



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

April 12, 2017

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

Attention: Brad Shaver  
NCDOT Coordinator

Subject: **Application for Section 404 Nationwide 23 Section and 401 Water Quality Certification** for the replacement of Bridge No. 325 over Little Coharie Creek Overflow and Bridge Nos. 326 and 327 over Little Coharie Creek on SR 1409 (Old Salemburg Road) in Sampson County. TIP No. B-4637. Debit \$240 from WBS 33808.1.2.

Dear Sir:

The North Carolina Department of Transportation (NCDOT) proposes to replace Sampson County Bridge Nos. 325, 326 and 327 on SR 1409 (Old Salemburg Road) over Little Coharie Creek and its overflow.

The purpose of this letter is to request approval for a Section 404 Nationwide Permit No. 23 and Section 401 Water Quality Certification. In addition to this cover letter, this application package includes the following for B-4637: stormwater management plan, permit drawings, roadway plans, and DMS acceptance letter.

This project calls for a letting date of January 16, 2018 and a review date of November 28, 2017, but this schedule will likely be advanced.

### **Impacts to Jurisdictional Resources**

The project will have permanent surface water impacts of 0.01 acre and 0.02 acre of temporary surface water impacts, located at Site 2 in the permit drawings. Wetland impacts occur at two mapped sites, Site 1 east of the main stem of Little Coharie Creek and Bridge No. 327, and Site 3 east of the creek and Bridge No. 327. A total of 0.23 acre of permanent impacts in wetlands.

Section 404: Application is hereby made for a USACE Nationwide 23 Permit as required for the above-described activities.

*Mailing Address:*  
NC DEPARTMENT OF TRANSPORTATION  
NATURAL ENVIRONMENT SECTION  
1598 MAIL SERVICE CENTER  
RALEIGH, NC 27699-1598

*Telephone:* (919) 707-6000  
*Fax:* (919) 212-5785  
*Customer Service:* 1-877-368-4968

*Location:*  
1020 BIRCH RIDGE DRIVE  
RALEIGH, NC 27699

*Website:* [www.ncdot.gov](http://www.ncdot.gov)

Section 401: We are requesting a Section 401 Water Quality General Certification 4093 from NCDWR. We are providing this application to NCDWR for their approval. Authorization to debit the \$240 Permit Application Fee from WBS Element 46041.1.1 is hereby given.

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. A Programmatic Categorical Exclusion (PCE) was completed for this project in July 2016. A copy of the PCE is also available at the above website address under Quick Links > Environmental Documents.

Thank you for your assistance with this project. If you have any questions or need additional information, please contact Gordon Cashin at or (919) 707-6107.

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., CPM, Manager  
Natural Environment Section

cc: NCDOT Permit Application Standard Distribution List



Office Use Only:  
 Corps action ID no. \_\_\_\_\_  
 DWQ project no. \_\_\_\_\_  
 Form Version 1.4 January 2009

## 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: 23 or General Permit (GP) number:		
1c. Has the NWP or GP number been verified by the Corps?	<input checked="" type="checkbox"/> Yes	<input 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 <span style="margin-left: 100px;"><input type="checkbox"/> Non-404 Jurisdictional General Permit</span> <input type="checkbox"/> 401 Water Quality Certification – Express <span style="margin-left: 100px;"><input type="checkbox"/> Riparian Buffer Authorization</span>		
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 type="checkbox"/> Yes	<input checked="" 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 Bridge Nos. 325, 326 & 327 SR 1409.
2b. County:	Sampson
2c. Nearest municipality / town:	Roseboro
2d. Subdivision name:	<i>not applicable</i>
2e. NCDOT only, T.I.P. or state project no.:	B-4637

**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) 707-6107
3g. Fax no.:	(919) 212-5785
3h. Email address:	gcashin@ncdot.gov

<b>4. Applicant Information (if different from owner)</b>	
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:	
<b>5. Agent/Consultant Information (if applicable)</b>	
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>B. Project Information and Prior Project History</b>	
<b>1. Property Identification</b>	
1a. Property identification no. (tax PIN or parcel ID):	<i>not applicable</i>
1b. Site coordinates (in decimal degrees):	Latitude: 34.992706 (DD.DDDDDD) Longitude: -78.521824 (-DD.DDDDDD)
1c. Property size:	12.2 acres
<b>2. Surface Waters</b>	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Little Coharie Creek
2b. Water Quality Classification of nearest receiving water:	C; SW
2c. River basin:	Cape Fear
<b>3. Project Description</b>	
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 study area includes the existing roadway and bridge. Land use is forestland, with some farmland.	
3b. List the total estimated acreage of all existing wetlands on the property: 6.5 acres N/A	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 209 feet	
3d. Explain the purpose of the proposed project: To replace three deteriorated bridges.	
3e. Describe the overall project in detail, including the type of equipment to be used: Three bridges of lengths 35'6", 35'8", 85'10" and widths 23'10", 23'10", 23'11" will be replaced with bridges having lengths 60', 60', 115' and widths 30' each. Standard road building equipment will be used.	
<b>4. Jurisdictional Determinations</b>	
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: JD requested on 3/26/2012	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
4b. If the Corps made the jurisdictional determination, what type of determination was made?	<input checked="" type="checkbox"/> Preliminary <input type="checkbox"/> Final
4c. If yes, who delineated the jurisdictional areas? Name (if known): Richard Darling	Agency/Consultant Company: Michael Baker Engineering Other:
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation. 4/11/12	
<b>5. Project History</b>	
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.	
<b>6. Future Project Plans</b>	
6a. Is this a phased project?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6b. If yes, explain.	

<b>C. Proposed Impacts Inventory</b>						
<b>1. Impacts Summary</b>						
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				
<b>2. Wetland Impacts</b>						
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. Forest ed	2e. Type of jurisdiction	2f. Area of impact (acres)	
Site 1 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Fill, excavation, rip rap mech. clearing	swamp	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	0.18	
Site 2 <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 3 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Fill, excavation, riprap, mech. clearing	swamp	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	0.05	
Site 4 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
<b>2g. Total wetland impacts</b>					0.23	
2h. Comments: There are 0.3 acres of temporary impacts due to hand clearing. There will be <0.01 acre of temporary fill in the hand clearing areas for erosion control measures.						
<b>3. Stream Impacts</b>						
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	Bridge/Road way fill	Little Coharie Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	35	28
Site 2 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Bridge/Road way fill	Little Coharie Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	35	80
Site 3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
<b>3h. Total stream and tributary impacts</b>						28 perm. 80 temp.
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)
O1 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Little Coharie Creek	Bridge/roadway fill, bridge pier	stream	0.02 perm.
O1 <input type="checkbox"/> P <input type="checkbox"/> T				
<b>4f. Total open water impacts</b>				0.02 perm.

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
<b>5f. Total</b>								

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"/> Tar-Pamlico <input type="checkbox"/> Other: <input type="checkbox"/> Catawba <input type="checkbox"/> Randleman			
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		
B2 <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		
B4 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
<b>6h. Total buffer impacts</b>					
6i. Comments:					



<b>D. Impact Justification and Mitigation</b>		
<b>1. Avoidance and Minimization</b>		
1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing project. This structure has been designed to have as little environmental and surface water impacts as possible. To avoid direct discharge of bridge stormwater into the receiving water, deck drains are not required for the proposed bridge. Storm water impacts to the creek have been minimized by utilizing grated inlets and pipes to collect bridge stormwater which will be outlet on Class II rip-rap before entering the stream. The project also utilizes an offsite detour.		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques. Construction impacts will be minimized through the use of Best Management Practices for Construction and Maintenance Activities.		
<b>2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State</b>		
2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, explain:	
2b. If yes, mitigation is required by (check all that apply):	<input type="checkbox"/> DWQ <input checked="" type="checkbox"/> Corps	
2c. If yes, which mitigation option will be used for this project?	<input type="checkbox"/> Mitigation bank <input checked="" type="checkbox"/> Payment to in-lieu fee program <input type="checkbox"/> Permittee Responsible Mitigation	
<b>3. Complete if Using a Mitigation Bank</b>		
3a. Name of Mitigation Bank: not applicable		
3b. Credits Purchased (attach receipt and letter)	Type	Quantity
3c. Comments:		
<b>4. Complete if Making a Payment to In-lieu Fee Program</b>		
4a. Approval letter from in-lieu fee program is attached.	<input type="checkbox"/> Yes	
4b. Stream mitigation requested:	linear feet	
4c. If using stream mitigation, stream temperature:	<input type="checkbox"/> warm <input type="checkbox"/> cool <input type="checkbox"/> cold	
4d. Buffer mitigation requested (DWQ only):	square feet	
4e. Riparian wetland mitigation requested:	acres	
4f. Non-riparian wetland mitigation requested:	acres	
4g. Coastal (tidal) wetland mitigation requested:	acres	
4h. Comments:		
<b>5. Complete if Using a Permittee Responsible Mitigation Plan</b>		
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	
<b>6f. Total buffer mitigation required:</b>				

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:

<b>E. Stormwater Management and Diffuse Flow Plan (required by DWQ)</b>	
<b>1. Diffuse Flow Plan</b>	
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 not, explain why. Comments:	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>2. Stormwater Management Plan</b>	
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
<b>3. Certified Local Government Stormwater Review</b>	
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):	<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
<b>4. DWQ Stormwater Program Review</b>	
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 N/A
<b>5. DWQ 401 Unit Stormwater Review</b>	
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

<b>F. Supplementary Information</b>	
<b>1. Environmental Documentation (DWQ Requirement)</b>	
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
<b>2. Violations (DWQ Requirement)</b>	
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):	
<b>3. Cumulative Impacts (DWQ Requirement)</b>	
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.	
<b>4. Sewage Disposal (DWQ Requirement)</b>	
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	

<b>5. Endangered Species and Designated Critical Habitat (Corps Requirement)</b>		
5a. Will this project occur in or near an area with federally protected species or habitat?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5c. If yes, indicate the USFWS Field Office you have contacted.	<input checked="" 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? USFWS website, field surveys.		
<b>6. Essential Fish Habitat (Corps Requirement)</b>		
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		
<b>7. Historic or Prehistoric Cultural Resources (Corps Requirement)</b>		
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		
<b>8. Flood Zone Designation (Corps Requirement)</b>		
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.)	04-12-2017 Date



ROY COOPER  
Governor

April 5, 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-4637, Replace Bridges 326 and 327 over Little Cohaire Creek on SR 1409, Sampson 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 April 3, 2017, the impacts are located in CU 03030006 of the Cape Fear River basin in the Southern Inner Coastal Plain (SICP) Eco-Region, and are as follows:

Cape Fear 03030006 SICP	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	0	0	0	0.23	0	0	0	0

\*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.

The impacts and associated mitigation needs were under projected by the NCDOT in the 2017 impact data. DMS will commit to implement sufficient compensatory riparian wetland mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies using the delivery timeline listed in Section F.3.c.iii of 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: Mr. Brad Shaver, USACE – Wilmington Regulatory Field Office  
Ms. Amy Chapman, NCDWR  
File: B-4637





North Carolina Department of Transportation

Highway Stormwater Program  
**STORMWATER MANAGEMENT PLAN**  
 FOR NCDOT PROJECTS



(Version 2.05; Released April 2016)

WBS Element: 33808.1.2      TIP No.: B-4637      County(ies): Sampson      Page 1 of 1

**General Project Information**

WBS Element:	33808.1.2	TIP Number:	B-4637	Project Type:	Bridge Replacement	Date:	2/22/2017
NCDOT Contact:	Craig Freeman, PE		Contractor / Designer:	Kimley-Horn & Associates			
Address:	NCDOT Hydraulics Unit 1020 Birch Ridge Drive Raleigh, NC 27610		Address:	421 Fayetteville Street Suite 600 Raleigh, NC 27601			
	Phone:	919-707-6721		Phone:	919-653-6623		
	Email:	cafreeman2@ncdot.gov		Email:	vance.blanton@kimley-horn.com		
City/Town:	Roseboro		County(ies):	Sampson			
River Basin(s):	Cape Fear		CAMA County?	No			
Wetlands within Project Limits?	Yes						

**Project Description**

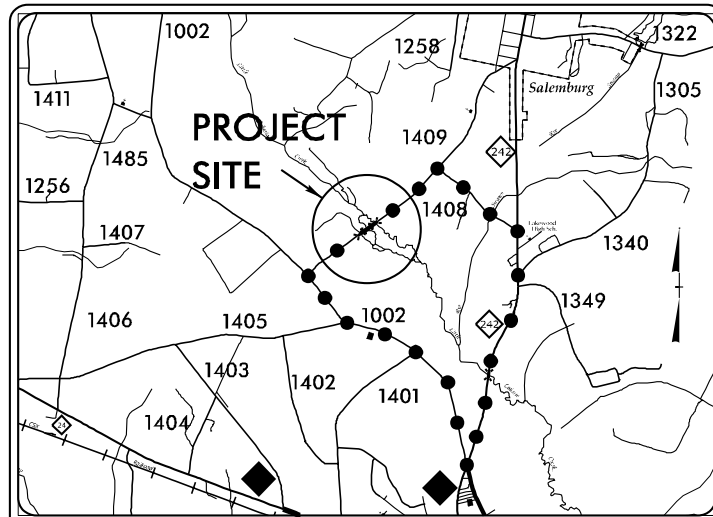
Project Length (lin. miles or feet):	0.21	Surrounding Land Use:	Rural
	<b>Proposed Project</b>		<b>Existing Site</b>
Project Built-Upon Area (ac.)	0.7 ac.		0.5 ac.
Typical Cross Section Description:	2 @ 10' wide lanes with 0' to 3'11" paved shoulders and 3' to 6' grass shoulders and 3:1 side slopes		2 @ 10' wide lanes with grass shoulders
Annual Avg Daily Traffic (veh/hr/day):	Design/Future: 935	Year: 2037	Existing: 490      Year: 2017
General Project Narrative: (Description of Minimization of Water Quality Impacts)	<p>Replacement of Bridges No. 810325, 810326, and 810327 on SR 1409 (Old Salemburg Road) in Sampson County. The existing bridges, overall length (OAL) = 35'6"; 35'8"; 85'10" (respectively) and widths = 23'10"; 23'10"; 23'11" (respectively), will be replaced with bridges having OAL = 60'; 60'; 115' (respectively) and widths of 30' each. The new bridges are wider than the existing bridges to provide the required shoulders necessary for roadway and drainage. The roadway is being widened to provide the minimum lanes for safe travel. An offset detour will be utilized for maintenance of traffic. No new roadside ditches are introduced as part of this project.</p> <p>Rip rap is placed on each of the bridges' sloping abutments to act as slope stabilization and prevent erosion. The bridges were designed to not require deck drains. Runoff from the bridges is captured on the low side of the bridges in shoulder berm gutter and traffic bearing 2GI's on either side of the road in the roadway sags, with the exception of two locations where the 10-year runoff at the sag location is less than 0.1 cfs. The systems are designed to outfall outside of proposed fill slopes in the area of an existing wetland that will be minimally disturbed by the outfall. All other roadside stormwater sheets across the roadway and down the roadway fill slope similar to existing conditions.</p>		

**Waterbody Information**

Surface Water Body (1):	Little Coharie Creek		NCDWR Stream Index No.:	18-68-1-17		
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class C				
	Supplemental Classification:	Swamp Waters (Sw)				
Other Stream Classification:						
Impairments:	None					
Aquatic T&E Species?	No	Comments:				
NRTR Stream ID:					Buffer Rules in Effect:	N/A
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	No	Dissipator Pads Provided in Buffer?	N/A	
Deck Drains Discharge Over Water Body?	No	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)		
	(If yes, provide justification in the General Project Narrative)					

09/28/19

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



### VICINITY MAP

NOT TO SCALE  
OFF SITE DETOUR ●●●●●

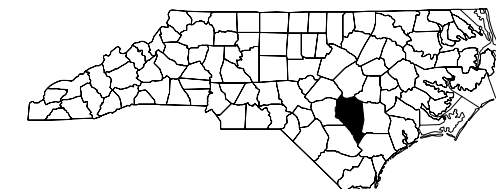
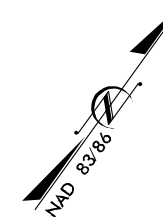
# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

## SAMPSON COUNTY

**LOCATION: REPLACE BRIDGE 325 OVER LITTLE COHARIE CREEK  
OVERFLOW AND BRIDGES 326 AND 327 OVER LITTLE  
COHARIE CREEK ON SR 1409 (OLD SALEMBURG RD)  
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURES**

WETLAND AND SURFACE WATER IMPACTS PERMIT

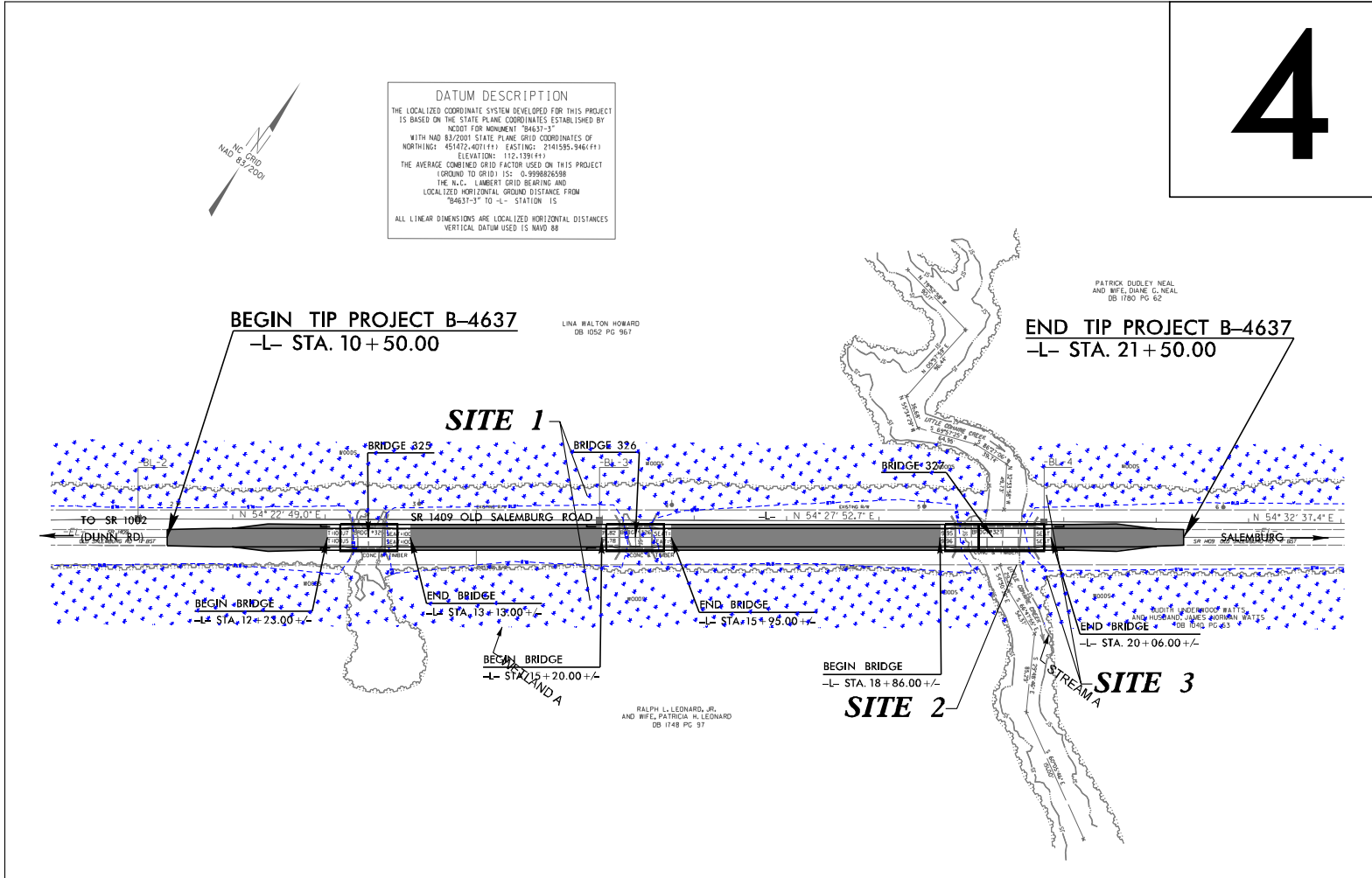
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4637	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33808.1.2	BRZ-1409 (12)	PE	



# 4

PERMIT DRAWING  
SHEET 1 OF 9

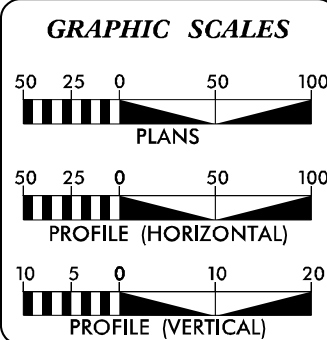
**DATUM DESCRIPTION**  
 THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCOTI FOR MONUMENT 79437-37 WITH NAD 83/2011 STATE PLANE GRID COORDINATES OF NORTHING: 451472.40711111 EASTING: 2741595.9461111 ELEVATION: 112.1391111 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT LOOKING TO GRID 1 IS: 0.999999999 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM 79437-37 TO S.TATION 15 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88



INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION

CLEARING ON THIS PROJECT SHOULD BE PREFORMED TO THE LIMITS ESTABLISHED BY METHOD III

**CONTRACT:**



**DESIGN DATA**

ADT 2017 =	590
ADT 2037 =	935
K =	11 %
D =	55 %
T =	5 % *
V =	60 MPH

\* (TTST 1%+DUALS 4%)  
FUNC CLASS=RURAL LOCAL SUBREGIONAL TIER

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-4637 =	.154 MI
LENGTH STRUCTURE TIP PROJECT B-4637 =	.054 MI
TOTAL LENGTH OF TIP PROJECT B-4637 =	.208 MI

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
NOVEMBER 18, 2016

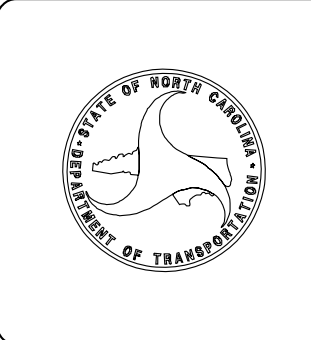
LETTING DATE:  
NOVEMBER 21, 2017

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

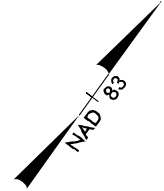
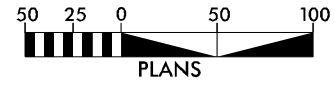


3/1/2017 K:\RAL-Roadway\01036316 - B-4637\Hydraulics\PERMITS\_Environment\Drawings\Plan Sheets\B4637\_hyd\_prm\_wet\_tsh.dgn User: vance.bidmtm



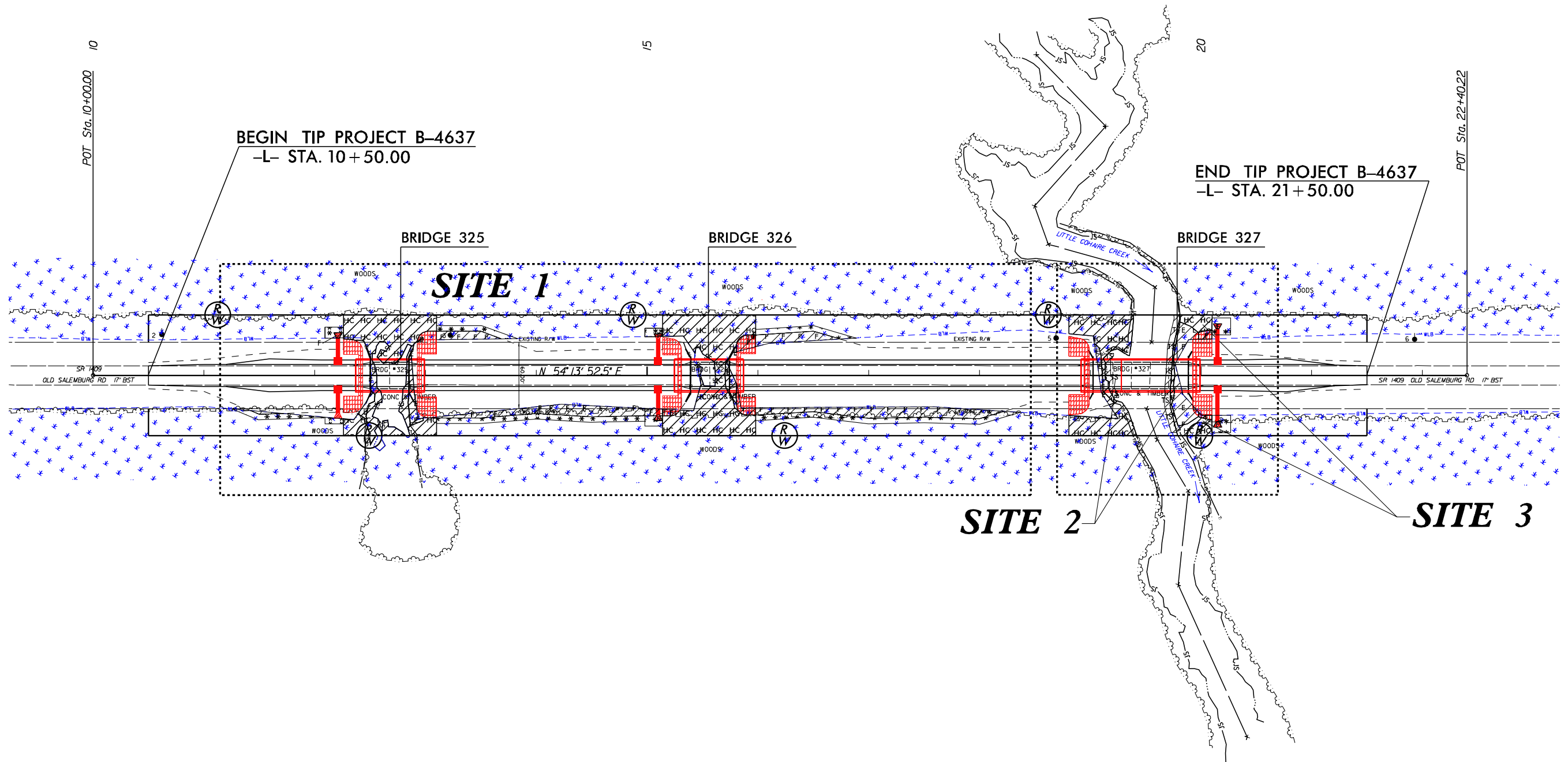
8/17/99  
 REVISIONS  
 3/6/2017 Roadkew\11036316 - B-4637\Hydraulics\PERMITS\Environmental\Drawings\Plan Sheets\B4637\_hyd.prm.wet.psh4.dgn  
 User: Vance Blanton

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



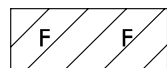
PROJECT REFERENCE NO. <b>B-4637</b>	SHEET NO. <b>4</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> <b>UNLESS ALL SIGNATURES COMPLETED</b>	

PERMIT DRAWING  
 SHEET 2 OF 9

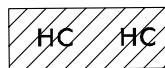


**SEE DETAILED ENLARGEMENTS ON NEXT SHEET**

### LEGEND



DENOTES FILL IN WETLAND



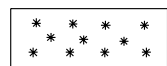
DENOTES HAND CLEARING



DENOTES EXCAVATION IN WETLAND



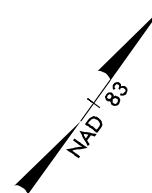
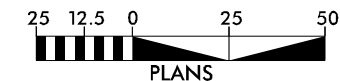
DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES MECHANIZED CLEARING



DENOTES IMPACTS IN SURFACE WATER



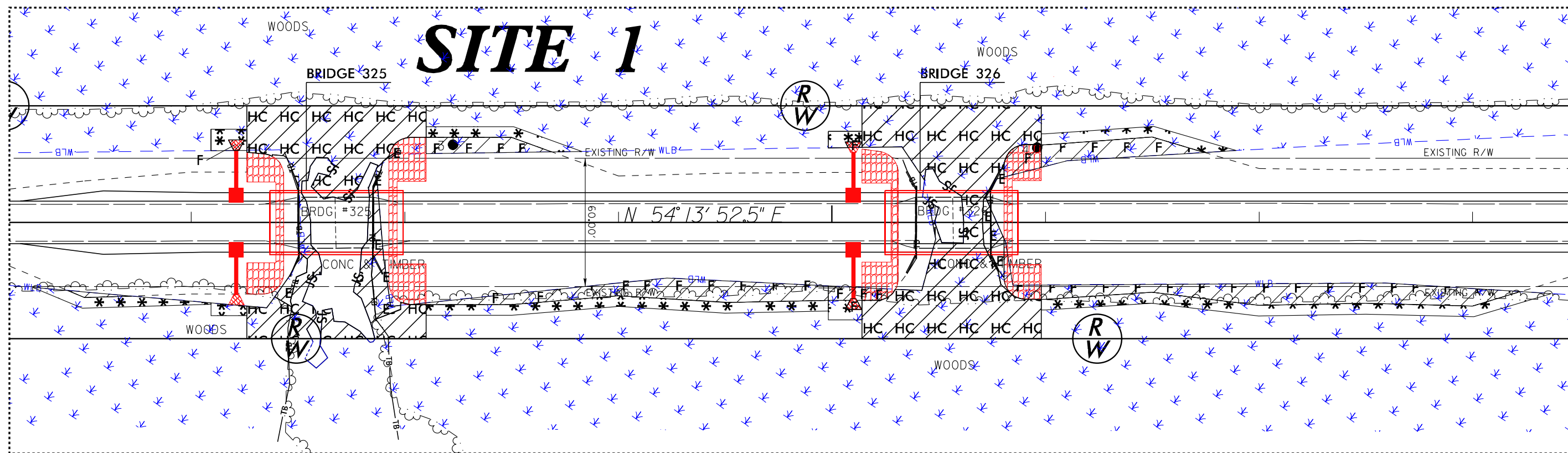
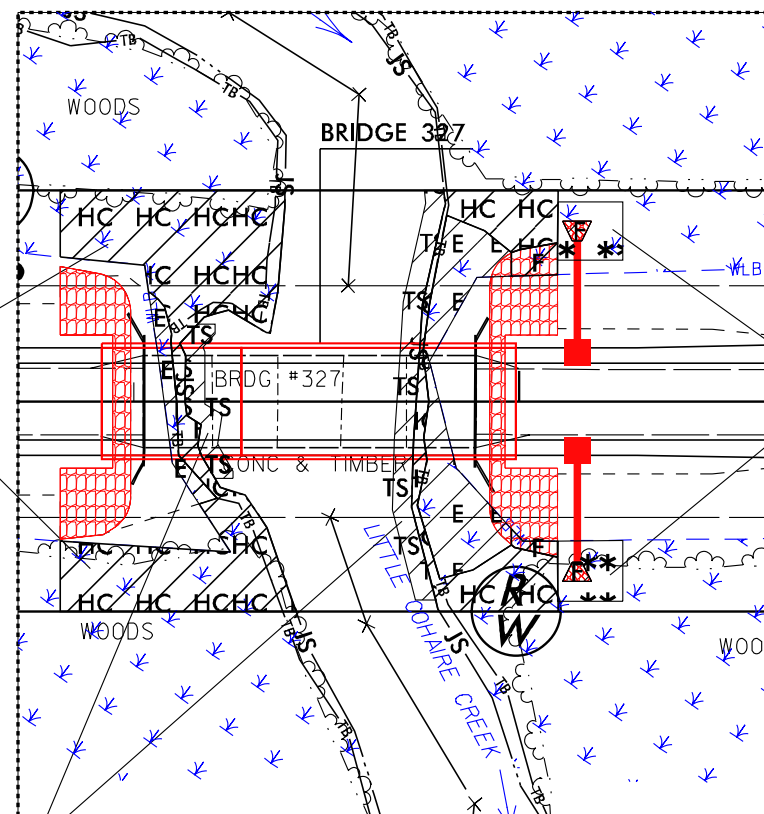
PROJECT REFERENCE NO. B-4637	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> <b>UNLESS ALL SIGNATURES COMPLETED</b>	

PERMIT DRAWING SHEET 3 OF 9

# SITE 1

# SITE 3







# SITE 2



REVISIONS

8/17/99

**LEGEND**

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

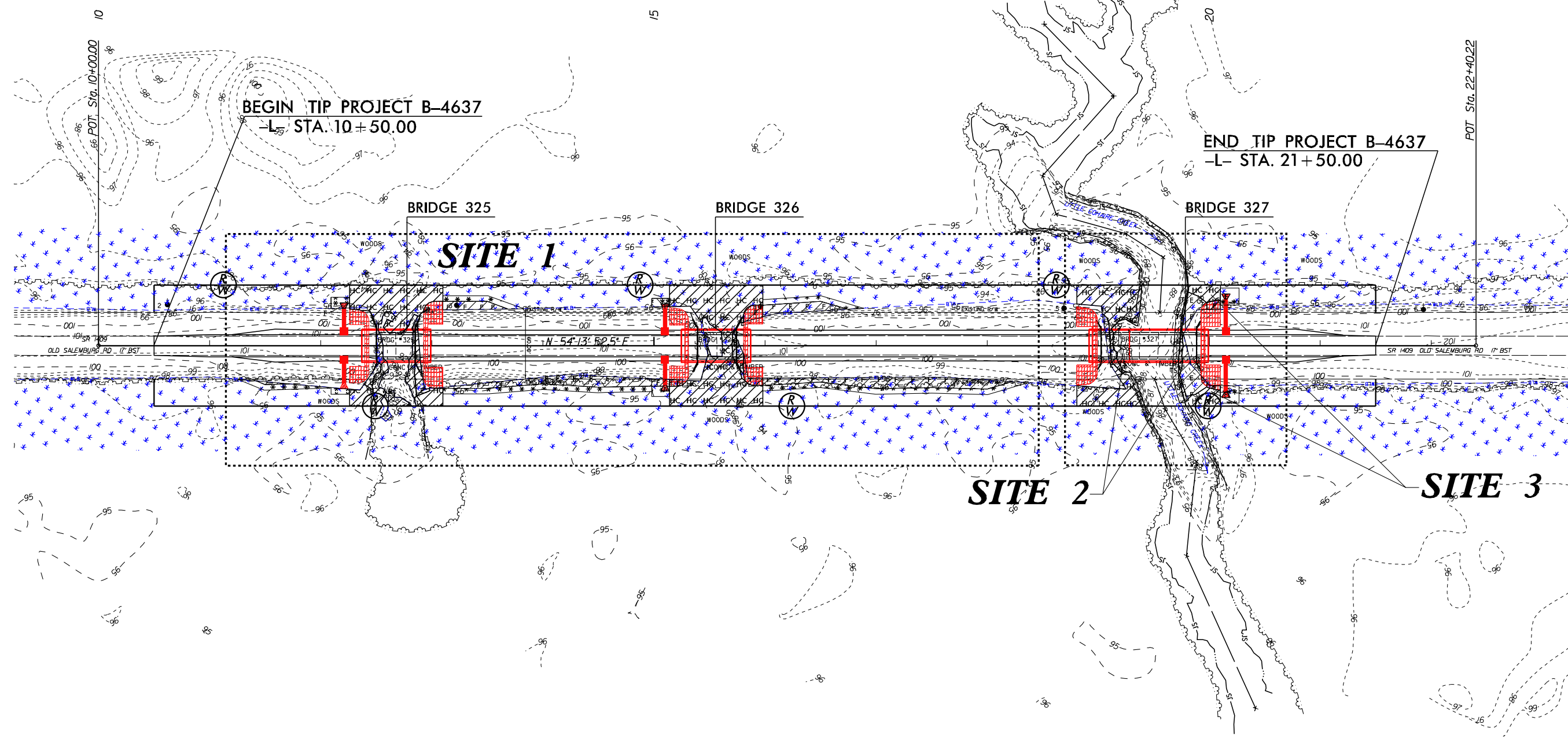


PROJECT REFERENCE NO. <b>B-4637</b>	SHEET NO. <b>4</b>
R/W SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING  
SHEET 4 OF 9

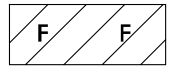
REVISIONS

3/6/2017 Roadkew\011036316 - B-4637\Hydraulics\PERMITS\Environmental\Drawings\Plan\_Sheets\B4637\_hyd\_prm\_wet\_psh4.com.dgn  
 User: Vance Blanton



SEE DETAILED ENLARGEMENTS ON NEXT SHEET

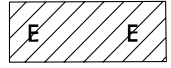
# LEGEND



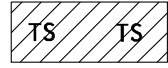
DENOTES FILL IN WETLAND



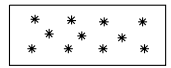
DENOTES HAND CLEARING



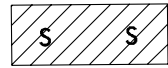
DENOTES EXCAVATION IN WETLAND



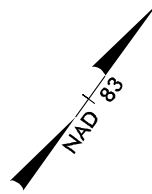
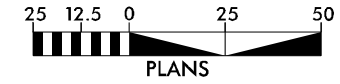
DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES MECHANIZED CLEARING



DENOTES IMPACTS IN SURFACE WATER



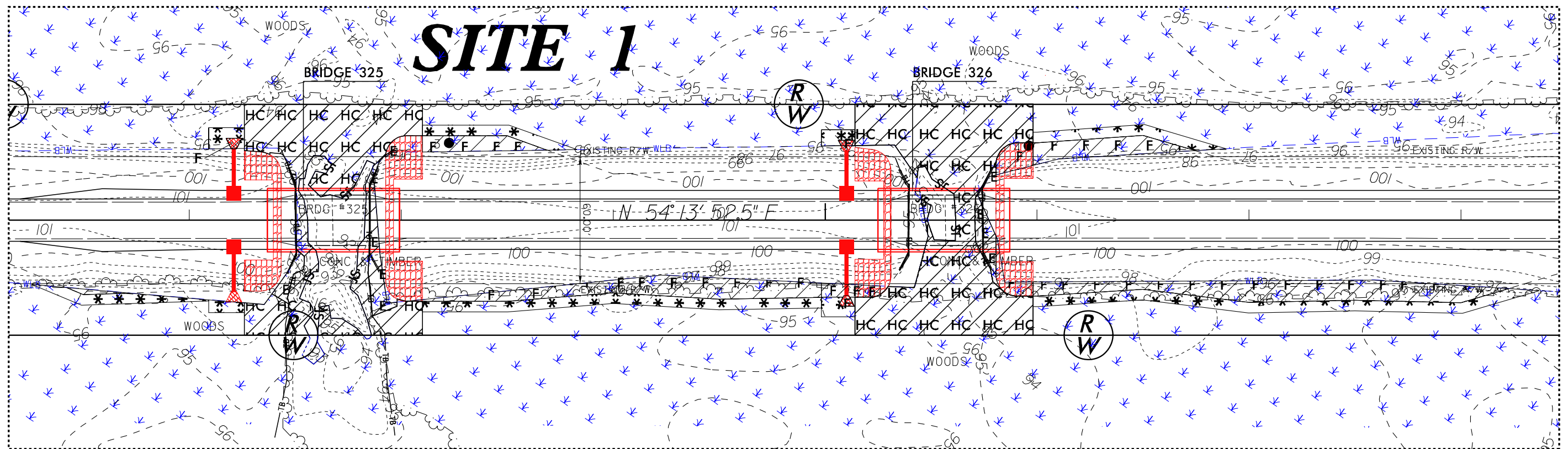
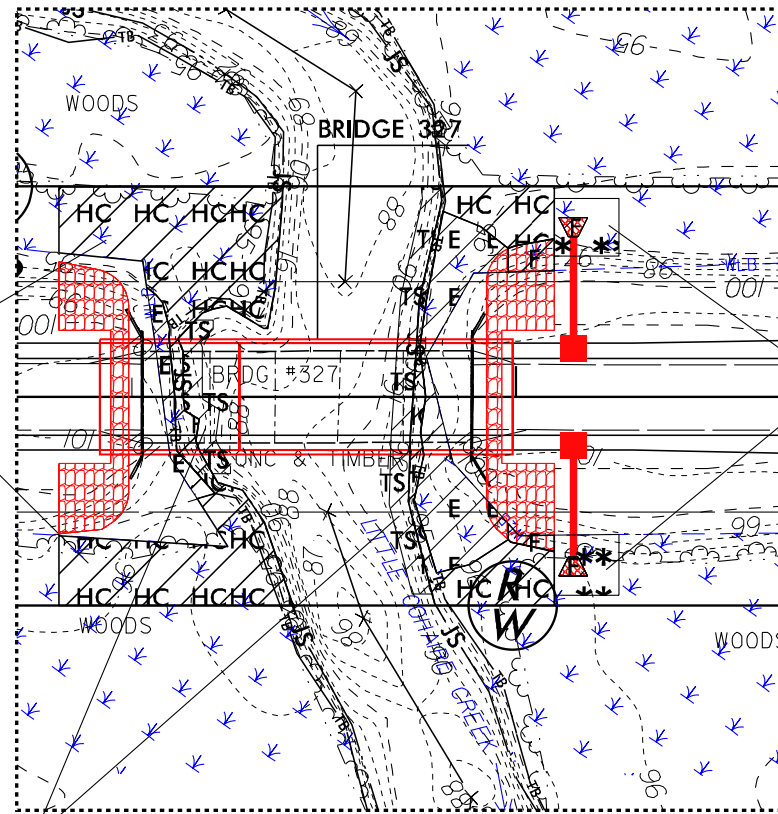
PROJECT REFERENCE NO. <b>B-4637</b>	SHEET NO. <b>4</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> <b>UNLESS ALL SIGNATURES COMPLETED</b>	

PERMIT DRAWING SHEET 5 OF 9

# SITE 1

# SITE 3

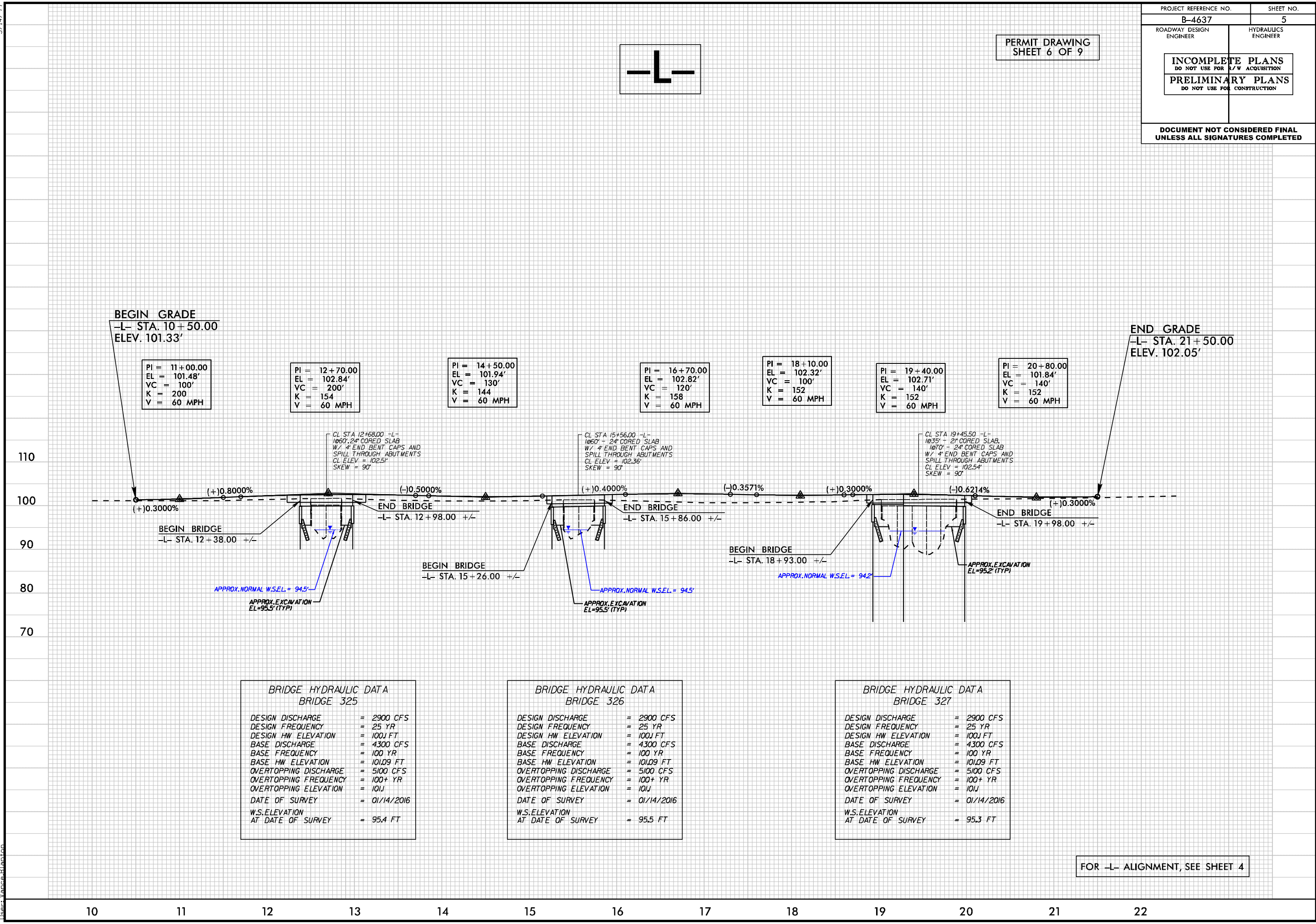
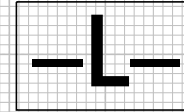
# SITE 2



REVISIONS

3/6/2017 Roadku011036316 - B-4637\Hydraulics\PERMITS\Environmental\Drawings\Plan Sheets\B4637\_hyd\_prm\_wet\_psh4\_enlargements\_con.dgn User: Vance Blanton

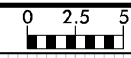
PERMIT DRAWING  
SHEET 6 OF 9



FOR -L- ALIGNMENT, SEE SHEET 4

5/14/99  
 3/6/2017  
 K:\FAI\Roadway\011036316 - B-4637\Hydraulics\PERMITS\Environmental\Drawings\Plan Sheets\B4637\_hyd\_prm\_wet.plt.dgn  
 User: Vance Blanton

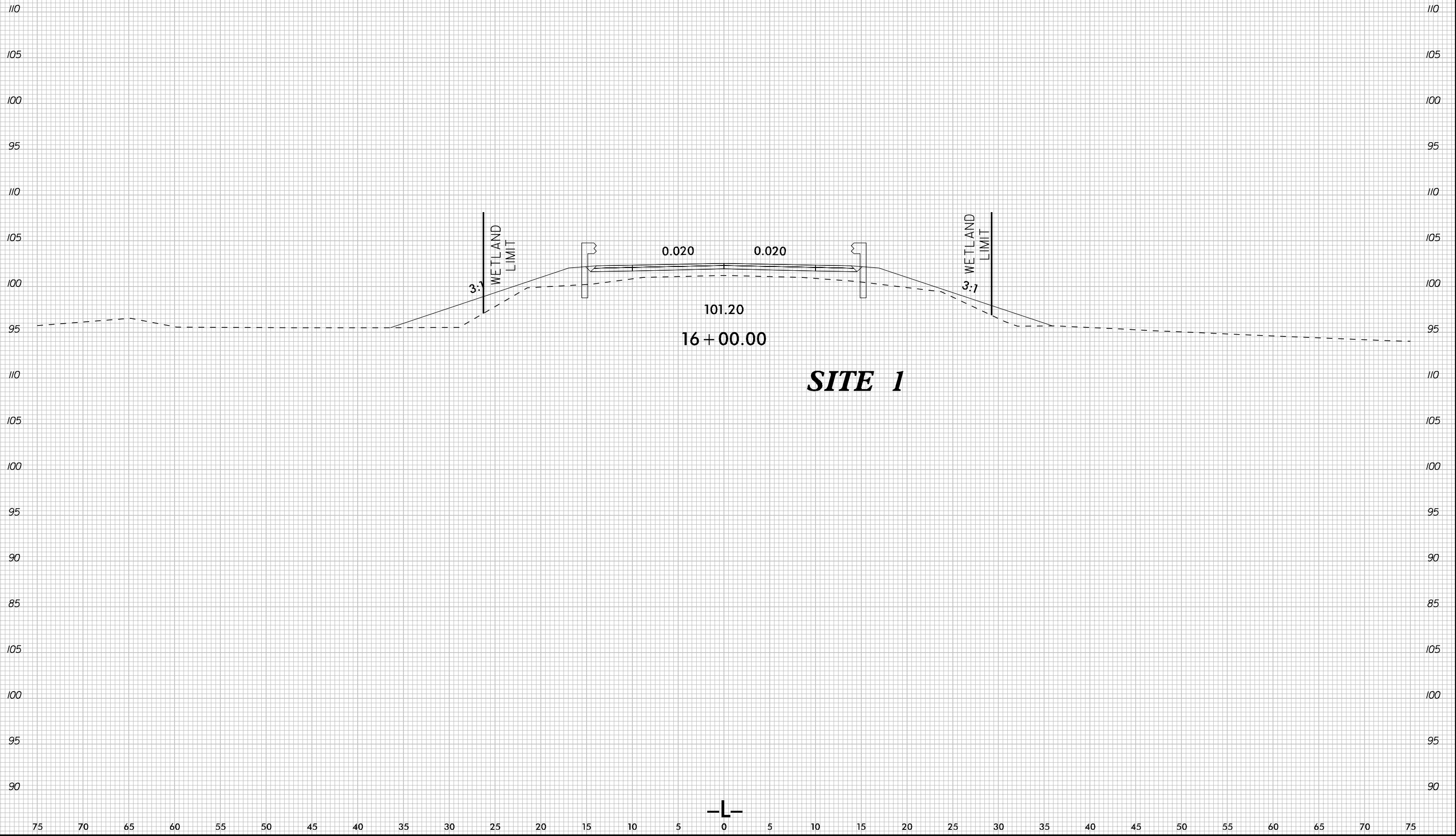
8/23/99



PROJ. REFERENCE NO.	SHEET NO.
B-4637	X-3

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

PERMIT DRAWING  
SHEET 7 OF 9

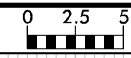


**SITE 1**

3/1/2017  
K:\RAI\_Roadway\011036316 - B-4637\Hydraulics\PERMITS.Environmental\Drawings\Plan Sheets\B4637\_hyd\_prm\_wet\_xpl.dgn  
User: vane@bentley.com



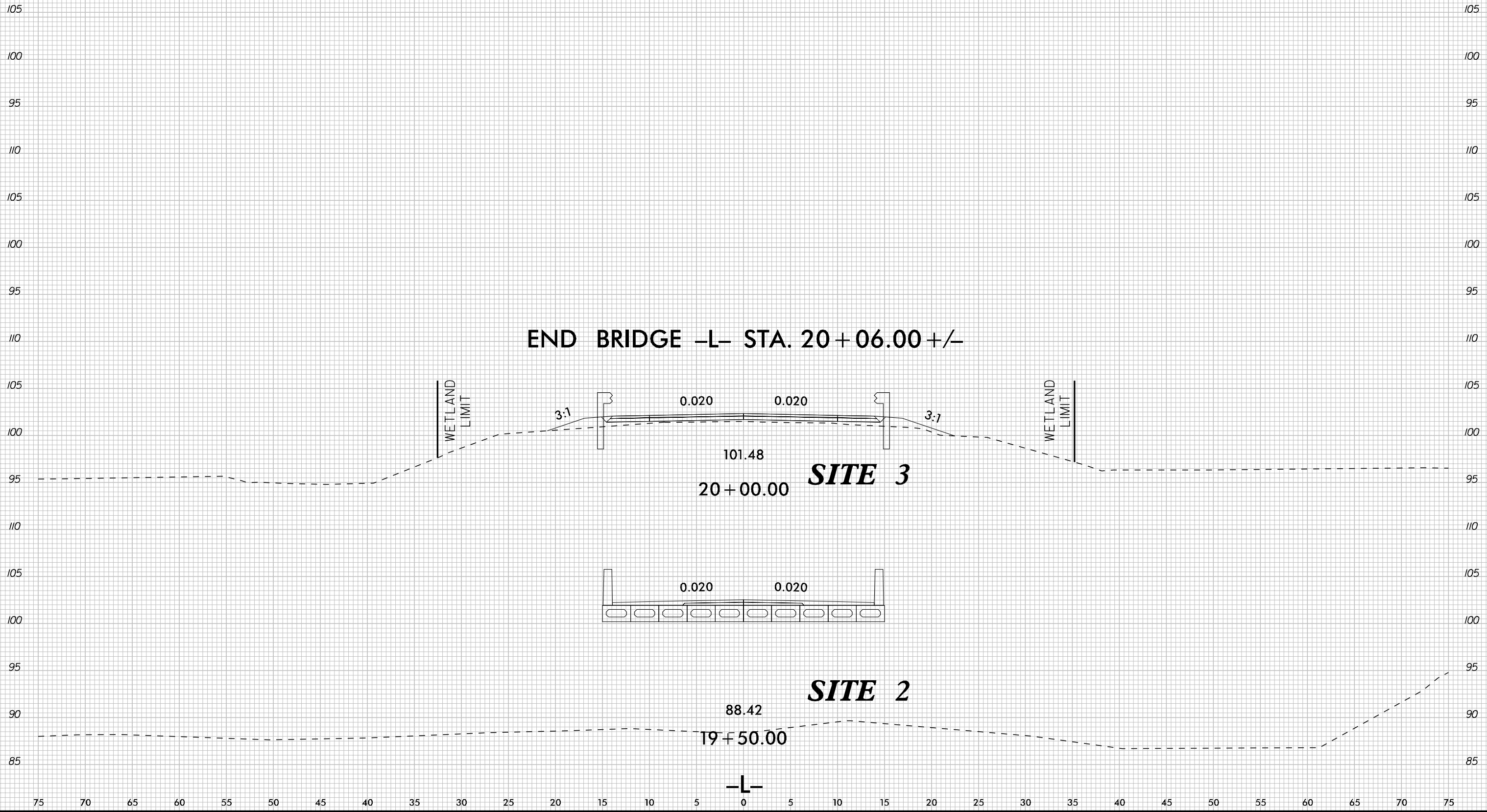
8/23/99



PROJ. REFERENCE NO.	SHEET NO.
B-4637	X-5

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

PERMIT DRAWING  
SHEET 8 OF 9



3/1/2017  
K:\RAI\_Roadway\011036316 - B-4637\Hydraulics\PERMITS.Environmental\Drawings\Plan Sheets\B4637\_hyd.prm.wet\_xpl.dgn  
User: vane@blanton

**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)
1	-L- 11+26 - 12+09 (RT)	Roadway Fill	< 0.01			< 0.01						
1	-L- 12+09 - 12+26 (LT/RT)	Class B Rip Rap	< 0.01			< 0.01						
1	-L- 12+26 - 13+10 (LT/RT)	Bridge/Roadway Fill			0.01		0.09					
1	-L- 13+10 - 14+98 (LT/RT)	Roadway Fill	0.04			0.03						
1	-L- 14+98 - 15+14 (LT/RT)	Class B Rip Rap	< 0.01			< 0.01						
1	-L- 15+14 - 15+98 (LT/RT)	Bridge/Roadway Fill	< 0.01		< 0.01		0.12					
1	-L- 15+98 - 18+37 (LT/RT)	Roadway Fill	0.05			0.04						
1	-L- 18+81 - 19+42 (LT/RT)	Bridge/Roadway Fill			< 0.01		0.07					
2	-L- 19+12 - 19+81 (LT/RT)	Bridge/Roadway Fill						0.02	28	80		
3	-L- 19+72 - 20+10 (LT/RT)	Bridge/Roadway Fill	< 0.01		0.02		0.02					
3	-L- 20+10 - 20+27 (LT/RT)	Class B Rip Rap	< 0.01			0.01						
TOTALS*:			0.10		0.04	0.09	0.30	0.02	28	80		

\*Rounded totals are sum of actual impacts

NOTES:

Less than 0.01 acres of the permanent surface water impacts are due to the proposed bridge pier.  
 <0.01 acre of Temporary Fill in Wetlands in the Hand Clearing areas for erosion control measures.

NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
  
 SAMPSON COUNTY  
 B4637 (WBS: 33808.1.2)

SHEET 9 of 9 4/10/2017

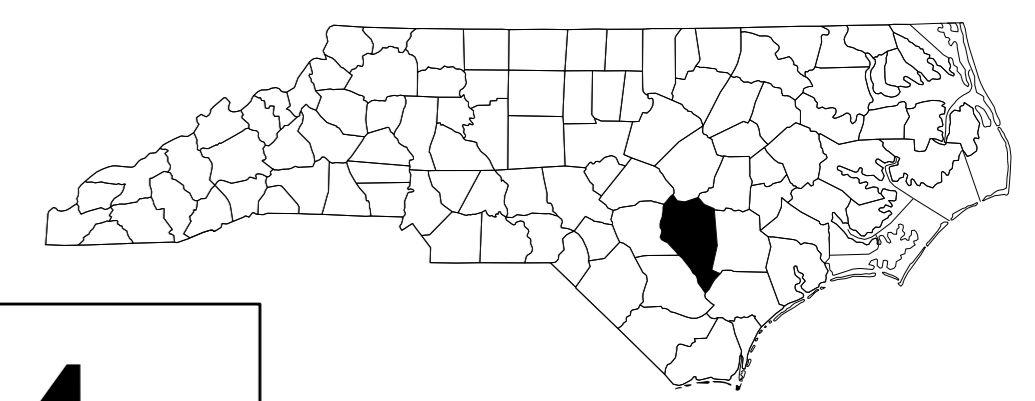
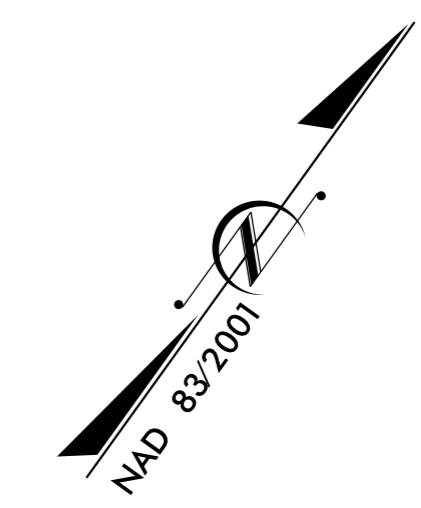


09/08/99

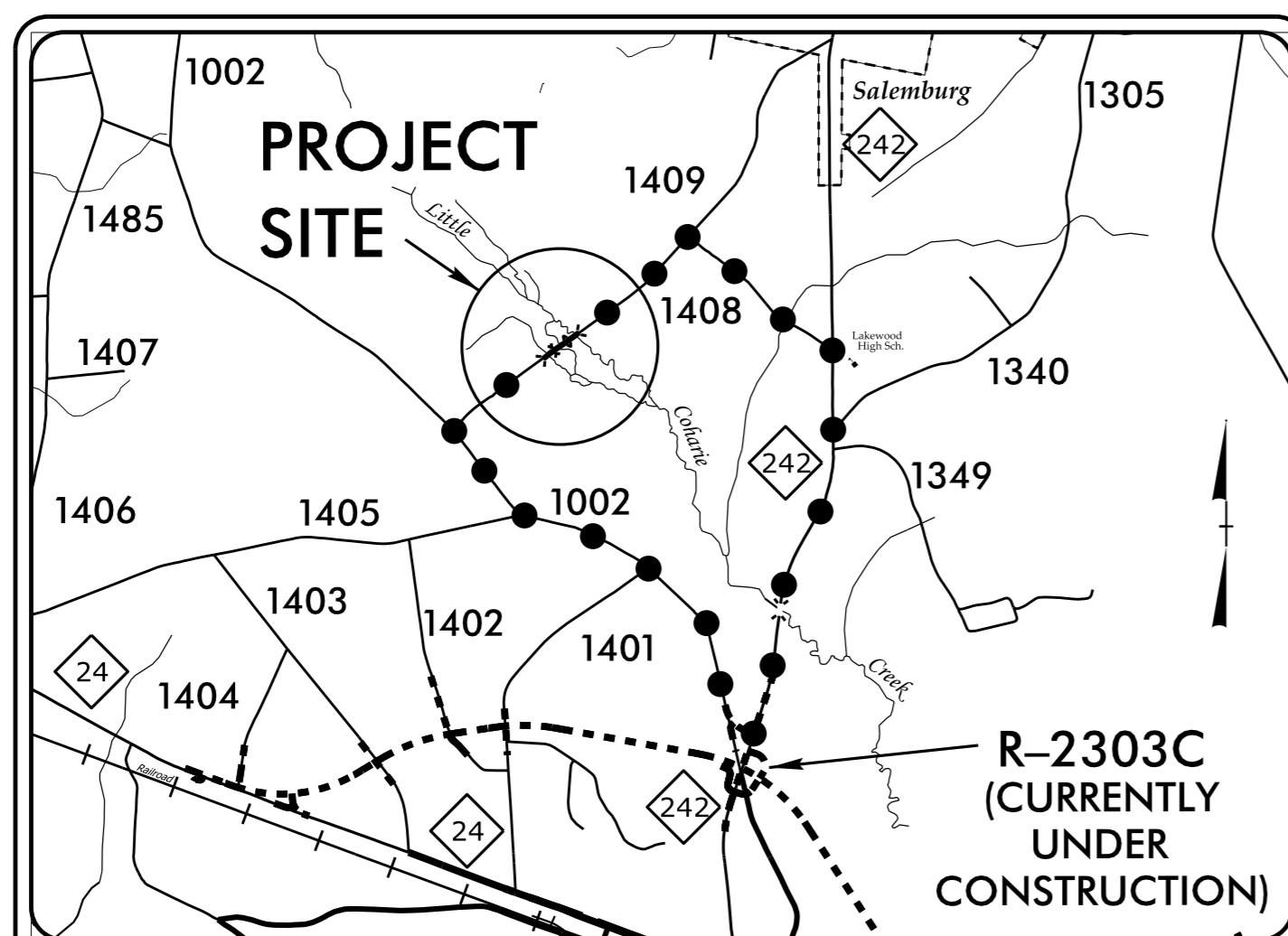
See Sheet 1A For Index of Sheets  
See Sheet 1B For Conventional Symbols

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
**SAMPSON COUNTY**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	<b>B-4637</b>	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33808.1.2	BRZ-1409 (12)	PE	
33808.2.1	BRZ-1409 (12)	R/W & UTIL	



**TIP PROJECT: B-4637**

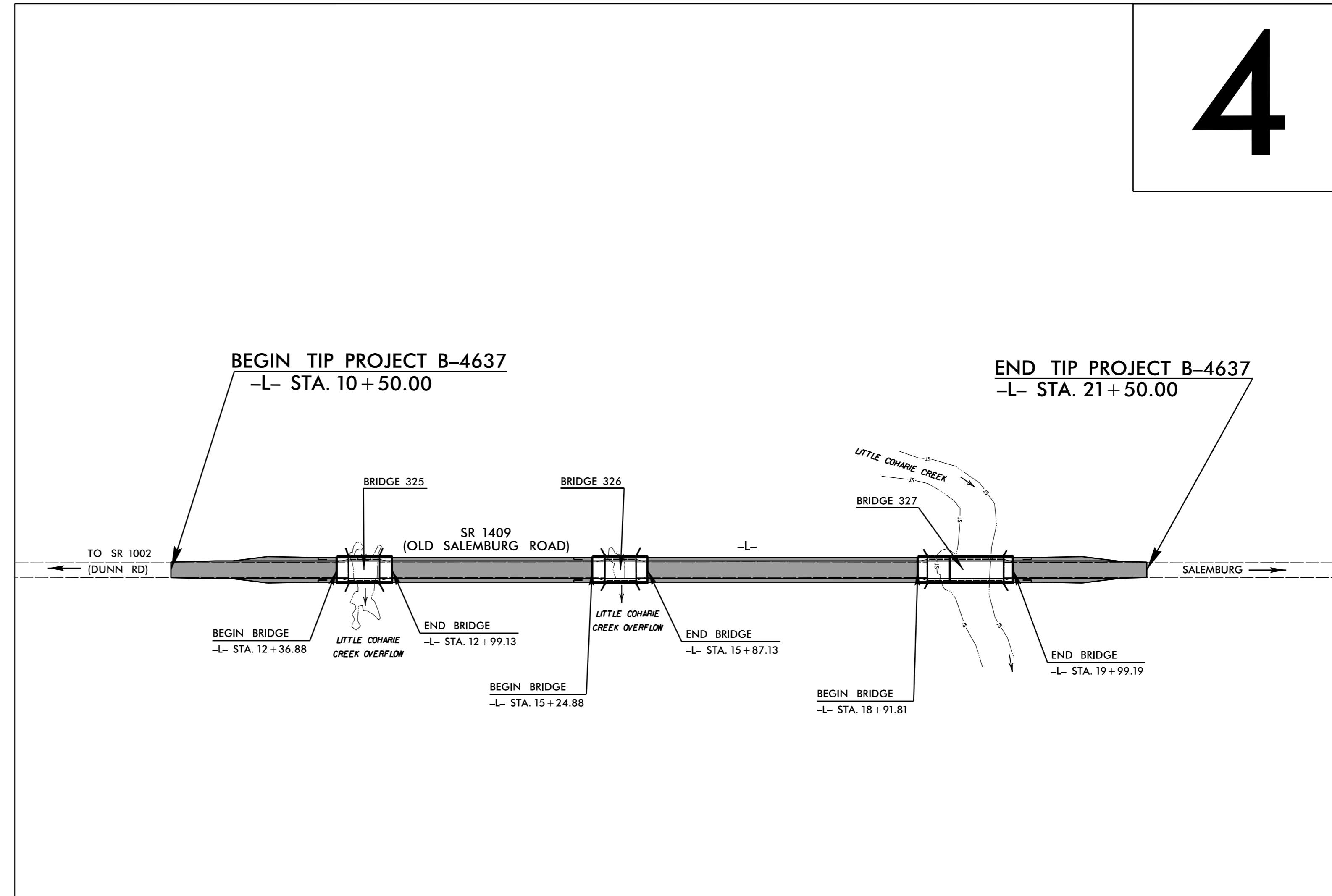


**VICINITY MAP**

OFF SITE DETOUR ●●●●●

**LOCATION: BRIDGES 325 AND 326 OVER LITTLE COHARIE CREEK OVERFLOW AND BRIDGE 327 OVER LITTLE COHARIE CREEK ON SR 1409 (OLD SALEMURG RD)**  
**TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURES**

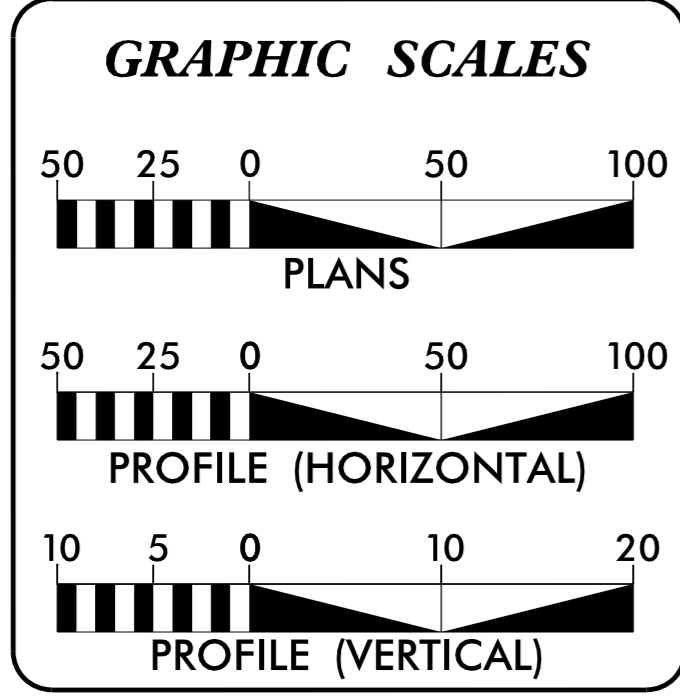
**4**



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.  
CLEARING ON THIS PROJECT SHOULD BE PREFORMED TO THE LIMITS ESTABLISHED BY MODIFIED METHOD III.

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

**CONTRACT:**



**DESIGN DATA**

ADT 2017 =	590
ADT 2037 =	935
K =	11 %
D =	55 %
T =	5 % *
V =	60 MPH
* (TTST 1%+DUALS 4%)	
FUNC CLASS =	RURAL LOCAL
SUBREGIONAL TIER	

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-4637 =	0.164 MI
LENGTH STRUCTURE TIP PROJECT B-4637 =	0.044 MI
TOTAL LENGTH OF TIP PROJECT B-4637 =	0.208 MI

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

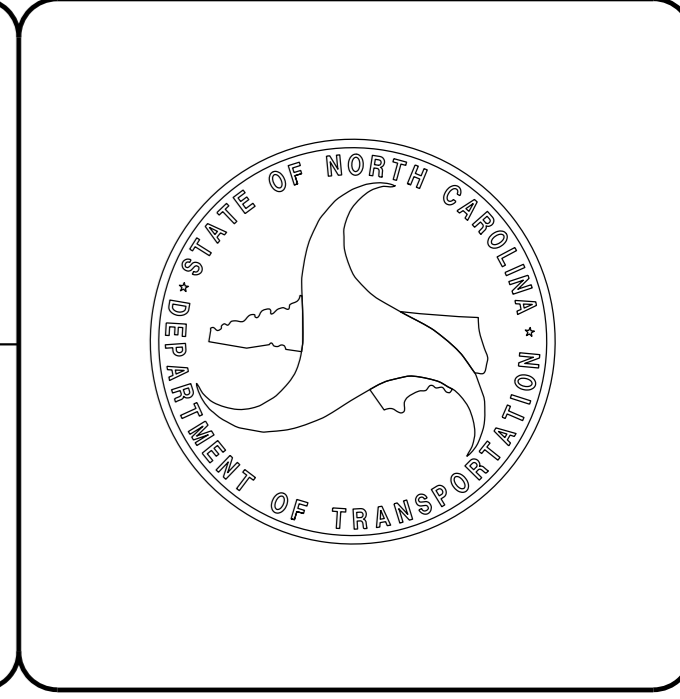
2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: NOVEMBER 18, 2016	GARY R. LOVERING, PE PROJECT ENGINEER
LETTING DATE: JANUARY 16, 2018	SAM ST. CLAIR PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.



18-NOV-2016 16:16  
R:\Roadway\Proj\B4637\_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	○ EP
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	○ CSX TRANSPORTATION 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 R/W Marker	----- RW
Proposed Control of Access Line with Concrete CA Marker	----- CA
Existing Control of Access	----- CA
Proposed Control of Access	----- CA
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	⊙
Storm Sewer	----- S

### UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊙
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	⊙
Telephone Pedestal	⊠
Telephone Cell Tower	⊠
U/G Telephone Cable Hand Hole	○
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	⊙
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	○
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.*)	----- ?UTL
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.

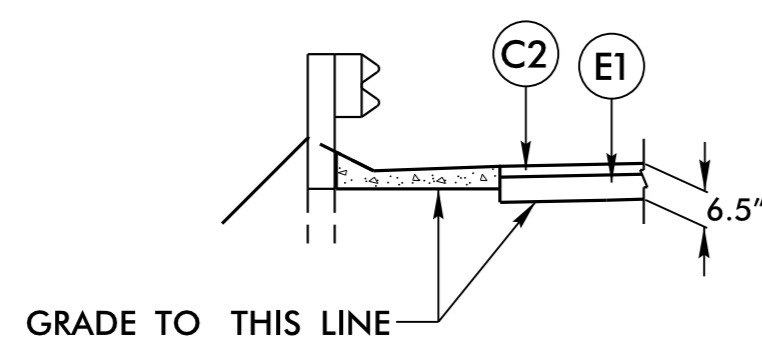
6/2/99

### PAVEMENT SCHEDULE

FINAL PAVEMENT DESIGN

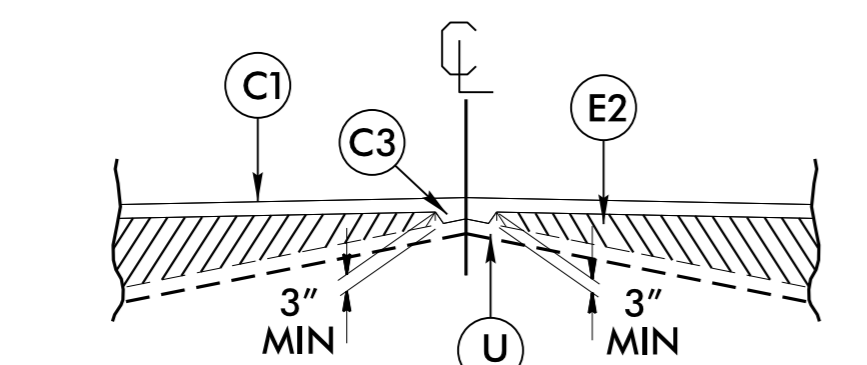
C1	PROP. APPROX. 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 2.5" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1.5" IN DEPTH
E1	PROP. APPROX. 4.0" 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 GREATER THAN 3" IN DEPTH OR LESS THAN 5.5" IN DEPTH
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE DETAIL SHOWING METHOD OF WEDGING)

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

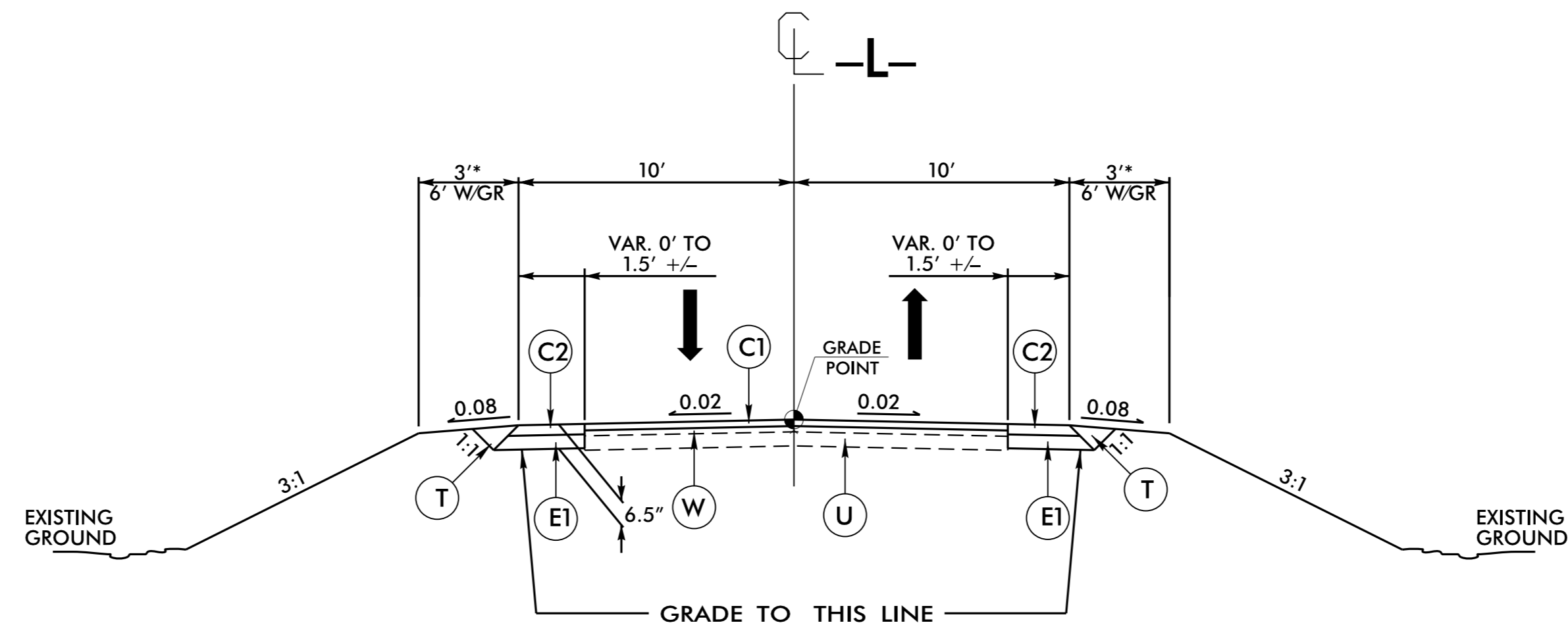


#### DETAIL SHOWING SHOULDER BERM GUTTER

- L- STA. 12+16.00 TO -L- STA. 12+26.00 (LT & RT)
- L- STA. 15+04.00 TO -L- STA. 15+14.00 (LT & RT)
- L- STA. 20+10.00 TO -L- STA. 20+20.00 (LT & RT)



Detail Showing Method of Wedging

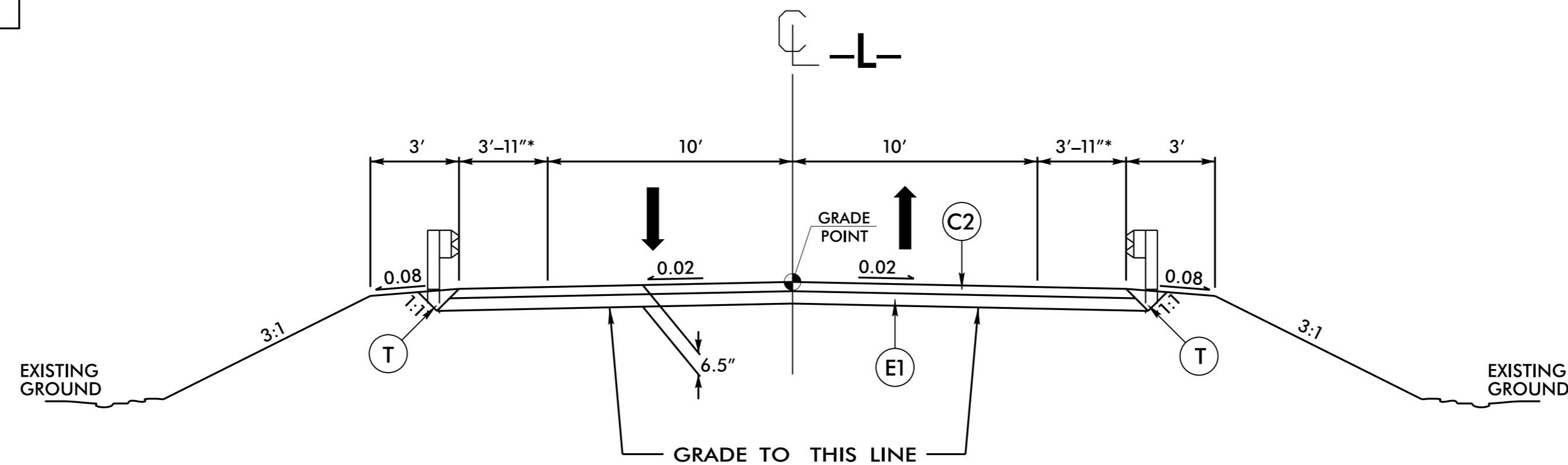


TYPICAL SECTION 1

#### USE TYPICAL SECTION 1 AS FOLLOWS:

- L- STA. 10+50.00 TO -L- STA. 11+70.00
- L- STA. 20+60.00 TO -L- STA. 21+50.00

\* PAVE TO FACE OF GUARDRAIL

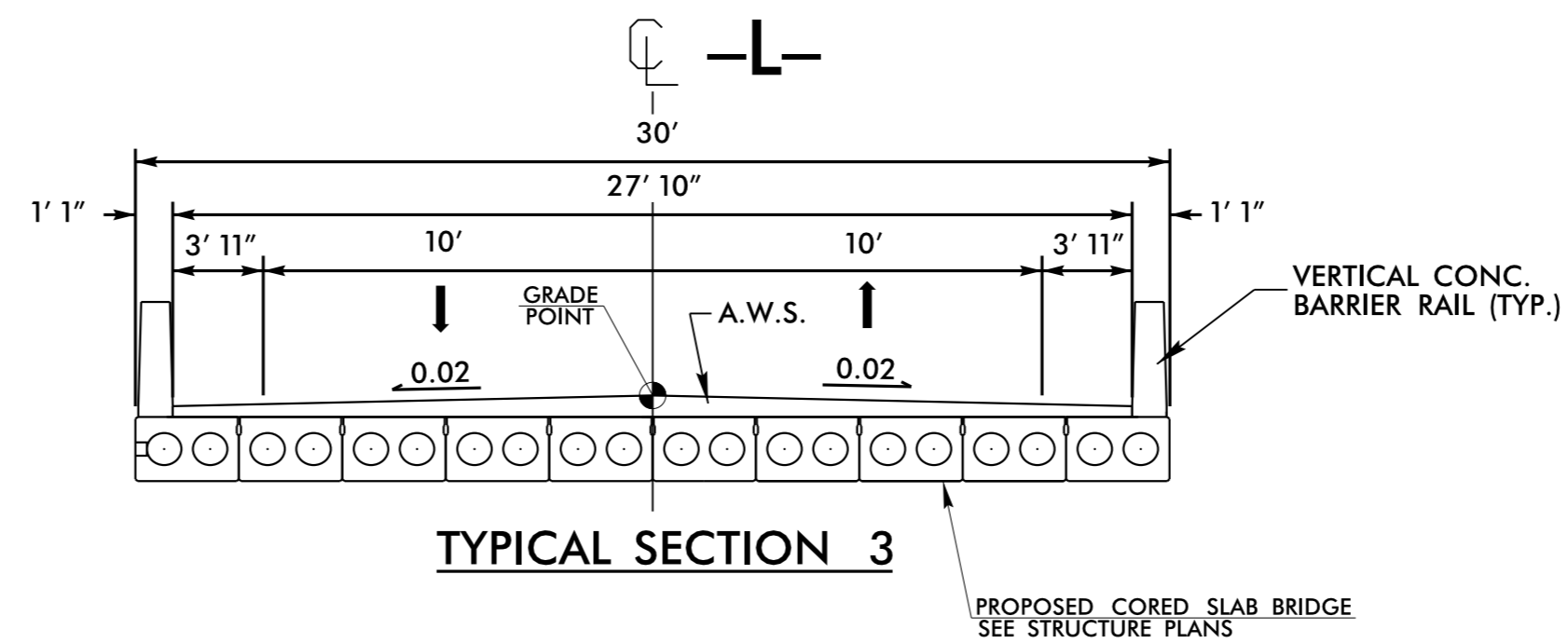


TYPICAL SECTION 2

#### USE TYPICAL SECTION 2 AS FOLLOWS:

- L- STA. 11+70.00 TO -L- STA. 12+36.88 (BEGIN BRIDGE)
- L- STA. 12+99.13 (END BRIDGE) TO -L- STA. 15+24.88 (BEGIN BRIDGE)
- L- STA. 15+87.13 (END BRIDGE) TO -L- STA. 18+91.81 (BEGIN BRIDGE)
- L- STA. 19+99.19 (END BRIDGE) TO -L- STA. 20+60.00

\* PAVE TO FACE OF GUARDRAIL



TYPICAL SECTION 3

A.W.S. - ASPHALT WEARING SURFACE

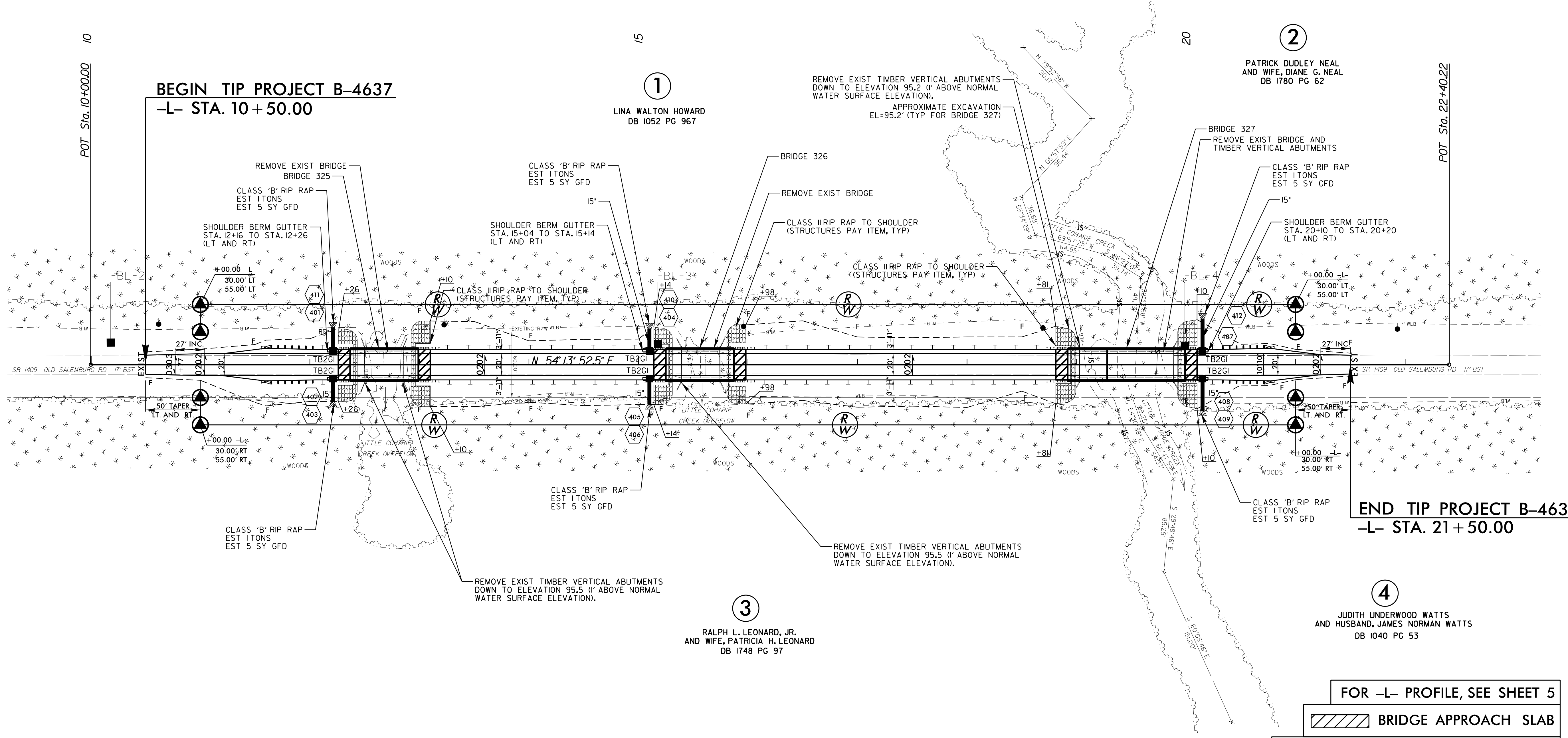
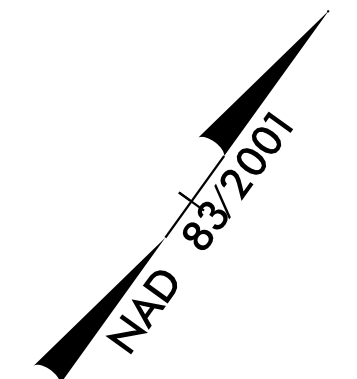
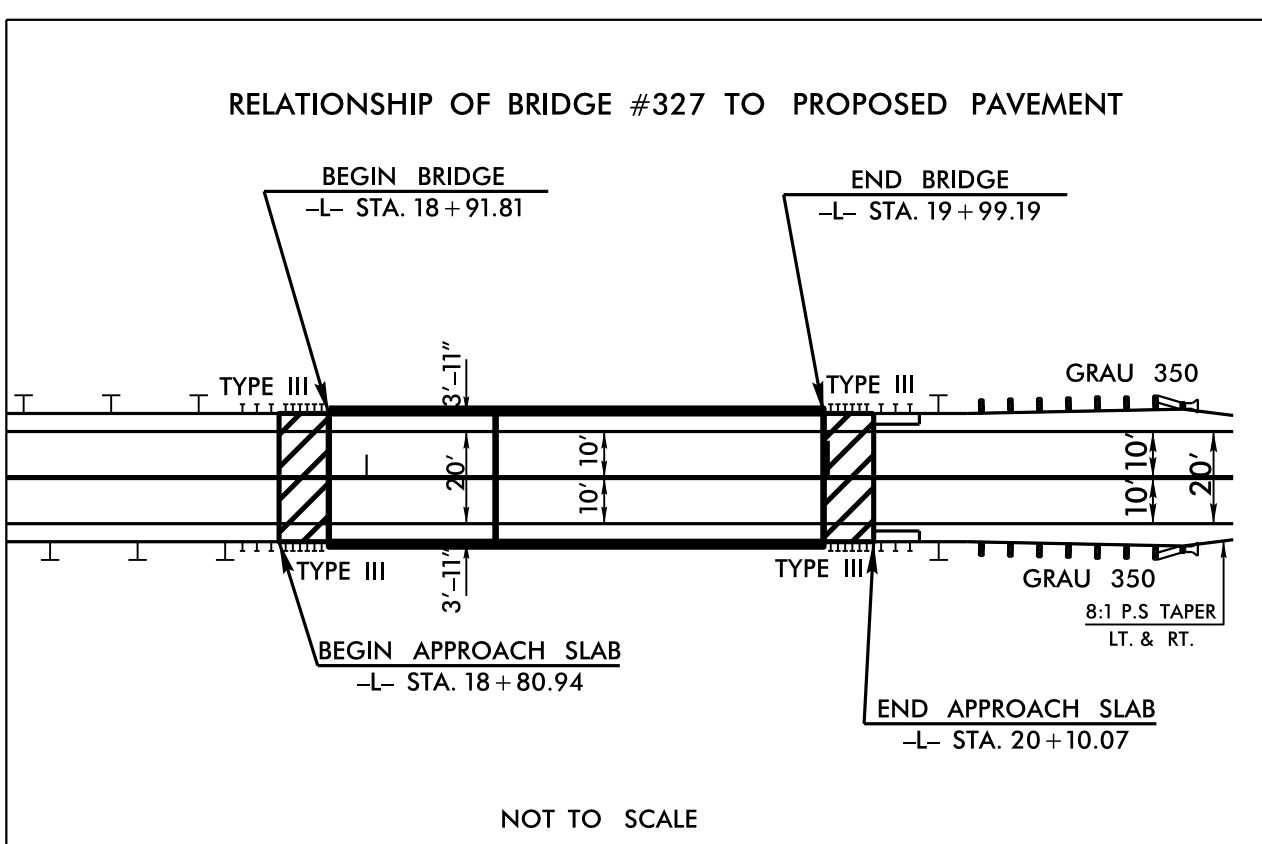
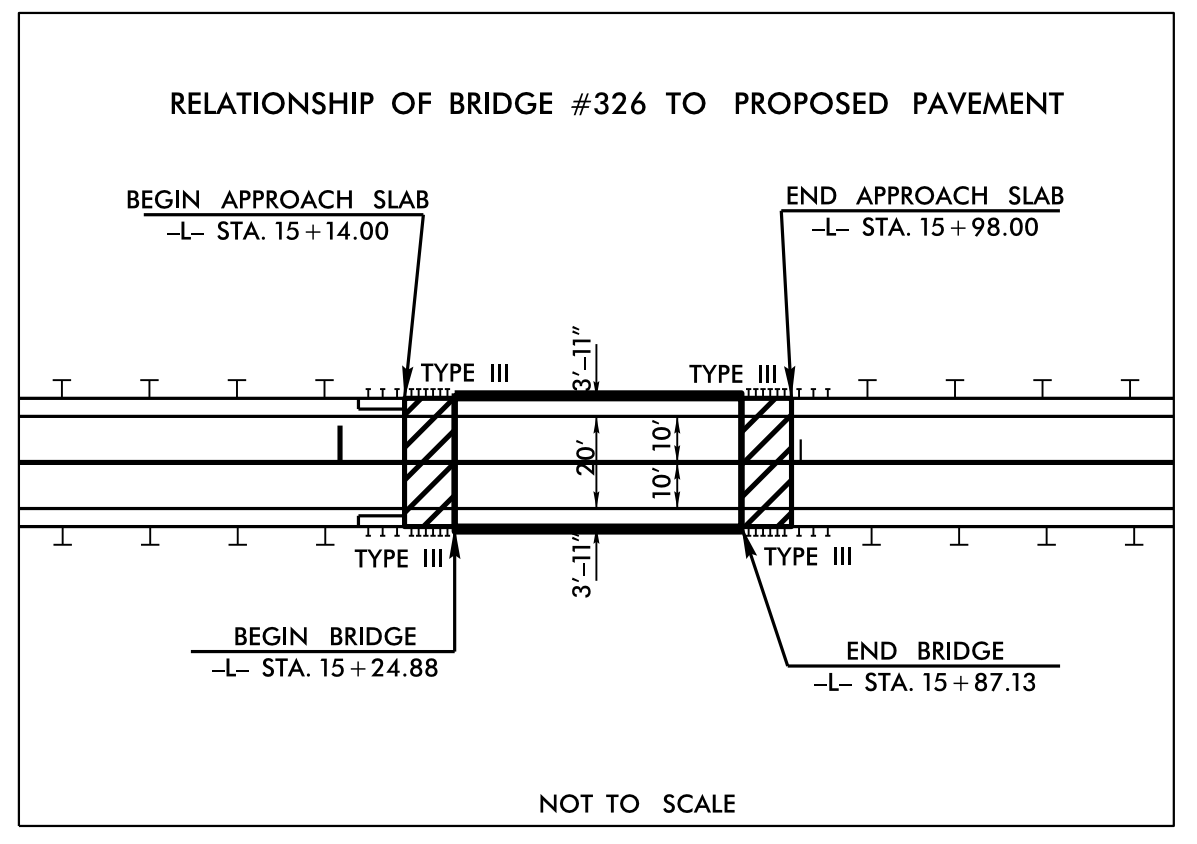
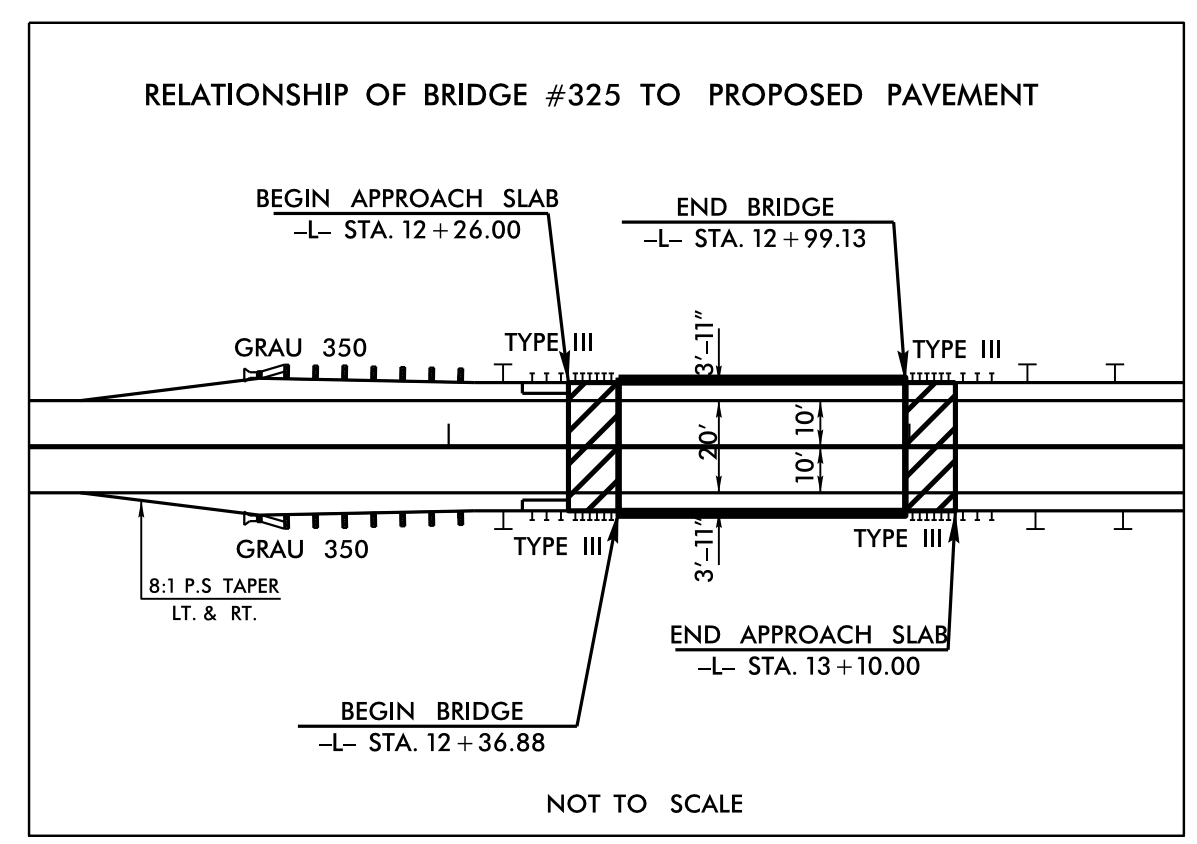
#### USE TYPICAL SECTION 3 AS FOLLOWS:

- L- STA. 12+36.88 (BEGIN BRIDGE) TO -L- STA. 12+99.13 (END BRIDGE)
- L- STA. 15+24.88 (BEGIN BRIDGE) TO -L- STA. 15+87.13 (END BRIDGE)
- L- STA. 18+91.81 (BEGIN BRIDGE) TO -L- STA. 19+99.19 (END BRIDGE)

PROJECT REFERENCE NO. B-4637	SHEET NO. 2A-1
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

18-NOV-2016 16:16 \\B4637.Rdy\_tup.dgn

PROJECT REFERENCE NO.	SHEET NO.
B-4637	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	



1  
LINA WALTON HOWARD  
DB 1052 PG 967

3  
RALPH L. LEONARD, JR.  
AND WIFE, PATRICIA H. LEONARD  
DB 1748 PG 97

2  
PATRICK DUDLEY NEAL  
AND WIFE, DIANE G. NEAL  
DB 1780 PG 62

4  
JUDITH UNDERWOOD WATTS  
AND HUSBAND, JAMES NORMAN WATTS  
DB 1040 PG 53

FOR -L- PROFILE, SEE SHEET 5

BRIDGE APPROACH SLAB

FOR STRUCTURE PLANS, SEE SHEET S-1 THROUGH S-XX

REVISIONS

8/17/99

18-NOV-2016 16:17 B:\B4637-Rdy-psh-4.dgn  
3:54:58 PM WJF