



September 22, 2008

Steven D. DeWitt, P.E., Chief Engineer  
North Carolina Turnpike Authority  
1578 Mail Service Center  
Raleigh, North Carolina, 27699-1578

Subject: CORRECTION to 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with ADDITIONAL CONDITIONS for Proposed Western Wake Freeway (NC 540) in Wake County, Federal Aid Project No. BRSTP-000S(491), State Project No. 6.408006T, TIP No. R-2635. DWQ Project No. 20071470 ver. 1.

Dear Mr. DeWitt:

Attached hereto is a copy of Water Quality Certification No. 3734 issued to The North Carolina Transit Authority dated March 17, 2008 and corrected September 22, 2008.

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

Sincerely,

Coleen Sullins,  
Director

Attachments

cc: Eric Alsmeyer, US Army Corps of Engineers, Raleigh Field Office  
Tracy Roberts, NC Turnpike Authority  
Dr. Gregory J. Thorpe, NCDOT PDEA  
Greg Price, NCDOT NEU  
Beth Harmon, Ecosystem Enhancement Program  
File Copy



**401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with ADDITIONAL CONDITIONS**

**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 .0500. This certification authorizes the NC Turnpike Authority to impact 23.71 acres of jurisdictional wetlands and 14,959 linear feet of jurisdictional streams in Wake County. The project shall be constructed pursuant to the application dated received August 30, 2007, and additional information received November 1, 2007. The authorized impacts are as described below:

**Section C Stream Impacts in the Cape Fear River Basin**

Site	Permanent Fill in Intermittent Stream (linear ft)	Temporary Impacts to Intermittent Stream (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Temporary Impacts to Perennial Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
1	128	0	0	0	128	0
3	0	0	1411	80	1491	1411
10	541	20	0	0	561	0
11	504	35	0	0	539	0
12	538	15	0	0	553	0
15	667	10	0	0	677	0
16	0	0	498	48	546	498
17	0	0	547	65	612	547
19	143	0	0	0	143	0
22	473	40	0	0	513	0
22A	52	20	0	0	72	0
23	0	0	546	50	596	546
24	0	0	172	25	197	172
26	332	0	30	0	362	30
29	232	14	0	0	246	0
29A	0	30	0	0	30	0
30	0	0	117	40	157	117
<b>Total</b>	<b>3610</b>	<b>184</b>	<b>3321</b>	<b>308</b>	<b>7423</b>	<b>3321</b>

**Total Stream Impact for Section C: 7,423 linear feet**



**Section B Stream Impacts in the Cape Fear River Basin\***

Site	Permanent Fill in Intermittent Stream (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
3	0	835	835	835
7	1148	0	1148	0
10	0	642	642	642
10A	266	0	266	0
30	0	282	282	282
35	0	124	124	124
15	119	0	119	0
16	431	0	431	0
19	0	21	21	0
22	935	0	935	0
23	0	541	541	541
<b>Total</b>	<b>2899</b>	<b>2445</b>	<b>5344</b>	<b>2424</b>

**Total Stream Impact for Section B: 5,344 linear feet**

*\*Phased Project: impacts for this section are preliminary and will be modified (including possible temporary impacts) in future certifications prior to construction of this section.*

**Section A Stream Impacts in the Cape Fear River Basin\***

Site	Permanent Fill in Intermittent Stream (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
1	74	0	74	0
2	305	0	305	0
5	0	103	103	0
6	0	447	447	447
7	0	450	450	450
11	276	0	276	0
12	0	537	537	537
<b>Total</b>	<b>655</b>	<b>1537</b>	<b>2192</b>	<b>1434</b>

**Total Stream Impact for Section A: 2,192 linear feet**

*\*Phased Project: impacts for this section are preliminary and will be modified (including possible temporary impacts) in future certifications prior to construction of this section.*



**Section C Wetland Impacts in the Cape Fear River Basin**

Site	Permanent Fill (ac)	Temporary Fill (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)	Wetland Impacts Requiring Mitigation (ac)
1	0.77	0	0	0.77	0.77
3	1.51	0	0	1.51	1.51
4	0.13	0	0	0.13	0.13
5	0.06	0	0	0.06	0.06
6	0.82	0	0	0.82	0.82
7	0.23	0	0	0.23	0.23
8	0.35	0	0	0.35	0.35
10	0.36	0	0	0.36	0.36
12	0.36	0	0	0.36	0.36
13	0.99	0	0.50	1.49	0.99
14	0	0	2.16	2.16	0
15	0.22	0	0	0.22	0.22
16	0.50	0	0	0.50	0.50
17	1.60	0	0	1.60	1.60
21	2.06	0	0.58	2.64	2.06
25	0.14	0	0	0.14	0.14
26	0	0.04	0.29	0.33	0
27	0.58	0	0	0.58	0.58
28	0.58	0	0	0.58	0.58
<b>Total</b>	<b>11.26</b>	<b>0.04</b>	<b>3.53</b>	<b>14.83</b>	<b>11.26</b>

**Total Wetland Impact for Section C: 14.83 acres.**

**Section B Wetland Impacts in the Cape Fear River Basin\***

Site	Permanent Fill (ac)	Total Wetland Impact (ac)	Wetland Impacts Requiring Mitigation (ac)
1	0.53	0.53	0.53
2	0.03	0.03	0.03
4	1.02	1.02	1.02
5	2.70	2.70	2.70
9	0.26	0.26	0.26
11	0.12	0.12	0.12
17	0.04	0.04	0.04
18	0.06	0.06	0.06
19	1.23	1.23	1.23
20	0.11	0.11	0.11
21	0.55	0.55	0.55
24	0.06	0.06	0.06
25	0.01	0.01	0.01
29	0.18	0.18	0.18
31	0.10	0.10	0.10
32	0.03	0.03	0.03
33	0.03	0.03	0.03
34	0.05	0.05	0.05
<b>Total</b>	<b>7.11</b>	<b>7.11</b>	<b>7.11</b>

**Total Wetland Impact for Section B: 7.11 acres.**

*\*Phased Project: impacts for this section are preliminary and will be modified (including possible temporary impacts) in future certifications prior to construction of this section.*



**Section A Wetland Impacts in the Cape Fear River Basin \***

Site	Permanent Fill (ac)	Total Wetland Impact (ac)	Wetland Impacts Requiring Mitigation (ac)
3	0.06	0.06	0.06
4	0.12	0.12	0.12
8	1.03	1.03	1.03
9	0.19	0.19	0.19
10	0.37	0.37	0.37
<b>Total</b>	<b>1.77</b>	<b>1.77</b>	<b>1.77</b>

**Total Wetland Impact for Section A: 1.77 acres.**

*\*Phased Project: impacts for this section are preliminary and will be modified (including possible temporary impacts) in future certifications prior to construction of this section.*

**Section C Open Water (Ponds) Impacts in the Cape Fear River Basin**

Site	Permanent Fill in Open Waters (ac)	Temporary Fill in Open Waters (ac)	Total Fill in Open Waters (ac)
2	1.11	0	1.11
8	1.55	0	1.55
9	0.69	0	0.69
14	0.20	0	0.20
15	0.61	0	0.61
18	0.58	0	0.58
19	1.16	0	1.16
20	0.91	0	0.91
<b>Total</b>	<b>6.81</b>	<b>0</b>	<b>6.81</b>

**Total Open Water Impact for Section C: 6.81 acres.**

**Section B Open Water (Ponds) Impacts in the Cape Fear River Basin\***

Site	Permanent Fill in Open Waters (ac)	Temporary Fill in Open Waters (ac)	Total Fill in Open Waters (ac)
8	1.12	0	1.12
12	0.93	0	0.93
13	0.12	0	0.12
14	1.04	0	1.04
<b>Total</b>	<b>3.21</b>	<b>0</b>	<b>3.21</b>

**Total Open Water Impact for Section B: 3.21 acres.**

*\*Phased Project: impacts for this section are preliminary and will be modified (including possible temporary impacts) in future certifications prior to construction of this section.*

**Section A Open Water (Ponds) Impacts in the Cape Fear River Basin\***

Site	Permanent Fill in Open Waters (ac)	Temporary Fill in Open Waters (ac)	Total Fill in Open Waters (ac)
11	1.21	0	1.21
<b>Total</b>	<b>1.21</b>	<b>0</b>	<b>1.21</b>

**Total Open Water Impact for Section A: 1.21 acres.**

*\*Phased Project: impacts for this section are preliminary and will be modified (including possible temporary impacts) in future certifications prior to construction of this section.*



The application provides adequate assurance that the discharge of fill material into the waters of the Cape Fear River Basin 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 dated received August 30, 2007. 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 any additional wetland impacts, or stream impacts, for this project (now or in the future) exceed one acre or 150 linear feet, respectively, additional 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. This Certification shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit. **This corrected certification replaces the one issued on March 17, 2008.**

#### Conditions of Certification:

1. Compensatory mitigation for impacts to 7,179 linear feet of perennial streams at a replacement ratio of 1:1 is required. Compensatory mitigation for impacts to jurisdictional streams shall be provided by onsite stream relocations of 640 linear feet of UT Reedy Branch at Site 3, Section C. The onsite stream relocation shall be constructed in accordance with the design submitted in your August 30, 2007 application and additional information received November 1, 2007. Please be reminded that as-builts for the completed streams shall be submitted to the North Carolina Division of Water Quality 401 Wetlands Unit with the as-builts for the rest of the project. If the parameters of this condition are not met, then the permittee shall supply additional stream mitigation. All channel relocations will be constructed in a dry work area, will be completed and stabilized, and must be approved on site by DWQ staff, prior to diverting water into the new channel. Whenever possible, channel relocations shall be allowed to stabilize for an entire growing season. All stream relocations shall have a 50-foot wide native wooded buffer planted on both sides of the stream unless otherwise authorized by this Certification. A transitional phase incorporating rolled erosion control product (RECP) and appropriate temporary ground cover is allowable.
2. The permittee shall visually monitor the vegetative plantings to assess and ensure complete stabilization of the mitigation stream segments. Riparian area success shall be determined by conducting stem counts to ensure a tree survival rate of 320 stems/acre. The monitoring shall be conducted annually for a minimum of 3 years after final planting. Photo documentation shall be utilized to document the success of the riparian vegetation and submitted to DWQ in a final report within sixty (60) days after completing monitoring. After 3 years the NC Turnpike Authority shall contact the DWQ to schedule a site visit to "close out" the mitigation site.
3. Compensatory mitigation for the remaining 6,539 linear feet of impact to perennial streams is required. We understand that you have chosen to perform compensatory mitigation for impacts to streams through the North Carolina Ecosystem Enhancement Program (EEP), and that the EEP has agreed to implement the mitigation for the project. EEP has indicated in a letter dated July 18, 2007 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the MOU between the NCDENR and US Corps of Engineers, Wilmington District, dated November 4, 1998.
4. Compensatory mitigation for impacts to 20.14 acres of riparian wetlands is required. We understand that you have chosen to perform compensatory mitigation for impacts to wetlands through the North Carolina Ecosystem Enhancement Program (EEP), and that the EEP has agreed to implement the mitigation for the project. EEP has indicated in a letter dated July 18, 2007 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the MOU between the NCDENR and US Corps of Engineers, Wilmington District, dated November 4, 1998.



5. When final design plans are completed for R-2635 Sections A and B, a modifications to the 401 Water Quality Certification shall be submitted with four copies and fees to the NC Division of Water Quality. Final designs shall reflect all appropriate avoidance, minimization, and mitigation for impacts to wetlands, streams, and other surface waters, and buffers. No construction activities that impact any wetlands, streams, surface waters, or buffers located in R-2635 Sections A or B shall begin until after the permittee applies for, and receives a written modification of the 401 Water Quality Certification from the NC Division of Water Quality.
6. Due to the possibility that compaction and/or other site alterations might prevent the temporary wetland impact area from re-attaining jurisdictional wetland status, the permittee shall provide an update on the wetland areas at Site 26, section C, one year after the temporary impact is finished. This update will consist of photographs and a brief report on the progress of this temporarily impacted area in re-attaining wetland jurisdictional status. If the wetland area temporarily impacted by this project has not re-attained jurisdictional wetland status, NC DWQ shall determine if compensatory wetland mitigation will be required.
7. A copy of the final construction drawings shall be furnished to NCDWQ Central Office prior to the pre-construction meeting. The permittee shall provide written verification that the final construction drawings comply with the permit drawings contained in the application dated August 30, 2007. Any deviations from the approved drawings are not authorized unless approved by the NC Division of Water Quality. Also, the Division of Water Quality shall be notified a minimum of 30 days prior to the preconstruction conference.
8. The North Carolina Turnpike Authority shall acquire its NPDES permit from DWQ before this highway can be opened to the public. Written notification shall be made to the Transportation Permitting Unit to comply with this condition.
9. At locations where ponds will be drained, proper measures will be taken to drain the pond with limited impact to upstream and downstream channel stability as well as to native aquatic species. Proper measures will be taken to avoid sediment release and/or sediment accumulation downstream as a result of pond draining. If typical pond draining techniques will create significant disturbance to native aquatic species, additional measures such as collection and relocation may be necessary to prevent a significant fish kill. The permittee shall consult with NC Wildlife Resources staff to determine if there are any sensitive species, and the most appropriate measures to limit impacts to these species. The permittee shall observe any natural channel re-establishment, or utilize natural channel construction techniques, to ensure that the jurisdictional stream channel above and below the drained pond remain stable, and that no additional impacts occur within the natural stream channel as a result of draining the pond. To comply with this condition, the permittee shall submit a Pond Drainage Plan to be approved by DWQ prior to draining any ponds on the project.
10. The post-construction removal of any temporary bridge structures must return the project site to its preconstruction contours and elevations. The impacted areas shall be revegetated with appropriate native species.
11. Strict adherence to the most recent version of NCDOT's Best Management Practices For Bridge Demolition and Removal approved by the US Army Corps of Engineers is a condition of the 401 Water Quality Certification.
12. Bridge deck drains shall not discharge directly into streams or surface waters. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of *Stormwater Best Management Practices*.
13. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel should be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.



14. Placement of culverts and other structures in waters, streams, and wetlands shall 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 streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by DWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NC DWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.
15. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed.
16. For any streams being impacted due to site dewatering activities, the site shall be graded to its preconstruction contours and revegetated with appropriate native species.
17. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.
18. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers.
19. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions.
20. The use of riprap above the Normal High Water Mark shall be minimized. Any riprap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage.
21. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval.
22. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.
23. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream.
24. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials.
25. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification.
26. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.
27. A copy of this Water Quality Certification shall be maintained on site at the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the permittee and the on-site project manager.



28. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. If DWQ determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, DWQ may reevaluate and modify this certification.
29. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification.
30. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification.
31. The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc.
32. The Permittee shall report any violations of this certification to the Division of Water Quality within 24 hours of discovery.
33. Upon completion of the project (including any impacts at associated borrow or waste site), the project manager shall complete and return the enclosed "Certification of Completion Form" to notify DWQ when all work included in the 401 Certification has been completed.
34. Native woody riparian vegetation (i.e., trees and shrubs native to your geographic region) must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.
35. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities.
36. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards:
  - a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
  - b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
  - c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.
  - d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.



37. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification.

38. The onsite project manager shall schedule monthly review meetings once construction on impact areas begins. These meetings will be scheduled with DWQ and other interested resource agencies (USCOE, WRC, USFWS, NCDOT, etc). At the agencies' discretion, these meetings may be less frequent as project nears completion.

Violations of any condition herein set forth may 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 and/or Coastal Area Management Act Permit. This Certification shall expire upon the expiration of the 404 or CAMA permit.

If this Certification is unacceptable to you have the right to an adjudicatory hearing upon written request within sixty (60) days following receipt of this Certification. This request must be in the form of a written petition conforming to Chapter 150B of the North Carolina General Statutes and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, N.C. 27699-6714. If modifications are made to an original Certification, you have the right to an adjudicatory hearing on the modifications upon written request within sixty (60) days following receipt of the Certification. Unless such demands are made, this Certification shall be final and binding.

This the 22nd day of September 2008

DIVISION OF WATER QUALITY

Coleen Sullins  
Director

WQC No. 3734