



Transportation

PAT McCRORY  
*Governor*

NICHOLAS J. TENNYSON  
*Secretary*

November 13, 2015

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

ATTN: Mr. Steven Kichefski  
NCDOT Coordinator

Subject: Application for Section 404 Nationwide Permits 13, 23 & 33 and Section 401 Water Quality Certification for the proposed replacement of Bridge No. 203 over Stanley Creek on SR 1935 (Willowside Drive) in Gaston County; Federal Aid Project No. BRZ-1935(2); Division 12; TIP No. B-4751.  
\$570 from WBS 38523.1.1

Dear Mr. Kichefski:

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 203 (a 71-foot bridge) over Stanley Creek on SR 1935 with an 82-foot bridge that will span Stanley Creek. The bridge will be replaced in place, with an off-site detour.

There will be a total of 178 linear feet (lf) of permanent stream impacts, and 37 lf (0.01 ac) of temporary stream impacts on the project. The permanent stream impacts include 170 lf from the relocation of a portion of a tributary to Stanley Creek into an open ditch, and 8 linear feet from the placement of bank stabilization at the confluence of the proposed ditch and Stanley Creek. The temporary stream impacts include 27 lf (<0.01 ac) from the placement of a temporary causeway in Stanley Creek for piling removal, and 10 linear feet (<0.01 ac) to the tributary to Stanley Creek associated with the filling of a portion of the tributary.

Please see enclosed copies of the Pre-Construction Notification (PCN), NCDMS Mitigation Acceptance Letter, stormwater management plan, permit drawings and design plans for the above-referenced project. The Programmatic Categorical Exclusion (PCE) was completed in June 2014 and distributed on June 23, 2014. Additional copies are available upon request.

This project calls for a letting date of March 15, 2016 and a review date of January 26, 2016; however, the let date may advance as additional funding becomes available.



A copy of this permit application and its distribution list will be posted on the NCDOT Website at: <http://connect.ncdot.gov/resources/Environmental>. If you have any questions or need additional information, please call Bill Barrett at (919) 707-6103.

Sincerely,



for

Richard W. Hancock, P.E., Manager  
Project Development and Environmental Analysis Unit

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: 13 23 33 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 <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 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 Bridge 203 over Stanley Creek on SR 1935.
2b. County:	Gaston
2c. Nearest municipality / town:	Stanley
2d. Subdivision name:	<i>not applicable</i>
2e. NCDOT only, T.I.P. or state project no.:	B-4751

#### 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) 707-6103
3g. Fax no.:	(919) 212-5785
3h. Email address:	wabarrett@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: 35.347905 (DD.DDDDDD) Longitude: - 81.46607 (-DD.DDDDDD)
1c. Property size:	0.72 acres
<b>2. Surface Waters</b>	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Stanley Creek
2b. Water Quality Classification of nearest receiving water:	WS-IV
2c. River basin:	Catawba
<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: Local rural. The Catawba Lands Conservancy owns property both north and south of Bridge No. 203.	
3b. List the total estimated acreage of all existing wetlands on the property: 0 within construction limits; 0.2 acre within NRTR study area.	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 245 within construction limits; 750 LF within NRTR study area.	
3d. Explain the purpose of the proposed project: To replace a structurally deficient and functionally obsolete bridge.	
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing a 71-foot bridge with a 82-foot, single-span bridge on the existing alignment with an off-site detour. Standard road building equipment, such as trucks, dozers, and cranes 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:	<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.	
<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 type="checkbox"/> Wetlands		<input checked="" type="checkbox"/> Streams - tributaries		<input type="checkbox"/> Buffers		
<input 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. Forested	2e. Type of jurisdiction	2f. Area of impact (acres)	
Site 1 <input type="checkbox"/> P <input type="checkbox"/> T		Choose One	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 2 <input type="checkbox"/> P <input type="checkbox"/> T		Choose One	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
<b>2g. Total wetland impacts</b>					X Permanent X Temporary	
2h. Comments:						
<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 1 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	temporary causeway	Stanley Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	12	27 (<0.01 ac)
Site 1 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	bank stabilization	Stanley Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	12	8 (<0.01 ac)
Site 2 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	fill / stream relocation	UT to Stanley Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	3	170
Site 2 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	associated with fill	UT to Stanley Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	3	10 (<0.01 ac)
<b>3h. Total stream and tributary impacts</b>						178 Perm 37 Temp (<0.01 ac)
3i. Comments: The loss of stream function from the filling of the tributary to Stanley Creek will be replaced by the proposed ditch to be constructed.						

**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 type="checkbox"/> P <input type="checkbox"/> T				
O2 <input type="checkbox"/> P <input type="checkbox"/> T				
O3 <input type="checkbox"/> P <input type="checkbox"/> T				
O4 <input type="checkbox"/> P <input type="checkbox"/> T				
<b>4f. Total open water impacts</b>				X Permanent X 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								
<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"/> Catawba	<input type="checkbox"/> Tar-Pamlico <input type="checkbox"/> Randleman	<input type="checkbox"/> Other:
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		
<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. The proposed bridge is 11 feet longer than the existing bridge; the proposed bridge will span Stanley Creek; the proposed bridge will be at approximately the same grade as the existing structure; an off site detour will be used; bank stabilization will be utilized where the proposed ditch discharges to Stanley Creek to reduce erosion and sedimentation; and 2:1 fill slopes will be used where practicable.		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques. A temporary causeway will be placed in Stanley Creek and utilized for the removal of the pilings of the existing bridge.		
<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: In conversations with Steve Kichefski USACE, mitigation is not required for the filling of the UT to Stanley Creek (low quality stream), as it's function will be replaced by the proposed ditch.  NCDOT does not propose mitigation for the 8 lf of bank stabilization impact, as it does not require fill in the stream bed and therefore, under Section 404 of the Clean Water Act, does not constitute Loss of Waters of the U.S. and is not subject to compensatory mitigation. Furthermore, the proposed bank stabilization is necessary to prevent erosion and sedimentation by preventing bank destabilization and thereby minimizing impacts to the environment.  Mitigation is required by NCDWR for stream impacts greater than 150 LF. Mitigation for 178 LF of stream impact at 1:1 ratio has been obtained from NCDMS.	
2b. If yes, mitigation is required by (check all that apply):	<input checked="" type="checkbox"/> DWQ <input 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 checked="" type="checkbox"/> Yes	
4b. Stream mitigation requested:	178 linear feet	
4c. If using stream mitigation, stream temperature:	<input checked="" type="checkbox"/> warm <input type="checkbox"/> cool <input type="checkbox"/> cold	
4d. Buffer mitigation requested (DWQ only):	0 square feet	
4e. Riparian wetland mitigation requested:	0 acres	
4f. Non-riparian wetland mitigation requested:	0 acres	
4g. Coastal (tidal) wetland mitigation requested:	0 acres	

4h. Comments: Mitigation for 170 LF in stream impact at 1:1 ratio, for NCDWR.

**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	
<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: If required from 1a, see attached buffer permit drawings.	<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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No Habitat for Schweinitz's sunflower
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 type="checkbox"/> Raleigh	<input checked="" type="checkbox"/> Asheville
5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? NHP, USFWS, and NCDOT field surveys An on-site field meeting was held on October 5, 2015, with Cheryl Gregory/NCDOT, Marella Buncick/USFWS, and Trish Beam/NCDOT Division 12 DEO to assess NLEB at the project site. There was no evidence of bats; poor bridge habitat. A handful of trees on the notheast side of the bridge will be cleared. Marella determined that because the trees are in a riparian area overhanging water, that they are not ideal maternity roost habitat for NLEB. Marella rendered a No Effect determination without a need for a tree-cutting moratorium. No Effect for Schweinitz's sunflower and dwarf-flowered heartleaf.		
<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>Richard W. Hancock, P.E.</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>11-13-2015</u> Date



PAT MCCRORY  
Governor

DONALD R. VAN DER VAART  
Secretary

November 6, 2015

Mr. Richard W. Hancock, P.E.  
Project Development and Environmental Analysis Unit  
North Carolina Department of Transportation  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548

Dear Mr. Hancock:

Subject: Mitigation Acceptance Letter:

**B-4751**, Replace Bridge 203 on SR 1935 over Stanley Creek, Gaston County

The purpose of this letter is to notify you that the Division of Mitigation Services (DMS) will provide the compensatory stream mitigation for the subject project. Based on the information supplied by you on November 6, 2015, the impacts are located in CU 03050101 of the Catawba River basin in the Southern Piedmont (SP) Eco-Region, and are as follows:

Catawba 03050101 SP	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	0	0	178.0	0	0	0	0	0

\*Some of the stream impacts may be proposed to be mitigated at a 1:1 mitigation ratio. See permit application for details.

**This mitigation acceptance letter replaces the mitigation acceptance letter issued on October 27, 2015.** This impact and associated mitigation need were under projected by the NCDOT in the 2015 impact data. DMS will commit to implement sufficient compensatory stream 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. Steve Kichefski, USACE – Asheville Regulatory Field Office  
Ms. Amy Chapman, NCDWR  
File: B-4751





North Carolina Department of Transportation

Highway Stormwater Program  
STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS



(Version 2.01; Released December 2014)

WBS Element: 38523.2.1      TIP No.: B-4751      County(ies): Gaston      Page 1 of 1

General Project Information

WBS Element:	38523.2.1	TIP Number:	B-4751	Project Type:	Bridge Replacement	Date:	4/21/2015
NCDOT Contact:	William S. Zerman			Contractor / Designer:			
Address:	NC DOT Hydraulics Unit 1590 Mail Service Center Raleigh, NC 27699			Address:			
	Phone:	919-707-6755			Phone:		
	Email:	bzerman@ncdot.gov			Email:		
City/Town:	Stanley			County(ies):	Gaston		
River Basin(s):	Catawba			CAMA County?	No		
Wetlands within Project Limits?	No						

Project Description

Project Length (lin. miles or feet):	0.079 mi	Surrounding Land Use:	Local Rural
Project Built-Up Area (ac.)		Existing Site	
Proposed Project		Existing Site	
Project Built-Up Area (ac.):	ac.	ac.	
Typical Cross Section Description:	2 Lane Paved Roadway (Each lane varies in width from 8.8' to 11.2') with 6 ft. unpaved shoulder.		2 Lane Paved Roadway (Each lane is 10' width) with grass shoulder.
Annual Avg Daily Traffic (veh/hr/day):	Design/Future: 1400	Year: 2035	Existing: 600      Year: 2015

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

Proposed Bridge spans Jurisdictional stream. Bank Stabilization has been provided where SW ditch discharges in to Stanley Creek.

Waterbody Information

Surface Water Body (1):	Stanley Creek		NCDWR Stream Index No.:	11-119-3-(2)		
NCDWR Surface Water Classification for Water Body	Primary Classification:	Water Supply IV (WS-IV)				
	Supplemental Classification:					
Other Stream Classification:						
Impairments:						
Threatened/Endangered Species?	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?	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)						

09/08/99

See Sheet 1-A For Index of Sheets

# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

## GASTON COUNTY

**LOCATION: BRIDGE No. 203 OVER STANLEY CREEK ON  
SR 1935 (WILLOWSIDE DR.)**

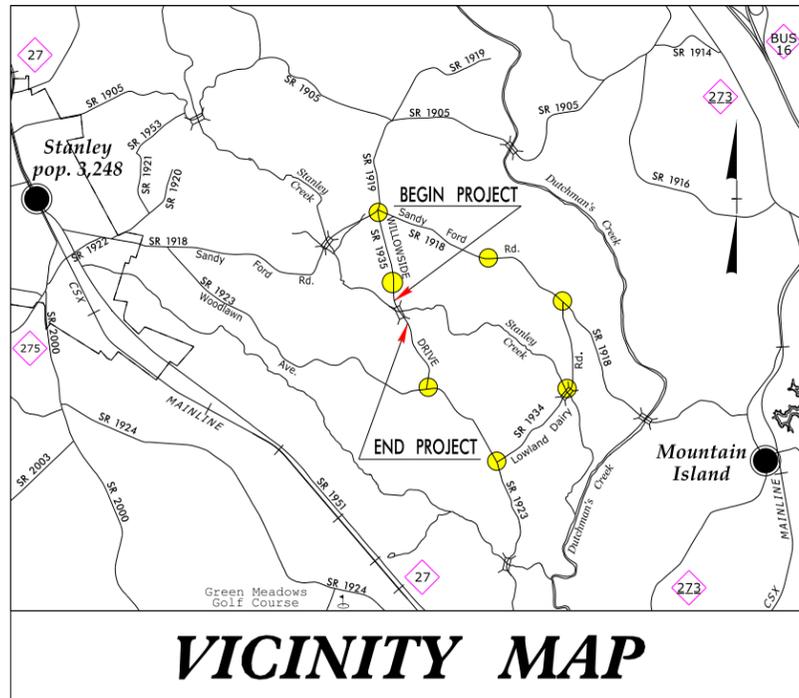
**TYPE OF WORK: GRADING, DRAINAGE, PAVING & STRUCTURE.**

**WETLAND AND SURFACE WATER IMPACTS PERMIT**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4751	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38523.1.2	BRZ-1935(3)	PE	
38523.2.FD1	BRZ-1935(3)	RW, UTIL	



PERMIT DRAWING  
SHEET 1 OF 5



● ● ● ● ● OFF-SITE DETOUR

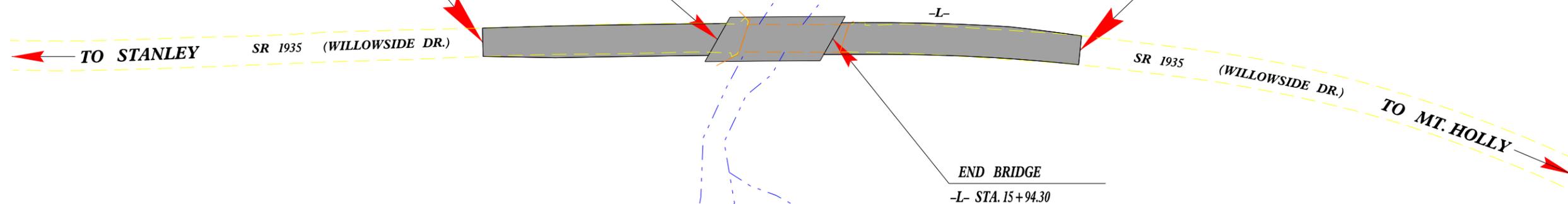
**BEGIN T.I.P. PROJECT B-4751**

-L- STA. 13+50.00

**BEGIN BRIDGE**  
-L- STA. 15+11.70

**END T.I.P. PROJECT B-4751**

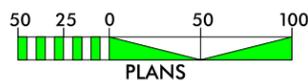
-L- STA. 17+65.00



THIS IS NOT A CONTROL OF ACCESS PROJECT.  
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

### GRAPHIC SCALES



### DESIGN DATA

ADT 2015 = 600  
 ADT 2035 = 1400  
 K = 12 %  
 D = 75 %  
 T = 5 % \*  
 V = 50 MPH  
 \* TTST = 1% DUAL 4%  
 FUNC CLASS = LOCAL RURAL  
 SUB-REGIONAL TIER

### PROJECT LENGTH

LENGTH ROADWAY T.I.P. PROJECT B-4751 = 0.063 MI  
 LENGTH STRUCTURE T.I.P. PROJECT B-4751 = 0.016 MI  
 TOTAL LENGTH OF T.I.P. PROJECT B-4751 = 0.079 MI

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

2012 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
MARCH 31, 2015

**LETTING DATE:**  
MARCH 15, 2016

**JASON MOORE, PE**  
PROJECT ENGINEER

**NYA K. BOAYUE, PE**  
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

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

**ROADWAY DESIGN ENGINEER**

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

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA



STATE HIGHWAY DESIGN ENGINEER P.E.

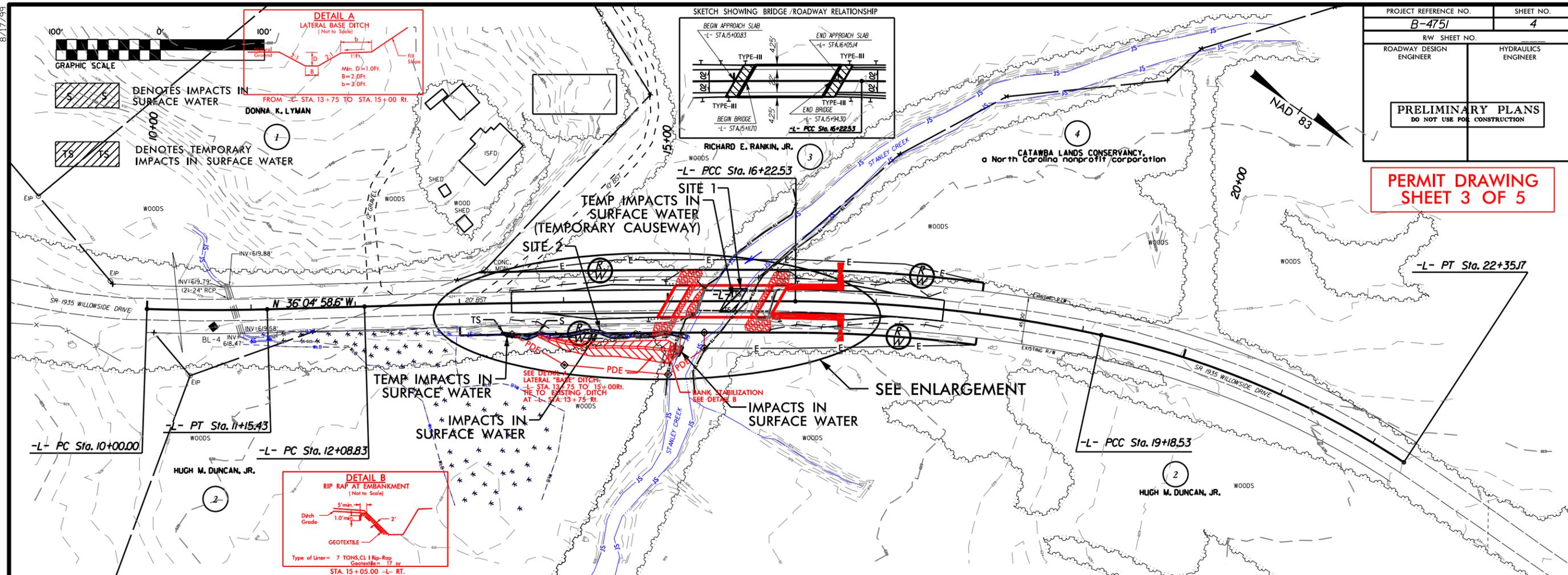
TIP PROJECT: B-4751

CONTRACT: C203673

\$\$\$\$\$SYTIME\$\$\$\$\$  
\$\$\$\$\$CDON\$\$\$\$\$  
\$\$\$\$\$USERNAME\$\$\$\$\$



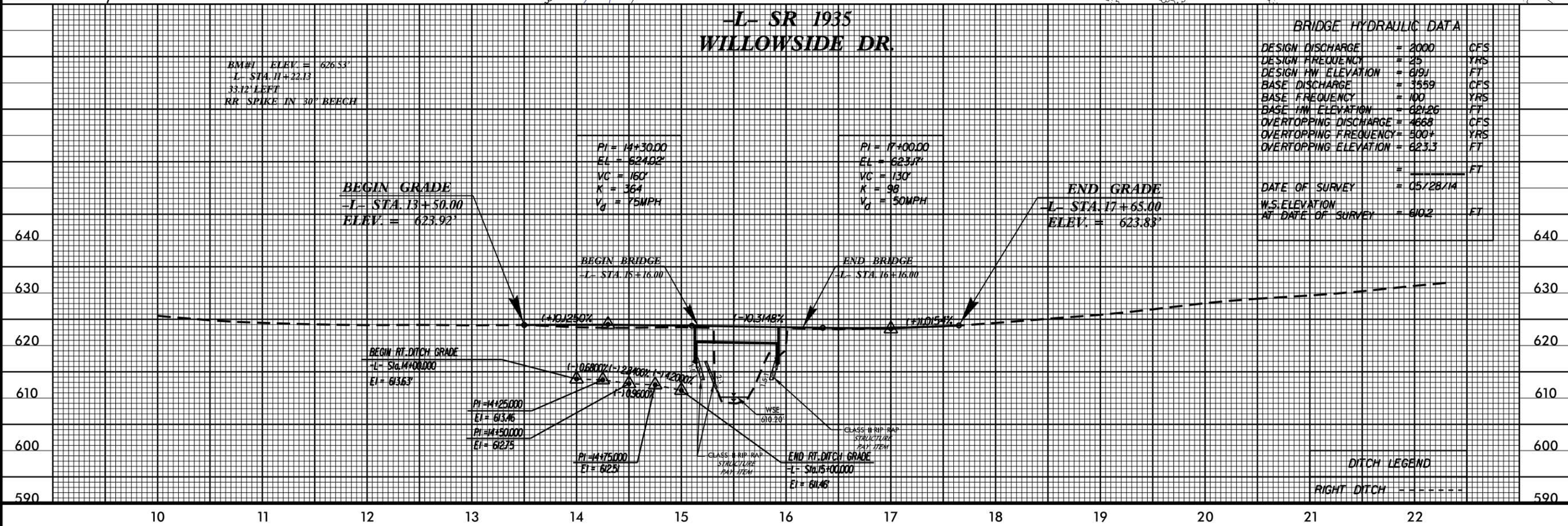
PERMIT DRAWING  
SHEET 3 OF 5



**-L- SR 1935  
WILLOWSIDE DR.**

**BRIDGE HYDRAULIC DATA**

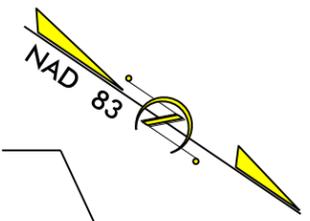
DESIGN DISCHARGE	= 2000	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 619.1	FT
BASE DISCHARGE	= 3559	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 621.26	FT
OVERTOPPING DISCHARGE	= 4668	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 623.3	FT
DATE OF SURVEY	= 05/28/14	
W.S. ELEVATION AT DATE OF SURVEY	= 610.2	FT



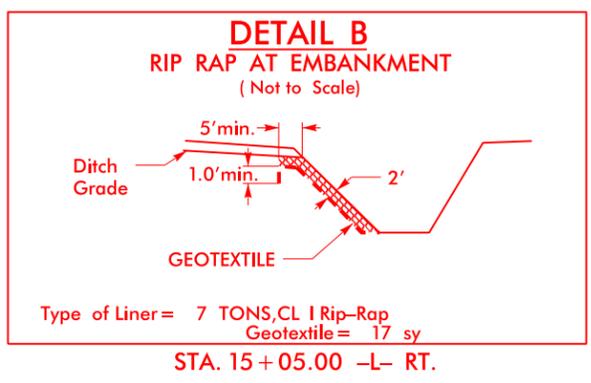
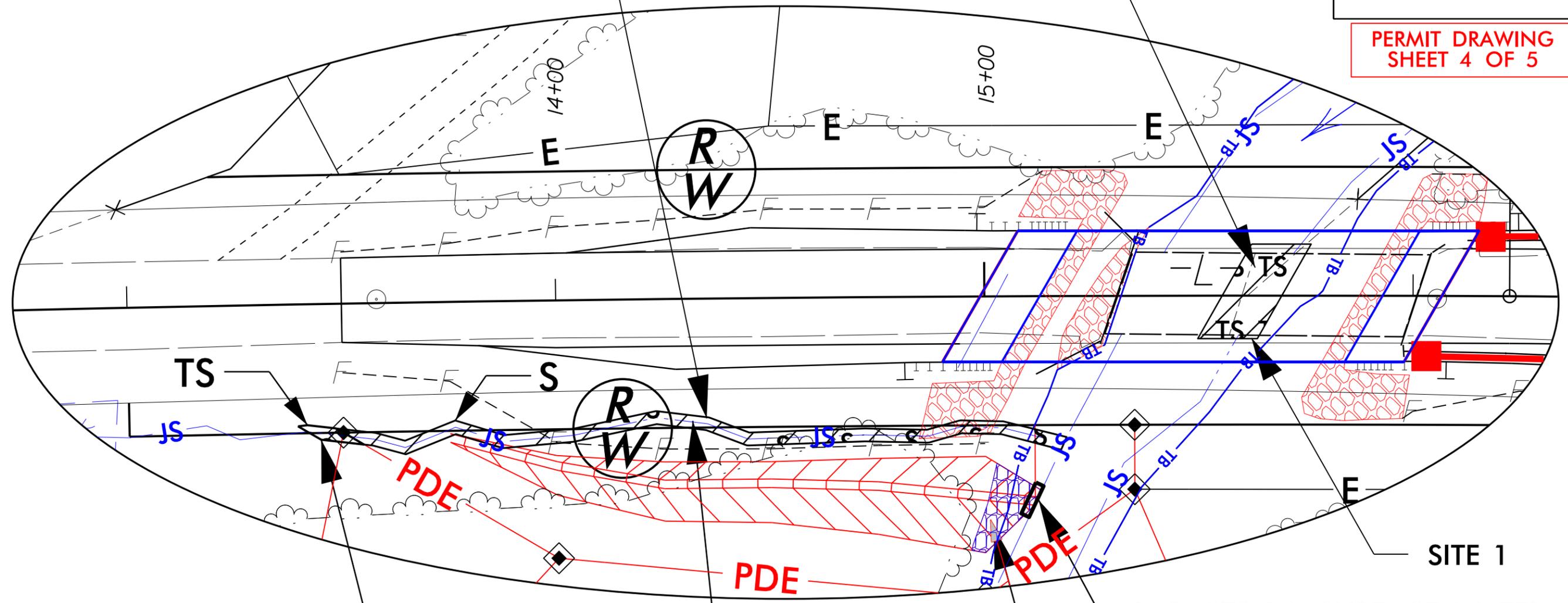
**DITCH LEGEND**  
RIGHT DITCH - - - - -

PROJECT REFERENCE NO. <b>B-4751</b>	SHEET NO.
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	

**PERMIT DRAWING  
SHEET 4 OF 5**



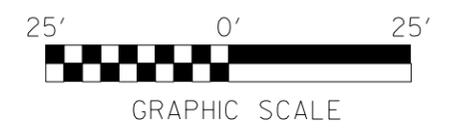
**TEMP IMPACTS IN SURFACE WATER  
(TEMPORARY CAUSEWAY)**



**TEMP IMPACTS IN SURFACE WATER  
ENLARGEMENT**

**IMPACTS IN SURFACE WATER**  
**BANK STABILIZATION**  
SEE DETAIL B

- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER



REVISIONS

B/17/99





09/08/99

See Sheet 1-A For Index of Sheets

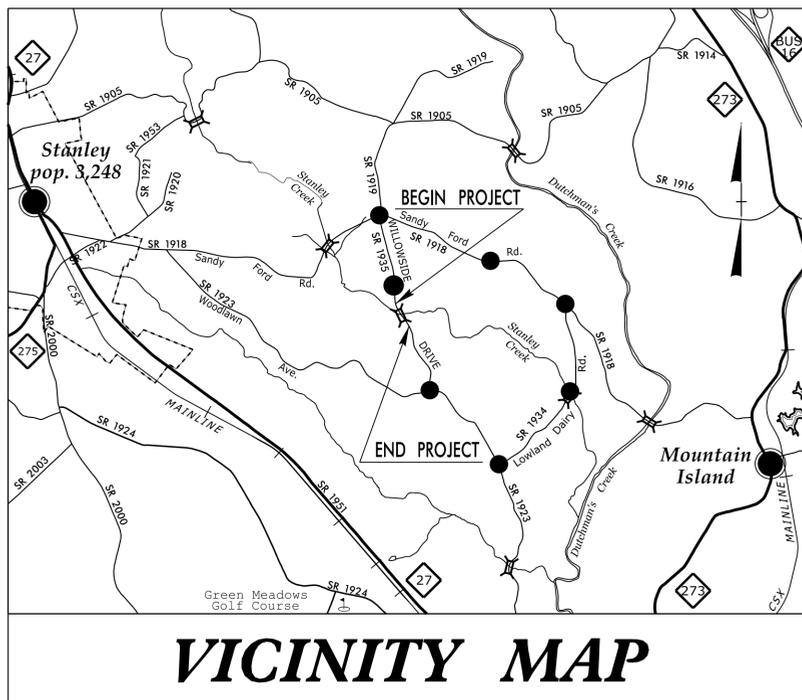
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**GASTON COUNTY**

**LOCATION: BRIDGE No. 203 OVER STANLEY CREEK ON  
SR 1935 (WILLOWSIDE DR.)**

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

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STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38523.1.2	BRZ-1935(3)	PE	
38523.2.FD1	BRZ-1935(3)	R/W, UTIL	



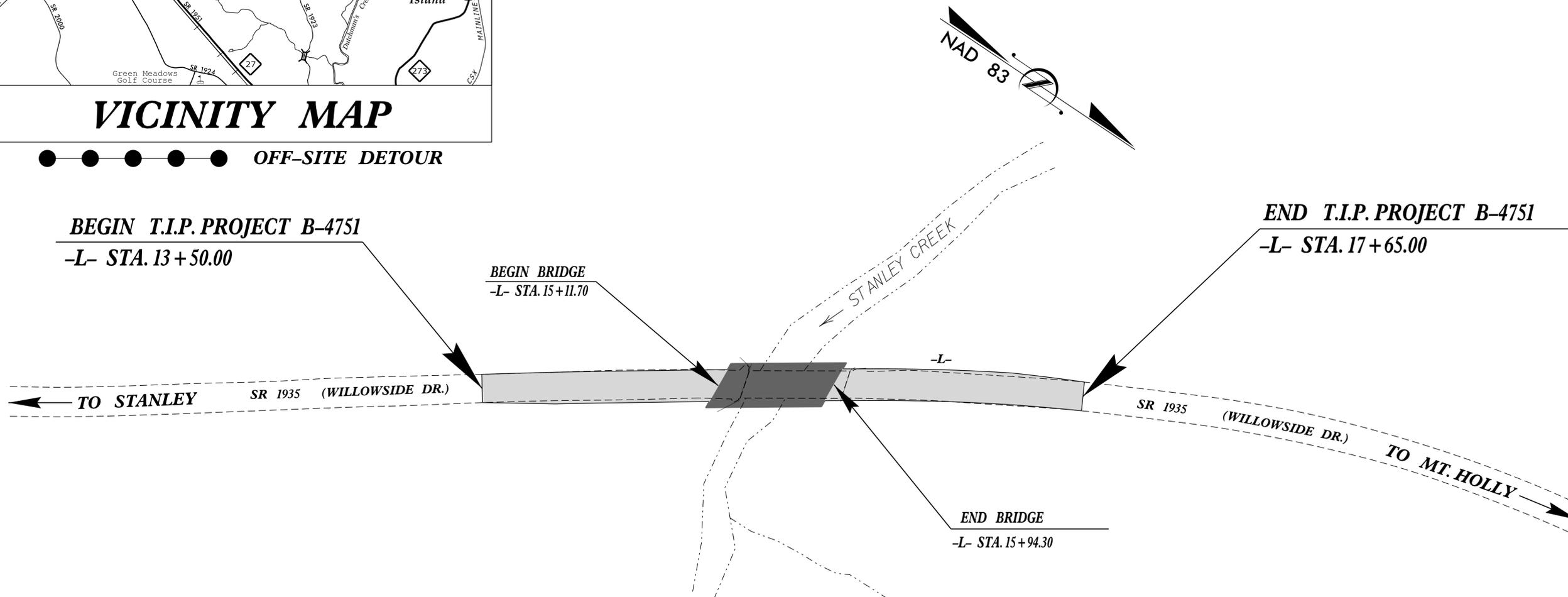
**VICINITY MAP**

● ● ● ● ● OFF-SITE DETOUR

**BEGIN T.I.P. PROJECT B-4751**  
-L- STA. 13+50.00

**BEGIN BRIDGE**  
-L- STA. 15+11.70

**END T.I.P. PROJECT B-4751**  
-L- STA. 17+65.00



**END BRIDGE**  
-L- STA. 15+94.30

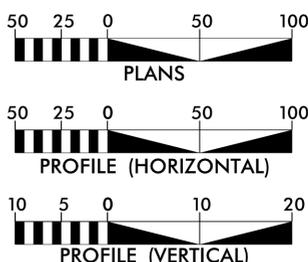
THIS IS NOT A CONTROL OF ACCESS PROJECT.  
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

**TIP PROJECT: B-4751**

**CONTRACT: C203673**

**GRAPHIC SCALES**



**DESIGN DATA**

ADT 2015 = 600  
ADT 2035 = 1400  
K = 12 %  
D = 75 %  
T = 5 % \*  
V = 50 MPH  
\* TTST = 1% DUAL 4%  
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Prepared in the Office of:  
**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS  
**RIGHT OF WAY DATE:**  
MARCH 31, 2015  
**LETTING DATE:**  
MARCH 15, 2016

**JASON MOORE, PE**  
PROJECT ENGINEER

**NYA K. BOAYUE, PE**  
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.  
**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.  
STATE HIGHWAY DESIGN ENGINEER

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA



STATE HIGHWAY DESIGN ENGINEER

18-AUG-2015 08:49  
R:\Roadway\Proj\B4751\Rdy\_tsh.dgn  
\$\$\$\$\$USERNAME\$\$\$\$\$

EFF. 01-17-2012  
REV. 10-30-2012

SHEET NUMBER	INDEX OF SHEETS SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
1C-1 THRU 1C-	SURVEY CONTROL SHEETS
2	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
3B-1 THRU 3B-	PAVEMENT REMOVAL SUMMARY, SUMMARY OF EARTHWORK, SHOULDER BERM GUTTER AND GUARDRAIL SUMMARY
3D-1	DRAINAGE SUMMARIES
4	PLAN AND PROFILE SHEET
TMP-1 THRU TMP-3	TRAFFIC MANAGEMENT PLANS
PMP-1 THRU PMP-	PAVEMENT MARKING PLANS
EC-1 THRU EC-	EROSION CONTROL PLANS
RF-1 THRU RF-	REFORESTATION PLANS
SIGN-1 THRU SIGN-	SIGNING PLANS
UC-1 THRU UC-	UTILITIES CONSTRUCTION PLANS
UO-1 THRU UO-	UTILITIES BY OTHERS PLANS
X-1	CROSS-SECTION SUMMARY SHEET
X-2 THRU X-8	CROSS-SECTIONS
S-1 THRU S-	STRUCTURE PLANS

GENERAL NOTES:

2012 SPECIFICATIONS  
EFFECTIVE: 01-17-2012  
REVISED: 10-31-2014

GRADING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED OR FUTURE SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

GUARDRAIL:

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

END BENTS:

THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE AT&T AND DUKE ENERGY  
PROGRESS  
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

RIGHT-OF-WAY MARKERS:

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.

2012 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
DIVISION 4 - MAJOR STRUCTURES	
422.11	Reinforced Bridge Approach Fills - Sub Regional Tier
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
840.00	Concrete Base Pad for Drainage Structures
840.19	Concrete Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.28	Brick Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.29	Frames and Narrow Slot Flat Grates
846.01	Concrete Curb, Gutter and Curb & Gutter
846.03	Funnel Drain Installation in Shoulder Berm Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
876.02	Guide for Rip Rap at Pipe Outlets

12/05/11

Note: Not to Scale

\*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# CONVENTIONAL PLAN SHEET SYMBOLS

### 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	--- NLB ---
Proposed Wetland Boundary	--- NLB ---
Existing Endangered Animal Boundary	--- EAB ---
Existing Endangered Plant Boundary	--- EPB ---
Known Soil Contamination: Area or Site	☠ ☠
Potential Soil Contamination: Area or Site	☠ ? ☠ ?

### BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
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	← FLOW
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	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	○ R/W
Proposed Right of Way Line with Concrete or Granite R/W Marker	○ R/W
Proposed Control of Access Line with Concrete CA 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	○
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	●
Recorded U/G Power Line	--- P ---
Designated U/G Power Line (S.U.E.*)	--- P ---

### TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	○
Telephone Booth	□
Telephone Pedestal	□
Telephone Cell Tower	○
U/G Telephone Cable Hand Hole	□
Recorded U/G Telephone Cable	--- T ---
Designated U/G Telephone Cable (S.U.E.*)	--- T ---
Recorded U/G Telephone Conduit	--- TC ---
Designated U/G Telephone Conduit (S.U.E.*)	--- TC ---
Recorded U/G Fiber Optics Cable	--- T FO ---
Designated U/G Fiber Optics Cable (S.U.E.*)	--- T FO ---

### WATER:

Water Manhole	○
Water Meter	○
Water Valve	○
Water Hydrant	○
Recorded U/G Water Line	--- W ---
Designated U/G Water Line (S.U.E.*)	--- W ---
Above Ground Water Line	--- A/G Water ---

### TV:

TV Satellite Dish	○
TV Pedestal	□
TV Tower	○
U/G TV Cable Hand Hole	□
Recorded U/G TV Cable	--- TV ---
Designated U/G TV Cable (S.U.E.*)	--- TV ---
Recorded U/G Fiber Optic Cable	--- TV FO ---
Designated U/G Fiber Optic Cable (S.U.E.*)	--- TV FO ---

### GAS:

Gas Valve	◇
Gas Meter	○
Recorded U/G Gas Line	--- G ---
Designated U/G Gas Line (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 ---
Recorded SS Forced Main Line	--- FSS ---
Designated SS Forced Main Line (S.U.E.*)	--- FSS ---

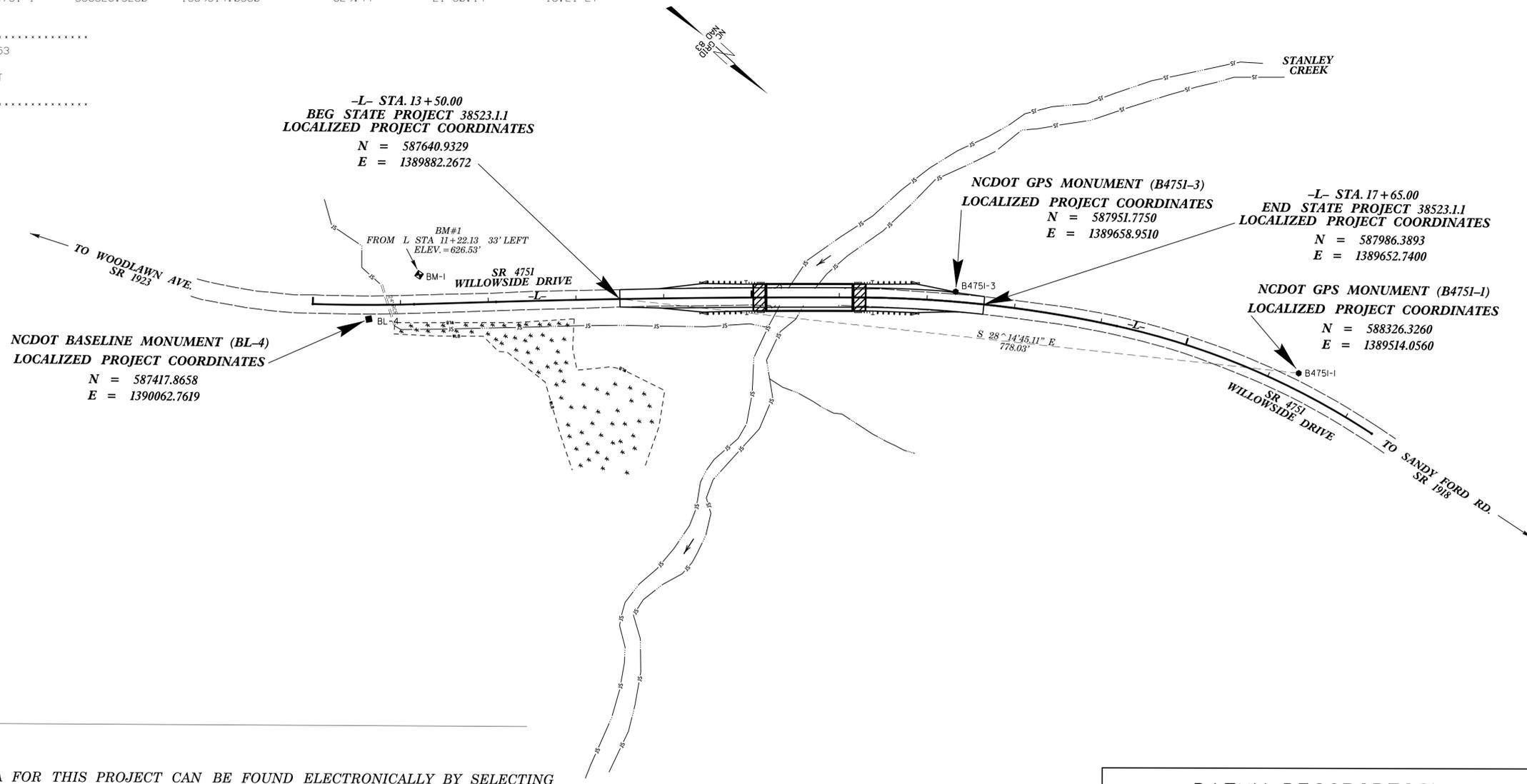
### MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	□
Utility Unknown U/G Line	--- ?U/L ---
U/G Tank; Water, Gas, Oil	□
Underground Storage Tank, Approx. Loc.	□
A/G Tank; Water, Gas, Oil	□
Geoenvironmental Boring	○
U/G Test Hole (S.U.E.*)	○
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

# SURVEY CONTROL SHEET B-4751

BL	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
4	BL-4		587417.8658	1390062.7619	623.93	10+63.86	16.02 RT
	GPS3	B4751-3	587951.7750	1389658.9510	622.80	17+31.86	11.38 LT
	GPS1	B4751-1	588326.3260	1389514.0560	629.44	21+30.14	18.21 LT

.....  
 BM1 ELEVATION = 626.53  
 N 587437 E 1389989  
 L STATION 11+22.13 33' LEFT  
 RR SPIKE IN 30" BEECH  
 .....



**NOTES:**

- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:  
[HTTP://WWW.DOH.DOT.STATE.NC.US/PRECONSTRUCTHIGHWAY/LOCATION/PROJECT/](http://www.doh.dot.state.nc.us/preconstructhighway/location/project/)  
 THE FILES TO BE FOUND ARE AS FOLLOWS:  
 B4751\_LS\_CONTROL.TXT  
 SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
- INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.  
 PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.  
 NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING SERVICE (OPUS)

**DATUM DESCRIPTION**

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "B4751-1" WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 588326.326(ft) EASTING: 1389514.056(ft) ELEVATION: 629.44(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99938118 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4751-1" TO -L- STATION 13+50.00 IS S 28°14'45.11" E 778.03'' ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

NOTE: DRAWING NOT TO SCALE

18-AUG-2015 08:49 P:\Roadway\Proj\B4751\_LS\_1c-1.dgn

# SURVEY CONTROL SHEET B-4751



PROJECT REFERENCE NO.	SHEET NO.
B-4751	1C-2
Location and Surveys	

## (PRELIMINARY)

### (DESIGN ALIGNMENTS)

TYPE	STATION	L	
		NORTH	EAST
PC	10+00.00	587355.5484	1390084.8024
PT	11+15.43	587450.8934	1390019.7734
PC	12+08.83	587526.3774	1389964.7639
PCC	16+22.53	587864.6854	1389726.6899
PCC	19+18.53	588125.1825	1389587.2733
PT	22+35.17	588433.5367	1389523.4290

### (ROW MARKERS)

ALIGN	STATION	L ROW (IRON PIN AND CAP)		
		OFFSET	NORTH	EAST
L	13+00.00	30.00	587617.7441	1389935.7114
L	13+00.00	22.17	587613.1777	1389929.3484
L	13+00.00	-30.00	587582.7614	1389886.9650
L	13+00.00	-22.83	587586.9400	1389892.7876
L	16+22.53	30.00	587881.5421	1389751.5063
L	16+22.53	-30.00	587847.8286	1389701.8736
L	18+00.00	23.12	588027.8676	1389657.0991
L	18+00.00	30.00	588030.9850	1389663.2294
L	18+00.00	-21.88	588007.4692	1389616.9866
L	18+00.00	-30.00	588003.7879	1389609.7474

### (PERMANENT EASEMENTS)

ALIGN	STATION	L PERMANENT EASEMENT (IRON PIN AND CAP)		
		OFFSET	NORTH	EAST
L	13+75.00	30.00	587678.6613	1389892.2705
L	14+00.00	55.00	587713.4381	1389898.2985
L	15+00.00	65.00	587800.7148	1389849.4421
L	15+35.00	30.00	587809.4828	1389800.8229
L	15+35.00	45.00	587817.9978	1389813.1717

**NOTES:**

1. THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:  
[HTTP://WWW.DOH.DOT.STATE.NC.US/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/](http://www.doh.dot.state.nc.us/preconstruct/highway/location/project/)  
  
 THE FILES TO BE FOUND ARE AS FOLLOWS:  
**B4751\_LS\_CONTROL.TXT**  
  
 SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
- INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.  
 PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.  
 NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING SERVICE (OPUS)

#### DATUM DESCRIPTION

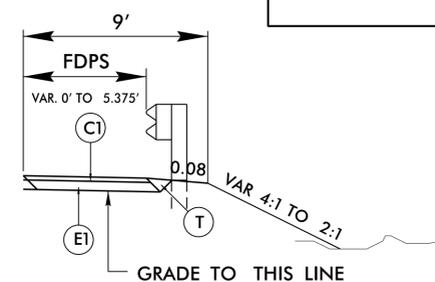
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "B4751-1"  
 WITH NAD 83 STATE PLANE GRID COORDINATES OF  
 NORTHING: 588326.326(±) EASTING: 1389514.056(±)  
 ELEVATION: 629.44(±)  
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99938118  
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4751-1" TO -L- STATION 13+50.00 IS  
 S 28°14'45.11" E 778.03'  
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES  
 VERTICAL DATUM USED IS NAVD 88

6/2/99

PROJECT REFERENCE NO. B-4751	SHEET NO. 2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

PAVEMENT SCHEDULE	
FINAL PAVEMENT DESIGN	
C1	PROP. APPROX. 2½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
E1	PROP. APPROX. 5½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 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 5½" IN DEPTH.
T	EARTH MATERIAL.
R	CONCRETE SHOULDER BERM GUTTER.
U	EXISTING PAVEMENT.

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



**TYPICAL SECTION NO. 1A**  
IN CONJUNCTION WITH T.S. # 1

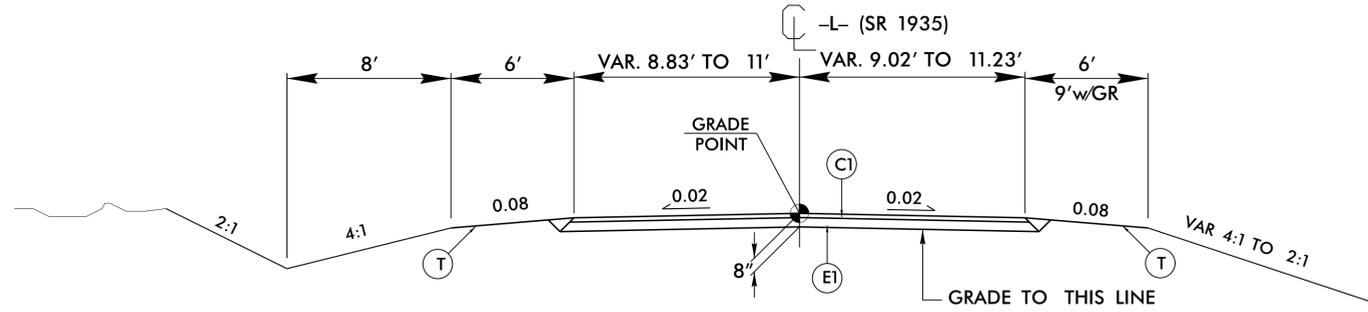
USE TYPICAL SECTION NO. 1

- L- STA. 14+03.75 TO 15+07.89 LT.
- L- STA. 16+65.00 TO 17+19.62 LT.
- L- STA. 14+29.02 TO 14+90.11 RT.
- L- STA. 15+98.00 TO 17+02.15 RT.

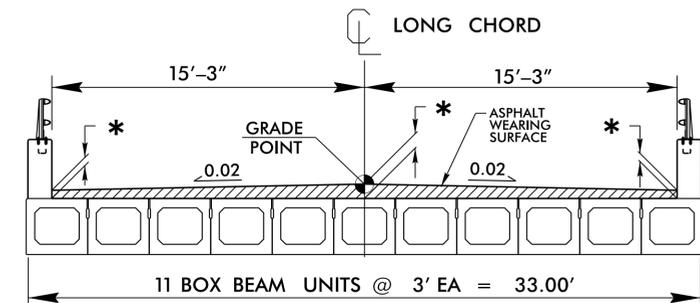
USE TYPICAL SECTION NO. 1

- L- STA. 13+50.00 TO BEG. BRIDGE 15+11.70
- L- STA. END BRIDGE 15+94.30 TO 17+65.00

\* PAVE TO FACE OF GUARDRAIL AS SHOWN ON SHEET 4.



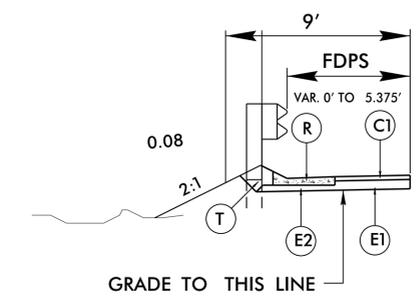
**TYPICAL SECTION NO. 1**



**TYPICAL SECTION ON STRUCTURE**

-L- STA. 15+11.70 TO 15+94.30

\* SEE STRUCTURE PLANS DIMENSIONS



**TYPICAL SECTION NO. 1B**

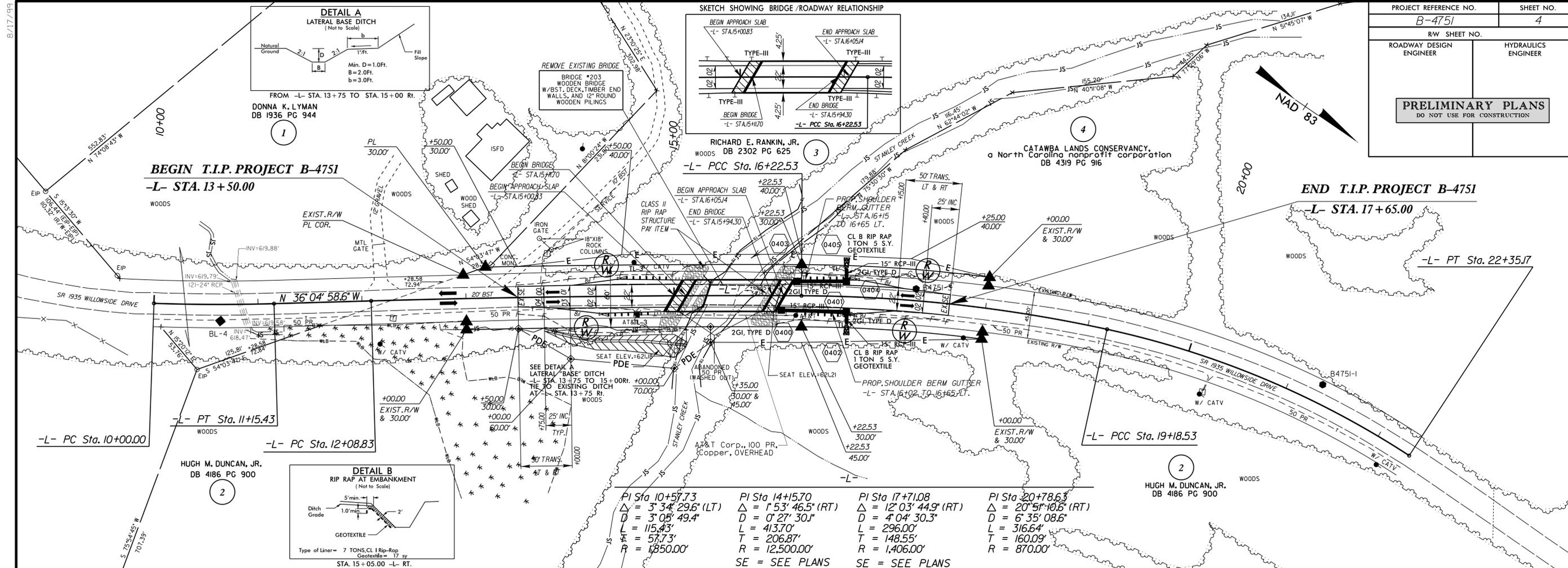
IN CONJUNCTION WITH T.S. # 1

USE TYPICAL SECTION NO. 1B

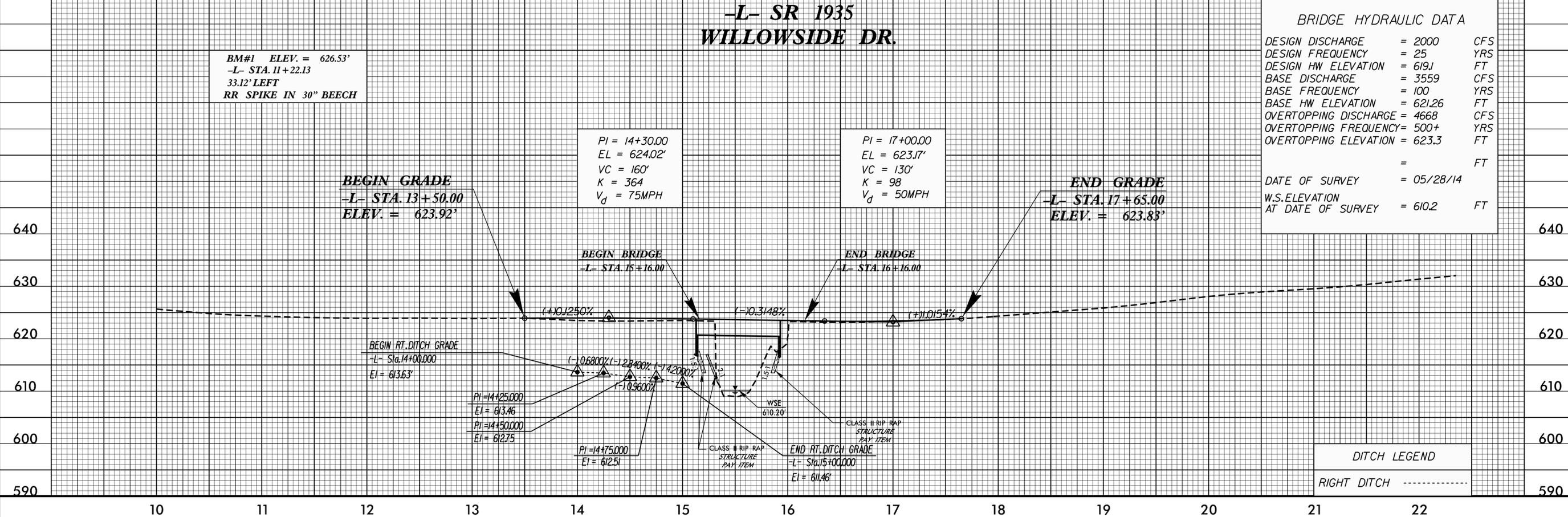
- L- STA. 16+15.00 TO 16+65.00 LT.
- L- STA. 16+02.00 TO 16+65.00 RT.

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**-L- SR 1935 WILLOWSIDE DR.**



BM#1 ELEV. = 626.53'  
-L- STA. 11+22.13  
33.12' LEFT  
RR SPIKE IN 30" BEECH

PI = 14+30.00  
EL = 624.02'  
VC = 160'  
K = 364  
 $V_d = 75$ MPH

PI = 17+00.00  
EL = 623.17'  
VC = 130'  
K = 98  
 $V_d = 50$ MPH

8/17/99  
 18-AUG-2015 08:49  
 3:58:58 PM  
 B:\4751\B4751.dwg  
 4.dgn