



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

January 26, 2007

Attn: Dave Timpy  
U. S. Army Corps of Engineers  
Regulatory Field Office  
Post Office Box 1890  
Wilmington, NC 28402-1890

Attn: Jim Gregson  
N.C. Dept. of Environment and Natural Resources  
Division of Coastal Management  
127 Cardinal Drive Ext.  
Wilmington, NC 28405-3845

Attn: Kathy Matthews  
USEPA - Region 4 Wetlands Section  
109 T.W. Alexander Dr.  
Durham, NC 27711  
MAIL CODE: N176-01

Attn: Brian Wrenn  
N.C. Dept. of Environment and Natural Resources  
Division of Water Quality  
2321 Crabtree Blvd, Suite 250  
Raleigh, NC 27604

Subject: **NCDOT Response to NCDWQ, NCDCM, USEPA, and USACE Questions regarding the Proposed Second Bridge to Oak Island**, Brunswick County, State Project No. 8.2231201, Federal Aid No. STP-1105(6), TIP R-2245, WBS Element 34407.1.1, Brunswick County.

References: -Supplemental Information for Sections 401 and 404 Individual Permits and CAMA Major Development Permit Applications and NCDOT Response to DWQ and USACE Questions Second Bridge to Oak Island dated January 19, 2007.  
-Water Quality Certification Application Requirements letters from NCDWQ dated May 16, 2006 and January 23, 2007  
-Email from USEPA (Kathy Matthews) dated January 23, 2007  
-Email from USACE (Dave Timpy) dated January 23, 2007  
-Email from NCDCM (Steve Sollod) dated January 24, 2007

Dear Sirs and Madam:

The NCDOT would like to submit the following information to clarify and supplement the above referenced items. Attached to this letter are the following:

- (1) A figure of the conservation easement area boundaries including the bay areas, the wildlife corridors, the wildlife pipe crossing locations, the Brunswick Electric Membership Cooperative powerline location, existing dirt road locations, and existing surveyed house lot locations.
- (2) Detailed description and results of the Method of Wetland/Upland Estimation for Conservation Easement Areas Associated with R-2245, Second Bridge to Oak Island.

MAILING ADDRESS:  
NC DEPARTMENT OF TRANSPORTATION  
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS  
1598 MAIL SERVICE CENTER  
RALEIGH NC 27699-1598

TELEPHONE: 919-715-1334  
FAX: 919-715-5501  
WEBSITE: [WWW.NCDOT.ORG](http://WWW.NCDOT.ORG)

LOCATION:  
2728 CAPITOL BOULEVARD  
SUITE 240  
RALEIGH NC 27699

- (3) A copy of the signature page of the Memorandum of Understanding (MOU) regarding control of access, signed by NCDOT, FHWA, and NCDENR.
- (4) A copy of an email from Chris Militscher, providing USEPA's written approval of the MOU.

The following are questions from the above mentioned resource agencies and NCDOT's responses to those questions

1. DWQ's Request stated the following was lacking from the Supplemental Information:

Maps detailing the conservation easements for the three Carolina bays, wildlife corridors, and park and recreation areas. These maps should delineate the upland and wetland boundaries of the bays with respective acreages, show any built upon areas within and immediately adjacent to the bays, provide the locations of the wildlife crossings under access and private development roads.

**NCDOT Response to DWQ**

Included with this letter is a figure of the conservation easement area boundaries including the bay areas, the wildlife corridors, the wildlife pipe crossing locations, the Brunswick Electric Membership Cooperative powerline location, existing dirt road locations, and existing surveyed house lot locations.

2. DWQ Request

...DWQ is willing to accept the Microstation map referenced in the NCDOT's response along with a more detailed explanation of the Method in place of the map requested in the May 16, 2006 letter. The explanation of the Method should be to the level of detail that the upland and wetland acreages estimated by NCDOT can be easily replicated.

**NCDOT Response to DWQ**

The Supplemental Information dated January 19, 2007 provided a Description of the Wetland/Upland Estimate Method, but made no mention of a MicroStation map illustrating these estimates.

However, in the spirit of cooperation and in an effort to assist DWQ in understanding the basic wetland/upland estimating process, NCDOT has included with this letter a figure of the conservation easement area boundaries including the bay areas, the wildlife corridors, the wildlife pipe crossing locations, the Brunswick Electric Membership Cooperative powerline location, existing dirt road locations, and existing surveyed house lot locations. The estimated uplands within the conservation easement areas are depicted on this figure.

As requested, a more Detailed Description and Results of the Method of Wetland/Upland Estimation for Conservation Easement Areas Associated with R-2245, Second Bridge to Oak Island is also included with this letter.

3. DWQ Request

Typically, DWQ requires that all conservation easements be signed and recorded prior to issuance of the 401 Water Quality Certification (WQC). However, due to the time sensitive nature of this project, DWQ will condition the 401 WQC to require the signed and recorded conservation easements prior to start of construction on jurisdictional areas.

### **NCDOT Response to DWQ**

In DWQ's May 16, 2006 letter, the request was made for "signed, legal agreements from landowners indicating their acceptance of the terms agreed to in the signed concurrence form dated Apr. 11, 2006." All of the April 11th commitments are met with the Agreements. Therefore, the signed Agreements satisfy the May 16th request and providing signed Easements are above and beyond what was requested in May 16, 2006.

Additionally, previous WQCs have been issued to NCDOT based on signed Agreements. However, in order to forward this application and in the spirit of cooperation, the NCDOT will make every effort to procure signed Easements by the end of Summer 2007.

Furthermore, NCDOT would not object to the permit being conditioned such that the signed and recorded conservation easements would be submitted to the resource agencies prior to the end of Summer 2007.

4. DWQ's Request stated the following was lacking from the Supplemental Information:  
A final approved draft of the Memorandum of Understanding (MOU) regarding control of access. The final draft must have the formal written approval of all the signatory parties of the MOU.

### **NCDOT Response to DWQ**

NCDOT, FHWA, and NCDENR have signed the four original copies of the MOU. The last signatory party, the USEPA, received the signed original MOU for their signature on January 24, 2007. The USEPA is in the process of signing the MOU, and will retain one original signed copy for their files. The three remaining originals will be sent back to NCDOT for distribution.

Attached is a copy of the signature page of the MOU, signed by three of the four parties. Also included, is a written confirmation from the USEPA indicating their approval of the MOU and their willingness to sign. In discussions and coordination with DWQ, it was indicated that an email would be accepted as formal written approval of the MOU.

### **5. DCM Request**

The amended CAMA permit application drawings submitted 1/8/07 do not show ACC4. Page 3 of the 1/19/07 Supplemental Information letter indicates that, "There are no jurisdictional impacts associated with ACC4, therefore the current permit drawings will remain accurate." Be advised that regardless of whether there are potential impacts, access ACC4 will not be authorized until permit drawings are submitted to DCM and the construction of the access is authorized under the CAMA Major Development Permit for this project.

### **NCDOT Response to DCM**

Exhibit 4 in the MOU and Exhibit B in the Williamson Agreement show the access point and road location for ACC4. Since these were submitted with the application, they can be considered "permit drawings". Typically, NCDOT permit drawings show impacted jurisdictional areas only. We supplement the permit drawings with Roadway plans so that the entire project can be viewed outside of the jurisdictional areas. In the case of R-2245, we have provided additional attachments, such as the MOU and the Williamson Agreement, to clarify ACC4.

#### 6. USEPA Request

In our 8/30/06 letter, we requested copies of the signed CE's [conservation easements] and the signed MOU. We don't quite have either, although we expect them soon. As I mentioned to Joseph Qubain on Friday [January 25, 2007], since we are the last ones to sign the MOU, we will consider the MOU item addressed as soon as EPA signs it (Hopefully this week). However, we still need the signed conservation easements. I would be concerned with accepting the signed agreements that were provided, before the CEs are signed and recorded. There is still too much leeway for significant changes. How close are we to getting signed CEs?

#### NCDOT Response to USEPA

The agreements with both Williamson and RDC are legally binding documents. We anticipate having the conservation easements signed and recorded by the end of Summer 2007. The status of the MOU is explained in response to question 4 from DWQ.

#### 7. USEPA Request

Also, I agree that the wildlife corridor issue on the RDC property needs to be addressed (will DOT record a CE over that portion of ROW for the corridor?).

#### NCDOT Response to USEPA

As stated in the Supplemental Information dated January 19, 2007, although Exhibit A in the RDC (St. James) Agreement does not depict a complete wildlife connection between the East Bay and North Bay, these two bays are connected by a wildlife corridor. The Exhibit A only depicts what is being obtained from RDC (St. James) by NCDOT. The upper end of the wildlife corridor, which was owned by a different landowner, has been obtained as a remnant parcel through the Roadway ROW condemnation process. This remnant parcel will be designated as a mitigation area on NCDOT's Mitigation site geodatabase. If ownership is transferred to a land conservation entity other than NCDOT, the site will be protected with NCDOT's standard mitigation easement.

#### 8. USACE Request

Why is the agreement/option is as good as a conservation easement and when do we expect to get the conservation agreements signed?

#### NCDOT Response to USACE

The agreements with both Williamson and RDC are legally binding documents and are subject to legal action. We anticipate having the conservation easements signed and recorded by the end of Summer 2007.

#### 9. USACE Request

What proposals or assurances can the NCDOT offer the agencies that the conservation easements will be signed and submitted to the agencies?

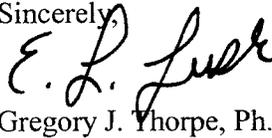
#### NCDOT Response to USACE

Property boundary surveys for the conservation easements are currently ongoing. Following the completion of these surveys, the signing and subsequent recording of the conservation easements will be executed. Through this letter, NCDOT assures the resource agencies of our intent to have the conservation easements signed and recorded, and will submit copies of the recorded documents by

the end of Summer 2007. If the USEPA and USACE would like extra assurance, NCDOT would not object to the permit being conditioned such that the signed conservation easements would be required by the end of Summer 2007.

This information should complete the Section 401 application previously submitted. Thank you for your assistance with this project. If you have any questions or need any additional information about this project, please contact Brett Feulner at (919) 715-1488.

Sincerely,

*for* 

Gregory J. Thorpe, Ph.D., Environmental Management Director  
Project Development and Environmental Analysis Branch

GJT/mcr

Enclosures

cc w/ attachment

Mr. John Hennessy, NCDWQ (4 Copies)  
Mr. Travis Wilson, NCWRC  
Mr. Ronald Mikulak, USEPA – Atlanta, GA  
Mr. Clarence W. Coleman, P.E., FHWA  
Mr. Gary Jordan, USFWS  
Mr. Ron Sechler, NMFS  
Mr. Michael Street, NCDMF  
Mr. Steve Sollod, NCDCM  
Ms. Deborah M. Barbour, P.E., Preconstruction  
Mr. Greg Perfetti, P.E., Structure Design Unit  
Mr. Victor Barbour, Project Services Unit  
Mr. H. Allen Pope, P.E., Division 3 Engineer  
Dr. David Chang, P.E., Hydraulics Unit  
Mr. Mark Staley, Roadside Environmental Unit  
Mr. Mason Herndon, Division 3 Environmental Officer

w/out attachment

Mr. Jay Bennett, P.E., Roadway Design  
Mr. Majed Alghandour, P. E., Programming and TIP  
Mr. Art McMillan, P.E., Highway Design  
Mr. Scott McLendon, USACE, Wilmington  
Mr. Joseph Qubain, PDEA  
Mr. Carl Goode, PE, Human Environment Unit Head

Attachments (4)



## R-2245 Second Bridge to Oak Island Water Quality Certification Application Proposed Conservation Easement Details

- Proposed Conservation Easement Boundary**  
(Approximate total easement area = 880 acres. Land within this boundary, and outside the Approximate Upland Area Boundary, is considered wetland. See Notes below. Approximate wetland acreage = 700 acres.)
- Approximate Upland Area Boundary**  
(Approximate upland acreage = 180 acres)
- Wildlife pipe crossing location**
- Proposed residential lot**
- Brunswick Electric Powerline**
- NCDOT ROW**

**Notes:** This figure is a representation of the proposed Conservation Easement Areas to be acquired by NCDOT as part of its commitments for the R-2245 roadway project. The landowners who are granting the Conservation Easements have agreed to the boundaries as shown on this figure. The easement boundaries are being surveyed; a plat with the surveyed boundaries will be recorded along with the conservation easements. Upland and wetland acreages have been estimated using digital data references. Wetland/Upland boundaries and acreages are approximate and have not been field verified. The proposed residential lots shown here were provided by RDC. These lots have not been recorded.



January 26, 2007

## **Method of Wetland/Upland Estimation for Conservation Easement Areas Associated with R-2245, Second Bridge to Oak Island**

The following method was used to produce an estimate of wetland and upland acres within the conservation easement areas, totaling approximately 880 acres, adjacent to R-2245, Second Bridge to Oak Island. The attached figure is a representation of the end product of this method. This figure also illustrates the conservation easement boundaries, the wildlife corridors, the wildlife pipe crossing locations, the Brunswick Electric Membership Cooperative powerline location, existing dirt road locations, and existing surveyed house lot locations.

The Microstation V8 computer program is used as the graphic tool of choice, creating a workspace from a standard 2D mapping seed file with working units of 1 FT:10:100 pu, allowing precision of 0.001 feet in a design plane approximately 813 miles square.

The following resources are obtained in digital format from the designated providers:

NCDOT Aerial Photography, post Hurricane Isabel, 2003  
NCDOT Wetland Delineation for R-2245  
NCDOT LIDAR Topography – 2ft and 5ft contours  
Brunswick County Soil Map  
USFWS/USGS National Wetland Inventory  
DCM NC Crews Wetland Areas

These files are referenced into the workspace, one at a time, using the standard Microstation MDL reference file function, with the aerial photography layer as the background so as not to obscure the line files. Line weights and colors for the various files may need to be adjusted to improve appearance.

The NCDOT wetland delineation for R-2245 is reviewed first for commonly occurring factors since these are known and verified jurisdictional wetland areas. Adjacent non-wetland areas, i.e. uplands, are also reviewed for commonly occurring factors. Notes are made of which factors that, in combination, typically occur in the wetland areas or in the upland areas. Factors that typically occur in wetland areas are low topographic zones and crenulations, hydric soils, wetland classifications, and natural wetland vegetated communities. Factors that typically occur in upland areas are higher topographic zones, non-hydric soils, upland classifications, and natural upland vegetated communities. Contrasts are made of the expressions of these two areas on aerial photography.

Then the interior of the conservation easement is perused for similar expressions of upland areas, as described above, based on the experience and judgement of the assessor. Using the standard drawing tool in Microstation, estimated boundaries of each upland area are outlined and closed polygons are created. The acres of each polygon are then calculated using the standard Microstation measuring tool. The acres of all the polygons are then added to get the total estimated upland acres. This total is subtracted from the surveyed easement area to estimate the total acres of wetland.

**Reserve Development Company, LLC (RDC)**

The conservation easement boundaries within land owned by RDC (St. James) adjacent to the proposed roadway follow the wetland delineation lines around the East Bay area and the North Bay area, joined by a approximately 300-foot wide Wildlife Corridor. Within these easement boundaries lie several small upland patches, totaling approximately 20 acres based on the estimation method described above. The result is a total of approximately 430 acres of wetland and upland within the conservation easement boundaries on the RDC property.

**Williamson**

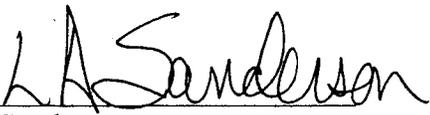
The conservation easement boundaries within land owned by the Williamson family follow the wetland delineation lines around the West Bay area, minus an area of upland on which a clubhouse is proposed, and the western end of the East Bay area, joined by an approximately 300-foot wide Wildlife Corridor; plus three future park areas (PR3, PR11, PR13) west of the proposed roadway. Within these easement boundaries lie several small upland patches, totaling approximately 160 acres based on the estimation method described above. The result is a total of approximately 450 acres of wetland and upland within the conservation easement boundaries on the Williamson property.

**8.0 Funding.** Nothing in this Agreement obligates any of the parties to pay any monies to any other party to this Agreement. In the event that a party to this Agreement enters into a contract, grant or Interagency Agreement with another party to this Agreement, the validly executed contract, grant or Interagency Agreement shall control the disbursement of any funding, the applicable scope of work and the resolution of any disputes involving the contract, grant or Interagency Agreement.

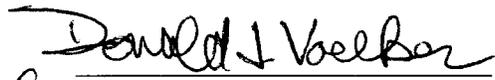
**9.0 Authorities.** No Provision or requirement in this Agreement shall affect or otherwise alter any of the delegated legal authorities of any of the signatory agencies.

This Agreement shall be effective on the date of the last signature below.

IN WITNESS WHEREOF, the Parties have each executed this Agreement, this the \_\_\_\_\_ day of \_\_\_\_\_, 2006.

  
\_\_\_\_\_  
Len Sanderson  
NCDOT, State Highway Administrator

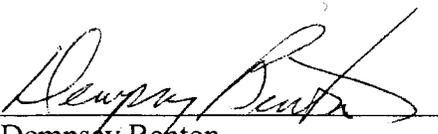
12-20-06  
Date

  
\_\_\_\_\_  
for John Sullivan, III  
FHWA, Division Administrator

1-22-07  
Date

\_\_\_\_\_  
A. Stanley Meiburg  
USEPA, Deputy Regional Administrator

\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Dempsey Benton  
NCDENR, Chief Deputy Secretary

1-16-07  
Date

**Subject: MOU on Control of Access for R-2245, 2nd Bridge to Oak Island, Brunswick Co.**

**Date:** Thu, 25 Jan 2007 08:08:50 -0500

**From:** Militscher.Chris@epamail.epa.gov

**To:** jqubain@dot.state.nc.us

**CC:** mueller.heinz@epa.gov, matthews.kathy@epa.gov, welborn.tom@epa.gov

Joseph: This e-mail serves to address your request that EPA provide a written confirmation regarding the above listed subject matter. It has been confirmed that Heinz Mueller, Chief of the NEPA Program Office received the MOU originals from NCDOT on 1/24/07 and that you spoke with him regarding EPA's formal approval of the MOU. EPA will unlikely be able to get the MOU signed by 1/26/07 and that we will require several days to obtain a formal approval signature from senior management. Nonetheless, this e-mail also serves to confirm that from an EPA staff perspective, the MOU proposed final revisions to the access points following the last Merger meeting was acceptable. Furthermore, the recommended changes to the draft MOU from EPA's legal counsel were incorporated into the revised MOU several months earlier. In conversation with Heinz on 1/23, we fully expect that a senior manager at EPA will sign the MOU. It is important to note for the administrative record that this 'control of access' MOU is viewed by me (and others) to be a 'contingency' to address potential future breaks in access from the new facility that could potentially cause impacts to jurisdiction waters of the U.S. It is one of the key environmental commitments proposed by NCDOT and FHWA that addresses avoidance and minimization measures for indirect and cumulative impacts. Finally, it is important to acknowledge that the other three parties (FHWA, NCDOT & NCDENR) to the MOU have already signed the MOU and the only party left to formally agree is EPA. We will immediately notify the other parties and the USACE and NCDOT as soon as it becomes officially signed. Thank you.

Christopher A. Militscher, REM, CHMM

USEPA Raleigh Office

Merger Team Representative

919-856-4206