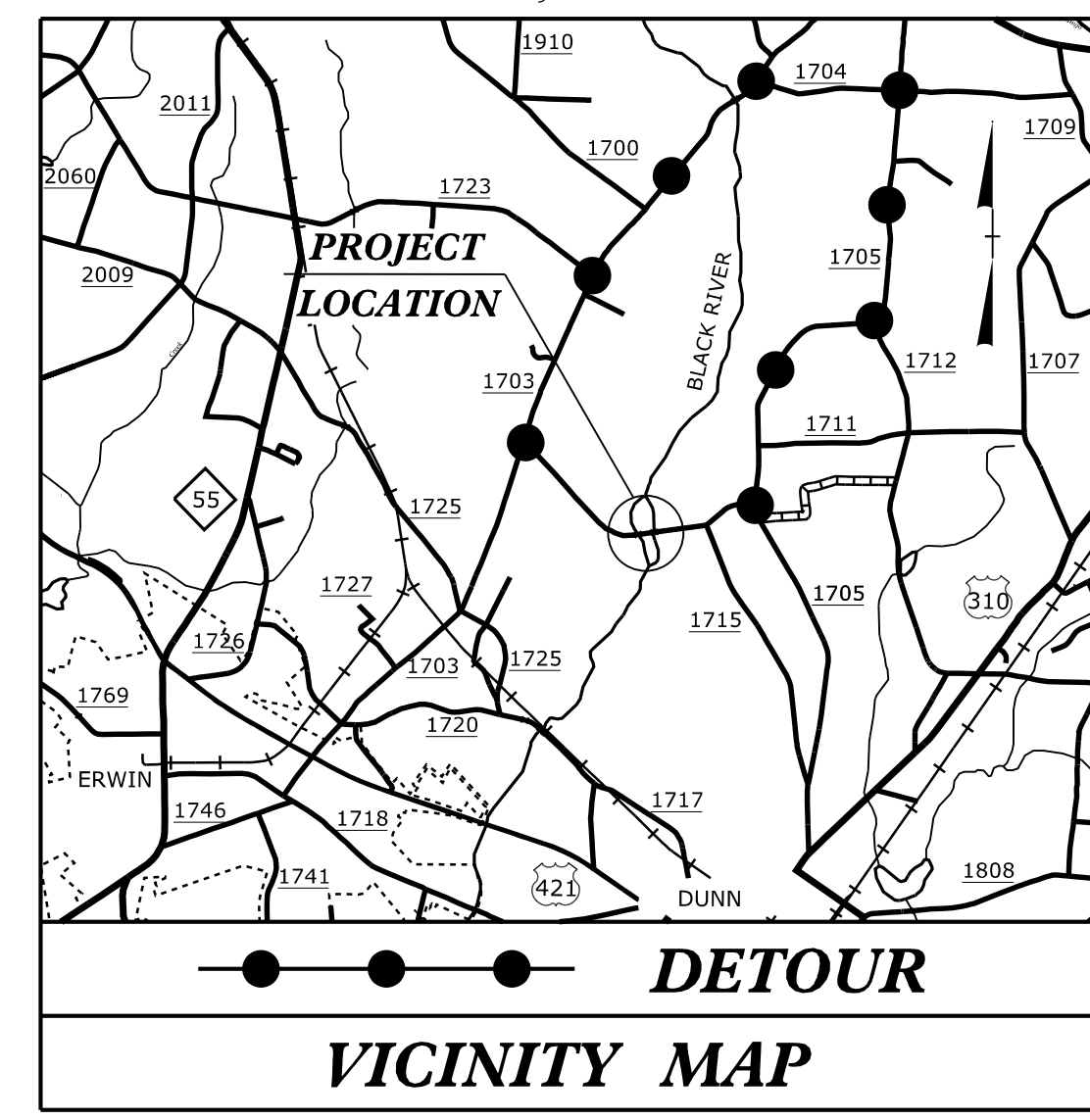
09.08/199

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

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4544	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38406.1.2	BRZ-1722(7)	PE	
38406.2.1	N/A	R/W	

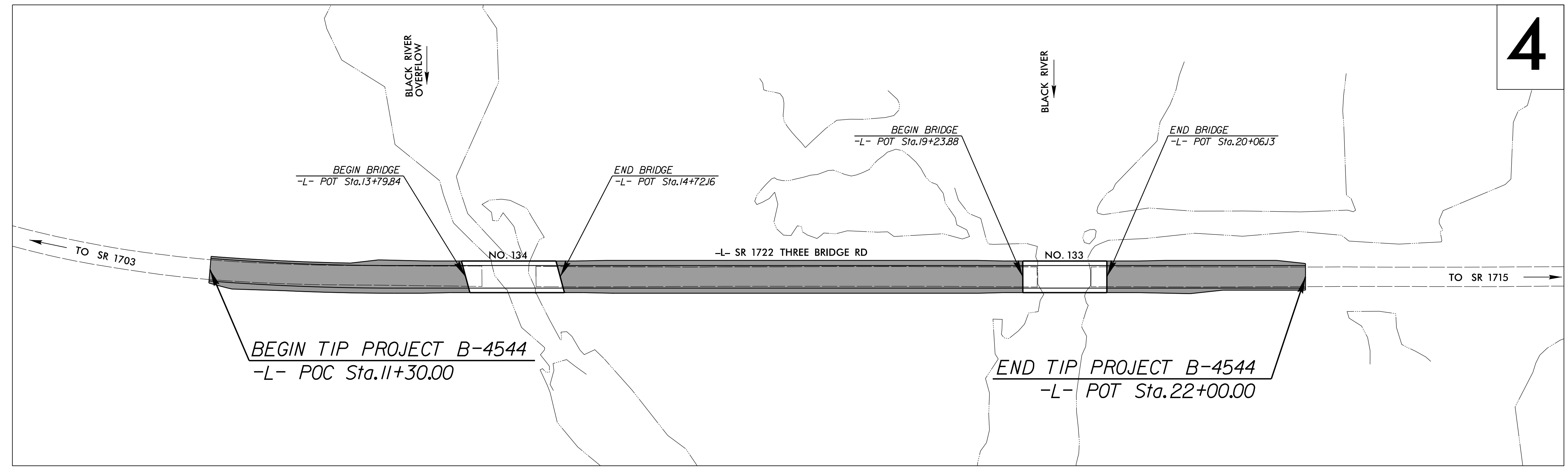
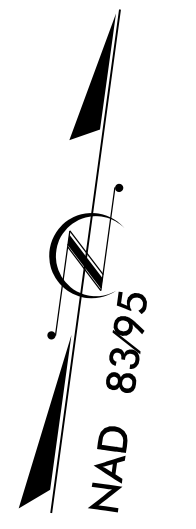
TIP PROJECT: B-4544



ROW PLANS

HARNETT COUNTY

**LOCATION: REPLACE BRIDGES 133 AND 134 OVER
 BLACK RIVER AND BLACK RIVER OVERFLOW
 ON SR 1722 (THREE BRIDGE ROAD)**
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURES

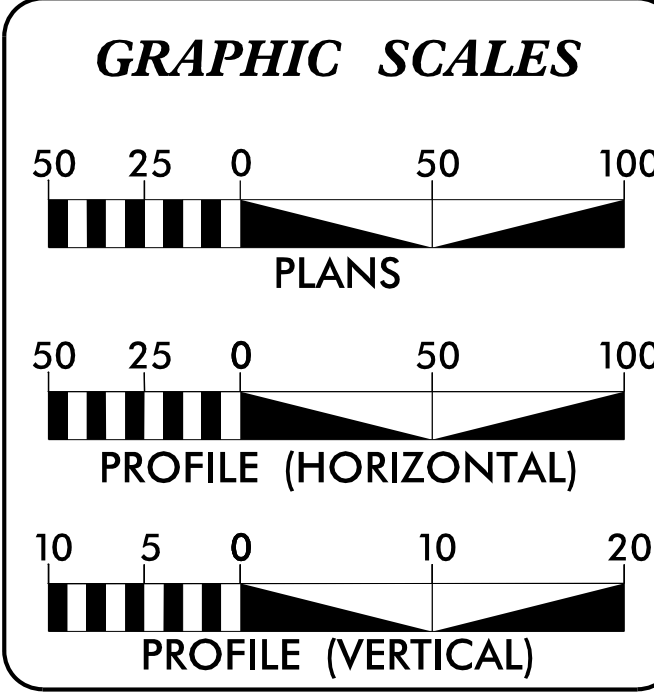


4

THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.
 THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
 CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

CONTRACT:



DESIGN DATA

ADT 2018	=	1,236
ADT 2038	=	1,782
K	=	10 %
D	=	60 %
T	=	6 % *
V	=	60 MPH
*(TTST=1% + DUAL=5%)		
FUNC CLASS	=	LOCAL
SUB-REGIONAL TIER	=	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4544	=	0.170 MILES
LENGTH STRUCTURES TIP PROJECT B-4544	=	0.033 MILES
TOTAL LENGTH TIP PROJECT B-4544	=	0.203 MILES

PLANS PREPARED BY:
RS&H RS&H Architects-Engineers-Planners, Inc.
 8601 SIX FORKS RD, SUITE 260
 RALEIGH, NC 27615
 919-926-4100

FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
 FEBRUARY 17, 2017

LETTING DATE:
 FEBRUARY 20, 2018

JENNIFER FARINO, PE
 PROJECT ENGINEER

JARED BOND, PE
 PROJECT DESIGN ENGINEER

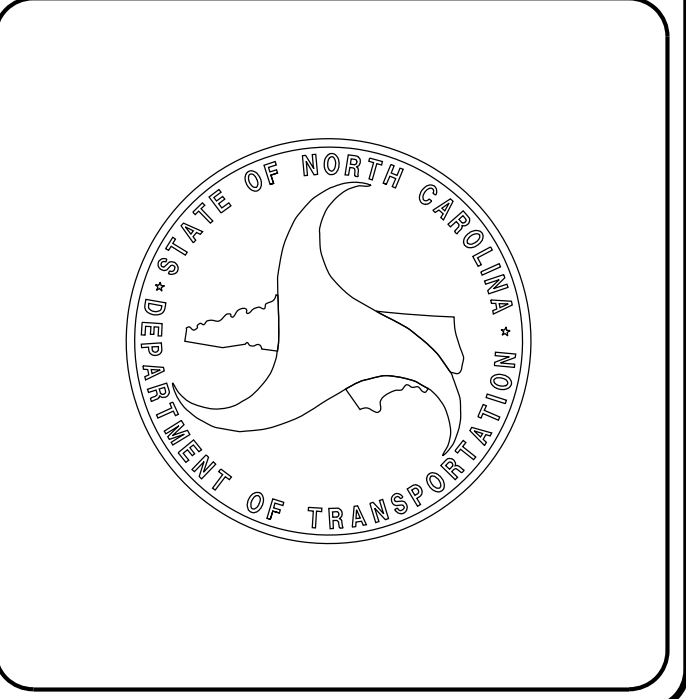
GARY LOVERING, PE
 NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



03-FEB-2017 13:09
 R:\Roadway\Proj\B4544_Rdy.tsh.dgn
 \$\$\$USERNAME\$\$\$

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

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

04/06/15

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	-x-x-x-
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	▬
False Sump	▽

RAILROADS:

Standard Gauge	-----
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 RW Marker	▲ RW
Proposed Control of Access Line with Concrete C/A Marker	○ C/A
Existing Control of Access	○ C/A
Proposed Control of Access	○ C/A
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	○ TH
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	□
TV Tower	⊗
U/G TV Cable Hand Hole	○ TH
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

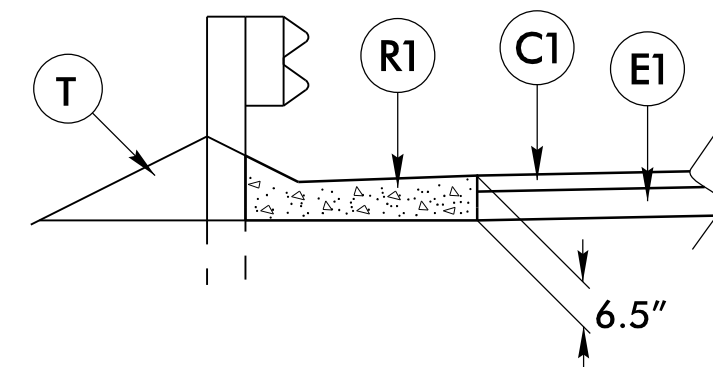
MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	□
Utility Unknown U/G Line LOS B (S.U.E.*)	----- 7UTL
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.

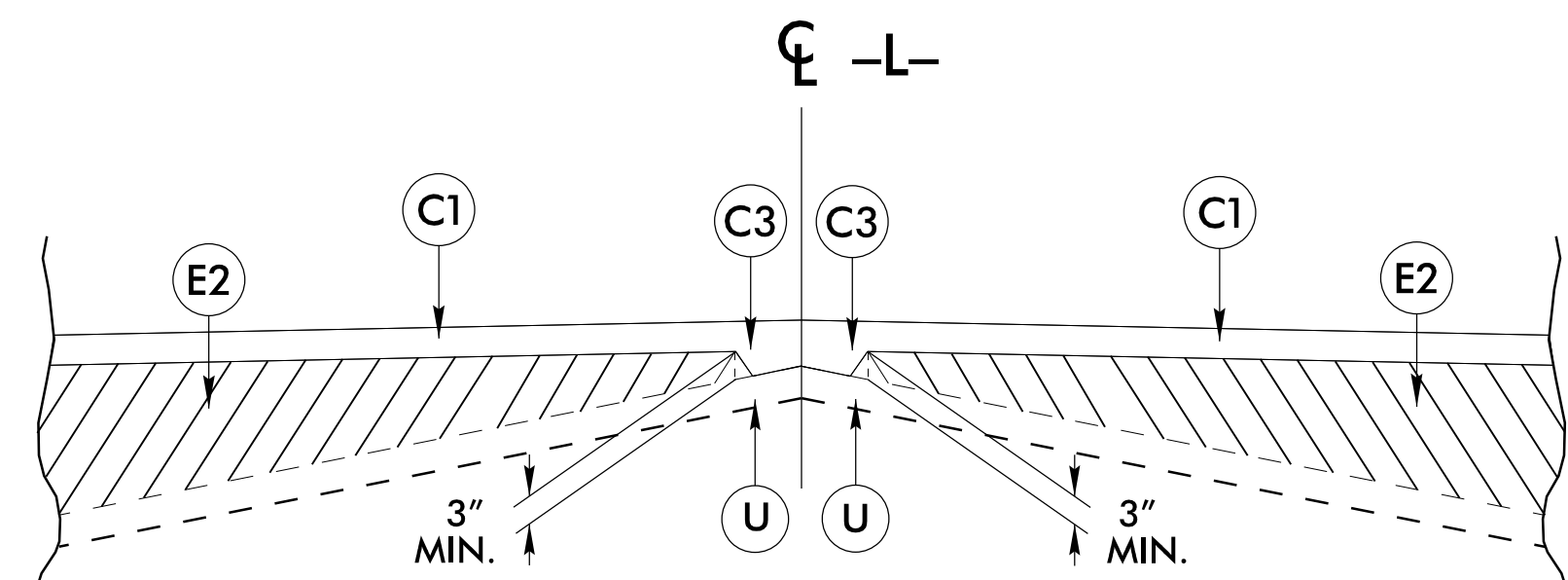
PAVEMENT SCHEDULE
(FINAL PAVEMENT DESIGN)

C1	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 2 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	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 1/2" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.
R1	SHOULDER BERM GUTTER (SEE DETAIL 2C-?)
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)
X	AGGREGATE SHOULDER BORROW

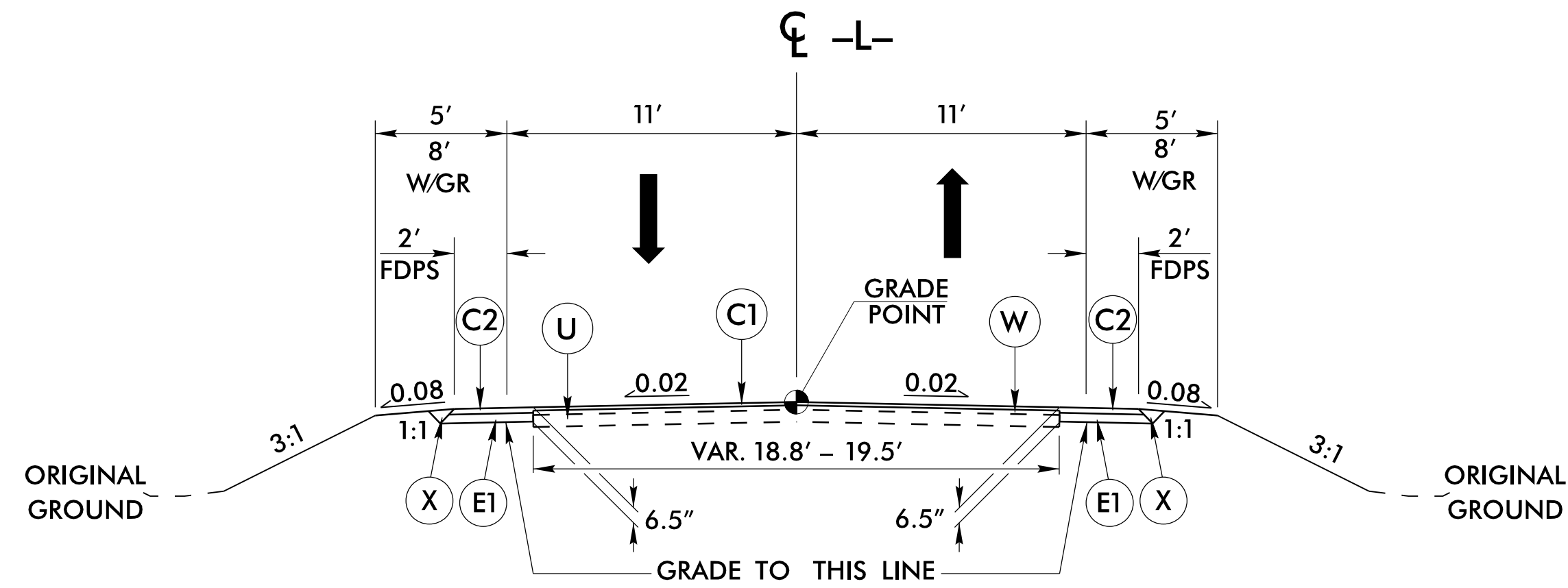
NOTE: ALL PAVEMENT SLOPES 1:1 UNLESS NOTED OTHERWISE



SHOULDER BERM GUTTER ON TOP OF SUBGRADE DETAIL

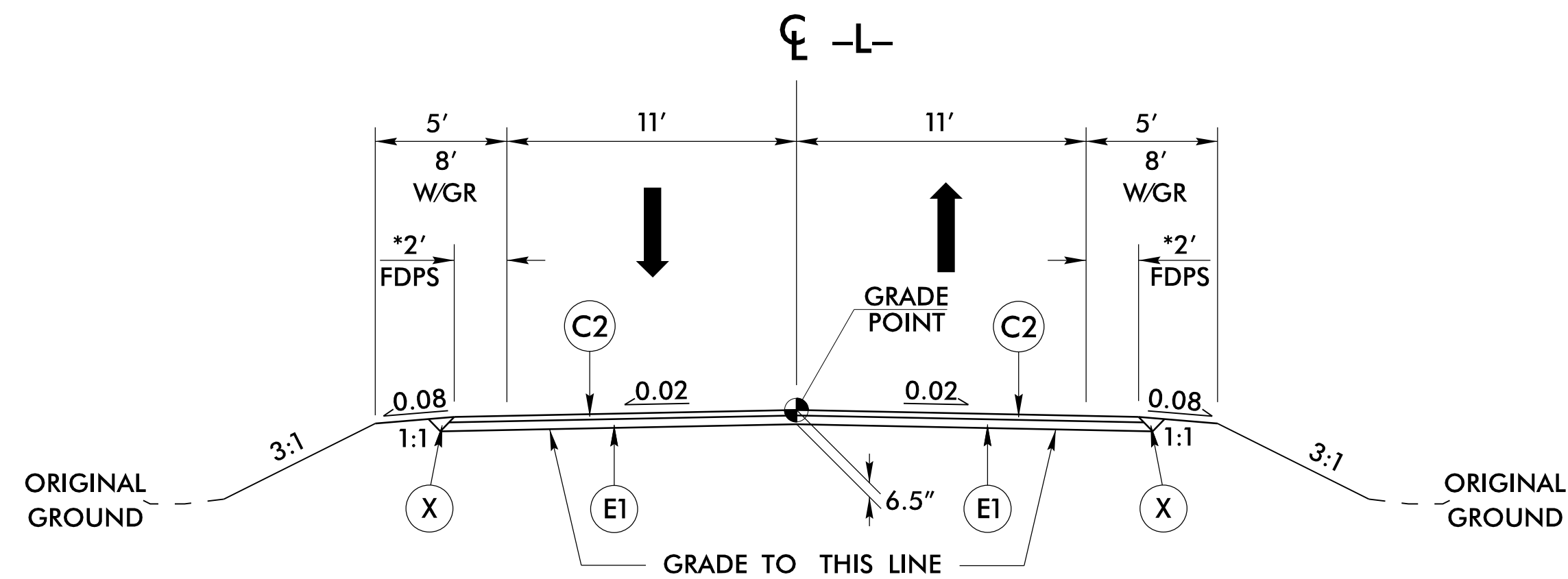


STANDARD WEDGING DETAIL



TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1
 -L- STA. 11+30.00 TO -L- STA. 12+30.00
 -L- STA. 21+50.00 TO -L- STA. 22+00.00

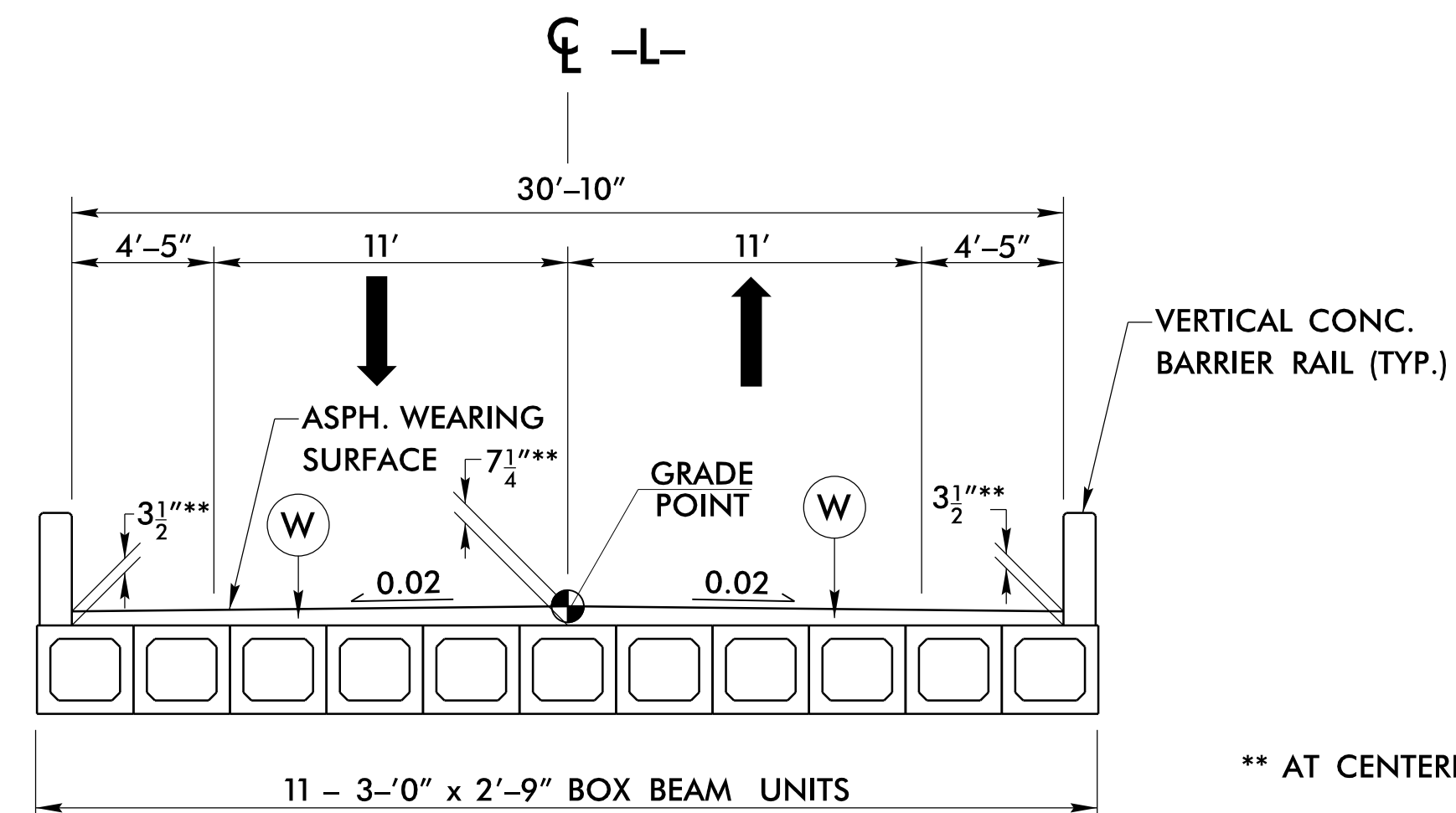


TYPICAL SECTION NO. 2

* PAVE TO FACE OF GUARDRAIL

USE TYPICAL SECTION NO. 2

-L- STA. 12+30.00 TO -L- STA. 13+79.84 (BEGIN BRIDGE)
 -L- STA. 14+72.16 (END BRIDGE) TO -L- STA. 19+23.88 (BEGIN BRIDGE)
 -L- STA. 20+06.13 (END BRIDGE) TO -L- STA. 21+50.00



TYPICAL SECTION ON STRUCTURE

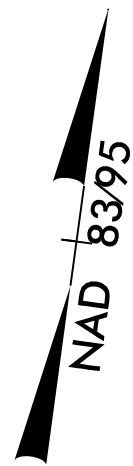
USE TYPICAL SECTION ON STRUCTURE

-L- STA. 13+79.84 (BEGIN BRIDGE) TO -L- STA. 14+72.16 (END BRIDGE)
 -L- STA. 19+23.88 (BEGIN BRIDGE) TO -L- STA. 20+06.13 (END BRIDGE)

PROJECT REFERENCE NO. B-4544	SHEET NO. 2A-1
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

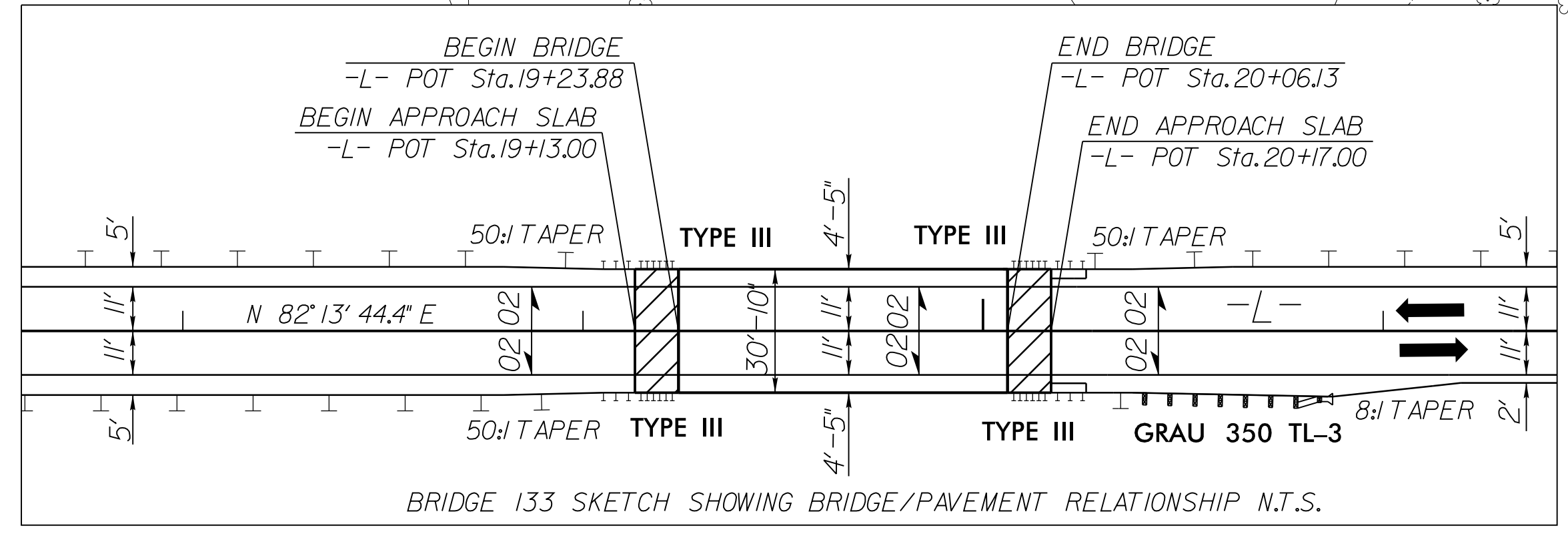
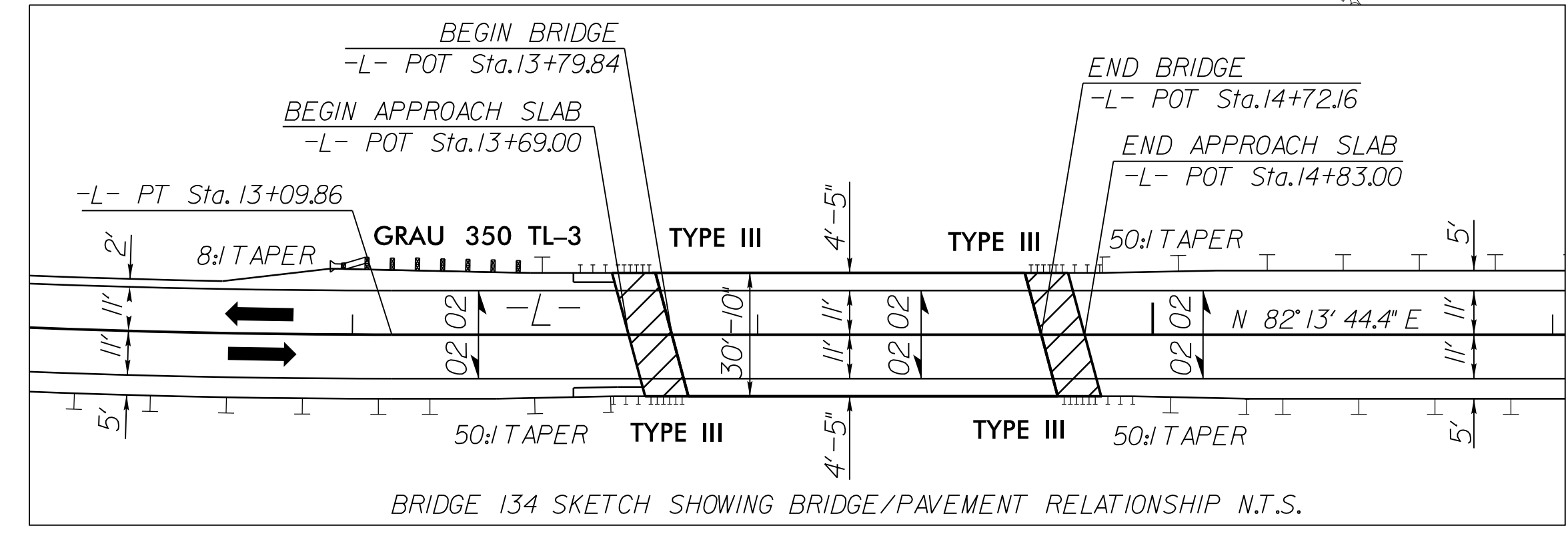
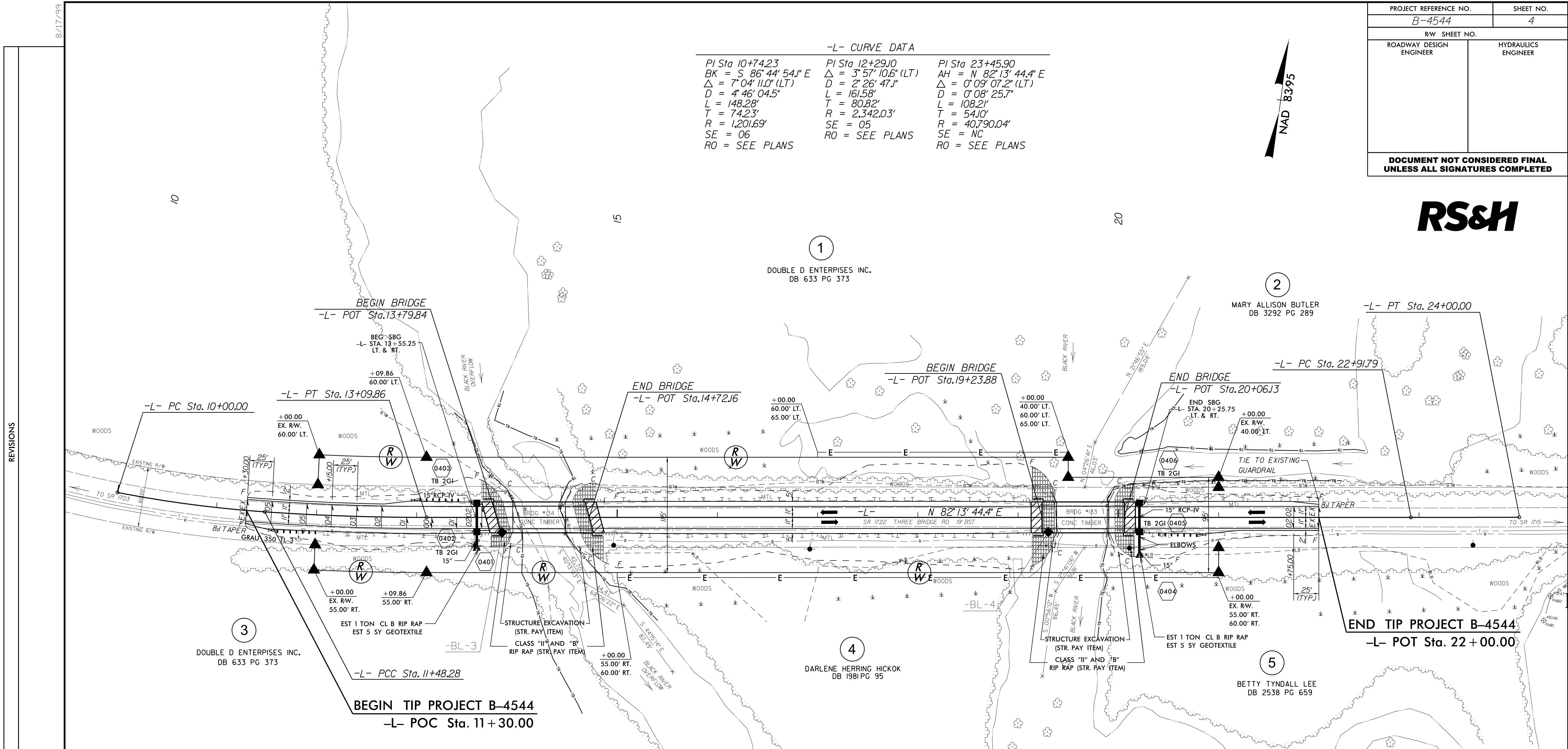


PROJECT REFERENCE NO.	SHEET NO.
B-4544	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



-L- CURVE DATA

PI Sta 10+74.23 BK = S 86° 44' 54.1" E Δ = 7° 04' 11.0" (LT) D = 4° 46' 04.5" L = 148.28' T = 74.23' R = 1,201.69' SE = 06 RO = SEE PLANS	PI Sta 12+29.10 Δ = 3° 57' 10.6" (LT) D = 2° 26' 47.1" L = 161.58' T = 80.82' R = 2,342.03' SE = 05 RO = SEE PLANS	PI Sta 23+45.90 AH = N 82° 13' 44.4" E Δ = 0° 09' 07.2" (LT) D = 0° 08' 25.7" L = 108.21' T = 54.10' R = 40,790.04' SE = NC RO = SEE PLANS
-------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------



FOR -L- PROFILE, SEE SHEET NO. 5
FOR STRUCTURE PLANS, SEE SHEETS S-1 THRU S-2

REVISIONS

8/17/99
07-FEB-2017 10:17
R:\F\B\p\B4544_Rdw_psh_4.dgn
\$\$\$\$DISPERNAME\$\$\$\$