

DEPARTMENT OF THE ARMY  
Wilmington District, Corps of Engineers  
69 Darlington Avenue  
Wilmington, North Carolina 28403

Applicant: Town of Cary  
Action ID: SAW-200800373

January 14, 2009  
Waterway: UT's to  
Panther Creek

**ENVIRONMENTAL ASSESSMENT, 404(B)(1) ANALYSIS, FINDING OF NO  
SIGNIFICANT IMPACT (FONSI), AND STATEMENT OF FINDINGS**

This document constitutes my Environmental Assessment, Finding of No Significant Impact, Statement of Findings, and review and compliance determination according to the 404(b)(1) guidelines for the proposed work.

This permit action is being taken under authority delegated to the Wilmington District Engineer by the Secretary of the Army and the Chief of Engineers by Title 33, Code of Federal Regulations, Part 325.8, pursuant to:

- Section 10 of the Rivers and Harbors Act of 1899.
- Section 404 of the Clean Water Act.
- Section 103 of the Marine Protection, Research and Sanctuaries Act.
- Section 4(e) of the Outer Continental Shelf Lands Act of 1953.

**1. Location, Existing Site Conditions, Project Description, Changes to Project:**

**a. Location:** The proposed project location is between North Carolina Highway 55 (NC 55) westward for a distance of approximately 3 miles to a terminus with SR 1625, Green Level to Durham Road at SR 1600, Green Level Church Road near Cary, Wake County, North Carolina. Coordinates, in decimal degrees, for the end points of the construction areas are 35.813720° N, 78.872747° W, and 35.802659° N, 78.909490° W. The project site contains several wetlands and unnamed streams channels which drain to Panther Creek in the Haw watershed of the Cape Fear River Basin (8-Digit Cataloging Unit of 03030002).

**b. Existing Site Conditions:** The proposed project would extend Morrisville Parkway, which currently terminates on the east side of NC 55, and create a roadway linking NC 55 to Green Level to Durham Road. Overall, the project study area is bordered to the east by NC 55, to the west by Green Level Church Road, to the north by undeveloped forest land and residential properties, and to the south by Green Hope School Road. The existing conditions within this project segment include upland hardwood/pine forest, several wetlands, and several unnamed streams draining to Panther Creek in the Cape Fear River Basin.

The upland forest is dominated by loblolly pine (*Pinus taeda*), white oak (*Quercus alba*), and tulip poplar (*Liriodendron tulipifera*). Flowering dogwood (*Cornus florida*), arrowwood (*Viburnum dentatum*), and saplings of red maple (*Acer rubrum*) dominate the understory. Typical wetland vegetation is dominated by sweetgum (*Liquidambar styraciflua*), red maple, and slippery elm (*Ulmus rubra*) within the canopy. Blueberry (*Vaccinium corymbosum*), sedge (*Carex* sp.), and soft rush (*Juncus effusus*) are common in the understory and herbaceous layer.

A U.S. Army Corps of Engineers (Corps) jurisdictional determination has been completed for each segment which verifies the aquatic features stated above.

**c. Project Description:** Portions of Morrisville Parkway have previously been constructed. This proposal is to extend the existing portion of roadway, currently terminating at NC 55, to Green Level to Durham Road at Green Level Church Road. The ultimate design would be similar to the existing sections of Morrisville Parkway which includes a 105-foot wide, 4-lane median divided roadway, including 5-foot wide sidewalks and 5-foot wide utility strips to be situated on both sides of the roadway. Included within this proposal is an interchange with the future Western Wake Freeway (I-540). Fill slopes are proposed at a 2:1 ratio. Total permanent impacts from this proposal are 0.72 acre of jurisdictional forested wetlands, and 3,412 linear feet of perennial stream channel exhibiting important aquatic functions.

This permit proposal will be evaluated on the dimensions and aquatic impacts stated above. However, construction of the proposed roadway would take place in three distinct stages. Stage 1A is proposed for the section between Green Level Church Road and the future Western Wake Freeway (I-540). The proposed design is an approximately 2,500-foot long, 40-foot wide, 2-lane paved road, with an associated 10-foot wide concrete greenway trail. To accommodate the roadway alignment, two culverted stream crossings are proposed. Final designs have been utilized for this stage and reflect 731 linear feet of perennial stream impact and 0.17 acre of forested wetland impacts.

Stage 1B is an approximately 12,500-foot long, 40-foot wide, 2-lane road, with an associated 12-foot wide concrete sidewalk, and would be constructed from NC 55 to the Stage 1A terminus. To accommodate the roadway alignment, proposed are four culverted stream crossings totaling approximately 1,297 linear feet of impact and one wetland crossing composed of 0.10 acre impact. Currently, only preliminary designs are available for this stage.

While traffic forecasts support a 4-lane road, Stage 2 will be proposed when eminent traffic studies support the widening of the 2-lane road to a 4-lane road from NC 55 to Green Level to Durham Road. At this time, the interchange with I-540 would be completed. Impacts assessed for this stage include all culvert extensions required for the typical roadway widening and interchange construction project. Designs are only preliminary for this stage. Approximately 1,384 linear feet of perennial stream impact and 0.45 acre of forested wetland impact are expected from this phase.

The Town of Cary is utilizing this long-range planning approach for a fair evaluation on the corridor and expected impacts of this roadway, rather than waiting and allowing future development to limit the overall flexibility required for impact minimization and/or avoidance. If permitted, Stage 1A would be constructed using the final designs depicted within this Public Notice. The other 2 phases would be permitted on the impacts stated above, realizing that these are worse-case scenarios. Final designs for each stage would be provided to the Corps for a permit modification prior to construction. At the time of permit modification, additional minimization or avoidance would be evaluated for items such as bridging, fill slopes, etc. It is expected that impact amounts would go down during the time of permit modification.

To mitigate for permanent impacts to jurisdictional wetlands and streams for Stage 1A, the applicant has proposed payment into the North Carolina Ecosystem Enhancement Program (NCEEP) at a 1:1 ratio and also to complete on-site preservation of streams and wetlands in the amount of 3,565 linear feet of streams and 1.2 acres of wetland via the Corps' approved Declaration of Restrictions. Additional NCEEP payments would be completed prior to the time of impact for each respective stage.

**d. Changes to Project:** No modifications were made to the proposal with the exception of finalizing the compensatory mitigation plan for Stage 1A.

## **2. Project Purpose:**

a. **Basic:** The basic purpose of this project is to extend the existing portion of roadway, currently terminating at NC 55, to Green Level to Durham Road at Green Level Church Road near Cary, Wake County, North Carolina. Therefore, the project is not water dependent.

b. **Overall:** The project is necessary to safely facilitate the movement of vehicles from NC55 to Green Level to Durham Road at Green Level Church Road. A review of alternative plans, including those that reduce or avoid impacts to waters of the U.S., is included in this document.

**3. Scope of Analysis:** The proposed work would primarily benefit the citizens of the Town of Cary. Other than the requirement to obtain a Section 404 permit, no other federal involvement in the proposed work is anticipated. The proposed impacts are limited to perpendicular crossings of aquatic features that are subject to Section 404 permit requirements. While additional alternatives are available, the applicant has stated that these alternatives lack economic viability. Accordingly, my analysis within this document will be limited to the impact areas and additional property directly adjacent.

## **4. Other Federal, State, and Local Authorizations Obtained or Required and Pending:**

a. **State water quality certification (401):** The North Carolina Division of Water Quality (DWQ) permit/certification number 3737 was received on April 9, 2008. Special conditions were issued, and a copy of these conditions is attached as Exhibit A.

**b. Coastal Zone Management (CZM) Consistency Determination:** The North Carolina Division of Coastal Management (DCM) consistency determination/permit was not required.

**c. Other authorizations:** No previous authorizations are associated with this project.

**5. Complete Application and Public Notice:** The Corps received the application on February 1, 2008, and considered it complete at that time. The Corps issued a public notice on February 15, 2008, and sent this notice to all interested parties including appropriate State and Federal agencies.

**6. Alternatives [33 CFR 320.4(b)(4), 40 CFR 230.10]:**

**a. Avoidance (No action, uplands, and availability of other sites):** No off-site alternatives for the proposed project were presented with the permit application. The project purpose was defined as an expansion of the existing roadway. Off-site alternatives would not meet the project purpose and need. Furthermore, since the proposed expansion is dependent upon the infrastructure of the existing roadway, any off-site alternative would be financially unfeasible for the applicant and would be expected to impact jurisdictional waters in a similar amount.

The no action option is an alternative to the currently proposed activity. Elimination of the crossings would reduce the impacts to waters of the U.S. This alternative would limit the applicant's ability to meet the regional traffic needs of its citizens, and does not satisfy the purpose and need of the proposal. Overall, the extent of the impact to waters of the U.S. that would result from the proposed plan is minimal when weighed against the overall loss of benefits incurred by the Town with the no project alternative.

A total of three different corridor alignments were evaluated for consideration as a possible option to the preferred alternative. One alternative, labeled as the Northern Alternative, was a new location option approximately 2.34 miles in length which was located north of the preferred alternative. This option was not chosen due to additional stream impacts which totaled 11 stream crossings versus 7 stream crossings for the preferred. The second alternative was the Southern Alternative, which showed slightly less impacts to aquatic features by a reduction of 1 stream crossing and 0.5 acre of wetland impact when compared to the preferred alternative. This alternative was to use part of the existing Green Hope School Road before extending to the same terminus with Green Level to Durham Road at Green Level Church Road. This alternative was not chosen because the Town believed that impacts to the human environment would be higher at the proposed interchange area because of a loss of connectivity for some existing residents. In addition, it did not provide as efficient an east-west connector as the preferred. These items, when weighed against nearly comparable aquatic impacts, were considered vital in discounting this alternative.

The third alternative is considered an upgrade of existing facilities by utilizing Green Hope School Road. Aquatic impacts were similar to the Southern Alternative and totaled 6 stream crossings and 0.2 acre of wetland impact. This alternative was 2.19 miles long and would require the taking of 44 properties and 13 potential relocations. Therefore, this option was not selected.

**b. Minimization (modified project designs, etc.):** Minimization was incorporated into the design of the project during the planning phase by crossing streams at the narrowest point. Bridges were evaluated as a possible minimization technique on Phase 1A, but due to the small stream channels (1 to 3 feet in width) were considered impracticable. As final designs are carried forward for Stage 1B and 2, an assessment of the remaining stream crossings will be conducted following consultation with the Corps at the time of permit modification

**c. Conclusions of Alternatives Analysis:** Following a review of all project alternatives, the proposed alternative is the only alternative presented that meets the project purpose and need and is financially feasible. In addition to the no project alternative, other alternatives exist that could have reduced impacts to aquatic systems. However, a review of these options demonstrates that their selection would result in an excessive financial expenditure by the permittee or could substantially reduce public benefit.

## **7. Evaluation of the 404(b)(1) Guidelines:**

### **a. Factual determinations:**

**1. Physical substrate:** The physical substrate of the streams and wetlands proposed for impact would be substantially altered as a result of the placement of the culverts and fill material. Although turbidity rates within the streams and/or their adjacent wetlands may temporarily increase during construction activities, sedimentation and erosion control measures that are required by the state and local government should prevent the excessive displacement of sediment downstream. Accordingly, stream/wetland substrate below the project site should not be appreciably affected.

**2. Water circulation, fluctuation, and salinity:** The proposed project would have an effect on current, circulation, or drainage pattern as the extent of impervious surface within the catchment is increased. The proper installation of stormwater control devices should minimize these impacts and should not result in a measurable decrease in floodwater retention.

**3. Suspended particulate/turbidity:** Downstream turbidities would increase temporarily during construction of the roadway; however, this will be a short-term impact and would likely diminish rapidly over time upon completion of construction. The majority of sedimentation is likely to result from clearing and construction of the roadway in upland areas. Any impacts would be minimized by the implementation of appropriate erosion control measures as required by the state and additional permit conditions.

4. **Contaminant availability:** The proposed project is not expected to introduce contaminants or increase the likelihood of contamination. The stream impacts would be completed with clean earthen materials produced during grading activities and should be free of toxic pollutants or contaminants. All concrete would be cured prior to contact with open water, eliminating the concerns associated with uncured concrete coming into contact with water until it has hardened.

5. **Aquatic ecosystem effects:** The placement of fill associated with the project would result in a total loss of the aquatic ecosystem and its functions within the impact boundaries. Temporary impacts associated with increased runoff and temporary discharges of sediments can be limited by the proper installation of sediment and erosion control devices, which are required by state and local ordinances and permit conditions. However, the proposed project would still contribute to the cumulative degradation of streams and the associated aquatic ecosystem on and downstream of the site.

6. **Proposed disposal site:** No disposal sites are required by the proposed plans.

7. **Cumulative effects:** The cumulative impacts that are expected as a result of this project and all similar projects in the region include the loss of riparian habitat and the degradation of on-site and downstream aquatic habitat as a result of increased stormwater runoff and additional sediment deposition. The effect of these incremental changes to the watershed would result in further destabilization of stream channels in the drainage basin as more stormwater is transported. The project would also result in degradation of water quality downstream as a result of increased turbidity, runoff of pollutants, and addition of nutrients that accompanies development. Due to the size of the roadway, the cumulative effects of the proposed activity are undeniable. The applicant has attempted to minimize these effects with the use of water quality control devices. Cumulative effects can also be minimized by the proper enforcement of permit conditions, including the regular maintenance of sediment control devices. Additional information pertaining to cumulative effects is described in the next section "Secondary effects".

8. **Secondary effects:** Secondary effects on the aquatic environment associated with the proposed project would largely result from the environmental changes that would occur across the property adjacent to the roadway. Loss of upland forested areas and the addition of impervious surfaces would cause changes in the population of terrestrial and aquatic species makeup of the area. In an effort to assess these effects, the Town has developed a Secondary and Cumulative Impact Master Mitigation Plan (SCI) by providing a holistic review of the environmental impacts associated with planned land use changes and infrastructure projects. In addition, the Town has adopted the Town of Cary Growth Management Plan (Plan) to guide future growth by guiding rezoning, site plan ordinances, and new infrastructure; encourages private sector development to respect local goals; and recommends new ordinances, policies, and studies.

The Plan is supplemented and supported by smaller area plans or policy documents. These documents establish the Town's official long-range vision and recommendations for future land uses, transportation, parks, open space, public schools, and the environment. This proposed project includes areas within two of these plans, the Northwest Area Plan and the Southwest Area Plan. The Northwest Area Plan objective is to provide higher density areas with park and open space inclusions to reduce sprawl. The Southwest Area Plan objective is to protect environmental features by keeping densities lower and preserving rural land patterns.

To provide additional protections to streams within this area, the Town has enacted an Urban Transitional Buffer Ordinance that requires riparian buffers within the Town's jurisdiction and extraterritorial jurisdiction. This ordinance exceeds the requirements of the Neuse River Basin NSW rules by requiring 100 foot riparian buffers on all USGS streams (perennial and intermittent) and 50 foot buffers on all streams mapped on the Wake County Soil Survey. All future development within the project area's sub-basin, within the Town's jurisdiction, will be subject to the riparian buffer requirements.

In addition, the Town has submitted a letter dated October 3, 2008, to the Corps in which they have stated that they will work with the Corps to protect aquatic resources under their jurisdiction. As such, the Town will not allow their ordinances to dictate an impact to a stream or wetland that might have originally been avoidable.

**b. Restrictions on discharges:**

1. **Alternatives** (See Section 6):

a. The activity is located in a special aquatic site (wetlands, sanctuaries and refuges, mudflats, vegetated shallows, coral reefs, riffle and pool complexes, etc.)

yes  no

b. The activity needs to be located in a special aquatic site to fulfill its basic purpose.

yes  no

c. All practicable alternatives have been reviewed in Section VI above. It has been demonstrated that the alternative with the fewest impacts on the aquatic ecosystem (least damaging alternative), has been identified.

yes  no

d. The least damaging alternative has no other significant environmental

effects.

yes  no

**2. Other program requirements:**

a. The proposed activity violates applicable State water quality standards or Section 307 prohibitions or effluent standards.

yes  no

b. The proposed activity jeopardizes the continued existence of federally listed threatened or endangered species or affects their critical habitat.

yes  no

c. The proposed activity violates the requirements of a federally designated marine sanctuary.

yes  no

3. The activity will cause or contribute to significant degradation of waters of the United States, including adverse effects on human health; life stages of aquatic organisms; ecosystem diversity, productivity and stability; and recreational, aesthetic, and economic values.

yes  no

**4. Minimization of adverse effects:**

a. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem.

yes  no

b. Compensatory Mitigation (Wetland restoration, enhancement, creation, preservation, etc.): The February 6, 1990, Corps/Environmental Protection Agency Memorandum of Agreement (MOA) established procedures to determine the type and level of mitigation necessary to comply with the Clean Water Act section 404(b)(1) Guidelines. This MOA provides for first, avoiding impacts to waters and wetlands through the selection of the least damaging, practical alternative; second, taking appropriate and practical steps to minimize impacts on waters and wetlands; and finally, compensating for any remaining unavoidable impacts to the extent appropriate and practical. To determine "appropriate and practicable" measures to offset unavoidable impacts, measures should be selected which are appropriate to the scope and degree of those impacts, and practicable in terms of cost, logistics, and technology in light of the overall project purpose.



The permittee shall make payment to the North Carolina Ecosystem Enhancement Program (NC EEP) in the amount determined by the NC EEP, sufficient to perform the amount necessary to restore 0.17 acre of riparian wetlands in the Cape Fear River Basin, Cataloging Unit 03030002 and 731 linear feet of warm water stream in the Cape Fear River Basin, Cataloging Unit 03030004. Construction within jurisdictional areas on the property for Stage 1A shall begin only after the permittee has made full payment to the NC EEP and provided a copy of the payment documentation to the Corps, and the NC EEP has provided written confirmation to the Corps that it agrees to accept responsibility for the mitigation work required, in compliance with the MOU between the North Carolina Department of Environment and Natural Resources and the United States Army Corps of Engineers, Wilmington District, dated November 4, 1998.

In addition, the Permittee shall execute and cause to be recorded in the Wake County Register of Deeds a Conservation Declaration, the form of which was transmitted to USACE in a December 19, 2008, email from Mr. Eric Simpson, which shall preserve in perpetuity 3,565 linear feet of stream and 1.2 acres of wetland described on the map attached to the email as "WETLANDS\_PRESERVE". The December 19, 2008, email states that the Permittee will use the Corps approved language for Declaration of Restrictions verbatim. The permittee shall enforce the terms of the conservation declaration and shall take no action on the property described in the declaration inconsistent with the terms thereof. The permittee shall record the conservation declaration no later than May 1, 2009. The permittee shall provide a copy of the recorded declaration to the Corps of Engineers within 30 days of recording.

Findings: The project complies with the Guidelines because the following conditions are to be included as part of the requested permit:

#### **Work Limits**

1. All work authorized by this permit must be performed in strict compliance with the attached plans, which are a part of this permit. Any modification to these plans must be approved by the US Army Corps of Engineers (USACE) prior to implementation.

2. Except as authorized by this permit or any USACE approved modification to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area. This prohibition applies to all borrow and fill activities connected with this project.

3. Except as specified in the plans attached to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, in such a manner as to impair normal flows and circulation patterns within waters or wetlands or to reduce the reach of waters or wetlands.

4. The North Carolina Division of Water Quality (DWQ) permit/certification number 3737 was issued for this project on April 9, 2008. Special conditions were issued associated with this water quality permit/certification and a copy of these conditions is attached as Exhibit A. These referenced conditions are hereby incorporated as special conditions of this permit.

5. The permittee shall make payment to the North Carolina Ecosystem Enhancement Program (NC EEP) in the amount determined by the NC EEP, sufficient to perform the amount necessary to restore 0.17 acre of riparian wetlands in the Cape Fear River Basin, Cataloging Unit 03030002 and 731 linear feet of warm water stream in the Cape Fear River Basin, Cataloging Unit 03030004.

Construction within jurisdictional areas on the property for Stage 1A shall begin only after the permittee has made full payment to the NC EEP and provided a copy of the payment documentation to the Corps, and the NC EEP has provided written confirmation to the Corps that it agrees to accept responsibility for the mitigation work required, in compliance with the MOU between the North Carolina Department of Environment and Natural Resources and the United States Army Corps of Engineers, Wilmington District, dated November 4, 1998.

In addition, the Permittee shall execute and cause to be recorded in the Wake County Register of Deeds a Conservation Declaration, the form of which was transmitted to USACE in a December 19, 2008, email from Mr. Eric Simpson, which shall preserve in perpetuity 3,565 linear feet of stream and 1.2 acres of wetland described on the map attached to the email as "WETLANDS\_PRESERVE". The December 19, 2008, email states that the Permittee will use the Corps approved language for Declaration of Restrictions verbatim. The permittee shall enforce the terms of the conservation declaration and shall take no action on the property described in the declaration inconsistent with the terms thereof. The permittee shall record the conservation declaration no later than May 1, 2009. The permittee shall provide a copy of the recorded declaration to the Corps of Engineers within 30 days of recording.

6. As the plans for phases 1B and 2 are finalized, permit modifications showing the finalized plans must be submitted to the Corps for review and evaluation. Compensatory mitigation for impacts under phases 1B and 2 will be addressed at the time of each respective permit modification and completed prior to impacts to jurisdictional features.

### Culverts

7. Measures will be included in the construction/installation that will promote the safe passage of fish and other aquatic organisms. The dimension, pattern, and profile of the stream above and below a pipe or culvert should not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed opening should be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. Spring flow should be determined from gage data, if available. In the absence of such data, bankfull flow can be used as a comparable level.

Culverts greater than 48 inches in diameter will be buried at least one foot below the bed of the stream. Culverts 48 inches in diameter or less shall be buried or placed on the stream bed as practicable and appropriate to maintain aquatic passage, and every effort shall be made to maintain the existing channel slope. The bottom of the culvert must be placed at a depth below the natural stream bottom to provide for passage during drought or low flow conditions. Destabilizing the channel and head cutting upstream should be considered in the placement of the culvert. A waiver from the depth specifications in this condition may be requested in writing. The waiver will be issued if it can be demonstrated that the proposal would result in the least impacts to the aquatic environment. Culverts placed in wetlands do not have to be buried.

#### **Related Laws**

8. All mechanized equipment will be regularly inspected and maintained to prevent contamination of waters and wetlands from fuels, lubricants, hydraulic fluids, or other toxic materials. In the event of a spill of petroleum products or any other hazardous waste, the permittee shall immediately report it to the N.C. Division of Water Quality at (919) 733-5083, Ext. 526 or (800) 662-7956 and provisions of the North Carolina Oil Pollution and Hazardous Substances Control Act will be followed.

#### **Project Maintenance**

9. The permittee shall advise the Corps in writing prior to beginning the work authorized by this permit and again upon completion of the work authorized by this permit. In addition, a pre-construction meeting shall take place prior to beginning the construction activities. This meeting shall be comprised of the applicant, the contractors, any sub-contractors and their equipment operators working within jurisdictional areas. Please contact the Corps of Engineers Project Manager at least 2 weeks prior to the commencement of construction to schedule this meeting.

10. Unless otherwise authorized by this permit, all fill material placed in waters or wetlands shall be generated from an upland source and will be clean and free of any pollutants except in trace quantities. Metal products, organic materials (including debris from land clearing activities), or unsightly debris will not be used.

11. The permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this permit. A copy of this permit, including all conditions, shall be available at the project site during construction and maintenance of this project.

12. The permittee shall employ all sedimentation and erosion control measures necessary to prevent an increase in sedimentation or turbidity within waters and wetlands outside the permit area. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project must remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4).

13. The permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the work will, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the water or wetland to its pre-project condition.

### **Enforcement**

14. Violations of these conditions or violations of Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act must be reported in writing to the Wilmington District U.S. Army Corps of Engineers within 24 hours of the permittee's discovery of the violation.

### **8. Public Interest Review:**

a. **All public interest factors have been reviewed.** The following public interest factors are considered relevant to this proposal. Both cumulative and secondary impacts on the public interest were considered.

1. **Conservation:** The proposed project would make mitigation payment to the NCEEP which would be used to restore and preserve wetlands and warm water streams in the Neuse River Basin. In addition, on-site preservation of streams and wetlands will enhance conservation aspects of this area.

2. **Economics [33 CFR 320.4(q)]:** The Town and citizens of Cary would be the primary beneficiary of the project. The project would help provide an overall traffic flow to the area in and around the project site, and could result in increases in local, state, and federal tax revenues. The new roadway may also result in temporary job opportunities during construction of the project.

3. **Aesthetics:** The community would benefit from the proper flow of traffic.

4. **General environmental concerns [33 CFR 320.4(p)]:** Note the comments below.

5. **Wetlands [33 CFR 320.4(b)]:** The proposed project would make mitigation payment to the NCEEP which would be used to restore and preserve wetlands in the Cape Fear River Basin.

6. **Historic and cultural resources [33 CFR 320.4(e)]:** There are no known or suspected historic or cultural resources located within the permit area, and no impact to any of these resources would result from the project. The North Carolina Department of Cultural Resources, Historic Preservation Office provided no comment on the proposed action.

7. **Fish and wildlife values [33 CFR 320.4(c)]:** Comments were received from the North Carolina Wildlife Resources Commission (NCWRC) in a letter dated March 17, 2008. These comments raised concerns with the location of the interchange and the on/off ramps in relation to avoidance and minimization of aquatic impacts, use of bridges, and secondary and cumulative impacts from the proposed project. In addition, several measures were included to be considered as permit conditions such as, dewatering procedures, proper installation of culverts, streambank stabilization, stormwater control, working from the top-of-bank, sediment and erosion control, proper reclamation of temporary access roads, and preventing stream water contact with uncured concrete.

In a response to these comments, the applicant provided additional information justifying the project as proposed. An email response from NRWRC dated August 21, 2008, indicated that they had no further comments or objections to the proposed project.

No response was received from the U.S. Fish and Wildlife Service. However, species, or their critical habitat, designated as endangered or threatened pursuant to the Endangered Species Act of 1973, are not known to exist on the site.

8. **Flood hazards:** The project would not be expected to have an impact on the overall hazard of flooding downstream of the project site. The development would result in increases to impervious surface within the watershed, but some of this increase would be offset by the retention of stormwater runoff flowing from the site.

9. **Floodplain values [33 CFR 320.4(l)]:** Pursuant to Executive Order 11988, consideration has been given to the effect that the proposed project may have in reducing the risk of flood loss, minimizing the impact of floods on human safety, health and welfare, and restoring and preserving the natural and beneficial values served by floodplains. With the exception of the road crossings, the roadway development would exclude the floodplain. However, runoff from the site would likely increase as a result of

additional impervious surface and may result in minimal increases in flood elevations downstream. This effect should be minimized by the construction of proper stormwater management facilities.

10. **Land use:** The project would be in compliance with local zoning ordinances.

11. **Navigation [33 CFR 320.4(o)]:** Not applicable.

12. **Shore erosion and accretion:** Not applicable.

13. **Recreation:** Not applicable.

14. **Water supply [33 CFR 320.4(m)]:** Increases to impervious surfaces on the site may alter water infiltration onsite, yet these impacts are expected to be negligible.

15. **Water quality [also 33 CFR 320.4(d)]:** The North Carolina Division of Water Quality issued permit/certification Number 3737 dated April 8, 2008. Special conditions were issued, and a copy of these conditions is attached as Exhibit A. No major impacts to water quality are expected. However, increases in turbidity during construction may result in minor adverse impacts. No comments were received from the U.S. Environmental Protection Agency.

16. **Energy needs [33 CFR 320.4(n)]:** The project would result in an increase in energy consumption during construction from equipment to prepare the site. However, this effect is expected to be negligible.

17. **Safety:** The project would be designed to meet roadway building requirements and is not expected to result in a negative impact to overall safety of the area.

18. **Food and fiber production:** Not applicable.

19. **Mineral needs:** Not applicable.

20. **Considerations of property ownership:** Adjacent landowners may be affected as a result of the proximity of their property to the project. It is possible that adjacent landowners may experience changes in their property value, leading to a higher or lower tax rate. However, the use of the land would be consistent with the designated zoning and transportation plans, and issuance of the permit would be consistent in keeping with the public's interest in health and welfare. In addition, property ownership and the possible relocation of homes/businesses were considered during the evaluation of the alternatives

b. **Need for Proposed Project:** The applicant has established a need for the proposed

impacts based upon necessity to satisfy local traffic needs.

c. **Alternative Locations:** See section 6 – Alternatives.

d. **Permanence of Effects:** The project benefits to the applicant and public are expected to last throughout the life of the development. Project impacts would generally be permanent, with the exception of impacts associated during construction, which would include increased noise and downstream turbidity.

e. **Threatened or endangered species:** No effect. Species, or their critical habitat, designated as endangered or threatened pursuant to the Endangered Species Act of 1973, are not known to exist on the site.

f. **Corps Wetland Policy:** Based upon a review of the proposed impacts relative to the anticipated benefits of the project, it has been determined that the beneficial effects of the project outweigh the detrimental impacts of the project. Additionally, mitigation will be provided to offset the unavoidable loss of jurisdictional waters of the United States resulting from the roadway development.

g. **Cumulative and Secondary Impacts:** Cumulative and secondary effects on the aquatic environment associated with the proposed project would largely result from the environmental changes that would occur across the property adjacent to the roadway. Loss of upland forested areas and the addition of impervious surfaces would cause changes in the population of terrestrial and aquatic species makeup of the area. In an effort to assess these effects, the Town has developed a Secondary and Cumulative Impact Master Mitigation Plan (SCI) by providing a holistic review of the environmental impacts associated with planned land use changes and infrastructure projects. In addition, the Town has adopted the Town of Cary Growth Management Plan (Plan) to guide future growth by guiding rezoning, site plan ordinances, and new infrastructure; encourages private sector development to respect local goals; and recommends new ordinances, policies, and studies.

The Plan is supplemented and supported by smaller area plans or policy documents. These documents establish the Town's official long-range vision and recommendations for future land uses, transportation, parks, open space, public schools, and the environment. This proposed project includes areas within two of these plans, the Northwest Area Plan and the Southwest Area Plan. The Northwest Area Plan objective is to provide higher density areas with park and open space inclusions to reduce sprawl. The Southwest Area Plan objective is to protect environmental features by keeping densities lower and preserving rural land patterns.

To provide additional protections to streams within this area, the Town has enacted an Urban Transitional Buffer Ordinance that requires riparian buffers within the Town's jurisdiction and extraterritorial jurisdiction. This ordinance exceeds the requirements of the Neuse River Basin NSW rules by requiring 100 foot riparian buffers on all USGS streams (perennial and intermittent) and 50 foot buffers on all streams mapped on the Wake County Soil Survey. All

future development within the project area's sub-basin, within the Town's jurisdiction, will be subject to the riparian buffer requirements.

In addition, the Town has submitted a letter dated October 3, 2008, to the Corps in which they have stated that they will work with the Corps to protect aquatic resources under their jurisdiction. As such, the Town will not allow their ordinances to dictate an impact to a stream or wetland that might have originally been avoidable.

h. **Essential Fisheries Habitat (EFH):** No adverse impacts to Essential Fish Habitat would result from the proposed project.

9. **Public Hearing Evaluation (If Applicable):** No requests for a public hearing were received, and no public hearing was held.

10. **Comments, Responses, and Corps Analysis of Comments and Responses:**

a. **Public Notice Comments:** The Corps has reviewed all of the comments submitted in response to the circulation of the public notice. Those comments are summarized below:

1. **U.S. Environmental Protection Agency (EPA):** No comments received.

2. **U.S. Fish and Wildlife Service (USFWS):** No comments received.

3. **National Marine Fisheries Service (NMFS):** No comments received.

4. **State Historic Preservation Officer (SHPO):** No comments received.

5. **Other State and local agencies:** Comments were received from the North Carolina Wildlife Resources Commission in a letter dated March 17, 2008. These comments raised concerns with the location of the interchange and the on/off ramps in relation to avoidance and minimization of aquatic impacts, use of bridges, and secondary and cumulative impacts from the proposed project. In addition, several measures were included to be considered as permit conditions such as, dewatering procedures, proper installation of culverts, streambank stabilization, stormwater control, working from the top-of-bank, sediment and erosion control, proper reclamation of temporary access roads, and preventing stream water contact with uncured concrete.

6. **Organizations:** No comments received.

7. **Individuals:** No comments received.

8. **Others (including, if applicable, internal coordination with TSD, Navigation):** No comments received.



b. **Applicant response to the comments:** On April 18, 2008, the Corps coordinated with the applicant the comments received in response to the public notice. The applicant responded to the comments on August 8, 2008. In a response to these comments, the applicant provided additional information for consideration against the proposed project.

c. **Additional Coordination of Project Revisions:** On August 15, 2008, the Corps provided the North Carolina Wildlife Resources Commission a copy of the applicants response to their respective comments. The Corps has summarized these comments below:

1. **U.S. Environmental Protection Agency (EPA):** No comments received.
2. **U.S. Fish and Wildlife Service (USFWS):** No additional comments received.
3. **National Marine Fisheries Service (NMFS):** No comments received.
4. **State Historic Preservation Officer (SHPO):** No comments received.
5. **Other State and local agencies:** An email response from NRWRC dated August 21, 2008, indicated that they had no further comments or objections to the proposed project.
6. **Organizations:** No comments received.
7. **Individuals:** No comments received.
8. **Others:** No comments received.

9. **Corps Analysis of Comments and Responses:** Following a review of both the applicant's response and the supplemental information, the Corps felt that the applicant had adequately addressed all concerns. This decision was based not only on the extent to which the concern may potentially impact aquatic resources, but also the relationship between the concern and the regulated activity.

#### 11. **Determinations:**

a. **Public Hearing Request (*If applicable*):** Not applicable.

b. **Civil Rights:** In accordance with Title III of the Civil Rights Act of 1964 and Executive Order 12898, it has been determined that the project would not directly or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin nor would it have a disproportionate effect on minority or low-income communities.

c. **Section 176(c) of the Clean Air Act General Conformity Rule Review:** The proposed

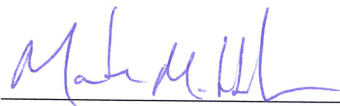
permit action has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activities proposed under this permit will not exceed *de minimis* levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the Corps' continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons a conformity determination is not required for this permit action.

d. **Finding of No Significant Impact (FONSI):** Having reviewed the information provided by the applicant and all interested parties and an assessment of the environmental impacts, I find that this permit action will not have a significant impact on the quality of the human environment. Therefore, an Environmental Impact Statement will not be required.

e. **Compliance with 404(b)(1) guidelines:** Having completed the evaluation in Section VII above, I have determined that the proposed discharge complies with the 404(b)(1) guidelines.

f. **Public Interest Determination:** I find that issuance of a Department of the Army permit is not contrary to the public interest provided Permittee complies with the attached special conditions. Accordingly, I am hereby issuing the requested permit.

PREPARED BY:



Monte Matthews  
Regulatory Project Manager

1-14-09

Date

REVIEWED BY:



Jean B. Manuele  
Chief, Raleigh Regulatory Field Office

14 Jan 09

Date

APPROVED BY:



Jefferson M. Ryscavage  
Colonel, U.S. Army  
District Commander

1/30/09

Date