




STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

September 14, 2004

MEMORANDUM TO: Mr. Jon G. Nance, P.E.  
Division 5 Engineer

FROM: Philip S. Harris, III, P.E., Manager   
Office of the Natural Environment  
Project Development and  
Environmental Analysis Branch

SUBJECT: Wake County; Division 5; NC 55 Widening to a Multi-lane facility from  
SR 1108 (Wake Chapel Road) to SR 1114 (Ralph Stevens Road); State  
Project No. 8.1403501; Federal Aid Project No. STP-55(5);  
TIP Project No. R-2907

Attached is the modification of the Neuse River Riparian Buffer Authorization.

PSH/mka

Attachment

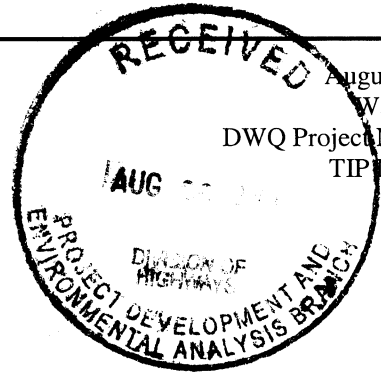
cc: Mr. Art McMillan, P.E.  
Mr. Omar Sultan  
Mr. Jay Bennett, P.E.  
Mr. David Chang, P.E.  
Mr. Randy Garris, P.E.  
Mr. Greg Perfetti, P.E.  
Mr. Mark Staley  
Mr. John F. Sullivan, III, FHWA  
Mr. Chris Murray, Division 5 DEO  
Ms. Cathy Houser, PE





*Nancy*  
Michael F. Easley, Governor  
William G. Ross Jr., Secretary  
North Carolina Department of Environment and Natural Resources

Alan W. Klimek, P.E. Director  
Division of Water Quality



Dr. Gregory J. Thorpe, PhD., Manager  
Planning & Environmental Branch  
N.C. Department of Transportation  
1548 Mail Service Center  
Raleigh, North Carolina, 27699-1548

Dear Dr. Thorpe:

Re: Certification Pursuant to Section 401 of the Federal Clean Water Act and Neuse Buffer Certification, Modification to the improvements to NC 55 widening, from SR 1108 (Wake Chapel Road) to SR 1114 (Ralph Stevens Road) in Wake County, TIP R-2907, Federal Aid Project STP-55(5), State Project No. 8.1403501, WQC Project No. 010681.

Attached hereto is a modification to Certification No. 010681 issued to the North Carolina Department of Transportation on April 25, 2002. The attached modification authorizes the following:

Site Location	Action taken	Impacts
STA 59+60 to STA 60+00	Removal of 300 mm and 375 mm pipe structure and associated catch basins; change in super elevation of left turn lane to drain away from median	None
STA 58+96	Removal of 375mm pipe structure and associated catch basin	None
STA 60+40	Change 900 mm pipe structure with extension to 750 mm pipe structure with extension	None

This modification is applicable only to the additional proposed activities. All the authorized activities and conditions of certification associated with the original Water Quality Certification dated April 25, 2002 and all other corresponding modifications still apply except where superseded by this certification.

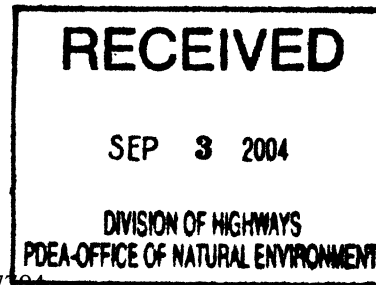
If we can be of further assistance, do not hesitate to contact us.

Sincerely,  
*Alan W. Klimek*  
Alan W. Klimek, P.E.  
Director

Attachments:

Modification to WQC No. 010681

cc: Wilmington District US Army Corps of Engineers  
Mr. Eric Alsmeyer, US Army Corps of Engineers Raleigh Field Office  
NCDWQ Raleigh Regional Office  
Mr. Christopher Militscher, US EPA Region IV  
Mr. Jon G. Nance, Division 5 Engineer, 2612 N. Duke Street, Durham, NC 27704  
Mr. Chris Murray, Division 5 Environmental Officer, 2612 N. Duke Street, Durham, NC 27704  
Central Files  
File Copy



## NORTH CAROLINA 401 WATER QUALITY CERTIFICATION

**THIS CERTIFICATION** is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Quality (DWQ) Regulations in 15 NCAC 2H, Section .0500. The attached modification authorizes the following:

Site Location	Action taken	Impacts
STA 59+60 to STA 60+00	Removal of 300 mm and 375 mm pipe structure and associated catch basins; change in super elevation of left turn lane to drain away from median	None
STA 58+96	Removal of 375mm pipe structure and associated catch basin	None
STA 60+40	Change 900 mm pipe structure with extension to 750 mm pipe structure with extension	None

This modification is applicable only to the additional proposed activities. All the authorized activities and conditions of certification associated with the original Water Quality Certification dated April 25, 2002 and all other corresponding modifications still apply except where superceded by this certification.

The application provides adequate assurance that the removal of the pipe structures and associated catch basins, changes in the super elevation of the roadway and changes in the size of pipe structures in conjunction with the proposed development will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application and conditions hereinafter set forth.

This approval is only valid for the purpose and design that you submitted in your application, as described in the Public Notice. Should your project change, you are required to notify the DWQ and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If total wetland fills for this project (now or in the future exceed one acre, compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you are required to comply with all the conditions listed below. In addition, you should obtain all other federal, state or local permits before proceeding with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations.

### Condition(s) of Certification:

1. Appropriate sediment and erosion control practices which equal or exceed those outlined in the most recent version of two manuals. Either the "North Carolina Sediment and Erosion Control Planning and Design Manual" or the "North Carolina Surface Mining Manual" (available from the Division of Land Resources in the DEHNR Regional or Central Offices). The control practices shall be utilized to prevent exceedances of the appropriate turbidity water quality standard (50 NTUs in all fresh water streams and rivers not designated as trout waters; 25 NTUs in all lakes and reservoirs, and all saltwater classes; and 10 NTUs in trout waters).
2. Pursuant to NCAC15A 2B.0233(6), sediment and erosion control devices shall not be placed in Zone 1 of any Noise Buffer without prior approval by the NCDWQ. At this time, the NCDWQ has approved no sediment and erosion control devices in Zone 1 anywhere on this project. Moreover, sediment and erosion control devices shall be allowed in Zone 2 of the buffers provided that Zone 1 is not compromised and that discharge is released as diffuse flow.
3. All protected riparian buffers impacted by the placement of temporary fill or clearing activities shall be restored to the preconstruction contours and revegetated with native woody species upon completion of

the project construction. A post-construction as-built with the restoration activities included shall be submitted to the DWQ no later than 60 days after the project is closed out by the Department of Transportation.

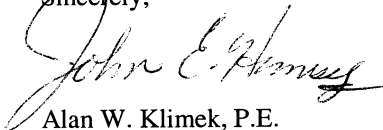
4. No live or fresh concrete shall come into contact with waters of the state until the concrete has hardened.
5. Placement of culverts and other structures in waters, streams, and wetlands must be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or stream beds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium shall be maintained if requested in writing by DWQ.
6. There shall be no excavation from or waste disposal into jurisdictional wetlands or waters associated with this permit without appropriate modification of this permit. Should waste or borrow sites be located in wetlands or stream, compensatory mitigation will be required since it is a direct impact from road construction activities.
7. No additional compensatory mitigation shall be done in accordance with this modification.
8. All other conditions written into previous Water Quality Certifications for this project still apply.

Violations of any condition herein set forth shall result in revocation of this Certification and may result in criminal and/or civil penalties. This Certification shall become null and void unless the above conditions are made conditions of the Federal 404 Permit. This Certification shall expire upon expiration of the 404 permit.

If you do not accept any of the conditions of this certification, you may ask for an adjudicatory hearing. You must act within 60 days of the date that you receive this letter. To ask for a hearing, send a written petition that conforms to Chapter 150B of the North Carolina General Statutes to the Office of Administrative Hearings, P.O. Box 27447, Raleigh, N.C. 27611-7447. This certification and its conditions are final and binding unless you ask for a hearing.

This letter completes the review of the Division of Water Quality under Section 401 of the Clean Water Act. If you have any questions, please contact Nicole Thomson at 919-715-3415.

Sincerely,



Alan W. Klimek, P.E.

Modification to WQC No. 010681



# PROJECT COMMITMENTS

NC 55  
Widening to a Multi-lane Facility  
from SR 1108 (Wake Chapel Road) to  
SR 1114 (Ralph Stevens Road)  
Wake County  
Federal Aid Project STP-55(5), State Project 8.1403501  
TIP Project R-2907

In addition to the standard Individual Section 404 and 401 Permit Conditions, State Consistency Conditions, NCDOT's Guidelines for Best Management Practices for Protection of Surface Waters, the following special commitments have been agreed to by NCDOT:

## **Commitments Developed through Project Development and Design**

All commitments developed during the project development and design phase have been incorporated into the design and were standard commitments. Current status, changes, or additions to the project commitments as shown in the environmental document for the project are printed in *italic* font.

### **Roadway Design Unit/Program Development Unit**

Sidewalks will be constructed along both sides of NC 55 within the Town of Fuquay-Varina's municipal boundaries from SR 1108 to SR 1113/SR 1398. The sidewalks will be jointly funded by NCDOT and the Town of Fuquay-Varina in accordance with NCDOT's Pedestrian Policy. NCDOT will coordinate with the Town of Fuquay-Varina to ensure proper placement of the sidewalks.

*Preliminary design plans of the project have included sidewalks along both sides of NC 55 within the Town of Fuquay-Varina's municipal boundaries from SR 1108 to SR 1113/SR 1398. Copies of the plans have been provided to the Town for their comments and a municipal agreement regarding the proposed sidewalks and landscaping has been prepared and sent to the Town for their approval.*

### **Roadside Environmental Unit**

In accordance with the NCDOT landscaping policy, NCDOT will fund up to 0.50% of the total project construction cost for landscaping. A municipal agreement for maintenance of landscaping plantings will be coordinated between NCDOT and the local municipalities. The landscaping will be coordinated between the Town of Fuquay-Varina and NCDOT.

*A municipal agreement regarding proposed sidewalks and landscaping has been prepared and sent to the Town of Fuquay-Varina for their approval. The landscaping design will be developed during construction of the project.*

To mitigate effects to historic resources, the following commitments have been made:

1. Adams House and Richard Adams Farm

**Right of Way Branch/Roadside Environmental Unit/Division 5/PDEA**

The State Historic Preservation office will be given the opportunity to review and comment on landscaping, median cuts, and median tapers in the vicinity of these sites. NCDOT will coordinate with the State Historic Preservation Office.

*On August 31, 2001, a meeting between NCDOT and the State Historic Preservation office (SHPO) was held to review the preliminary design plans. The following comments were made by SHPO:*

- *The wood fence at Richard Adams Farm will remain undisturbed, except the last approximate 130 meter of rail fence located west of this property will be relocated to the proposed right of way.*
- *NCDOT will re-plant trees at temporary drainage easement locations after proposed silt basins are removed.*
- *The cemetery on the historic Richard Adams Farm will not be disturbed.*

2. Jeff Stephens Farm

**Right of Way Branch/PDEA/Roadside Environmental Unit**

NCDOT will move the historic house to another location within the historic property suitable to the property owner.

In a letter dated November 5, 2001, the State Historic Preservation office (SHPO) have concurred on the proposed new location of the "Jeff Stephens" house and two outbuildings (the well house and kitchen). SHPO's comments and recommendations are outlined below.

- *The "Jeff Stephens" house, kitchen, and well house will maintain their original orientation to one another at the new location.*
- *The Abandoned outbuilding located at the south/west corner of Ralph Stephens Road and NC 55 (One-story tenant house) will be salvaged and used in the repairs of the two outbuildings to be relocated.*

*Advertisement of the contract for the historic house move is pending Wake County approval of the proposed new location for the well and septic system for the house.*

**Roadside Environmental Branch/PDEA**

NCDOT will provide landscaping (off NCDOT R/W) around the new house location to try to add to the historic setting.

*This commitment will be implemented after moving the historic house to the proposed new location.*

**Right of Way Branch/Division 5/PDEA**

NCDOT will place the moved house on a suitable foundation.

*This commitment will be implemented when the house is moved.*



NCDOT will connect utilities to the relocated house.

*This commitment will be implemented following the relocation of the house.*

If the utilities in the house do not meet current code standards, NCDOT will fund the upgrading of these utilities.

*This commitment will be implemented after the relocation of the house.*

NCDOT will construct (or fund) an access driveway to the new house location.

*This commitment will be implemented after the house is relocated.*

NCDOT will fund suitable sanitary connections (well/septic or water/sewer connections, as appropriate).

*This commitment will be implemented after the house is relocated.*

## **Commitments Developed through Permitting**

### **Commitments Developed through Permitting Pertaining to Mitigation**

#### **Project Development & Environmental Analysis**

NCDOT shall mitigate for 2.39 acres of unavoidable impacts to wetlands, and for 291 linear feet of impact to important streams, for the project, as described below (582 linear feet of stream mitigation and 4.78 acres of wetland mitigation through the North Carolina Wetlands Restoration Program (NCWRP), in the upper Neuse River basin (Cataloging Unit 03020201)).

#### **NCWRP WETLANDS MITIGATION**

#### **Project Development & Environmental Analysis**

NCDOT shall mitigate for 2.39 acres of unavoidable impacts to wetlands associated with this project by payment to the North Carolina Wetlands Restoration Program (NCWRP) in an amount determined by the NCWRP sufficient to perform 4.78 acres of forested wetland mitigation (2.52 acres non-riparian and 2.26 riparian) in the upper Neuse River basin (Cataloging Unit 03020201). Construction within wetlands on the permitted highway project shall begin only after NCDOT has made full payment to the NCWRP, and the NCWRP has made written confirmation to the District Engineer, that it agrees to accept responsibility for the mitigation work required, pursuant to Paragraph IV.D. of the Memorandum of Understanding between the North Carolina Department of Environment and Natural Resources and the U.S. Army Corps of Engineers, Wilmington District, dated November 4, 1998.

#### **NCWRP STREAM MITIGATION**

#### **Project Development & Environmental Analysis**

NCDOT shall mitigate for 291 linear feet of unavoidable impacts to important stream channel associated with this project by payment to the North Carolina Wetlands Restoration Program (NCWRP) in an amount determined by the NCWRP sufficient to perform 582 linear feet of warm water stream mitigation, in the upper Neuse River basin (Cataloging Unit 03020201). Construction within streams on the permitted highway project shall begin only after NCDOT has made full payment to the NCWRP, and the NCWRP has made written confirmation to the District Engineer, that it agrees to accept responsibility for the mitigation work required, pursuant to Paragraph IV.D. of the Memorandum of Understanding between the North Carolina Department of Environment and Natural Resources and the U.S. Army Corps of Engineers, Wilmington District, dated November 4, 1998.

NCWRP BUFFER MITIGATION

**Project Development & Environmental Analysis**

Of the total 1.54 acres of impacts to protected riparian buffers, compensatory mitigation for impacts to 0.94 acres of Neuse Riparian Buffers shall be provided for as described below.

Zone of Impact	Impacts(acres)	Replacement Ratio	Total Acres of Mitigation Required
Zone 1	0.257	3:1	0.771
Zone 2	0.109	1.5:1	0.164
<b>Total</b>			<b>0.94</b>

The Division of Water Quality understands that NCDOT has chosen to perform compensatory mitigation for impacts to protected buffers through an in lieu payment to the North Carolina Wetland Restoration Program (NCWRP), and that the WRP has agreed to implement the mitigation for the project. Mitigation for unavoidable impacts to Neuse Riparian Buffers shall be provided through an in lieu payment to the North Carolina Wetlands Restoration Program (NCWRP) at a rate of \$41,625 per acre for 0.94 acres of buffer impact. Therefore, a total payment of \$39,128 shall be submitted to the NCWRP to offset the impacts. No construction activities in Neuse River Riparian buffers shall begin until payment for buffer mitigation is made and the Wetland Restoration Program receives and clears NCDOT's check (made payable to DENR-Wetland Restoration Program). The payment to NCWRP shall be sent within two months of issuance of the 404 permit. Any questions concerning the Wetland Restoration Program can be answered by calling 919-733-5208.

**GENERAL MITIGATION**

**Project Development & Environmental Analysis, Roadside Environmental**

Failure to institute and carry out the details of the commitment above, will result in a directive to cease all ongoing and permitted work within waters and/or wetlands associated with the permitted project, or such other remedy as the District Engineer or his authorized representatives may seek.

**OTHER CONDITIONS**

**Division 5 Construction Unit**

Prior to commencing construction within jurisdictional waters of the United States for any section, NCDOT shall forward the latest version of project construction drawings for that section to the Corps of Engineers, Raleigh Regulatory Field Office NCDOT Regulatory Project Manager. Half-size drawings are acceptable.

**Division 5 Construction**

NCDOT shall schedule a meeting between its representatives, the contractor's representatives, and the Corps of Engineers, Raleigh Regulatory Field Office NCDOT Regulatory Project Manager, prior to any work within jurisdictional waters and wetlands, to ensure that there is a mutual understanding of all of the terms and conditions contained within this Department of the Army Permit. NCDOT shall notify the Corps of Engineers Project Manager a minimum of thirty (30) days in advance of the scheduled meeting in order to provide that individual with ample opportunity to schedule and participate in the required meetings.

**Division 5 Construction**

NCDOT and its contractors and/or agents shall not excavate, fill, or perform mechanized landclearing at any time in the construction or maintenance of this project within waters and/or wetlands, except as authorized by this permit, or any modification to this permit. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification of this permit, including appropriate compensatory mitigation. This prohibition applies to all borrow and fill activities connected with this project.

**Division 5 Construction**

To ensure that all borrow and waste activities occur on high ground, except as authorized by this permit, NCDOT shall require its contractors and/or agents to identify all areas to be used to borrow material, or to dispose of dredged, fill, or waste material. NCDOT shall ensure that all such areas comply with the terms of the USACE permit, and shall require and maintain documentation of the location and characteristics of all borrow and disposal sites associated with this project. This information will include data regarding soils, vegetation and hydrology sufficient to clearly demonstrate compliance with the permit. All information will be available to the Corps of Engineers upon request.

**Division 5 Construction**

NCDOT shall comply with the conditions specified in the water quality certification, No. 3382, issued by the North Carolina Division of Water Quality on April 25, 2002.

**Roadside Environmental, Hydraulics Unit, Division 5 Construction**

NCDOT shall place culverts and other structures in waters, streams, and wetlands below the elevation of the streambed to allow low flow passage of water and aquatic life, unless providing passage would be impractical. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to, or upstream and downstream of the structures. NCDOT is required to provide

evidence that the equilibrium shall be maintained if requested in writing by the Division of Water Quality.

**Hydraulics Unit, Division 5 Construction**

No changes to the horizontal or vertical placement of the stormwater outfall locations, the horizontal or vertical placement of the culverts, the horizontal or vertical placement of bridges, the horizontal or vertical placement of grassed swales, or the horizontal or vertical placement of open ditches is permitted without written approval from the NC Division of Water Quality 401 Wetlands Unit. In addition, no changes to the flow spreader locations or designs, preformed scour hole locations or designs are permitted without written approval from the NC Division of Water Quality 401 Wetlands Unit. Any request for changes to the referenced items above will require submittal of a modification request, with seven copies, and corresponding fees will need to be submitted to the North Carolina Division of Water Quality.

**Roadside Environmental, Division 5 Construction**

NCDOT shall use appropriate sediment and erosion control practices which equal or exceed those outlined in the most recent version of the "North Carolina Sediment and Erosion Control Planning and Design Manual" to assure compliance with the appropriate turbidity water quality standard (50 NTU's in all streams and rivers, and 25 NTU's in all lakes).

**Roadside Environmental, Division 5 Construction**

NCDOT shall remove all sediment and erosion control measures placed in wetlands or waters, and shall restore natural grades in those areas, prior to project completion.

**Division 5 Construction**

NCDOT shall take measures to prevent live or fresh concrete from coming into contact with any surface waters until the concrete has hardened.

**Division 5 Construction, Hydraulics Unit**

All channel relocations will be constructed in a dry work area, and stabilized before stream flows are diverted. Channel relocations will be completed and stabilized prior to diverting water into the new channel. Whenever possible, channel relocations shall be allowed to stabilize for an entire growing season. Vegetation used for bank stabilization shall be limited to native woody species, and should include establishment of a 30 foot wide wooded and an adjacent 20 foot wide vegetated buffer on both sides of the relocated channel to the maximum extent practical. A transitional phase incorporating coir fiber and seedling establishment is allowable. Also, rip-rap may be allowed if it is necessary to maintain the physical integrity of the stream, but the applicant must provide written justification and any calculations used to determine the extent of rip-rap coverage requested.

**Division 5 Construction, Hydraulics Unit**

All stormwater runoff shall be directed to sheetflow through stream buffers at nonerosive velocities, unless approved otherwise by the Water Quality Certification.

**Project Development & Environmental Analysis**

If an environmental document is required, the Water Quality Certification is not valid until a FONSI or ROD is issued by the State Clearinghouse. All water quality-related conditions of the FONSI or ROD shall become conditions of the Certification.

**Project Development & Environmental Analysis Historic Architecture Unit, Division 5 Construction**

NCDOT shall ensure compliance with the stipulations (I - V) set forth in the Memorandum of Agreement (MOA) between the Federal Highway Administration, the North Carolina State Historic Preservation Officer, and the North Carolina Department of Transportation, dated August 31, 1999. A copy of the Memorandum of Agreement is attached.

**Project Development & Environmental Analysis Archaeology Unit, Division 5 Construction**

If NCDOT discovers any previously unknown historic or archeological remains while accomplishing the authorized work, he will immediately notify the Wilmington District Engineer who will initiate the required State/Federal coordination.

**Division 5 Construction**

No excavated or fill material will be placed at any time in waters or wetlands outside the permitted construction areas, nor will it be placed in any location or in any manner so as to impair surface water flow into or out of any wetland area.

**Division 5 Construction**

NCDOT will maintain the authorized work in good condition and in conformance with the terms and conditions of this permit. NCDOT is not relieved of this requirement if he abandons the permitted activity without transferring it to a third party.

**Division 5 Construction**

All fill material will be clean and free of any pollutants except in trace quantities. Metal products, organic materials, or unsightly debris will not be used.

**Project Development & Environmental Analysis**

The Department of the Army permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

**Project Development & Environmental Analysis, Division 5 Construction**

Upon completion of the project, the NCDOT shall complete and return the enclosed "Certification of Completion Form" to notify the Division of Water Quality when all work included in the 401 Certification has been completed. The responsible party shall complete the attached form and return it to the 401/Wetlands Unit of the Division of Water Quality upon completion of the project.

**Project Development & Environmental Analysis**

The USACE permit does not grant any property rights or exclusive privileges.

**Project Development & Environmental Analysis**

In issuing the USACE permit, the Federal Government does not assume any liability for damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes, damages to the permitted project or uses thereof as a result of current or future Federal activities initiated on behalf of the general public, damages to other permitted or unpermitted activities or structures caused by the authorized activity, design and construction deficiencies associated with the permitted work, or damage claims associated with any future modification, suspension, or revocation of this permit.

**Roadside Environmental Unit**

All protected riparian buffers impacted by the placement of temporary fill or clearing activities shall be restored to the preconstruction contours and revegetated with native woody species upon completion of the project construction. A post-construction as-built with the restoration activities included shall be submitted to the DWQ no later than 60 days after the project is closed out by NCDOT.