

Appendix A

State and Federal Agency Involvement Materials

A. State and Federal Agency Involvement Materials

NEPA/SECTION 404 MERGER TEAM MEETING MINUTES.....	A-4
July 12, 2001 Meeting.....	A-4
August 16 2001 Meeting.....	A-5
May 8, 2002 Meeting.....	A-7
July 24, 2002 Meetings.....	A-11
August 20, 2003 Meeting.....	A-19

TURNPIKE ENVIRONMENTAL AGENCY COORDINATION

(TEAC) MEETING MINUTES*	A-23
December 15, 2006 Meeting.....	A-23
January 17, 2007 Meeting.....	A-29
April 18, 2007 Meeting	A-32
May 23 and 31, 2007 Meetings	A-35
June 20, 2007 Meeting.....	A-39
July 10, 2007 Field Trip.....	A-45
July 18, 2007 Meeting.....	A-46
September 19, 2007 Meeting.....	A-50
November 14, 2007 Meeting.....	A-52
February 5, 2008 Meeting.....	A-57
April 8, 2008 Meeting	A-62
May 6, 2008 Meeting.....	A-67
July 8, 2008 Meeting.....	A-68
October 7, 2008 Meeting.....	A-79
June 10, 2009 Meeting.....	A-85

*Note: The minutes include notes related to all NCTA projects discussed with the TEAC on any given day and not just the Mid-Currituck Bridge Study.

TURNPIKE ENVIRONMENTAL AGENCY COORDINATION

(TEAC) MEETING HANDOUTS	A-87
Handout 1 – Hurricane Evacuation Need (April 18, 2007).....	A-87
Handout 2 – Conceptual Alternatives (April 18, 2007).....	A-89

Handout 3 – Alternatives Screening Criteria (April 18, 2007)..... A-91

Handout 4 – Analysis of Conceptual Alternatives (May 23, 2007)..... A-96

Handout 5 – Highway Improvement Alternatives Comparison
(June 20, 2007)..... A-117

Handout 6 – 1995 Comparison of Bridge Alternatives (June 20, 2007)..... A-120

Handout 7 – Response to Agency Comments May 23 to
June 12, 2007 (June 20, 2007) A-123

Handout 8 – Response to Agency Comments at the July 18, 2007
TEAC Meeting (August 6, 2007 – Updated September 5, 2007) A-128

Handout 9 – Response to Written TEAC Comments Requested
in July 2007 (September 19, 2007 Update)..... A-132

Handout 10 – Detailed Study Alternatives (September 19, 2007) A-141

Handout 11 – Conceptual Alternatives Refinement (November 14, 2007).... A-143

Handout 12 – February 2008 Citizens Informational Workshop
Comments Summary (April 8, 2008)..... A-149

Handout 13 – May 2008 Citizens Purpose and Need and Alternatives
Screening Report Comments Summary (July 8, 2008)..... A-156

Handout 14 – Summary of Agency Comments Received
May 2008 (July 8, 2008) A-159

Handout 15 – Scope for Evaluating ER2 and MCB2 as Detailed Study
Alternatives in the DEIS (July 8, 2008) A-162

Handout 16 – ER2 and MCB2 Detailed Studies (October 7, 2008) A-164

Handout 17 – DEIS Outline, Technical Reports, and
Schedule (June 10, 2009)..... A-170

Handout 18 – MCB2 & MCB4 Mainland Corridor Design
Options (June 10, 2009)..... A-172

TURNPIKE ENVIRONMENTAL AGENCY COORDINATION (TEAC)

COMMENT LETTERS A-173

 US Department of the Army, Wilmington District, Corps of Engineers..... A-173

 US Environmental Protection Agency A-178

 North Carolina Department of Cultural Resources..... A-184

 North Carolina Department of Environment and Natural Resources A-184

 Division of Coastal Management..... A-184

 Division of Marine Fisheries A-186

 Division of Water Quality A-188

North Carolina Wildlife Resources Commission..... A-197

**NCTA LETTER TO AGENCIES ON ITS FINAL PURPOSE AND NEED AND
ALTERNATIVES DECISIONS (JULY 2, 2008) A-198**

FINAL SECTION 6002 PROJECT COORDINATION PLAN A-203



Memorandum

Page 2



To: Meeting Participants
From: Reginald Scales, Parsons Brinckerhoff
Date: August 2, 2001
Subject: TIP No. R-2576 - July 12, 2001 NCDOT Team Meeting Minutes (Amended July 25, 2001 Submission)

Meeting Attendees

Bill Bunting, Roadway Design Unit, NCDOT
Bill Gilmore, Manager, PDEA, NCDOT
Brian Yamamoto, Consulting Unit Engineering Head, PDEA, NCDOT
Carl Goode, Manager, Office of Human Environment, PDEA, NCDOT
Charles Bruton, Manager, Office of Natural Environment, PDEA, NCDOT
Dean Hatfield, Parsons Brinckerhoff
Debbie Barbour, State Design Engineer
Dewayne Sykes, Assistant State Roadway Design Engineer, Roadway Design Unit, NCDOT
Don Conner, Division Engineer, Division 1, NCDOT (via telephone)
Elizabeth Harper, Parsons Brinckerhoff
Emily Lawton, Federal Highway Administration
Gail Grimes, Assistant Branch Manager, PDEA, NCDOT
Greg Perfetti, Assistant State Bridge Design Engineer, Structure Design Unit, NCDOT
Janet D'Ignazio, Chief Planning and Environmental Officer, NCDOT
Jennifer Harrison, Project Manager, PDEA, NCDOT
Jennifer Lewis, Parsons Brinckerhoff
Jerry Jennings, Division 1 Operations Engineer, NCDOT (via telephone)
John Frye, Structure Design Unit, NCDOT
John Page, Parsons Brinckerhoff
John Wadsworth, PDEA, NCDOT
Julia Berger, CZR Incorporated
Leigh Lane, Unit Head, Public Involvement and Community Studies, Office of Human Environment, NCDOT
Len Hill, Deputy Highway Administrator, NCDOT
Mike Bruff, Group Manager, Planning Group I, Statewide Planning Branch, NCDOT
Randy Turner, Bio-Team Leader, PDEA, NCDOT
Reginald Scales, Parsons Brinckerhoff
Rob Hanson, Deputy Branch Manager PDEA, NCDOT
Roy Shelton, Staff Engineer, PDEA, NCDOT

Meeting Summary

Jennifer Harrison opened the meeting at 1:30 PM on July 12, 2001 in the Board Room in the Transportation Building. Following introductions, she recognized John Page of Parsons Brinckerhoff. John proceeded through the meeting's agenda, inviting input and questions as necessary.

John stated that the purpose of the meeting was to describe the planned direction of the next phase of the Mid-Currituck Sound Bridge project planning study and for Parsons Brinckerhoff to receive comments and feedback from key NCDOT staff in order to develop a project work plan.

John then presented a brief project history (see meeting handout). Carl Goode added that a large amount of preparation for the project began as early as 1991. This preparation included environmental and community impact screenings and community meetings, as well as anticipation of a new bridge by local real estate interests.

Following the project history, previous traffic studies were briefly discussed. Additionally it was noted that NC 12 through Duck was one of the major bottlenecks into Currituck, with the highest traffic flow during the weekend. It had been assumed that the area was at 43% build-out, but now, development is already up to 46% build-out and development is continuing at a moderate to rapid pace. John added that lots have been subdivided into greater numbers than the current roadway system can accommodate.

Roy Shelton expressed concern regarding what type of traffic scenario should be designed and whom. Comments were made concerning development, specifically that water supply has always been a limiting factor on development. Roy also stated that the EPA has questioned the use of federal funds to extend access to barrier islands. John Page noted that Currituck County was pursuing a reverse osmosis treatment process as a means increasing water capacity. Bill Gilmore discussed the possibility of partnering with DENR or CAMA on this project.

Carl Goode expressed the need to make Currituck County more accessible (by reducing travel time). John Page emphasized that the County needs improved access to the island whether it necessitates a bridge or not, and that this should be addressed in the project's Purpose & Need. It was agreed that there should be more of a focus on solving Currituck's traffic problem and less of a focus on building a bridge.

After this discussion, the "NEPA Process Objective and Focus" portion of the handout was addressed. It was clarified that "long-term" in reference to "transportation needs" meant a 20-25 year period. Questions were raised regarding possible legislation mandating a bridge. It was emphasized that although previous work will continue to be of value, new work will be of more importance. Janet D'Ignazio suggested that the group explore ground rules with the resource agencies early to develop a successful strategy to move this project forward.

The meeting continued with the discussion of "Likely Components of the Statement of Purpose and Need". Bill Gilmore commented that in statements 2 and 3 of this section, "desirable" should be changed to "practicable" or "specified". Discussion then continued on the third item of achieving a desirable hurricane evacuation time. Currently the county must give a warning to evacuate at a 33% chance (very low) that the hurricane will strike. The group discussed but discounted the idea of building or creating a redundant roadway system in case of a problem with the primary system (NC 12) during a hurricane.

Gail Grimes questioned whether the project's Purpose & Need statement should include support for continued development in Currituck County. It was argued that this seems to be one of the County's purposes for the project, considering that they get between 85 and 90% of their tax base from island residents. A new bridge/road improvement would allow traffic to reach Currituck County more readily in the future. Current traffic bottlenecks are in Dare County which prevents a great deal of traffic and thus development from reaching Currituck County. With a new bridge, there was concern that day trippers and developers would overrun the outer banks. Randy Turner raised concerns that including development as part of the project's Purpose & Need would invite challenges and increase the project's controversy. It was suggested that the team should be up front with the issue of development occurring as a result of the project however it should not be made a part of the Purpose and Need. Janet D'Ignazio strongly



recommended that the issues surrounding development be brought up at the appropriate point such that time spent on this issue would be minimized.

It was stated that the region already has a CAMA plan that DENR has approved so the framework for a discussion on development with the agencies is present. It was also stated that Currituck County and the public feel that they have the right to create their own development plans as they chose while the resource agencies feel that they have the right to inhibit that development as they see fit.

John Page suggested that a no-build alternative resulting from failed project proceedings would have just as much damage to the area as any alternative that might arise in successful project proceedings. Should no agreement on the project be reached, not only would additional pockets of unorganized, unplanned development occur, but secondary impacts such as phosphate run-off from lawns would go unchecked. John stressed the fact that a win-win agreement between agencies and the county would be possible, but everyone needs to be willing to have an open mind and compromise.

The same discussion also touched upon the general public opinion of the project. Don Commer stated that Currituck County citizens feel that they do not have the option of using US Highway 158, particularly around the Wright Memorial Bridge area, during peak travel periods. It was also stated that there was concern that a new bridge may encourage day-trippers, for which the area does not have facilities (bathrooms, parking, restaurants, etc.). In addition, the mainland residents do not want a bridge to disrupt their community. It is feared that a new bridge or even widening existing roadways may result in increased traffic in Dare County, creating animosity between Dare and Currituck Counties. Once again, the suggestion was made to hold a meeting that would include the agencies and Currituck and Dare County officials.

Discussion continued to the possibility of other transportation improvements in Currituck County should the bridge project be eliminated. Gail Grimes stated that there are some parts of the project area, such as the intersection of US 158 and NC 12 near the Welcome Center, that should be improved regardless if a bridge is built.

John Page presented the "Alternatives Selection Assumptions" section. Suggestions were made regarding the boundaries of the project area and alternatives to be considered were discussed.

Next, the "Key Impact Issues" were reviewed. It was discussed that there is a current court case regarding property owners claiming beach ownership rather than the State. Randy Turner stated that secondary and cumulative impacts to resources should be addressed during this study. The discussion continued through the "Mitigation" section of the handout where PB stated that NCDOT will not mitigate secondary impacts and that Currituck County will need to have further involvement in addressing secondary and cumulative impacts. This idea was addressed in more detail in the "Agency and Citizen Involvement" section of the handout.

Finally, the "Next Steps" portion of the handout was presented. The next meeting, as suggested in step one, will be held on August 16, 2001. Comments were made that the land use plan should be considered before the traffic forecasts are completed. Any necessary data collection, such as traffic counts, should be collected immediately rather than wait until next summer. It was recommended that Janet D'Ignazio meet with other officials should the project not proceed in a timely manner.

Bill Gilmore suggested another strategic meeting, with key NCDOT staff, prior to the August 16th resource agency meeting. With no further comments, the meeting was adjourned

F:\PLANNING\CURRITUCK\2001 - Meetings\Coordination Meeting 7-12-01\7-12-01 Meeting Minutes 4.doc

To: Meeting Participants
From: Reginald Scales, Parsons Brinckerhoff
Date: September 24, 2001
Subject: TIP Project No. R-2576 – August 16, 2001 NCDOT –NEPA/404 Merger Team Meeting Minutes

Meeting Attendees

- Bill Arrington, NCDOT
- Brian Yamamoto, PDEA, NCDOT
- Cathy Brittingham, NCDOT
- David Cox, NCWRC
- David Franklin, USACE
- Dewayne Sykes, Roadway Design, NCDOT
- Don Commer, Division Engineer, Division 1, NCDOT
- Ed Harrell, NCDOT
- Emily Lawton, FHWA
- Frank McBride, NCWRC
- Gail Grimes, PDEA, NCDOT
- Jennifer Harrison, PDEA, NCDOT
- Jennifer Lewis, Parsons Brinckerhoff
- John Frye, Structure Design Unit, NCDOT
- John Hennessy, NCDOT
- John Page, Parsons Brinckerhoff
- John Wadsworth, PDEA, NCDOT
- Mike Bell, USACE
- Mike Bruff, Statewide Planning Branch, NCDOT
- Randy Turner, PDEA, NCDOT
- Reginald Scales, Parsons Brinckerhoff
- Renee Gledhill-Earley, SHPO
- Roger Sheats, Deputy Secretary, NCDOT
- Roger Thomas, Roadway Design, NCDOT
- Ron Lucas, FHWA
- Ron Sechler, NMFS (via telephone)
- Roy Shelton, PDEA, NCDOT
- Ted Bisterfeld, EPA
- Ted Stampson, NCDOT
- Tom McCartney, USFWS; Sara Winslow, NCDMF; Ann Deaton, USCG; and Bill Brazier, USCG were invited to the meeting but were unable to attend.



Meeting Summary

Jennifer Harrison opened the meeting in the Photogrammetry Conference Room at the Century Center, by announcing that the TIP Project No. R-2576 has been reactivated. Mike Bell indicated that he had scheduled the meeting and referenced a letter to the Corps of Engineers from Congressman Walter Jones and stated that the Colonel wanted the Corps to be proactive in this project's process. David Franklin also noted that his office had received calls from the media concerning the scheduled meeting. Ted Bisterfeld said that he had not received any calls.

Jennifer recognized John Page of Parsons Brinckerhoff. John Page thanked Mike Bell for scheduling the meeting and proceeded through the meeting's agenda, as listed in the attached Proposed New Work Plan Assumptions, inviting input and questions as necessary. John noted that:

- NCDOT is considering a change in process which will involve all stakeholders.
- NCDOT held an internal team meeting in July on the proposed new work plan and will hold a stakeholder meeting in September for Currituck and Dare Counties.
- We cannot proceed until we have a focused coordinated work plan.
- 1998 DEIS was developed prior to the current NEPA/404 Merger Process.

The issue of local control over land use regulations was opened for discussion. Roger Sheats noted that Currituck County has a decent land use plan and asked whether Dare County has a plan. Cathy Brittingham noted that that CAMA requires a plan for all coastal Counties and that Dare County has a good plan but she was unsure whether it reflects a Mid-Currituck Sound Bridge. Roger also asked about the difficulty of the bridge landings on both sides of the sound. It was noted that there are a number of places to begin the bridge, however there are environmental issues along both sides of the sound, most notably high quality marshes. David Cox stated that there are high quality marshes associated with the Timbuktu Shopping Center area.

Ted Bisterfeld said that he was concerned about the overall impact of the project on the Currituck Sound-fisheries, etc.- and not just the marshes and swamps. Mike Bell stated that the impacts from a bridge will not change from the previous study. John Page noted that the any impacts will be avoided, minimized and mitigated.

Renee Gledhill-Earley asked whether the county was platted. John Page noted that it was.

Ted Bisterfeld questioned whether parcels both the mainland and outer banks of Currituck County have been approved for development. John Page said yes; however there are stringent land use controls. Additionally, lack of public services (water) limits the amount of development.

Renee questioned whether an adequate public facilities ordinance was in place. John Page stated that an ordinance is in place however no one in attendance knew the specifics of the ordinance.

The question of the effective date and recent amendments to the Currituck County land use plan was discussed. Cathy Brittingham indicated that she will follow up and determine these dates.

The idea of partnering with the community was discussed. Randy Turner stated that it would be a good idea to ask the community what they can do to mitigate or reduce indirect and cumulative impacts. Mike Bell objected to the idea of encouraging or discouraging development in this process.

Ted Bisterfeld questioned the funding for long-term beach renourishment.



John Hennessy asked, is there a traffic deficiency we are trying to solve and if so what is the deficiency. John Page responded that yes there is a deficiency and discussed the current problems with congestion along US 158, Wright Memorial Bridge and NC 12.

John Hennessy questioned whether the specific carrying capacity of the land, relative to the availability of potable water, should be factored into the traffic studies. John Page responded that yes the issue will be considered in this study. John also noted that the issue was indirectly considered in the 1997 study by acknowledging the fact that traffic would still continue to worsen even if all development was halted.

However the limitations of such a study will be evaluated. John Hennessy stated that until we address the capacity issue, new development is not an option and that traffic should be limited based on the availability of water. John Page noted that we cannot plan roads for 2025 in relation to current water availability as Currituck County may have a greater capacity in the next few years.

Ted Bisterfeld questioned the location of a water main on the bridge. John Page noted that the county is evaluating a reverse osmosis system which would rule out the need for using the bridge to supply water.

Mike Bell stated that the key impact issues are:

- Hurricane evacuation
- Currituck Sound impacts
- Project includes Currituck and Dare Counties

Mike then verbally listed the current Merger Team Members:

Jennifer Harrison, NCDOT
Tom McCartney, USFWS
Ron Sechler, NMFS
Ron Lucas, FHWA
Cathy Brittingham, NCDOT
Sara Winslow, NCDMF
John Hennessy, NCDWQ
David Cox, NCWRC
Renee Gledhill-Earley, SHPO
Ted Bisterfeld, EPA
Mike Bell, USACE
Ann Deaton, USCG

Jennifer Harrison asked about local representation on the Merger Team. She said that the NCDOT wants to find a way to involve the locals on the Merger Team. [This issue was discussed and still needs to be resolved.]

Ron Sechler (via phone) stated that the planning and environment group of the Corps has initiated a study of Currituck Sound (evaluating the health of sound) that may be of interest as we proceed with the R-2576 study. He also noted that Essential Fish Habitat provisions need to be addressed during the project study.



Ted Bisterfeld noted that the EIS must identify management goals for Currituck Sound. He requested a comprehensive well developed traffic management component which evaluates times and modes of traffic.

Renee Gledhill-Earley questioned the timeline. Gail Grimes noted that the we do not yet have timeline for the project. Gail Grimes also noted that we are trying to cover all aspects of the project and we still have to meet with Dare and Currituck Counties to discuss the proposed new work plan.

John Hennessy questioned why the project was restarted. Gail Grimes noted that the project was never deactivated. The project was stalled and now it has been reactivated. The question was asked why the hurricane model is being redone. Gail stated that we are not redoing the model. We will use the Corp's recent hurricane study and model and use it to project 20 to 25 years ahead.

John Hennessy stated that without a purpose and need it would be difficult for the Merger Team to comment on the project. Gail noted that NCDOT would like the Merger Team to be a part of the comprehensive study to evaluate the transportation need. Cathy Brittingham stated that the NCDOT will have comments but they need to check their files to get up to speed on the project. John Page requested that the comments be sent (within 2 weeks) before the meeting with the counties. David Cox indicated that his concerns about this project have not changed since the original studies. Frank McBride indicated that it will be difficult to reach a win-win scenario. Ted Bisterfeld noted that he would select the no action alternative.

John Page indicated that we will meet with the counties within the next few weeks. Jennifer Harrison urged the agencies to submit comments.

The meeting was then adjourned.

Attachment

- C. Len Hill, NCDOT
- Bill Jones, NCDOT
- Carl Goode, PDEA
- Tom McCartney, USFWS
- Sara Winslow, NCDMF
- file

E:\PLANNING\Currituck\2001 - Meetings\Merger Meeting 8-16-01\8-16-01 Merger Meeting Minutes - final.doc

To: Participants

From: Reginald Scales, Parsons Brinckerhoff

Date: June 3, 2002

Subject: TIP No. R-2576 – Currituck Sound Area Transportation Study, May 8, 2002 NEPA/404 Merger Team

Attendance

- Jennifer Harris, NCDOT-PDEA
- John Frye, NCDOT-Structures
- Cathy Brittingham, DCM-Raleigh
- John A. Thayer, DCM-Elizabeth City
- Gail Grimes, NCDOT-PDEA
- John Page, Parsons Brinckerhoff
- Bill Arrington, DCM
- Emily Lawton, FHWA
- Sara E. Winslow, NCDMF
- John Hennessy, NCDWQ
- Dan Scanlon, Currituck County Manager
- Renee Gledhill-Earley, SHPO
- Howard Hall, USFWS
- Roy Shelton, NCDOT-PDEA
- Mike Bell, USACOE
- David Cox, NCWRC
- Bob Capehart, NCDOT-Division 1
- Ron Lucas, FHWA
- Roger Thomas, NCDOT-Roadway Design
- Don Conner, NCDOT-Division 1
- Lynn Smith, NCDOT- Natural Systems
- Greg Perfetti, NCDOT-Structures
- Moncie "Punk" Daniels, Dare County Board of Commissioners
- Chris Militscher, EPA
- Mike Bruiff, NCDOT-SWP
- Brian Yamamoto, NCDOT-PDEA
- Elizabeth Harper, Parsons Brinckerhoff
- Ron Sechler, NMF (via teleconference)
- Reginald Scales, Parsons Brinckerhoff



Jennifer Harris opened the meeting with introductions and turned the meeting over to Mike Bell who named the Project Merger Team Members:

Mike Bell, USACOE	Renee Gledhill-Earley, SHPO
John Hennessy, NCDWQ	Ron Sechler, NMF
David Cox, NCWRC	Cathy Brittingham, NCDGM
Howard Hall, USFWS	Sara Winslow, NCDMF
Ron Lucas, FHWA	Jennifer Harris, NCDOT
Chris Militischer, EPA	

Mike Bell noted the Merger Team members who had been with the project since its inception. He then provided a brief project history:

- The initial project began in 1994 and was entitled Mid-Currituck Sound Bridge Study;
- A draft EIS was produced in 1996 (there was no merger process in 1996);
- The original Purpose and Need of the project was to reduce traffic and relieve congestion on NC 12, reduce travel time and cost for trips, provide better public services, and improve hurricane evacuation;
- In 1996, "hurricane evacuation", "reduce traffic", and "relieve congestion" was dropped from the Purpose and Need;
- In 1997, the COE, the FHWA, and the NCDOT approved a statement of Purpose and Need that set the primary purpose as the reduction of travel time and road user cost with the secondary benefit of providing better public services;
- Public hearings were held and the public was against the project; and
- Project was inactive after the public hearing until 2001 when the NCDOT decided to reevaluate the study using a Mid-Currituck Sound Bridge as one alternative along with several others such as improvements to NC 12 and US 158. The project is now called the Currituck Sound Area Transportation Study.



Jennifer Harris next asked John Page to provide a summary of the Purpose and Need. John reviewed the project's Purpose and Need as follows:

1. To increase traffic capacity and improve travel operations along US 158 and NC 12 in the project area during the summer resort period.

Needs Addressed: Traffic capacity deficiencies exist on NC 12 in the Southern Shores and Duck areas during the summer months. In 2025, traffic capacity deficiencies will exist on all of US 158 during the summer months and on most of NC 12 during all of the year. Traffic capacity deficiencies cause substantial travel delay and contribute to the inefficient operation of motor vehicles.

2. To reduce travel time for persons traveling between the Currituck County mainland and the Currituck County Outer Banks. A secondary benefit is a reduction in travel costs.

Needs Addressed: The time required to travel from Barco to the terminus of NC 12 near Corolla is 23 percent higher than during non-peak periods. By 2025, future increases in traffic volumes will further increase travel time to 65 percent higher than non-peak period conditions.

3. To improve existing (2000) and predicted future (2025) storm evacuation times.
Needs Addressed: The time required to evacuate the Dare and Currituck County Outer Banks over the project area's thoroughfares is 24 hours in 2001, and it is expected to increase to 33 hours by 2025.

Renee Gledhill-Earley asked the distance between Barco and Corolla. John Page responded 50 miles.

John Page reviewed the hurricane evacuation analysis and the issues associated with evacuation noting that the probability of the storm reaching an area and the way in which the evacuation is carried out are both important factors in judging when to issue and evacuation order.

A Merger Team member stated that the storm prediction computer models are constantly being improved to predict the path of a hurricane and if we project out 25 years all of the Purpose and Need estimates and projections regarding hurricane evacuation times could be reduced by 50%. He reiterated that the figures in the Purpose and Need will change in the next 10 years and that they may change next year.

Mike Bell asked why evacuation times had increased substantially from the previous study.

John Page stated that the methodology and basis of determination for those who make decisions regarding evacuations has changed. The COE solicits a new study every few years (which includes updated growth rates, new housing starts, etc.) to provide information to those who determine the need for evacuation to use to make their decision of when to



begin an evacuation. The COE completed an updated spreadsheet model in October of 2000. The model was used as the basis for existing conditions and gave us the opportunity to increase the population to 2025 forecasts and incorporate capacity improvements included in the Transportation Improvement Program outside of the study area for our Purpose and Need. We have better information now than we did during the previous study.

John Hennessy asked what specific parameters have changed because the hurricane evacuation estimates have been increased by a factor of two.

Mike Bell questioned the change and stated that in 1996 and 1998 everyone agreed on same methodology. He also noted that there have been several evacuations over the past few years they did not take that long.

John Hennessy stated that he would like to see previous models and current models to understand why there is a two-fold increase.

Mike Bell stated that he would like more detail regarding the current study and questioned why hurricane evacuation was reintroduced into the Purpose and Need.

John Page stated that hurricane evacuation was always important and it was dropped from the earlier Purpose and Need only because the alternatives being evaluated did not reduce hurricane evacuation time. Previous studies showed that if we added a bridge, ultimately new demand would use the additional road capacity provided (although more people were being evacuated, the evacuation time did not change).

Mike Bell stated that the first two Purpose and Need items (listed as 1 and 2 above) address the problem of hurricane evacuation.

Renee Gledhill-Earley stated that we can get a broader range of alternatives if we proceed with the Purpose and Need without hurricane evacuation.

John Hennessy noted that the hurricane evacuation study is a component of the system deficiencies discussion and the issue should be discussed during evaluation of alternatives and not during Purpose and Need.

Mike Bell agreed and stated that the issue should be evaluated during alternatives analysis or as an impact.

John Page noted that the level of service analysis that makes the case for capacity deficiencies only addresses daily needs. There could be alternatives that meet daily needs but not emergency hurricane evacuation needs.

John Hennessy asked that if we have alternatives that meet day-to-day traffic needs, how will the impact of everyone evacuating the area at the same time because of a hurricane differ from one alternative to another.



Emily Lawton provided the example of a ferry system that will support day to day travel but not hurricane evacuation.

Mike Bell stated that when we put people on barrier islands we will have problems.

John Page noted that in hurricane everyone is trying to leave at the same time.

John Hennessy stated that excessive demand will be constant among all alternatives in the future and no matter which alternative is selected, during hurricane evacuation the road system will be congested.

Renee Gledhill-Earley stated that if we address day to day needs, hurricane impacts will take care of themselves.

Mike Bell asked for consensus on the project's Purpose and Need.

Cathy Brittingham stated that the DCM was not prepared to make a decision at this time and did not know how long it would be before they could make a decision because of their current workload.

A Merger Team member questioned population and traffic projections and the difference between inland and coastal projects. On barrier islands there is a carrying capacity dependant upon freshwater supplies and wastewater treatment, both of which are independent of roadway capacity in supporting growth. In the 1998 DEIS, there was a sentence which stated that a bridge may be used to extend public water to the Outer Banks. He was concerned the bridge could bring in freshwater contributing to growth. He questioned whether the 2025 population estimates factored in limiting conditions such as the availability of water and treatment of wastewater.

John Page indicated that the Outer Banks traffic projections were based on existing lots available on the road accessible portion of the island (which is fully subdivided) and projections and trends for the non-road accessible portion of the island. Dan Scanlon noted that there is just as much development in areas with and without public water and Currituck County has addressed the water issue. It will provide needed water using reverse osmosis. They have no plans to put a water line on a bridge if constructed. John Page said the water line was mentioned in the DEIS only to answer the question of whether or not it was physically possible to put a water line on the bridge.

Renee Gledhill-Earley asked for a consensus on a Purpose and Need without hurricane evacuation.

Chris Militscher stated that he could not concur at this time.

John Hennessy stated that he was not prepared to agree until he gained a better understanding of the hurricane clearance time forecasting model.



Jennifer Harris stated that she would not agree to remove hurricane evacuation as a part of the project's Purpose and Need, and that she would need to examine the issue in more detail.

Ron Sechler stated that he could agree to the Purpose and Need 1 (traffic capacity deficiencies) and 2 (travel time growth) but he had reservations about including hurricane evacuation in the Purpose and Need statement.

The group next discussed the Purpose and Need language from page 1-5 of the document.

John Hennessy asked for clarification of the difference between traffic capacity and travel operation. Jennifer Harris responded that by increasing traffic capacity we are improving operation. The group discussed the merits of using level of service (LOS) as an evaluation technique. Brian Yamamoto noted that LOS refers to the Highway Capacity Manual method of measuring traffic congestion; however other methods are also used.

John Hennessy asked whether the FHWA would fund a project that will not achieve a LOS of D.

Emily Lawton responded that the FHWA does not require highways to be designed for peak travel periods and it is understood that it may be impossible to meet all the capacity needs for a project area.

The Merger Team tentatively agreed that the first Purpose and Need item on Page 1-5 of the draft Purpose and Need would be revised to read as follows:

To increase traffic capacity and reduce delay times along US 158 and NC 12 in the project area during the summer resort period.

Next, the Merger Team discussed the second Purpose and Need item on page 1-5.

Mike Bell commented that the second Purpose and Need statement was similar to the first item.

Discussion took place concerning the difference between reducing travel time reducing travel delay. John Page stated that delay time and travel times should go down consistently when compared together but not necessarily at the same rate. There are two ways to reduce travel time: 1) make the route shorter, and 2) increase capacity. Delay time may not capture both aspects of travel time.

The Merger Team tentatively agreed to combine the first and second Purpose of the project as follows:

To increase traffic capacity and reduce travel time along US 158 and NC 12 in the project area during the summer resort period.



The question was asked how the summer peak travel period was determined.

John Page said that two summer periods were evaluated, summer weekday and summer weekend. Summer weekend has the highest traffic volumes. John observed that the potential exists to make improvements that will address summer weekday congestion but leave unacceptable levels of congestion during the summer weekend.

Mike Bell observed that 8 of 11 team members agreed with the above listed Purpose and Need. The EPA and the DCM were not ready to make a decision and NCDOT did not agree to remove hurricane evacuation from the Purpose and Need.

John Hennessy asked whether the Purpose and Need language precluded selection of a full range of alternatives.

Roger Thomas stated that by removing LOS and including delay time and reduced travel time, the Purpose and Need is substantially broadened.

John Hennessy stated that he would like to know how the NCDOT designs similar projects in resort areas (for summer weekday or summer weekend peak hour traffic).

Gail Grimes said that the NCDOT does not design for resort peak hour traffic.

John Hennessy questioned why we are using this traffic scenario for this project if we do not use it for other projects.

Renee Gledhill-Earley requested that the Team look at what peak period was used to assess alternatives on other projects, e.g. second bridge to Oak Island, Radio Island, and Manteo Bypass, etc.

Cathy Brittingham noted that the DCM would be ready to make a decision after June 19.

The group determined that the target date for the next meeting would be Wednesday, July 24 at 9:00 AM. In the interim, the NCDOT would continue to consider the merits of hurricane evacuation as a part of the Purpose and Need statement. The NCDOT also will be prepared at the next meeting to respond to questions and issues raised by the Merger Team related to all three proposed statements of Purpose and Need. NCDOT also will further consider the appropriate wording for the first two statements.

The meeting was adjourned.



Memorandum

To: Participants

From: Douglas Smith, Parsons Brinckerhoff

Date: August 22, 2002

Subject: Meeting Minutes, NEPA/404 Merger Team Meeting, TIP Projects No. R-2544 & R-2545, US 64 from Columbia to US 264, and R-2576, Currituck Sound Area Transportation Study. Presentation on the U.S. Army Corps of Engineers' North Carolina Hurricane Evacuation Model.

The subject meeting was held July 24, 10:30 AM – 12:00 PM in the Board Room in the Transportation Building.

Introduction and Meeting Purpose

Jennifer Harris, NCDOT, called the meeting to order at 10:30. The purpose of the meeting was to hear a presentation by the U.S. Army Corps of Engineers and their consultant on the development of the current Hurricane Evacuation Model developed for North Carolina. Meeting attendees are listed below.

- | | |
|--------------------------------|---|
| Sarah McBride – SHPO | Roger Sheets - NCDOT |
| Renee Gledhill-Earley – SHPO | Sharon Lipscomb – NCDOT |
| Doug Hoell – NCEM | John Frye – NCDOT, Structures |
| James Smith – NCEM | Joseph Cotton – FHWA |
| Gary Faltinowski - NCEM | Donna Dancausse – FHWA |
| John Hennessy – NCDWQ | Allen Raynor – NCDOT, Structures |
| David Cox – NCWRC | Richard Lewis – USACE, Planning |
| Maria Chambers – NCWRC | Don Conner – NCDOT, Div. 1 |
| Howard Hall – USFWS | Gail Grimes – NCDOT, PDEA |
| Christopher Miltischer – USEPA | Mike Bryant – USEWS/PINWR |
| Sara Winslow – NCDMF | Roy Shelton – NCDOT, PDEA |
| Cathy Brittingham – NCDOM | Dan Scanlon – Currituck County Manager |
| Bill Arrington – NCDOM | Terry Wheeler – Dare County Manager |
| Allan McDuffie – USACE | Roger Thomas – NCDOT, Roadway Design |
| Theresa Ellerby – NCDOT, PDEA | Lynn Smith – NCDOT, Natural Systems |
| Jennifer Harris – NCDOT, PDEA | Reggie Scales – Parsons Brinckerhoff |
| Brian Yamamoto – NCDOT, PDEA | John Page – Parsons Brinckerhoff |
| Mike Bell – USACE | Elizabeth Harper – Parsons Brinckerhoff |
| Bill Biddlecome – USACE | Don Smith – Parsons Brinckerhoff |
| Emily Lawton – FHWA | Don Lewis – PBS&J |
| Mike Bruff – NCDOT, SWP | Ted Bisterfeld – USEPA (via phone) |
| David Franklin – USACE | Ron Sechler – NMFS (via teleconference) |

Following introductions, Jennifer Harris suggested that the agenda be modified to go directly into a discussion of the hurricane evacuation model.



Participants
August 22, 2002
page 2

Hurricane Evacuation Modeling

Overview

Allan McDuffie, U.S. Army Corps of Engineers Project Manager, indicated that the current model is a restudy of a hurricane evacuation model that was developed in 1987. The model is comprised of five separate analyses:

1. Hazard Analysis – A storm surge analysis prepared by the National Hurricane Center.
2. Vulnerability Analysis – Applies information from the Hazard Analysis to determine an area's vulnerability to flooding.
3. Behavioral Analysis – Based on pre and post-storm interviews to determine what people's intentions are if a storm were to strike an area and to determine what people actually did in a storm (i.e., stay or evacuate).
4. Shelter Analysis – Determines storm shelter capacity/availability and demand in an area.
5. Transportation Analysis – Based on the other analyses, this analysis determines clearance times for evacuations. Clearance times are defined as the length of time it takes to clear a section of highway from the beginning of an evacuation until the last car has cleared. It is not the length of time it takes one vehicle to evacuate an area.

Don Lewis of PBS&J provided a more detailed description of the model, including a brief history. To aid in his discussion, a handout was distributed that provided examples of the information contained in the currently published two volumes. PBS&J is currently completing the documentation for the entire study.

It was pointed out that the model was not developed to specifically support particular transportation projects. The purpose of the model is public safety. It provides a tool for local and state emergency management personnel to use to protect lives in the event of a hurricane.

The initial work on the model began with studies in the four southeastern counties of North Carolina: Brunswick, Pender, Onslow, and Carteret. The model was then expanded to take in the approximately 20 coastal counties in North Carolina. The transportation analysis was completed about one and one-half years ago. This information was provided to the North Carolina Department of Emergency Management and is now being disseminated to the counties.

A simplified version of the model was prepared to enable counties to easily analyze changes that may take place (e.g., additional development, road improvements, etc.). Because of the diversity among the counties in their ability to analyze information and data, the simplified model was developed as a spreadsheet and made available in several formats (e.g., Lotus, Excel, etc.). Each county has three spreadsheet tables:



Participants
August 22, 2002
page 3

1. Socio-economic sheet – populations, vehicle ownership, tourist information
2. Behavioral sheet – who participates in the evacuation and where they go (out of the regions, shelter, etc.)
3. Evacuation statistics sheet – utilizes data from the socio-economic and behavioral sheets.

The data from all counties is then tied to two final spreadsheets:

1. Vehicles by roadway sheet – lists key bottlenecks that control an evacuation
2. Evacuation statistics sheet – outputs clearance times

The model does not analyze any alternative routes in Currituck and Dare counties. The study only looked at existing routes. The model incorporated information and data, including traffic counts from several states, from Hurricane Floyd.

The Corps of Engineers and their contractor have tried to make the model as realistic as possible. Don Lewis indicated that the worst thing they could do is to predict an evacuation time that was too short and to have people stuck on the road when a hurricane hit. This could result in the loss of lives. The next worst case would be to predict an evacuation time that was too long and force counties to make a decision on evacuation too early.

Don Lewis pointed out that one of the features built into other state models, but not available in the North Carolina model, is the ability to make assumptions on what will happen if groups are told which evacuation routes to take.

Questions and Discussion

LOS and Vehicles Per Hour

David Cox wanted to know the significance of the Level of Service (LOS) D and its relationship to the 1,100 vehicles per hour (vph) shown in the spreadsheet table. Don Lewis indicated that represented an average rate for the entire evacuation. Over the entire evacuation period, traffic flow ranges from 0 vehicles per hour to maximum road capacity. In the full model, capacity is determined for each quarter of the evacuation. For the simplified model, this was averaged to 1,100 vph and that number equates to an approximate LOS D. In fact, the LOS D shown in the table has no direct relationship to the number.

Mike Bell made the point that the numbers used for vehicles per hour are different in each report. Don Lewis recommended using the numbers from the model because they are based on the latest data. This was followed by additional comments on the numbers used in each of the reports (the Draft Environmental Impact Statement for a Mid-Currituck Sound Bridge, the Manteo Bypass Study, and the current Currituck Sound Area Transportation Study).

*Over a Century of
Engineering Excellence*



Participants
August 22, 2002
page 4

John Page said that the answers to Mike Bell's questions regarding differences in vehicles per hour assumed were in the letter that NCDOT sent to each of the Merger Team members. The 1998 study assumed that four-lane evacuation routes would operate from the beginning of the evacuation to the end of the evacuation at the capacity of the road, 3,200 vehicles per hour for a four-lane road. Based on studies of past evacuations, the Corps of Engineers' evacuation model used in the 2002 study assumes an average rate over the course of the evacuation of 1,650 vehicles per hour for a four-lane road.

Mike Bell then raised the question of whether we should be giving everyone an easy LOS C or D hurricane evacuation, and again raised the question of where the 1,100 vph came from. He asked if actual traffic counts were conducted in Dare and Currituck Counties.

Don Lewis explained that during a hurricane evacuation, vehicle flow does not operate at the maximum capacity on the road. Traffic rarely gets to LOS E before it breaks down completely. John Page again explained that the LOS D referenced related only to the average traffic flow over the course of an evacuation and that the actual flow was not LOS D.

Mandatory Evacuations

Howard Hall, USFWS, asked how a phased mandatory evacuation would affect evacuation times. It was his understanding that during an evacuation tourists were forced to leave but locals could not be forced. The State Emergency Management staff indicated that in a mandatory evacuation, everyone is supposed to evacuate; however, there is inadequate ability to enforce the evacuation. In general, especially on the Outer Banks, the tourist population does evacuate, but the local population often stays or stays longer.

Renee Gledhill-Earley, SHPO, asked who ordered the evacuations. The Chairman of the County Board of Commissioners orders the actual evacuations. North Carolina Emergency Management coordinates closely with the National Hurricane Center and the county governments during a storm event. During an event, Emergency Management conducts four conference calls a day with all of the counties. They provide the counties with current storm information to allow them to make a decision whether or not to call for an evacuation. The goal is to evacuate during daylight hours and to have the evacuation complete before the onset of gale-force winds (>39 mph).

Renee Gledhill-Earley then expressed the concern that county governments would be inclined to want to delay calling for an evacuation until the last minute so as to minimize impacts to the local economy. Mike Bell agreed that he felt the counties would wait until the last moment.

Hurricane Forecasting

Howard Hall asked if the forecasting of storms and storm paths was likely to improve through the use of super-computers and improved forecast models? It was noted by Emergency Management that forecasting storms was still inexact. At 72 hours, the margin of error for predicting the path of a storm was 139 miles on either side of the projected storm track. They

*Over a Century of
Engineering Excellence*



also indicated that projecting the storm intensity was even more difficult. Another complicating factor is that even if they can predict where the eye of a hurricane will come ashore, the storms are so large that you would still have to evacuate a very large area.

Road Capacity and Estimated Vehicles per Hour During an Evacuation

John Hennessy, NCDWQ, expressed that he was trying to understand the various inputs for the model and still wanted to understand how the 1,100 vehicles per hour number was derived and why it was so much different than the 1,250 to 1,600 vph capacity for a two-lane road. John asked what had changed since hurricane Floyd to change this number. Again, the question of why 1,230 vph was used in the 1996 report and 1,600 vph was used in the 1998 report. Mike Bell asked a related question as to whether actual traffic counts were taken in Dare and Currituck counties or if the model assumed numbers from counts in South Carolina. Mike asked if the Merger Team was to make a decision on what happens in Myrtle Beach or what happens on these roads.

Don Lewis explained that no actual traffic counts were taken on the Outer Banks during Floyd. He explained that just as we have years of traffic engineering experience that tells us what capacity is for various types of roads, we have similar nationwide data that shows the "capacity" of certain types of roads during an evacuation. He also restated that the 1,100 vph is an average over an entire evacuation. The actual number of vehicles passing a point will vary depending upon the stage of the evacuation. That is why the full model is uses different numbers for each quarter of the evacuation.

Changing Human Behavior

Cathy Brittingham, NCDCM, asked if there was any effort in North Carolina to change the behavioral patterns of the people instead of trying to rely on road network to handle a worst-case scenario. Could clearance times be improved through improved education, policy, or approach? There were several related questions on the availability of pre-storm shelters in Dare and Currituck Counties.

The NC Emergency Management staff indicated that education was an ongoing effort. They felt that education and awareness could improve the responses of local residents, but they were not sure how much good it does for the tourist population. They are not sure how to most effectively reach them to get the point across that the storms are a real threat without sending a message of "do not come at all."

There are no storm shelters in Dare, Currituck, Hyde, and Tyrrell Counties. There are some post-storm locations that people could go to if they get stuck, but they would be flooded. The nearest shelters that might accommodate evacuees are in Elizabeth City. The reason there are no shelters in these counties is because of the storm surge and because there is no high ground on which to locate a shelter. Additionally, if there was a satisfactory location for a shelter, there is inadequate staffing for the shelter. The counties do not have the facilities or the resources to staff shelters and the Red Cross will not send their staff into the storm area.



Another factor is that the goal is to get the residents out of the area. If shelters were constructed, it would just encourage people to stay in the area, which is not the goal.

David Cox asked why Dare and Currituck Counties were more dangerous than Brunswick or Carteret Counties. The principal reasons are that the southeastern counties in North Carolina have areas of high ground near the coast.

Another related question was why people were directed as far west as I-95 in an evacuation. The nearest shelter is Elizabeth City, but it is not adequate to handle the local population. Also, for most of the counties, the storm surge goes as far inland as I-95.

Population Projects

John Hennessy asked how the model projected population growth for future years, such as 2025. Don Lewis said that the model did not have any built in population projections. The spreadsheet did have the capability of adjusting population numbers, but the model itself used pre-census 2000 population estimates. PBS&J hopes to go back and update the model with 2000 census data. In developing the purpose and need for the transportation studies, PB took advantage of the models ability to modify the population numbers to input population estimates for 2025.

Mike Bell asked where the 2025 population projects came from. The population figures were generally obtained from the State Data Center (2019 forecasts projected to 2025 based on expected growth trends from 2000 to 2019). In the project area, the population forecasts developed for the traffic forecasts presented in the Statement of Purpose and Need were used.

Cathy Brittingham asked if the evacuation times were based on summer peak weekday or summer peak weekend. Don Lewis explained that the model had two estimates for evacuations, peak occupancy and low occupancy. He could not remember the actual percent occupancy rate used. The model, however, allows you to adjust these numbers.

Manteo Bypass

John Hennessy asked if the model calculated evacuation times based on the new Manteo Bypass Bridge having been completed or did it still assume the two-lane road through Manteo. Earlier in the discussions Don Lewis had indicated that the model used whatever existed at the time the model was developed. However, he was not 100 percent sure whether or not the new bridge was included or not. Jennifer Harris stated that the answer to the question would be provided to the Merger Team as soon as it was clarified. (Don Lewis later confirmed that the new bridge was not included in the current model).

John Page indicated that for the Currituck project, PB evaluated the system with all TIP improvements in Currituck and northern Dare County included. The model, however, did not allow for the inclusion of new road links. Therefore, a new Currituck bridge could not be assessed.



Participants
 August 22, 2002
 page 7



Memorandum

Adjournment

At 12:00, the meeting was adjourned to allow the participants to get lunch. In anticipation that there may be additional questions regarding the hurricane evacuation model, Jennifer Harris asked Don Lewis and Allan McDuffie to stay and attend the Currituck Sound Area Transportation Study Merger Team meeting that would follow lunch.

To: R-2576 Merger Team Meeting Participants

From: Reginald Scales, Parsons Brinckerhoff

Date: August 25, 2002

Subject: TIP Project No. R-2576 – Currituck Sound Area Transportation Study,
 July 24, 2002 NEPA/404 Merger Team

Attendance

- Jennifer Harris, NCDOT-PDEA
- John Frye, NCDOT-Structures
- Cathy Brittingham, DCM-Raleigh
- Sarah McBride, SHPO/DCR
- Gail Grimes, NCDOT-PDEA
- John Page, Parsons Brinckerhoff
- Bill Arrington, DCM
- Emily Lawton, FHWA
- Sara E. Winslow, NCDMF
- John Hennessey, NCDWQ
- Dan Scanlon, Currituck County Manager
- Renee Gledhill-Earley, SHPO
- Howard Hall, USEFWS
- Roy Shelton, NCDOT-PDEA
- Mike Bell, USACOE
- David Cox, NCWRC
- Roger Thomas, NCDOT-Roadway Design
- Don Commer, NCDOT-Division 1
- Lynn Smith, NCDOT-Natural Systems
- Mike Bryant, USEFWS -PINWR
- Chris Millitscher, EPA
- Mike Bruff, NCDOT-SWP
- Don Lewis, PBS&J
- Donna Dancausse, FHWA
- Allen Raynor, NCDOT-Structures
- Terry Wheeler, Dare County Manager
- Doug Smith, Parsons Brinckerhoff
- Brian Yamamoto, NCDOT-PDEA
- Elizabeth Harper, Parsons Brinckerhoff
- Ron Sechler, NMF (via telephone)
- Ted Bisterfeld, EPA (via telephone)
- Richard Lewis, USACOE



Bill Biddlecome, USACOE
Reginald Scales, Parsons Brinckerhoff

Jennifer Harris opened the meeting with introductions and recognized Mike Bell who named the Currituck Sound Area Transportation Study Merger Team Members:

Mike Bell, USACOE	Renee Gledhill-Earley, SHPO
John Hennessey, NCDWQ	Ron Sechler, NMF
David Cox, NCWRC	Cathy Brittingham, NCDOT
Howard Hall, USFWS	Sara Winslow, NCDMF
Ron Lucas, FHWA	Jennifer Harris, NCDOT
Ted Bisterfeld, EPA	

The group continued discussion of the Corp's of Engineers hurricane evacuation study and model from discussions held earlier in the day.

Ted Bisterfeld requested more detail regarding the background traffic and mobilization factor for the model.

Don Lewis responded that during hurricane evacuation there is more than just the evacuated population in the roadway network, particularly early in the evacuation. There is not a great deal of real data to support the hypothesis but it is believed that at the beginning of an evacuation, the highest level of non evacuating traffic on the roadway network will occur (e.g. people going to the grocery store to get batteries or going from work to home before evacuating). Therefore, it is believed that the level of background traffic is highest at the beginning of an evacuation and then it tapers off to almost nothing at the end of an evacuation. Mobilization time deals with how quickly people respond to their local county government and state government emergency advisory. Sometimes people respond to quickly and overwhelm the road network.

Ted asked whether background traffic and mobilization happen subsequent to an evacuation directive (follow the notice for evacuation).

Don responded that because people have access to the Weather Channel and the Internet they may make a decision to evacuate earlier, therefore it could happen earlier in some situations. Additional background traffic could increase as population increases. Four hours is a pretty short time for mobilization (some evacuations have a length of 10 to 12 hours for mobilization depending on the lead time from the National Hurricane Center).



John Hennessey asked about the background traffic factors (presented during the morning meeting) ranging from 2.5 to 4. He wanted to know what the numbers represented, their purpose, and how they worked in the model. Don responded that what was shown at the earlier meeting was a simplified version of the detailed model. The background traffic factors represent an estimate of the raw travel demand (hours of travel demand) plus background traffic and mobilization time. The background traffic factors adjust the clearance times calculated for the critical link in the simplified model to match the times calculated from the detailed model.

Don stated that the numbers were developed through testing different mobilization times (i.e., rapid response [immediate], medium response [4-6 hours], and long response times [10-12 hours]) and not just one number. The numbers were obtained from behavioral research that shows how quickly people respond (load the road network) during an actual evacuation.

John Hennessey asked whether the numbers are predicated on empirical data.

Don responded that the detailed model tests different mobilizations. Only one scenario was placed in the abbreviated model. Actual events are used to calibrate the model.

John Hennessey asked if the Floyd event was used to calibrate the model.

Don stated that this was not the case for the Outer Banks because the response to Floyd from that part of the Outer Banks was not significant enough to warrant recalibration of the model.

John Hennessey stated that the roadway capacity had decreased from 1,600 vehicles per hour (vph) in the 1997 study to 1,100 vph in the most recent Corps study. How could the information from Floyd be used to change the numbers in the model if we did not have a significant response in the area?

Don stated that, as in the case of the Highway Capacity Manual, which has been built around all the empirical data that has been collected on daily traffic on roadways all over the country, a great deal of hurricane evacuation experience has been gained through evaluating similar roadways (e.g. Florida Keys with long stretches of rural two lane highways). This data has provided a high level of confidence of the actual number of vehicles that can move through the study area roadway network based on other evacuations.

John Hennessey asked why the earlier models did not use the numbers. Don responded that the earlier numbers did not have the results of the Floyd event



(1999), which provided a tremendous amount of information that was previously not available. The most current model was developed during the last couple of years.

John Hennessey asked how the Floyd event could be used to change the model if there was not a full mobilization.

Don stated that there are permanent traffic counters all over the country that provide hard data for every hour of an evacuation. This data documents how many vehicles move through the roadway network each hour. Mobilization is a behavioral issue, and we do not have detailed behavioral information (we would have to know when each household on the Outer Banks made the decision to evacuate and when did they leave, etc.). There is some information from surveys, however the hard data for people's behavior that is available is traffic counts.

John Hennessey stated that we have models predicated on data from coastal regions around the country, and it was used to develop earlier models. It was his opinion that this is a broad based data set which should provide a good overview of network capacity. A statement was made that the Floyd event changed the numbers, however a later statement was made that the model was predicated upon long standing data developed over a period of years. What was learned in Floyd that made a dramatic change in the model?

Don stated that there are a lot of factors. There were three technical memorandums produced from the Floyd event. There was a great deal of data learned from Floyd and other events and the approach has been to apply the best parameters available for what has been learned.

John Hennessey stated that he was trying to determine the underlying assumptions in the model.

Don stated that he was attempting to relay the hard science (traffic numbers) versus behavioral issues, which can vary dramatically for the same location even during the same hurricane event.

Mike Bell asked about bottleneck locations and how they influence evacuation times.

Don stated that the worst bottleneck is at US 158/NC 168 at Barco.

John Hennessey asked about population projections used, 39,790 for the 1998 DEIS versus 47,000 plus for the new study; what was the difference in assumptions?



John Page noted that the last study assumed that population growth on the Outer Banks was constrained by lack of capacity in the road system. The current study assumes that population will not be constrained by the capacity of the road system.

Mike Bell noted that part of the problem is that the previous study (1998 DEIS) was agreed to by all parties. He further stated that he agreed with the previous study that roads do hinder or help population growth.

John Page stated that the difference between new study and the previous study is that the previous study focused on a Mid-Currituck Sound bridge. The previous study evaluated the road system and what was planned in the TIP and Thoroughfare Plan. One of the findings of the study was that if a Mid-Currituck Sound Bridge were constructed with no other improvements, the result would be continued severe congestion along NC 12 from Southern Shores through Sanderling and creation of congestion in Currituck County. A flaw of the original study was that it was too narrow in scope and left problems unsolved. Therefore, the project scope was expanded to include the entire road network. As the result the new study must start with what would happen without constraints rather than what would be constrained by the inadequacies of the Thoroughfare Plan. The assumptions were changed because we are looking at improvements on the whole road system.

Mike Bell stated that the 1998 DEIS was an excellent document and has been used as an example of how an EIS should be created. If the document is changed it puts the regulators in a bad position in terms of what they should believe is correct.

John Page said that the basic parameters of the study have changed. The project has changed from the Mid-Currituck Sound Bridge Project to the Currituck Sound Area Transportation Study, which will study the entire study area roadway network.

Renee Gledhill-Earley asked if improvement of every road in the study area was open for discussion.

Jennifer Harris responded yes.

Renee asked about actual population data and what is known about growth constraints versus what people want (to grow or not grow). John Hennessey asked about the assumption of a population of 47,000 with an unconstrained road system.

John Page stated that the parameters used to generate traffic forecasts and to generate the population data used in the hurricane evacuation clearance time



assessment were included in the June 25, 2002 memorandum to the Merger Team, page 1-9. These parameters were:

- Currituck and Dare County population forecasts used State Data Center forecasts through 2019. A straight-line forecast was performed from 2019 through the 2025 design year.
- Along the Outer Banks from Southern Shores north through the road accessible area (Corolla) is 100 percent subdivided except for the Pine Island Wildlife Refuge. It was assumed that all lots were built-out.
- Growth assumptions were made for Corova Beach or the area north of the road accessible area. Assumptions were based on building permit trends and not full build-out. The annual number of building permits issued is greater now than five years ago.

As we develop alternatives, we will reevaluate whether these assumptions are reasonable. The only thing included in the current purpose and need is that traffic will not flow well, travel time will be long, and hurricane evacuation times are not desirable. Once we obtain agreement on purpose and need, we can evaluate the extent of population growth in detail. John welcomed the participation of the Merger Team in the process.

Cathy Brittingham asked whether the population numbers were consistent with the local CAMA land use plan and do they consider CAMA land use policies.

John Page stated that there was a presumption that on the Outer Banks the plans are consistent with CAMA policy because the entire area is subdivided. On the mainland the study focused on the forecasts from the State Data Center.

A statement was made that the platted land is based on the CAMA land use plan, which is not an unconstrained projection but is constrained based on the land use plan adopted and used for controlled growth. The State Data Center population numbers are based on the platted lots in the area, which is based on the CAMA land use plan.

Mike Bell directed the meeting to the language of the Statement of Purpose and Need. Discussion ensued regarding amended language of the purpose and need proposed by the NCDOT versus the language discussed at the May 8, 2002 meeting. Traffic capacity versus traffic flow was specifically discussed.



Renee Gledhill-Earley suggested a glossary of transportation terms for use by the Merger Team.

John Hennessy stated that he would like the wording to include a full range of alternatives.

John Page stated our objective is to make sure that the purpose and need does not preclude any study alternatives. If the Merger Team can agree and that a full range of alternatives will be evaluated then the May 8 meeting language should be acceptable.

The group agreed to amend the statement from the May 8, 2002 meeting:

To increase traffic capacity and reduce travel time along US 158 and NC 12 in the project area during the summer resort period.

To read as follows:

To improve traffic flow and reduce travel time along US 158 and NC 12 in the project area during the summer weekday travel period.

The discussion turned to hurricane evacuation.

Mike Bell stated that he was against hurricane evacuation as part of the purpose and need because it is only included to obtain public acceptance for the project.

Howard Hall stated that hurricane evacuation is already a part of the purpose and need because when traffic flow is increased hurricane evacuation times are decreased.

Jennifer Harris stated that meeting the summer weekday travel period might not meet the needs of a hurricane evacuation. The NCDOT is not supporting inclusion of hurricane evacuation as part of the purpose and need as the sole basis for selecting a Least Environmentally Damaging Practicable Alternative (LEDPA) but as one important part of the decision making process.

Mike Bell stated that it can be evaluated as a part of the document (as was done in the 1998 DEIS), however it does not need to be included as a part of Purpose and Need.

Howard Hall restated that meeting the purpose and need agreed to earlier will facilitate any kind of evacuation.



John Hennessey stated that he did not understand the underlying assumptions for the new model. As a result he could not support hurricane evacuation as a part of the purpose and need. He stated that if he could become more comfortable (gain a greater understanding of the model) he would consider a purpose and need with the hurricane evacuation. If safety is an issue then we should address that issue during this study.

John Page stated that: 1) the current model shows that we have a hurricane clearance problem, if we get into the study and find that there is not a problem then we take it out, and 2) the peaking characteristics of an evacuation are different from the peaking characteristics of daily trips. If there is an issue, we should develop a project that specifically addresses the issue.

Mike Bell stated that the previous study (1998 DEIS) did not include hurricane evacuation in the purpose and need.

Gail Grimes stated the previous study (1998 DEIS) was completed in 1996. NCDOT spent two years and four meetings discussing the issue with the Corps until NCDOT was told that the Corps would never concur with the purpose and need until hurricane evacuation was removed. Consequently, FHWA directed NCDOT to remove hurricane evacuation and sign the document although NCDOT never agreed with removing hurricane evacuation from the document.

Mike Bell stated that the previous document reported no decrease in hurricane evacuation times and that is why hurricane evacuation was removed.

Roy Shelton stated that the problem was that the amount of growth taking place on the island. There was the time that it took for evacuation in the existing year. Twenty-year projections showed no reduction in evacuation time. The Corp's position was that evacuation time would not be improved. However, if evaluated from a 10-year period, evacuation was improved in the short-term, but because growth is continually taking place, evacuation times increased again. That problem was never resolved. FHWA never agreed with the finding, however, the document was released.

Jennifer Harris asked if there were any other Merger Team members open to including hurricane evacuation as a part of the project's purpose and need.

John Hennessey restated his concern regarding the model and his feeling that the purpose and need to which we have already agreed is adequate to address the issue.



Cathy Brittingham asked whether hurricane evacuation is a current or future need.

Jennifer Harris stated that based on current clearance times, it is already an issue. The current clearance time is 32 hours, which does not meet the goal for evacuation during daylight hours. (The clearance time is the time it takes from the evacuation order to the last person reaching a point of safety.)

John Hennessey stated that if he could be convinced that the new documentation [new model] shows there is a problem he will reconsider his position on inclusion of hurricane evacuation in the purpose and need.

John Page indicated that the letter that was sent to the Merger Team members prior to the meeting described the differences between the earlier study and existing study.

David Cox wanted to know why in 1998 we looked at a constrained traffic forecasts and now we are not assuming constrained traffic. Everywhere else (other studies) we have to look at realistic growth figures and carrying capacity of areas and here we have chosen not too for this project and it doesn't make sense. How did we double our evacuation times?

Jennifer Harris asked for consensus on the next step – approval, elevation, etc.

Mike Bell stated that we have a purpose and need without hurricane evacuation and he was not in favor of the inclusion of hurricane evacuation.

Emily Lawton stated that FHWA would like to keep hurricane evacuation as part of the purpose and need.

The Merger Team agreed that additional information for the new hurricane model would be supplied to John Hennessey who would follow up with other team members.

The meeting was adjourned.



Memorandum



To: Participants, Sara Winslow (NCDENR-DMF), and file

From: Reggie Scales, Parsons Brinckerhoff

Date: September 16, 2003 (revised December 8, 2003)

Subject: Meeting Minutes, August 20, 2003 NEPA/404 Merger Team Meeting, Concurrence Point 1-Purpose and Need, TIP Project No. R-2576, Currituck Sound Area Transportation Study

Merger Team Attendees

Ron Lucas – FHWA
 Jennifer Harris – NCDOT-PDEA
 Bill Biddlecome – USACE
 Gary Jordan – USFWS
 Ron Sechler – National Marine Fisheries Service, via teleconference
 Ted Blisterfield – US Environmental Protection Agency, via telephone
 Sarah McBride – NCDCR
 John Hennessy – NCDENR-DWQ
 Cathy Brittingham – NCDENR-DCM
 Travis Wilson - NCWRC

Other Attendees

David Cox – NCWRC
 John Sullivan – FHWA
 Emily Lawton – FHWA
 Donna Dancausse – FHWA
 David Franklin -- USACE
 Mike Bell – USACE
 Roger Sheats – NCDOT-Deputy Secretary of Transportation
 Don Conner – NCDOT-Div. 1 Engineer
 Greg Thorpe – NCDOT-PDEA
 Gail Grimes – NCDOT-PDEA
 Roy Shelton – NCDOT-PDEA
 Brian Yamamoto – NCDOT-PDEA
 Dewayne Sykes – NCDOT- Roadway Design
 Beth Barnes – NCDENR-DWQ
 Reggie Scales – Parsons Brinckerhoff
 John Page – Parsons Brinckerhoff

Jennifer Harris opened the Merger Team Meeting. Attendees introduced themselves. Jennifer Harris stated that the NCDOT and the USACE wanted to discuss new potential wording for the Purpose and Need concurrence form (see Item 2 of the Attachment). She said no new information for the Purpose and Need Statement had been prepared since the last Merger Team Meeting on July 24, 2002.

Over a Century of
Engineering Excellence

Participants
 September 16, 2003 (revised December 8, 2003)
 page 2

It was noted that Brian Yamamoto will be leading a new hurricane evacuation modeling study in conjunction with Don Lewis of PBS&J. The study will address model issues that have been brought up by the Merger Team. A revised model should be complete within six months. Don Lewis will be available on September 17, 2003 (10:30 AM) to discuss this study and address Merger Team questions.

David Franklin stated that the USACE was ready to sign the revised Purpose and Need Statement as sent via e-mail to the Merger Team prior to the meeting. He also noted that:

- Standards for the transportation system are the NCDOT's responsibility.
- The project is not a traditional (typical) project (e.g., building a road from point to point), and therefore, it does not fit the normal merger process.
- This is an opportunity for developing improvements to a road system rather than simply constructing a transportation project.
- This project could be an opportunity for process improvement.
- The USACE is prepared to sign the concurrence form presented by the NCDOT with hurricane evacuation as a part of the Purpose and Need Statement.

The DWQ representative suggested revising the language (see language below) of the proposed Purpose and Need Statement to specifically state that if the hurricane evacuation model does not support system improvement(s), then hurricane evacuation will be removed from the Purpose and Need Statement.

Greg Thorpe (NCDOT) stated that the NCDOT was very reluctant to revise its proposed language.

The DCM and NIMFS representatives indicated that they would sign the agreement with DWQ's proposed revision.

The USFWS and USEPA representatives stated that they could not concur with a Purpose and Need which includes hurricane evacuation until the NCDOT addresses the modeling concerns discussed at previous meetings.

David Franklin stated that the Merger Team should focus on alternatives and not the Purpose and Need Statement. The need for each alternative will stand on its own merit(s).

Discussion then centered on the issue of the hurricane evacuation model and the inclusion of hurricane evacuation in the Purpose and Need Statement and the assessment of alternatives. General comments and responses were:

- Some alternatives could meet more than one need (i.e., daily travel and hurricane evacuation).

Over a Century of
Engineering Excellence



- The Merger Team, with the exception of the NCDOT and the FHWA, agreed to the wording of the Purpose and Need Statement at the last meeting.
- The wording for the first two bullets of the proposed Purpose and Need Statement has changed since the last meeting. (The language discussed at the July 2002 meeting is listed in Item 1 of the attachment.)
- Delete hurricane evacuation from the current Purpose and Need Statement and reconsider it later when the revised model is complete.
- Why did the NCDOT not provide more technical information regarding hurricane evacuation modeling (statewide) and why has the technical work not already been done?
 - Response: The issue is extremely complex and it has taken time to develop a comprehensive strategy.
- If concurrence is received regarding hurricane evacuation and the model shows that it is not a problem, what happens?
 - Response: Hurricane evacuation would be removed from the Purpose and Need Statement.
- The model assumptions were established without input from the USACE and the DWQ. There may be need for the Merger Team to review the model when it is complete. A request was made for a meeting to review the model inputs.
 - Response: The meeting on September 17 will allow the Merger Team to ask questions and make suggestions regarding model input assumptions.
- How will the study proceed once concurrence on the Purpose and Need Statement is reached?
 - Response: The alternatives analysis and hurricane evacuation study can proceed on parallel tracks.
- Does TIP Project No. R-2576 need to go back through the systems planning process (i.e., should the project be a Statewide Planning thoroughfare planning project rather than a PDEA NEPA project)?
 - Response: The current study area encompasses a much larger area than the Draft Environmental Impact Statement (DEIS). The study will evaluate reasonable alternatives for meeting the Purpose and Need rather than simply evaluating a bridge over Currituck Sound. The study does not need to be sent back to Statewide Planning.
- The USFWS representative asked whether the study will address the issue of increased development and how it would affect the improvement of hurricane evacuation times offered by increased transportation capacity. He indicated that the potential for increased development coming with an improved transportation system and defeating the gains associated with the improvement was the reason the USFWS could not concur with the Purpose and Need Statement.



- Response: The improvement of the state transportation system can encourage development opportunities. The reality is that development is presently occurring along the Outer Banks without system improvements. This NEPA process is an opportunity to address development-related issues. There are major concerns with secondary development in addition to saving lives. Indirect and cumulative impacts, including impacts on transportation capacity, will be addressed in the Supplemental DEIS. The project area's local governments will need to address the development impacts.
- It was noted that the DEIS addressed secondary and cumulative impacts.
- The USEPA representative stated that the potential for negative impacts to Currituck Sound, which is already stressed (e.g., loss of native sea grasses), would be worsened by a bridge. USEPA was not willing to sign a Purpose and Need Statement with hurricane evacuation until the modeling is complete and the need for hurricane evacuation in the Purpose and Need Statement is firmly established.
- Are we setting a precedent for future projects by not following the normal Merger 01 Process?
 - Response: The study is not a simple roadway improvement from point to point along a single corridor. It is a study to examine potential system-wide transportation improvements. The purpose of the study is to decide what improvements are needed.
- Has hurricane evacuation been included in the Purpose and Need Statement for other coastal projects?
 - Response: Hurricane evacuation was a part of the Purpose and Need Statement for several recent coastal projects including:
 - TIP Project No. R-2551, Dare County, Construction of a New Croatan Sound Bridge
 - TIP Project No. R-2418, Dare and Currituck Counties, Construction of westbound lanes for Wright-Memorial Bridge.
 - TIP Project No. R-2245, Brunswick County, SR 1104 (Beach Drive) to NC 211. Widen SR 1105 (Middleton Avenue) from SR 1104 to SR 1190. Replace Bridge No. 206 over Davis Creek and construct two lanes from SR 1105 to NC 211 on new location.
- The USEPA representative stated that the Merger Process should be followed step by step, and the step for the Purpose and Need Statement should be completed before the next step begins.
- The discussion then focused on the Merger Team approving or accepting the hurricane model assumptions and alternative wording for the Purpose and Need Statement.



Participants
September 16, 2003 (revised December 8, 2003)
page 5

- The DWQ representative noted that the agency had a legal responsibility to understand the hurricane model assumptions and there was an agreement from a September 2002 meeting for the Merger Team to review the assumptions.
 - The DCM representative stated that there were DCM agency experts who could evaluate the model assumptions, or they could contract with outside experts to do so.
 - David Franklin stated that the USACE had communicated with the NCDOT prior to the meeting and would agree to sign the Purpose and Need Statement, as presented to the Merger Team, without the wording in the Purpose and Need Statement that the Merger Team would approve the assumptions used in the model.
 - Mike Bell requested an opportunity to review the hurricane evacuation model assumptions.
 - Emily Lawton (FHWA) stated that the FHWA would be opposed to the Merger Team approving the model assumptions; the previous Merger Team understanding was only to discuss assumptions.
 - Two options for revised Purpose and Need Statement wording were proposed. They are included as items 3 and 4 of the Attachment. Both options include the addition to the NCDOT proposal that: "if the modeling indicates that hurricane evacuation is not a need of the transportation system, then it will be removed from the Purpose and Need Statement." They differ in that one version includes a statement that the hurricane evacuation inputs and assumptions must be acceptable the Merger Team and the other version does not.
 - The USEPA and the USEFWS will not approve hurricane evacuation as a part of the Purpose and Need Statement at this time. The USEPA indicated they would not approve hurricane evacuation as a part of the Purpose and Need Statement until the hurricane evacuation model was revised and the results provided to the Merger Team for review. The USEFWS expressed concern about the potential for road improvement projects to encourage additional Outer Banks development and defeat the gains associated with the improvements. The FHWA and the NCDOT will not concur without hurricane evacuation as a part of the Purpose and Need Statement. The NCDOT noted that the locals want some type of transportation improvement and the need is too great to allow the project to be delayed until the hurricane evacuation study is complete. The FHWA stated that any major coastal project should include hurricane evacuation as a part of the Purpose and Need Statement.
 - The FHWA and the NCDOT indicated they would not approve a Purpose and Need Statement that indicates the hurricane evacuation model inputs and assumptions must be approved or acceptable to the Merger Team. The DWQ and the DCM indicated they preferred a statement that did include such language.
- The following additional items were discussed both during and after the discussion on alternative Purpose and Need Statement wording:
- The Merger Team discussed whether or not project improvements (through encouraging development) would create a hurricane evacuation problem.

Over a Century of
Engineering Excellence



Participants
September 16, 2003 (revised December 8, 2003)
page 6

- The NCDOT will conduct Citizens Informational Workshops to receive public comment on potential alternatives after the Purpose and Need Statement is approved.
 - What are the next steps?
 - Response: The hurricane evacuation model assumption discussions will occur in September. Following that meeting, the NCDOT will have a better idea of the next steps.
- It was requested that the Merger Team be provided material for them to consider prior to the meeting.
- David Franklin noted that the current study process is a major concession on the part of the NCDOT (to look at transportation solutions from system-wide perspective and not as an individual project). The Merger Team was also encouraged to look at the system and not the segments.
 - The USEPA representative stated that since the project is a system-wide effort, a list of projects or a work plan should be submitted for evaluation.
 - Response: One such project is the improvement of the NC 12/US 158 intersection.
- NCDOT, FHWA, and USACE concurred with the language of the Purpose and Need Statement presented to the Merger Team (Item 2 of the Attachment). None of the other agencies concurred with the Purpose and Need Statement.

The meeting was adjourned without complete concurrence.

Since the Merger Meeting, concurrence forms with the language contained in Item 4 of the Attachment were signed by all parties. The USEPA added the following statement at the bottom of the form they signed: "Concurrence with P&N 1 & 2; conditional concurrence on 3 to allow the study to proceed with the understanding that the modeling input issues will be resolved & it will be removed if not supported prior to concur. Pt. 2."

Attachment

J:\PLANNING\Currtruck_SDEIS\Project Meetings\Merger_Team\6-20-03 (12-03 revised final minutes).doc

Over a Century of
Engineering Excellence

Attachment
Proposed Language for Purpose and Need Statement and
Indications of Merger Team Support

1. Alternative Purpose and Need Statement proposed at the July 24, 2002 NEPA/404 Merger Team meeting:

To improve traffic flow and reduce travel time along US 158 and NC 12 in the project area during the summer weekday travel period.

The NCDOT and the FHWA did not concur with this statement because it did not include hurricane evacuation.
2. Revised Purpose and Need Statement proposed by the NCDOT with the support of the USACE and the FHWA at the August 20, 2003 NEPA/404 Merger Team Meeting:

Develop a range of alternatives which improves the Currituck Sound Area Transportation System and addresses the following needs:

 - *Need to improve traffic flow on the project area's thoroughfares during the summer weekday peak travel periods.*
 - *Need to reduce travel time for persons traveling between the Currituck County mainland and the Currituck County Outer Banks.*
 - *Need to facilitate coastal evacuation of the northern Outer Banks, provided this need is supported by empirical data prior to concurrence point 2.*

Only the NCDOT, FHWA, and the USACE indicated that they concurred with this statement. Other Merger Team members suggested two clarifications: 1) that the third item be dropped if the refined hurricane evacuation model showed that there was no need to improve hurricane evacuation times and 2) that the Merger Team have some measure of review or approval authority over the hurricane evacuation model inputs and assumptions used. The USEPA indicated they would not approve the third bullet until the hurricane evacuation model was revised and the results provided to the Merger Team for review. The USFWS expressed concern about the potential for road improvement projects to encourage additional Outer Banks development and defeat the gains associated with the improvements.
3. Purpose and Need Statement proposed by the DWQ based upon discussions at the NEPA/404 Merger Team meeting on August 20, 2003:

Develop a range of alternatives which improves the Currituck Sound Area Transportation System and addresses the following needs:

 - *Need to improve traffic flow on the project area's thoroughfares during the summer weekday peak travel periods.*
 - *Need to reduce travel time for persons traveling between the Currituck County mainland and the Currituck County Outer Banks.*
 - *Need to facilitate coastal evacuation of the northern Outer Banks provided this need is supported by empirical data from the U.S. Army Corps of Engineers' hurricane*

evacuation model, with inputs and assumptions found acceptable to the NEPA/404 Merger Team prior to Concurrence Point Number 2. If the modeling indicates that hurricane evacuation is not a need of the transportation system, then it will be removed from the Purpose and Need.

The NCDOT and the FHWA would not agree with the revised third bullet because it included the statement that the hurricane evacuation inputs and assumptions must be acceptable to the Merger Team. The USEPA and the USFWS did not concur because of the reasons stated under item 2.

4. Purpose and Need Statement as revised by the NCDOT based upon discussion with the NEPA/404 Merger Team meeting on August 20, 2003:

Develop a range of alternatives which improves the Currituck Sound Area Transportation System and addresses the following needs:

 - *Need to improve traffic flow on the project area's thoroughfares during the summer weekday peak travel periods.*
 - *Need to reduce travel time for persons traveling between the Currituck County mainland and the Currituck County Outer Banks.*
 - *Need to facilitate coastal evacuation of the northern Outer Banks provided this need is supported by empirical data from the U.S. Army Corps of Engineers' hurricane evacuation model prior to Concurrence Point Number 2. If the modeling indicates that hurricane evacuation is not a need of the transportation system, then it will be removed from the Purpose and Need.*

The DWQ and the DCM indicated at the meeting that they preferred inclusion in the third bullet of a statement that the Merger Team needed to find the hurricane evacuation model input and assumptions acceptable. The USEPA and the USFWS did not concur because of the reasons stated under item 2.

Since the Merger Meeting, concurrence forms with the language contained in Item 4 of the Attachment were signed by all parties. The USEPA added the following statement at the bottom of the form they signed: "Concurrence with P&N 1 & 2; conditional concurrence on 3 to allow the study to proceed with the understanding that the modeling input issues will be resolved & it will be removed if not supported prior to concurrence. Pt. 2."



Turnpike Environmental Agency Coordination Meeting

TEAC Meeting Protocols & Project Coordination Plans

MEETING MINUTES

Date: December 15, 2006

Time: Morning Session – 9:00 am to 12:00 pm

Place: NCTA Board Room

Purpose: Discuss meeting protocols and project coordination plans

Attendees:

Donnie Brew, FHWA	Scott McLendon, USACE
Clarence Coleman, FHWA	Kathy Matthews, USEPA
George Hoops, FHWA	Chris Mittscher, USEPA
Sarah McBride, NCDOT-SHPO	Marella Bunick, USFWS (via phone)
Cathy Brittingham, NCDENR-DCM	Steve DeWitt, NCTA
Steve Sollod, NCDENR-DCM	Gail Grimes, NCTA
John Hennessy, NCDENR-DWQ	Jennifer Harris, NCTA
Rob Ridings, NCDENR-DWQ	David Joyner, NCTA
David Wainwright, NCDENR-DWQ	Bill Malley, Akin Gump
Amy Simes, NCDENR	Jeff Dayton, HNTB
Wally Bowman, NCDOT-Division 5	Craig Deal, HNTB
David Chang, NCDOT-Hydraulics Unit	Donna Keener, HNTB
John Conforti, NCDOT-PDEA	Adin McCann, HNTB
Charles Cox, NCDOT-PDEA	Tracy Roberts, HNTB
Missy Dickens, NCDOT-PDEA	Christy Shumate, HNTB
Dewayne Sykes, NCDOT-Roadway Design	Whit Webb, HNTB
Marla Chambers, NCWRC	Chris Lloyd, PB
Eric Alsmeyer, USACE	Jill Gurak, PBS&J
Bill Biddlecome, USACE	David Griffin, URS

The following items were discussed during the meeting:

The NCTA opened the meeting with introductions and a brief history of the North Carolina Turnpike Authority (NCTA). The NCTA was created by the state legislature to enhance project delivery without compromising environmental responsibility, quality, and safety. The NEPA and Section 404 permitting processes are critical to accomplishing this goal and the NCTA is aware of the need to advance both together. The agencies were asked to come to the meetings with open minds and the NCTA vowed to be open and honest with all stakeholders throughout the coordination process.

Turnpike Environmental Agency Coordination Meeting Protocols

The Turnpike Environmental Agency Coordination (TEAC) meeting protocols were presented. Several of the agency representatives recommended that a detailed agenda be sent prior to the monthly meetings. This information should contain sufficient detail to allow the agencies to determine if their attendance is required. The NCTA will provide meeting materials prior to the meeting, and it will be at the agencies' discretion to decide on attendance. These meetings are anticipated to be monthly. "Snapshot" projects may not warrant travel to Raleigh by out of town agency representatives. Participation for "snapshot" projects may be accomplished through conference calls. Future meetings may be audio recorded to aid in preparing accurate meeting minutes.

Draft Section 6002 Coordination Plan

The primary purpose of this first TEAC meeting was to review the Section 6002 Draft Coordination Plan. A template of the Draft Coordination Plan and a table describing the legislative background for elements of the plan were included in the Turnpike 101 binders and also distributed to meeting attendees. NCTA is in the process of drafting project-specific Coordination Plans for the Section 6002 projects – Cape Fear Skyway, Mid-Currituck Bridge, and Monroe Connector/Bypass. The final Project Coordination Plans will be approved by FHWA-Division Office.

The elements of the draft Project Coordination Plan discussed were:

Section 1: General

The plan meets the requirements for a Coordination Plan in SAFETEA-LU Section 6002.

Section 2: Project Initiation

A project initiation letter will be sent to FHWA at the beginning of the study process. FHWA will issue a Notice of Intent for the project.

Section 3: Project Schedule

A project schedule will be attached to each project-specific Coordination Plan. The schedule will be developed collaboratively with the agencies, and may be updated throughout the project development process.

Section 4: Agency Roles

Agencies will be identified as Lead Agencies, Cooperating Agencies, and/or Participating Agencies in each Coordination Plan. FHWA, NCDOT, and NCTA will be Lead Agencies for the candidate toll projects. The definition of a Cooperating Agency has not changed with Section 6002 and will generally consist of agencies with permitting interests in the project. Cooperating Agencies generally are included on the cover of the NEPA document so that the agencies can use the document to fulfill their own NEPA requirements. USACE is typically a Cooperating Agency for projects requiring an individual Section 404 permit.

A Participating Agency can be any agency with an interest in a project or any agency that would be expected to provide comments on a Draft EIS. Cooperating Agencies are a sub-set of the Participating Agencies.

Section 6002 sets forth a formal process for the Lead Agencies to invite participating agencies. In this process, one of the Lead Agencies will submit a written request to other agencies inviting them to participate. Federal agencies are not required to respond; they will be assumed to have accepted the invitation unless written explanation of their refusal is provided. State and local agencies will be requested to respond in writing in all cases.

Section 5: Agency Meetings

Monthly meetings will be used to provide updates to agencies and receive comments from the agencies on the projects. Meeting materials will be provided in advance; additional materials may be provided at the meeting, for discussion at future meetings. NCTA is investigating the use of a secure internet site for storing and distributing meeting materials. NCTA will coordinate with the agencies to determine if this method of providing information is effective or if other arrangements are required. At a minimum, a detailed agenda with a list of issues to be discussed and a summary of the previous month's meeting will be distributed with the meeting announcement. Sufficient information will be provided with the announcement so that agencies can determine whether it is necessary to attend. The length of the meetings will vary

depending on the projects and issues to be discussed. NCTA will coordinate closely with NCDOT to schedule meetings to coincide with regularly-scheduled Merger Meetings.

Section 6: Identification and Resolution of Project Issues
Agencies should raise any potential issues they have during project scoping. Because many of the candidate toll projects have a long history, NCTA is aware of many of the potential issues. Previous comments received from the agencies on NCTA projects will be collected and summarized. The project-specific Coordination Plans will include details on how previous agency inputs are incorporated into the current study.

Attempts will be made to resolve issues informally; however, Section 6002 does provide procedures when informal issue resolution is not possible.

Section 7: Methodologies and Level of Detail for Alternatives Analysis
Methodologies used to screen alternatives and analyze impacts will be determined in coordination with the cooperating and participating agencies. NCTA will prepare a memorandum summarizing the methodologies to be used and will obtain agency comments. This will include the level of engineering detail to be used on designs. In general, NCTA anticipates that functional designs will be used to analyze and compare Detailed Study Alternatives in the Draft EIS. Preliminary design may be completed on all or portions of the Detailed Study Alternatives if necessary to satisfy NEPA or permitting requirements; the need for this increased level of detail will be determined on a case-by-case basis. In any case, the Detailed Study Alternatives will be designed to an equivalent level of detail to allow for relative comparison in the Draft EIS. Preliminary designs will be completed for the Preferred Alternative and reflected in the Final EIS in order to refine the design and further minimize impacts.

Several of the agencies expressed general support for this approach, noting that in most cases an increased level of design would not affect the decision on a Preferred Alternative and completing preliminary design on multiple alternatives is often an inefficient use of time and funds.

No change to the level of investigations for other work is anticipated, including wetland and stream delineations, noise studies, and air quality reports. The NCTA plans to follow existing procedures and methodologies as used by NCDOT.

Section 7.4 (Level of Detail) of the Coordination Plan should be revised to include the timing for decisions on bridging and the process for presenting and discussing this issue with agencies.

Sections 8 and 9: Development of Purpose and Need & Development and Screening of Alternatives
NCTA will prepare a preliminary purpose and need statement and present it to agencies for input. NCTA envisions that the purpose and need will evolve throughout the project and will not seek concurrence on a written purpose and need. Additional input on the purpose and need will be solicited from agencies during the screening of alternatives. Public input will also be sought at this point on both the purpose and need and alternatives, and it is possible that based on public comment, the purpose and need would be revised.

Operation as a toll facility may or may not be included as part of a project's stated purpose and need, but it may be used as a consideration in screening alternatives. For example, toll feasibility may be used as a screening criterion where a project would not be financially feasible without implementation of tolls. If the purpose and need specifically calls for completion of a toll road, the only reasonable alternatives would be new location alternatives, because under North Carolina law, existing roads cannot be tolled.

Information on potential locations for alternatives, along with environmental constraints mapping, will be presented to the agencies as early as possible so that potential issues can be identified. This is similar to scoping in other projects.

EPA noted that they will need to confirm how this process fits with their existing procedures for scoping and document review and comment. EPA does not normally provide written comments on a project until the Draft EIS is published in the Federal Register.

Section 10: Selection of Preferred Alternative/LEDPA

On most projects, a public hearing will be held after publication of the DEIS to collect comments on the Detailed Study Alternatives. Following the hearing, NCTA will meet with agencies to discuss selection of a preferred alternative. NCTA will propose a preferred alternative in a report to the agencies. This report will address all applicable regulatory requirements, as identified in Section 10.1 of the project-specific Coordination Plans. The agencies will present comments to the NCTA and FHWA in writing. The FHWA will identify the Preferred Alternative in the Final EIS². The FHWA may also request a written indication as to the likelihood that a permit will be obtained from the appropriate agencies.

Section 11: Avoidance, Minimization, Mitigation, and Enhancement

Avoidance and minimization efforts will be built into the design process. As mentioned above, the Preferred Alternative may be developed to a higher level of design for the purposes of considering mitigation. NCTA intends to use NC Ecosystem Enhancement Program's (EEP) in-lieu fee program to comply with mitigation requirements to the extent possible; however, NCTA agrees that opportunities for on-site mitigation will be identified and considered during project development. Section 11 of the Draft Coordination Plan will be revised to separate Section 11.2 into subsections for Onsite Mitigation (11.2.1) and EEP (11.2.2). Onsite mitigation options would be identified conceptually in the Draft EIS and in more detail for the Preferred Alternative in the Final EIS.

Section 12: Section 404/401 Permitting

Several permits and approvals, in addition to the 404 and 401, would be required for most of the turnpike projects, including Coastal Area Management Act (CAMA) permits, stormwater management permits, Federal Emergency Management Agency (FEMA) flood zone permits, Coast Guard bridge permits, buffer authorizations, Section 106 consultations, Section 4(f) approvals, and Section 7 consultations. These items will be included in the project-specific Coordination Plans, as applicable.

The permit application process set forth in the draft Coordination Plan will be revised as follows:

- Sections 12.1 (Early Coordination) and 12.2 (Comment Opportunities) will be revised in the project-specific Coordination Plans to include other agencies from which permits will be required.
- Section 12.4 (Filing of Section 404 Permit Application) refers to the "permit application" submitted to USACE along with the Draft EIS that triggers USACE to issue a public notice for the Draft EIS and public hearing. This section will be retitled "Request for Public Notice."
- Section 12.8 (Updated Permit Application and Decision) will be revised to include Section 12.6 (Section 401 Certification by NCDENR), as well as to include other permits and approvals required for a project.
- NCTA will add a section discussing pre-application screening and coordination with permitting agencies, including time for detailed hydraulic design review, which will shorten permit decision time.

A timeline for permitting with regards to design-build construction will be developed in coordination with the agencies.

Project-Specific Coordination Plans

Draft Coordination Plans for Cape Fear Skyway, Mid-Currituck Bridge, and Monroe Connector/Bypass were distributed. Comments on these draft Coordination Plans will be discussed at the January TEAC meetings. Local government coordination sections are in the process of being drafted. NCTA requested feedback on the list of cooperating and participating agencies, and the extent to which divisions of umbrella agencies, such as DENR, should be broken out.

DENR and EPA are indicated in the Project Coordination Plans as cooperating agencies; however, neither DENR nor EPA has traditionally served as a cooperating agency. They will be included as participating agencies.

¹ The agencies request input on the selection of the preferred alternative at a TEAC meeting prior to publication of the Preferred Alternative Report.

² These procedures will be revisited and coordinated with the agencies in cases where a preferred alternative is identified in the Draft EIS.

MEETING MINUTES

Date: December 15, 2006
Time: Spotlight Project - 1:00 pm to 2:15 pm
Place: NCTA Board Room

Purpose: Project Update for Triangle Parkway

Attendees:

Clarence Coleman, FHWA
 George Hoops, FHWA
 John Hennessy, NCDENR Division of Water Quality
 Rob Ridings, NCDENR Division of Water Quality – TPU
 Missy Dickens, NCDOT-PDEA
 Travis Wilson, NCWRC
 Eric Alsmeyer, USACE Raleigh
 Steve DeWitt, NCTA
 Gail Grimes, NCTA
 Jennifer Harris, NCTA
 Bill Malley, Akin Gump
 Jerry McCrain, EcoScience
 Craig Deal, HNTB
 Adin McCann, HNTB
 Jay Bissett, Mulkey
 Johnny Banks, Mulkey
 Cindy Carr, Mulkey
 Bill Hood, Mulkey
 Michelle Fishburne, Mulkey
 Other Agency Representatives – see attendees from morning session

The following items were discussed during the meeting:

Highlights of the last agency coordination meetings held in July and October were reviewed. Based on questions and comments received from the agencies at the July coordination meeting, NCTA met with the USACE and NCDWQ in early October to discuss the McCrimmon Connector. Although the McCrimmon Connector was not officially part of the Triangle Parkway project, the NCTA studied the connection at the request of CAMPO and the Town of Morrisville. Based on traffic and revenue studies, as well as estimates of construction, operation, and maintenance costs, the NCTA has determined that it is not financially feasible to add this connection to the Triangle Parkway project. However, it was noted that the I-540 interchange with Triangle Parkway was designed to accommodate a future connection to McCrimmon Parkway, and the Triangle Parkway will be designed to accommodate a future connector to the McCrimmon Parkway. Decisions made for the Triangle Parkway will not restrict future road design options.

It was noted that Wilbur Smith Associates (WSA) is preparing an investment-grade traffic and revenue study for both the Triangle Parkway and Western Wake Parkway. The study should be completed in June 2007.

CAMPO's long-range transportation plans show the Triangle Parkway as a non-toll facility. CAMPO is amending their plan to show the project as a toll facility. A corresponding air quality conformity update is scheduled to be completed in June 2007. The conformity update will be completed before FHWA signs the final environmental document (which is expected to be Finding of No Significant Impact).

Constraints that affect roadway design such as the CDC building/GSA property, the EPA property, the Keystone

development facilities, and the expansion of Eisai's facilities were discussed. A bridge over Burdens Creek is planned and would likely involve reconstruction of the NC 54 bridge. Improvements at the I-40 interchange with NC 147 may be required. Traffic projections are currently being updated and would be reviewed before decisions are made regarding the I-40/NC 147 interchange. The NCTA is coordinating with FHWA and NCDOT on this issue. Functional designs for these areas are expected to be available for the January 2007 Turnpike Environmental Agency Coordination Meeting. Designs for any required improvements to the interchange are expected to remain within existing ROW limits. Any lane improvements/widening on NC 147 would likely occur in the median. Preliminary reviews of NC 147 identified a stream located within the existing median.

Current functional designs show that the Kit Creek Drive connection to Davis Drive will be cut off by Triangle Parkway. The Town of Morrisville has concerns this will eliminate east-west mobility along Kit Creek Drive. The NCTA is evaluating bridge concepts to maintain the Kit Creek connection to Davis Drive. Based on the initial concepts, no additional stream or wetland impacts are anticipated as result of this grade separated crossing. NCTA will have more information regarding this topic at the January meeting. Access to Davis Drive from Triangle Parkway is provided at the proposed split diamond interchange.

A handout (figure) showing the schematic locations of the proposed toll plaza facilities was provided to attendees. The current toll collection concept for the Triangle Parkway included ramp plazas only and would not create additional stream or wetland impacts. Toll plazas would be located at I-540 ramps and the split diamond interchange ramps for Hopson Road. The NCTA is evaluating the proposed mainline toll plaza location on I-540P to determine if additional wetland impacts would occur.

A revised preliminary impacts table was provided to the attendees. The table includes revised impacts to residential and commercial properties. Jay noted the proposed cloverleaf interchange design at Davis Drive and Hopson Drive creates more impacts than the proposed split diamond interchange design. There are no changes to the stream and wetland impacts as a result of the service roads proposed between the two interchanges in the split diamond interchange concept. The split diamond configuration would reduce and minimize perennial stream impacts, have slightly more intermittent stream impacts, and create the same impacts to non-riparian wetlands as the cloverleaf design. Stream and wetland impacts have been avoided along Burdens Creek by using a bridge to completely span this area. A mainline toll plaza near Burdens Creek was also eliminated to reduce stream and wetland impacts. Stream impacts occur primarily along intermittent streams. Current functional designs reduce impacts to perennial streams. The NCTA is currently evaluating how to connect Jenkins Road to maintain EPA/NIEHS access to the air quality monitoring facility on the north end of the EPA property. The current Jenkins Road bridge over Burdens Creek is expected to be retained and used for this purpose. There will be no takes on EPA property.

Cut and fill slopes will be steepened where possible to reduce potential impacts to streams and wetlands. Consideration will be given to using retaining walls in some areas to reduce impacts.

A draft conceptual stream relocation plan was distributed to appropriate agencies representatives. The draft plan focuses on evaluating the possibility of performing on-site stream relocation and mitigation. The NCTA and NCEEP have discussed the availability of off-site mitigation through the in-lieu fee mitigation program. The NCEEP has sufficient credits available for the Triangle Parkway project in the watershed area. EEP also stated it can provide mitigation credits for the Western Wake parkway.

The NCTA would like to have agency agreement on mitigation strategy prior to the FONSI and permit application. The EA document is scheduled for March 2007, and the FONSI for July 2007. Construction is anticipated in late 2007.

NCWRC noted the highly erodible Triassic Basin soils disadvantage for on-site mitigation would also apply to any parallel stream impacts that would require stream relocation. The erodibility problem would apply to stabilization of relocated streams. The NCTA will keep this in mind as avoidance and minimization measures are implemented during roadway design.

Approximately 2,900 LF of perennial stream and 3,900 LF of perennial stream would potentially be impacted by the Triangle Parkway, but the impacts at NC 147 remained to be determined. The numbers on the impact table do not represent subset impacts for individual streams.

The NCTA would like to proceed with off-site mitigation through the EEP in-lieu fee mitigation program. The NCTA pursued off-site mitigation because of agency concerns presented in previous meetings. The NCDWQ conceded that it is widely known and accepted that Triassic Basin soils are highly erodible. However, Triassic Basin soils should not be used as the only reason to eliminate consideration of on-site mitigation opportunities. This may create the idea that stream mitigation should not be done in Triassic soils and that is not the case.

The NCTA noted that the unstable soils issue is one of many potential concerns. There are concerns about stepping down the stream system to tie-in to existing grade. Other concerns include the fact these are small stream systems, there is an existing sewer line easement, and the wooded buffer that would need to be removed for purposes of construction.

Smaller areas of on-site mitigation would be used where feasible to stabilize impacts at culverts and pipes. These areas could be used to increase mitigation provided on-site by as much as 500 or 1000 LF at each location.

USACE asked if the split diamond design was going to require stream relocation and create relocation impacts and if additional ROW could be purchased or condemned by the NCTA to provide mitigation for these impacts. This question could not be answered during the meeting. Mitigation issues will be discussed at the January meeting, along with updated traffic studies, air quality information, and that an alternative recommendation would be presented for agency consideration.

The NCTA is working with FHWA to determine the need for operational improvements at the NC 147/I-40 interchange. The functional designs and associated impacts will be discussed at the next agency coordination meeting in January.

Toll traffic is expected in January. Preliminary designs will be prepared based on the toll traffic data.

The NCTA will provide an information package with the EA for public notice. The NCTA will coordinate the draft permit application with the USACE prior to the distribution of the EA and the advertisement of the Public Hearing.

MEETING MINUTES

Date: December 15, 2006
Time: Spotlight Project – 2:15 pm to 3:00 pm
Place: NCTA Board Room
Purpose: Project Update for Western Wake Parkway
Attendees:

Participants:
 Clarence Coleman, FHWA
 George Hoops, FHWA
 John Hennessy, NCDWQ
 Rob Ridings, NCDWQ
 Gary Lovering, NCDOT-Roadway Design Unit
 David Chang, NCDOT-Hydraulics Unit
 Leliani Paugh, NCDOT-Natural Environment Unit
 Missy Dickens, NCDOT-PDEA
 Eric Alsmeyer, USACE
 Steve DeVitt, NCTA
 Jim Eden, NCTA
 Gall Grimes, NCTA
 Jennifer Harris, NCTA
 Kristina Miller, ARCADIS
 Martha Register, ARCADIS
 Jerry McCrain, EcoScience Corp
 Donna Keener, HNTB/NCTA GEC
 Tracy Roberts, HNTB/NCTA GEC

Copies:
 All Participants
 Ann Steedly, ARCADIS
 Steve Smallwood, ARCADIS
 Len Hill, ARCADIS
 Tyson Graves, ARCADIS
 Barney O'Quinn, ARCADIS

The following items were discussed during the meeting:

A PowerPoint presentation provided the background, current project status, general information and projected schedule. A copy of the presentation was provided to the participants. More detailed information was included in a project handout also provided to the meeting participants.

A correction was noted on the Preliminary Tolling Locations diagram provided to the participants -The Future Morrisville Parkway, shown on the diagram north of Carpenter-Fire Station Road, should be located to the south of Carpenter-Fire Station Road and the road north of Carpenter-Fire Station Road is actually Amberly Parkway.

NCDWQ requested additional information on planned payment methods, especially regarding through traffic. NCTA described the various types of payment methods currently under consideration (e.g. cash, credit, video license recognition, call ahead, etc., pending available/current technology).

USACE requested additional information on how collecting of tolls would affect traffic flow, acceleration weave/merge conditions, especially in regard to the need for additional or lengthened ramps/lanes. The NCTA noted that traffic flow and potential environmental impacts are being considered in the location of toll plazas.

NCDWQ questioned if the free alternative route required by NCTA enabling legislation requires that the free alternative be the same type of facility as the toll route. NCTA responded that the free alternative facility can be any

parallel route, even if it is not the same type of facility as the proposed toll road. NCDWQ requested clarification whether an ICI (Indirect and Cumulative Impacts) analysis would be prepared for the project prior to permitting. An ICI is underway for the project.

P-Load model is a nutrient overland-flow model (sediment, nitrogen and phosphorus) and not the more commonly seen in-stream flow model. The PLOAD model looks at larger scale modeling which is more suited to this project. NCDWQ also noted that the project schedule which provides three months to process the wetland permit was very optimistic. The public notice, published by the USACE, is followed by a 30-day public comment period. After the comment period is closed and the USACE has responded to the comments, NCDWQ has a 60-day clock to process the permit. NCDWQ requested the NCTA look at their schedule in light of these regulatory response windows and consider allowing more time for permitting.

NCDOT noted a 4C meeting for Section C of the project is planned for April 2007. Additionally, final plans for Section C and preliminary plans for Sections A and B are in preparation.

The Western Wake Parkway project is located entirely within the Cape Fear River basin.

NCDOT noted that the jurisdictional wetland re-verification for the project has identified some wetlands that have increased in size due to beaver activity. NCDOT is proceeding from the hydraulics standpoint with decisions made during the project 4B meeting regarding the use of culverts and bridges. In particular, one wetland has expanded from 250 feet to 400 feet in width and would now likely require a 4-barrel culvert and not a 3-barrel culvert. However, if culverts are not feasible hydraulically, NCDOT will likely bridge the system, but only as wide as necessary to provide for appropriate hydraulic opening. No objections were voiced to this approach.

MEETING MINUTES

Date: December 15, 2006
Time: Spotlight Project – 3:00 pm to 4:15 pm
Place: NCTA Board Room
Purpose: Project Update for the Gaston E-W Connector

Attendees:

Clarence Coleman FHWA
 George Hoops FHWA
 Sarah McBride NCDOT-SHPO
 John Hennessy NCDWQ
 Dewayne Sykes NCDOT-Roadway Design
 Missy Dickens NCDOT-PDEA
 Tony Houser NCDOT-Roadway Design
 David Chang NCDOT-Hydraulics
 Travis Wilson NCWRC
 Maria Chambers NCWRC
 Eric Alsmeyer USACE-Raleigh
 Chris Millscher USEPA
 Marella Buncick USFWS (via phone)
 Steve DeWitt NCTA
 Gail Grimes NCTA
 Jennifer Harris NCTA
 Bill Malley Akin Gump
 Jerry McCrain EcoScience Corp.
 Jeff Dayton HNTB
 Craig Deal HNTB
 Adin McCann HNTB
 Tracy Roberts HNTB
 Whit Webb HNTB
 Jill Gurak PBS&J
 Clint Morgan PBS&J

The following items were discussed during the meeting:

A PowerPoint presentation provided a review of the project history, studies recently completed, studies in progress, and next steps undertaken as part of the Draft Environmental Impact Statement (DEIS) process. More detailed information was included in a project handout also provided to the meeting participants.

Toll scenarios for the Detailed Study Alternatives will be modeled in 2007.

Additional information was requested about the elimination of the "improve" existing alternative from further study. Concurrence Point 2 was achieved by signature of the Review Board in accordance with the Merger 01 elevation procedures. The Review Board consisted of senior managers of NCDOT, FHWA, NCDENR, and USACE. The USFWS, USEPA, and NCWRC elected to abstain from Concurrence Point 2 following the Review Board decision. They provided reasons for their abstention in letters/emails.

Information requested by the Review Board regarding the Improve Existing Roadways Alternatives was provided to the Review Board. This was a new process at the time, and distribution protocols were not established. It was assumed that Review Board members would distribute information as needed to the staff in their agencies. The NCTA will provide the materials given to the Review Board to the agencies.

Turnpike Environmental Agency Coordination Meeting (12/15/06)

Turnpike Environmental Agency Coordination Meeting (12/15/06)

An Alternatives Development and Analysis Report that documents the entire alternatives development process currently is being reviewed and will be distributed to interested agencies representatives upon finalization.

FHWA stated that another reason the Improve Existing Roadways Alternative could be eliminated is that funding is not available to construct the project as a non-toll facility. This can be applied to the purpose and need statement or as a screening factor when considering alternatives. This was guidance provided by FHWA in relation to a project in Colorado.

The historic architecture field work will be completed in early January. The survey report likely submitted to the SHPO in March.

The mussel survey report and protected species report will be submitted to USFWS in early 2009 for concurrence on the findings. The FHWA requests that all correspondence with USFWS be routed through FHWA.

The agencies requested a field review to inspect natural resources. Functional assessments of jurisdictional resources will be included in the NRTR. NCTA will apply the buffer rules on the main stem of the Catawba River and that they apply only to the main stem.

The geotechnical studies will consider the feasibility of either fill or structure across the fly ash basin at the Allen Steam Station. The stability of the fly ash basin material will affect how much fill would be needed or how deep piers would need to be constructed to support a bridge. The bridge over the Catawba River heading westward also needs to clear an active rail line spur (used by the Steam Station) near the west bank of the river between the river and the fly ash basin. Clearance requirements over this railroad track may influence the choice of fill or structure.

A preliminary hydraulics report will be prepared during the preliminary design process on the Detailed Study Alternatives to determine bridging and culvert sizes for major stream crossings needed from a hydraulic standpoint. The NCTA anticipates that a meeting will be held with environmental agencies to review the hydraulic report results as well as the results of the jurisdictional resources surveys.

The DEIS would include a qualitative ICI analysis. A quantitative analysis, if necessary, would be performed for the Preferred Alternative and reported in the FEIS. The Detailed Study Alternatives are relatively close together with similar interchanges, so indirect and cumulative impacts are expected to be similar amongst the Detailed Study Alternatives. The USFWS expressed concern about potential indirect and/or cumulative impacts to bald eagle and to the one small Schweinitz's sunflower population. Indirect and cumulative impacts to protected species will be a part of the ICI.

A question was asked about tolling influence/affect impacts on the local area, and how will toll collection sites be determined and where will they be located. General locations for potential toll collection sites were identified in the Traffic and Revenue Study. These will be considered during the refinements of the Detailed Study Alternatives' designs. Toll collection facilities will be included in the footprints of the Detailed Study Alternatives under toll scenarios.

There are two options for Section 404/401 permitting: one permit with phasing or multiple permits. The NCTA has made no decision regarding this issue on the project. NCDWQ suggested the I-540 project be considered as an example. This project used a phased permit, which was amended as funding became available to construct each section. Time between construction of sections/phases will influence the type of permit used. For example, if there will be 15 years between the construction of sections/phases, then multiple permits may be appropriate.

There is limited corridor protection available at this time. After a Preferred Alternative is identified, a Corridor Protection Map can be filed with Gaston County. However, protection is provided for a three-year period beginning when a subdivision or site plan is filed with the local government. If NCTA does not acquire the right-of-way within three years, the subdivision petition can proceed. NCTA has limited funds for buying right of way not needed for near term construction.

A question was raised regarding staged construction. There are two major north/south routes in southern Gaston County, US 321 and NC 279. The first phase of the project is proposed to be from NC 279 to I-485. The second

phase would extend westward to terminate at US 321, with the third phase ending the project at I-85. The traffic and revenue study would consider these phases in determining financial feasibility.

The NCVRC asked if the Gaston project will continue to follow the Merger 01 process and will a Coordination Plan be created for the Gaston project. A decision regarding the environmental review process to implement for the Gaston East-West Connector has not yet been made.

The January agency meeting will probably include a snapshot review for Gaston. More discussion will follow in February and March when the field surveys for wetlands, streams, bald eagle, historic architecture, and archaeology are complete.

ACTION ITEMS:

- NCTA will provide copies of the materials provided to the Review Board during the Concurrence Point 2 elevation process to the agencies.
- NCTA also will provide copies of the Alternatives Development and Analysis Report to the agencies, after internal NCTA reviews have been completed.
- The FHWA will submit the mussel survey report and protected plant species report to USFWS in early 2007. All correspondence with USFWS be routed through FHWA.
- Functional assessments for jurisdictional resources will be included with the NRTR.



Turnpike Environmental Agency Coordination (TEAC) Meeting - East

- **Participating/Cooperating Agency Letters** – The NCTA anticipates mailing participating/cooperating agencies letters in February. Letters will be sent individual divisions of NCDENR.

Cape Fear Skyway Snapshot

- A brief update of the proposed the Cape Fear River was provided.

Mid-Currituck Bridge Snapshot

- A brief update of the proposed Mid-Currituck Bridge was provided.

Q&A:

When will the purpose and need statement be finalized?

The NCTA plans to finalize the purpose and need statement in spring 2007. The purpose and need may include time savings and hurricane evacuation. Tolls may be included as part of the P&N statement. This project is listed in the NCDOT TIP as a toll project.

What happens if the existing upgrade alternative is selected?

If the upgrade existing roads alternative is selected, the NCTA would return the project to NCDOT. If the bridge alternative is selected with some minor upgrades to existing facilities, it will continue on as a toll project. Economic feasibility could be an issue if the required upgrades to existing facilities are extensive.

When is the traffic and revenue study expected to be completed?

The traffic and revenue study is scheduled for March 2007.

What is the current design year traffic?

The current design year traffic is 2025, with an eventual update to 2035.

Will the effect of sea level rise be accounted for in the design and the description of land use and socio-economic impacts?

East Carolina University is assisting in developing the indirect and cumulative impact section of the DEIS. As a part of that work, they will be charged with simulating reasonably foreseeable future conditions and determining sensitivities that would influence travel behavior, traffic trip generation, and the economic impact of this behavior.

How will the hurricane evacuation study be treated in the new DEIS?

The hurricane evacuation study will focus on clearance times required to evacuate the barrier island population during a major storm event under build and no build conditions. The State goal is 18 hours (from the time an evacuation is ordered until people reach a point of safety). Emergency Management Services goal is generally 24 hours.

Will tolls be suspended during emergency hurricane evacuation conditions?

More than likely the tolls will be taken out during evacuation situations.

Action Items for TEAC Members:

- The NCTA plans to finalize the Section 6002 Coordination Plan Template after the February TEAC meeting. Agencies to provide comments no later than the February TEAC meeting.

Resolutions:

- None

MEETING MINUTES

Date: January 17, 2007

9:00 am to 12:00 pm

NC Turnpike Authority Board Room

Projects: Cape Fear Skyway – TIP No. U-4738; FA No. STP-0017(53)
Mid-Currituck Bridge – TIP No. R-2576; FA No. BRNH-000S(419)
Triangle Parkway - TIP No. U-4763; FA No. NHS-54(7)
Western Wake Freeway – TIP NO. R-2635; FA No. NONE

Attendees:

Donnie Brew, FHWA
George Hoops, FHWA
Cathy Brittingham, NCDENR-DCM
Stephen Lane, NCDENR-DCM
Steve Sollod, NCDENR-DCM
Rob Ridings, NCDENR-DWQ
David Wainwright, NCDENR-DWQ
Wally Bowman, NCDOT-Division 5
Tony Houser, NCDOT-Roadway Design
Dewayne Sykes, NCDOT-Roadway Design
Lonnie Brooks, NCDOT-Structure Design
Travis Wilson, NCDENR-WRC
Bill Biddlecome, USACE (via conference call)
Eric Alsmeyer, USACE
Kathy Matthews, USEPA

Presentation Materials: (Posted on TEAC website)

- December 15, 2006 Draft TEAC meeting minutes
- Revised Draft Section 6002 Coordination Plan Template
- Draft Section 6002 Coordination Plan for Cape Fear Skyway
- Draft Section 6002 Coordination Plan for Mid-Currituck Bridge
- Cape Fear Skyway Status Report
- Mid-Currituck Bridge Status Report

General Topics:

- **Minutes** – December 2006 TEAC meeting minutes scheduled for approval at February 14, 2007 meeting.
- **Draft Section 6002 Coordination Plan Template** – The revised draft template includes the suggested changes from the December 2006 TEAC meeting. Detailed discussion will occur at the February TEAC meeting. The template is scheduled for adoption at the March TEAC meetings.
- **Draft Section 6002 Coordination Plans for NCTA Candidate Projects** –The revised draft plans for Cape Fear Skyway and Mid-Currituck Bridge include the revisions suggested at December 2006 TEAC meeting.

Triangle Parkway Spotlight:

Will the NCTA use natural channel design for those sections of stream that will be relocated, in particular the unnamed tributary to Burdens Creek?
Yes, the NCTA will use natural channel design for the sections of stream that will be relocated.

Additional Attendees:

Jay Bissett, Mulkey
Johnny Banks, Mulkey
Cindy Carr, Mulkey
Wendee Smith, Mulkey
Michelle Fishburne, Mulkey

Presentation Materials: (Posted on TEAC website)

- Year 2011 (opening year) and 2030 (design year) toll traffic forecasts to be used to determine environmental impacts and analyze traffic.
- Western Wake Parkway and Triangle Parkway project map showing location of proposed toll facilities.
- Conceptual Stream Relocation Plan
- List of advantages and disadvantages of stream relocation in the Triangle Parkway study area.
- Slides/Photographs of Burdens Creek and the unnamed tributary, and the stream in the median of NC 147.

General Discussion:

- *Toll traffic forecasts*
 - Approximately 30 percent fewer vehicles would use the toll facility than would use a non-toll facility.
- *Functional/Preliminary Design Plans*
 - The NCTA is evaluating the NC 147/I-40 interchange area and a portion of NC 147 from I-40 to Cornwallis Road to determine capacity improvements needed to accommodate Triangle Parkway traffic.
 - The NCTA evaluated two interchange configurations at Hopson Road/Davis Drive
 - The NCTA does not have a preferred alternative at this time.
- *Natural Resources*
 - The NCTA presented functional designs for Triangle Parkway in the area of Burdens Creek and the unnamed tributary to Burdens Creek.
 - Wetlands and streams along the project corridor have been delineated and approved by the Corp of Engineers (COE) and Division of Water Quality (DWQ).
 - On the southern end of the project, the stream will be relocated on one side of the proposed toll road to create one continuous stream rather than stream fragments on both sides of the roadway.
 - Avoidance and minimization of wetland impacts in the vicinity of the stream will be reviewed in more detail during preliminary design.
 - A stream located in the median of NC 147 was delineated as part of the Triangle Parkway natural systems survey and determined jurisdictional by the COE and DWQ.
 - The NCTA proposes to use the Ecosystem Enhancement Program's "in-lieu" fee program for mitigation of unavoidable wetland and stream impacts.
- *Environmental Document*
 - The NCTA anticipates approval of the Environmental Assessment (EA) in March 2007.

Q & A:

Does the impact table reflect the amount of stream impact (22,867 linear feet) for the entire project corridor?
The first row of numbers in the table are the wetland and stream impacts, both intermittent and perennial, for the entire 1,000 foot wide corridor between I-40 and I-540 (Corridor A). The second and third rows are the impacts associated with the functional designs for the two design options under consideration - a cloverleaf interchange design and a split diamond interchange design. The functional design is avoiding the majority of 22,867 linear feet of stream.

Do the impact calculations consider clearing work beyond the toe of slope?
No, the impact calculations do not consider clearing work beyond the toe of slope.

Will the NCTA use natural channel design for those sections of stream that will be relocated, in particular the unnamed tributary to Burdens Creek?
Yes, the NCTA will use natural channel design for the sections of stream that will be relocated.

Action Items for TEAC Members:

- Comments or concerns regarding wetland or stream impacts.
- Comments regarding a preferred alternative.
- DWQ to submit a list of their issues and concerns regarding use of the EEP "in-lieu" fee program for the Triangle Parkway.
- Recalculate the wetland and stream impacts table to quantify clearing limits that extend 10 feet beyond the toe of slope.
- Conduct additional studies to determine if stream relocation can be avoided; and if not, how much stream relocation is required.
- Prepare functional design for the proposed capacity improvements through the I-40/NC 174 interchange area and along NC 147.
- Conduct capacity analysis for the I-40/NC 147 interchange area based on the build toll forecast.
- Request the COE to place Triangle Parkway on public notice
- Transmit NRTR to appropriate agencies and post on TEAC website.

Resolutions:

- The COE, DCM, WRC, EPA and USFWS agreed that mitigation through EEP "in-lieu" fee program is appropriate for the Triangle Parkway. DWQ deferred comment at this time.
- The COE, DCM, WRC, EPA, USFWS, and DWQ agreed that the split diamond interchange configuration is the preferred alternative.

Western Wake Parkway Spotlight:**Additional Attendees:**

Felix Nwoko, DCHC MPO/Durham
 Len Hill, ARCADIS
 Kristina Miller, ARCADIS
 Martha Register, ARCADIS
 Wally Bowman, NCDOT-Division 5
 Marshall Clawson, NCDOT-Hydraulics
 Rachelle Beauregard, NCDOT-NEU
 Greg Price, NCDOT-NEU
 Brenda Moore, NCDOT-Roadway Design
 Tony Houser, NCDOT-Roadway Design
 Dewayne Sykes, NCDOT-Roadway Design
 Lonnie Brooks, NCDOT-Structure Design
 Clarence Coleman, FHWA
 David Chang, NCDOT-Hydraulics Unit
 Leilani Paugh, NCDOT-NEU
 Missy Dickens, NCDOT-PDEA
 Gary Lovring, NCDOT-Roadway Design

Presentation Materials: (Posted on TEAC website)

- 2030 Build Toll Alternative Traffic Forecast
- Wetland and stream impacts table for the toll and non-toll alternatives
- Toll Alternative key map showing location of toll plazas

General Discussion:

- Public involvement
 - A local officials' meeting will be held at 10 a.m. on February 8, 2007 at the Apex Town Hall, 2nd floor, Council Chambers, 73 Hunter Street, Apex, NC 27502.
 - A Citizens Informational Workshop will be held at the Apex High School Cafeteria, 1501 Laura Duncan Road, Apex, NC 27502, beginning at 5 p.m. and ending at 8:00 p.m.
 - A small group meeting will be held with the Felonsville Community at 6 p.m. on February 15, 2007 at 5836 Old Smithfield Road in Apex, located between NC 55 and NC 55 Bypass, just north of Holly Springs.
- Toll Traffic Forecast
 - Toll traffic forecasts for the Triangle Parkway and Western Wake Parkway differ because the two forecasts were based on different forecasting methodology. The Western Wake Parkway forecast was developed by applying a diversion factor of 30% to 2025 traffic forecasts presented in the FEIS.
- Functional/Preliminary Design
 - Toll plazas are designed to avoid and minimize impacts to natural resources.
 - Concurrence Point 4B is complete for Section C. Concurrence Point 4C is planned for April 2007
 - There are two new bridge sites proposed on Section C: Concurrence Point 4C (one at Jack's Branch and one at Panther Branch, both related to beaver impoundments). These new bridges will lower the wetland impact totals by approximately 5 acres. One bridge will be approximately 200 feet in length; the other will be approximately 260 feet in length. The bridges will not span the entire wetland area
- Natural Systems
 - The NCTANCDOT proposes a "No Effects" call for protected species.
 - Wetland and stream resurveys were reviewed by the USACE in the field on November 30, 2006. Corps provided verbal concurrence.
 - The estimated impacts to ponds, streams, and wetlands for the toll and non-toll alternatives are similar.
 - The NCTA is coordinating with EEP about providing off-site mitigation.

A-31

Q & A:***Do the plans include parking provisions at the toll plazas?***

Parking plans are at a conceptual stage. However, the design will address this need and will avoid and minimize impacts on natural resources to fullest extent practicable.

Are there any on-site mitigation opportunities for this project?

Since most streams are in wooded settings and follow the alignment in a perpendicular fashion; and due to the amount of development encroachment; no on-site opportunities are available.

Are there any on-site mitigation opportunities?

Most streams were in wooded settings and follow the alignment in a perpendicular fashion--and due to the amount of development encroachment--that no on-site opportunities were available.

Action Items for TEAC Members:

- Provide any comments on the wetland and stream impacts by the February TEAC meeting
- Coordinate with the USACE to identify public notice requirements for Western Wake Parkway.
- Provide a copy of the protected species survey report, especially as it relates to Michaux's Sumac, to the USFWS would like to receive a copy of the survey report.
- Incorporate the latest delineation base mapping onto the functional/preliminary design.
- Explain the reason for the large difference between the wetland and stream impacts presented in the FEIS and the findings from the resurvey.

Resolutions:

- The USFWS verbally supported a "no effect" call for Bald Eagle.
- The agencies agreed that the differences between the wetland and stream impacts for the toll and the non-toll alternatives are not significant.



Turnpike Environmental Agency Coordination (TEAC) Meeting

MEETING MINUTES

NOTE: Minutes for the 4C Permit Drawing Review Meeting for the Western Wake Parkway will be posted separately to the TEAC website

Date: April 18, 2007
1:15 pm to 3:00 pm
NC Turnpike Authority Conference Room #G-13-A

Project: TIP R-2576 Mid-Currituck Bridge Study – BRS-000S(35)

Mid-Currituck Bridge Spotlight:

Attendees:

Donnie Brew, FHWA
George Hoops, FHWA
Bill Bidlecome, USACE
Kathy Matthews, USEPA
Gary Jordan, USFWS
Sarah McBride, NCDOT-SHPO
John Hennessy, NCDENR-DWQ
Travis Wilson, NCDENR-WRC
Cathy Brittingham, NCDENR-DCM
Steve Solland, NCDENR-DCM
Jennifer Harris, NCTA

Denise Cauley, NCTA
John Contorti, NCDOT-PDEA
Lonnie Brooks, NCDOT-Structure Design
Craig Deal, HNTB
Anne Redmond, HNTB
Christy Shumate, HNTB
Tracy Roberts, HNTB
Bill Malley, Akin Gump
John Page, PB
Chris Lloyd, PB

Presentation Materials: (Posted on TEAC website)

- Meeting Agenda
- Hurricane Evacuation Need, Handout 1
- Conceptual Alternatives, Handout 2
- Alternatives Screening Criteria, Handout 3

General Discussion:

- **Purpose** - The purpose of the meeting was threefold; first, to provide updates on the results of the hurricane evacuation as an element in the Mid-Currituck Bridge Statement of Purpose and Need, second, to present the conceptual alternatives and third, to provide the first and second tier of alternative screening criteria.
- **Presentation** – An overview of the recently completed PBS&J Hurricane Evacuation Study was provided. This study was discussed at the March 22 NCDOT Interagency Meeting. The results of the study indicate clearance times for evacuation of the Outer Banks along US 158/NC 168 and US 64 exceeded the 18-hour standard for a Category 3 storm with a 75% tourist occupancy rate for both year 2004 and year 2030 on the US 158/NC 168 route and year 2030 for the US 64 route. Conceptual alternatives initiating from the 1998 NCDOT DEIS, including No Build, Non – Highway, Bridge Build, NC 12 Build and US 158 Build

Turnpike Environmental Agency Coordination Meeting – 4/18/07

alternatives, were discussed. Logical combinations of the Build Bridge and Build NC 12/Build US 158 were presented. First Screening criteria to determine the ability of the alternatives to meet the Purpose and Need were provided. Finally, Second Screening criteria to evaluate alternative impacts upon natural, cultural and community resources were presented.

• Hurricane Evacuation

- PBS&J completed a North Carolina coastal hurricane evacuation model and report for NCDOT. The model was used to develop evacuation clearance times for years 2004 and 2030. Clearance time begins with the issuance of the evacuation order and ends when all evacuees reach a point of safety prior to the arrival of gale-force winds. Clearance times were determined for three levels of storm intensity and four levels of tourist occupancy. The state standard as adopted by the North Carolina legislature is 18 hours for a Category 3 storm with a 75% tourist occupancy rate. As noted above, US 158/NC 168 falls to meet this standard in years 2004 and 2030, and US 64 falls in 2030. For US 64 the clearance time is 17.5 hours in 2004 and 26.4 hours in 2030.
- Based on the results of this study, the Statement of Purpose and Need that will be presented at the May TEAC meeting will include a need for this project to facilitate coastal evacuation of the Northern Outer Banks.
- PBS&J will assess the conceptual alternatives for clearance times under 35%, 50%, 75% and 95% tourist occupancy rates for Category 1/2, 3 and 4/5 storms.

• Conceptual Alternatives

- Conceptual alternatives for the project include those previously analyzed in the 1998 DEIS (No-Build, Non-Highway Alternatives, Bridge Build Alternatives). In addition, widening alternatives will be considered for NC 12 and US 158 on the Outer Banks. These alternatives, as well as representative combinations of alternatives that could be considered, are shown in Handout 2 – Conceptual Alternatives.

• Alternatives Screening Process

- A two-level screening process is being proposed. The First Screening will consider whether alternatives are able to meet the project purpose and need. PB is compiling prior traffic technical reports and assessing hurricane evacuation clearance time, level of service, capacity, speed, travel time, delay and congested conditions for existing and 2025 conditions for No Build and Build conditions to assist with this determination. This screening will be used to evaluate broad alternative concepts, not distinguish between options within concepts.
- The Second Screening will be a quantitative screening of impacts upon natural, cultural and community resources.
- **Next Steps Towards DEIS**
 - Complete discussions on Statement of Purpose and Need.
 - Continue discussions on screening process and conceptual alternatives.
 - Begin discussions on preliminary alternatives.

Q&A:

NCDENR-DCM questioned the integration of the USACE's Hurricane Evacuation efforts with the current study. PBS&J provided the technical analysis for both studies with the same technical staff coordinating the two models and reports. The USACE model is used to model current conditions, while the model developed for NCDOT is capable of modeling future conditions.

NCDENR-DWQ and others asked for the geographic extent of the hurricane evacuation population. Related questions included the identity or evacuation origin and destinations, how much of mainland Currituck County was included, what if none of the alternatives can achieve a clearance of 18 hours, will the evacuation consider northbound movement across the NC/VA boundary into Chesapeake, VA. It was agreed that the PBS&J principal who managed the evacuation study would appear next month and address questions such as these.

USEPA questioned the evaluation of Alternatives without closure on the Statement of Purpose & Need.

Turnpike Environmental Agency Coordination Meeting – 4/18/07

A complete Statement of Purpose and Need will be distributed before the May 23 TEAC meeting. The Purpose and Need elements of mobility and congestion were agreed upon during previous NCDOT studies. One revised need is hurricane evacuation. The latest data indicates the existing and 2030 transportation system fails to meet the state mandated standard. Widening alternatives will be evaluated.

NCDENR-DCM asked if an Environmental Features Map will be provided?
Yes, at the next meeting.

NCDENR-DCM requested that wetland impacts be broken down between coastal wetlands and other jurisdictional wetland systems and asked if SAVs will be considered.
Yes, those recommendations will be implemented into the screening process.

Concerns from NCDENR-DWQ, NCDENR-WRC, NCDENR-DCM and others were expressed regarding the tiered screening process and potential premature elimination of alternatives that only partially meet the Statement of Purpose and Need.

NCTA plans to present the qualitative and quantitative screening results at the next meeting. It is anticipated that only non-highway alternatives will be eliminated during the First Screening, and Second Screening impacts will be presented for all other alternatives.

What is planned for the next TEAC meeting?

Next month's TEAC meeting (May 23) is expected to be a spotlight for Currituck with a presentation of the results of purpose and need and the alternatives screening material. NCDENR-DCM, NCDENR-WRC, and USFWS indicated that they are not available to meet on May 23 and suggested the meeting be rescheduled.

Previous Action Items:

- None

New Action Items:

- NCTA to provide information packages for the project sufficiently early to allow TEAC members the opportunity to fully review the information before the May TEAC meeting.

Resolutions:

- The TEAC endorsed the inclusion of hurricane evacuation in the Statement of Purpose and Need.

Date: April 18, 2007
3:00 pm to 4:20 pm
NC Turnpike Authority Conference Room #G-13-A

Project: TIP R-3329 Monroe Connector – NHF-74(21)
TIP R-2559 Monroe Bypass – NHF-74(6)

Monroe Connector / Bypass Spotlight:

Additional Attendees:
Rob Ayers, FHWA
Steve Lund, USACE (via phone)
Marella Buncick, USFWS
Polly Lespinasse, NCDENR-DWQ (via phone)
Maria Chambers, NCDENR-WRC
Jill Gurak, PBS&J
Lauren Wolfe, PBS&J
Carl Gibliaro, PBS&J (via phone)

Presentation Materials: (Posted on TEAC website)

- Meeting Agenda
- Purpose and Need Handout (including Draft Responses to Agency Comments on Preliminary Purpose and Need Statement, Draft Preliminary Purpose and Need Statement, NCDENR-DWQ comments on Preliminary Purpose and Need Statement)
- Draft Screening Criteria

General Discussion:

- **Minutes** – No comments have been received on the March 22, 2007 minutes. Any comments on these minutes should be submitted as soon as possible, otherwise the minutes will be finalized and reposted to the TEAC website.
- **Purpose** - The purpose of the meeting was to complete discussions on purpose and need; have further discussions on the alternatives screening process; and introduce proposed conceptual alternatives.
- **Presentation** – No formal presentation was made. The meeting consisted of an open discussion of agency comments on the Preliminary Purpose and Need Statement and NCTA's responses and a continued discussion on alternative screening criteria.
- **Preliminary Purpose and Need Statement** – Comments on the Preliminary Purpose and Need Statement were received from NCDENR-DWQ in a letter dated April 5, 2007, and responses were prepared by NCTA. These comments and responses were included in the project meeting materials packet provided to the attendees. After some discussion, it was decided to discontinue the discussion until all agencies have a chance to review the information outside of the TEAC meeting. Points to consider when reviewing the responses include:
 - o Improving existing roadways will be considered as high speed roadways
 - o Improving existing roadways and combinations of improving existing / new location alternatives will be considered

There was a general discussion about including consistency with the Mecklenburg-Union Metropolitan Planning Organization's Long Range Transportation Plan (LRTP) in the Preliminary Purpose and Need Statement. There was concern that because the LRTP shows a specific alignment for the proposed facility, the terminology "consistent with" the LRTP would limit the project to that alignment. NCTA indicated that the consistency with the LRTP would be considered for facility type and purpose, particularly with regards to air quality conformity.

- **Alternative Screening Criteria** – Input from the agencies was requested as the alternatives screening criteria are developed and implemented. Screening will be a three phase process. The first phase will look at required alternative concepts and their ability to meet the Purpose and Need. Alternative concepts moving forward from this phase will proceed to the second phase and be preliminary study alternatives. Known constraints for these will be assessed before proceeding to the third phase or quantitative analysis.

The quantitative analysis will consist of evaluation criteria similar to what has been presented in the past as part of the merger process.

An overall concern regarding the first phase of the qualitative criteria was that there did not appear to be sufficient definition to determine if a concept "is consistent with state or local plans". Narratives describing how concepts meet or do not meet components of the Preliminary Purpose and Need Statement will be prepared by NCTA to provide additional information.

Q&A:

When will the Purpose and Need Statement Report be available?

The Purpose and Need Statement Report will be completed over the next several months as the traffic forecasts are ready. Given the extensive history on this project, NCTA feels comfortable moving forward with the Preliminary Purpose and Need Statement while detailed studies and data are gathered to further substantiate the statement.

Are you planning on holding public workshops before the Purpose and Need Statement Report is complete?
NCTA anticipates holding public workshops in June in the project area. These workshops will be for public scoping. The study area, Preliminary Purpose and Need Statement, and conceptual alternatives will be presented.

What does NCTA expect from the agencies before the public workshops with respect to Preliminary Purpose and Need?
As noted by USFWS, this project has a long history and NCTA needs to demonstrate progress on the study. NCTA agrees with the USFWS.

How do you provide qualitative analyses on a broad alternative concept? Are there screening criteria that can be used to measure how well concepts meet purpose and need?
NCTA will prepare narrative discussions on the ability for each concept to meet each element of purpose and need. Alternative concepts that do not meet any of these elements will not be carried forward for further consideration; however, those that meet some of the elements will be evaluated in the second level screening. Purpose and need will only be used to screen alternative concepts (i.e. TDM, TSM, Mass Transit, etc.); it will not be used to screen alternate alignments or options within a concept.

Can the number of toll collection sites be incorporated into the screening?

Toll collection sites will not be unique to any one build alternative. They will likely be similar across all alternatives. Potential impacts from the toll collection site footprint will be included in quantitative analyses, and NCTA will consider adding a row for "Number of Toll Collection Sites" to the table of quantitative GIS analysis.

Previous Action Items:

- NCTA will add verbal comments received on the project study area and Preliminary Draft Purpose and Need Statement in the comment/response tables.
These comments were added and are reflected in the revised versions of these tables posted on the TEAC website for April 18.
- NCTA will distribute revised comment/response tables by April 4th.
- Revised tables were posted to the TEAC website on April 4th.
- Agencies provide comments on Draft Screening Process for Alternatives by April 13th.
- No comments on the Draft Screening Process were received prior to this meeting.

New Action Items:

- Agencies will review all new and revised responses to comments received on the Draft Preliminary Purpose and Need Statement by May 2, 2007 and provide comments to NCTA.
- Agencies will provide comments on Draft Screening Criteria by May 2, 2007.
- NCTA will present first and second level screening results at the May 17th TEAC meeting.

Resolutions:

- None.

Date: April 18, 2007
4:20 pm to 5:00 pm
NC Turnpike Authority Conference Room #G-13-A

Section 6002 Draft Coordination Plan Template:

Attendees:

Donnie Brew, FHWA
George Hoops, FHWA
Bill Biddlecome, USACE
Kathy Matthews, USEPA
Marella Bunick, USFWS
John Hennessy, NCDENR-DWQ
Cathy Brittingham, NCDENR-DCM
Steve Soldad, NCDENR-DCM
Maria Chambers, NCDENR-WRC

Travis Wilson, NCDENR-WRC
Bill Malley, Akin Gump
Jennifer Harris, NCTA
John Conforti, NCDOT-PDEA
Craig Deal, HNTB
Anne Redmond, HNTB
Tracy Roberts, HNTB
Christy Shumate, HNTB

Presentation Materials: (Posted on TEAC website)

- USACE Comments on Draft Coordination Plan (January 30, 2007)
- USEPA Comments on Draft Coordination Plan (February 13, 2007)
- NCDENR-DCM Comments on Draft Coordination Plan (March 1, 2007)
- NCDENR-WRC Comments on Draft Coordination Plan (March 1, 2007)
- NCDOT-SHO Comments on Draft Coordination Plan (February 21, 2007)
- NCTA Response to USACE comments on Draft Coordination Plan
- NCTA Response to other agency comments on Draft Coordination Plan
- Revised Draft Section 6002 Coordination Plan Template (changes highlighted)
- Revised Draft Section 6002 Coordination Plan Template (changes accepted)

General Discussion:

Four primary areas of the plan were discussed:

- Section 6.4 Issues of Concern**
The distinction between Issues of Concern and General Project Issues was provided. An issue of concern, as defined in SAFETEA-LU, would be an issue in the agency's opinion that could result in denial or significant delay in issuing a permit, while a general project issue is a routine comment that could be raised at any time. Issues of concern may be brought up by any agency at any point in the process but should be as early as practicable based on available information. In addition, NCTA may ask at any point that agencies identify issues of concern. Issues of concern should be documented in writing within 30 days of a request unless a longer time frame is agreed upon.

NCTA will maintain a list of general project issues and issues of concern and their status of whether they are resolved or pending (Section 6.5 Monitoring and Updating).

- Section 6.7 Resolving Issues of Concern**
If necessary, NCTA or the Governor may request a meeting to resolve issues of concern. This would only be used for "red flag" issues and resolution must be reached within 30 days of the meeting.

General project issues that have not been resolved during the TEAC meetings can be elevated to senior officials within an agency. Elevation can be invoked by any TEAC member. TEAC members are to identify senior officials within their agency who would be involved in the elevation process.

- Section 12.2 Comment Opportunities**

Agencies are encouraged to provide comments on agency letterhead, especially when raising issues of concern. However, all written comments submitted by agencies, including comments submitted by email, will be accepted and considered in decision-making.

The coordination plan template will be revised to clarify that verbal comments submitted at TEAC meetings will also be accepted.

Section 5.4 Meeting Materials

- NCTA's goal is to post the agenda and materials at least two weeks in advance of TEAC meetings. In some cases, materials will be provided less than two weeks in advance, or will be circulated in the TEAC meeting. NCTA will not seek to resolve issues or obtain final agency comments on materials that the agencies received less than two weeks in advance of the meeting.

NCTA will provide paper copies of all materials at each TEAC meeting, in addition to posting materials on the TEAC website. Large documents that would be difficult for agencies to reproduce will also be made available in hard copy.

The Coordination Plan template is nearing completion, pending incorporation of any remaining comments received from the agencies by May 2, 2007. Both NCTA, and the agencies agreed that it is time to advance to the project-specific coordination plans.

Q&A:

Are NCTA and FHWA comfortable with the revised coordination plan?

Yes, NCTA and FHWA feel that the coordination plan addresses all major topics.

Previous Action Items:

- Agencies to provide comments on draft Section 6002 Coordination Plan template and project specific coordination plans by March 1, 2007.
- Comments were received from USACE, USEPA, NCDENR-DCM, NCDENR-WRC, and NCDOR-SHPO. NCTA will revise and circulate the revised Section 6002 Coordination Plan template via e-mail, based on the agencies' comments.
- The plan was revised and circulated via email for review following the February 14th TEAC meeting. Paper copies were distributed at the April 18th TEAC meeting.

New Action Items:

- NCTA will revise the Coordination Plan template to state that verbal comments made by TEAC members will also be accepted and considered by NCTA.
- Agencies to provide any remaining comments on the Coordination Plan template by May 2, 2007.

Resolutions:

- Agencies expressed general satisfaction with the plan.
- NCTA will move forward with development of the project-specific coordination plans in consultation with FHWA and the TEAC members.



Turnpike Environmental Agency Coordination (TEAC) Meeting – East

MEETING MINUTES

Date: May 23, 2007
9:00 am to Noon
NC Turnpike Authority Board Room

Project: TIP R-2576 Mid-Currituck Bridge Study - BRS-000S(35)

Mid-Currituck Bridge Spotlight:

Attendees:

- Rob Avers, FHWA
- George Hoops, FHWA
- Bill Biddecome, USACE
- Scott McLendon, USACE
- Kathy Matthews, USEPA
- Chris Millscher, USEPA
- John Hennessy, NCDWQ
- David Wainwright, NCDWQ
- Missy Dickens, NCDOT - PDEA
- Jennifer Harris, NCTA
- Denise Cauley, NCTA
- Craig Deal, HNTB
- Anne Redmond, HNTB
- Christy Shumate, HNTB
- John Page, PB
- Chris Lloyd, PB
- Mike Fendrick, PB
- Don Lewis, PBS&J
- Sam Cooper, CZR
- Jens Geratz, EcoScience

Presentation Materials: (Posted on TEAC website)

- Meeting Agenda
- Statement of Purpose & Need Handout
- Analysis of Conceptual Alternatives Handout
- Draft Section 6002 Project Coordination Plan Handout
- April 18, 2007 TEAC Meeting Minutes

General Discussion:

- **Purpose** – The purpose of the meeting was to discuss the statement of purpose and need, conceptual alternatives, and the analysis of conceptual alternatives.
- **Statement of Purpose & Need** – There are three elements of the Mid-Currituck Bridge Statement of Purpose and Need: 1) **improve traffic flow** on US 158 and NC 12; 2) **reduce travel time** for travel between the Currituck County mainland and the Currituck County Outer Banks; and 3) **facilitate coastal evacuation** for users of US 158 and NC 168.
 - o *Need to improve traffic flow on the project area's thoroughfares (US 158 and NC 12)*
There are two minor differences between the proposed statement of purpose and need and the statement the NCDOT Merger Team concurred upon in August 2003. These are the identification of US 158 and NC 12 as the project area's thoroughfares and eliminating the reference to the summer weekday peak travel periods, which reflects the desire not to disregard the summer weekend congestion when assessing alternatives. Deficiencies were presented in terms of level of service (LOS), volume to capacity ratios (V/C), and length of peak demand period. It was noted that LOS ratings of F dominate much of the NC 12 and US 158 roadway links in 2025 for weekday and weekend periods.
 - o *Need to reduce travel time for persons traveling between the Currituck County mainland and the Currituck County Outer Banks.*
This need statement has not been changed from the statement of purpose and need concurred upon in August 2003. However, additional travel time runs were completed and the effects of intersection delay were incorporated through application of the Synchro traffic simulation program. This information is now included in the statement of purpose and need report. Travel time for outbound trips (from Currituck County Outer Banks to Currituck County mainland) during the summer weekday will increase 48 percent, and inbound trips (from Currituck County mainland to Currituck County Outer Banks) will increase 68 percent by 2025. During the summer weekend condition, the same outbound and inbound trips will increase 130 percent and 138 percent respectively by 2025. The majority of the delay will occur in Dare County in the Duck and Southern Shores areas of NC 12.
 - o *Need to facilitate coastal evacuation for residents and visitors using US 158 and NC 168 as an evacuation route.*
This need statement was modified from that included in the 2003 statement by removing the caveat related to providing empirical evidence in support of the need, as the hurricane evacuation study completed by NCDOT demonstrates a clear need for improved emergency evacuation in this area. Additionally, for clarification, the statement was revised from "evacuation of the northern Outer Banks," to specify the evacuation routes (US 158 and NC 168). This change was made because there were questions regarding the extent of the hurricane evacuation need to be included in this project. The current clearance time for these routes for the 2030 No-Build condition, assuming a 75 percent rental occupancy rate, a category 3 storm, and that other area TIP projects are in place is just under 36 hours. The state legislature has set an 18 hour clearance time (defined as the length of time from the issuance of an evacuation order until all evacuees reach a point of safety) as the benchmark for safely evacuating the coastal areas. The assumed point of safety is I-95 for travelers evacuating on US 158. For those using NC 168 into Virginia, it is assumed that they will reach a point of safety in the same time as those using US 158. Enhancements to the US Army Corps of Engineers' statewide hurricane evacuation model for this project, including added current land use data, traffic detail at intersections, and results from permanent traffic count stations in the region.
- **Alternatives** – The contents of the analysis of conceptual alternatives handout were reviewed. Meeting participants were encouraged to review discussions related to the non-highway improvement alternatives (ferry service, transit, and shifting rental times) on their own and get back to the NCTA with comments or questions.

Five highway improvement alternatives were developed that best represent the range of available alternatives for consideration to determine detailed study alternatives. Two of the five (ER1 and ER2) are non-bridge alternatives involving improvements to US 158 and NC 12. The difference between ER1 and ER2 is the 4-lane versus 3-lane improvements to NC 12 in Dare County. The remaining three alternatives (MCB1, MCB2, and MCB3) are various combinations of highway improvements to US 158 and NC 12 with a new 4-lane Mid-Currituck Bridge. The improve existing roadway components are the same for MCB1 and ER1, with the only difference being the inclusion of a bridge with MCB1. Likewise, MCB2 is the same as ER2 with the addition of the bridge. MCB3 is the bridge only with limited improvements to NC 12 and US 158. All alternatives include varying improvements to US 158 in Currituck County to facilitate hurricane evacuation.

Six bridge corridor alternatives (C1 through C6) are being evaluated comprised of two termini on the Outer Banks and three termini on the mainland. The general area for the six bridge locations was determined in the studies for the 1998 DEIS. These corridors were refined for the current studies to account for current land use and development.

- **Section 6002 Project Coordination Plan** – The current template Draft Section 6002 Project Coordination Plan was updated to include project-specific information for the Mid-Currituck Bridge project. Agencies were asked to review the project-specific plan and provide comments. Once comments are received and addressed, the plan will be submitted to FHWA for approval.

Q&A:

NCDENR-DWQ asked if evacuation times for the No-Build Alternative incorporated lane reversal (contraflow) on US 158.

Reversible lanes were considered in the evaluation of highway improvement alternatives for the Build Alternative. They were not included in the No-Build Alternative clearance time because reversible lanes are not a current or planned component of an evacuation plan for this area. Implementation of contraflow would require at a minimum some operational actions.

FHWA asked if a 4-lane bridge had similar characteristics to a 3-lane bridge.
In terms of travel characteristics, a three-lane bridge would operate in a manner similar to a four-lane bridge on the summer weekend when the center lane could be reversed. A three-lane bridge would operate in a manner similar to a two-lane bridge on summer weekdays when the center lane would not be reversed because directional flows would be similar.

USEPA asked how bridge termini were determined on the Outer Banks.
The analysis was conducted in 1993 (NCDOT official map study selected the southern termini at Albacore Street) and 1995 (northern termini)—as a part of alternatives studies for the 1998 DEIS prepared by NCDOT). Environmentally, the termini were located based physical constraints such as wetlands, marsh islands, and communities.

USACE asked if the designs for the widening on NC 12 was to one side of NC 12 in the 4-lane widening options or if the side of the road varied to reduce impacts.
The widening was moved or shifted from one side of the road to the other to minimize impacts to the extent practical while meeting geometric design criteria.

NCDENR-DWQ questioned the travel times for ER1 versus MCB1.
In this case, travel time benefits are similar because congestion levels on NC 12 and US 158 are notably different between the two alternatives only on the summer weekend along US 158 in Currituck County. The most notable savings are for those using the Mid-Currituck Bridge. With MCB1, travel times using the Wright Memorial Bridge are decreased as some traffic is diverted to the new bridge.

NCDENR-DWQ observed there was not a substantive difference in hurricane evacuation times for the MCB alternatives compared to the ER alternatives in Table 3.
This is true. The controlling roadway segments for determining hurricane evacuation times are US 158 and NC 168 in Currituck County; therefore, improvements to NC 12 on the Outer Banks or addition of a Mid-

Currituck Bridge would not impact clearance times. Construction of a Mid-Currituck Bridge would reduce the length of improvements required to improve hurricane evacuation times on US 158 (from approximately 25 miles to 5 miles).

USEPA suggested enhanced ferry operations or a combination of ferry operations with improvements to existing roadways should be considered in lieu of a bridge.

The team agreed to provide additional information related to the ferry alternative prior to the next TEAC meeting.

USACE questioned the removal of the "summer weekday" from the first need statement in the purpose and need.

In traffic planning, projects are not designed to accommodate the worst case scenario. For example, the 30th highest hour of traffic volume is commonly used in urban areas as the "design hourly volume" or the future volumes for which one designs a road improvement. For this project, traffic studies revealed that the summer weekday peak period traffic volume most closely represents the typical design hourly volume. However, we have recognized throughout this project that there is a substantial congestion problem on the summer weekend that, based on current traffic findings, will last 10 to 14 hours per day. Thus, we have continued to generate traffic statistics for both the summer weekday and the summer weekend and continue to believe it is appropriate to consider both summer weekday and weekend travel benefits in our decision making. The change in the need statement affirms the relevance of the summer weekend data. Examining both allows us to perhaps make a decision that an alternative with notable reductions in both summer weekday and summer weekend congestion has as much merit as an alternative that eliminates summer weekday congestion while having only minimal reductions in summer weekend congestion.

USEPA observed that none of the build alternatives meet the 18 hour legislative hurricane clearance time goal. True, but all alternatives reduce the clearance time by 8.9 to 14.5 hours (25 percent to 40 percent) over the No-Build Alternative. The 18 hour clearance time set by the legislature is a goal rather than a policy.

USEPA and NCDENR-DWQ inquired about the criteria used to locate the interchange and toll booth at the bridge terminus on US 158, noting that it appears to have impacts to wetlands.

The functional designs for the US 158 interchange and toll collection plaza with the Mid-Currituck Bridge were developed to keep these improvements on upland as much as possible. The designs will be refined during preliminary design to further avoid and minimize impacts.

USEPA and NCDENR-DWQ asked if additional bridge locations north or south of the current corridors were considered.

The alternatives studies completed in 1995 considered corridors further north and further south. The results of these studies were summarized in the 1998 DEIS. Several factors limit placement of a bridge further north, including desire not to build a new high level bridge across the Intracoastal Waterway and NC 12's termination point on the Outer Banks. The location of marsh islands in the sound, potential neighborhood fragmentation, the presence of the Pine Island Wildlife Refuge, and the need to divert traffic from NC 12 limited placement options further south. NCTA will post the alternatives analysis from the earlier studies on the TEAC website and will discuss the elimination of additional bridge locations at the June TEAC meeting.

NCDENR-DWQ asked how permits would be handled if only the bridge can be built by the NCTA and the road improvements were funded later by the MCDOT or others?

The project is being proposed as one action. NCTA will coordinate with the NCDOT to ensure that project elements among and between the roadway and bridge components can be funded.

What about the next TEAC meeting?

Next month's TEAC meeting is expected to be a spotlight for Currituck to conclude discussion on the Statement of Purpose and Need and to decide which alternatives to advance into detailed studies.

Previous Action Items:

- NCTA to forward information packages on Currituck sufficiently early to allow TEAC members a full review. The Statement of Purpose and Need was distributed two weeks in advance of the TEAC members.

New Action Items:

- Agencies will provide comments on statement of purpose and need by June 6, 2007.
- Agencies will provide comments on conceptual alternatives and analysis of conceptual alternatives by June 6, 2007.
- Agencies will provide comments on project-specific Draft Section 6002 Project Coordination Plan by June 6, 2007.
- NCTA will provide additional information on the selection of the bridge corridor locations.
- NCTA will provide additional information on the ferry alternative.

Resolutions:

- None

MEETING MINUTES

Date: May 31, 2007
 9:30 am to Noon
 NC Turnpike Authority Board Room

Project: TIP R-2576 Mid-Currituck Bridge Study – BRS-000S(35)

Mid-Currituck Bridge Spotlight:

Attendees:

- Donnie Brew, FHWA
- George Hoops, FHWA
- Gary Jordan, USFWS
- Sarah McBride, NCDOT-SHPO
- Travis Wilson, NCDENR-WRC
- Cathy Brittingham, NCDENR-DCM
- Jim Hoadley, NCDENR-DCM
- Jennifer Harris, NCTA
- Craig Deal, HNTB
- Anne Redmond, HNTB
- Christy Shumate, HNTB
- John Page, PB
- Martena Everett, PB
- Mike Fendrick, PB
- Chris Lloyd, PB (via phone)

Presentation Materials: (Posted on TEAC website)

- Meeting Agenda
- Statement of Purpose & Need Handout
- Analysis of Conceptual Alternatives Handout
- Draft Section 6002 Project Coordination Plan Handout
- April 18, 2007 TEAC Meeting Minutes

General Discussion: This meeting was a repeat of the May 23 TEAC meeting to provide an opportunity for agency representatives that could not attend the May 23 meeting to discuss the Statement of Purpose and Need, conceptual alternatives, and analysis of conceptual alternatives. The presentation was the same as that described in the minutes of the May 23 TEAC meeting. Additional discussion and questions are noted below.

Q&A:

NCDENR-DCM asked what is considered to be the point of safety for evacuees.
 I-95 is generally considered as the point of safety. This applies to people evacuating via US 158. For those evacuating via NC 168, the point of safety is a location in Virginia that would be reached in a similar amount of time.

NCDOT-SHPO asked if improvements to I-95 would be required, since I-95 is the designated point of safety.
 No improvements are proposed on I-95 in association with hurricane evacuation. I-95 is the point where it is assumed that evacuees are out of harms way and clearance is no longer an issue for transportation planning purposes.

NCDOT-SHPO questioned the study area related to hurricane evacuation.
 The study area for the model includes all the counties east of I-95. Improvements in the Mid-Currituck Bridge study area shown in the handouts will be effective in reducing hurricane clearance times via US 158 and NC 168. Additional improvements are not needed outside that area to improve clearance times for this route.

USFWS suggested a field inspection of the alternatives.
 NCTA agreed and a field meeting is anticipated for July 10, 2007.

NCDENR-DCM asked why alternative bridge corridors further south are not being considered.
 An alternative further south was assessed in the 1998 DEIS and not carried forward as a detailed study alternative. The 1998 DEIS includes the findings of that assessment. Bridge corridors in Dare County have never been considered. Reasons for this include community impacts in the heavily developed Dare County Outer Banks, the narrow NC 12 right-of-way (60 feet), and the project's definition as a bridge serving the Currituck County Outer Banks. NCTA will post the alternatives analysis from the earlier studies on the TEAC website and will discuss the elimination of additional bridge locations at the June TEAC meeting.

SHPO inquired about whether reversible lanes or contraflow was considered.
 Reversible lanes are considered to improve hurricane clearance times as part of the highway improvement alternatives. Additionally, a reversible center lane on a three-lane Mid-Currituck Bridge is being considered. It would be effective on summer weekends when a distinct AM and PM directional split occurs.

USFWS asked how realistic it was to consider the alternative with four lanes on NC 12 in Dare County (ER1 and MCB1), especially with the high volume (180 displacements) of community/social impacts and how this alternative would affect the issue of congestion.
 We are looking at congestion issues holistically, in terms of how much congestion we would leave in the system with each alternative. This very issue led to the consideration of alternatives ER2 and MCB2, which do not include four lanes in Dare County on NC 12.

NCDENR-DCM asked about the availability of water and sewer service in the project area.
 In 1998, Currituck County conducted a study to identify how new water sources would be determined. They built a reverse osmosis plant, which will meet the need for water for planned Currituck County Outer Banks development. Sewer service is provided by package treatment plants.

USFWS asked if there is any colonial water bird usage of the marsh island crossed by bridge corridor C3.
 NCTA and NCDWQ-WRC will both look into this issue and provide an answer at or before the next TEAC meeting.

NCDENR-WRC asked if all five highway improvement alternatives were acceptable based on purpose and need and cost, without considering the human/environmental impacts.
 There is a large amount of data to consider and the NCTA is still in the process of analyzing the data.

NCDENR-WRC asked if it has been determined whether all of the alternatives are feasible from the perspective of affordability.
 The NCTA is looking at alternatives for financing the project including revenue bond financing, TIFIA loans, or public/private partnerships. The bridge has the opportunity to be tolled. Alternatives that do not include a bridge cannot generate toll revenue because tolls can't be placed on existing facilities. With a public/private partnership, it could be possible to finance some NC 12 and US 158 improvements, as well as the bridge. Affordability will be considered during alternatives screening in the selection of detailed study alternatives.

NCDENR-WRC asked how permits would be handled if only the bridge can be built by the NCTA and the road improvements were funded later by the NCDOT.
 The project is being proposed as one action. NCTA will coordinate with the NCDOT to ensure that project elements among and between the roadway and bridge components will be effectively programmed and phased.

NCDENR-DCM asked if NCTA is subject to the equity formula.
 Money funded by NCDOT (that comes from the TIP) would be subjected to the equity formula. Financing from other sources, including revenue bonds, federal loans, or public/private partnerships, would not be subject to the equity formula.

FHWA inquired about how the wetland impacts in Table 6 of the handout were calculated.

The average wetland impacts of the six bridge corridors was used for the bridge corridor component.

NCDENR-DCM inquired how the bridge termini on the Outer Banks were selected.

The analysis was conducted in 1993 (NCDOT official map study selected the southern termini at Albacore Street) and 1995 (northern termini —as a part of alternatives studies for the 1998 DEIS prepared by NCDOT). Environmentally, the termini were selected based physical constraints such as wetlands, marsh island, and communities.

The question was raised about the travel times for the five highway improvement alternatives.

For specific segment origins and destinations the differences are not dramatic, but on a system wide or network basis the collective travel time savings difference is notable.

NCDENR-DCM asked if SAV had been mapped in the project area and if NCDENR-DMF or NMFS had been coordinated with.

USACE will be completing a bathymetric survey of the project area in June and will identify potential SAV locations in a report due this summer. NCDOT-Photogrammetry will provide aerial photography of the study area, and NCDOT-NEU will field check USACE and aerial maps. Based on recent studies completed by Elizabeth City State University, SAV in this area is concentrated along the shorelines. NCDENR-DMF and NMFS received copies of the Statement of Purpose and Need and the analysis of conceptual alternatives, and NCTA intends to contact representatives of those agencies directly to engage them in the study.

What about the next TEAC meeting?

Next month's TEAC meeting is expected to be a spotlight for Currituck to conclude discussion the Statement of Purpose and Need and to decide which highway improvement alternatives to advance into detailed studies. A decision on which bridge corridors to carry forward will not be finalized until after the field trip. Agencies requested that this project be discussed in the morning at the June 20 TEAC meeting.

Previous Action Items:

- NCTA to forward information packages on Currituck sufficiently early to allow TEAC members a full review. *The Statement of Purpose and Need was distributed two weeks in advance of the TEAC members.*

New Action Items:

- Agencies will provide comments on statement of purpose and need by June 13, 2007.
- Agencies will provide comments on conceptual alternatives and analysis of conceptual alternatives by June 13, 2007.
- Agencies will provide comments on project-specific Draft Section 6002 Project Coordination Plan by June 13, 2007.
- Agencies will provide availability and preferred dates for the field visit as soon as possible.
- NCTA will provide copies of the environmental constraints mapping for agency use in commenting on alternatives.
- NCTA will provide additional information on the selection of the bridge corridor locations.
- NCTA will provide additional information on the ferry alternative.
- NCTA and NCDENR-WRC will look into the use of marsh islands in Currituck Sound by colonial birds.
- NCTA will contact NCDENR-DMF and NMFS to update them on the project.

Resolutions:

- None



Turnpike Environmental Agency Coordination (TEAC) Meeting

MEETING MINUTES

Date: June 20, 2007
9:00 AM to Noon
NC Turnpike Authority Office Building Ground Floor Conference Room (G-13)

Project: TIP R-2576 Mid-Currituck Bridge -BRS-000S(35)

Mid-Currituck Bridge Spotlight:

Attendees:

Donnie Brew, FHWA
George Hoops, FHWA
Bill Biddlecome, USACE
Kathy Matthews, USEPA
Gary Jordan, USFWS
Ron Sechler, NMFS
Cathy Brittingham, NCDENR-DCM
Jim Hoadley, NCDENR-DCM
David Wainwright, NCDENR-DWQ
Travis Wilson, NCDENR-WFC
Sarah McBride, NCDCR-HPO
Jennifer Harris, NCTA
Denise Cauley, NCTA
Dewayne Sykes, NCDOT
Craig Deal, HNTB
Anne Redmond, HNTB
Christy Shumate, HNTB
John Page, PB
Chris Lloyd, PB
Mike Fendrick, PB

Presentation Materials: (Posted on TEAC website)

- Meeting Agenda
- Handouts # 5 (Highway Improvement Alternatives Comparison), 6 (1995 Comparison of Bridge Alternatives), & 7 (Response to Agency Comments May 23 to June 12, 2007)
- Draft Section 6002 Project Coordination Plan
- July 10, 2007 Field Review Information

General Discussion:

- **Purpose** - The purpose of the meeting was to address and finalize comments and concerns on project purpose and need, provide additional data and answer questions regarding alternatives, distribute another draft of the Section 6002 Project Coordination Plan, and to provide logistical and preparatory information regarding the July 10th field review.

- **Purpose & Need** – There are three elements of the Mid-Currituck Bridge Statement of Purpose and Need: **improve traffic flow** on US 158 and NC 12, **reduce travel time** for travel between the Currituck mainland and the Outer Banks and **facilitate coastal evacuation** for users of US 158 and NC 168. USAACE expressed concern about the consideration of both summer weekday and summer weekend traffic flow conditions (see Handout #7, Meeting Comment #4). That concern related to whether or not such an assumption would automatically preclude road widening alternatives. The issue was left open until after the discussion of how traffic flow was addressed in the alternatives comparison. After the alternatives discussion, the USAACE agreed with the wording as proposed by the NCTA.
- **Non-Highway Improvement Alternatives Follow up** – Additional information related to a ferry alternative was provided in Handout #7, including ferry service operational, environmental and capital cost comparisons to achieve a level of service comparable to the bridge alternatives. To serve similar amounts of traffic, approximately 40 ferries would be required. This, along with the environmental impacts and cost, make the option not feasible. In addition, ferry service would not benefit hurricane evacuation, as NCDOT shuts down ferry operations 12 hours before gale force winds arrive, thus eliminating the ability of ferry service to meet evacuation needs during part of the peak evacuation period. Therefore, improvements to US 158 would be required between the Wright Memorial Bridge and NC 168 at Barco. This analysis was based on traffic volumes projected to use a Mid-Currituck Bridge. NCDENR-WRC and NCDCCR-SHPO acknowledged and agreed that the ferry alternative is not feasible.
- No comments were received on the other non-highway improvement alternatives; therefore, NCTA is going to proceed with the conclusion that the non-highway improvement alternatives are not feasible. This will be fully documented in the DEIS.
- **Highway Improvement Alternatives** – Handout # 5 contains revisions to information provided during the prior May 23rd TEAC meeting in Handout #4, Table 6. Additions to the table included affordability factors, information from Handout #4, Table 3 related to environmental impacts, revised right of way cost estimates, and revised bond financing estimates.

A-40

The bridge corridors were not discussed; they will be reviewed in the field on July 10 and discussed further at the July 18 TEAC meeting.

Several questions were generated:

- **NCDENR-DCM and USEFA** asked how the bond revenue and TIFIA funding was developed? The NCTA's financial advisor, PFM, developed the bond revenue forecast and the TIFIA loan amount. TIFIA will generally finance 1/3 of the construction cost.
- **NCDENR-WRC** asked why the MCB3 alternative has the smallest funding gap (\$51.2M) and as *Partnership (PPP) funding*? The MCB3 alternative has the smallest funding gap (\$51.2M) and as such is more attractive to the private sector as there would be less capital at risk. Also, the additional cost for MCB2 and MCB1 is all in widening existing roads, including US 158 east of the Wright Memorial Bridge. It is doubtful that any private partner would be willing to take the added risk of recovering from bridge tolls, a widening project 20 miles away.
- **NCDCCR-HPO** inquired about the availability of PPP funding on the existing Wright Memorial Bridge. Current North Carolina law prohibits the placement of tolls on existing non-toll facilities.

The following observations and suggestions were made related to the Highway Improvement Alternatives:

- ER1 - high capital cost and high displacements - suggest eliminating this alternative,
- ER2 - low benefit travel benefits, suggest eliminating this alternative,
- MCB1 - high displacements and high capital cost, suggest eliminating this alternative,
- MCB2 - performs well in travel benefits, high capital cost, suggest eliminating this alternative, since MCB2 is a subset of MCB3 if funding is available from NCDOT at some time in the future, the part of MCB2 not in MCB3 could be built and is not precluded by MCB3, suggest eliminating this alternative,
- MCB3 - smallest funding shortfall of all alternatives, achieves much of the travel benefits of MCB2, suggest considering this alternative further.

- **Meeting With Currituck County** – a recent meeting (June 8, 2007) with Currituck County officials (County Commissioner, County Manager and County Planner) highlighted the following points in the County's position on bridge corridor locations:
 - The County wants to reduce the number of bridge alternatives if possible. They are limiting development in the corridors as much as possible until a decision on a corridor is made.
 - The County prefers the C6 bridge alternative because the County Commissioners have committed to the community of Aydlett to advocate a low community impact alternative.
 - The County will ultimately support any of the six bridge alternatives.
 - The County clarified the extent of impact on a new subdivision that occupies the location of the northern Outer Banks terminus alternative (C1, C3, and C5).
 - The County prefers the southern Outer Banks Terminus alternative but did have concerns related to the functional design's approach to adjusting street and driveway access near the bridge/NC 12 intersection.

NCDENR-DCM pointed out that Currituck County has a recently-approved CAMA land use plan and that the bridge should be consistent with what is presented in the plan. This will be a consideration during permitting.

- **Section 6002 Project Coordination Plan** – a revised coordination plan was distributed. Additional comments should be provided by July 5, 2007. The coordination plan will be submitted to FHWA for approval.
- **Field Review July 10, 2007** – hotel accommodations were discussed, the itinerary for the 10th will be mapped out in advance, and will be discussed the evening of the 9th at the Hampton Inn in Elizabeth City at 8:00 PM. Transportation options during the field trip were discussed. Clothing and safety measures were suggested. A cell phone number will be provided to all field review participants the week before the event.

Q&A:

NCDENR-DCM would like to know the acres of CAMA wetlands bridged.
This will be prepared. CAMA wetlands are confined to the Outer Banks sound-side shoreline.

NCDENR-DCM also requested that SAV impacts be quantified and mapped.
Elizabeth City State University (ECSU) is developing a comparison of Submerged Aquatic Vegetation (SAV) in Currituck Sound under current conditions vs. 50 years ago. PB will get that data for use by the agencies prior to a decision on bridge corridors. Additional data will be provided as available from an ongoing USACE bathymetric survey and NCDOT aerial photography of the project study area. If later mapping reveals changes need to be made in corridor decisions, the NCTA is willing to consider such changes.

USFWS and NCDCCR-HPO inquired about status of Audubon Society property holdings both in terms of restrictive covenants and the USFWS compatibility determination.

USFWS clarified that the property is not a National Wildlife Refuge, and therefore will not require a compatibility determination. The Audubon Society property is also not a Section 4(f) resource.

NCDENR-DCM and USFWS initiated inquiries regarding the treatment of evacuation times among the Currituck alternatives and other NCDOT projects. The issue concerned consistency in application of the state legislative goal of 18 hours to achieve a safe evacuation. The project alternatives currently exhibit a range of 21 to 27 hours evacuation time. The US 64 project was cited as an example where a no-build 27 hour evacuation time was to be improved upon.

A meeting between the NCTA and NCDOT is currently scheduled to address this issue.

USFWS asked how directional contra flow lanes are to be managed and enforced.
Directional contra flow lanes will be evaluated for relevance, safety, and performance. It was also emphasized that evacuation times are not reduced without road improvements to US 158.

Based on a comment FHWA questioned the ability of MCB3 to meet the purpose and need as it relates to hurricane evacuation since the best time that can be achieved is 2b.2 versus 21.4 with the other alternatives.

The difference is that MCB3 does not include a third northbound/westbound lane on US 158 between the Wright Memorial Bridge and NC 12. The NCTA was agreeable to adding this component to MCB3 to create an MCB4 for further consideration.

There were common agency questions regarding the comparison of traffic volumes and Level of Service between ER2 and the bridge alternatives. PB observed that the traffic and travel demand evaluation for this project covered a broad geographic area, considering a wider network beyond the immediate bridge. This is similar to NCDOT thoroughfare planning. Vehicle-miles of travel is the metric used for measuring the performance of alternative systems or networks and thus is appropriate for the Mid-Currituck Bridge project.

NCDENR-WRC noted that secondary cumulative impact analysis was crucial as the bridge alternatives provide more direct access to the coast and will induce development, particularly in Currituck County. East Carolina University is under contract to help NCTA estimate changes in development patterns with the project alternatives, including the potential for a new bridge to bring in more day trips from Hampton Roads. One location for potential induced development is on the mainland near the bridge terminus.

Several agencies inquired about the traffic and travel demand update to 2035 and will that evoke a re-evaluation of all of the alternatives in light of new data? Horizon year decisions are currently under review by FHWA. The NCTA will revisit alternatives selection decisions if it appears warranted with the use of a later design year. However, the current data (2025) assumes full build out of the road-accessible Outer Banks, and NCTA does not anticipate that updating the information to a later design year would impact alternatives decisions.

NCWRC asked about the condemnation powers of the NCTA. NCTA does have condemnation authority. NCDOT will own any right-of-way purchased.

A-41

Resolutions:

- NCTA asked all agencies if there were any objections or further comments on the Statement of Purpose and Need as last presented and with the questions as addressed in this meeting and in the handouts. There were no further comments, concerns, questions, or objections. NCTA will proceed with the current Statement of Purpose and Need.
- Non-highway improvement alternatives will not be studied in detail, as they are not feasible. This will be discussed fully in the DEIS.

Previous Action Items:

- Agencies will provide comments on statement of purpose and need by June 6, 2007. [Comments were received from NCDENR-DWQ]
- Agencies will provide comments on conceptual alternatives and analysis of conceptual alternatives by June 6, 2007. [Comments were received from NCDENR-DWQ]
- Agencies will provide comments on project-specific Draft Section 6002 Project Coordination Plan by June 6, 2007. [No comments were received]
- NCTA will provide additional information on the selection of the bridge corridor locations. [The 1995 Alternatives Comparison report was posted to the TEAC site following the May meeting and is included in Handout 6]
- NCTA will provide additional information on the ferry alternative. [Handout 7 contains additional information on the ferry alternative]

New Action Items:

- NCTA and PB will continue to search for more state rate accommodations for the Field Review on July 10.
- NCTA, FHWA and PB will continue to address the merits of the project configuration and bridge location alternatives.
- Agencies provide comments or questions by July 17, 2007 on Highway Improvement Alternatives.
- Agencies provide any questions by July 17, 2007 on previous study findings on bridge corridor locations.
- NCTA and PB will provide acres of CAMA wetlands affected by bridge corridors C1 to C6.
- Conduct field visit of bridge corridors on July 10.

wide with some enlarged areas where preliminary interchanges have been identified. The mapping shows historic districts, watershed drainage basins, neighborhoods, development in the western portion of the project is denser than in the east, and schools, churches, and gold mines are shown. An important note was made that during final design geologic constraints may arise from the use of large equipment in areas previously mined.

- **Presentation** – A PowerPoint slideshow that will run continuously at both CIWs was presented and the script was reviewed.
- **CIW Comment Form** – FHWA suggested revising the comment form to include questions asking specifically about the project purpose and need to ensure that the public has the opportunity to comment on purpose and need, in compliance with Section 6002 requirements. The deadline for public comments will be July 27, 2007.
- **Workshop Format** -- NCTA, Mecklenburg-Union MPO (MUMPO), NCDOT, and project team members will be at various stations around the room. A PowerPoint presentation will run on a continuous loop for the public to view upon entering the workshop. NCTA staff will be available to answer general turnpike-related questions. MUMPO staff will be present to solicit input regarding tolling the Bypass section of the project. MUMPO intends to make a decision regarding tolling at their meeting in September 2007. NCDOT right-of-way staff will be available to discuss the acquisition process, which the group agreed would be a primary concern of many of the CIW attendees. It is anticipated that several questions regarding the previously purchased right of way in Sections B and C of the Monroe Bypass will arise at the CIW.

Large-scale maps (1" = 500') would be placed in the center of the room with adequate spacing between for people to circulate. A display board will be prepared showing a key to the areas covered by each sheet, as one set includes 7 sheets. This key will also be included on each map.

Local street maps will be brought to the CIW to assist the public in finding their respective properties. It was also noted that it is typical to get questions regarding other TIP projects in the area and that should such questions arise to direct them to the NCDOT staff. It was suggested that a map including other TIP projects in the project vicinity be included at the CIW.

Other Discussion:

Existing and 2030 No-Build traffic forecasts have been received and the Purpose and Need Report is being prepared for distribution and discussion at the next TEAC meeting. After the Purpose and Need Report has been prepared, work will continue on alternatives screening.

Meetings/conference calls are being scheduled with individual agencies to discuss the scope of work, study area, and methodologies for the indirect and cumulative effects (ICE) study. The first meeting will be with USFWS and NCDENR-WRC on June 29, 2007.

Q&A:

At last month's TEAC meeting, MUMPO expressed some concerns about preliminary corridors located south of US 74. What was the reaction from other local staff regarding these corridors?

Other local staff had similar concerns, particularly with preliminary corridors through the city of Monroe which contains several historic properties. Also, there were concerns about potential impacts to the Monroe Regional Airport.

It would be valuable to show watershed constraints on the project mapping. Are there any critical areas in addition to water supply watersheds?

No, there are no critical watershed areas.

How much do tolls usually cost?

Tolls for type of facility average between 10 cents and 15 cents per mile for a passenger car.

Date: June 20, 2007
1:30 pm to 3:00 pm

Project: NC Turnpike Authority Office Building Ground Floor Conference Room (G-13)

TIP R-3329 Monroe Connector – NHF-74(21)
TIP R-2559 Monroe Bypass – NHF-74(8)

Monroe Connector / Bypass Spotlight:

Attendees:

Donnie Brew, FHWA
George Hoops, FHWA
Marella Buncick, USFWS (via phone)
Steve Lund, USACE (via phone)
Maria Chambers, NCDENR-WRC
Polly Lespinasse, NCDENR-DWQ
John Conforti, NCDOT
Dwayne Sykes, NCDOT
Jennifer Harris, NCTA
Denise Cauley, NCTA
Craig Deal, HNTB
Christy Shumate, HNTB
Anne Redmond, HNTB
Michael Gloden, EcoScience
Ross Andrews, EcoScience
Jill Gurak, PBS&J
Carl Gagliaro, PBS&J
Kiersten Giugno, PBS&J

Presentation Materials: (Posted on TEAC website)

- Meeting Agenda
- Project Newsletter
- Citizens Informational Workshop (CIW) PowerPoint Slide Presentation
- 1" = 1000' Project Mapping with preliminary corridors
- CIW Display Boards
- CIW Comment Form
- Preliminary Study Corridors Map

General Discussion:

- **Purpose** – Review materials for the Citizens Information Workshops (CIW) to be held on June 25 and 26, 2007.
- **Newsletter/Workshop Handout** – Approximately 27,000 copies of the newsletter were mailed to property owners and residents in the project study area. The workshop handout includes the same information as the newsletter; however, information about the dates and locations of the workshops was removed to allow space for a larger map.
- **Display Boards** – The display boards containing project information (study area, project purpose and need, project process, and project schedule) were presented and reviewed. USFWS suggested an additional board explaining what purpose and need is and why it is important.

Mapping – Large-scale project maps (1" = 1,000') showing the preliminary study corridors were reviewed and discussed. Larger maps (1" = 500') will be shown at the workshops. The base map is the most current aerial photography flown for this project in January 2007. The study corridors are generally 1,000 feet

Previous Action Items:

- Agencies will provide comments on Draft Section 6002 Project Coordination Plan by June 1, 2007. *No comments were received.*
- Agencies will provide comments on additional constraints for consideration by June 1, 2007. *No comments were received.*
- NCTA will post copies of the land suitability mapping and PowerPoint presentation from the TEAC meeting on the TEAC website. *These items were posted to the TEAC website.*

New Action Items:

- NCTA will revise CIW presentation materials and comment form as suggested.
- NCTA to schedule meetings with individual agencies to discuss scope of work for ICE study.

Resolutions:

- None.

Date:

June 20, 2007
3:00 pm to 4:30 pm
NCTA Turnpike Authority Office Building Ground Floor Conference Room (G-13)

Project:

TIP U-3321 Gaston E-W Connector – STP-1213(6)

Gaston East-West Connector Spotlight:

Attendees:

George Hoops, FHWA
 Donnie Brew, FHWA
 Steve Lund, USACE-Asheville (via phone)
 Polly Lespinasse, NCDWQ
 Marla Chambers, NCWRC
 Marella Buncick, USFWS (via phone)
 Dewayne Sykes, NCDOT-Roadway Design
 Jennifer Harris, NCTA
 Ross Andrews, EcoScience Corp.
 Anne Redmond, HNTB
 Jeff Dayton, HNTB
 Jill Gurak, PBS&J
 Lou Raymond, PBS&J

Presentation Materials (Posted on TEAC Site):

- Meeting Agenda
- Presentation
- Table Handout
- Streams and Wetlands Map Segment 1
- Streams and Wetlands Map Segment 2
- Streams and Wetlands Map Segment 3

General Discussion:

- **Minutes** – The minutes from the May 17, 2007 meeting have been posted on the TEAC website.
- The purpose of the meeting was to provide further updates on recently completed/ongoing environmental and technical studies, field verification meetings, and next steps towards the DEIS. The NCTA requested comments, issues, and concerns from the agencies regarding environmental issues based on the recently completed studies.
- **Presentation** – A powerpoint presentation was used in the discussion. Issues covered in the presentation included the decision to study toll-only alternatives in the DEIS, recently completed Phase II historic resource surveys and the archaeological resource surveys, field verification meetings for wetlands, streams, and ponds, and other updates on special technical studies, engineering designs, community characteristics, and toll traffic forecasts were provided.

The presentation information is summarized below:

- **Toll Alternative**
 - In February 2007, a decision was made by both NCTA and NCDOT to proceed with only evaluating toll alternatives in the DEIS. This decision was based on consideration that the NCDOT does not have sufficient funding within the foreseeable future to implement the project as a non-toll facility.
- **Toll Collection**
 - No cash lanes are included in the design of the Gaston E-W Connector for the opening year of 2015. The designs at the interchanges will be based on accommodating electronic toll collection only.

- **Recently Completed Studies**
- Historic Architectural Resources
 - The Phase II report prepared by Mattson, Alexander and Associates (MA&A) was completed in May, 2007 and reviewed by NCDOT.
 - A meeting was held on June 12, 2007 with HPO, NCDOT and MA&A to review properties identified in the Phase II report. 152 of the 180 were determined not eligible and a concurrence form was signed for those properties. NCDOT and HPO indicated that the remaining properties require more information to be added to the Phase II report. After review of the additional information, the NCDOT will determine the eligibility for the National Register of these properties.
- Archaeological Resources
 - A Final Archaeological Assessment prepared by Coastal Carolina Research was submitted, reviewed, and approved by NCDOT. They will submit the report to the Office of State Archaeology (OSA).
- Natural Resources
 - Field verification meetings for wetlands, streams, and ponds were completed in Segment 1 (S&ME) and Segment 2 (JH Carter and Associates). Segment 3 (the Catena Group) will be completed June 25-26, 2007. EcoScience presented a detailed summary of the wetlands, streams, and ponds by Segment including the evaluation factors and biological features.
 - Earth Tech will assemble the final Natural Systems Report that summarizes all consultants' work upon receipt of the draft reports from each of the three subconsultants. The document is expected to be completed in early fall.
- Special Technical Studies
 - Within Segment K1D, the Allen Steam Station had a site suitability study performed for the dormant fly ash basin as a possible landfill site. The NCDOT Geotechnical Unit reviewed the study, and after considering several options, determined that bridging of the fly ash basin was the only reasonable and feasible option, if this segment were chosen. The possible bridging of the fly ash basin was further discussed with the NCDOT Structure Design Unit and they indicated they could provide cost estimates on this structure at a later time, if necessary.
- **Ongoing Studies**
 - Preliminary Engineering design and traffic operations analyses work are both proceeding concurrently with draft completion dates of October and June (this month), respectively.
 - Typical sections, mainline shifts based on field surveys, and interchange configurations were presented. Two examples of the mainline shifts were shown along with several examples of the interchange configuration changes (changes from the functional design) based on the recently completed historic and natural resource surveys.
 - Work on the Community Characteristics Report has begun and stakeholder interviews are in the process of being scheduled.
 - M/A/B is preparing toll traffic forecasts for the Detailed Study Alternatives (DSAs) and is on schedule for completion in August 2007. Their base year model work has been completed and they are starting on the 2030 model runs.
- **Next Steps Towards Draft Environmental Impact Statement (DEIS)**
 - Indirect and Cumulative Effects (ICE) studies are in the scoping process and will be starting soon.
 - After completion of the field verification meetings, additional progress on the preliminary designs, and determinations of eligibility by the HPO, it is believed that some of the DSA corridors may be candidates for elimination prior to inclusion in the DEIS. As this information becomes available, it will be presented to the environmental agencies. This information will likely be presented near the end of the year.
 - Toll traffic forecasts are on schedule to be complete in August 2007 and thereafter, toll traffic capacity analysis would be done.
 - NCTA described the Gaston MPO is resolutions to change the name of TIP Project U-3321 to the Garden Parkway. U-3321 is already named Garden Parkway in the STIP, but R-2608 is awaiting

change to the US 321 Bypass. When the name change is effective in the STIP, the name change would be adopted at that point forward by the NCTA.

- Field visits for natural resources and historic resources can be scheduled if there is interest from the resource agencies. NCTA solicited available dates from the agencies.

Q&A:

How will tolls be collected if there are no cash lanes?
 Cashless toll collection likely will use transponders and cameras at toll collection points on the mainline and on the interchange ramps. The cameras will capture license plates of vehicles that don't have transponders. The registered owners of those vehicles will be mailed notices. The footprint needed for this type of toll collection is not much different than a non-toll facility. Differences exist primarily on the ramps. On and off ramps require a certain length of tangent roadway section to provide sight distance for the toll collection cameras, which also includes loop ramps. Consideration for this is being incorporated into the preliminary engineering designs.

Have there been any discussions with EEP?

Yes, NCTA is actively coordinating with EEP. NCTA plans to submit a request for a phased approach to mitigation, with the first phase being from NC 279 to I-485. Due to the size of the project, a phased approach is practical, and EEP is receptive to planning mitigation in the same way.

What about the next TEAC meeting?

In the next couple of months, NCTA will be concentrating on completing field verification meetings and other ongoing studies. A spotlight meeting probably will not be held for a couple months.

New Action Items:

- NCTA and EcoScience will work on with the resource agencies on scheduling some natural resource field tours and will contact the HPO to gauge their interest in scheduling a field visit for historic resources.

Resolutions:

- None



Mid-Currituck Bridge

TIP No. R-2576

MEETING SUMMARY

July 10, 2007
Field Visit

Attendees:

George Hoops, FHWA	Sarah McBride, NCDCCR-HPO
Bill Biddlecome, USACE	Jennifer Harris, NCTA
Ted Bisterfeld, USEPA	Anne Redmond, HNTB
Kathy Matthews, USEPA	Christy Shumate, HNTB
Chris Militscher, USEPA	Jens Geratz, EcoScience
Gary Jordan, USFWS	John Page, PB
Ron Sechler, NMFS	Chris Lloyd, PB
John Hennessy, NCDENR-DWQ	Bill Rice, PB
David Wainwright, NCDENR-DWQ	Roland Robinson, PB
Jim Hoadley, NCDENR-DCM	Sam Cooper, CZR
Steve Lane, NCDENR-DCM	Travis Brown, CZR
Sara Winslow, NCDENR-DMF	
Travis Wilson, NCDENR-WRC	

Purpose: The purpose of the field meeting was to allow the environmental agencies the opportunity to review and comment on the six bridge corridors under consideration for the Mid-Currituck Bridge.

Summary of Pre-Field Visit Briefing (July 9, 2007 8:00PM at Hampton Inn, Elizabeth City)

Summary of Field Visit:

- Attendees met at 8:00AM at the Old Currituck County Courthouse and boarded vans provided by Currituck County. Bridge corridors were visited in the following order:
 - o Northern Outer Banks site (C1, C3, and C5)
 - o Southern Outer Banks site (C2, C4, and C6)
 - o Northern Mainland site (C1 and C2)
 - o Middle Mainland site (C3 and C4)/Southern Mainland site (C5 and C6)
 - o Wetlands west of US 158 (all corridors)
- Northern Outer Banks site (C1, C3, and C5) – the site crosses the Corolla Bay subdivision (currently under construction), as well as upland forest, red maple maritime swamp, and coastal wetland areas.

- o The Corolla Bay subdivision includes 30 lots, 10 of which are already sold. A house under construction during the field visit appeared to be in the path of the proposed corridor.
- o The bridge corridor alignment had been developed to avoid an existing pond south of the Corolla Bay subdivision; however, upon examination of the pond, agencies indicated that the pond was not ecologically important and given a choice of avoiding coastal wetlands or the pond, they would prefer that the coastal wetlands be avoided.
- o Agencies requested that the alignment be shifted southward to minimize impacts to coastal wetlands.
- o A preference for this alternative over the other proposed Outer Banks terminus was expressed by several agencies, including NMFS, NCDENR-DCM, NCDENR-DMF, NCDENR-WRC, and NCDENR-DWQ, because it affects less wetland area.

- Southern Outer Banks site (C2, C4, and C6) – the site is just north of the Timbuktu shopping plaza near Albacore Road. It is an official map site for the proposed bridge. A portion of the site had been purchased by NCDOT in the early 1990s to prevent it from being developed under the ground rules associated with an official map. The site includes a large pond, upland forest, red maple maritime swamp, and coastal wetland areas.
 - o Newly placed survey markers were observed at the site associated with a pending transfer of a portion of the property not in the official map site from the current owner to a utility company.
 - o Agencies observed this site to be more ecologically important than the Northern Outer Banks option.
 - o Agencies also commented that this site would have fewer opportunities for mitigation.
- Northern Mainland site (C1 and C2) – this corridor parallels an existing utility easement from US 158 to the Sound.
 - o The corridor is in proximity to a historic structure determined eligible for the National Register.
 - o Agencies had no specific concerns with this corridor, including the potential impact to the historic structure.
 - o A second historic structure is north of this corridor and was also observed during the field visit.

- Middle Mainland site (C3 and C4) – this corridor roughly parallels Aydlett Road from US 158 to near Currituck Sound and then passes through the community of Aydlett.
 - o Vans traveled along Aydlett Road after it turns south to parallel the Sound and observed the approximate location of the corridor along the Sound shore, as well as several houses that would be relocated if this corridor were selected.
 - o Vans then parked along Aydlett Road (where the corridor parallels the road), and agencies entered Maple Swamp.
 - o Maple Swamp contains some bay forest community. The density and quality of the bay forest higher at the southern corridor (C5/C6).
 - o Agencies suggested incorporating existing Aydlett Road into the bridge corridor. NCTA indicated that it may be difficult to provide access to remaining portions of the community of Aydlett if the existing road is replaced with a new structure.



Turnpike Environmental Agency Coordination (TEAC) Meeting

MEETING MINUTES

Date: July 18, 2007
9:00 AM to Noon
NC Turnpike Authority Board Room

Project: TIP R-2576 Mid-Currituck Bridge Study

Mid-Currituck Bridge Spotlight:

Attendees:

Rob Ayers, FHWA (via phone)	Jennifer Harris, NCTA
Donnie Brew, FHWA	Denise Cauley, NCTA
George Hoops, FHWA	Dane Berglund, NCTA
Bill Biddlecome, USACE	Ted Devens, NCDOT
Kathy Matthews, USEPA	Brian Yamamoto, NCDOT
Chris Militscher, USEPA	Dawn Rierson, NCDOT
Gary Joroon, USFWS	Lonnie Brooks, NCDOT
David Wainwright, NCDENR-DWQ	Craig Deal, HNTB
Cathy Brittingham, NCDENR-DCM	Anne Redmond, HNTB
Jim Hoadley, NCDENR-DCM	Christy Shumate, HNTB
Sarah Winslow, NCDENR-DMF	John Page, PB
Travis Wilson, NCDENR-WRC	Chris Lloyd, PB
Sara McBride, NCDCR-HPO	Roland Robinson, PB

Presentation Materials:

- Meeting agenda
- Comparison of Wetland Impacts
- General Assembly HB 253 with Statute 136-102.7 Hurricane Evacuation Standard
- USACE potential SAV locations mapping
- Draft Meeting Summary from July 10th field visit
- Functional design drawings and scroll maps of the bridge and roadway alternatives, including a CD of the functional designs

General Discussion:

- **Highway Improvement Alternatives** – An overview of previously discussed Highway Improvement Alternatives (ER1, ER2, MCB1, MCB2, and MCB3) was presented, highlighting characteristics and impacts of each alternative. In addition, based on discussion at the June TEAC meeting, NCTA has developed MCB4, which includes components of MCB3 (construction of a new bridge across Currituck Sound, some widening on NC 12 to accommodate traffic from the bridge to Currituck Club Drive, and an additional northbound lane on US 158 between the bridge and NC-168) plus an additional northbound lane on US 158 from NC 12 to the Wright Memorial Bridge. This alternative would achieve the maximum reduction in hurricane evacuation time possible with improvements within the project study area (21.4 hours).

- Southern Mainland site (C5 and C6) – this corridor is located approximately 2,900 feet south of the C3/C4 corridor in Maple Swamp. Agencies walked south through Maple Swamp from the Middle Mainland corridor to determine the quality of the bay forest community.
 - This corridor fragments a more contiguous tract of Maple Swamp (large blocks of uninterrupted forest are important habitat for wildlife, including bears, migratory birds, etc).
 - The corridor would impact a larger area of bay forest community, a significant natural heritage community. Agencies indicated this community is the most pristine of its type and contains the largest specimens of Loblolly bay they have encountered
 - NCDENR-DWQ indicated this option may not be permittable.
 - Wetlands west of US 158 – areas of wetland west of US 158 would be affected with all corridors by an interchange between US 158 and the proposed bridge.
 - Agencies stressed that impacts to wetlands in this area should be minimized, and that impacts that could not be minimized would require justification.
- Other discussion:
- Agencies suggested several potential mitigation options for impacts to Maple Swamp, including preservation of the bay forest community, improvements to the hydrologic flow across Aydlett Road.
 - FHWA suggested that the C3/C4 and C5/C6 corridors on the mainland could be combined to develop a corridor that minimizes impact to the bay forest in Maple Swamp as well as minimizes impacts to the community of Aydlett.
 - Agencies asked about funding relative to the Highway Improvement Alternatives. NCTA's Chief Financial Officer, Grady Rankin, will be invited to attend the July 18, 2007 TEAC meeting to answer questions.
 - USACE requested that functional plans for all Highway Improvement Alternatives be reviewed at the July 18, 2007 TEAC meeting.

- Summary of Highway Improvement Alternatives discussion:
 - o ER2 would perform poorly in terms of traffic and congestion measures. NCTA proposes to eliminate this alternative.
 - o MCB1 and ER1 have major displacements of homes and businesses in Dare County. Based on the number of displacements, NCTA proposes to eliminate these alternatives.
 - o MCB2 performs well in terms of traffic and does not have the high level of displacements as MCB1 and ER1. However, MCB2 would result in a significant gap between cost and potential financing for the project. NCTA proposes to eliminate this alternative, noting that the selection of MCB3 or MCB4 would not preclude NCDOT from implementing other components of MCB2 at a future time when funding is available. These improvements would require a separate environmental document. USACE pointed out that the traffic benefits of this alternative exceed those on MCB3, and asked that the alternative not be eliminated based on funding alone.
 - o MCB3 and MCB4 are proposed by NCTA and FHWA for detailed studies. The widening of NC 12 to four lanes needed with a bridge would be needed the year of project opening from the C1/C3/C5 bridge terminus to Albacore Street. The widening of NC 12 from Albacore Street to Currituck Club Road with either Outer Banks terminus could be delayed to as late as 2018. This widening will be part of the proposed action but construction may be phased. A decision on phasing this construction will be made based on input from the county, toll traffic diversion estimates, and permitting considerations.
- **Bridge Corridors** – Six bridge corridors, comprised of three potential corridors on the Currituck County mainland and two potential corridors on the Currituck County Outer Banks, were reviewed during a field visit on July 10, 2007.
 - o The C5 and C6 bridge options would have the highest fragmentation impact to Maple Swamp. Based on comments from the agencies, including USFWS, NCDENR-DWQ, and NCDENR-WRC, NCTA proposed eliminating this corridor due to impacts to the bay forest community in Maple Swamp. Agencies, with the exception of USEPA, agreed with eliminating this corridor.
 - o The C3 and C4 bridge options would have the highest impact on the community of Aydlett, as well as impacts to Maple Swamp. NCTA proposed eliminating this corridor. Agencies suggested that NCTA should look at modifying this corridor to attempt to minimize impacts to Maple Swamp south of Aydlett Road, as well as to the community of Aydlett.
 - o The C1 and C2 bridge corridors will be studied in detail in the DEIS.

- NCTA proposed selection of MCB3 and MCB4 with Bridge Corridors C1 and C2 as the detailed study alternatives and asked if the agencies had concerns. Issues of concern should be provided in writing within 30 days per the Section 6002 Project Coordination Plan.
- **Review of Functional Design Plans** -- The roadway and bridge alternative drawings were reviewed to illustrate the extent and nature of the relocations along the ER1 and ER2 alternatives and to secure feedback on the US 158/Mid-Currituck Bridge interchange configurations.
- **Finances** – A presentation was made by Dane Berglund, NCTA Senior Accountant, on the business decisions inherent in a revenue bond issue. The importance of cost estimates, ridership forecast, toll revenue forecasts and the impact upon toll bridge operations were broadly summarized. The amount that can be financed is based on the projected revenue and estimated project costs. The total amount to be financed includes interest, inflation, operating and maintenance costs, in addition to construction costs. With revenue bonds and TIFIA loans, the total cost of the project could not be financed, therefore leaving a gap between the funding and the cost of the project. For Highway Improvement Alternatives ER1, ER2, MCB1, and MCB2, there would be a significant amount of gap funding required. For MCB3 and MCB4, this gap would be less. Also, these two alternatives could be considered for a Public Private Partnership, in which a private entity would fund construction, operation, and maintenance of the project for an extended period.
- **Hurricane Evacuation Statute** – A discussion ensued about Statute 136-102.7, which indicates "the hurricane evacuation standard to be used for any bridge or highway construction project pursuant to this Chapter shall be no more than 18 hours, as recommended by the State Emergency Management officials."

There was considerable debate regarding the legislative intent of the 18 hour evacuation standard (see Q&A section).

Q&A:

1. EPA suggested that FHWA consider a tiered EIS because of funding shortfalls, inability to fund some alternatives, the inability of the alternatives to meet the 18 hour evacuation standard and the implications of going outside the study area to meet the 18 hour standard. FHWA, NCTA and NCDOT will consider.
2. EPA said GS 136-89.183 seems to indicate that the Mid-Currituck Bridge Corridor should be at the Virginia State Line and the hurricane statute appears to require projects to meet the 18-hour clearance time. NCTA and NCDOT will look into the history and legislative intent of both statutes.
3. SHPO questioned how bonds are graded and the influence upon financial markets. Bonds are graded or rated by bond rating agencies. Bond ratings influence bond interest rates.
4. EPA inquired about accommodating toll increases in the future. Provisions are incorporated in the bond indentures allowing tolls to rise in step with the inflation of operating and maintenance costs.
5. It was noted that Division 1 and Currituck County may be considering building a paved road in the currently non-road accessible area of the Currituck County Outer Banks. NCTA will look into this.
6. EPA further asked about the toll revenues and how the demographics of the users are accommodated. The demographics/income level of the typical bridge user is considered in the Traffic and Revenue Study to determine the optimum toll rate. The Preliminary Traffic and Revenue Study (completed by Wilbur Smith Associates in January 2007) is available on the NCTA web site.
7. NCDENR-WRC requested NC 12 relocations be divided between those where the improvement takes the structure and those where the structure is assumed to be taken because enough lot is taken that the lot size becomes too small to meet county standards. It also was asked why exceptions to the Dare County ordinance related to minimum lot sizes could not be waived, particularly if septic systems were not involved in the loss of land. This information will be provided.
8. FHWA inquired about NCDOT acceptance of design exceptions in the three-lane and two-lane NC 12 improvement alternatives. It was felt that the design exceptions were minimal and within NCDOT's level of tolerance. This would be explored further and in more detail during preliminary and final design, if necessary.
9. EPA questioned the use of 17-foot medians in the four-lane NC 12 alternatives and suggested a narrower median. The median is as narrow as it can be to provide for left turn lanes. FHWA responded by questioning safety and driver expectations of a variable median width. Also, intersections are close enough together that as soon as the median narrowed, it would have to widen again for the next intersection's left turn lane.
10. EPA questioned the adequacy of the at grade "T" intersection proposed for NC 12 and the new bridge. It has been determined that this configuration will work as the volume of traffic from and to the north on NC 12 is not sufficient to warrant a larger or more complicated design.
11. NCDENR-WRC inquired about avoiding the CAMA wetlands on the northern terminus (C1/C3/C5) near NC 12. The alignment can be revised to avoid all CAMA wetlands. Some impacts to Section 404 wetlands would remain.

12. *NCDENR-WRC asked about an interchange with a smaller footprint at NC 12, including an urban-style interchange.*
The configuration shown on the drawing was developed with features that already reduce its footprint some (See the response to NCDENR-DWQ question 10 in Handout 7). Other configurations, such as an urban interchange with the ramps tight against the road will be examined during preliminary design.
13. *Multiple agencies noted the significance of the Bay Forest south of Aydlett Road. It is very unique, particularly because of the size of the trees. USFWS indicated that they had not seen anything like it was stated that because practicable alternatives exist, it was unlikely that a Section 404 Permit could be issued for a project in the C5/C6 corridor. The Bay Forest gets more narrow north towards Aydlett Road and the forest north of Aydlett Road is of a different character and quality. USFWS said the introduction of a road or bridge in the C5/C6 corridor in Maple Swamp would alter it by bringing in more sunlight and invasive species. The area should be protected and preserved.*
NCTA will determine if more information exists on the Bay Forest system. NCTA asked if it would be appropriate to drop the C3/C4 and C5/C6 corridors from further consideration and focus on the C1/C2 corridors. Another reason to drop the C3/C4 corridors is because they would pass through the middle and most developed part of Aydlett.
14. *EPA indicated that there was not enough information to drop any corridor at this time. EPA said for example that the NCTA had not done a full analysis of migratory bird impacts and it might prove that there were migratory birds in C1/C2 and for that reason C5/C6 might prove to be the better alternative. EPA did not consider the community impact with C3/C4 to be notable in that other NCDOT projects have much greater community impacts.*
15. *NCDENR-WRC indicated that C3/C4 and C5/C6 could be dropped at this time. USFWS said that with regards to migratory birds, C5/C6 would be the most likely location for this to be an issue. USFWS agrees with dropping C5/C6 at this time.*
NCTA said they could look at modifications to the C3/C4 corridor, including moving the corridor north of Aydlett Road.
16. *NCDENR-DCM asked if the bridge corridor could also serve local Aydlett Road traffic.*
This would not be feasible. Toll collection for the bridge will be near US 158, so an alternative free route would still need to be provided for accessing remaining portions of the community of Aydlett. For toll enforcement purposes, it is not possible to provide access from the bridge facility directly into the community of Aydlett.
17. *NCDENR-DCM indicated that just because they had not yet submitted comments in writing, NCTA should not assume they have no comments. They have not had time to prepare comments. NCDENR-DCM noted that new information is continuously being made available. EPA also said they had not had time to submit written comments.*
NCTA said that the new information posted was being provided at the request of the agencies. NCTA asked when they could expect written comments from NCDOT and EPA, who could not give a definite timeframe. Agencies requested that there not be a TEAC meeting for this project in August in order to allow time for them to review and comment on materials received to date. NCTA will consider this request.
18. *NCDENR-DMF indicated that the entire sound is potential SAV habitat even if SAVs are not currently present. The availability of SAV information from Elizabeth City University was noted.*
NCTA asked for guidance with regards to how to address direct SAV impacts and impacts to potential SAV habitat as the study progresses. For instance, is it practical to avoid direct impacts if SAV locations vary year to year. NCTA has been trying to contact Elizabeth City University about SAV information and will continue to do so.

Previous Action Items:

- NCTA and PB will continue to search for more state rate accommodations for the Field Review on July 10. [State rate accommodations were available at the Quality Inn in Elizabeth City.]
- NCTA, FHWA and PB will continue to address the merits of the project configuration and bridge location alternatives.

- [This information was discussed at the July 10, 2007 field visit and at the July 18, 2007 TEAC meeting.]
- Agencies provide comments or questions by July 17, 2007 on Highway Improvement Alternatives. [Verbal comments were received from USACE during the July 10, 2007 field visit, and written comments were received from USACE on July 17, 2007.]
 - Agencies provide any questions by July 17, 2007 on previous study findings on bridge corridor locations. [No questions or comments were received on previous studies related to the bridge corridor locations.]
 - NCTA and PB will provide acres of CAMA wetlands affected by bridge corridors C1 to C6. [This information was available on the TEAC site on July 17, 2007 and distributed at the TEAC meeting on July 18, 2007.]
 - Conduct field visit of bridge corridors on July 10, 2007. [The field visit was conducted on July 10, 2007. A draft meeting summary was distributed at the July 18, 2007 TEAC meeting.]
- New Action Items:**
- NCTA/NCDOT will investigate the legislative intent of 18-hour hurricane evacuation standard (GS 136-102.7)
 - FHWA/NCTA to look into legislative intent of the accelerated pilot toll bridge project (GS 136-89.183) with specific regard to the terminology "bordering the State of Virginia"
 - FHWA/NCTA to consider Tiered EIS recommendation
 - NCTA will ask Carolina Land for a breakdown of relocations from direct impacts and relocations from reduced lot size only
 - NCTA will check on minimum lot size ordinances, prevalence of individual septic systems, and relation of lot size to the CAMA land use plan
 - NCTA will check with Currituck County on potential extension of NC 12 north. NCTA will check with NCDOT Division 1
 - NCTA will consider alternative interchange configurations for the US 158/McCurrituck Bridge interchange to the community of Aydlett
 - NCTA will evaluate modifying C3/C4 to minimize impacts to the bay forest (shift north of Aydlett Road) and to the community of Aydlett
 - NCTA will check with NCDENR-DNH on information on the bay forest system
 - NCTA will continue to pursue ECSU SAV study information
 - NCTA will consider whether to meet on the project in August
 - Agencies will provide comments and issues of concern on Highway Improvement Alternatives and bridge corridors (proposed Detailed Study Alternatives) within 30 days, as noted in the Section 6002 Project Coordination Plan.
 - Agencies will provide comments on the draft meeting summary from the July 10, 2007 field visit by August 15, 2007.

Date: July 18, 2007
1:30 PM to 2:00 PM
NC Turnpike Authority Board Room

Northern Wake Expressway Toll Plaza Spotlight:

Additional Attendees:

Eric Alsmeyer, USACE
Fleming El-Amin, Triangle Transit Authority
Ken Ivey, PE, NCDOT Traffic Engineering & Safety Systems Branch
Regina Page, PE, NCDOT Traffic Engineering & Safety Systems Branch
David Chang, PE, NCDOT Hydraulics Unit
Wally Bowman, PE, NCDOT, Division 5
Tracy Roberts, AICP, HNTB/NCTA GEC
Jim Cooper, EcoScience Corporation
Jim Buck, PE, Baker Engineering
Ken Gilliland, Baker Engineering

Presentation Materials: (Posted on TEAC website)

- Meeting Agenda
- Start of Study Letter
- Handout 1, Project Background, Purpose and Need, Schedule
- Figure 1, Northern Wake Expressway Toll Plaza - Vicinity Map
- Figure 2, Northern Wake Expressway Toll Plaza Aerial Photography
- Section 129 Agreement for Northern Wake Expressway, Western Wake Expressway, and Triangle Parkway
- NC General Assembly Authorization for Tolling the Northern Wake Expressway
- Northern Wake Expressway PowerPoint Scoping Presentation

General Discussion:

- **Purpose** – Conduct Start of Study and scoping meeting.
- **Project Vicinity/Study Area** – The proposed project is located in western Wake County just south of the Durham County line. The project study area is located along the Northern Wake Expressway (NWE) between the NC 55 and Triangle Parkway interchanges. The study corridor is approximately 700 feet wide and 7,120 feet long. Most of the study area is located within existing NCDOT right of way.
- **Project Purpose and Need** – The purpose of this project is to generate funding for proper operation and maintenance of the NWE between NC 55 and NC 54, and to implement legislative authorization to toll.

The need for this project is that there is insufficient funding to cover the cost necessary for proper operation and maintenance of the NWE between NC 55 and NC 54, including reconstruction, resurfacing, restoration, and rehabilitation.

- **Project Description** – This project proposes to install a mainline toll plaza on the existing NWE between NC 55 and NC 54. This 2.8 mile long segment was recently completed by the NCDOT as State Transportation Improvement Program (STIP) Project Number R-2000 AA/AB.

The proposed toll collection facility would be comprised of a free-flowing section on the mainline travel lanes in which toll fares would be gathered electronically. Vehicles would travel through this section at highway speeds. Additionally, there would be temporary "cash lanes" constructed at approximately the same location as the electronic collection point to allow tolling of vehicles not equipped for electronic tolling. The number of cash lanes has not been determined but will be based on traffic forecasts and operations. The cash lanes will be unmanned. Site features for the toll collection facility include a parking area, access lanes for cash toll islands, a building housing an emergency generator, an overhead gantry, and mast lighting.

NCTA, in consultation with FHWA, anticipates that the proposed action will be classified as a Categorical Exclusion.

- **Project Authorization** - The North Carolina General Assembly has authorized the tolling of the Northern Wake Expressway between I-40 and NC 55. Additionally, a Section 129 Agreement between the FHWA, NCTA, and NCDOT was executed on December 6, 2006, which allows for tolling of the facility.
- **Previous Studies** - In January 2007, EcoScience delineated streams and wetlands in the vicinity of the proposed toll plaza (Figure 2). Streams in the project area are unnamed tributaries to Kit Creek, therefore receiving the same water quality classification as Kit Creek, which is classified as water supply watershed IV and nutrient sensitive waters from a point 1.3 miles upstream from its intersection with NC 55 to Northeast Creek.
- According to the Section 404 permit, 1,002 acres of wetlands and 3,123 linear feet of stream were impacted by the construction of Section AA (I-540 (Raleigh Outer Loop) from NC 55 West of Morrisville to Research Triangle Park East Limits) of STIP R-2000.
- In the 1990 Final Environmental Impact Statement for STIP R-2000, Section AA had no noise or air quality, cultural resource, protected species, hazardous waste, or mineral resource impacts, and minimal community impacts.
- **Project Schedule** – Scoping comments were requested prior to August 1, 2007. Field work for the natural resource technical report (NRTR), noise, and hydraulics reports will be carried out in August. The NRTR is scheduled for completion in September. The Categorical Exclusion is scheduled to be signed in October 2007.

Other Discussion:

USACE indicated that a Nationwide 23 permit will likely be appropriate for the project.

Public input for the project will include the study team's availability to answer questions at the public hearing for Triangle Parkway (STIP U-4763B).

Q&A:

USEPA asked about the potential stream and wetland impacts of the construction of the toll plaza? Baker stated that inside the area previously delineated by EcoScience that there were approximately 934 feet of unimpacted (i.e., not culverted or filled by the existing roadway) streams and 0.85 acres of wetlands. It was noted that the project study area had been extended and that additional delineations would be necessary. Minimization steps would be taken to reduce the potential impacts to these resources.

NCDOT asked about the number of cash lanes and the traffic forecast methodology that will be implemented for this project.
Baker stated that four cash lanes will be used as a base assumption. This assumption will be verified by VISSIM analysis. NCDOT agreed that VISSIM was an appropriate simulation analysis tool.

NCDOT stated reservations about the stop condition mandated by the cash lanes and the operational issues associated with the cash lanes.
NCTA stated that they were aware of the issue and that the project design team was working on the weave issue associated with the construction of the NWE toll plaza between two nearby interchanges (NC 55 and Triangle Parkway).

NCDOT asked if changes to the existing travel lanes were envisioned.
NCTA stated that at this time, no changes to existing travel lanes were envisioned.

TTA asked if special equipment would be needed on their buses if an agreement were reached that allowed free or reduced fares.
NCTA stated that buses would have the opportunity to use transponders on the mainline and would not be required to stop to use cash lanes.



Turnpike Environmental Agency Coordination (TEAC) Meeting – East

USACE asked about the project schedule past October. NCTA answered that that construction of the NWE Toll Plaza is anticipated to be included in the design build contract for the Triangle Parkway. Construction activities may begin within the next year.

NC DOT asked if noise studies would be conducted in the vicinity of the Breckinridge development. NCTA stated that noise studies using TMM 2.5, including an evaluation of noise mitigation walls, would take place as part of the Categorical Exclusion. Ambient noise measurements would take place with NC-540 in place.

NC HPO asked if additional construction would be needed once the temporary cash lanes are removed? NCTA stated that there are no additional construction requirements envisioned through the design year for toll technology implementation. Five years from opening, the cash lanes will be removed and electronic toll collection will remain in place.

TTA asked about provisions for out-of-town travelers once the cash lanes are removed? NCTA stated that there would be signage to indicate that the toll facility was ahead. There are also northern and southern non-toll routes for those not wanting to use the toll facility. Also there would be video tolling and options to pre-register for those who lack transponders.

Previous Action Items:

- None

New Action Items :

- Agencies provide scoping comments (study area, purpose & need, environmental concerns, permitting, etc) to NCTA no later than August 1st, 2007.

A-Resolutions

- None

MEETING MINUTES

Date: September 19, 2007
9:00 AM to Noon
NC Turnpike Authority Office Building Ground Floor Conference Room (G-13)

Project: STIP R-2576 Mid-Currituck Bridge Study - BRS-OOOS(35)

Mid-Currituck Bridge Spotlight:

Attendees:

- | | |
|-------------------------------|----------------------------|
| Scott McLendon, USACE | Bruce Ellis, NCDOT-NEU |
| Bill Biddlecome, USACE | Elizabeth Lusk, NCDOT-NEU |
| Christopher Millsicher, USEPA | Ted Devens, NCDOT-PDEA |
| Kathy Matthews, USEPA | Brian Yamamoto, NCDOT-PDEA |
| Gary Jordan, USFWS | Jennifer Harris, NCTA |
| Jim Headley, NCDENR-DCM | Christy Shumate, HNTB |
| Cathy Brittingham, NCDENR-DCM | Anne Redmond, HNTB |
| David Wainwright, NCDENR-DWC | Jens Geratz, EcoScience |
| Travis Wilson, NCWRC | John Page, PB |
| George Hoops, FHWA | Bill Rice, PB |
| Donnie Brew, FHWA | |

Presentation Materials: (Posted on the TEAC website)

- Meeting Agenda
- Handout 8 – Response to Agency Comments at the July 18, 2007 TEAC Meeting (updated Sept. 5, 2007)
- Handout 8 Attachment – Historic SAV Mapping
- Handout 9 – Response to Written TEAC Comments Requested in July 2007
- Handout 10 – Detailed Study Alternatives (updated September 19, 2007)
- Final Section 6002 Project Coordination Plan

General Discussion:

- **Responses to agency comments at the July 18, 2007 TEAC meeting** – Responses to agency comments made at the July 18, 2007 TEAC meeting are included in Handout 8. The comments and responses were reviewed.
- **Responses to written comments received since the July 18, 2007 TEAC meeting** – Written comments were received from USEPA, USACE, NCDENR-DWC, and NCDENR-DMF. Responses to these comments are included in Handout 9. Questions and discussion on this handout can be found in the Q&A section of these minutes.
 - o Ferries – Additional consideration and analysis has been completed for a ferry alternative. These alternatives are essentially the same as the bridge alternatives, but replace the bridge with ferry service.

- o USEPA noted that the I-73 DEIS prepared for SCDOT has good discussion of NEPA cross-cutting issues and recommended that NCTA obtain a copy to consider as a go-by.
- o NCDENR-DCM noted that they will be providing written comments on alternatives selection. These comments will be similar to those already submitted by other agencies.
- **Detailed Study Alternatives** – NCTA reiterated its selection of MCB3 and MCB4 with Bridge Corridors C1 and C2 as the detailed study alternatives with the following details:
 - o The C1/C2 mainland corridor will be expanded to extend from just south of Aydlett Road north to the powerline corridor to allow for more detailed field studies and shifting of the alignment to minimize impacts.
 - o Alternate configurations will be considered for the interchange at US 158. Intersections will also be assessed for feasibility.
 - o Results of ongoing SAV studies will be used to minimize SAV impacts when determining the bridge alignment.
 - o On the Outer Banks, wetland impacts will be minimized as much as possible.

Q&A:

1. *What is the source of the hurricane statistics used to respond to USEPA Purpose and Need Comment #3?*
The data was gathered from the National Hurricane Center, NOAA, NC Climate Center. A full report will be provided to agencies by NCDOT.
2. *Will the DEIS address stormwater runoff from a bridge, as well as additional impacts related to storing and treating stormwater (i.e. land for treatment areas, etc.)?*
These impacts will be disclosed in the DEIS and discussed with agencies at upcoming TEAC meetings. NCDENR-DCM recommended that NCTA coordinate with NCDENR-Stormwater Division early in the design process to ensure proper stormwater measures are included.
3. *NCDENR-DWQ asked if widening on NC 12 does not improve hurricane clearance times, why it is included in the alternatives.*
NC 12 is not a controlling link for hurricane evacuation; therefore improvements to NC 12 do not effect clearance times. However, improvements to NC 12 would improve daily traffic flow in the project area.
4. *NCDENR-DCM asked about potential issues with navigability related to the bridge. NCDENR-DCM added that CAMA requires maintenance of conditions comparable what exists currently.*
NCTA has coordinated with USCG regarding navigability of Currituck Sound. USCG is amenable to looking into who is using Currituck Sound and what their requirements would be in terms of navigation.
5. *NCDENR-DCM indicated that mitigation for the project should include SAV impacts, noting that shading of SAV could require mitigation.*
Studies are ongoing to determine the extent of SAV in the project area. NCTA will coordinate with NCDOT, NCDENR-DCM, NCDENR-DMF, and NMFS to identify appropriate mitigation for SAV impacts. NCDOT suggested that mitigation could include constructing oyster beds or funding research efforts or water quality monitoring.
6. *USFWS noted that there was discussion during the July 10, 2007 field visit about preserving Maple Swamp as part of the mitigation for the project and asked if that discussion had been documented.*
This discussion was documented in meeting minutes for the field visit, as well as in meeting minutes for the July 18, 2007 TEAC meeting. USEPA suggested that as a first step to determining the feasibility of this proposal, property owners would need to be contacted to gauge their willingness to sell and/or preserve the property. USFWS added that a local land trust may be able to assist in this effort. In addition, local land use regulations should be reviewed to determine if there may already be protections in place. NCTA will discuss this further with NCDOT and NCEEP. USEPA pointed out that FHWA and NCDOT have not historically mitigated for indirect and cumulative impacts, and suggested that a commitment for a more robust mitigation plan could help alleviate agency concerns about the alternatives selection. FHWA requirements do not require mitigation for indirect and cumulative impacts.

7. *NCWRC requested clarification that no non-bridge alternatives are proposed for detailed study and expressed concern that an adequate comparison of secondary and cumulative impacts could not be completed without a non-bridge alternative being studied in detail.*
Based on the results of the alternatives screening process, NCTA is proposing to assess only bridge alternatives in the DEIS. NCTA is working with East Carolina University (ECU) to assess secondary and cumulative impacts for the project and has asked that ECU consider a non-bridge scenario for comparison with bridge alternatives.
8. *USACE asked if FHWA is satisfied that requirements of Section 6002 have been met with respect to selection of detailed study alternatives.*
FHWA stated that based on the alternatives analysis and screening that has been completed, they are satisfied with the recommendation to study only bridge alternatives. FHWA pointed out also that there is state legislation mandating that this project be studied as a bridge based on the ability to toll a new facility. Funding needs to be considered – if this project is not a toll project it will not be built. Tolling could have been incorporated into the purpose and need for the project; however, NCTA elected to continue with the purpose and need developed by NCDOT with the agencies through the Merger 01 process.
9. *Has a Public Private Partnership been secured for this project?*
No commitment for a Public Private Partnership is in place at this point, though private entities have expressed interest in this project.
10. *Agencies responded that ability to obtain funding for the project is speculative, and USACE noted that they are not comfortable dropping alternatives based on funding without the funding already in place.*
MCB2 is the only alternative eliminated from further consideration due to lack of funding. Other alternatives were evaluated through the screening process included in Handout 3 (May 2007) based on their effectiveness at meeting the project purpose and need, traffic benefits, and potential impacts. ER1 and MCB1 were eliminated based on the high number of relocations required for widening NC 12 to four lanes in Dare County. ER2 was eliminated because it provides minimal traffic benefits. FHWA added that these results are based on an alternatives screening process and alternatives that are not be arbitrarily carried forward.
11. *USEPA noted that there should be a full range of alternatives considered in the DEIS, including a non-bridge alternative, so that impacts can be evaluated equally. Also, the public should be given an opportunity to comment on the range of alternatives, including upgrading the existing roads.*
Alternatives considered to this point, including non-bridge alternatives, have been evaluated through the alternatives screening process introduced at the May 2007 TEAC meeting. At each stage of screening, equivalent levels of data were used for all alternatives. The screening process was used to evaluate a range of alternatives and determine which alternatives should be studied in detail in the DEIS.

Public workshops will be held as soon as possible and the public will be invited to comment on all alternatives.
12. *NCDENR-DCM asked about the status of invitation letters for cooperating and participating agencies.*
These letters are being prepared and will be distributed before the next TEAC meeting.

Previous Action Items:

- NCTA/NCDOT will investigate the legislative intent of 18-hour hurricane evacuation standard (GS 136-102.7) [See Handout 8 for response.]
- FHWA/NCTA to look into legislative intent of the accelerated pilot toll bridge project (GS 136-89.183) with specific regard to the terminology "bordering the State of Virginia" [See Handout 8 for response.]
- FHWA/NCTA to consider Tiered EIS recommendation [See Handout 8 for response.]
- NCTA will ask Carolina Land for a breakdown of relocations from direct impacts and relocations from reduced lot size only [See Handout 8 for response.]

- NCTA will check on minimum lot size ordinances, prevalence of individual septic systems, and relation of lot size to the CAMA land use plan
[See Handout 8 for response.]
- NCTA will check with Currituck County on potential extension of NC 12 north; NCTA will check with NCDOT Division 1
[See Handout 8 for response.]
- NCTA will consider alternative interchange configurations for the US 158/Mid-Currituck Bridge interchange
[See Handout 8 for response.]
- NCTA will evaluate modifying C3/C4 to minimize impacts to the bay forest (shift north of Aydlett Road) and to the community of Aydlett
[See Handout 8 for response.]
- NCTA will check with NCDENR-DNH on information on the bay forest system
[See Handout 8 for response.]
- NCTA will continue to pursue ECSU SAV study information
[See Handout 8 for response.]
- NCTA will consider whether to meet on the project in August
[The August meeting was cancelled.]
- Agencies will provide comments and issues of concern on Highway Improvement Alternatives, bridge corridors, and proposed Detailed Study Alternatives within 30 days, as noted in the Section 6002 Project Coordination Plan.
[Written comments were received from USACE, USEPA, NCDENR-DMF, and NCDENR-DWQ. See Handout 9 for responses to written comments.]
- Agencies will provide comments on the draft meeting summary from the July 10, 2007 field visit by August 15, 2007.
[No comments were received.]

New Action Items:

- NCTA will complete and distribute a final alternatives screening report for agency review and comment.
- Agencies will provide any additional written comments on the alternatives screening conclusions presented in Handout 10, which states that MCB3 and MCB4 alternatives with bridge corridors C1 and C2 will be evaluated in the DEIS, by October 19, 2007.
- NCTA will distribute invitation letters to cooperating and participating agencies.



Turnpike Environmental Agency Coordination (TEAC) Meeting

MEETING MINUTES

Date: November 14, 2007
9:00 am to 10:30 am
NC Turnpike Authority Office Building Ground Floor Conference Room (G-13)

Project: STIP U-4763B Triangle Parkway

Triangle Parkway Spotlight:

Attendees:

- | | |
|------------------------------------|-----------------------------------|
| Eric Alsmeyer, USACE | Tony Houser, NCDOT-Roadway Design |
| Travis Wilson, NCWRC | Anne Redmond, HNTB |
| Kathy Matthews, EPA | Jim Cooper, EcoScience |
| Gary Jordan, USFWS | Richard Bollinger, Transit |
| Chris Millscher, EPA | Jay Bissett, Mulkey |
| Rob Ridings, NCDENR-DWQ | Jeff Reck, Mulkey |
| Brian Wrenn, NCDENR-DWQ | David Booker, Mulkey |
| Renée Gledhill-Earley, HPO | Angela Parker, Mulkey |
| George Hoops, FHWA | Cindy Carr, Mulkey |
| Donnie Brew, FHWA | Johnny Banks, Mulkey |
| Jennifer Harris, NCTA | Bill Hood, Mulkey |
| Tim McFadden, NCDOT-Alt. Delivery | |
| Nicole Hacker, NCDOT-Alt. Delivery | |
| Nilesh Surti, NCDOT-Alt. Delivery | |

Presentation Materials: (All materials have been posted on the TEAC website)

- Meeting Agenda
- 30% Hydraulic Design Plans
- Half-size draft public hearing map
- Handout 1 from October 17, 2007 TEAC Meeting – Wetland and Stream Impact Table
- Handout 3 from October 17, 2007 TEAC Meeting – NC 540 Stream and Wetland Impact Table

Purpose:

The purpose of this meeting was to provide a brief project status update, discuss any comments received on avoidance and minimization, proposed widening of eastbound NC 540 and qualitative Indirect and Cumulative Effects (ICE) results, and review the 30% Hydraulic Plans.

General Discussion:

The following information was discussed during the meeting:

- **Public Hearing Map Overview/Project Description** - Triangle Parkway is proposed as a six-lane tolled freeway facility with a 46 foot grassed median with 12-foot paved inside shoulders and 12-foot paved outside shoulders. Each of the proposed travel lanes is 12-foot wide. The project is located in southern

Durham County and western Wake County, predominately within RTP. The project includes the following improvements:

- Constructing a full control access road extending approximately 3.4 miles in length from NC 540 to I-40.
- Constructing a compressed split diamond interchange between Davis Drive and Hopson Road with one-way frontage roads connecting Davis Drive and Hopson Road.
- Constructing dual bridges over Burdens Creek.
- Constructing toll plazas on the interchange ramps at Hopson Road.
- Constructing toll plazas on the ramp between westbound NC 540 and northbound Triangle Parkway and the flyover ramp between southbound Triangle Parkway and eastbound NC 540.
- Widening approximately 0.8 miles in the median of northbound NC 147 from I-40 to Cornwallis Road.
- Widening the outside lane of eastbound NC 540 by one-lane (The total length of the widening along NC 540 is approximately 1.3 miles).
- Widening the two-lane flyover ramp from eastbound NC 540 to Triangle Parkway to three-lanes.
- Widening the existing bridges on NC 540 over Davis Drive, Cisco Access Road and proposed Louis Stephens Road.
- Constructing the Kit Creek Road connector. (The Kit Creek Road connector, which would provide additional connectivity between Davis Drive and Church Street, is currently included as part of the Preferred Alternative at the request of the Town of Morrisville. A final decision on the construction of the Kit Creek connector will be made after all comments are received on this environmental document and through the public hearing process.)

- **Project Status Update** – An update on the project status was provided to the meeting attendees. This update included the following information:
 - Qualitative Indirect and Cumulative Effects (ICE) presentation and Avoidance and Minimization – Comments, issues or concerns on the ICE presentation and the Avoidance and Minimization discussion were requested at the October 17, 2007 TEAC Meeting by November 9, 2007. The NCTA did not receive any comments. If there are any comments, issues or concerns, please submit them to Jennifer Harris as soon as possible. The draft ICE assessment is currently being reviewed by NCDOT and FHWA. The report should be finalized within the next few weeks and will be made available on the TEAC website.

- EPA questioned the review of hydraulic plans prior to the issuance of the Environmental Assessment (EA). The NCTA is using an expedited process to implement the project. FHWA and NCTA acknowledged that the team is proceeding at risk in order to meet an expedited schedule, and commented that if the plans changed based on the public hearing or comments received during the EA review period that those changes to the design plans would be revised and re-reviewed with the agencies. No approvals are final until the final NEPA document is completed and the 401 and 404 permits are issued. There will be additional opportunities for the environmental review agencies to provide comments prior to the submittal of the permit package. It should be noted this project has been screened out of the 404/NEPA Merger Process in July 2006.

- The NCTA is aware of the concerns raised by the employees at the EPA facility located adjacent to the project. The NCTA has had numerous meetings with both EPA and NIEHS management and the employee's union representatives throughout the planning process to discuss their concerns regarding access to the campus and air quality at the daycare. EPA recommended that a chronology of coordination with EPA / NIEHS during the planning process be disclosed in the EA.
- A quantitative Mobile Source Air Toxics (MSATs) Analysis is being prepared for the project and will be included in the EA. The preliminary Noise Report has determined that a noise wall is feasible and reasonable at the daycare facility located on the EPA property. A Design Noise Report will be prepared and completed prior to the Public Hearing to finalize the need for the noise wall. In addition, there is an environmental commitment in the EA and in the Design-Build scope of work to minimize the cutting of trees along the EPA property in the vicinity of the daycare.

- NCTA and NCDOT will continue to evaluate the access to EPA at Hopson Road with the NCDOT after comments are received on the EA and after the Public Hearing. The current design includes a left-over at this intersection based on the project-level traffic analysis and NCDOT Roadway Design

Manual and Median Crossover Spacing Guidelines, which recommends a 1,200-foot minimum intersection spacing for divided highways without full control of access and posted speeds of 45 mph and less. Hopson Road is a NCDOT state maintained facility. Therefore, any decisions on access must be approved by NCDOT. The NCTA will include the information relating to the coordination completed with the EPA and NIEHS in the EA. Once completed, the EA will be available on the NCTA website.

- The EPA commented that studies show the noise wall should help mitigate the MSATs at the daycare. MSAT effects vary according to the time of year and are more of an issue during cool winter days. MSATs tend to hydrolyze (mix in with air and humidity), and effects are felt immediately adjacent to the roadway (within 100 feet). The daycare is approximately 10 to 12 feet above the elevation of the proposed roadway.

Review of the 30% Hydraulic Plans – Jeff Reck proceeded with the review of the 30% hydraulic plans for the project. The following is a discussion of each wetland or stream site being impacted by the project:

General

- All waters within the project are Class 'C' nutrient sensitive waters.
- The project falls within the Cape Fear River Basin.
- Grass Swale treatment will occur in multiple locations throughout the project in ditches where flat slopes can be maintained.
- Pre-formed scour holes will also be utilized as treatment measures.
- Proposed culverts will be buried 1 ft to provide for fish passage.
- Cross pipes in jurisdictional perennial streams will be buried 1 foot.
- Cross pipes in jurisdictional intermittent streams will be buried 1 foot for culverts greater than 48 inches and 20% of the pipe diameter for culverts less than 48 inches in diameter.

(The cross pipe topic was clarified after the meeting with NCDENR-DWQ & NCWRC via email stating: Cross pipes in jurisdictional perennial and intermittent streams will be buried 1 foot for culverts greater than 48 inches and 20% of the pipe diameter for culverts less than 48 inches in diameter.)

Sheet 2-DET-1

- Details Sheet
 - All impacts shall be temporary.
 - Riprap at inlet of temporary culvert is proposed to provide positive drainage since the inlet is perched.
 - Stream NSL is considered permanent impacts currently, but needs to be changed to temporary stream impacts since culvert extensions will be removed and everything will be put back to existing conditions. The impacts table will also be revised to reflect this change.

Sheet 2-DET-2 (No Comments from Regulatory Agencies)

- No impacts
- Sheet 4
 - Culvert Crossing at Sta. 99+37 –L–
 - A single box culvert is proposed to match the channel shape
 - Riprap will be removed from channel bed per request.
 - Culvert Crossing at Sta. 11+28 –YSDR1–
 - Waiting on geotechnical information to determine if existing bottomless arch culvert can withstand additional fill
 - Current design shows proposed 9' x 6' box culvert to replace bottomless arch culvert (worst case scenario).
 - Base Ditch
 - At grade
 - Wetlands
 - Impacts at approx. Sta. 109+00 due to the roadway alignment.

General Comment: NCWRC noted not to put riprap in perennial channels for energy dissipation.

Sheet 5 (No Comments from Regulatory Agencies)

- Intermittent Stream
 - Approximately 200 ft of impacts at approx. Sta. 120+00

Sheet 6

- Culvert Crossing at Sta. 125+00 –L–
 - Can be built in the dry, without additional impacts to the stream.
 - 2 ft silt in culvert carrying "non" base flow.
 - Culvert is buried 1 ft
 - Request made to remove rip rap from channel bed
- Culvert Crossings at Sta. 142+53 –L– and Sta. 229+85 –Y1–
 - Can be built in the dry, without additional impacts to the stream.
 - 2 ft silt in culvert carrying "non" base flow.
 - Culvert is buried 1 ft
 - Grass-lined swales before direct discharge into culvert.
 - Concern about the channel between these two culverts
- USACE asked if the two culverts could be connected. NCTA stated that they could not because there would be too much direct discharge into the culverts, and the bridge limits the alignment options.
- At the request of USACE, NCTA plans to look at the detailed design for this channel prior to the next TEAC meeting in December to make sure the channel is stable. There is a lot of water flowing through the channel and there are two bends in the channel; these are both design concerns. The velocity of the channel at that site is 7.6 ft/s and the bed slope is 0.5%.
- There was a request by USACE to reinforce the channel as much as necessary, including adding riprap if needed.
- Wetlands
 - Assuming total takes for all wetlands
- Perennial Streams
 - There will be some perennial streams buried.
- Ponds
 - There was a question about impacts to the office park stormwater ponds shown on Sheet 6. NCTA stated that the current designs do not impact any of the stormwater ponds associated with the office parks on Sheet 6.
- General Comments
 - Remove "Drain Ditch" from the survey file throughout the entire project.
 - At approx. Sta. 241+00 –Y1– there is riprap in the jurisdictional stream that was permitted under TIP Project U-4026.

Sheet 7

- Perennial Stream
 - At match line for Sheet 6, approx. 75 ft of stream will be impacted. The stream turns to intermittent after that, and the whole area will be a total take.
 - Open channel flow with riprap will be added to the west side of the project to relocate the stream.
- Intermittent Streams at north side of Hopson Rd.
 - Adding a ditch to handle the flow. Ditch will be grass lined for the first half then rip rapped.

Sheet 8

- Intermittent Stream
 - From beginning of sheet to Sta. 185+00 –L– the intermittent stream will be a full take.
 - Relocating stream from the east side of the project to the west side.
- Perennial Streams
 - From Sta. 185+00 –L– to the end of the sheet the perennial stream will be a full take.

Sheet 9

- Perennial Streams
 - Impacts up to Sta. 191+00 –L–, after that we will no longer be impacting it
 - Riprap will most likely be added to that stream (only showing on the banks currently) due to the high velocity of the water exiting the 72" cross-pipe.
- 72" Cross-pipe
 - Look at energy dissipaters besides riprap.
 - USACE asked if a bend be added. NCTA stated that a bend could not be added because the amount of discharge and the size of the culvert create concern of debris potential at the bend. The overall skew angle will be looked at and revised if feasible.
- Wetlands
 - Fill slope into wetlands at approx. Sta. 204+00 –L–.
 - A 5 ft berm will be provided at the base of slope.
- General
 - Comment that traffic flow arrows appear to be reversed on some sheets.
 - NCDOT inquired if the wall could be moved back further from guardrail.

Sheet 10

- Wetlands
 - Wetlands from Sta. 207+00 –L– to 211+00 –L– will be total take.
 - Wetlands from Sta. 218 –L– to next sheet will be total take.

Sheet 11

- Wetlands
 - Bridge over wetlands
- There is a bent located in the wetlands
- USACE asked how much will be impacted due to access for construction. NCTA responded that there will be temporary impacts for the access and construction; the bent will be a permanent impact.
- EPA requested that the 340' bridge over the FEMA-regulated stream be documented as avoidance and minimization.

Sheet 12

- Culvert Extension on –Y3–
 - Culvert dropped at outfall to match scour hole
 - NCDENR-DWQ requested the removal of the riprap from the channel and instead using the NCDOT energy dissipater cell.

Sheet 13

- Culvert Extension
 - Extending existing 8' x 6' culvert
 - No riprap in channel
- Jurisdictional Intermittent Stream impacts on –Y4RPC–
 - Relocating stream (diverging it)
 - Riprap will be put on embankment

Sheet 14 (No Comments from Regulatory Agencies)

- Widening existing road
 - Sheet Flow into existing stream, no impacts
- Floodplain may be created by excavating embankment

Sheet 15 (No Comments from Regulatory Agencies)

- Widening existing road
 - Sheet Flow into existing stream, no impacts
- Floodplain may be created by excavating embankment

Sheet 16 (No Comments from Regulatory Agencies)

- Widening existing road
 - Sheet Flow into existing stream, no impacts
- Culvert Extension
 - No impacts
- Floodplain may be created by excavating embankment

Sheet 17

- Retaining wall on -YRPA- needed due to toll plaza - (worst case scenario if there are cash collection facilities instead of all electronic toll collection)
 - Might require extension of two culverts
- Sta. 40+00 -YBFLY- culvert extension (worst case scenario if there are cash collection facilities instead of all electronic toll collection)

Sheet 18 (No Comments from Regulatory Agencies)

- No proposed work
 - No impacts

Sheet 19 (No Comments from Regulatory Agencies)

- No proposed work
 - No impacts

Sheet 20 (No Comments from Regulatory Agencies)

- No impacts

Sheet 21 (No Comments from Regulatory Agencies)

- No impacts

Sheet 22 (No Comments from Regulatory Agencies)

- No impacts

Sheet 23 (No Comments from Regulatory Agencies)

- No impacts

Sheet 24 (No Comments from Regulatory Agencies)

- No impacts

Sheet 25 (No Comments from Regulatory Agencies)

- No impacts

Sheet 26 (No Comments from Regulatory Agencies)

- No impacts

Sheet 27 (No Comments from Regulatory Agencies)

- Permitted under U-4026

Sheet 28 (No Comments from Regulatory Agencies)

- No impacts

Sheet 29

- Intermittent Stream
 - 75 ft of stream will be buried
 - Existing 36" pipe at this location will be extended

Next Steps

- NCTA will review the draft permit drawing with the agencies

New Action Items:

- The NCTA will distribute the draft permit drawings to the agencies prior to the (December or January) TEAC meeting. At the meeting, the NCTA will review the permit drawings with the agencies. The hydraulic design engineers will be present at the meeting to review the drawings and discuss comments with the agencies. (Note: NCTA anticipates submitting the permit applications in February 2008.)
- Brian Wrenn will be representing NC DENR-DWQ from this point forward as Acting Supervisor since John Hennessy is no longer in this position.

Date: November 14, 2007
10:30 am to 12:30 pm
NC Turnpike Authority Office Building Ground Floor Conference Room (G-13)

Project: STIP R-2576 Mid-Currituck Bridge Study - BR5-0005(35)

Mid-Currituck Bridge Spotlight:

Attendees:

Bill Biddlecome, USACE	George Hoops, FHWA
Christopher Miltischer, USEPA	Donnie Brew, FHWA
Kathy Matthews, USEPA	Bruce Ellis, NCDOT-NEU
Gary Jordan, USFWS	Ted Devens, NCDOT-PDEA
Ron Sechler, NMFS	Jennifer Harris, NCTA
Jim Hoadley, NCDENR-DCM	Christy Shumate, HNTB
Cathy Brittingham, NCDENR-DCM	Jens Geratz, EcoScience
David Wainwright, NCDENR-DWQ	John Page, PB
Brian Wrenn, NCDENR-DWQ	Mike Fendrick, PB
Travis Wilson, NCWRRC	Eric Misak, PB
Renee Gledhill-Early, NCDENR-HPO	Sam Cooper, CZR

Presentation Materials: (All materials have been posted on the TEAC website)

- Meeting Agenda
- Handout 11 – Conceptual Alternatives Refinement
- Bathymetric and SAV Data from USACE
- Compressed Y Interchange Concept (Sheets 1 and 2 of 2)
- Signalized Intersection Concept (Sheets 1 and 2 of 2)
- Trumpet Interchange Concept (Sheets 1 and 2 of 2)
- NC 12 Alternatives C1C and C1D
- NC 12 Alternatives C1A, C2A, and C1B
- USACE Currituck Sound Hydrographic and Submerged Aquatic Vegetation Survey (September 2007)
- NCDOT SAV Field Survey Summary (October 26, 2007)

Purpose:

The purpose of the meeting was to discuss results of environmental field studies, including submerged aquatic vegetation (SAV) mapping, wetland delineations, and tree surveys in Maple Swamp, and review conceptual interchange and alignment options for bridge corridors.

General Discussion:

The following information was discussed at the meeting:

- **Alternatives for Detailed Study** – NCTA is working to address written comments received from the agencies on the proposed alternatives for detailed study and to complete documentation of the alternatives analysis process. A draft alternatives study report will be circulated for agency and public comment once it is complete. NCTA is proceeding with environmental field studies for the MCB3 and MCB4 bridge alternatives in the C1 and C2 bridge corridors, as there has been general agreement that those alternatives should be studied in detail in the draft environmental impact statement (DEIS).
- **Environmental Field Studies** – Within the C1/C2 bridge corridors, environmental field studies are underway. This includes: SAV/bathymetry mapping studies conducted by USACE, wetland delineations, and tree surveys in Maple Swamp.
 - SAV - SAV and bathymetry surveys were conducted by USACE for the NCTA in June/July 2007. From the mapping, USACE was able to identify areas currently containing SAV as well as water depth (and potential SAV habitat) throughout the study area. The results of the USACE survey

were provided to and field checked by NCDOT-NEU in August 2007 and found to be accurate. On bathymetry mapping, areas shown in green are shallower than areas in blue. SAV habitat is considered to be areas with less than 5 feet of water depth. Potential impacts for the bridge alternatives will be calculated for both existing SAV and potential SAV habitat. NCTA has received a final report from USACE summarizing the results of their survey. Hard copies of the report were distributed at the meeting, and the report is available on the TEAC website.

- Wetland delineations - Wetland delineations are on-going in the C1 and C2 corridors. CZR used aerial photographs, soils mapping, and the North Carolina Natural Heritage database to identify potential wetland areas. Potential wetlands were mapped in the office and field checked. CZR is in the process of flagging wetland boundaries and has had one field meeting with the USACE representative (Outer Banks side). CZR noted that several isolated wetlands were located on the Outer Banks along NC 12 and will likely be subject to NCDENR-DWQ jurisdiction.

The field checked wetland impacts were used in the comparison of interchange and intersection alternatives in the C1 and C2 corridors discussed below.

- Tree surveys in Maple Swamp - CZR conducted a tree survey in Maple Swamp to identify trees greater than 22 inches diameter at breast height (DBH). Trees with diameters larger than 22 inches represented less than 15 percent of the number of trees surveyed. Larger trees were concentrated south of Aydlett Road, where the largest trees would surpass the state's current Loblolly Bay "Champion Tree", which is 18 inches DBH. CZR also recorded density of trees greater than 10 inches DBH per acre, species composition, and habitat/community type. Some loblolly bay trees are found north of Aydlett Road, but the current C1/C2 alignment, which is north of and parallel to an existing powerline corridor, would avoid impacts to loblolly bays. Maps showing the results of this survey are included in Handout 11.

• **Work Plan for Completion of the Alternatives Studies** – NCTA is continuing work on the complete draft

Alternatives Study Report, which will summarize the alternatives development and analysis process and document NCTA's recommended detailed study alternatives. The completed report will be distributed for agency and public review, likely early in January 2008. Citizens Informational Workshops will also be held in late January/early February 2008 to obtain public comment on the Statement of Purpose and Need and alternatives considered for the project. Dates have not yet been determined for the Citizens Informational Workshops but will be provided to agency representatives as soon as they are available. A summary of the public comments will be provided to the agencies.

• **US 158 Interchange Alternatives** – Based on agency comments received during the July 2007 field visit,

multiple interchange configurations at US 158 and the proposed bridge were considered to minimize impacts to wetlands west of US 158. Three configurations were evaluated in detail using conceptual designs and field-checked wetland impact calculations. Toll collection and support facilities for the interchange options have been incorporated to minimize wetland impacts. These configurations all tie to a two-lane bridge at this time, as NCTA is evaluating 2035 traffic projections and lane requirements for the bridge.

- Trumpet interchange – the trumpet interchange configuration was originally proposed in the previous studies but would have impacts to wetlands west of US 158. This concept includes a single toll collection plaza, operations facilities, and a relocation of Aydlett Road to the south. This interchange configuration has the greatest wetland impacts and would relocate three residences and two businesses. The cost of this interchange is also relatively high due to the amount of bridging required to minimize wetland impacts.
- Compressed Y interchange – this interchange concept was developed to minimize wetland impacts west of US 158. It would use ramp toll collection plazas, which would not have any wetland impacts. This interchange configuration is preferred by NCTA because of lower potential wetland impacts, good traffic flow, and lower costs.
- Signalized intersection – this concept would use a signalized intersection to control southbound US 158 traffic onto the bridge and westbound bridge traffic onto US 158. The southbound lanes of US 158 would be shifted to allow for unimpeded southbound flow and create a storage area for cars turning onto the bridge. This concept would include a single toll plaza, which would result in some filled and bridged wetland impacts. This concept is also the most expensive and is not preferred by NCDOT or NCTA.



Turnpike Environmental Agency Coordination (TEAC) Meeting

USFWS, USACE, and NCDENR-DWQ agreed that the compressed Y interchange is preferred. USEPA suggested carrying both the trumpet and compressed Y interchanges forward at an equal level of detail for public input. All three interchange configurations and their analysis will be included in the draft Alternatives Study Report.

- **NC 12 Intersections** – NCTA originally presented two potential Outer Banks termini for the project – C1/C3/C5 termini near the Corolla Bay development north of Monterey Shores, and the C2/C4/C6 termini near the Timbukli shopping center. At the July 2007 field visit, agencies requested that NCTA evaluate shifting the C1/C3/C5 to the south to minimize impacts to coastal wetlands. In addition, in written comments dated October 22, 2007, NCDENR-DCM requested that NCTA consider an alternative alignment that would minimize direct impacts to current SAV beds. In response to these comments, several options were developed for each of the original termini within the existing study corridors.

- o C1 – original northern termini that impacts new Corolla Bay subdivision and coastal wetlands.
- o C1A – avoids direct impacts to existing SAV beds, but would have greater impacts to existing Monterey Shores subdivision.
- o C1B – ties in between Corolla Bay and Monterey Shores and would not directly impact existing residences in either development; minimizes impacts to coastal wetlands.
- o C1C and C1D – southward shifts of C1 within Corolla Bay to minimize coastal wetland impacts.
- o C2 – original southern termini at Timbukli shopping center; substantially impacts access to several commercial properties.
- o C2A – southward shift of C2 to minimize access changes to commercial properties.

Costs for these options are not a factor in decision-making as cost is more dependent on the length of widening required on NC 12 (approximately 2 miles for C2 options and approximately 4 miles for C1 options). NCTA proposes to eliminate Option C1A because of its community impacts, and although it would avoid current SAV beds, it would impact potential SAV habitat. NCTA will discuss Options C1, C1B, C1C, and C1D with Currituck County and present to the public. Likewise, NCTA will discuss Options C2 and C2A with the County and present to the public.

- **Invitations to Participating and Cooperating Agencies** – NCTA distributed invitation letters for state agencies to become participating agencies and requested responses by December 14, 2007. Invitation letters for federal agencies to become cooperating and/or participating agencies will be mailed to federal agency representatives from FHWA.

Previous Action Items:

- NCTA will complete and distribute a final draft alternatives screening report for agency review and comment. *[Preparation of this report is underway.]*
- Agencies will provide any additional written comments on the alternatives screening conclusions presented in Handout 10, which states that MCB3 and MCB4 alternatives with bridge corridors C1 and C2 will be evaluated in the DEIS, by October 19, 2007. *[Written comments were received from USEPA (October 19, 2007 email), NCDENR-DWQ (October 12, 2007 letter), NCWRC (October 15, 2007 letter), NCDENR-DMF (October 18, 2007 letter), and NCDENR-DCM (October 22, 2007 letter).]*
- NCTA will distribute invitation letters to cooperating and participating agencies. *[Invitation letters to participating state agencies were distributed at the November 14, 2007 TEAC meeting. Responses have been received from NCDENR-DWQ and NCDENR-DMF. Invitations to federal cooperating and participating agencies were distributed via mail by FHWA.]*

New Action Items:

- NCTA will complete and distribute a final draft alternatives screening report for agency review and comment.
- NCTA will schedule Citizens Informational Workshops and notify agencies of the dates for these workshops.
- Agencies will provide comments on US 158 interchange alternatives and NC 12 intersection options.
- Agencies will respond to invitations to become cooperating and/or participating agencies.

MEETING MINUTES

Date: February 5, 2008
1:30 PM to 2:30 PM
NC Turnpike Authority Office Board Room (Suite 400)

Project: STIP R-2576 Mid-Currituck Bridge Study - BRS-000S(35)

Mid-Currituck Bridge Spotlight:

Attendees:

Bill Biddlecome, USACE	George Hoops, FHWA
Christopher Millscher, USEPA	Donnie Brew, FHWA
Kathy Matthews, USEPA	Dewayne Sykes, NCDOT-Roadway
Gary Jordan, USEFWS	Sam St. Clair, NCDOT-Roadway
Ron Sechler, NMFS (via phone)	Jennifer Harris, NCTA
Cathy Brittingham, NCDENR-DCM	Christy Shumate, HNTB
Sara Wainwright, NCDENR-DWQ	Jens Geratz, EcoScience
David Winslow, NCDENR-DMF (via phone)	John Page, PB
Travis Wilson, NCWRC	Chris Lloyd, PB
Renee Gledhill-Earley, NCDCCR-HPO	

Presentation Materials: (All materials have been posted on the TEAC website)

- Meeting Agenda
- Mid-Currituck Workshop Postcard Notification (February 2008)

Purpose:

The purpose of the meeting was to prepare for distribution of the Alternatives Study Report and provide an overview of upcoming Citizens Informational Workshops.

General Discussion:

The following information was discussed at the meeting:

- **Statement of Purpose and Need and Alternatives Study Report Status** – The Statement of Purpose and Need is being updated to incorporate 2035 No-Build traffic forecast data to correspond to the design year used for the project.

NCTA is continuing work on the complete draft Alternatives Study Report, which will summarize the alternatives development and analysis process and document NCTA's recommended detailed study alternatives. The completed report will be distributed for agency and public review to obtain comment on the Statement of Purpose and Need and alternatives considered for the project. A

summary of the public comments will be provided to the agencies before the April 2008 TEAC meeting.

- **Two, Three, and Four Lane Bridge Discussion** – PB provided an overview of the differences between 2, 3 and 4 lane bridge scenarios for the Mid-Currituck Bridge. Under the 2035 travel demand forecast, a two lane bridge operates at an acceptable Level of Service (LOS D) during the Summer Weekday. The four lane bridge scenario operates a better LOS but affords a travel time savings of just a few minutes over the two lane bridge. The four lane bridge will have a capital cost of approximately \$122 million more than the two lane bridge.

A three lane bridge scenario was evaluated but is subject to a series of operational issues that impact safety and costs. Three lane scenarios under a fixed lane overhead signal system were evaluated, but found to be problematic when dealing with seasonal users. This system works best under a commuter pattern where daily users have adjusted their driving behavior to accommodate the signals which control lane access. A movable barrier was considered as another three lane option but is costly to implement and has safety concerns for the operating staff and users.

The interchange with US 158, the intersection with NC 12, as well as the approaches to the bridge will be sized to accommodate summer weekend peak traffic to avoid back-ups entering and existing the bridge.

All 2, 3 and 4 lane bridge conditions assume a toll bridge.

- **Citizens Informational Workshops February 26th, 27th and 28th (4:00 to 8:00 PM)** – Citizens Informational Workshops have been scheduled for February 26, 27 and 28. The workshops (4:00 to 8:00 PM) will be informal with no presentation provided. The intent is to provide attendees the opportunity to review project information on the purpose and need, study area, and alternatives under consideration and solicit and respond to attendee comments and inquiries. Presentations to Currituck and Dare County officials will occur on February 26 (Currituck County) and 28 (Dare County) before the workshops. Approximately 12,000 postcards announcing the workshops will be mailed to property owners, officials and citizens who are on the mailing list. After the workshops a newsletter will be distributed.
- **East Carolina University** – NCTA provided an update on the progress of work being completed by East Carolina University (ECU). ECU received a SAFETEA-LU earmark to do research on the Mid-Currituck Bridge project, and are providing support for indirect and cumulative impacts assessment, socioeconomic analysis, and supplemental traffic operations evaluations.
- **Maple Swamp** – NCTA provided recent news regarding clear cut operations that have occurred on a 100-acre parcel just north of Aydlett Road. NCTA noted that ECU is looking into preservation opportunities for Maple Swamp as part of their work.

Q&A:

1. **USEPA** asked if hurricane evacuation times vary with 2, 3 and 4 lane bridge options. The number of lanes on the bridge does not affect hurricane evacuation time because the critical link to hurricane evacuation is US 158 between the Wright Memorial Bridge and NC 12.
2. **NCDCR-HPO** inquired if tolls would be collected for both directions of travel. NCTA currently plans to collect tolls for both directions of travel on the bridge. FHWA added that tolls would be suspended under emergency evacuation orders.
3. **NCDENR-DCM** asked how the C1/C2 touchdown point options will be addressed. NCTA assured that they will all be included in the DEIS as part of the alternatives assessment discussion. Additionally, public input will be collected at Citizens Informational Workshops in February, and agency input will be further assessed at the next TEAC meeting.

meeting, planned for April 2008. PB provided additional comments on the operational and land constraints that will influence the ultimate configuration of the C1 and C2 alignments.

PB also elaborated on the configurations of the interchanges under study at US 158. The interchange configuration will be influenced by the need to reduce wetland and high quality resource impacts balanced against the space constraints of fitting the toll plazas, offices, maintenance facilities and access roads into the interchange. All of these considerations will be provided in the Alternatives Study Report and DEIS. PB further asserted that all alternatives will be presented at the Citizens Informational Workshops, however, more emphasis will be placed on the ER and MCB build alternatives.

4. **USACE** inquired about the availability of revised Statement of Purpose & Need and Alternatives Study Report before the Citizens Informational Workshops. NCTA confirmed the intent is to have both documents available before the workshops. Hard copies will be distributed to the agencies, and the documents will be posted to the NCTA website for public review. USACE was pleased with the language used in the workshop postcard notification.

Previous Action Items:

- Obtain comments on conceptual interchange and alignment options for bridge corridors. [Comments were received from NCDENR-DCM (10/22/07) and USEPA (12/14/07) on conceptual interchange and alignment options for bridge corridors.]
- Distribute invitation letters to participating and cooperating agencies. [Responses to participating agency invitations were received from NCDENR-DCM, NCDENR-DMF, NCDENR-DWQ, NCWRC, and NCDCR-HPO. The USACE accepted the invitation to become a cooperating and participating agency.]

New Action Items:

- NCTA will distribute the Alternatives Study Report for agency and public comment.

Resolutions:

- None

MEETING MINUTES

Date: February 5, 2008
2:30 pm to 3:30 pm
NC Turnpike Authority Office Board Room (Suite 400)

Project: STIP R-3329 Monroe Connector – NHF-74(21)
STIP R-2559 Monroe Bypass – NHF-74(8)

Monroe Connector / Bypass Spotlight:

Attendees:
Donnie Brew, FHWA
George Hoops, FHWA
Kathy Matthews, USEPA
Chris Millsicher, USEPA
Steve Lund, USACE
Marella Buncick, USFWS (by phone)
Renee Gledhill-Early, NCDOT-HPO
Maria Chambers, NCWRC (by phone)
Polly Lespinasse, NCDENR-DWQ (by phone)
Anne Gamber, NCDOT-Hydraulics
John Conforti, NCDOT-PDEA

Ryan White, NCDOT-PDEA
Dewayne Sykes, NCDOT-RDU
Bob Cook, MUMPO (by phone)
Steve DeWitt, NCTA
Jennifer Harris, NCTA
Christy Shumate, HNTB
Anne Redmond, HNTB
Carl Gibilaro, PBS&J
Kiersten Giugno, PBS&J
Jill Gurak, PBS&J
Michael Gloden, EcoScience

Presentation Materials: (all materials have been posted to the TEAC website)

- Meeting Agenda
- Draft TEAC Meeting Minutes (December 5, 2007)
- Summary of Public Comments and Summary of Agency Comments and Responses

Purpose:

The purpose of this meeting was to discuss agency and public comments on the Draft Alternatives Development and Analysis Report.

General Discussion:

- **Summary of Public Comments on Draft Alternatives Development and Analysis Report**
 - The Draft Alternatives Development and Analysis Report was distributed to the agencies and posted to the NCTA website in early November 2007. No comments on the analyses included in the report were received from the public. The vast majority of comments were regarding specific corridor segments. The following summary of public comments was provided:
 - Twenty-two inquiries about impacts to individual properties;
 - Two comments regarding improvements needed on US 601 between US 74 and the North Carolina/South Carolina border.
 - One comment to use NC 218 as the route for the Monroe Connector/Bypass.
 - Two emails supporting alternatives that include Corridor Segment 18A.
 - Sixty-seven emails opposing alternatives that include Corridor Segment 18A.
 - The Town of Stallings, Town of Matthews, and City of Monroe commented via letters and/or local resolutions in support of routes that do not include Corridor Segment 18A.
 - CPCC commented in opposition to Corridor Segment 18A.
 - Approximately 2,300 signatures, including 1,693 petitions and 609 copies of a form letter, were received in opposition to alternatives that include Corridor Segment 18A.
 - Village of Lake Park opposed alternatives that include upgrading existing US 74, including alternatives that include Corridor Segment 2.

- The Town of Indian Trail indicated that Corridor Segments 2 and 22A are inconsistent with local land use plans and expresses concern that Corridor Segment 2 would impact the Old Hickory Industrial Park.

- **Summary of Agency Comments on Draft Alternatives Development and Analysis Report** – Several agencies requested additional information on Alternative G, upgrading existing US 74, including potential indirect and cumulative impacts. Based on these comments, NCTA will carry Alternative G forward on an interim basis until additional information can be evaluated on traffic forecasts, direct community impacts, and potential indirect and cumulative impacts. Alternative G will be included in the qualitative indirect and cumulative impact analysis (ICI). NCTA still recommends Alternative G be eliminated from further consideration based on the information provided in the Draft Alternatives Development and Analysis Report. Once the additional analysis is complete, the data will be presented at a TEAC meeting for discussion.

Several agencies also commented on interchange locations for the project. At this time, interchanges for the detailed study alternatives will correspond to those in the Long Range Transportation Plan; however, due to potential natural resource impacts, NCTA will evaluate all alternatives with and without an interchange at Indian Trail Fairview Road. This will allow for an equal comparison of the alternatives.

NCWRC commented that impacts from Alternative G would likely make it impractical and suggested that Alternative E should also be considered further. It was noted that this alignment would substantially impact a residential area (Hamilton Place), which exhibited strong opposition when the alignment was presented previously as part of the Monroe Bypass project and more recently as part of this project, as well as two historic properties (Secret Farm and Hiram Secret House). NCWRC noted that if the study team is comfortable with studying essentially one build alternative for the project, then she would agree as well. USEPA commented that a full analysis of feasible alternatives should be conducted and warned that the narrower the range of alternatives will equate to an increase in litigation risk. USACE noted that for Section 404 compliance, alternatives can be considered and eliminated prior to detailed study as long as the process and decisions are documented either in a technical report or in the Draft EIS. FHWA noted that the comment to consider another alternative would be considered; however, FHWA is comfortable with the range of alternatives as presented in the screening document. Over many meetings in 2007, the screening process was presented to the agencies for comment.

- **Indirect and Cumulative Impacts** – HNTB is currently preparing a draft qualitative ICI, which is scheduled to be presented to the group for discussion in May 2008. Data collection has begun. The following approach will be used to complete the ICI analyses:
 - The growth impact study area has been identified and provided to FHWA for approval. The growth impact study area will be refined as the ICI moves forward and additional data is available.
 - The ICI will primarily look at growth around proposed interchange areas. The ICI will assume the same interchanges as presented in the Long Range Transportation Plan, but will analyze the project with and without a US 601 interchange.
 - Existing and new land use ordinances will be reviewed to determine existing and future land use. Applicable policies and regulations (e.g., stream buffers and water quality) will also be reviewed.
 - Indicators will be developed in coordination with appropriate agencies to assist in evaluating impacts.
 - Meetings with local planners will be coordinated between various team members.
 - A list of questions will be prepared and provided to the planners in advance of the meetings.
 - The ICI will assume the typical sections included in the Draft Alternatives Development and Analysis Report for new location and upgrade existing roadway segments.

Previous Action Items:

- Obtain agency input on quantitative third screening and recommended detailed study alternatives. *[Written comments received from USACE, USEPA, USEFWS, NCDENR-DWQ, NCDOR-HPO, and NCWRC.]*

New Action Items:

- None.

Resolutions:

- Concluded discussion on detailed study alternatives – Alternatives A, B, C, D, A1, A2, A3, B1, B2, B3, C1, C2, C3, D1, D2, and D3 will be evaluated as detailed study alternatives in the Draft Environmental Impact Statement.
- Alternative G (upgrading existing US 74) will be carried forward on an interim basis until such time as additional information can be developed and evaluated, including potential indirect and cumulative impacts.

Next Steps:

- No TEAC meeting in March 2008; next anticipated TEAC meeting is April 2008.
- Indirect and Cumulative Impact Assessment
- Community Impact Assessment
- Functional Designs
- Environmental Field Studies

MEETING MINUTES

Date: February 5, 2008
3:30 pm to 4:30 pm
NC Turnpike Authority Office Board Room (Suite 400)

Project: STIP U-3321 Gaston E-W Connector – STP-1213(6)

Gaston E-W Connector Spotlight:

Attendees:
George Hoops, FHWA
Donnie Brew, FHWA
Steve Lund, USACE
Kathy Matthews, EPA
Dewayne Sykes, NCDOT-Roadway Design
Kristina Solberg, NCDOT-PDEA
Anne Gamber, NCDOT-Hydraulics
Bill Barrett, NCDOT-PDEA

Steve DeWitt, NCTA
Jennifer Harris, NCTA
Michael Gloden, EcoScience Corp.
Jeff Dayton, HINTB
Jill Gurak, PBS&J
Carl Gibliaro, PBS&J

Via Telephone:

Marela Buncick, USFWS
Polly Lespinasse, NCDENR – DWQ
Marla Chambers, NCWRC

Presentation Materials (Posted on TEAC Website):

- Meeting Agenda
- Handout 1 - Proposed Approach to Bridging Decisions

Purpose:

The purpose of this meeting was to provide a project status update and to discuss the approach for bridging decisions for the Detailed Study Alternatives (Concurrence Point 2a).

General Discussion:

The following information was discussed during the meeting:

- **Planning Process to be Used on the Project** - To date, the project environmental review process has been following the Section 404 NEPA Merger Process for the Gaston East-West Connector project, although the NCTA is not a signatory to the merger process Memorandum of Understanding.

Concurrence Point 1 (CP1) (Purpose and Need) and CP 2 (Detailed Study Alternatives) have been obtained for the project, with abstentions from the USEPA, USFWS, and NCWRC on CP 2.

A formal decision has not been made on the environmental review process that will be used. The North Carolina Merger Process is not yet compliant with Section 6002 of SAFTEA-LU. However, Mr. Sykes noted that the proposed changes to make it compliant are close to being finalized and approved by the FHWA. At this time, the NCTA envisions to at least follow a process that mirrors the Merger Process.

A Coordination Plan as required by Section 6002 of SAFTEA-LU has not been completed for the project. The Coordination Plan and a decision on the environmental review process to follow for the project will be made after a Section 6002 compliant Merger Process is approved and NCTA has a chance to review it.

- **Updates to the Purpose and Need Statement** - The Purpose and Need Statement was finalized in August 2002. In preparation for producing the DEIS, the data in the Purpose and Need Statement needs to be refreshed. This includes updating the No-Build traffic forecasts from year 2025 forecasts to year 2030 forecasts. Since August 2002, transportation and land use plans have been updated and more recent socioeconomic data is available. Also since 2002, the Strategic Highway Corridor Program was adopted by NCDOT, and the project was designated a Strategic Highway Corridor.

An updated Purpose and Need Statement will be prepared. The updated Purpose and Need Statement will be made available to the resource agencies and the public. NCTA currently is in the process of developing the 2030 No-Build forecasts and it is anticipated the update will be completed in a few months.

- **Alternatives Development and Analysis Report Addendum** - An addendum to the Alternatives Development and Analysis Report is planned and will include the new information about Detailed Study Corridor Segment K1D and recommendation for elimination from detailed study, 2030 Build Toll traffic forecasts, and a discussion of the project now being studied as a toll facility. The Alternatives Development and Analysis Report Addendum will be made available to the resource agencies and the public.

- **Public Involvement** - The NCTA is planning on holding citizens informational workshops since the last workshops were held in 2006. The updated Purpose and Need Statement, the Alternatives Development and Analysis Report, and Alternatives Development and Analysis Report Addendum will be provided for public and agency comment in accordance with Section 6002 public involvement requirements.

- **Approach to Discussing Concurrence Point 2a (Bridging Decisions)** - Although the environmental review process has not been finalized, the NCTA envisions at this time to at least follow a process that mirrors the Merger Process.

The attendees agreed that it was acceptable to move forward with bridging decision discussions.

The term Concurrence Point 2a is being used in this meeting since the agencies are familiar with the term and the types of information presented and discussed at CP 2a meetings are the same types of information to be presented for the Gaston East-West Connector project. The NCTA wants input on bridging decisions for the project, regardless of the environmental review process ultimately adopted for the project.

The handout that describes the proposed approach for discussing bridging for the project was summarized by Ms. Gurak. She noted that the approach proposed in the handout is based on informal discussions held with representatives from USEPA and USACE during the site visits held December 17 and 18, 2007, where a desire was expressed to try to narrow down the numbers of crossings needing to be discussed in detail.

Currently, according to the final Preliminary Hydraulic Technical Memorandum, there are 129 crossings requiring a major structure (bridge, box culvert, or pipe 72 inches in diameter or greater) throughout the 12 Detailed Study Alternatives.

The proposed approach would include all crossings requiring a bridge for hydraulic purposes, all triple box culverts, all crossings of high quality wetlands, all crossings of 303a-listed streams, and those non-bridge major crossings where engineering judgment warrants a comparison of the costs of a bridge versus the recommended structure. Excluding the last screening item, this results in a minimum of 32 crossings to be discussed. The last screening item will result in more crossings, but it is not known at this time how many more.

USEPA stated they have some concerns about the screening based on high quality wetlands. She stated that many of the forested wetlands in the corridors that she would consider of high value are not scored high on the currently available rating forms. She would like information on all the

crossings in order to determine if she would like any additional ones discussed. She stated USEPA would like to talk with NCTA about using the NC WAM forms for the Least Environmentally Damaging Practicable Alternative (LEDPA). USEPA believes these forms provide a better picture of the value of wetlands. USEPA also noted they would be sending comments to NCTA on the December site visit summary.

NCWRC stated they thought more that 32 crossings would need to be discussed. They also would like more information on all the crossings before agreeing to a certain set to discuss.

The NCDOT-Hydraulics Unit asked if floodplain issues were considered. The final Preliminary Hydraulic Technical Memorandum was prepared to NCDOT standards. The report evaluated a 50-year storm event and used urban regression equations, as directed by NCDOT's Hydraulics Unit.

The Natural Resources Technical Report (NRTR) currently is available on the TEAC website, without impact calculations or discussion of Rapanos forms. The NRTR version that includes these items will be made available in February and hard copies will be sent to those who would like one. However, the new Figure 3 from the NRTR that shows the jurisdictional resources, corridor boundaries, and preliminary engineering designs, is available now and will be posted to the TEAC site in the next couple days.

The NCTA is open to suggestions on which crossings should be discussed and comments from the agencies are requested within a couple weeks. The USACE commented that this proposed approach was a good place to start with bridging decisions. Also noted by NCTA was that additional avoidance and minimization (including bridging) discussions can and will be discussed for the LEDPA.

Wrap-Up / Next Steps:

- NCTA will be updating the Purpose and Need Statement and preparing the Alternatives Development and Analysis Report Addendum.

Previous Action Items:

- None

New Action Items:

- NCTA will post updated Figure 3 from the NRTR to the TEAC website.
- NCTA will make a decision on an environmental review process for the project after a Section 6002 compliant Merger Process is approved and NCTA has a chance to review it.
- Agencies will provide input on which crossings should be discussed for potential bridging.
- USEPA will provide comments on the minutes from the December 17-18 field visit.



Turnpike Environmental Agency Coordination (TEAC) Meeting

MEETING MINUTES

Date: April 8, 2008
10:00 AM to 11:30 AM
NC Turnpike Authority Office Board Room (Suite 400)

Project: STIP R-2576 Mid-Currituck Bridge Study - BRS-000S(35)

Mid-Currituck Bridge Spotlight:

Attendees:

Bill Biddlecome, USACE	George Hoops, FHWA
Christopher Militscher, USEPA	Donnie Brew, FHWA
Kathy Matthews, USEPA	Dewayne Sykes, NCDOT-Roadway Design
Gary Jordan, USFWS	Renee Roach, NCDOT-Traffic (via phone)
Cathy Brittingham, NCDENR-DCM	Beau Memory, NCTA
Jim Hoadley, NCDENR-DCM	Jennifer Harris, NCTA
David Wainwright, NCDENR-DWQ	Christy Shumate, HNTB
Sara Winslow, NCDENR-DMF (via phone)	Jens Geratz, EcoScience
Travis Wilson, NCWRC	John Page, PB
Renee Gledhill-Earley, NCDCR-HPO (via phone)	Dan Brown, PB

Presentation Materials:

- (All materials have been posted on the TEAC website)
- Meeting Agenda
- Statement of Purpose and Need
- Alternatives Screening Report
- Handout 12 – February 2008 Citizens Informational Workshops Comments Summary

Purpose:

The purpose of the meeting was to distribute the revised Statement of Purpose and Need and Alternatives Screening Report and review public comments received from the February 2008 Citizens Informational Workshops.

General Discussion:

The following information was discussed at the meeting:

Statement of Purpose and Need – Minor revisions were made to the Statement of Purpose and Need since it was last discussed, as noted would be done at the February 2008 TEAC meeting. FHWA and NCTA incorporated these changes to better reflect changes that have occurred in state and local plans, legislation, and funding since the purpose and need was originally developed in 2003. On page 1-7, an additional need is identified that states, "The need to

improve system efficiency by providing an additional link between the Currituck County mainland and its Outer Banks." This need is based on the inefficiencies created by the "U-shaped" route to access the northern Outer Banks, which results in increased travel time and congestion in the project area, and has been addressed in state and local legislation and plans. This addition was presented to the public at the workshops in late February.

Also, traffic forecasts and hurricane evacuation analysis have been updated to design year 2035. While the individual numbers may differ from previous versions of the report, the results are the same. The new statistics did not change the needs for the project.

NCTA requested that agencies be prepared to discuss any comments on this report at the May 6, 2008 meeting.

- Alternatives Screening Report** – The alternatives screening process has been discussed at TEAC meetings for several months, and NCTA has finally completed a report that documents that screening process and results with the recommended detailed study alternatives. The report incorporates comments received from the agencies at TEAC meetings and written comments on alternatives. Also, the report summarizes public comments received at and following citizens informational workshops in February 2008 relating to alternatives considered.

There have been changes in the data since it was previously presented to agencies, including analyses based on updated 2035 toll traffic forecasts and impacts for a two-lane Mid-Currituck Bridge.

NCTA requested agencies provide any additional comments on alternatives screening and recommended detailed study alternatives at or before the May 6, 2008 TEAC meeting.

- February 2008 Citizens Informational Workshops Comments Summary** – Three citizens informational workshops were held in February in the project study area. Nearly 600 people participated over the three nights. At the workshops, NCTA presented the purposes and needs for the project and the alternatives considered in the screening process, as well as NCTA's recommended detailed study alternatives – MCB3 and MCB4 with C1 and C2 bridge corridors.

292 comments were received at the workshops or during the 30-day comment period following the workshops. Of these, 219 indicated a preference for an alternative on the project, 186 were in favor of the bridge, citing improved access and emergency evacuation, reduced congestion on NC 12 and potential economic benefits as reasons for favoring the bridge. The concerns raised regarding a bridge included habitat and natural resource impact concerns; visual concerns; historic and archaeological resource concerns (primarily to the north on the Outer Banks side); noise; and that the bridge would lead to increased access for criminals. Some raised concern over tolling the bridge, while others agreed that tolling was an acceptable way of funding the project.

With respect to alternative bridge locations on the Outer Banks, the C2 option just south of TimBuckll was the preferred option in many of the comments received from the public.

There were many resolutions and letters received from the local governments, tourism board, planning organizations, and business organizations. All were in favor of building the bridge. Several sent comment letters noting that resolutions supporting the bridge from years ago still hold true today.

Q&A:

- USEPA asked how sea level rise would be discussed in the DEIS, noting a recent report on the impacts of sea level rise on infrastructure including roads and bridges. FHWA stated that there is currently no guidance for addressing sea level rise in FHWA NEPA documents. USEPA noted that based on the report, the Outer Banks termini under consideration may be inundated before the design year for this project. USEPA will provide the report and NCTA will review.

2. *USACE asked for a definition of the word "substantial" as used on page 5 of Handout 12. Substantial describes the number of comments receiving noting opposition to alternatives that included improvement of existing roads; 83 of the 219 comments expressing a preference noted specific opposition to widening existing roads in the project area.*
3. *USACE and NCDENR-DCM noted that according to the Section 6002 Project Coordination Plan for this project, the citizens informational workshops should have been held during the comment period for reviewing the Statement of Purpose and Need and Alternatives Screening Report, but NCTA held the workshops before the documents were available for review.*
 NCTA had hoped to have the reports available prior to the workshops but was not able to do so. Therefore, NCTA will be distributing a postcard announcing the availability of the reports on the NCTA website for public review and comment and offering a second public comment period. The postcard will be distributed to everyone who attended the workshops as well as to the entire project mailing list of nearly 12,000 names. Agencies suggested that hard copies of the reports be made available at local government offices in the project area for those without access to computers. NCTA agreed and will do so. Agencies also asked if an addendum or note should be added to the Section 6002 Project Coordination Plan to explain the actual sequence of events. NCTA agreed and will draft some text.

4. *USEPA noted that the Alternatives Screening Report refers to "a single proposed project in the Raleigh area" (page 12) as an exception to the state law prohibiting tolls on existing roads and asked which project that referred to.*
 A legislative exception was made to allow tolling on the portion of NC 540 between NC 54 and NC 55 to complete the Triangle Expressway. This section of road opened in 2007 as a non-tolled facility. USEPA asked about the status of the Yadkin River bridge replacement on I-85. NCTA responded that the project is not an official toll candidate project at this time, but if it were to become a candidate toll project, state legislation would be required to allow tolling on the existing route.

Previous Action Items:

- NCTA will distribute the Alternatives Screening Report for agency and public comment. [The report was not distributed. The Alternatives Screening Report and Statement of Purpose and Need were distributed to agencies at the April 8, 2008 TEAC meeting and made available for public comment on the NCTA website. In addition, a postcard announcement will be distributed the week of April 14 announcing the availability of the reports and requesting comments by May 15, 2008. Hard copies of the reports were mailed to local government offices to be made available to interested citizens.]

New Action Items:

- Agencies review revised Statement of Purpose and Need and Alternatives Screening Report for discussion at the May 6, 2008 TEAC meeting.

Resolutions:

- None

MEETING MINUTES

Date: April 8, 2008
 1:30 pm to 3:00 pm
 NC Turnpike Authority Office Board Room (Suite 400)

Project: STIP U-3321 Gaston E-W Connector – STP-1213(6)

Gaston E-W Connector Spotlight:

Attendees: George Hoops, FHWA
 Donnie Brew, FHWA
 Steve Lund, USACE
 Kathy Matthews, USEPA
 Chris Miltscher, USEPA
 Maria Chambers, NCDOT
 Dewayne Sykes, NCDOT-Roadway Design

Kristina Solberg, NCDOT - PDEA
 Dan Grissom, NCDOT-Division 12
 Michael Gloden, EcoScience Corp.
 Jennifer Harris, NCTA
 Jill Gurak, PBS&J

Via Telephone:

Marella Buncick, USFWS
 Polly Lespinasse, NCDENR - DWQ

Presentation Materials: (All materials have been posted on the TEAC website)

- Meeting Agenda
- Memo – Merger Process Concurrence Point 2a Bridging Decision Information – NCTA's Response to Agency Requests from the March 4, 2008 Meeting – This memo addresses action items from the March 4, 2008 TEAC meeting.

Purpose:

Discuss action items from the March 4, 2008 TEAC Meeting (Concurrence Point 2a meeting) in order to achieve agreement/concurrence on the bridging/alignment decisions for streams and wetlands crossed by the Detailed Study Alternatives (DSAs)

General Discussion:

Ms. Harris opened the meeting with introductions. The purpose of the meeting was to complete discussions regarding bridging and alignment decisions for the DSAs (CP2a). She noted that further discussions regarding bridging and permitting will be held again for the Preferred Alternative at CP4a. A general discussion took place prior to the discussions of the individual crossings. The questions and answers are summarized below.

Minutes from the March 4, 2008 Meeting. Ms. Harris asked if anyone had any comments or revisions to the March 4, 2008 meeting minutes. No one had any comments.

Other Issues. Mr. Miltscher stated he could not access the TEAC website, as it was not recognizing his username and password. Ms. Harris stated she would ask the website administrator to follow up with Mr. Miltscher.

Ms. Gurak began the discussion of the action items requested at the March 4, 2008 meeting that were summarized in the memo distributed for the April 8 TEAC meeting.

Wildlife Passage Structures

The NCTA agrees to study wildlife passage structures at the following crossings of Stream S156 during final design, if they are part of the Preferred Alternative. This will be included as a commitment in the DEIS.

- Crossing JD6 – crossing of Stream S156 on Detailed Study Alternative (DSA) Segment J1C (west of Robinson Road)
- Crossing JD19 – crossing of Stream S156 on DSA Segment JX1
- Crossing JD31 – crossing of Stream S156 on DSA Segment J2C

The resource agencies asked if this wildlife crossing was unique to any of the alternatives. All DSAs cross Stream 156 once, so all DSAs will include a wildlife passage structure at this stream.

The WRC stated there are numerous resources available to assist in designing wildlife passages. The WRC noted one method of sizing the crossing uses an "openness factor" that takes into account length/height/width of the crossing as well as the types of wildlife anticipated to use the crossing. The equation is metric based. The NCDOT has designed wildlife crossings for bears on the I-26 (A-10) project in western North Carolina. There have also been some successful crossings on projects in eastern North Carolina.

The NCDOT noted that Ted Devens (NCDOT) is working with Virginia Tech on wildlife crossing studies.

USFWS noted that the 2007 conference proceedings from IC0ET (International Conference on Ecology and Transportation) would be a good resource for wildlife crossing information.

The WRC stated that during final design for the Preferred Alternative, the bridges at other crossings also should be designed to be wildlife friendly when feasible.

Bridging Beyond What is Required for Hydraulic Conveyance

At the March 4, 2008 meeting, the NCTA agreed to the following bridges to be included in the DSA designs.

- Crossing HD27 – DSA Segment H2A over Bessemer Branch. Change from triple box culvert to a bridge.
- Crossing HD32 – DSA Segment H2C over Stream S70 adjacent to Chapel Grove Road. Extend mainline bridges over Chapel Grove Road to span Stream S70.
- Crossing HD17 – DSA Segment HX2 over Stream S79 adjacent to Camp Rotary Road. Extend mainline bridges over Camp Rotary Road to span Stream S79.
- Crossing HD38 – DSA Segment H3 over Stream S135 (Blackwood Creek). Change from a triple box culvert to a bridge.

The NCTA also agreed to the following bridges to be included in the DSA designs, as requested at the March 4, 2008 TEAC meeting.

- Crossing JB2 – DSA Segment J3 over Crowders Creek. Extend mainline bridges over Crowders Creek to span Wetland 103.
- Crossing JD9 – DSA Segment J1C over Stream S178. Change from a triple box culvert to a bridge.
- Crossing KD3 – DSA Segment K3A over Stream S259 (Catawba Creek). Extend mainline bridges over Catawba Creek to span main body of Wetland W248.

- Crossing KD17 – DSA Segment K1B over Stream S259 (Catawba Creek). Extend mainline bridges over Catawba Creek to span main body of Wetland W248.

The resource agencies agreed to the additional bridges and had no further comments.

Cost Estimate for Bridge at Crossing HB1

At the March 4, 2008 meeting, the resource agencies requested a cost estimate for additional bridges at Crossing HB1 (DSA Segment H1A over Crowders Creek near the US 29-74 interchange). The additional bridges would include extending the mainline bridges over Crowders Creek to span Wetland 12, and constructing bridges over Wetland 12 for the WB Connector off ramp to US 29-74 and the WB Connector on ramp (loop) from US 29-74.

In 2007 dollars, the cost of all these additional bridges would be \$15.5 million. The original cost for the shorter mainline bridges was \$2.1 million. If the interchange is eliminated, the cost of the extended mainline bridges (no ramps) would be \$11.4 million.

The resource agencies requested information on the costs of the Crowders Creek ramp bridges to be included in these minutes. *The costs were calculated post meeting. These two bridges, off ramp from WB Connector to US 29-74 over Crowders Creek and on ramp from US 29-74 to WB Connector over Crowders Creek, would each be about 38 feet wide and 120 feet long. The total cost for the two ramp bridges would be approximately \$1 million.*

There was a question about whether the loop ramp could be extended to shift out of the wetland. If it was extended, it would encroach farther into the floodplain of Crowders Creek and nearer to the creek. It can not be shortened due to sight distance requirements for the toll collection equipment.

The resource agencies would prefer to eliminate the US 29-74 interchange. As discussed at the March 4, 2008 meeting, the NCTA will be considering eliminating the US 29-74 interchange (for all DSAs). The Gaston Urban Area MPO (GUAMPO) is also looking at this issue. The potential elimination of this interchange will be presented to the public for comment at Citizens Informational Workshops planned for this summer.

The resource and regulatory agencies agreed that extending the mainline bridges over Crowders Creek to also span Wetland 12 would not be cost effective. The USFWS pointed out that the area of the wetland crossed by the mainline bridges is forested. This vegetation would be cleared to construct the low bridges. Regrowth of vegetation under the bridges would not be the same as the existing conditions. It may be more effective to restore the eastern part of Wetland 12 and fill the western part.

The USEPA stated that since Crowders Creek is a 303d listed stream, BMP (Best Management Practices) measures such as basins also should be considered to ensure that Crowders Creek would not be impacted by roadside drainage.

In conclusion, it was decided to show the impacts of filling Wetland 12 in the DEIS, but to also discuss the potential elimination of the US 29-74 interchange. If this DSA Segment is part of the Preferred Alternative, mitigation and minimization measures will be revisited at Concurrence Point 4a. The agencies agreed that it was not cost effective to extend the mainline bridges to span Wetland 12.

Mainline Alignment Shift at Crossing HB3 to Avoid Wetland W51

A full discussion of the alignment shift investigation is included in Section 5a of the memo provided as part of the April 8, 2008 meeting. Crossing HB3 is located at Crowders Creek for DSA Segments H3 and H2A near the US 29-74 interchange. At the March 4, 2008 meeting, the resource and regulatory agencies requested that a shift in the Corridor H3 alignment be investigated to move the H3 alignment to the east so the US 29-74 interchange ramps would avoid Wetland 51.

The alignments in this location were placed to minimize relocations and impacts to the three junkyards in the vicinity.

DSA Segment H2A can not be shifted to the east within the corridor boundaries due to curve radii constraints.

The alignment in DSA Segment H3 would need to shift about 240 feet to the east to avoid Wetland 51. This would encroach directly on the Putnam Auto Body junkyard and would increase impacts to Stream S54 from 188 ft to about 575 ft.

The same discussion regarding eliminating the US 29-74 interchange was held for this location. The resource agencies would prefer to eliminate the US 29-74 interchange. As discussed at the March 4, 2008 meeting, the NCTA will be considering eliminating the US 29-74 interchange (for all DSAs). The GJAWPO is looking at this issue. The potential elimination of this interchange will be presented to the public for comment at Citizens Informational Workshops planned for this summer. The NCTA recommended not shifting the alignment at this location, particularly since the elimination of the interchange is being considered. The resource and regulatory agencies conditionally agreed.

The USEPA requested that a cost estimate be provided for bridging Wetland W51 for Corridor Segments H3 and H2A (this would involve bridges only on the ramps). The USEPA stated that they would provide information about potential costs for relocating the Putnam Auto Body junkyard. *The costs were calculated post meeting. For Corridor Segment H3, two bridges are proposed (one for the ramp and one for the loop ramp). These two bridges would be between 37 feet to 50 feet wide, and 470 feet to 560 feet long. The total cost for the two bridges would be approximately \$4.8 million. For Corridor Segment H2, three bridges are proposed (one for the loop ramp and two for the ramps). These three bridges would be between 37 feet to 50 feet wide, and 130 feet to 500 feet long. The total cost for the three bridges on Segment H2 are approximately \$3.3 million.*

Mainline Alignment Shift at Crossing JD17 to Avoid Parallel Impacts to Stream S146

A full discussion of the alignment shift investigation is included in Section 5b of the memo provided as part of the April 8, 2008 meeting.

The NCTA recommends not shifting this alignment. The resource agencies agreed.

Mainline Alignment Shift at Crossing KD17 to Avoid the Easternmost Finger of Wetland W248

A full discussion of the alignment shift investigation is included in Section 5c of the memo provided as part of the April 8, 2008 meeting.

The NCTA recommends not shifting this alignment. The resource agencies agreed.

Y-Line (Cross-Street) Alignment Shift at Crossing KD31 to Avoid Confluence of Beaverdam Creek and Legion Lake Stream

A full discussion of the alignment shift investigation is included in Section 5d of the memo provided as part of the April 8, 2008 meeting.

The NCTA recommends not shifting this alignment at this time. If this corridor is selected as the Preferred Alternative, this crossing will be revisited during final design when more refined mapping is available. The resource agencies agreed.

Conclusions

The resource agencies agreed that discussions for Concurrence Point 2a were complete. Below is an updated table summarizing the final decisions made as part of CP2a for the major hydraulic crossings.

Crossing	Decision	Cost Differential for Crossing
HD26	Revisit this area for minimization measures during CP4a	--
HD27	Change recommended structure from a culvert to a bridge	Savings of \$0.44 million
HB1	The potential elimination of the interchange will be presented for public comment at the next Citizens Informational Workshops. Eliminating the interchange will be evaluated for the Preferred Alternative.	N/A
HB2	The potential elimination of the interchange will be presented for public comment at the next Citizens Informational Workshops. Eliminating the interchange will be evaluated for the Preferred Alternative.	N/A
HB3	The potential elimination of the interchange will be presented for public comment at the next Citizens Informational Workshops. Eliminating the interchange will be evaluated for the Preferred Alternative.	N/A
HD29	No change in the recommended structure -- a culvert.	--
HD31	No change in the recommended structure -- a culvert.	--
HD59	No change in the recommended structure -- a bridge.	--
HD32	Change recommended structure from a culvert to a bridge since a culvert does not appear feasible from a design standpoint at this time.	Increase of \$0.96 million
HD10	No change in the recommended structure -- a culvert.	--
HD 17	Change recommended structure from a culvert to a bridge since a culvert does not appear feasible from a design standpoint at this time.	Increase of \$1.27 million
HD35	No change in the recommended structure -- a culvert.	--
HD48	Change recommended structure from a culvert to a bridge due to size of Blackwood Creek, floodplain, and proximity to Crowders Creek confluence.	Increase of \$1.75 million
JB2	Extend recommended bridge structure approximately 365 feet to span Wetland W103 in addition to Crowders Creek.	Increase of \$4.1 million
JB1	No change in the recommended structure -- a bridge.	--
JD29	No change in the recommended structure -- a bridge.	--
JD4	No change in the recommended structure -- a bridge.	--
JD17	No change in the recommended structure -- a bridge.	--
JD6, JD19 and JD31	No change in the recommended structure -- a culvert. However, an additional culvert or other measure will be considered for wildlife passage during final design.	Increase for wildlife passage structures unknown.
JD21	No change in the recommended structure -- a culvert.	--
JD9	Change recommended structure from a culvert to a bridge.	Increase of \$0.84 million
JD26	No change in recommended structure -- a pipe	--
KD54	No change in the recommended structure -- a culvert.	--
KD25	No change in the recommended structure -- a bridge.	--

Crossing	Decision	Cost Differential for Crossing
KD3	Extend recommended bridge structure about 395 ft to span Wetland W248 in addition to Catawba Creek.	Increase of \$4.0 million
KD17	Extend recommended bridge structure about 370 ft to span Wetland W248 in addition to Catawba Creek.	Increase of \$4.2 million
KD2	No change in the recommended structure – a culvert.	--
KB3, KB5, KB7	No change in the recommended structures – bridges over the South Fork Catawba River.	--
KB4, KB6	No change in the recommended structures – bridges over the Catawba River.	--
KD7, KD29, KD16	No change in the recommended structure – a culvert.	--
KD31	No change in the recommended structure – a culvert. If this crossing is part of the Preferred Alternative, during final design, NCTA will investigate the feasibility of shifting the alignment of Dixie River Road at this crossing to avoid the confluence of Beaverdam Creek and Legion Lake Stream.	--

Wrap-Up / Next Steps:

- Concurrence Point 2a bridging and alignment decisions are complete. NCTA will incorporate the conclusions of CP2a into the DEIS.

New Action Items

- The agencies requested information on the costs of the Crowders Creek ramp bridges for Corridor Segment H1A to be included in these minutes.
The cost for these ramp bridges is approximately \$ 1,000,000 (see detailed information in these minutes).
- The agencies requested information on the costs of bridging Wetland W51 along Corridor Segments H3 and H2B.
The cost for the bridges along Segment H3 is approximately \$4,800,000, and the proposed cost for the bridges along Segment H2B is approximately \$3,300,000 (see detailed information in these minutes).
- The USEPA stated they would provide information for a cost estimate for relocating the Putnam Auto Body junkyard located near the US 29-74 interchange for Corridor Segments H3 and H2C.

Previous Action Items:

- NCTA will prepare a cost estimate for Crossing HB1 for providing bridges over Crowders Creek for the mainline and WB off ramp to span Wetland 12.
Cost estimates provided as described in the response memo handed out at the April 8, 2008 TEAC meeting.
- NCTA to consider eliminating the Corridor Segment H1A/US 29-74 interchange ramp that provides access from US 29-74 to WB Connector. This ramp crosses over W12.
NCTA is considering eliminating the US 29-74 interchange for all DSAs. The GUAMFO is evaluating this option. The option will be presented to the public for comment at upcoming workshops this summer.

- NCTA will consider providing wildlife passage structures at JD6, JD19, and JD31.
NCTA agrees to study wildlife passages at JD6, JD19, or JD 31, whichever is included as part of the Preferred Alternative.
 - NCTA will consider the additional bridging recommendations made during the meeting. These include changing a culvert to a bridge for Crossing JD9 and extending the bridges at JB2, KD3/KD17 to span high value/high quality wetlands.
NCTA has included bridges for these crossings, as requested by the resource agencies.
 - NCTA will investigate the feasibility of shifting alignments at the following locations:
 - Mainline shift at HB3 east to avoid W51
 - Mainline shift at JD17 to avoid parallel impacts to S146
 - Mainline shift at KD3 to avoid the easternmost finger of W248
 - Y-line shift at KD31 to avoid confluence of Beaverdam Creek and Legion Lake Stream
- As detailed in the April 8, 2008 memo and these minutes, none of these alignment shifts will be implemented at this time. The Y-line alignment shift at KD31 will be reviewed during final design if it is part of the Preferred Alternative.*

Resolutions:

- This concludes the discussion on bridging and alignment decisions for the Gaston E-W Connector. NCTA, NCDOT, FHWA, and the agencies have reached agreement/concurrence on the proposed crossings.



Turnpike Environmental Agency Coordination (TEAC) Meeting

MEETING MINUTES

Date: May 6, 2008
9:30 AM to 11:30 AM
NC Turnpike Authority Office Board Room (Suite 400)

Project: STIP R-2576 Mid-Currituck Bridge Study - BRS-000S(35)

Mid-Currituck Bridge Spotlight:

Attendees:

Bill Bidlecome, USACE	Dewayne Sykes, NCDOT-Roadway Design
Kathy Matthews, USEPA	David Joyner, NCTA
Gary Jordan, USFWS	Steve DeWitt, NCTA
Ron Sechler, NMFS (via phone)	Jennifer Harris, NCTA
Cathy Brittingham, NCDENR-DCM	Bill Malley, Perkins Coie
Brian Wienn, NCDENR-DWQ	Christy Shumate, HNTB
David Wainwright, NCDENR-DWQ	Spencer Franklin, HNTB
Travis Wilson, NCWRC	Michael Gloden, EcoScience
George Hoops, FHWA	John Page, PB
Donnie Brew, FHWA	Don Brown, PB

Presentation Materials: (All materials have been posted on the TEAC website)

- Meeting Agenda
- Section 6002 Project Coordination Plan (dated May 5, 2008)

Purpose:

The purpose of the meeting was to discuss agency comments on the revised Statement of Purpose and Need and Alternatives Screening Report.

General Discussion:

At the April 8, 2008 TEAC meeting, agencies were provided a revised Statement of Purpose and Need and the Alternatives Screening Report for review and comment. Written comments were received from USEPA and NCDENR-DWQ in advance of the May TEAC meeting.

The following information was discussed at the meeting:

- **Section 6002 Project Coordination Plan** – NCTA distributed a revised Project Coordination Plan. The plan has been revised to incorporate comments from FHWA, as well as to reflect actual project status on several items that have already been completed or for which assumptions have changed since the plan was drafted. Agencies are welcome to provide additional comments if they have any.

- **Predevelopment Agreement and Industry Forum** – NCTA is hosting and Industry Forum on May 7, 2008 to present the project to prospective developers, contractors, and financiers. NCTA will also be holding one-on-one meetings with these groups to discuss and obtain feedback on potential procurement methods for delivering this project, including use of a Predevelopment Agreement (PDA) or more traditional Public Private Partnership. Under a PDA procurement, NCTA would bring a private partner into the process early, likely later this year, to help develop the project concurrent with the NEPA process. At this time, NCTA is anticipating that the majority, if not all, of the project will be financed by the private partner. Agencies are invited to attend the Industry Forum if interested. NCTA has asked prospective partners not to contract agency representatives directly to discuss the project.

- **Statement of Purpose and Need and Alternatives Screening Report** – The Statement of Purpose and Need distributed in April 2008 includes an additional need from what was discussed with agencies in 2007. This new need states, "The need to improve system efficiency by providing an additional link between the Currituck County mainland and its Outer Banks". This need is based on the inefficiencies created by the "U-shaped" route to access the northern Outer Banks, which results in increased travel time and congestion in the project area, and has been addressed in state and local legislation and plans.

USACE commented that the inclusion of "provide a new transportation link" in the new project need precludes any alternative that does not include a bridge, and may be unduly limiting the range of alternatives and ultimately the selection of the least environmentally damaging practicable alternative. NCDENR-DCM commented that they would need to discuss the additional need statement internally and determine if it is consistent with their agency's direction on statements of purpose and need and specifically if the wording unnecessarily limits the location or design of the project. NCDENR-DCM noted that the elements included in this statement had been discussed during previous agency involvement in the project years ago and had not been included in the statement of purpose and need. NCDENR-DCM added that the addition of this need may be an "issue of concern" for their agency. NCWRC said that their concern was primarily with the "providing a new transportation link" terminology and they could be comfortable with the remainder of the need statement. USEPA agreed that this part of the need statement should be deleted. NCTA agreed to consider this comment.

USFWS noted they would not be taking a position on the Statement of Purpose and Need or recommended detailed study alternatives. USFWS noted that NCTA should discuss the North American Waterfowl Management Plan in the Draft EIS. John Stanton is the contact person for this program.

FHWA added that their legal advisors are comfortable with the addition of the new need statement as written because of the substantiation for adding it (i.e. the number of state and local plans that include the project). FHWA noted that even without the new need statement, the ER alternatives would be screened out as not practicable before detailed study due to economic feasibility considerations.

NCTA reminded agencies that all information presented in the Alternatives Screening Report will be included in the Draft EIS, including information on the ER alternatives. If additional studies are needed for the ER alternatives, the question becomes what level of detail is appropriate for further analyzing them.

NCDENR-DCM noted that SAV impacts and mitigation plans should be discussed in detail in the Draft EIS for all alternatives.

- **Public Comments on Statement of Purpose and Need and Alternatives Screening Report** – A postcard announcement was distributed to the project mailing list of nearly 12,000 addresses to announce the availability of the reports on NCTA's website and request comments. Hard copies of the reports were mailed to local government offices to be made available to interested citizens. Comments were requested by May 15, 2008. As of this meeting, only a few comments have been received. These will be considered along with

comments received at and following the February 2008 Citizens Informational Workshops related to project purpose and need and alternatives. Agencies will be provided a summary of additional comments received from the public prior to the next TEAC meeting.

Q&A:

1. *NCWRC and NCDENR-DCM pointed out that previous discussions between NCTA and agencies indicated that finances and tolling would not be considered during alternatives screening and NEPA analysis, but that NCTA would evaluate a range of alternatives and if NCTA could not implement the alternative that was ultimately selected, the project would revert to NCDOT for implementation. However, based on the Alternatives Screening Report, NCTA is now using financial feasibility as a reason for eliminating alternatives from further consideration, particularly the ER2 and MCB2 alternatives. NCTA may have indicated early in the project development process that lack of funding should not preclude alternatives from being considered; however, there is now a better understanding of the reality of the funding situation. NCDOT has no funding for this project, therefore it is not built as a toll project, it will not be built. Based on guidance from FHWA entitled "NEPA Analysis of Toll Roads", financial feasibility is a valid basis for eliminating non-toll alternatives.*

2. *USACE asked how much of the non-tolled portions of the project a private partner could be expected to finance. NCTA anticipates that a private partner could cover the cost of either MCB3 or MCB4 alternatives, including non-tolled portions of these alternatives. NCTA does not expect that a private partner would be willing to finance additional improvements such as the additional length of NC 12 widening included in the MCB2 alternative. NCTA will discuss this issue further with potential private partners during the Industry Forum and One-on-One Meetings to be held May 7-8, 2008.*

Previous Action Items:

- Agencies to review the revised Statement of Purpose and Need and Alternatives Screening Report for discussion at the May 6, 2008 TEAC meeting. [Written comments were received from NCDENR-DWQ (April 29, 2008) and USEPA (May 5, 2008) prior to the May 6, 2008 TEAC meeting.]

New Action Items:

- Agencies will provide any additional comments on the Statement of Purpose and Need and Alternatives Screening Report by May 16, 2008. [Following the meeting, written comments were received from USACE (May 21, 2008), NCDENR-DCM (May 6, 2008), NCDENR-DMF (May 12, 2008), NCDOT-HPO (April 30, 2008), and NCWRC (May 13, 2008) and additional comments were received from NCDENR-DWQ (May 16, 2008).] Agencies will provide any additional comments on the revised Section 6002 Project Coordination Plan.
- NCTA will provide a link to the FHWA's "NEPA Analysis of Toll Roads" guidance document [http://www.environment.fhwa.dot.gov/guidebook/NEPA_tollroads.asp]. [NCTA provided this to agencies via email on May 6, 2008.]
- NCTA will provide an updated summary of public comments on the Statement of Purpose and Need and Alternatives Screening Report following the close of the public comment period on May 15, 2008.

Resolutions:

- None



Turnpike Environmental Agency Coordination (TEAC) Meeting

MEETING MINUTES

Date: July 8, 2008
10:00 AM to 12:00 PM
NC Turnpike Authority Office Board Room (Suite 400)

Project: STIP R-2576 Mid-Currituck Bridge Study - BRS-000S(35)

Mid-Currituck Bridge Spotlight:**Attendees:**

Bill Biddlecome, USACE
Kathy Matthews, USEPA
Gary Jordan, USFWS
Sara Winslow, NCDENR-DMF (via phone)
Cathy Brittingham, NCDENR-DCM
Jim Hoadley, NCDENR-DCM
David Wainwright, NCDENR-DWQ
Travis Wilson, NCWRC
George Hoops, FHWA
Donnie Brew, FHWA
Lomie Brooks, NCDOT-Structure Design
Renee Roach, NCDOT-Traffic (via phone)
BenJetta Johnson, NCDOT-Congestion Management (via phone)

Brian Yamamoto, NCDOT-PDEA
Ted Devens, NCDOT-PDEA
Dewayne Sykes, NCDOT-Roadway Design
David Joyner, NCTA
Steve DeWitt, NCTA
Jennifer Harris, NCTA
Reid Simons, NCTA
Bill Malley, Perkins Cole
Christy Shumate, HNTB
Spencer Franklin, HNTB
Michael Gloden, EcoScience
John Page, PB
Eric Misak, PB
Don Brown, PB

Presentation Materials: (All materials have been posted on the TEAC website)

- Meeting Agenda
- Section 6002 Project Coordination Plan (dated July 2, 2008)
- Letter from Jennifer Harris dated July 2, 2008 (with attachments) – Response to Agency Comments regarding Statement of Purpose and Need and Alternatives Screening Report
- Letter from David Joyner dated July 2, 2008 – Decision on Advancing Existing Road Alternatives for Detailed Study
- Handout 13 – May 2008 Citizens Purpose and Need and Alternatives Screening Report Comments Summary
- Handout 14 – Summary of Agency Comments Received May 2008
- Handout 15 – Scope for Evaluating ER2 and MCB2 as Detailed Study Alternatives in the DEIS

Purpose:

The purpose of the meeting was to discuss NCTA's response to agency comments on the Statement of Purpose and Need and Draft Alternatives Screening Report, as well as the scope of work for proceeding with detailed studies of the ER2 and MCB2 alternatives.

General Discussion:

The following information was discussed at the meeting:

- **Letter from Jennifer Harris dated July 2, 2008 – Response to Agency Comments regarding Statement of Purpose and Need and Alternatives Screening Report** – Agencies were emailed a copy of, and were provided a hard copy of, a letter from NCTA in response to agency comments received on the Statement of Purpose and Need (April 2008) and Alternatives Screening Report (April 2008). A copy of the letter was distributed to meeting attendees and the major points reviewed.
 - The newly added need statement (the 4th bullet) in the Statement of Purpose and Need (“The need to improve system efficiency by providing an additional link between the Currituck County mainland and its Outer Banks”) will be removed. Substantiating information for this need, such as inclusion of the Mid-Currituck Bridge in planning and legislative documents, will remain in the document. Agencies agreed.
 - NCTA will retain ER2, MCB2, and MCB4 alternatives for detailed study in the Draft EIS. ER1 and MCB1 will be eliminated from further study, as will other conceptual alternatives discussed in the Alternatives Screening Report, including transit, shifting rental times, transportation systems management, and ferry alternatives. There were no other suggestions for other alternatives to be considered. Agencies agreed.
 - MCB3 will also be eliminated from further study due to its similarity to MCB4. Agencies agreed.
 - Bridge corridors C1 and C2 will be evaluated in detail in the Draft EIS. Other corridors will not be considered further. Agencies agreed.
 - The 1995 Notice of Intent (NOI) for the project was rescinded and a new NOI was issued by FHWA in June. Copies of these notices are attached to the letter.
 - NCTA anticipates the additional studies for ER2 and MCB2 will take approximately 6 months to complete. Therefore, the revised project schedule is:
 - Draft EIS – January 2009
 - Final EIS – August 2009
 - Record of Decision – October 2009
 - Participating and cooperating agency invitation letters were distributed by NCTA and FHWA prior to issuing the new NOI. NCTA noted that these invitations and all responses received are still considered valid. Agencies agreed.

NCDENR-DCM noted appreciation for NCTA’s decision to evaluate ER2 as a detailed study alternative in the Draft EIS.

The Statement of Purpose and Need and Alternatives Screening Report will be revised to reflect these decisions and made available for agency review by August 10.

- **Letter from David Joyner dated July 2, 2008 – Decision on Advancing Existing Road Alternatives for Detailed Study** – The North Carolina General Assembly approved \$99 million of annual funding for Turnpike projects, including \$15 million per year for the Mid-Currituck Bridge project. This money is allowed to be used to assist in paying debt service for the toll revenue bonds used to finance the project. There is currently no money in the STIP to build roads in the project area.

Mr. Joyner suggested that the NCTA and the agencies continue to talk together over the next few months about project financing. He noted that by law, NCTA cannot toll an existing road; therefore, an alternative with existing road improvements only can not be funded with toll revenues and non-bridge components of a bridge alternative may not be able to be funded with

Turnpike Environmental Agency Coordination Meeting 7/8/08

toll revenues. NCTA issued a request for qualifications for private partners interested in developing, constructing, operating, maintaining, and financing the project, and statements of qualifications were received from four teams.

- **Handout 15 – Scope for Evaluating ER2 and MCB2 as Detailed Study Alternatives in the DEIS** – ER2 and MCB2 will be evaluated as detailed study alternatives to the same level as MCB4 has been. This will include detailed environmental studies – wetland/stream delineations, natural resource community mapping, historic resources, hazardous materials identification, and other information typically gathered. NCTA wants any suggestions for additional information the agencies would like to see included in the Draft EIS. Agencies offered the following:
 - NC DENR-DCM stated that NCTA should discuss submerged aquatic vegetation (SAV) impacts, SAV mitigation, sea level rise, and wetland mitigation. Specifically, impacts to SAV and SAV habitat should be calculated for areas of Currituck Sound less than 6 feet deep.
 - USEPA noted that wetland impacts on the Outer Banks may need to be mitigated for on the Outer Banks, as NC EEP may not be able to provide adequate compensatory mitigation for these impacts. USEPA will check on the status of a guidance document/interagency agreement discussing this issue.
 - NC DENR-DWQ requested that impacts for wetlands be presented by corridor and distinguished between the Outer Banks and the mainland. NCTA will include this information in the meeting minutes. (See “Table 2” and “Table 4” attached – these tables have been revised from the Alternatives Screening Report; also note that the impacts have been corrected from those presented in the April 2008 report to reflect the current preliminary design and bridge width.)
 - USFWS noted that NCTA should consider potential secondary effects of the ER2 and MCB2 alternatives in the non-road accessible areas north of Corolla, adding that widening NC-12 may make it easier to bring pre-fabricated homes into that area.
 - NC DENR-DWQ also noted that potential for development in the Aydlett area near the proposed bridge terminus should be fully evaluated.
 - NC DENR-DCM added that the permit application for Phase 2 of the Corolla Bay development near the C2 bridge corridor alternative is under review.

Studies for ER2 and MCB2 include advancing the functional designs to preliminary designs. Road drainage will have to be addressed. Currently, there are no outfalls in Southern Shores, and in Duck there are outfalls draining to Currituck Sound. USEPA offered to provide a recent document available on infiltration systems. NC DENR-DCM said that filter systems are being installed on ocean outfalls in Nags Head. NC DENR-DCM is not permitting any new ocean outfalls, but may permit rehabilitation of existing outfalls.

There is a one-mile section in Duck that is already three lanes and will not be altered for alternatives ER2 and MCB2. Left turn restrictions will be placed on some subdivision intersections to facilitate traffic movement. On US 158 between the Wright Memorial Bridge and NC 12, a superstreet typical section is being discussed with NCDOT in lieu of arterial widening. NCDOT’s US 158/NC 12 interchange project (STIP No. R-4457) will remain a separate project.

Q&A:

1. *USACE asked about documentation for eliminating bridge corridors further to the south.* Documentation for this decision is included in the April 2008 Alternatives Screening Report in Section 3.2. These corridors were generally eliminated from consideration due to impacts to the community of Poplar Branch on the mainland, a group of marsh islands in Currituck Sound (a Significant Natural Heritage Area), and the Pine Island Audubon Sanctuary (a Coastal Barrier Resources Act area), as well as due to traffic considerations – a bridge further south would have introduced additional congestion into already

Turnpike Environmental Agency Coordination Meeting 7/8/08

congested areas of Dare County and Duck and caused additional community disruption and displacement, particularly since the existing NC 12 right of way is only 60-feet wide in this area.

2. *USACE asked how much of the non-tolled portions of the project a private partner could be expected to finance.*
NCTA will be asking potential private partners to provide additional information on this topic during the procurement process for the predevelopment agreement to help answer this question, specifically with regards to improvements included in the MCB2 alternative.
3. *USACE requested information on the history of STIP funding for the project.*
NCTA will provide this information via email to agencies following the meeting.
4. *NCDENR-DCM asked how financial feasibility will be considered in the NEPA and permitting processes, noting that this differs from the NCDOT process where funding is almost never considered during project planning.*
This issue is something that NCTA is also learning. NCTA will work with FHWA and the agencies over the coming months to determine how best to incorporate financial feasibility into project decisions; however, it is NCTA's belief that it is an issue that must be considered in project planning and in determining if alternatives are reasonable and feasible.
5. *USEPA asked if construction phasing would be discussed in the Draft EIS.*
Construction phasing will likely be discussed in the Draft EIS, in terms of project financing, meeting traffic operational needs, and minimizing environmental impacts during initial construction.

Previous Action Items:

- Agencies will provide any additional comments on the Statement of Purpose and Need and Alternatives Screening Report by May 16, 2008.
[Written comments were received from *USACE (May 21, 2008)*, *USEPA (May 5, 2008)*, *NCDENR-DCM (May 6, 2008)*, *NCDENR-DMF (May 12, 2008)*, *NCDCR-HPO (April 30, 2008)*, and *NCWRC (May 13, 2008)* and *NCDENR-DWQ (April 29, 2008 and May 16, 2008)*.]
- Agencies will provide any additional comments on the revised Section 6002 Project Coordination Plan.
[No comments were received.]
- NCTA will provide a link to the FHWA's "NEPA Analysis of Toll Roads" guidance document [http://www.environment.fhwa.dot.gov/guidebook/NEPA_tollroads.asp].
- NCTA provided this to agencies via email on May 6, 2008.]
- NCTA will provide an updated summary of public comments on the Statement of Purpose and Need and Alternatives Screening Report following the close of the public comment period on May 15, 2008.
[Handout 13 is a summary of public comments on the Statement of Purpose and Need and Alternatives Screening Report.]

New Action Items:

- NCTA to revise and recirculate the Statement of Purpose and Need and Alternatives Screening Report based on decisions presented in Letter from Jennifer Harris dated July 2, 2008 by August 10, 2008.
- NCTA will provide history of STIP funding for R-2576.
[NCTA provided this to agencies via email on July 10, 2008.]
- USEPA will provide new guidance on infiltration basins and will check on guidance document/interagency agreement discussing wetland impacts and mitigation on the Outer Banks.
[Guidance on Class V UIC wells received on July 10, 2008.]
- Agencies will provide additional comments on topics and issues they would like to see addressed in the Draft EIS.
[Additional comments have been received via email from *USFWS* and *NCDENR-DCM* and are attached to these minutes. In response to questions from *NCDENR-DCM* regarding impacts to SAV habitat for areas of Currituck Sound 6 feet deep or less, please see "Table 6" attached – this

table has been revised from the April 2008 Alternatives Screening Report to include this information. Additionally, impacts have been corrected to reflect current preliminary designs.]

Resolutions:

- NCTA will evaluate ER2, MCB2, and MCB4 as detailed study alternatives in the Draft EIS.

MEETING MINUTES

Date: July 8, 2008
1:00 pm to 3:00 pm
NC Turnpike Authority Office Board Room (Suite 400)

Project: STIP R-3329 Monroe Connector – NHF-74(21)
STIP R-2559 Monroe Bypass – NHF-74(8)

Monroe Connector / Bypass Spotlight:

Attendees:
Donnie Brew, FHWA
George Hoops, FHWA
Kathy Matthews, USEPA
Steve Lund, USACE
Marella Buncick, USFWS
Maria Chambers, NCWRC (via phone)
Polly Lespinasse, NCDENR-DWQ
John Conforti, NCDOT-PDEA
Dwayne Sykes, NCDOT-Roadway Design
Steve DeWitt, NCTA
Jennifer Harris, NCTA

Reid Simons, NCTA
Bill Malley, Perkins Coie
Christy Shumate, HNTB
Donna Keener, HNTB
David Bass, PBS&J
Clint Morgan, PBS&J
Jill Gurak, PBS&J
Michael Gloden, EcoScience
Paul Pettigout, ESI

Presentation Materials: (all materials have been posted to the TEAC website)

- Meeting Agenda
- Map of project segments

Purpose:

The purpose of this meeting was to present an overview of the functional design plans under development and obtain agency feedback.

General Discussion:

The following information was discussed at the meeting:

- **Project Update** – The agencies last met in February 2008 to discuss this project. At that time, NCTA recommended 16 Detailed Study Alternatives extending from I-485 in Mecklenburg County to US 74 near Marshville. Since then, NCTA has been working on detailed studies for these alternatives, including traffic forecasts for design year 2035 with tolls (including scenarios with and without certain interchanges as requested by agency comments during alternatives development); traffic capacity analysis; and environmental field studies, including wetland and stream delineations. Field meetings to review delineated wetlands and streams were held with USACE and NCDENR-DWQ on May 28 and 29 and June 2. Qualitative indirect and cumulative impact studies and community impact assessments are also underway. Findings from the indirect and cumulative impact study will be presented at the August TEAC meeting.

Additionally, agencies had requested that additional information be provided for the upgrade existing US 74 alternative before agreeing to eliminate it as a detailed study alternative. NCTA has pursued this alternative further to determine the appropriate typical section, including obtaining additional traffic forecasts. This traffic data reflects that even more traffic than originally predicted would utilize the free frontage roads rather than the tolled freeway lanes; therefore, additional frontage road lanes would be needed, and the overall footprint of this alternative would be larger than assumed in the Alternatives Development and Analysis Report (April 2008). This information will be distributed to agencies prior to the August TEAC meeting and discussed at that meeting.

- **Overview of Functional Designs** – Functional designs were reviewed by project segment from west to east, noting interchange configurations, y-line improvements and crossings, natural

resource avoidance and minimization efforts implemented, and other constraints. Engineers also noted where designs had been altered from previous studies conducted by NCDOT. Segments discussed were 18A, 21, 30, 31, 36, 41, 43, 1, 1A, 2, 22A, 34, 40, and 42. Interchanges are proposed at I-485/Stallings Road (Segment 18A) or US 74 east of Stallings Road (Segment 1/1A/2), Indian Trail Fairview Road, Unionville Indian Trail Road, Rocky River Road, US 601, NC 200, Austin Chaney Road, Forest Hills School Road, and US 74.

When asked, USACE agreed that NCTA's efforts to avoid and minimize impacts to natural resources during the design process were evident. USFWS commented that NCTA should include a discussion of community impacts resulting from proposed road closures and aesthetics of the proposed project in the Draft EIS.

NCTA will have mapping of the functional designs available in August or September once reviews are completed by NCTA, NCDOT, and FHWA. Preliminary hydraulics analysis and bridging decisions will be presented and discussed in September and/or October with the agencies.

- **Project Schedule** – NCTA anticipates completing the Draft EIS for signature in December 2008 and circulating for agency and public review and comment in January 2009. NCTA is planning to recommend a preferred alternative in the Draft EIS. This would be subject to agency and public comment. The Final EIS is scheduled for release in August 2009, and the Record of Decision is scheduled for October 2009.

Q&A:

1. *Has NCTA identified locations for toll collection facilities and the potential impacts from those?*
The project will have all electronic toll collection.
2. *Plans show an interchange at Rocky River Road for all alternatives, but the Alternatives Development and Analysis Report did not.*
At this point, we are going to include all interchanges in designs for all alternatives for purposes of calculating and comparing impacts and costs in the Draft EIS; however, we may have further discussions about interchange locations as part of avoidance and minimization for the preferred alternative.

Previous Action Items:

- Conclude discussion on selection of detailed study alternatives.

New Action Items:

- NCTA to schedule August TEAC meeting for week of August 4 in Charlotte-Gastonia area. [This meeting has been scheduled for Thursday, August 7 at 9:00 AM. The meeting will be held at PBS&J's Charlotte Office (8200 77 Center Dr., Suite 500, Charlotte, NC 28217) or via video conference at PBS&J's Raleigh Office (1616 East Millbrook Road, Suite 310, Raleigh, NC 27609).]
- NCTA to provide information on additional studies of upgrade existing US 74 alternative.

Resolutions:

- None.

MEETING MINUTES

Date: July 8, 2008
3:00 pm to 5:00 pm
NC Turnpike Authority Board Room

Project: STIP U-3321 Gaston E-W Connector – STP-1213(6)

Gaston E-W Connector Spotlight:**Attendees:**

George Hoops, FHWA	Tristram Ford, NCDOT-HEU
Donnie Brew, FHWA	Bill Malley, Perkins Cole
Steve Lund, USACE	Jeff Dayton, HNTB
Kathy Matthews, USEPA	Anne Redmond, HNTB
Marella Buncick, USEPA	Michael Gloden, PBS&J
Polly Lespinasse, NCDENR-DWQ	Jill Gurak, PBS&J
Maria Chambers, NCWRC (via phone)	Scott Lane, Louis Berger Group
Hank Graham, GUAMPO (via phone)	Julie Flesch-Pate, Louis Berger Group
Randi Gates, GUAMPO (via phone)	Lisa Murphy, Louis Berger Group
Jennifer Harris, NCTA	Chris Walsh, Louis Berger Group
Dewayne Sykes, NCDOT-Roadway Design	

Presentation Materials: (all materials have been posted to the TEAC website)

- Meeting Agenda.
- Powerpoint presentations for the Draft Indirect and Cumulative Effects (ICE) Assessment Review, Updated Purpose & Need Statement and Alternatives Report Addendum.
- ICE Figures, including maps for growth potential with and without the Project.
- Updated Draft Purpose and Need Statement.

Purpose:

The purposes of the meeting were to discuss the analysis and results from the Draft ICE Assessment, present the Updated Draft Purpose and Need Statement, discuss the items updated and added in the Addendum to the Alternatives Development and Evaluation Report, provide an update on the status of the Section 6002 Coordination Plan for the project, and announce the upcoming Citizens Informational Workshops.

General Discussion:

The following information was discussed at the meeting:

- **Presentation on the ICE Study** - Scott Lane from Louis Berger group began the powerpoint presentation by providing an overview of the analysis methods, data, and results for the ICE study. He stated that scoping meetings were held in June and July 2007 with the resource agencies to discuss the ICE study and topics to include in the analysis. He noted that, as an example, the topic of habitat fragmentation, was suggested during the study scoping process.

Mr. Lane also described the various study areas used in the analysis and the stakeholder interview process. Over 36 interviews were conducted with project area stakeholders such as local planning staff, real estate agents, riverkeepers, and developers. The interviewee's responses were weighted based on the interviewee's knowledge of each study district.

Lisa Murphy described the data collected and its limitations, and how it was used in the spatial grid analysis. As an example, farmland and forested land information was collected from the National Land Cover database (2002). This 2002 database was corrected to 2006 using aerial photography.

Turnpike Environmental Agency Coordination Meeting 7/8/08

Julie Flesch-Pate reviewed the ICE study steps 4 and 5 relating to identifying effect-causing activities and identifying potential indirect and cumulative effects for further analysis.

- **Presentation on the Updated Purpose and Need Statement and the Addendum to the Alternatives Development and Evaluation Report** - Jill Gurak from PBS&J gave a brief powerpoint presentation. She began with a description of the major topics included in the Updated Draft Purpose and Need Statement. A description of major updates in the Addendum to the Alternatives Development and Evaluation Report included the incorporation of 2030 traffic forecasts, the inclusion of tolling, and the elimination of corridor segment K1D.
 - **Upcoming Citizens Informational Workshops** - The NCTA will be conducting Citizens Informational Workshop Series #3 this summer on the following dates:
 - o August 6 at Olympic High School in Charlotte
 - o August 7 at Southpoint High School in Belmont
 - o August 11 at the Gastonia Adult Recreation Center in Gastonia
- The purpose of the workshops is to present and ask for input on the Updated Draft Purpose and Need Statement, Addendum to the Alternatives Development and Evaluation Report (including the elimination of Corridor Segment K1D), and the potential elimination of the US 29-74 interchange. The tight of way limits for the preliminary engineering designs and the study corridor boundaries will also be presented on large-scale aerial photographs.
- **Section 6002 Coordination Plan Update** - The status of the project's Section 6002 Coordination Plan not changed much over the past few months. The plan will include early public involvement and state that a notification of project initiation letter from NCTA to FHWA will be prepared. The coordination plan also will state that the project will follow a process that will mirror the 6002 compliant merger process soon to be adopted by the NCDOT, FHWA, and resource agencies, even though the NCTA will not be a signatory to the Memorandum of Agreement.

The NCTA will be requesting that the resource agencies re-sign Concurrence Points 1 and 2 based on the Updated Draft Purpose and Need Statement and the Addendum to the Alternatives Development and Evaluation Report, once the agencies have a chance to review those reports and after the public has commented. After CP1 and CP2 are re-signed, the NCTA will request concurrence on CP2a.

The USFWS would like to see the public comments from the upcoming Citizens Informational Workshops and any resulting changes to these documents, before re-signing CP1 and CP2 and signing CP2a. Other resource agencies in attendance agreed.

The comment period on these items will likely extend through August, so a summary will be available in September.

Q&A:

1. **When will the ICE report be available for review?**
The report is under final review by the NCDOT. It is expected to be available for distribution in one to two weeks. Mr. Lund, Ms. Buncick, Ms. Chambers, and Mr. Miltischer will be provided hard copies of the report. Mr. Graham, Ms. Lespinasse, and Ms. Matthews requested a CD.
2. **Why is the potential for growth effects low in York County, SC? How well are they interviewed from York County?**
York County stated they feel they are far enough away to not be substantially affected by the proposed project. One issue of concern they did mention was the potential for increased school attendance resulting from increased growth. Overall, interviewees felt that the growth trends are already occurring and they are not directly in anticipation of the proposed project.

Turnpike Environmental Agency Coordination Meeting 7/8/08

Table 2. Evaluation of Existing Road (ER) and Mid-Currituck Bridge (MCB) Alternatives

Components	Highway Improvement Alternatives					
	ER1	ER2	MCB1	MCB2	MCB3	MCB4
• Bridge	NA	NA	2-lane bridge	2-lane bridge	2-lane bridge	2-lane bridge
• US 158 (Wright Memorial Bridge to NC 12)	8 lanes	8 lanes	6 lanes (8 lanes in NC 12 area)	6 lanes (8 lanes in NC 12 area)	5 lanes	5 lanes
• NC 12 (Dare County north of US 158)	4 lanes	3 lanes	4 lanes	3 lanes	2 lanes	2 lanes
• NC 12 (Currituck County)	4 lanes	4 lanes	4 lanes	4 lanes	2 lanes (4 near bridge)	2 lanes (4 near bridge)
• Location of US 158 Contraflow or Third Northbound Lane for Hurricane Evacuation	Wright Memorial Bridge to NC 168 (24.5 miles)	Wright Memorial Bridge to NC 168 (24.5 miles)	Mid-Currituck Bridge to NC 168 (5 miles)			Same as MCB3 plus Wright Memorial Bridge NC 12 (1.5 miles)
Economic Feasibility						
Capital Cost (in millions)						
• Two-Lane Mid-Currituck Bridge (average of six potential corridors)	NA	NA	\$385	\$385	\$385	\$385
• NC 12	\$550	\$207	\$550	\$207	\$72	\$72
• US 158 in Dare County	\$41	\$41	\$27	\$27	\$0	\$7
• US 158 in Currituck County (third northbound lane)	\$67	\$67	\$16	\$16	\$16	\$16
TOTAL CAPITAL COST WITH A TWO-LANE BRIDGE	\$658	\$315	\$978	\$635	\$473	\$480
Available Capital Funding (in millions)						
• Potential Total Revenue Bond Financing	\$0	\$0	\$284	\$284	\$284	\$284
• Potential Transportation Infrastructure Finance and Innovation Act (TIFIA) Financing	\$0	\$0	\$128	\$128	\$128	\$128
• Potential Capital Funding Shortfall (Surplus) (total cost minus available funding)	\$658	\$315	\$566	\$223	\$61	\$68

3. In the results table, why is Gaston County shown as having a high potential for growth acceleration due to the project, but shown as having a moderate cumulative effect? The growth trends are already there and the potential for cumulative effect can also depend on how well an area follows their land use plans. Mr. Lane stated that, in their research, the project area jurisdictions were found to be generally following their plans.

4. Were connections between Natural Heritage Areas taken into account, or did you just consider them as point locations (blobs)? Connections between Natural Heritage Areas were considered on a 1 square mile grid basis. GIS layering allowed the report preparers to consider both the location and reported occurrences of Natural Heritage elements. Additionally, composites or areas having the potential for future land use change were considered in the vicinity of the Natural Heritage Areas to determine the potential for wildlife corridor fragmentation. The analysis was qualitative in nature and focused on wildlife corridors not necessarily particular species. The assessment of Threatened and Endangered Species looked at the habitat requirements of particular species.

Previous Action Items:

- Conclude discussion on Concurrence Point 2a.

New Action Items:

- NCTA to provide a copy of the Draft Indirect and Cumulative Effects Assessment and the Addendum to the Alternatives Development and Evaluation Report once the NCDOT reviews are complete.
- NCTA to provide the public comments from the August workshops after the comment period has passed.
- Agencies will provide any comments on the Updated Draft Purpose and Need Statement, Addendum to the Alternatives Development and Evaluation Report, and the Draft ICE by the end of August.

Resolutions:

- None.

Table 2 (continued). Evaluation of Existing Road (ER) and Mid-Currituck Bridge (MCB) Alternatives

	Highway Improvement Alternatives					
	ER1	ER2	MCB1	MCB2	MCB3	MCB4
2035 Hurricane Evacuation Benefit						
Clearance Time With US 158 Northbound Contraflow Lane in Currituck County	27.4 hrs	27.4 hrs	27.4 hrs	27.4 hrs	27.4 hrs	27.4 hrs
• Percent of a Reduction from 36.3 hours to 18 hours	49%	49%	49%	49%	49%	49%
• Amount Above 18-hour Goal	8.9 hrs	8.9 hrs	8.9 hrs	8.9 hrs	8.9 hrs	8.9 hrs
Clearance Time With US 158 Third Northbound Lane in Currituck County	21.8 hrs	21.8 hrs	21.8 hrs	21.8 hrs	26.6 hrs	21.8 hrs
• Percent of a Reduction from 36.3 hours to 18 hours	79%	79%	79%	79%	53%	79%
• Amount Above 18-hour Goal	3.8 hrs	3.8 hrs	3.8 hrs	3.8 hrs	8.6 hrs	3.8 hrs
System Linkage and Efficiency Benefit						
Percent Reduction in Total Annual Millions of Vehicle Miles Traveled (VMT)	0%	0%	13%	13%	13%	13%
Consistent with Strategic Highway Corridor Vision Plan	No	No	Yes ²	Yes ²	Yes	Yes
Consistent with Intrastate System Designations	No	No	Yes ²	Yes ²	Yes	Yes
Impact Potential						
Displacement						
• Mid-Currituck Bridge (average of C1 to C6)	0	0	5	5	5	5
• NC 12	195	15	195	15	5	5
• US 158 in Dare County	0	0	0	0	0	0
• US 158 in Currituck County (third northbound lane)	32	32	1	1	1	1
TOTAL DISPLACEMENT	227	47	201	21	11	11

Table 2 (continued). Evaluation of Existing Road (ER) and Mid-Currituck Bridge (MCB) Alternatives

	Highway Improvement Alternatives					
	ER1	ER2	MCB1	MCB2	MCB3	MCB4
Potential for Public-Private Partnership to cover shortfall	No	No	No	No	Yes	Yes
Travel Benefits¹						
2035 Traffic Flow Benefits						
Percent Reduction in Congested Annual Millions of VMT						
• At LOS E or F	55%	22%	64%	50%	37%	37%
• At LOS F	51%	27%	91%	91%	71%	71%
• At a poor LOS F	100%	44%	100%	100%	69%	69%
Percent Reduction in Miles of Road Operating at LOS F						
• Summer Weekday (SWD)	100%	60%	100%	100%	61%	61%
• Summer Weekend (SWE)	37%	10%	89%	89%	73%	73%
• Weighted Average of SWD & SWE	66%	33%	94%	94%	68%	68%
Percent Reduction in Miles of Road Operating at a Poor LOS F						
• Summer Weekday (SWD)	100%	35%	100%	100%	86%	86%
• Summer Weekend (SWE)	100%	25%	100%	100%	75%	75%
• Weighted Average of SWD & SWE	100%	32%	100%	100%	83%	83%
2035 Travel Time Benefits (Aydlett Rd to Albacore St)						
• Percent Reduction in Summer Travel Time via Wright Memorial Bridge (weighted average of SWD & SWE)	48%	19%	53%	44%	31%	31%
• Percent Reduction in Summer Travel Time via Currituck Sound Crossing (weighted average of SWD & SWE)	NA	NA	93%	93%	93%	93%

Table 4. Comparison of Bridge Corridors C1 Through C6

	C1	C2	C3	C4	C5	C6	
SOCIAL, ECONOMIC, AND CULTURAL IMPACTS	Major Utility Conflicts (yes or no)	No	No	No	No	No	No
	Railroad Crossings (number)	0	0	0	0	0	0
	Displacements (number)						
	• Residences	6	6	7	7	0	0
	• Businesses	0	1	0	1	1	0
	• Cemeteries (all or part)	1	1	1	1	0	0
	• Recorded Historic Sites	0	0	0	0	0	0
	Rural Community Fragmentation on Mainland	Passes through Aydlett north of its center		Passes through center of Aydlett		At southern end of Aydlett	
	Beach Community Fragmentation on Outer Banks	Passes between 2 subdivisions taking southern end of one	None, in commercial area	Passes between 2 subdivisions taking southern end of one	None, in commercial area	Passes between 2 subdivisions taking southern end of one	None, in commercial area
	Greenway Crossings (number)	0	0	0	0	0	0
	Low Income or Minority Populations (yes or no)	No	No	No	No	No	No
	Potential Section 4(f) Impacts (yes or no)	No	No	No	No	No	No
	Hazardous Materials Sites (number completely or partially used)	0	0	0	0	0	0

Table 2 (concluded). Evaluation of Existing Road (ER) and Mid-Currituck Bridge (MCB) Alternatives

	Highway Improvement Alternatives					
	ER1	ER2	MCB1	MCB2	MCB3	MCB4
Rural/Beach Community Fragmentation	Four through lanes crossed by beach users, shoppers, or hotel guests in Dare County.	New turn lane crossed by beach users or hotel guests in Dare County.	Same as ER1 plus Mid-Currituck Bridge passes through Aydlett (C3 and C4 through center) and C1, C3, and C5 pass through middle of new subdivision.	New turn lane crossed by beach users or hotel guests in Dare County, plus Mid-Currituck Bridge passes through Aydlett (C3 and C4 through center) and C1, C3, and C5 pass through middle of new subdivision.	Mid-Currituck Bridge passes through Aydlett (C3 and C4 through center) and C1, C3, and C5 pass through middle of new subdivision.	Mid-Currituck Bridge passes through Aydlett (C3 and C4 through center) and C1, C3, and C5 pass through middle of new subdivision.
Habitat Fragmentation	None	None	Associated with Mid-Currituck Bridge crossing of Maple Swamp and loss of swamp forest and hardwood forest; C1 to C4 in vicinity of an existing forest edge; C5 and C6 create a new edge and also use bay forest.			
Wetland Filled/Bridged (Acres)						
• Mid-Currituck Bridge on Mainland (average of C1 to C6, see Table 4 for acres by corridor)	0.0/0.0	0.0/0.0	14.2/6.5	14.2/6.5	14.2/6.5	14.2/6.5
• Mid-Currituck Bridge on Outer Banks (average of C1 to C6, see Table 4 for acres by corridor)	0.0/0.0	0.0/0.0	0.0/2.0	0.0/2.0	0.0/2.0	0.0/2.0
• NC 12	10.9/0.0	10.4/0.0	10.9/0.0	10.4/0.0	6.3/0.0	6.3/0.0
• US 158 in Dare County	4.2/0.0	4.2/0.0	3.4/0.0	3.4/0.0	0.0/0.0	0.0/0.0
• US 158 in Currituck County (third northbound lane)	12.4/0.0	12.4/0.0	10.8/0.0	10.8/0.0	10.8/0.0	10.8/0.0
TOTAL WETLANDS FILLED/BRIDGED	27.5/0.0	27.0/0.0	39.3/8.5	38.3/8.5	30.8/8.5	30.8/8.5
High Quality Resources Filled/Bridged (Acres)						
• Mid-Currituck Bridge (average of C1 to C6, see Table 4 for acres by corridor)	0.0/0.0	0.0/0.0	4.8/6.6	4.8/6.6	4.8/6.6	4.8/6.6
• NC 12	17.8/0.0	16.8/0.0	17.8/0.0	16.8/0.0	0.0/0.0	0.0/0.0
• US 158 in Dare County	0.2/0.0	0.2/0.0	0.0/0.0	0.0/0.0	0.0/0.0	0.0/0.0
• US 158 in Currituck County (third northbound lane)	1.4/0.0	1.4/0.0	1.4/0.0	1.4/0.0	1.4/0.0	1.4/0.0
TOTAL HIGH QUALITY RESOURCES FILLED/BRIDGED	19.4/0.0	18.4/0.0	24.0/6.6	23.0/6.6	6.2/6.6	6.2/6.6

¹The absolute numbers associated with the percents shown are included in Table 7 in the Appendix. Several charts showing these findings in a graphical form also are included in the Appendix.

²Consistent because it includes a Mid-Currituck Bridge, however, these plans do not call for the improvement of NC 12, which is a component of these alternatives.

Shumate, Christy

Harris, Jennifer
 Tuesday, July 08, 2008 5:12 PM
From: 'Gary_Jordan@fws.gov'
Sent: Shumate, Christy; pagej,
To: Re: Mid-Currituck
Cc:
Subject:

Thank you Gary.

----- Original Message -----
From: Gary_Jordan@fws.gov <Gary_Jordan@fws.gov>
To: Harris, Jennifer
 Travis.Wilson@wildlife.org <travis.wilson@wildlife.org>;
 mlitscher.chris@panaia.epa.gov <mlitscher.chris@panaia.epa.gov>;
 jim.hoadley@ncmail.net <jim.hoadley@ncmail.net>; george.hoops@fwha.dot.gov
 <george.hoops@fwha.dot.gov>; william.j.biddlecome@usace.army.mil
 <william.j.biddlecome@usace.army.mil>; Cathy.brittingham@ncmail.net
 <Cathy.brittingham@ncmail.net>; david.wainwright@ncmail.net <david.wainwright@ncmail.net>;
 matthews.kathy@epa.gov <matthews.kathy@epa.gov>
Sent: Tue Jul 08 16:39:02 2008
Subject: Mid-Currituck

Jennifer,

I have a few questions and comments for consideration in the development of the DEIS for R-2576.

- 1) Will the bridge be lighted? If so, the effects of bridge lighting on night migrating birds needs to be addressed in the document. The USFWS would strongly prefer that the bridge not be lighted, but if that is proposed, there needs to be measures implemented which would reduce the lighting and minimize impacts on migratory birds. I understand that in the state of New York, there was a significant lawsuit regarding the effects of a lighted bridge on migratory birds.
- 2) Regardless of whether the bridge is lighted or not, the effects to migratory birds needs to be addressed in the DEIS. Sec. 3(e)(1) of Federal Executive Order 13186 states each agency shall "support the conservation intent of the migratory bird conventions by integrating bird conservation principles, measures, and practices into agency activities and by avoiding or minimizing, to the extent practicable, adverse impacts on migratory bird resources when conducting agency actions."
- 3) The old US 64 bridge across Croatan Sound has had a very bad problem of attracting migrating purple martins. They temporarily roost underneath the bridge and then fly in the path of cars. During a period of about two months out of each year, thousands of purple martins are killed by traffic. There is something about the design of the bridge which attracts them there to roost. The new US 64 bridge does not attract them. NCTA needs to avoid any design that would attract roosting purple martins or any other species.

Please note that I did not cc anyone from PB because I did not have their email addresses.

Gary Jordan
 US Fish and Wildlife Service
 PO Box 33726
 Raleigh, NC 27636-3726
 Phone (919) 856-4520 ext. 32
 Fax (919) 856-4556
 gary_jordan@fws.gov

Table 4. Comparison of Bridge Corridors C1 Through C6

	C1	C2	C3	C4	C5	C6
Known Federally-Listed Species Habitat (Natural Heritage Program) (number of areas affected)	0	0	0	0	0	0
100-Year Floodplain Impacts (yes or no)	Yes	Yes	Yes	Yes	Yes	Yes
Habitat Fragmentation (Maple Swamp Bridged on Mainland)	Bridge corridor parallel to power line corridor; swamp forest lost; in vicinity of existing edge		Bridge corridor parallel to Aydlett Road ; swamp forest lost; in vicinity of existing edge		Bridge corridor is a new crossing ; swamp and bay forest lost; new edge created	
Wetland Impacts						
• Crossings (number)	3	3	4	4	4	4
• Total Area on Mainland (acres; bridged is width of bridge times length)	7.6 (fill) 7.4 (bridged)	7.6 (fill) 7.4 (bridged)	15.9 (fill) 6.6 (bridged)	15.9 (fill) 6.6 (bridged)	19.0 (fill) 5.5 (bridged)	19.0 (fill) 5.5 (bridged)
• Total Area on Outer Banks (acres; bridged is width of bridge times length)	1.5 (bridged)	2.5 (bridged)	1.5 (bridged)	2.5 (bridged)	1.5 (bridged)	2.5 (bridged)
• Coastal (CAMA) wetland area on Outer Banks (acres; bridged is width of bridge times length)	1.2 (bridged)	1.0 (bridged)	1.2 (bridged)	1.1 (bridged)	1.2 (bridged)	1.0 (bridged)
Stream Impacts						
• Crossings (number)	0	0	0	0	0	0
• Length in feet (within design construction limits)	0	0	0	0	0	0
Potential Riparian Buffer Impacts (yes or no)	No	No	No	No	No	No
Water Supply Critical Areas (yes or no)	No	No	No	No	No	No
High Quality Resources	Maple Swamp; Gordonia Forest	Maple Swamp; Gordonia Forest	Maple Swamp; Gordonia Forest; North River/ Great Swamp	Maple Swamp; Gordonia Forest; North River/ Great Swamp	Maple Swamp; Gordonia Forest	Maple Swamp; Gordonia Forest
	Forest is different character and quality than C3 to C6. and while of value is not as unique		Bay forest exists but is thinner and smaller than C5 and C6.		Passes though a bay forest unique primarily because of the large size of the trees.	
• Crossings (number)	2	2	2	2	2	2
• Area (acres)	0.85 (fill) 7.8 (bridged)	0.85 (fill) 7.8 (bridged)	6.44 (fill) 6.5 (bridged)	6.44 (fill) 6.5 (bridged)	7.23 (fill) 5.5 (bridged)	7.23 (fill) 5.5 (bridged)

Shumate, Christy

From: Cathy Brittingham [Cathy.Brittingham@ncmail.net]
Sent: Friday, July 11, 2008 2:50 PM
To: Bill Biddlecome; David Wainwright; Chris Miltscher; Kathy Matthews; Gary Jordan; George Hoops; Harris Jennifer; Shumate, Christy; Amy Simes; Jim Hoadley; Yamamoto, Brian F.; Ron Sechler; Donnie Brew; Sara Winslow; Travis Wilson; Renee Gledhill-Earley; Devens, Thomas E.; pageji; Sykes, Dewayne L; Jethro
Subject: R-2576 DEIS, NC 12 Intersection Alternatives & Hurricane Evacuation
Attachments: The Virginia Pilot June 2008 article hurricane evacuation.doc

Hi Jennifer,

I have two additional comments at this time regarding the DEIS for R-2576:

1. Has NCTA determined which of the NC 12 Intersection Alternatives it plans to study in detail in the DEIS? I was unable to find this information in the documents distributed at the TEAC meeting this week. As stated in the DCM letters dated 5/6/08 and October 22, 2007, DCM will provide our comments on the seven NC 12 intersection alternatives after we receive additional information from NCTA regarding SAV impacts. This information could be provided in the DEIS if NCTA plans to carry forward all seven NC 12 Intersection Alternatives in the DEIS. However, if NCTA plans to eliminate any of the NC 12 Intersection Alternatives from further study before the DEIS is finalized, then DCM recommends that this be added as a discussion topic at a future TEAC meeting when the additional information regarding SAV impacts is available.

A-77
2. NCDOT has provided the NEPA/404 Merger Team for R-2544 & R-2545 with the attached newspaper article from the Virginia Pilot regarding the possibility that access could be cut off through NC 168 to Virginia during a hurricane evacuation. If I remember correctly, the hurricane evacuation analysis for R-2576 assumes that a certain percentage of the evacuees will travel north to Virginia on NC 168. How does NCTA plan to address the possible scenario as described in the attached newspaper article? How does this effect the hurricane evacuation analysis that has been done for R-2576? DCM recommends that this be discussed in the DEIS, as well as at a future TEAC meeting.

Sincerely,

Cathy

<!--[if !supportEmptyParas]--> <!--[endif]-->

--
Cathy Brittingham
Transportation Project Coordinator
N.C. Division of Coastal Management
1638 Mail Service Center
Raleigh, NC 27699-1638
(919) 733-2293 x238 telephone
(919) 733-1495 FAX



State officials concerned about traffic along evacuation route

CURRITUCK COUNTY, N.C.

If a large hurricane approaches, tourists and residents from the Outer Banks and Currituck County may be turned away from Hampton Roads.

Emergency planners want to close N.C. 168 in Barco and divert traffic west on U.S. 158. But U.S. 158 shrinks from five lanes to two there and could create a major traffic jam. "It could be a mess," Currituck County manager Dan Scanton said.

The so-called Barco diversionary plan was debated June 12 when emergency officials from both states met in Currituck County. Officials are expected to reconvene in July, said Mike Sprayberry, deputy director and operations chief for the North Carolina Division of Emergency Management.

With a large hurricane approaching, it would take 30 hours to get 95 percent of the traffic to safety through the Barco intersection, according to a 2005 study by the state highway department.

"It's going to be tough," said Sandy Casey, chief deputy for the Currituck County Sheriff's Office. "I'd say it would take not hours, but days."

Between 200,000 and 300,000 people may need to evacuate the Outer Banks, while Virginia could have to move two or three times as many people.

It would not make sense to allow the Outer Banks traffic into Hampton Roads during an evacuation, said Bob Spieldenner, spokesman for the Virginia Department of Emergency Management.

"The goal is to get them west," Spieldenner said.

But most Outer Banks tourists would be from Virginia, countered Ron Wall, natural hazards program manager for the N. C. Division of Emergency Management.

"The people coming there will be people from Virginia and they'll probably want to go back that way," Wall said. "I would argue with the Virginia plan. I can't see them closing the road to Virginia residents."

The Barco diversionary plan calls for traffic to follow U.S. 158 by turning west from the

7/29/2008

Table 6. Comparison of NC 12 Intersection Alternatives

		Original C1	C1A	C1B	C1C	C1D	Original C2	C2A
SAV Bridged (in acres)		3.2	0.0	4.4	4.5	4.3	6.0	5.5
Potential SAV Habitat Bridged (over areas of sound less than 4 feet deep in acres)		6.5	7.9	8.5	8.1	7.7	14.2	12.6
Potential SAV Habitat Bridged (over areas of sound less than 6 feet deep in acres)		13.3	16.1	15.3	14.9	14.5	20.6	17.9
Coastal Wetlands Bridged / Filled (in acres)		2.1 / 0	0.0 / 0.0	0.0 / 0.0	0.0 / 0.0	0.0 / 0.0	1.4 / 0.0	0.8 / 0.0
Non-Coastal Wetlands Bridged/Filled (in acres)		0.8 / 0.7	0.3 / 0.4	0.0 / 0.9	0.3 / 1.4	0.6 / 1.5	1.8 / 0.2	1.4 / 0.0
Displacements		<ul style="list-style-type: none"> • 1 home • 13 vacant residential parcels 	<ul style="list-style-type: none"> • 9 homes • 11 vacant residential parcels 	<ul style="list-style-type: none"> • 2 homes • 1 vacant residential parcels 	<ul style="list-style-type: none"> • 6 homes • 4 vacant residential parcels 	13 vacant residential parcels	1 business	None
Community Impacts		Bisects a developing subdivision	Bisects existing subdivision; separates approximately ¾ of homes from community center; substantial change in internal traffic movement.	Passes between two sections of a subdivision but both have independent access to NC 12; pond filled	At edge of a developing subdivision; pond partially filled	Bisects a developing subdivision but more towards its southern boundary than original C1	None, except those related to NC 12 access	None
Changes Required in Local Road and Driveway Access (Currituck Clubhouse Road to Virgin Gordo Crescent)	NC 12 Widening to 4 Lanes (in miles)	4.2	3.2	3.7	3.8	4.1	2.5	2.1
	Total NC 12 Access Points	27	19	24	26	26	17	10
	Access Points with Revised Access	13	10	12	12	13	10	3
	• Right In – Right Out (RIRO) Only	10	8	10	8	10	8	3
	• Proposed Leftovers (no left turns from access point)	3	2	2	3	3	2	0
	• Road Closure	0	0	0	1	0	0	0
Proximity to Marsh Islands (closest point in feet)		Beyond 1,000 feet					900 feet	575 feet

Mid-Currituck Bridge Study

7/4

Alternatives Screening Report

five-lane highway onto Shortcut Road, a two-lane stretch of U.S. 158. Traffic would continue into Camden County and turn right onto N.C. 343, also a two-lane road, and pass through South Mills and briefly turn onto U.S. 17 before returning to U.S. 158 toward Gates County.

Another option would be to send traffic through Elizabeth City to southbound U.S. 17, a five-lane highway. But the route would pass through low-lying areas that have flooded in past hurricanes.

The nearest shelter would be in Rocky Mount, Scamlon said. Dare County might have to alter evacuation plans and direct more people west on U.S. 64, a four-lane highway through Columbia, he said.

North Carolina and Virginia officials will communicate closely through the emergency, Sprayberry said.

"We're moving into something like this as well ordered as possible," Sprayberry said. "No matter how well you plan and coordinate some of this, it's still going to be ugly."

[Return to Today's Clips](#)



Turnpike Environmental Agency Coordination (TEAC) Meeting

MEETING MINUTES

Date: October 7, 2008
9:00 AM to 12:30 PM
NC Turnpike Authority Office Board Room (Suite 400)
Project: STIP R-2576 Mid-Currituck Bridge Study - BRS-000S(35)

Mid-Currituck Bridge Spotlight:

Attendees:

- Donnie Brew, FHWA
- George Hoops, FHWA
- Bill Biddlecome, USACE
- Christopher Militscher, USEPA
- Kathy Matthews, USEPA
- Gary Jordan, USFWS
- Ron Seehler, NMFS (via phone)
- Cathy Brittingham, NCDENR-DCM
- David Wainwright, NCDENR-DWQ
- David Chang, NCDOT-Hydraulics
- Ben-Jetta Johnson, NCDOT-Traffic Engineering (via phone)
- Brian Yamamoto, NCDOT-PDEA
- Ted Devens, NCDOT-PDEA
- John Wadsworth, NCDOT-Alternative Delivery Unit
- Steve DeWitt, NCTA
- Jennifer Harris, NCTA
- Christy Shumate, HNTB
- Tracy Roberts, HNTB
- Jens Geratz, PBS&J
- John Page, PB
- Marlena Everett, PB
- Bill Rice, PB
- Eric Misak, PB
- James Kleckley, ECU
- Dan Marucci, ECU
- Kate Christenbury, ECU
- Conor Harrison, ECU
- Jill Brent, ECU

Presentation Materials:

- (All materials have been posted on the TEAC website)
- Meeting Agenda
- Detailed Study Alternatives Map
- Mid-Currituck Bridge Study Indirect and Cumulative Effects PowerPoint slides
- Handout 16 – ER2 and MCBZ Detailed Studies
- Statement of Purpose and Need (October 2008)

Purpose:

The purpose of the meeting was to present East Carolina University's work on the indirect and cumulative effects assessment and discuss design concepts for detailed studies of the MCBZ and ERZ alternatives.

General Discussion:

The following information was discussed at the meeting:

- Indirect and Cumulative Effects Assessment** – Dan Marucci and James Kleckley from East Carolina University (ECU) presented ongoing work related to the assessment of potential indirect and cumulative effects associated with the detailed study alternatives for the project. The ICE study area spatial boundaries include all of Currituck and Dare Counties, as well as portions of surrounding counties and part of the Hampton Roads, Virginia area. Both Currituck and Dare

Counties have Coastal Area Management Act (CAMA) Land Use Plans, as do the towns in Dare County. The Town of Southern Shores is currently updating its CAMA plan. It was also noted that Carova is included in the Growth Service Area (GSA) because of its recreational use.

ECU reviewed the activities that would potentially cause indirect and cumulative effects. USEPA added that invasive species should be considered, as they might spread during construction of the project as well as any induced development. Chemical treatment (eradication) in combating these species is not adequately reflected in the general types of impact-causing activities table shown in the PowerPoint slides. USEPA said that open and disturbed areas, as well as construction equipment use spreads invasive species (i.e., kudzu). In the project area, invasive species are currently along US 158 but not in Maple Swamp. USEPA cited an example where North Carolina Department of Environment and Natural Resources (NCDENR) have worked to eradicate phragmites from a mitigation site for more than 5 years. The indirect potential for invasive species should be taken into account.

ECU discussed the potential induced activities and development related to the project, such as: changes in the number of day visitors, changes in the number of permanent residents, changes in development on the mainland, changes in development on the NC 12-accessible Outer Banks, and changes in development on the non-NC 12-accessible Outer Banks in Currituck County.

ECU also discussed the potential indirect and cumulative impact types to be considered and explained how the Currituck County calculated their future land use in their CAMA Land Use Plan with respect to urban use. NCDENR-DCM cautioned that the CAMA Land Use Plans are not static and that they are updated every 5 years.

ECU noted that within the Carova area there is a hotel proposed for development. The proposed plan is scheduled to be considered by the county commissioners at their November 17 meeting and county planners have not recommended the hotel in Carova. [Note: it was later found that this is the same development rejected months ago by the county planning board. The developer is only now appealing the decision to the county commissioners.] It was noted that in the past, Currituck County and persons in the Carova area have opposed even minor increments to the existing sand road and a proposed commercial development. Thus, there is current resistance to changing the status quo in the Carova area. These are trends that are considered when evaluating the potential for indirect impacts as a result of this project.

USFWS questioned how one should interpret where the land suitability map from the Currituck County Land Use Plan that shows land suitable for development within part of a wildlife refuge. No one knew the answer, the county will be asked. USEPA asked what is the criteria being used by the CAMA plans to determine suitability for development. John Page answered by pointing out on the map which areas are the least suitable for development, which tend to be the area's extensive swamps and other wetlands. USEPA stated the CAMA plans do not consider all of the items that could restrict land use. NCDENR-DCM suggested that she can invite the CAMA land use planner, Charlene Owens, to join the next TEAC meeting. Charlene is located in the Elizabeth City office. ECU noted that essentially land suitability can be defined as "can we physically build it?". USEPA questioned whether Currituck County took into account prime and unique farmland soils when considering whether land is suitable for development. FHWA stated impacts on prime and unique farmland only would be required for direct impacts.

ECU discussed the key considerations in addressing how the project could change development. A recent economic development study being done for the county by staff at the University of North Carolina at Chapel Hill was mentioned. It was explained that this area has unique structures and a unique population. Other factors besides transportation tend to dominate development trends, unlike traditional development where access to work is an important factor.

USFWS asked whether the analysis takes into account changes in local politics, e.g. large homes in non-road areas and demand for a paved road in Carova. ECU answered that there is a lot of redevelopment in Dare County in the road-accessible areas and that there are multiple factors to

resist any demand for a paved road to the Carova area. A paved road in Carova appears unlikely to happen.

ECU said the impact analysis would consider current and planned availability of visitor services, past preferences of visitors, beach driving regulations, and competing recreation and development opportunities (i.e., Virginia Beaches in association with day visitors). Keeping characteristics of what is there now on the Outer Banks is key for a service based economy. The drivers of the economic analysis are employment, income, tax revenue, tourists and residents. The Outer Banks is a unique economy. The next step for the economic analysis is completing the determination of induced activities.

USEPA stated that there could be some redevelopment issues because the FEMA flood insurance expired on September 30, 2008 and that this issue should be considered in the study. NCTA should consider the extent to which Dare and Currituck counties allow placing structures in floodplains. USEPA said the floodplain should be compared with potential development and redevelopment areas.

USEPA asked if infrastructure adequacy will be studied. ECU answered infrastructure is being reviewed based on the CAMA Land Use Plan. USEPA questioned if there are current plans for upgrading or increasing capacity to serve development that is projected and that long term water supply and treatment needs to be considered.

ECU noted the next steps for the impact analysis will be to complete the determination of induced activities or actions, assess indirect and cumulative impacts, and complete documentation. NCTA anticipates completing the ICE assessment by the end of the year.

- **ER2 and MCB2 Detailed Studies** – The functional designs prepared and used for calculating impacts for the Alternatives Screening Report assumed a curb and gutter typical section along NC 12 for ER2 and MCB2; however, discussions with NCDOT and more detailed studies of the area have revealed that this typical section will not work on the Outer Banks because the water table is very high and there are no outfalls in the study area. Within the project area there are no streams or outlets for runoff, dunes create a ridge and NC 12 is often within a low lying area. Several drainage studies have been recently completed along NC 12 and were reviewed for use in development of the preliminary design along NC 12 (see Handout 16). Based on this, drainage on NC 12 was evaluated in four zones:
 - o Zone 1 (from Skyline Drive to Ocean Boulevard) – NC 12 is the low point and receives drainage from surrounding development. Infiltration ditches would be designed to accommodate drainage from NC 12 and development. USEPA suggested checking if the infiltrative trench would contact the groundwater. PB answered that the presumption is the infiltration ditches will be shallow enough not to come in contact with the groundwater so they generally remain dry.
 - o Zone 2 (from Ocean Boulevard to Plover Drive) could use best management practices (BMP's) such as wet ponds and infiltration basins. USEPA stated a preference for the infiltration basins, because of the fecal coliform can thrive in wet ponds. PB said that is the study team's preference as well.

[There is a gap between Zones 2 and 3 where no improvements are proposed. This is the existing 3-lane section of NC 12 in Duck.]

- o Zone 3 (from Cook Drive to Hunt Club Drive) could use sheet flow or BMP's. At a meeting with NCDENR-DWQ Storm Water Management, they indicated they would prefer BMP's.
- o Zone 4 (from Hunt Club Drive to the end of widening) – a 4-foot wide infiltration ditch could be used. In this area, drainage patterns are such that we only need

to account for the infiltration of road drainage and not development drainage. This design would be used for all alternatives, including ER2, MCB2 and MCB4. NCDENR-DWQ noted that property owners should be contacted if there will be impacts to existing stormwater ponds and their permits could require modifications.

Along NC 12 the speed limit is 45 mph except when it is 35 mph in the summer (within Duck it is 25 mph). The current design of NC 12 is for 35 mph. NCDOT agreed that the design speed for the widened NC 12 could be 35 mph to minimize impacts to surrounding land use.

For widening on US 158 between the Wright Memorial Bridge and NC 12 included in ER2 and MCB2 NCDOT requested a superstreet design rather than standard arterial widening. A graphic depicting this concept is included in Handout 16. It was indicated that traffic volumes were great enough to require dual U-turn lanes in the Wal-Mart area.

Q&A:

1. *USEPA asked why a 4-lane section is needed on NC 12 in Currituck County in all of the alternatives.*
In the case of ER2, there would be sufficient traffic in Currituck County to warrant four lanes as far north as Albacore Street and four lanes could be accommodated in the existing right of way in this area. Four lanes are not included in Dare County with this alternative, though the traffic would warrant four lanes, due to the high number of displacements, which all agreed were unacceptable (ER1 alternative). With the Mid-Currituck Bridge, four lanes would be needed on NC 12 so that back-ups at traffic signals would not back up onto the bridge. A future traffic signal is planned for Currituck Clubhouse Drive and is the southern extent of four-laning required.
2. *USEPA asked if sea level rise will be documented in the environmental document.*
Sea level rise will be documented in the environmental document in a similar manner to how it was addressed in the Bonner Bridge (B-2500) Final EIS.
3. *USEPA asked if a quantitative analysis will be completed for potential indirect effects to water quality.*
At this time, a qualitative analysis is being completed for potential impacts to the habitat and water quality based on the different alternative scenarios. A quantitative analysis may be completed later during the permitting process.
4. *USFWS asked where the Rural Planning Organization (RPO) stands in the updating of the comprehensive transportation plan within their jurisdiction.*
ECU answered that all current plans have been reviewed and they are not aware of planned updates for Currituck County but will look into it.
5. *NCDENR-DCM asked if ECU and NCTA were looking into ICE mitigation.*
ICE mitigation will be forthcoming during step 8 of the assessment. Research is underway. NCDENR-DCM noted that on some projects mitigation commitments are required of local communities. ECU stated that Currituck County has solid land use controls already in place.
6. *USEPA noted that the cost of NCDOT projects has been increasing 2 percent per month. Is this something that has been factored into project finance planning?*
NCTA updates project costs months and future cost estimates will be presented as a range. FHWA also advocates for presenting cost estimates as a range.
7. *USEPA asked about the status of the Public Private Partnership?*
NCTA is continuing to pursue a Pre-Development Agreement Partner for this project. Three teams of contractors, developers, engineers, and financiers, have been shortlisted and issued a Request for Proposals. Their proposals are due October 27 and NCTA hopes to select a partner by mid-November. The RFP specifically asks the three teams

how they would handle a variety of environmental issues, including runoff from the bridge, mitigation, permitting, etc. NCTA will make the RFP available on the TEAC website.

Previous Action Items:

- NCTA to revise and circulate the Statement of Purpose and Need and Alternatives Screening Report based on decisions presented in Letter from Jennifer Harris dated July 2, 2008. [A revised Statement of Purpose and Need dated October 2008 was distributed at the October 7, 2008 meeting and is posted to the TEAC website. The Alternatives Screening Report is being updated to reflect discussions with NCDOT regarding the No-Build Alternative.]
- NCTA will provide history of STIP funding for R-2576.
- [NCTA provided this to agencies via email on July 10, 2008.]
- USEPA will provide new guidance on infiltration basins and will check on guidance document/interagency agreement discussing wetland impacts and mitigation on the Outer Banks. [Guidance on Class V UIC wells received on July 10, 2008.]
- Agencies will provide additional comments on topics and issues they would like to see addressed in the Draft EIS. [Additional comments were received via email from USFWS and NCDENR-DCM and attached to the July 8, 2008 TEAC meeting minutes.]

New Action Items:

- NCTA will post the Pre-Development Agreement Request for Proposals to the TEAC website. [The RFP and RFP attachments were posted to the TEAC website on October 8, 2008.]
- Agencies will provide additional comments or questions related to the NC 12 widening, typical section, and drainage options.
- NCTA will work with NCDOT to schedule TEAC meetings for 2009. If agencies have comments about dates, they should provide those to Jennifer Harris.

Resolutions:

- Agencies agreed with the approach for detailed studies of NC 12 for ER2 and MCB2.
- Agencies agreed with work done on the Indirect and Cumulative Effects Assessment thus far.

MEETING MINUTES

Date: October 7, 2008
1:00 pm to 3:30 pm
NCTA Board Room

Project: STIP R-3329 Monroe Connector – NHF-74(21)
STIP R-2559 Monroe Bypass – NHF-74(6)

Monroe Connector / Bypass Spotlight:

Attendees:	Jennifer Harris, NCTA
Donnie Brew, FHWA	Christy Shumate, HNTB
George Hoops, FHWA	Carl Gibilaro, PBS&J
Steve Lund, USACE	Clint Morgan, PBS&J
Kathy Matthews, USEPA	Bryan Lambeth, PBS&J
Marella Buncick, USFWS (via phone)	Michael Gloden, PBS&J
Maria Chambers, NCWRC	Phillip Rogers, HNTB
Polly Lespinasse, NCDENR-DWQ	James Byrd, HNTB
John Wadsworth, NCDOT	
Steve DeWitt, NCTA	

Presentation Materials: (Posted to the TEAC website)

- Meeting Agenda
- Draft TEAC Meeting Minutes (September 23, 2007)
- Proposed Drainage Structure Maps
- Selection Criteria Handout
- Recommended Preliminary Crossing Size and Bridge Lengths (Table 4)
- Spotlighted Bridges Data Sheets
- Spotlighted Culverts Data Sheets
- Spotlighted Structures Data Sheets

Purpose: Discuss information in order to achieve agreement on the bridging decisions for streams and wetlands crossed by the detailed study alternatives.

General Discussion:

- **Selection Criteria** – The selection criteria (see Selection Criteria Handout) for identifying major drainage crossings matched what was previously used with endorsement from the agencies for the Gaston East West Connector. Crossings of 303(d) streams, streams which have a triple box culvert, and streams which drain 30 or more acres were identified. Of the fifty-six total drainage crossings on the project, fourteen crossings (nine proposed bridge crossings and five proposed culverts) were discussed in detail (see Spotlighted Bridges Data Sheets and Spotlighted Culverts Data Sheets).
- **Proposed Major Bridge Crossings** – Bridge lengths identified in the Spotlighted Bridges Data Sheets were not based on FEMA criteria or profiles. The bridge lengths were based on minimum NCDOT design criteria, which identify 10' offsets from the top of bank and then project a 2:1 slope to intersect with the proposed roadway profile. Also, it was noted that estimated bridge costs do not include annual maintenance costs. The bridge lengths do not account for FEMA requirements related to flood requirements. These studies will be done during final designs and bridge lengths will be adjusted accordingly. Agencies also requested that bridge widths and clearance be maximized to allow for possible inclusion of animal crossings at these locations or that floodplain pipes, which could also be used for small animal crossings, be considered in the fill slopes.

The following bridges were proposed based on hydraulic analysis:

- **Proposed Major Culvert Crossings**
 - Culverts were recommended at the following locations based on hydraulic analysis:
 - **Culvert Crossing #3 – 3-(7'x10')** culvert proposed for S008A on the mainline (Corridor Segment 18A). Agencies requested a bridge be considered due to the 303(d) status of the stream and because bridges are proposed or existing on upstream and downstream crossings. NCTA agreed to dual 250' bridges to bridge Stream S008A, however, equalization pipes will be utilized to maintain hydraulic connectivity for Wetland W004 rather than extending the bridge.
 - **Culvert Crossing #6 – 3-(11'x10')** culvert proposed for S008C on the mainline (Corridor Segment 18A). USEPA and NCWRC requested that this location be bridged. The drainage area for this location is very small and does not meet NCDOT criteria for inclusion of a bridge. The USEPA representative noted that all other 303(d) streams are bridged so this one should be bridged also. NCTA will consider changing this location from a culvert to a bridge.
 - **Culvert Crossing #27 – 3-(7'x12')** culvert proposed for S076 on the mainline (Corridor Segment 31). Concern was expressed that the culvert at this location could split the stream. NCTA will consider a 2 barrel culvert, which would be sufficient hydraulically. It was noted that structures up and downstream would need to be considered in the selection process. It was agreed that this location will be a culvert.
 - **Culvert Crossing #46 – 3-(9'x12')** culvert proposed for S152 on the mainline (Corridor Segment 34). The drainage area at this location is well below the NCDOT requirements for consideration of a bridge. Agencies requested a field review of this crossing before making a decision.
 - **Culvert Crossing #47 – 3-(9'x12')** culvert proposed for S152 on the mainline (Corridor Segment 36). A bridge was proposed at this location in NCDOT's R-2559 plans. USACE requested a field review for this crossing, as well as crossing #46 before finalizing a decision.
- **Changes to Recommendations** - NCTA agreed to make the following changes to its initial recommendations:
 - **Culvert Crossing #3** – Change from a culvert to a 250' bridge to bridge Stream S008A.
 - **Bridge Crossing #22A** – Extend bridge from 165' to 230' to bridge Wetland W044.
 - **Bridge Crossing #39** – Agreed to keep bridge at current proposed length (375') but to discuss possible lengthening during further avoidance and minimization discussions on the preferred alternative.
 - **Bridge Crossings #46 & 47** – Have a field review for these locations.
 - **Culvert Crossing #6** – This is the only 303(d) crossing without a bridge. NCTA will reevaluate this location for potential bridging.

Q&A:

1. *Why weren't crossings 1, 53 and 54 analyzed even though they appear to meet the selection criteria?*
All three of these crossings are existing culvert crossings under existing US 74 and would be replaced with appropriate culvert structures.
2. *Were future build-out and developments considered when sizing the crossings?*
The USGS formula was used which takes into account future land-use changes.
3. *How was the avoided length of stream distance determined?*
This was the distance measured along the stream to points 40' outside the slopestakes.
4. *Can all of Stream 115B be bridged at Bridge Crossing #39?*
S115B was only partially bridged because it is a lateral stream impact and to completely bridge it would be extremely costly. This options bridges S115B until its closest point to the edge of the proposed fill and from there on the stream will be rerouted to the edge of fill. This was done to best balance the stream impacts and the cost of the structure.

5. *Can the alignment at Bridge Crossing #39 be shifted to minimize impacts?*
If that crossing is shifted, it will affect other crossings. However, the alignments and grades have not yet been optimized. That will be evaluated further once a preferred alternative is selected.

Previous Action Items:

- NCTA to provide additional statistics on upgrade existing US 74 alternative. [NCTA and FHWA have determined that this information will be provided in the Draft EIS for agency review.]
- NCTA to continue development of Qualitative ICE Assessment and present findings at upcoming meetings.

New Action Items:

- NCTA will reevaluate Crossing #6 to determine if a bridge or culvert should be recommended.
- NCTA will schedule a field review meeting. Agencies will provide available dates. [The field review meeting was scheduled for October 21, 2008.]

Resolutions:

- Bridges will be included at the following locations:
 - Crossing 3/Stream S008A – 2-(250'x48') Corridor Segment 18A
 - Crossing 5A/Stream S008B – 50'x40' Corridor Segment 18A
 - Crossing 19/Stream S047 – 2-(150'x48') Corridor Segment 30
 - Crossing 20/Stream S047 – 75'x64' Corridor Segment 30
 - Crossing 21/Stream S047 – 2-(110'x56') Corridor Segment 22A
 - Crossing 22A/Stream S047 & Wetland W044 – 2-(230'x32') Corridor Segment 22A
 - Crossing 30/Stream S082 – 2-(240'x48') Corridor Segment 34
 - Crossing 37/Stream S111 – 2-(320'x48') Corridor Segment 36
 - Crossing 38/Stream S112 – 2-(280'x48') Corridor Segment 36
 - Crossing 39/Stream S111 – 2-(375'x48') Corridor Segment 34
- Culverts will be included at the following locations:
 - Crossing 27
- The following locations will be reevaluated:
 - Crossing 6
 - Crossing 46
 - Crossing 47

MEETING MINUTES

Date: October 7, 2008
3:30 pm to 5:00 pm
NC Turnpike Authority Board Room

Project: STIP U-3321 Gaston E-W Connector – STP-1213(6)

Gaston E-W Connector Spotlight:

Attendees:
George Hoops, FHWA
Donnie Brew, FHWA
Kathy Matthews, USEPA
Polly Lespinasse, NCDWQ
Maria Chambers, NCWRC
Steve Lund, USACE
Marella Bunick, USFWS (via phone)

John Wadsworth, NCDOT
Jennifer Harris, NCTA
Jeff Dayton, HNTB
Jill Gurak, PBS&J
Michael Gloden, PBS&J
Kiersien Giugno, PBS&J
Joanna Harrington, URS

Presentation Materials: (Posted to the TEAC website)

- Meeting Agenda
 - Draft TEAC Meeting Minutes (September 23, 2008)
 - Draft Section 6002 Coordination Plan (dated October 7, 2008)
 - Signature Form for Concurrence Points 1, 2, and 2a (dated October 7, 2008)
- [The final signature form will be posted once all signatures have been collected]

Purpose:

Discuss agency comments on the Draft Updated Purpose and Need Statement and Draft Addendum to the Final Alternatives Development and Analysis Report; discuss agency comments on the Indirect and Cumulative Effects Assessment; and discuss the Section 6002/Merger 01 Process and Section 6002 Coordination Plan.

General Discussion:

Ms. Harris opened the meeting with introductions and a review of the agenda.

- **Updated Purpose and Need Statement** – Ms. Harris requested comments from the team. NCWRC noted that the two Catawba River crossings are more like arms of Lake Wylie, and this should be clarified in the Purpose and Need Statement. USEPA suggested that growth in the southeast portion of the project area is due to the lure of lakeside living rather than proximity to Charlotte. USEPA believes that after talking with the Gaston Urban Area MPO, the MPO seems to be primarily focused on the Catawba River crossing more than anything else. Traffic forecasts for non-toll scenarios are approximately 106,000 vehicles per day, and traffic forecasts for the toll scenario show approximately 60,000 vehicles per day using the eastern end of the project. This type of demand can only be accommodated with a high-speed controlled-access facility. This project is unique in that there are only a few existing crossings of the Catawba River, and the forecasts show that there is a large demand for more capacity between Gaston and Mecklenburg Counties. Ms. Gurak noted that I-85 is already expanded to eight lanes across the Catawba River and is projected to operate at levels of service F in 2030. Mr. Militscher was not able to attend the meeting but communicated via e-mail with the team that he did not have any environmental objections on the Updated Purpose and Need Statement. Ms. Harris asked the team if there were any outstanding issues with the Updated Purpose and Need Statement. The team agreed there were none. USACE indicated the team could adopt the Purpose and Need Statement. The rest of the team agreed.

- **Addendum to the Final Alternatives Development and Evaluation Report** – Ms. Harris requested comments from team. NCWRC stated the forecasts seem to show that both the New Location Alternative and improving existing I-85 are both needed. NCWRC asked that, given the mixed comments regarding support for the project received at the August 2008 Citizens

Informational Workshops, would it be appropriate to do a survey of Gaston County residents regarding the need for the project. There were approximately 50-60 comments received that specifically stated support or opposition to the project or the need for the project out of the 200+ written comments received. Mr. Brew stated that the Long Range Transportation Plan (LRTP) process is in place to identify needed projects in the MPO's jurisdiction. For the Gaston East-West Connector, there were several public meetings held in the 1990s so that the MPO could identify their preferred alternative. The project has been a top priority since it was first included in the local transportation plans in the early 1990s. There is no improved existing I-85 project proposed in the MPO's LRTP or in the NCDOT STIP. NCDWQ had a question pertaining to the network wide statistics. Ms. Gurak explained the background of the statistics and why they seem counterintuitive. Braess's Paradox is the term for this phenomenon, recognized in complex networks where increasing capacity on specific links can, in certain instances, increase congestion overall. Mr. Militscher was not able to attend the meeting but communicated via e-mail with the team that he did not have any environmental objections on the Addendum to the Final Alternatives Development and Evaluation Report. Ms. Harris asked the team if there were any outstanding issues with the Addendum to the Final Alternatives Development and Evaluation Report. The team agreed there were none. USACE indicated the team could adopt the Addendum to the Final Alternatives Development and Evaluation Report. The rest of the team agreed.

- **Indirect and Cumulative Effects Assessment** - Ms. Harris asked if anyone had any comments or questions on the ICE Assessment. NCDWQ observed there were several references to "lack of stormwater ordinances" that need to be clarified since the area's jurisdictions do have stormwater ordinances. Ms. Gurak stated the intent of that phrase was to note that the effects being described would occur if there were no stormwater ordinances in place. However, it was acknowledged that clarification was needed. NCDWQ mentioned that the State of South Carolina was suing the State of North Carolina for water quality issues in the Catawba River basin. This is an important issue for NCDWQ. The attendees needed additional time to review the report and will provide written comments to NCTA. It was determined that it may be beneficial to provide the Indirect and Cumulative Effects chapter of the DEIS to the agencies for review.

- **Section 6002 Coordination Plan** - NCTA's intent for the environmental reviews is to follow a merger-like process for the Gaston East-West Connector project. Since NCTA is not a signatory to the NEPA/404 Merger Agreement, the process used can't officially be Merger 01. The process also needs to be compliant with Section 6002 of SAFETEA-LU. A Section 6002 Coordination Plan was distributed on September 23, 2008, and has since been revised to include comments from that meeting. The dispute resolution process is proposed to be the same as for the Monroe Connector/Bypass project. The team discussed including a section regarding abstenions in the plan. Ms. Harris clarified that inclusion of an abstenion process is not necessary since the plan includes the Merger 01 process by reference and such a provision is included in that process. As such, the Merger 01 abstenion process is included in the plan. The attendees agreed with the Section 6002 Coordination Plan as currently drafted. The NCTA also discussed the need for invitation letters to be sent to each of the agencies. The agencies confirmed that they did not need an invitation letter and understood that by making this determination, they accepted status as participating agencies. The responsibilities associated with this status can be found in the Gaston Section 6002 Project Coordination Plan.

- **Concurrence Points 1 (Purpose & Need), 2 (Range of Alternatives), and 2a (Bridging Decisions)** - With Mr. Militscher absent, the question of USEPA responsibilities was raised. Ms. Matthews clarified that Mr. Militscher is responsible for NEPA compliance and she is responsible for permitting issues. As such, signing Concurrence Point forms is Mr. Militscher's responsibility. Ms. Harris asked the team if there were any outstanding issues with the Concurrence Points. The team agreed there were none. USACE indicated the team could sign the Concurrence Forms. The rest of the team agreed.

The project team, including Mr. Militscher via email and Ms. Bunick via telephone, identified that they were ready to sign off on Concurrence Points 1, 2, and 2a. The form for Concurrence Points 1, 2, and 2a was passed around for each member to sign. The agencies who signed the form include FHWA, USACE, NCDWQ, and NCWRC. The signed form was scanned and copied for each member.

In conclusion, Ms. Harris noted that NCTA is using the documents discussed at today's meeting to prepare the Draft EIS. Although the team has concurred with the content of the documents, should any additional issues arise, Ms. Harris stressed the importance of NCTA's timely receipt of any further comments, particularly on the ICEA, so that the project schedule can be maintained. No TEAC meeting is expected in November.

Q&A:

1. *NCWRC asked why the report uses forecasts for Improve Existing Roadways Scenario 4+4a for comparison to the No-Build Alternative and the New Location Alternative, and not Scenario 8. NCDDWQ also posed a question regarding the region-wide statistics. Scenario 4+4a was the best model to represent the full range of Improve Existing Roadways Alternatives. If Improve Existing Roadways Alternative Scenario 8 were modeled, the congested VMT totals would be expected to improve over Scenarios 4+4a, but likely not enough to show the same improvements in congested VMT achieved by the New Location Alternatives (Non-Toll or Toll Scenarios). Widening north-south feeder roads under Scenario 8 would just allow more traffic to be delivered to the same bottlenecks faster. Due to the volumes of traffic, these bottlenecks would still occur even with widened roadways. Travelers would have wider crossroads/feeder roads to sit on while waiting to get onto I-85. The effects would be to have shorter queues and higher levels of services for other trips on the crossroads/feeder roads, but this would not be enough improvements to congestion to compete with any of the New Location Alternatives.*
2. *Are there any plans to widen I-85?*
Ms. Harris stated there are no projects in the Long Range Transportation Plan or Thoroughfare Plan to widen I-85 in the project area. I-85 already is widened to eight lanes over the Catawba River. Widening I-85 would require a long period of construction, as documented in the Alternatives Addendum, and currently there is no other controlled-access alternate route.
3. *Is NCTA planning on submitted a merger application for the Section 404 permit?*
The NCTA is intending to submit a merger application.

Previous Action Items:

- Agencies will provide comments on the Updated Purpose and Need Statement, Draft Addendum to the Final Alternatives Development and Evaluation Report, and the Indirect and Cumulative Effects Assessment by October 7, 2008.
[The agencies provided comments on the Updated Purpose and Need Statement and the Alternatives Addendum and discussions of these reports are closed. The agencies requested additional time to review the ICE Assessment.]
- Agencies to provide comments on the Section 6002 Coordination Plan. NCTA will provide a revised Draft Coordination Plan based on comments from the September 23, 2008 meeting.
[The attendees agreed at the October 7, 2008 meeting that the Draft Coordination Plan presented was acceptable.]
- Obtain agency comments and signatures on Concurrence Points 1, 2, and 2a at the October 7, 2008 TEAC meeting.
[All agencies agreed to sign Concurrence Points 1, 2, and 2a at the October 7 meeting.]

New Action Items:

- The resource agencies agreed that Concurrence Points 1, 2, and 2a are final. NCTA will obtain all concurrence signatures for Concurrence Points 1, 2, and 2a and will distribute a copy of the completed signed form.

Resolutions:

- The agencies signed Concurrence Points 1, 2, and 2a.



Turnpike Environmental Agency Coordination (TEAC) Meeting

MEETING MINUTES

Date: June 10, 2009
10:30 AM to 12:00 PM
NC Turnpike Authority Office Board Room (Suite 400)
Project: STIP R-2576 Mid-Currituck Bridge Study - BRS-000S(35)

Mid-Currituck Bridge Spotlight:

Attendees:

- | | |
|--|-------------------------------|
| Bill Biddlecome, USACE | George Hoops, FHWA |
| Christopher Militscher, USEPA | Jennifer Harris, NCTA |
| Gary Jordan, USFWS | Christy Shumate, HNTB |
| Cathy Brittingham, NCDENR-DCM | John Page, PB |
| David Wainwright, NCDENR-DWQ | Don Brown, PB |
| Travis Wilson, NCWRC | Jeff Dayton, HINTB |
| Renee Gredhill-Earley, NCDCCR-HPO
(via phone) | Jose Luque, CDG-ACSD |
| Steve DeWitt, NCTA | Benjetta Johnson, NCDOT-TMS |
| Jerry McCain, PBS&JEcoScience | Kristin Maseaman, CDG-Lochner |
| Lonnie Brooks, NCDOT-SDU | Dewayne Sykes, NCDOT-RDU |
| Amy Simes, NCDENR | Elizabeth Lusk, NCDOT-NEU |
| Missy Pair, NCDOT-PDEA | Shannon Sweitzer, NCTA |
| Roy Bruce, CDG-Lochner, MMM LLP | Spencer Franklin, HNTB |
| John Wadsworth, NCDOT-TPM Unit | Steve Browde, CDG-Lochner |
| Ted Devens, NCDOT-PDEA | |
| Brian Eason, CDG-Lochner | |

Persons Who Were Provided Materials but Were Unable to Attend:

- Ron Sechler, NMF
- Sara Winslow, NCDENR-DMF

Presentation Materials:

- (All materials posted on the TEAC website)
- Meeting Agenda
- Detailed Study Alternatives figure
- DEIS Outline, Technical Reports, and Schedule (Handout 17)
- MCB2 & MCB4 Mainland Corridor Design Options (Handout 18)
- Graphic – Option B with T3

Purpose:

The purpose of the meeting was to provide an update on Draft Environmental Impact Statement (DEIS) preparation; and to discuss the potential for inclusion of an additional Mid-Currituck Bridge design option in the detailed study alternatives being evaluated in the upcoming DEIS.

Turnpike Environmental Agency Coordination Meeting 6/10/09

General Discussion:

The following information was discussed at the meeting:

- Selection of Private Partner** – Since the last TEAC meeting in October 2008, NCTA has selected the Currituck Development Group (CDG) as the private partner for the Mid-Currituck Bridge project. HW Lochner is the partner's engineer. However, these firms are not responsible for the NEPA process. NCTA and PB will continue to guide the project through the NEPA process. (The NCTA will follow the processes outlined in 23 CFR 636.109.)
- DEIS and Technical Reports Discussion** – NCTA (Jennifer Harris) stated that NCTA and PB are working on the DEIS and the technical reports. Handout 17 was presented and the way the DEIS is being structured was described. Based on coordination with FHWA, the DEIS is being prepared differently than traditional DEIS documents. It will be a smaller document that is more reader friendly to the public. Detail will be presented in technical reports. In addition to the usual technical reports (such as Air, Noise, and Natural Resources), other technical reports will be produced as well, including a technical report for Other Physical Features that would include topics such as energy, seal level rise, visual quality, hazardous materials, and floodplains. A hard copy of the DEIS will be provided to TEAC members, along with a CD containing the technical reports. Hard copies of technical reports also will be provided upon request.

Q&A:

- USEPA** stated that there are *CEO regulations for the preparation of NEPA documents and if we deviate from this, we would have to provide compelling reasons. CEQ likes to see a clear distinction between Affected Environment and Environmental Consequences. Cross-cutting issues need to be noted, e.g. noise is also a community issue.*
NCTA noted that the standard material will be provided using the customary headings. The key difference is the focus on key findings in the main body of the DEIS and the details will be in technical reports.
- USEPA** stated that they would require five hard copies of all the technical reports in addition to five copies of the DEIS.
- NCDENR-DCM** asked how much review time would be allotted for the DEIS review by the agencies.
- The traditional 45 days would be provided, starting from the date the Notice of Availability is published in the Federal Register, but the actual time agencies will have the document would likely be closer to 60 days before comments are due.
- NCDENR-DCM** asked if the DEIS distribution for state agencies would be through the state clearinghouse.
Yes.

- MCB2 & MCB4 Mainland Corridor Design Options** – NCTA (Jennifer Harris) reviewed the three detailed study alternatives (ER2, MCB2, MCB4) and the two bridge corridors (C1 and C2) that have been previously agreed to be studied in the DEIS. Both bridge corridors include a bridge on the Currituck County mainland through Maple Swamp between US 158 and Currituck Sound. Handout 18 was presented, which described a new, second option for the C1 and C2 corridors on the mainland between US 158 and Currituck Sound. For the purposes of the meeting, the original design option (bridging through Maple Swamp) was called Option A, while the new design option (filling through Maple Swamp) was called Option B. This new option (Option B) would involve removing Aydtlet Road, restoring Maple Swamp in the Aydtlet Road right-of-way, placing Aydtlet Road traffic on the access road for the Mid-Currituck Bridge, passing through Maple Swamp on fill (with provisions for maintaining the swamp's hydrology and wildlife passage), and providing access to Aydtlet from the bridge access road. With Option B, there would be approximately 600 acres within Maple Swamp that would be "landlocked" (would not have access). NCTA would seek to buy,

Turnpike Environmental Agency Coordination Meeting 6/10/09

preserve and restore timbered land within this 600 acres.

An additional toll plaza location option was presented for consideration. The current location being studied is a toll plaza west of Maple Swamp. This option works with alignment Option A (bridging Maple Swamp). An additional toll plaza location option is east of Maple Swamp and uses the uplands east of Maple Swamp and west of Currituck Sound near Aydlett. This option could be considered with either of the design options (Options A and B) described above.

It was noted that the tolls would be collected electronically, but there would still be provision of cash lanes for approximately 10 years because of the large number of out of state travelers.

NCTA anticipates there to be comments and concerns with this new option from the residents of Aydlett. NCTA has informed a County Commissioner and the County Manager that NCTA is considering this design option.

The reason for adding this design option is related to cost. Option B would save the project \$60 million, even after accounting for purchasing and preserving the approximately 600 acres in Maple Swamp.

Q&A:

1. *USEPA asked if the 600 acres of property would be turned over to a third party.*

Yes.

2. *NCDENR-DCM asked how much of the property has been timbered. Timbered property would not be of as high a quality.*

NCTA noted that much of the land north of Aydlett Road has been timbered.

USFWS noted that if the decision is made to implement Option B, the rest of the land would likely be timbered. NCWRC noted that this situation occurred with another bridge project (Second Bridge to Oak Island). Based on the Second Bridge experience most landowners will want access to the bridge access road. The land will be highly sought for development. NCWRC stated that purchasing land for preservation was a good idea, but this concept could evolve over time into something that was not originally intended with the land preserved being in fragmented small areas.

NCTA noted that with the purchase of the approximately 600 acres, they would purchase the right-of-access for all properties along its facility from US 158 to Currituck Sound.

3. *NCTA asked if there were recommendations from any TEAC members as to how to prevent the situation described in Question 2 above.*

USFWS noted that even timbered, the land has biological value. The wetlands would remain and the forest would grow back over time. USFWS suggested that NCTA talk with non-profit agencies in land conservation. They can move much faster to protect the quality.

NCTA indicated that they have talked to the North Carolina Coastal Land Trust and they are interested in preserving land in this area.

4. *USEPA asked how many lanes would be provided with the new road replacing Aydlett Road; and how would local traffic be separated from the tolled traffic using the bridge.*

The road would be two lanes. NCTA explained that one of the reasons for the toll plaza location option east of Maple Swamp was to allow local Aydlett traffic to use the new facility without paying the toll for the bridge since Aydlett Road would be removed.

5. *USEPA asked how much right of way would be required for this two lane road.*

The NCTA plans to acquire 200 feet of right of way.

6. *USEPA asked for more information on the functionality of the wildlife crossings given the project width.*

NCWRC noted that it was too early in the process for that information.

7. *NCWRC asked if it was possible to provide a free pass for residents of Aydlett to allow for placing the toll plaza out of the environmentally sensitive areas.*

NCTA noted that the toll plaza location with Option B east of Maple Swamp is not in wetlands.

8. *NCTA noted that along with the introduction of Option B, nothing previously agreed to be studied in detail was being suggested to be eliminated from consideration in the DEIS. Option B is being added to the mix of already existing alternatives and design options for those alternatives. The impacts of Option B are not yet known. It will be studied further. It would be assessed in full in all technical reports, as well as the DEIS, and NCTA would coordinate with the NC-HPO regarding the potential effect on the Daniel Saunders House.*

9. *NCTA asked if the TEAC wanted to meet again next month to discuss this option further or wait until after the DEIS is released that assesses it.*

USEPA requested that a follow up meeting occur prior to submission of the DEIS. NCDENR-DCM suggested that the TEAC may want to have someone from the Natural Heritage Program come to the next meeting to talk about Maple Swamp.

10. *USEPA noted that this new option appears to be a reasonable alternative and it would be good to carry it forward in the DEIS. USEPA cautioned how Option B is presented from a Section 404 perspective. The purchase of the 600 acres could not be considered during selection of the LEDPA.*

11. *NCWRC asked why the removal of Aydlett Road would not be part of the design option including a bridge over Maple Swamp were provided.*

NCTA explained that it had to do with cost. NCWRC noted that this gets into the mitigation issue that was dealt with on Second Bridge to Oak Island. NCTA added that the goal is to try to find a cost effective solution that can enhance the environment.

12. *USFWS requested that the DEIS include the most up-to-date information on how much of the land within Maple Swamp that has been timbered. The area south of Aydlett Road is the most valuable forest. In addition, consideration should be given to how practical it would be to restore the land if it has been timbered.*

13. *USACE noted that one cannot buy down wetland loss by preserving habitat. USEPA noted that impacts associated with other issues can allow for the selection of a preferred alternative with higher wetland impacts than other alternatives. NCDENR-DCM stated that they do not see the harm in studying this new option. It is a surprise, however, and NCDENR-DCM will have to discuss it internally. It was requested that NCTA coordinate with the Natural Heritage Program.*

14. *USEPA asked where the proposed facility for Option B was in relation to the power lines.*

NCTA said it is directly adjacent to the power lines.

- 15. USEPA asked what the adjacent properties would do because the facility would feature full control of access.

PB said that adjacent properties would either have access to another road and the right-of-access to the Mid-Currituck Bridge facility purchased from adjoining land owners or if there is no alternate access, the entire property would be purchased.

- 16. NCWRC asked who would own the right-of-way and have the authority to grant access if someone requests access.

NCTA stated that NCDOT would maintain the power to grant, or not grant, access. NCWRC added that some language needs to be added to right-of-way agreements so that it is clear that developers will not have a right of direct access to the facility west of the toll plaza and that a "red flag" is raised if such access is requested. USEPA agreed that controlled access needs to be stated. USEPA suggested that NCTA consult with attorneys now to develop such language.

- 17. NCDENR-DCM asked about the status of the ICE Report.

NCTA stated that it is being reviewed, but this new design option would need to be added to the report. NCDENR-DCM requested that the consistency of the ICE Report with area CAMA plans be discussed with their staff. USFWS reminded NCTA that CAMA plan maps showed development in a USFWS refuge, which would not be allowed.

- 18. USFWS asked about the status of a proposed hotel in Carova.

PB stated that it was denied by the County Commissioners.

Resolutions:

- It was resolved by the TEAC that NCTA could add Option B (fill on new alignment in the C1/C2 corridor on the mainland with removal of Aydlett Road) as a design option with the detailed study alternatives being analyzed in the DEIS and associated technical reports.

Next Steps:

- The need for a follow up TEAC meeting was discussed. USEPA requested that a follow up meeting occur prior to submission of the DEIS. NCDENR-DCM suggested that the TEAC may want to have someone from the Natural Heritage Program come to the next meeting to talk about Maple Swamp. Charlan Owens (District Planner with NCDENR-DCM in Elizabeth City) would be good to have at the meeting to discuss the CAMA land use plan as it relates to ICE.



Mid-Currituck Bridge Study

Currituck and Dare Counties

TIP No. R-2576

Hurricane Evacuation Need

Handout 1 – April 18, 2007

2003 Hurricane Evacuation Need Statement

The starting point will be what was concurred upon by the project's NEPA/404 Merger Team when the project was under the jurisdiction of the North Carolina Department of Transportation (NCDOT). The approved purpose and need statement in late 2003 (NEPA/404 Merger Team meeting on August 20, 2003) for hurricane evacuation was:

Need to facilitate coastal evacuation of the northern Outer Banks provided this need is supported by empirical data from the U.S. Army Corps of Engineers' hurricane evacuation model prior to Concurrence Point Number 2. If the modeling indicates that hurricane evacuation is not a need of the transportation system, then it will be removed from the Purpose and Need.

NCDOT Hurricane Evacuation Model and State Maximum Clearance Time

A North Carolina coast hurricane evacuation model was developed for NCDOT by Post Buckley Schuh & Jernigan (PBSJ). This model was used to develop evacuation clearance time estimates for 2004 and 2030. The clearance time is defined as the time from when an evacuation is ordered until all evacuees reach a point of safety prior to the arrival of gale-force winds. The clearance times were determined for three levels of storm intensity and four levels of tourist occupancy. Model development was accomplished in conjunction with an oversight committee consisting of representatives from NCDOT, Federal Highway Administration (FHWA), state and federal environmental resource and regulatory agencies, and emergency management representatives from Dare, New Hanover, and Brunswick counties. Environmental resource and regulatory agencies represented were:

- US Army Corps of Engineers;
- US Fish and Wildlife Service;

Assessment of the Ability of Alternative Concepts to Meet the Hurricane Evacuation Need

NCTA's private engineering firm for the Mid-Currituck Bridge Study has hired PBSJ to adapt the hurricane evacuation model they developed for NCDOT to assess the Conceptual Alternatives under consideration, including bridge corridor alternatives, existing road widening alternatives, and combinations of these.

Clearance times will be calculated for possible combinations of:

- 35 percent, 50 percent, 75 percent, and 95 percent tourist occupancy.
- Category 1/2, 3, and 4/5 storms.



Mid-Currituck Bridge Study

Currituck and Dare Counties

TIP No. R-2576

Conceptual Alternatives

Handout 2 – April 18, 2007

The starting point for the development of Conceptual Alternatives was the alternatives assessed in the 1998 Draft Environmental Impact Statement (DEIS), with taking into consideration agency and public comments received during the DEIS comment review period and changes in the project setting since 1998. The locations of bridge and highway improvement alternatives are shown in Figure 1. The Conceptual Alternatives under consideration are:

- **No-Build Alternative.**
- **Non-Highway Improvement Alternatives.**
 - Ferry Across Currituck Sound.
 - Transit.
 - Shifting Rental Unit Start Times.
- **Bridge Corridor Alternatives (US 158 to NC 12 with a four-lane bridge representing the worst case environmental impact, although a two-lane or a three-lane bridge could be selected for detailed evaluation in the DEIS).**
 - C1—Parallel to the power line right-of-way (north of Aydlett Road [SR 1140]) and across Currituck Sound to just north of Monterey Shores subdivision.
 - C2—Parallel to the power line right-of-way and across Currituck Sound to Albacore Street at the Official Map site established by NCDOT in 1991 under the provisions of the Roadway Corridor Official Map Act.
 - C3—Parallel to Aydlett Road (SR 1140) and across Currituck Sound to just north of Monterey Shores subdivision.
 - C4—Parallel to Aydlett Road (SR 1140) and across Currituck Sound to Albacore Street at the Official Map site.

- C5—Between Aydlett and Poplar Branch and across Currituck Sound to just north of Monterey Shores subdivision.
- C6—Between Aydlett and Poplar Branch and across Currituck Sound to Albacore Street at the Official Map site.

- **NC 12 Improvement Alternatives** (US 158 to just north of Monterey Shores subdivision).

- Widen from Two to Four Lanes with Left Turn Lanes.
- Widen from Two to Three Lanes.
- Existing Two Lanes with Intersection Improvements.

- **US 158 Improvement Alternatives** (Wright Memorial Bridge to NC 12).

- Widen from Five to Six Lanes with Left Turn Lanes.
- Widen from Five to Eight Lanes with Left Turn Lanes.

- In addition to the No-Build Alternative, the following representative combinations of highway improvements will be used in evaluating their network travel benefits.

	Bridge		US 158 (Wright Memorial Bridge to NC 12)			NC 12	
	Two Lanes	Four Lanes	Six Lanes	Eight Lanes	Three Lanes	Four Lanes	
RC1				X			X
RC2				X			
RC3	X		X				
RC4	X		X			D	C
RC5		X	X				X
RC6	X						C (part)
RC7		X					C (part)

RC=Representative combination
 X=Included at location indicated
 D=Included in Dare County only
 C=Included in Currituck County only
 C (part)=Included in Currituck County for two miles south of the intersection of NC 12 and a bridge

Note: A three-lane bridge with a center reversible lane would have summer weekend travel characteristics similar to a four lane bridge. The summer weekday peak period does not have a substantial peak direction of travel and so a reversible lane would not be helpful in increasing peak period bridge capacity, and thus, summer weekday travel characteristics with a three-lane bridge would be the same as for a two-lane bridge.

Preliminary information used to help in defining these combinations are:

- Without a bridge, eight lanes will be needed on US 158 between the Wright Memorial Bridge and NC 12 to achieve an uncongested level of service; with a bridge, six lanes would be adequate; there is generally sufficient existing right-of-way on US 158 for six or eight lanes.
- In Currituck County, there is generally sufficient existing NC 12 right-of-way for four lanes.
- In Dare County, there is generally insufficient right-of-way on NC 12 for four lanes (60 feet with 100 feet needed), but there is generally sufficient right-of-way for three lanes.
- The travel benefits of two lanes with intersection improvements will be minimal.

Mid-Currituck Bridge Study

Currituck and Dare Counties
TIP No. R-2576

Alternatives Screening Criteria Handout 3 — April 18, 2007

First Screening—Ability to Meet the Purpose and Need

The following two tables will be used as an initial screening of Conceptual Alternatives. The first will be a summary table indicating whether a particular alternative concept satisfies each aspect of the project's need. Descriptive material will be prepared explaining the yes or no findings for all alternatives. For the seven representative highway combination alternatives defined in the "Alternatives" handout, as well as existing conditions and the No-Build Alternative, a table of supporting traffic findings also will be presented.

Table 1. Ability to Meet Purpose and Need (yes or no)

	Needs			
	1	2	3	4
No-Build				
Non-Highway Improvement Alternatives				
Ferry				
Transit				
Shifting Rental				
Unit Start				
Times				
Representative Highway Improvement Combinations				
RC1				
RC2				
RC3				
RC4				
RC5				
RC6				
RC7				

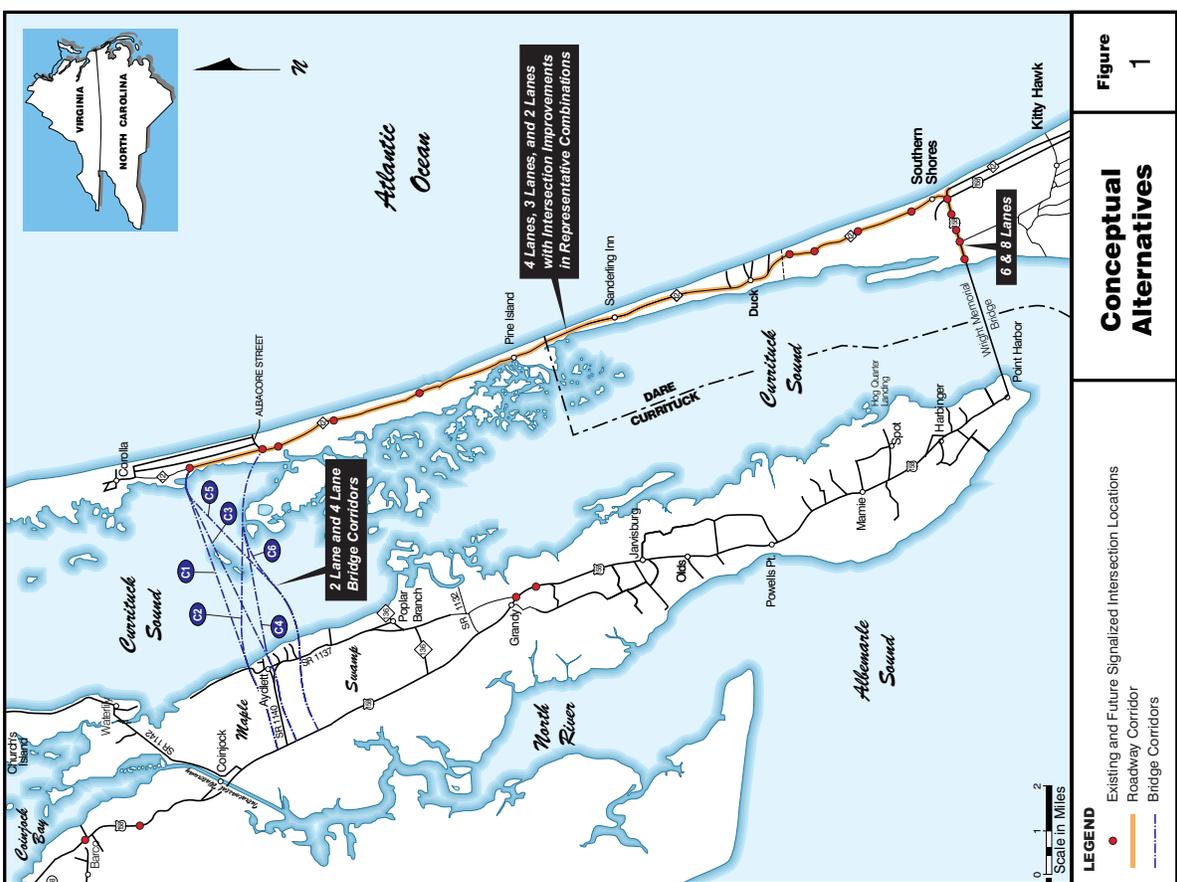


Table 2. Traffic Findings

	Existing (2001)	No-Build (2025)	Representative Highway Improvement Combinations (2025)						
			RC1	RC2	RC3	RC4	RC5	RC6	RC7
• NC 12 just south of Albacore Street									
• Mid-Currituck Bridge									
Volume/Capacity Ratio on Selected Links (SWD/SWE)									
• US 158 south of Barco									
• US 158 near Jarvisburg									
• US 158 just west of NC 12 intersection									
• NC 12 just north of US 158 intersection									
• NC 12 at Duck business area									
• NC 12 just south of Albacore Street									
• Mid-Currituck Bridge									
Intersection Operations (Number of LOS E/F signals of 18 on SWD/SWE)									
Duration of Congested (LOS E/F) Peak Period (hours on SWD/SWE)									
• Mid-Currituck Bridge									
• US 158 (Wright Memorial Bridge to NC 12)									
• NC 12 (Dare County north of US 158)									
• NC 12 (Currituck County)									
Percent of Annual Vehicles Operating at LOS E/F (SWD/SWE)									

Handout 3

3

April 18, 2007

Table 2. Traffic Findings

	Existing (2001)	No-Build (2025)	Representative Highway Improvement Combinations (2025)						
			RC1	RC2	RC3	RC4	RC5	RC6	RC7
Assumed Lanes									
• Bridge	NA	NA	NA	NA	2	2	4	2	4
• US 158 (Wright Memorial Bridge to NC 12)	5	5	8	8	6	6	6	5	5
• NC 12 (Dare County north of NC 12)	2	2	4	3	3	3	4	2	2
• NC 12 (Currituck County)	2	2	4	3	3	4	4	4 (part)	4 (part)
Average Annual Daily Traffic (vehicles per day) on Selected Links (SWD/SWE)									
• US 158 south of Barco									
• US 158 near Jarvisburg									
• US 158 just west of NC 12 intersection									
• NC 12 just north of US 158 intersection									
• NC 12 at Duck business area									
• NC 12 just south of Albacore Street									
• Mid-Currituck Bridge									
Level of Service (LOS) on Selected Links (SWD/SWE)									
• US 158 south of Barco									
• US 158 near Jarvisburg									
• US 158 just west of NC 12 intersection									
• NC 12 just north of US 158 intersection									
• NC 12 at Duck business area									

Handout 3

April 18, 2007

Second Screening—Potential for Environmental Impact

The following two tables will provide information on environmental impact potential for the bridge corridors and widening concepts. The impacts will be based on conceptual designs. Relocation counts will be based on counts from aerial photography. Historic resource impacts will be derived from past Phase II historic resource survey reports. Other findings will be determined from Geographic Information Systems (GIS) data, which will be depicted on environmental features maps. A four-lane bridge will represent the worst case environmental impact, although a two-lane or a three-lane bridge could be selected for detailed evaluation in the DEIS.

Table 2. Traffic Findings

	Existing (2001)	No-Build (2025)	Representative Highway Improvement Combinations (2025)						
			RC1	RC2	RC3	RC4	RC5	RC6	RC7
Million Annual Vehicle-Miles Traveled									
• Total									
• Congested									
• Percent Congested									
Travel Time(hours:minutes on SWD/SWE)									
• Travel Time using Wright Memorial Bridge									
• Travel Time using Mid-Currituck Bridge									
• Time Savings of Mid-Currituck Bridge									
• Reduced Delay on Existing Route									
Hurricane Evacuation Clearance Time (hours:minutes for a Category 3 Storm with 75 percent Tourist Occupancy)									

Note: SWD/SWE indicates that the data before the slash is for the summer weekday. The data after the slash is for the summer weekend.
 NA=Not Applicable

Table 3. Potential for Environmental Impact for Bridge Corridors

		C1	C2	C3	C4	C5	C6
NATURAL RESOURCES IMPACTS	Known Federally-Listed Species Habitat (Natural Heritage Program) (number of areas affected)						
	100-Year Floodplain Impacts (yes or no)						
	Wetland Impacts						
	• Crossings (number)						
	• Area (acres)						
	Stream Impacts						
	• Crossings (number)						
	• Length in feet (within design construction limits)						
	Potential Riparian Buffer Impacts (yes or no)						
	Water Supply Critical Areas (yes or no)						
	High Quality Resources						
	• Crossings (number)						
	• Area (acres)						

Table 3. Potential for Environmental Impact for Bridge Corridors

		C1	C2	C3	C4	C5	C6
CONSTRUCTION IMPACTS	Length (miles)						
	Interchanges (number)						
	Capital Costs (2-lane/4-lane)						
	ROW Costs						
	Major Utility Conflicts (yes or no)						
	Railroad Crossings (number)						
SOCIAL, ECONOMIC, AND CULTURAL IMPACTS	Displacements (number)						
	• Residences						
	• Businesses						
	• Schools						
	• Parks						
	• Churches						
	• Cemeteries (all or part)						
	• Recorded Historic Sites						
	Greenway Crossings (number)						
	Low Income or Minority Populations (yes or no)						
	Potential Section 4(f) Impacts (yes or no)						
Hazardous Materials Sites (number completely or partially used)							

Table 4. Potential for Environmental Impact for Road Improvements

		US 158		NC 12				
		6-Lane	8-Lane	4-Lane	4-Lane (C)/ 3-Lane (D)	4-Lane (C)/ Intersection Improvements (D)	3-Lane	Intersection Improvements
NATURAL RESOURCES IMPACTS	Known Federally-Listed Species Habitat (Natural Heritage Program) (number of areas affected)							
	100-Year Floodplain Impacts (yes or no)							
	Wetland Impacts							
	• Crossings (number)							
	• Area (acres)							
	Stream Impacts							
	• Crossings (number)							
	• Length in feet (within design construction limits)							
	Potential Riparian Buffer Impacts (yes or no)							
	Water Supply Critical Areas (yes or no)							
	High Quality Resources							
	• Crossings (number)							
• Area (acres)								

Note: C=Currituck County, D=Dare County

Table 4. Potential for Environmental Impact for Road Improvements

		US 158		NC 12				
		6-Lane	8-Lane	4-Lane	4-Lane (C)/ 3-Lane (D)	4-Lane (C)/ Intersection Improvements (D)	3-Lane	Intersection Improvements
CONSTRUCTION IMPACTS	Length (miles)							
	Interchanges (number)							
	Capital Costs							
	ROW Costs							
	Major Utility Conflicts (yes or no)							
	Railroad Crossings (number)							
SOCIAL, ECONOMIC, AND CULTURAL IMPACTS	Displacements (number)							
	• Residences							
	• Businesses							
	• Schools							
	• Parks							
	• Churches							
	• Cemeteries (all or part)							
	• Recorded Historic Sites							
	Greenway Crossings (number)							
	Low Income or Minority Populations (yes or no)							
	Potential Section 4(f) Impacts (yes or no)							
	Hazardous Materials Sites (number completely or partially used)							



Mid-Currituck Bridge Study

Currituck and Dare Counties

TIP No. R-2576

Analysis of Conceptual Alternatives Handout 4—May 23, 2007

Conceptual Alternatives under Consideration

The starting point for the development of Conceptual Alternatives was the alternatives assessed in the 1998 Draft Environmental Impact Statement (DEIS), taking into consideration agency and public comments received during the DEIS comment review period and changes in the project setting since 1998. Potential road improvement and potential bridge locations are shown in Figure 1. The Conceptual Alternatives under consideration are:

- **No-Build Alternative.**
- **Non-Highway Improvement Alternatives.**
 - Ferry Across Currituck Sound.
 - Transit.
 - Shifting Rental Unit Start Times.
- **Highway Improvement Alternatives.**

Five Highway Improvement Alternatives are evaluated. They are representative of a broad range of potential highway improvement alternatives. They include two alternatives that involve only improving existing roads and three that involve a combination of improving existing roads and building a Mid-Currituck Bridge. The Highway Improvement Alternatives and their components are shown in Table 1 and in Figure 2 and consist of:

 - **Improve Existing Roads Only.**
 - o Existing Roads 1 (ER1)—ER1 includes: (1) widening US 158 between the NC 168 intersection and the Wright Memorial Bridge to add a northbound

Table 1. Highway Improvement Alternatives

4-Lane Mid-Currituck Bridge	US 158 North-bound Emergency Lane (NC 168 to Aydlett Road)	US 158 North-bound Emergency Lane (Aydlett Road to Wright Memorial Bridge)	US 158 (Wright Memorial Bridge to NC 12)		NC 12 in Dare County			NC 12 in Currituck County						
			5 Lns ¹	6 Lns	8 Lns	2 Lns ¹	3 Lns	4 Lns	2 Lns ¹	3 Lns	4 Lns			
ER1	X	X			X									
ER2		X	X			X		X						X
MCB1	X					X			X					X
MCB2	X	X				X			X					X
MCB3	X	X				X		X			X ²			

¹ Existing number of lanes

² Except four lanes for two to four miles south of the NC 12 intersection with a Mid-Currituck Bridge

ER= Improve Existing Roads Only

MCB= Mid-Currituck Sound Bridge plus Improve Existing Roads

X=Included at location indicated

emergency lane, (2) widening US 158 to eight lanes between the Wright Memorial Bridge and the NC 12 intersection, and (3) widening NC 12 to four lanes between the Wright Memorial Bridge and Corolla.

- o Existing Roads 2 (ER2)—ER2 includes (1) widening US 158 between the NC 168 intersection and the Wright Memorial Bridge to add a northbound emergency lane, (2) widening US 158 to eight lanes between the Wright Memorial Bridge and the NC 12 intersection, and (3) widening NC 12 to three lanes between the Wright Memorial Bridge and the Dare-Currituck County Line and to four lanes between the Dare-Currituck County Line and Corolla.
- **Mid-Currituck Sound Bridge plus Improve Existing Roads.**
 - o Mid-Currituck Bridge 1 (MCB1)—MCB1 includes: (1) constructing a four-lane bridge across the Currituck Sound in Currituck County, (2) widening US 158 between the NC 168 intersection and Aydlett Road (SR 1140) to add a northbound emergency lane, (3) widening US 158 to six lanes between the Wright Memorial Bridge and the NC 12 intersection, and (4) widening NC 12 to four lanes between the Wright Memorial Bridge and Corolla.
 - o Mid-Currituck Bridge 2 (MCB2)—MCB2 includes (1) constructing a four-lane bridge across the Currituck Sound in Currituck County, (2) widening US 158

between the NC 168 intersection and Aydlett Road (SR 1140) to add a northbound emergency lane, (3) widening US 158 to six lanes between the Wright Memorial Bridge and the NC 12 intersection, and (4) widening NC 12 to three lanes between the Wright Memorial Bridge and the Dare-Currituck County Line and to four lanes between the Dare-Currituck County Line and Corolla.

- o Mid-Currituck Bridge 3 (MCB3)—MCB3 includes (1) constructing a four-lane bridge (or two two-lane bridges) across the Currituck Sound in Currituck County, (2) widening US 158 between the NC 168 intersection and Aydlett Road (SR 1140) to add a northbound emergency lane, (3) widening NC 12 to four lanes for two to four miles south of the intersection with a Mid-Currituck Sound Bridge.

For those alternatives that include a Mid Currituck Bridge, six bridge corridor locations were identified. Any of these corridors could be used with MCB1 to MCB3. Traffic volumes do not vary between these six corridors and therefore these corridors are a factor only in the comparison of potential environmental impacts and are not a factor in meeting the project’s purpose and need. These alternative bridge corridors, labeled C1 to C6, can be generally described as follows:

- C1—Parallel to the power line right-of-way (north of Aydlett Road [SR 1140]) and across Currituck Sound to just north of Monterey Shores subdivision.
- C2—Parallel to the power line right-of-way and across Currituck Sound to Albacore Street at the Official Map site established by NCDOT in 1991 under the provisions of the Roadway Corridor Official Map Act.
- C3—Parallel to Aydlett Road (SR 1140) and across Currituck Sound to just north of Monterey Shores subdivision.
- C4—Parallel to Aydlett Road (SR 1140) and across Currituck Sound to Albacore Street at the Official Map site.
- C5—Between Aydlett and Poplar Branch and across Currituck Sound to just north of Monterey Shores subdivision.
- C6—Between Aydlett and Poplar Branch and across Currituck Sound to Albacore Street at the Official Map site.

Development of the Conceptual Alternatives

The five conceptual Highway Improvement Alternatives were developed based on the following factors:

- A variety of bridge and roadway configuration options merited consideration;
- That design assumptions should meet NCDOT criteria, while at the same time attempt to minimize impact; and
- When identifying combinations of improvements that make up the Highway Improvement Alternatives, certain traffic, hurricane evacuation, and impact findings are indicative of the best alternatives to consider.

These factors are described below. Other combinations are possible, but the five conceptual Highway Improvement Alternatives were found to best represent the trade-offs important to the selection of alternatives. The characteristics of the existing road network and its setting are described in Sections 1.3.1, 1.4, and 1.7.1 of the “Statement of Purpose and Need.”

Potential Roadway Improvements

Potential improvements that could be made to the Project Area roadways were identified and considered as part of the development of alternatives. These improvements included:

- NC 12 Improvements (US 158 to Corolla).
 - Widen from two to four lanes with left turn lanes.
 - Widen from two to three lanes.
 - Existing two lanes with intersection improvements.
- US 158 Improvements in Currituck County (NC 168 to Wright Memorial Bridge) to facilitate hurricane evacuation.
 - Widen to include a northbound emergency lane (add additional pavement as needed on the northbound [east] side of US 158 that could be used as a third northbound travel lane during a hurricane evacuation).
 - Northbound emergency contraflow lane (equipment, signing, and operations planning to use primarily the existing center turn lane as needed as a third northbound travel lane during a hurricane evacuation).

At this time, both these approaches to hurricane evacuation are considered possible. Both will be considered further. One part of developing these two options further will be coordination with local and state emergency management and NCDOT Division 1 leadership regarding the operational viability of the contraflow option, particularly from the perspective of personnel availability. It is possible that as a result of these meetings the contraflow option, which would be operations personnel intensive, could be found to be unreasonable.

- US 158 Improvements in Dare County (Wright Memorial Bridge to NC 12).
 - Widen from five to six lanes with left turn lanes.
 - Widen from five to eight lanes with left turn lanes.

Potential Bridge Lanes

For alternatives screening, costs were estimated for a two-lane bridge, which could later be expanded to four lanes, and for a pair of two lane bridges. The potential environmental impact of a four-lane bridge was used in the screening to represent the worst case environmental impact. A three-lane bridge also could be selected for detailed evaluation in the DEIS.

Potential Typical Roadway Sections and Intersection Improvements

As part of identifying and analyzing the potential improvements that would make up the Conceptual Alternatives, the following typical sections were used in developing conceptual designs:

- NC 12 Improvement Components

Four Lane Widening

- Four-lane NC 12 with a 17.5-foot median, curb and gutter, and a 10-foot wide multi-use path on one side, which except for some grading will fit within the existing 100-foot NC 12 right-of-way in Currituck County. In Dare County the right-of-way is 60-feet wide except in the southern 1.3 miles of NC 12 in Southern Shores where the right-of-way is 90 feet. In all cases, new right-of-way would be purchased from one side of the road. In general, any permanent land loss associated with increasing the right-of-way width from 60 to 100 feet would reduce lots to below the minimum size required by law and would necessitate purchasing the entire property. Widening to one side will therefore minimize the number of properties affected. (Figure 3)
- Four-lane NC 12 with a 4-foot median, curb and gutter, 11-foot lanes, and sidewalks in a 6-foot wide berm in the Sanderling Inn area where Inn parking

and recreational facilities would be lost if the right-of-way were widened by much. This typical section would use a 64-foot right-of-way. (Figure 3)

Three Lane Widening

- Three-lane NC 12 with a center turn lane, 4 feet of extra pavement width on both sides of the road for bicycle use, and sidewalks, which except for some grading will fit within the existing 60-foot NC 12 right-of-way that occurs in most of Dare County. (Figure 4)
- Three-lane NC 12 with a center turn lane, 4 feet of extra pavement width on both sides of the road for bicycle use, and a 10-foot wide multi-use path on one side, which except for some grading will fit within the existing 90-foot NC 12 right-of-way that is in a part of Southern Shores. (Figure 4)

Intersection Improvements

- Two-Lane—Right in-right out intersections, left overs (left turn permitted from NC 12 but not from cross streets), closure of some roads in Dare County where alternative access exists, and left turn lanes on NC 12 at intersections serving a large number of homes.
- Three-Lane—Continuous left turn lane, right in-right out intersections, and closure of some roads in Dare County where alternative access exists.
- Four-Lane—Median with breaks and associated left turn lanes and space for turns every 1,000 to 1,200 feet and closure of some roads in Dare County where alternative access exists.

- US 158 Improvement Components

Currituck County from NC 168 to Wright Memorial Bridge

It was assumed that a third northbound lane on US 158 in Currituck County for emergency use would require an additional 12 feet of right-of-way, the width of the additional lane. It was assumed that no additional right-of-way would be needed for the contra-flow lane concept.

Dare County from Wright Memorial Bridge and NC 12

- Six-lane US 158 with a 30-foot median and curb and gutter, which except for some grading will fit within the existing 150-foot US 158 right-of-way. (Figure 5)
- Eight-lane US 158 with a 30-foot median and curb and gutter, which except for some grading will fit within the existing 150-foot US 158 right-of-way, although

grading outside the right-of-way will be more extensive than with six lanes. (Figure 5)

- Mid-Currituck Bridge
 - Two-lane or four-lane bridge approach roads with 4-foot paved shoulders. (Figure 6)
 - One or two two-lane bridges with an 8-foot outer shoulder and a 4-foot inner shoulder; if phased such that one bridge is built first and a second bridge is built when needed to serve traffic growth, then the first bridge would have two eight-foot shoulders. (Figure 6)

Findings and Considerations Used in Developing of the Highway Improvement Alternatives

Several findings and assumptions were used to combine the existing road improvement components and Mid-Currituck Bridge components described above into the five Highway Improvement Alternatives. The findings and considerations are:

- NC 12 Improvements.

ER1 and MCB1 represent alternatives that would achieve maximum travel improvement, as related to all three project needs, without and with a Mid-Currituck Bridge, respectively. However, substantial displacement and associated community impact would occur when widening NC 12 to four lanes in Dare County because of the narrow (mostly 60 feet) existing right-of-way. Thus, alternatives were identified (ER2 and MCB2) that include three lanes on NC 12 in Dare County. They include all other components of ER1 and MCB1.

Three lanes on NC 12 in Dare County, while leaving four lanes on NC 12 in Currituck County, represents the best capacity improvement possible on NC 12 without substantial displacement and associated community impact. Two lanes with intersection improvements in either county or three lanes in Currituck County would result in less congestion relief.

- US 158 Improvements in Currituck County (NC 168 to the Wright Memorial Bridge).

Only improvements related to hurricane evacuation are being considered on this part of US 158. There are two controlling road segments for hurricane evacuation via US 158 and NC 168:

1. US 158 between NC 168 and the Wright Memorial Bridge, and
2. US 158 between the Wright Memorial Bridge and NC 12.

A controlling segment is a portion of road for which evacuation capacity must be increased or evacuation demand reduced in order for hurricane evacuation clearance times to go down. Clearance time is the time from the ordering of an evacuation until all people evacuating reach a point of safety. Given the controlling road segments, the following determinations were made:

- Widening NC 12 alone or building a Mid-Currituck Bridge (of any lane configuration) will not reduce hurricane clearance times.
- Without a Mid-Currituck Bridge, additional northbound capacity on US 158 is needed for 24.5 miles from NC 168 to NC 12 in order to reduce hurricane evacuation clearance times.
- With a Mid-Currituck Bridge, additional northbound capacity on US 158 is needed for approximately 5 miles from NC 168 to the Aydlett Road area, where the bridge would terminate, in order to reduce hurricane evacuation clearance times.

Thus, all alternatives include a hurricane evacuation-related improvement to US 158 to satisfy evacuation demand on controlling road segments.

- US 158 Improvements in Dare County (Wright Memorial Bridge to NC 12)

Widening from five lanes to six lanes with left turn lanes is needed if a Mid-Currituck Bridge is built. Without a Mid-Currituck eight lanes with left turn lanes is needed. Either typical section will fit within the existing right-of-way except for some regarding that could be contained within a temporary construction easement.

- Mid-Currituck Bridge

- While the TIP defines the project as a bridge across Mid-Currituck Sound only, and does not include other road network improvements, minor roadway improvements would be necessary for a bridge-only alternative (MCB3).
 - o The widening on NC 12 in Currituck County for two to four miles south of the bridge terminus is necessary to minimize traffic back-ups onto the bridge resulting from the merging of NC 12 and bridge traffic. Two miles would be needed with the southern Outer Banks bridge terminus alternative (C2, C4, and C6) and four miles would be needed with the northern Outer Banks bridge terminus alternative (C1, C3, and C5).
 - o Widening of US 158 between the Mid-Currituck Bridge and NC 168 is a necessary northbound emergency evacuation improvement (given the purpose and need of the project) because US 158 north of the Bridge is a controlling link for hurricane evacuation.

- A four-lane bridge is an appropriate assumption for the bridge alternatives because:
 - o A four-lane bridge reflects the worst potential environmental impact.
 - o The differences between a two-lane bridge and a four-lane bridge are footnoted in the traffic results table (presented later as Table 3) rather than included in separate columns because a two-lane Mid-Currituck Bridge would affect level-of-service only on the bridge and not on the rest of the network, and therefore differences between a four-lane and a two-lane bridge are small.
 - o A three-lane Mid-Currituck Bridge with a center reversible lane would have summer weekend travel characteristics similar to that shown in the traffic results table a four lane bridge. The summer weekday peak period does not have a substantial peak direction of travel and so a reversible lane would not be helpful in increasing peak period bridge capacity, and thus, summer weekday travel characteristics with a three-lane bridge would be the same as for a two-lane bridge.

Past Public and Local Official Comments

Citizens group and public officials meetings and Citizens Information Workshops were held to discuss the Mid-Currituck Bridge project on multiple occasions between July 12, 2001 and December 21, 2005. The issues raised in the comments and discussions from project area meetings and workshops are as follows:

- There is support from citizens for the construction of a Mid-Currituck Bridge and opposition to widening of NC 12 to a four or five-lane road in Dare County north of US 158. It was stated that the bridge should be built before other roadway improvements, such as widening US 158 between the Wright Memorial Bridge and NC 12.
- Issues and concerns related to widening NC 12 included:
 - Potential for substantial negative economic and community impacts, including the economic loss resulting from land use displacement and potential property value loss from being in proximity to a wider road;
 - Loss of the village or community “feel;”
 - Pedestrian (crossing NC 12 to reach the beach and potential loss of walking paths), bicyclist, and motorist safety; and
 - Timely hurricane evacuation.

Handout 4 9 May 23, 2007

- Issues related to a Mid-Currituck Bridge included:
 - Impacts to the community of Aydlett;
 - Selecting bridge termini so they can be protected by Currituck County from development;
 - Potential induced development on the mainland and on the Outer Banks; and
 - A Mid-Currituck Bridge would provide convenient access to mainland schools for Outer Banks’ school children.
- A desire on the part of local officials to be a part of coordination with environmental resource and regulatory agencies and to collaborate with them on resolving issues related to a Mid-Currituck Bridge.
- Support for toll financing of a Mid-Currituck Bridge.
- Inquiries regarding the public’s ability and potential steps to encourage the efficient completion of the study process.

Comparison of the No-Build and Non-Highway Improvement Alternatives

No-Build Alternative

The No-Build Alternative would involve no investment in the project area’s transportation infrastructure and would have no associated travel benefits. The travel characteristics of the No-Build Alternative define the travel-related project needs; as such, the No-Build Alternative by definition cannot satisfy those needs, in terms of reducing congestion, reducing travel time, or reducing hurricane clearance times.

Non-Highway Improvement Alternatives

Three non-highway improvement alternatives were assessed from the perspective of their ability to meet project needs:

1. Ferry Across Currituck Sound—A potential alternate means for crossing Currituck Sound.
2. Transit—A potential means for reducing future traffic demand on the road system in the project area.
3. Shifting Rental Unit Start Times—A potential means for redistributing summer peak traffic.

Handout 4 10 May 23, 2007

None of these three alternatives would meet the congestion, travel time, or hurricane evacuation clearance time needs. Quantitative analyses supporting these preliminary conclusions are described below.

Ferry

A ferry alternative's capacity would limit its ability to meet the project's purpose and need. With a maximum safe operating headway of ten minutes between departures and arrivals of ferry vessels, a 22-vehicle capacity ferry, and a total of five ferries operating, up to 176 vehicles per hour could be transported across Currituck Sound. If the maximum hourly service (176 vehicles) could be provided 24 hours a day, 4,224 vehicles could be carried per day. A schedule typical of the NCDOT Ferry Service would include approximately 96 one-way trips per day across Currituck Sound with a total capacity of 2,112 vehicles, representing less than 5 percent of the 41,500 trips projected to use NC 12 just north of the US 158 intersection on a summer weekday in 2025 and the 45,600 trips projected to use NC 12 just north of the US 158 intersection on a summer weekend day in 2025. If no roadway improvements are implemented, 1,795 summer weekday peak hour trips on NC 12 just north of the US 158 intersection would need to divert to the ferry in order to achieve an uncongested LOS D at the NC 12 link that would carry the highest peak hour traffic demand. This number would be 1,978 trips on the summer weekend. The diversion needed to achieve LOS D is thus more than 10 times the maximum hourly ferry service capacity of 176 vehicles. A reduction of 176 vehicles would reduce the ratio of traffic volumes to road capacity from 1.56 to 1.47 during the summer weekday peak period and from 1.64 to 1.56 during the summer weekend peak period. LOS F occurs with a volume to capacity ratio of 1.00 or more. Thus, the ferry alternative would not remove an adequate number of vehicles from existing roads to see improvements to traffic flow that could be associated with lower traffic demand on existing roads.

The inability of ferry service to adequately address travel demand, congestion, and capacity needs also limits its ability to address hurricane evacuation needs. Utilizing ferry service to its full capacity would not remove enough traffic from controlling segments to contribute to improved clearance times.

In terms of travel time savings, the ferry from Currituck to Knotts Island travels a distance similar to that across Currituck Sound from Aydlett to the Currituck Outer Banks. The trip is 45 minutes long. It takes approximately 5 minutes to load the ferry assumed in the previous paragraph and 5 minutes to unload it. The 96 one way trips noted above over 12 hours would result in a time between ferries of 15 minutes in each direction of travel and create an average waiting time for travelers of 7.5 minutes before loading begins. Thus, the total travel time for a ferry trip would be just over an hour assuming the best case scenario that potential users arrive such that queues waiting for ferries never exceed 22 vehicle capacity of a ferry. Thus, the 2,112 travelers that could use the ferry could potentially save time compared with the 1 hour 40 minute (summer

Handout 4

11

May 23, 2007

weekday) and 3 hours 11 minutes (summer weekend) travel times forecast from Aydlett Road on the mainland to Albacore Street on the Currituck Outer Banks for 2025. Because of the low diversion of traffic to the ferry, however, travel times for those traveling from the Currituck County mainland to the Currituck County Outer Banks via US 158 and NC 12 would be virtually unchanged. For these reasons, the ferry would not meet the travel time need.

The greatest potential for environmental impact with the ferry alternative would be associated with the dredging of the sound bottom for a channel, turning basins and a dredge access channel. The area disturbed by the ferry channel would be 134.4 acres, assuming a channel that is 5.6 miles long and 197 feet wide. Submersed aquatic vegetation (SAV) would be lost and benthic habitat would be substantially changed. The turbidity associated with dredging could adversely affect SAVs and benthics outside the channels, as well as spawning fish. The hydrology of the sound could be changed. Disposal of such a large quantity of dredged materials would affect natural resources in the disposal area. Other potential impacts could include displacement of wetlands on the Outer Banks and homes on the mainland for ferry loading and unloading facilities.

Transit

Transit also would not substantially reduce the number of vehicles on the existing road network. As noted for the Ferry Alternative, if no roadway improvements are implemented, 1,795 summer weekday peak hour trips on NC 12 just north of the US 158 intersection would need to divert to transit in order to achieve an uncongested LOS D. This number would be 1,978 trips on the summer weekend. These numbers represent 55 and 57 percent of the peak hour trips, respectively. To achieve a still congested LOS E, 1,173 summer weekday peak hour trips on NC 12 just north of the US 158 intersection would need to divert to transit. This number would be 1,356 trips on the summer weekend. These numbers represent 36 and 39 percent of the peak hour trips, respectively.

Modal shifts of 36 and 39 percent are very large. They do not appear to be achievable by a local transit strategy given the characteristics of the majority of the trips between the mainland and Outer Banks. The project area is a resort community with numerous origin and destination points. On the summer weekend much of the peak hour traffic consists of families and their vacation luggage traveling to and from locations outside the project area. Once families and other travelers reach their initial destinations (i.e., their lodging), they will take trips both within and outside of the community in which they are staying. It is not likely that transit could adequately accommodate these types of trips. As a comparison, even in large metropolitan areas with transit systems serving primarily persons commuting to employment destinations in a central business district, successful transit percentages are less than 10 percent.

Handout 4

12

May 23, 2007

Thus like the Ferry Alternative, a Transit Alternative would not remove an adequate number of vehicles from existing roads to see improvements to traffic flow and travel time for both normal and hurricane evacuation travel that could be associated with lower traffic demand on existing roads.

Shifting Rental Unit Start Times

Today, approximately 70 percent of rental unit check-ins in the project area are on Saturdays, 25 percent are on Sundays, and the remaining five percent are on Fridays. Renters prefer Saturday check-ins because of the extra day at the end of the second weekend to get ready for work on Monday, whereas owners prefer Sunday check-ins. Monday through Friday check-ins are generally not available, but check-ins could fall in the middle of the week depending on holidays. Most of the rentals are weekly rentals, thus allowing a nine day vacation (two weekends and a five day week). Local real estate representatives interviewed by the study team indicated that shifting the check-in days to Monday through Friday would not be profitable to the owners because it would be difficult to rent the houses without lowering rents since the majority of vacationers want to take advantage of the nine day vacation period noted above.

Table 2 indicates that shifting arrival times to an even distribution among Friday, Saturday and Sunday or to an even distribution among Wednesday, Friday, Saturday and Sunday would improve traffic flow on the summer weekends marginally and worsen traffic flow marginally on the summer weekday. The level of service on NC 12 would be unchanged in 2025. The marginal change can be seen in the ratio of traffic volume to road capacity, with a volume capacity ratio of 1.0 meaning that peak hour travel demand equals the capacity of the road.

The marginal change indicates that the shifting of rental times, even if accomplished by the rental businesses, would not meet project need. Such a policy would not reduce summer congestion overall. With congestion essentially unchanged, travel time would not change. This approach focuses on influencing normal travel and not emergency travel and as such would not affect hurricane clearance times and meet that need.

Finally, even if shifting rental times was an effective means for reducing travel demand, it could not be legally imposed. Realtors and property owners would have to shift rental times voluntarily, which as indicated in the first paragraph of this section, would not be profitable or in turn desirable, and therefore would be unlikely.

Table 2. Level of Service Change Resulting from Shifts in Rental Times

Link	Description	Summer Weekday		Summer Weekend	
		LOS	V/C	LOS	V/C
	No-Build Alternative				
9.	NC 12 just north of US 158 intersection	F	1.56	F	1.64
10.	NC 12 at Duck business area	F	1.32	F	1.53
11.	NC 12 at Sanderling Inn	F	1.04	F	1.23
14.	NC 12 at Dare/Currituck County Line	F	1.02	F	1.21
12.	NC 12 just south of Albacore Street	E	0.88	F	1.07
13.	NC 12 just south of Corolla	D	0.41	D	0.47
	Shifting Rental Unit Start Times to an Even Distribution among Friday, Saturday and Sunday				
9.	NC 12 just north of US 158 intersection	F	1.63	F	1.49
10.	NC 12 at Duck business area	F	1.38	F	1.39
11.	NC 12 at Sanderling Inn	F	1.09	F	1.12
14.	NC 12 at Dare/Currituck County Line	F	1.06	F	1.10
12.	NC 12 just south of Albacore Street	E	0.92	E	0.97
13.	NC 12 just south of Corolla	D	0.42	D	0.42
	Shifting Rental Unit Start Times to an Even Distribution among Wednesday, Friday, Saturday and Sunday				
9.	NC 12 just north of US 158 intersection	F	1.66	F	1.43
10.	NC 12 at Duck	F	1.40	F	1.33
11.	NC 12 in Sanderling	F	1.11	F	1.08
14.	NC 12 at Dare/Currituck County Line	F	1.08	F	1.05
12.	NC 12 just south of Albacore Road	E	0.94	E	0.93
13.	NC 12 just south of Corolla	D	0.43	D	0.41

Comparison of Highway Improvement Alternatives

The potential Highway Improvement Alternatives listed above, including Mid-Currituck Bridge corridors and US 158 and NC 12 improvement alternatives, will be evaluated in three ways:

1. Their ability to meet the purpose and need of the project;
2. Their potential for environmental impact; and
3. Their cost.

The objective of this evaluation is to identify the alternative or alternatives to be evaluated in detail in the DEIS. The following paragraphs, tables, figures, and charts

present the data findings that the NCTA will use in the evaluation of potential highway improvement alternatives.

Ability to Meet Project Purpose and Need

Data being used to assess the Highway Improvement Alternatives from the perspective of their ability to meet the project's purpose and need are shown in Table 3. To facilitate the comparison of alternatives, key data from Table 3 is depicted graphically in several figures and charts. Figure 7 to Figure 12 show graphically the congested and uncongested links along US 158 and NC 12 on the summer weekday and summer weekend in 2025 for the No-Build Alternative and the five Highway Improvement Alternatives. For those locations where the LOS is F, the percent of travel demand over the capacity of the road is shown. Also shown is the number of hours per day of congestion associated with congested road segments. Chart 1 to Chart 7 illustrate the difference between the No-Build Alternative and the five Highway Improvement Alternatives in 2025 in terms of:

1. Number of intersections operating at LOS E or F;
2. Miles of thoroughfare in the project area operating at LOS E or F;
3. Percent vehicles operating at LOS E or F;
4. Annual million vehicle-miles traveled and congested (LOS E or F);
5. Travel time in minutes;
6. Cost; and
7. Displacement.

Potential for Environmental Impact

Table 4 provides information on environmental impact potential for the bridge corridors. Any one corridor could be a part of the MCBs. Table 5 provides information on environmental impact potential of potential widening components. The impacts are based on conceptual designs as follows:

- Relocation counts are based on counts made by the right-of-way agents that prepared the right-of-way costs except for the third northbound lane on US 158 for emergency evacuation, which are based on counts from aerial photography.
- Historic resource impacts are derived from past Phase II historic resource survey reports.

Handout 4 15 May 23, 2007

- Other findings are determined from Geographic Information Systems (GIS) data, which will be depicted on environmental features maps at the May 23 agency meeting.

A four-lane bridge would have the highest environmental impact, and has been assumed for purposes of the screening level analysis; a two-lane or a three-lane bridge could be selected for detailed evaluation in the DEIS.

The key differences in environmental impact potential between the alternatives are:

- Displacement;
- Rural and/or beach developed community fragmented;
- Wildlife habitat fragmented;
- Wetlands filled or bridged; and
- High quality resources filled or bridged.

Table 6 compares the Highway Improvement Alternatives by these six factors, including a Mid-Currituck Bridge, improvements to NC 12, improvements to US 158 between the Wright Memorial Bridge and NC 12, and the addition of a third northbound lane to US 158, as needed for hurricane evacuation, between NC 168 and the Wright Memorial Bridge.

The Mid-Currituck Bridge Study team will discuss the findings contained in these tables at the May 23, 2007 agency coordination meeting.

Cost

Table 4 and Table 5 also present construction and right-of-way costs for the bridge corridors and potential widening project components, respectively. Table 6 includes total costs for the Highway Improvement Alternatives, including costs for a third northbound lane on US 158 in Currituck County for hurricane evacuation. The construction and right-of-way costs were based on a conceptual design except for the third northbound lane in Currituck County, which were based on the assumption that 12 feet of additional right-of-way is needed to add 12 feet of pavement. This is a conservative assumption in that it assumes that grading to accommodate the adjacent terrain will not dictate a wider right-of-way in some locations. Table 6 includes the cost of adding a third northbound lane to the Knapp Bridge across the Intracoastal Waterway. The right-of-way costs were estimated by right-of-way agents.

Handout 4 16 May 23, 2007

Table 3. Traffic Findings

	Existing (2001)	No-Build (2025)	Highway Improvement Alternatives (2025)				
			ER1	ER2	MCB1	MCB2	MCB3
• Mid-Currituck Bridge	No bridge	No bridge	No bridge	No bridge	B/B ¹	B/B ¹	B/B ¹
Volume/Capacity Ratio on Selected Links (SWD/SWE)							
• US 158 south of Barco (and north of Aydlett)	0.29/0.55	0.68/1.08	0.68/1.08	0.68/1.08	0.68/1.08	0.68/1.08	0.68/1.08
• US 158 near Jarvisburg (and south of Aydlett)	0.27/0.54	0.64/1.07	0.64/1.07	0.64/1.07	0.45/0.73	0.48/0.80	0.48/0.80
• US 158 just west of NC 12 intersection	0.55/0.75	1.32/1.59	0.66/0.80	0.66/0.80	0.73/0.84	0.74/0.86	1.11/1.29
• NC 12 just north of US 158 intersection	0.93/1.00	1.56/1.64	0.67/0.71	1.56/1.64	0.5/0.53	0.96/0.96	1.09/1.09
• NC 12 at Duck business area	0.76/0.87	1.32/1.53	0.56/0.66	1.16/1.35	0.45/0.57	0.85/1.00	0.97/1.14
• NC 12 just south of Albacore Street	0.55/0.65	0.88/1.07	0.38/0.46	0.38/0.46	0.45/0.64	0.42/0.57	0.42/0.57
• Mid-Currituck Bridge	No bridge	No bridge	No bridge	No bridge	0.30/0.44 ¹	0.30/0.41 ¹	0.30/0.41 ¹
Intersection Operations (number of LOS E or F signalized intersections of 18 total on SWD/SWE)							
• Mid-Currituck Bridge	0/2	9/15	1/7	4/11	1/6	2/6	4/8
Miles of Road Congested (LOS E or F on SWD/SWE)							
• Mid-Currituck Bridge	5.8/5.8	18.0/46.2	0.0/28.2	9/7/37.9	0.0/5.3	9.7/15.7	15.7/21.7
Duration of Congested (LOS E or F) Peak Period (hours on SWD/SWE)							
• US 158 (Currituck County north of Mid-Currituck Bridge)	0/0	0/10	0/10	0/10	0/10	0/10	0/10
• US 158 (Currituck County south of Mid-Currituck Bridge)	0/0	0/10	0/10	0/10	0/0	0/0	0/0
• US 158 (Wright Memorial Bridge to NC 12)	0/0	5/14	0/0	0/0	0/0	0/6	3/12
• NC 12 (Dare County north of US 158)	2/6	6/14	0/0	6/13	0/0	3/10	4/11
• NC 12 (Currituck County)	0/0	2/10	0/0	0/0	0/0	0/0	2/11 (2 lane) 0/0 (4 lane)
• Mid-Currituck Bridge	No bridge	No bridge	No bridge	No bridge	0/0 ¹	0/0 ¹	0/0 ¹
Percent of Annual Vehicles Operating at LOS E or F (SWD/SWE)							
• Mid-Currituck Bridge	3.0%/6.5%	17.1%/62.8%	0.0%/18.9%	4.7%/28.7%	0.0%/4.4%	2.9%/11.0%	8.0%/30.7%

Table 3. Traffic Findings

	Existing (2001)	No-Build (2025)	Highway Improvement Alternatives (2025)				
			ER1	ER2	MCB1	MCB2	MCB3
Assumed Lanes							
• Bridge	NA	NA	NA	NA	4	4	4
• US 158 (Wright Memorial Bridge to NC 12)	5	5	8	8	6	6	5
• NC 12 (Dare County north of US 158)	2	2	4	3	4	3	2
• NC 12 (Currituck County)	2	2	4	4	4	4	2 (4 near bridge)
Average Annual Daily Traffic (vehicles per day) on Selected Links (SWD/SWE)							
• US 158 south of Barco (and north of Aydlett)	20,000/ 40,600	47,700/ 80,600	47,700/ 80,600	47,700/ 80,600	47,700/ 80,600	47,700/ 80,600	47,700/ 80,600
• US 158 near Jarvisburg (and south of Aydlett)	18,700/ 40,000	44,600/ 79,300	44,600/ 79,300	44,600/ 79,300	31,300/ 54,300	33,300/ 59,500	33,300/ 59,500
• US 158 just west of NC 12 intersection	38,700/ 56,000	92,200/ 118,500	92,200/ 118,500	92,200/ 118,500	76,700/ 93,300	77,600/ 96,000	77,600/ 96,000
• NC 12 just north of US 158 intersection	24,900/ 27,800	41,500/ 45,600	41,500/ 45,600	41,500/ 45,600	31,900/ 34,800	30,000/ 30,400	30,000/ 30,400
• NC 12 at Duck business area	20,300/ 24,200	35,100/ 42,400	35,100/ 42,400	35,100/ 42,400	28,800/ 37,100	26,700/ 31,800	26,700/ 31,800
• NC 12 just south of Albacore Street	14,800/ 17,900	23,500/ 29,600	23,500/ 29,600	23,500/ 29,600	29,000/ 41,600	27,300/ 36,900	27,300/ 36,900
• Mid-Currituck Bridge	No bridge	No bridge	No bridge	No bridge	22,400/ 35,100	22,000/ 32,600	22,000/ 32,600
Level of Service (LOS) on Selected Links (SWD/SWE)							
• US 158 south of Barco (and north of Aydlett)	B/C	D/F	D/F	D/F	D/F	D/F	D/F
• US 158 near Jarvisburg (and south of Aydlett)	A/C	C/F	C/F	C/F	C/D	C/D	C/D
• US 158 just west of NC 12 intersection	C/D	F/F	D/D	D/D	D/D	D/E	F/F
• NC 12 just north of US 158 intersection	E/F	F/F	C/C	F/F	A/A	E/E	F/F
• NC 12 at Duck business area	E/E	F/F	B/C	F/F	A/B	E/F	E/F
• NC 12 just south of Albacore Street	D/D	E/F	A/A	A/A	A/C	A/B	A/B

Table 4. Cost and Potential Environmental Impacts of Bridge Corridors

		C1	C2	C3	C4	C5	C6
CONSTRUCTION IMPACTS	Length (miles)	6.8	7.1	6.8	6.9	6.9	7.0
	Interchanges (number)	1	1	1	1	1	1
	Capital Costs (2-lane/4-lane) in millions	\$335.5/\$506.5	\$359.1/\$520.1	\$327.6/\$494.6	\$376.2/\$505.2	\$318.5/\$497.5	\$308.5/\$493.5
	ROW Costs (2-lane/4-lane) in millions	\$42.5	\$24.9	\$43.4	\$25.8	\$41.6	\$24.5
	Major Utility Conflicts (yes or no)	No	No	No	No	No	No
	Railroad Crossings (number)	0	0	0	0	0	0
	Displacements (number)						
SOCIAL, ECONOMIC, AND CULTURAL IMPACTS	• Residences	6	6	7	7	0	0
	• Businesses	0	1	0	1	1	0
	• Cemeteries (all or part)	1	1	1	1	0	0
	• Recorded Historic Sites	0	0	0	0	0	0
	Rural Community Fragmentation on Mainland	Passes through Aydtlett north of its center		Passes through center of Aydtlett		At southern end of Aydtlett	
	Beach Community Fragmentation on Outer Banks	Passes between 2 subdivisions taking southern end of one	None, in commercial area	Passes between 2 subdivisions taking southern end of one	None, in commercial area	Passes between 2 subdivisions taking southern end of one	None, in commercial area
	Greenway Crossings (number)	0	0	0	0	0	0
	Low Income or Minority Populations (yes or no)	No	No	No	No	No	No
	Potential Section 4(f) Impacts (yes or no)	No	No	No	No	No	No
	Hazardous Materials Sites (number completely or partially used)	0	0	0	0	0	0

Table 3. Traffic Findings

	Existing (2001)	No-Build (2025)	Highway Improvement Alternatives (2025)				
			ER1	ER2	MCB1	MCB2	MCB3
Million Annual Vehicle-Miles Traveled (mvm)							
• Total mvm	275.4	588.7	588.7	588.7	520.6	524.6	524.6
• Congested mvm	3.5	64.8	25.3	50.6	4.6 ¹	15.8 ¹	21.1 ¹
• Percent Congested	1.3%	11.0%	4.3%	8.6%	0.9% ¹	3.0% ¹	4.0% ¹
Travel Time (hours:minutes on SWD/SWE)							
• Travel Time using Wright Memorial Bridge	1:00/1:19	1:40/3:11	1:03/1:22	1:34/2:22	1:02/1:06	1:12/1:25	1:16/1:40
• Travel Time using Mid-Currituck Bridge	NA	NA	NA	NA	0:09/0:11	0:09/0:11 ¹	0:09/0:11 ¹
• Time Savings of Mid-Currituck Bridge	NA	NA	NA	NA	0:53/0:55 shorter	1:03/1:14 shorter	1:07/1:29 shorter
• Time Savings by Reduced Delay on Existing Roads	NA	Baseline	0:37/1:49 saved	0:06/0:49 saved	0:38/2:05 saved	0:28/1:46 saved	0:25/1:31 saved
Hurricane Evacuation Clearance Time (hours:minutes for a Category 3 Storm with 75 percent Tourist Occupancy)							
• With No Northbound Improvements on US 158 in Currituck County	27.1 hrs	35.9 hrs	35.9 hrs	35.9 hrs	35.9 hrs	35.9 hrs	35.9 hrs
• With US 158 Northbound Contraflow Lane in Currituck County	—	35.9 hrs	27.0 hrs	27.0 hrs	27.0 hrs	27.0 hrs	27.0 hrs
• With US 158 Third Northbound Lane in Currituck County	—	35.9 hrs	21.4 hrs	21.4 hrs	21.4 hrs	21.4 hrs	26.2 hrs
Location of US 158 Contraflow or Third Northbound Lane		Wright Memorial Bridge to NC 168 (24.5 miles)			Mid-Currituck Bridge to NC 168 (5 miles)		
Controlling Segment		US 158—NC 168 to NC 12	US 158—NC 168 to Wright Memorial Bridge		US 158—NC 168 to Mid-Currituck Bridge		

Note: SWD/SWE indicates that the data before the slash is for the summer weekday. The data after the slash is for the summer weekend. NA=Not Applicable
¹With a 2-lane Mid-Currituck Bridge in 2025 the LOS would be E/E; the volume/capacity ratios would be 0.66/0.92; the duration of peak period congestion would be 2 hrs/8 hrs; miles of congested vehicle-miles traveled would increase by 5.6 mvm (1.1 percent); and travel time across the bridge would be 10 minutes/14 minutes. Other results would not change substantially.

Table 5. Cost and Potential Environmental Impacts of Road Improvements

		US 158 (Currituck County)		NC 12				
		6-Lane	8-Lane	4-Lane	4-Lane (C)/ 3-Lane (D)	4-Lane (C)/ Intersection Improvements (D) ¹	3-Lane ¹	Intersection Improvements ¹
CONSTRUCTION IMPACTS	Length (miles)	2.0	2.2	19.6	18.5	4.3	18.5	NA
	Interchanges (number)	0	0	0	0	0	0	0
	Capital Costs in millions	\$22.7	\$28.9	\$146.6	\$120.3	78.0	\$105.3	\$13.9
	ROW Costs in millions	\$2.6	\$9.5	\$393.2	\$197.0	\$137.3	\$115.6	\$17.4
	Major Utility Conflicts (yes or no)	No	No	Yes	No	No	No	No
	Railroad Crossings (number)	0	0	0	0	0	0	0
SOCIAL, ECONOMIC, AND CULTURAL IMPACTS	Displacements (number)							
	• Residences	0	0	138	14	8	9	3
	• Businesses	0	0	57	1	1	0	0
	• Cemeteries (all or part)	0	0	0	0	0	0	0
	• Recorded Historic Sites	0	0	0	0	0	0	0
	Rural/Beach Community Fragmentation	None	None	Four through lanes crossed by beach users, shoppers, or hotel guests in Dare County.	New turn lane crossed by beach users or hotel guests in Dare County.	None	New turn lane crossed by beach users or hotel guests in Dare County.	None
	Greenway Crossings (number)	0	0	0	0	0	0	0
	Low Income or Minority Populations (yes or no)	No	No	No	No	No	No	No
Potential Section 4(f) Impacts (yes or no)	No	No	No	No	No	No	No	
Hazardous Materials Sites (number completely or partially used)	0	0	0	0	0	0	0	

Table 4. Cost and Potential Environmental Impacts of Bridge Corridors

		C1	C2	C3	C4	C5	C6
NATURAL RESOURCES IMPACTS	Known Federally-Listed Species Habitat (Natural Heritage Program) (number of areas affected)	0	0	0	0	0	0
	100-Year Floodplain Impacts (yes or no)	Yes	Yes	Yes	Yes	Yes	Yes
	Habitat Fragmentation (Maple Swamp Bridged on Mainland)	Bridge corridor parallel to power line corridor; swamp forest lost; in vicinity of existing edge		Bridge corridor parallel to Aydlett Road ; swamp forest lost; in vicinity of existing edge		Bridge corridor is a new crossing ; swamp and bay forest lost; new edge created	
	Wetland Impacts						
	• Crossings (number)	3	3	4	4	4	4
	• Total Area (acres; bridged is width of bridge times length)	7.6 (fill) 13.7 (bridged)	7.6 (fill) 14.6 (bridged)	15.9 (fill) 12.2 (bridged)	15.9 (fill) 13.1 (bridged)	19.0 (fill) 10.5 (bridged)	19.0 (fill) 11.4 (bridged)
	• CAMA Area (acres; bridged is width of bridge times length)	1.1 (bridged)	0.9 (bridged)	1.1 (bridged)	0.9 (bridged)	1.1 (bridged)	0.9 (bridged)
	Stream Impacts						
	• Crossings (number)	0	0	0	0	0	0
	• Length in feet (within design construction limits)	0	0	0	0	0	0
	Potential Riparian Buffer Impacts (yes or no)	No	No	No	No	No	No
	Water Supply Critical Areas (yes or no)	No	No	No	No	No	No
	High Quality Resources	Maple Swamp; Gordonia Forest	Maple Swamp; Gordonia Forest	Maple Swamp; Gordonia Forest; North River/ Great Swamp	Maple Swamp; Gordonia Forest; North River/ Great Swamp	Maple Swamp; Gordonia Forest	Maple Swamp; Gordonia Forest
	• Crossings (number)	2	2	2	2	2	2
	• Area (acres)	0.85 (fill) 12.9 (bridged)	0.85 (fill) 12.9 (bridged)	6.44 (fill) 10.8 (bridged)	6.44 (fill) 10.8 (bridged)	7.23 (fill) 9.2 (bridged)	7.23 (fill) 9.2 (bridged)

Table 6. Cost and Potential Environmental Impacts of Highway Improvement Alternatives

	Highway Improvement Alternatives (2025)				
	ER1	ER2	MCB1	MCB2	MCB3
Assumed Lanes					
• Bridge	NA	NA	4	4	4
• US 158 (Wright Memorial Bridge to NC 12)	8	8	6	6	5
• NC 12 (Dare County north of US 158)	4	3	4	3	2
• NC 12 (Currituck County)	4	4	4	4	2 (4 near bridge)
• Location of US 158 Contraflow or Third Northbound Lane	Wright Memorial Bridge to NC 168 (24.5 miles)		Mid-Currituck Bridge to NC 168 (5 miles)		
Cost (in millions)					
• Mid-Currituck Bridge (average of C1 to C6)	NA	NA	\$536.7	\$536.7	\$536.7
• NC 12	\$539.8	\$317.3	\$539.8	\$317.3	\$90.8
• US 158 in Dare County	\$38.4	\$38.4	\$25.3	\$25.3	\$0.0
• US 158 in Currituck County (third northbound lane)	\$63.9 ¹	\$63.9 ¹	\$21.7	\$21.7	\$21.7
TOTAL COST	\$642.1	\$419.6	\$1,123.5	\$901.0	\$649.2
Potential for Toll Revenue Bond Financing²	No	No	Yes	Yes	Yes
Potential for Public-Private Partnership	No	No	Yes	Yes	Yes
Displacement					
• Mid-Currituck Bridge (average of C1 to C6)	0	0	5	5	5
• NC 12	195	15	195	15	5
• US 158 in Dare County	0	0	0	0	0
• US 158 in Currituck County (third northbound lane)	32	32	1	1	1
TOTAL DISPLACEMENT	227	47	201	21	11

Table 5. Cost and Potential Environmental Impacts of Road Improvements

	US 158 (Currituck County)		NC 12					
	6-Lane	8-Lane	4-Lane	4-Lane (C)/3-Lane (D)	4-Lane (C)/Intersection Improvements (D) ¹	3-Lane ¹	Intersection Improvements ¹	
NATURAL RESOURCES IMPACTS	Known Federally-Listed Species Habitat (Natural Heritage Program) (number of areas affected)	0	0	1	1	0	1	0
	100-Year Floodplain Impacts (yes or no)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Habitat Fragmentation	None	None	None	None	None	None	None
	Wetland Impacts							
	• Crossings (number)	4	4	28	26	19	27	3
	• Area (acres)	3.4 (fill)	4.2 (fill)	10.9 (fill)	10.4 (fill)	9.8 (fill)	6.8 (fill)	0.3 (fill)
	Stream Impacts							
	• Crossings (number)	1	1	0	0	0	0	0
	• Length in feet (within design construction limits)	0	0	0	0	0	0	0
	Potential Riparian Buffer Impacts (yes or no)	No	No	No	No	No	No	No
	Water Supply Critical Areas (yes or no)	No	No	No	No	No	No	No
	High Quality Resources	Kitty Hawk Woods Coastal Preserve	Kitty Hawk Woods Coastal Preserve	Pine Island Audubon Sanctuary	Pine Island Audubon Sanctuary	Pine Island Audubon Sanctuary	Pine Island Audubon Sanctuary	None
	• Crossings (number)	1	1	3	3	3	3	0
	• Area (acres)	0.1 (fill)	0.2 (fill)	4.2 (fill)	4.2 (fill)	4.2 (fill)	2.3 (fill)	0 (fill)
	Significant Natural Heritage Areas			Pine Island/ Currituck Club Natural Area	Pine Island/ Currituck Club Natural Area	Pine Island/ Currituck Club Natural Area	Pine Island/ Currituck Club Natural Area	
• Crossings (number)	0	0	3	3	3	4	0	
• Area (acres)	0.0 (fill)	0.0 (fill)	17.8 (fill)	16.8 (fill)	16.7 (fill)	5.5 (fill)	0.0 (fill)	

Note: C=Currituck County, D=Dare County

¹These potential road improvement assumptions are not reflected in the Highway Improvement Alternatives comparison because the five conceptual Highway Improvement Alternatives examined were found to best represent the trade-offs important to the selection of alternatives. The information is provided here in the interest of full disclosure of the factors considered in our analysis process.

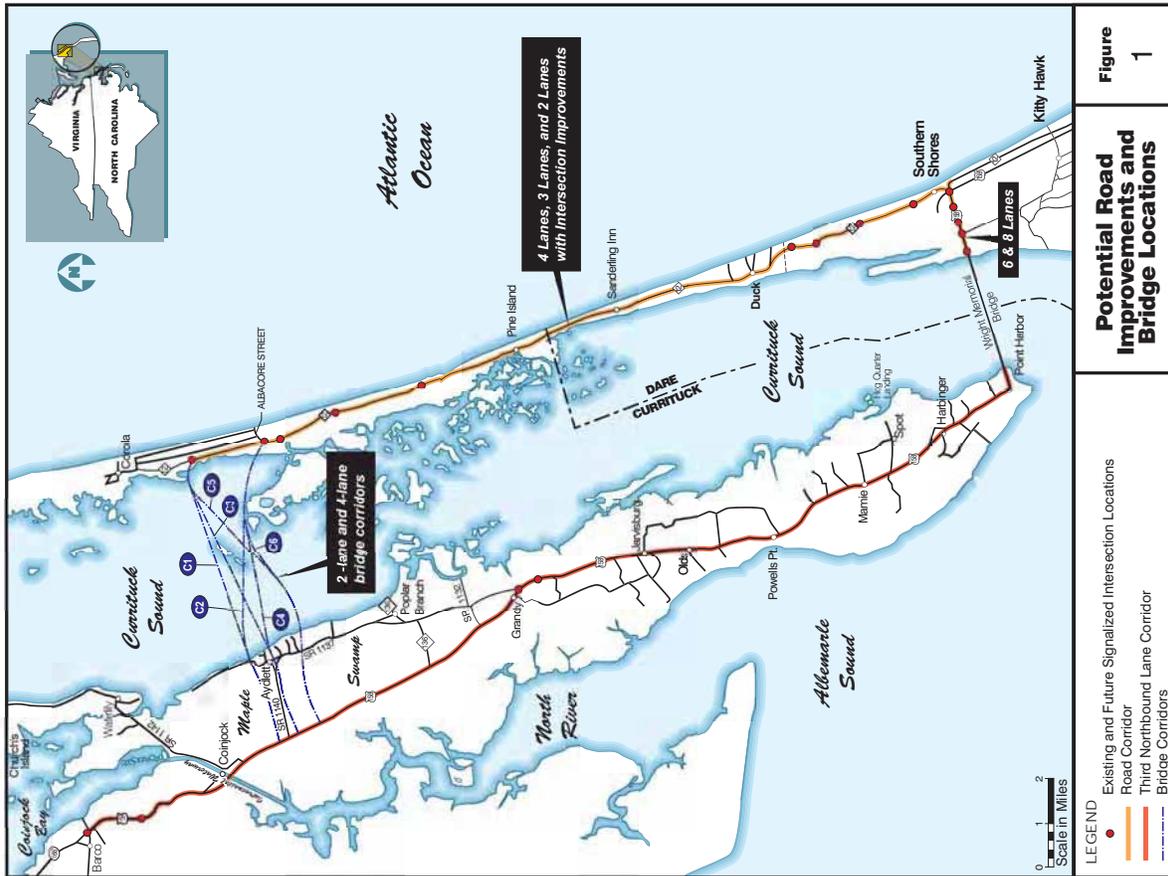


Figure 1
Potential Road Improvements and Bridge Locations

Table 6. Cost and Potential Environmental Impacts of Highway Improvement Alternatives

	Highway Improvement Alternatives (2025)				
	ER1	ER2	MCB1	MCB2	MCB3
Rural/Beach Community Fragmentation	Four through lanes crossed by beach users, shoppers, or hotel guests in Dare County.	New turn lane crossed by beach users or hotel guests in Dare County.	Same as ER1 plus Mid-Currituck Bridge passes through Aydlett (C3 and C4 through center)	Same as ER2 plus Mid-Currituck Bridge passes through Aydlett (C3 and C4 through center)	Mid-Currituck Bridge passes through Aydlett (C3 and C4 through center)
Habitat Fragmentation	None	None	Associated with Mid-Currituck Bridge crossing of Maple Swamp and loss of swamp forest; C1 to C4 in vicinity of an existing forest edge; C5 and C6 create a new edge and also use bay forest.		
Wetland Filled/Bridged					
• Mid-Currituck Bridge (average of C1 to C6)	0.0/0.0	0.0/0.0	14.0/13.0	14.0/13.0	14.0/13.0
• NC 12	10.9/0.0	10.4/0.0	10.9/0.0	10.4/0.0	6.3/0.0
• US 158 in Dare County	4.2/0.0	4.2/0.0	3.4/0.0	3.4/0.0	0.0/0.0
• US 158 in Currituck County (third northbound lane)	23.1/0.0	23.1/0.0	10.8/0.0	10.8/0.0	10.8/0.0
TOTAL WETLANDS FILLED/BRIDGED	38.2/0.0	37.7/0.0	39.1/13.0	38.6/13.0	31.1/13.0
High Quality Resources Filled/Bridged					
• Mid-Currituck Bridge (average of C1 to C6)	0.0/0.0	0.0/0.0	4.8/11.0	4.8/11.0	4.8/11.0
• NC 12	17.8/0.0	16.8/0.0	17.8/0.0	16.8/0.0	0.0/0.0
• US 158 in Dare County	0.2/0.0	0.2/0.0	0.0/0.0	0.0/0.0	0.0/0.0
• US 158 in Currituck County (third northbound lane)	1.4/0.0	1.4/0.0	1.4/0.0	1.4/0.0	1.4/0.0
TOTAL HIGH QUALITY RESOURCES FILLED/BRIDGED	19.4/0.0	18.4/0.0	24.0/11.0	23.0/11.0	6.2/11.0

¹ Construction cost only Aydlett Road (SR 1140) to Wright Memorial Bridge.

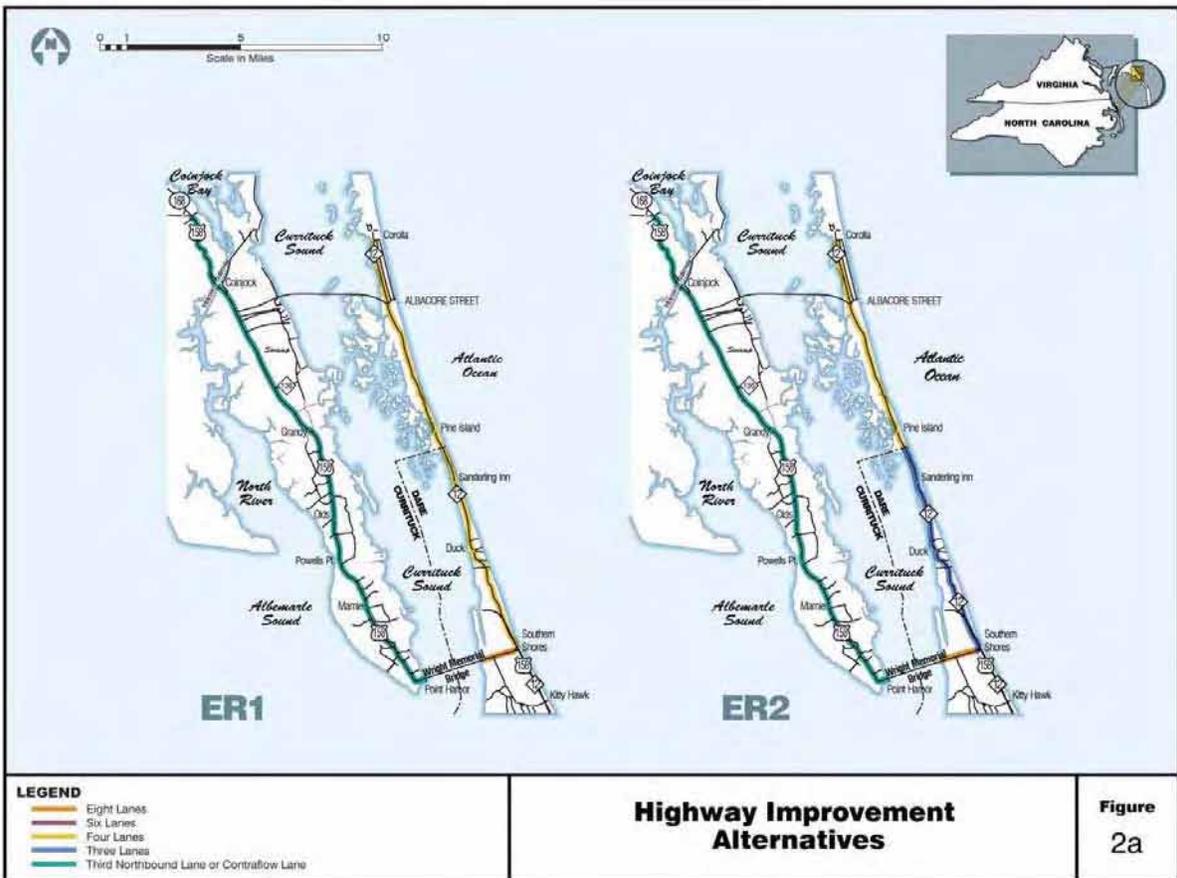
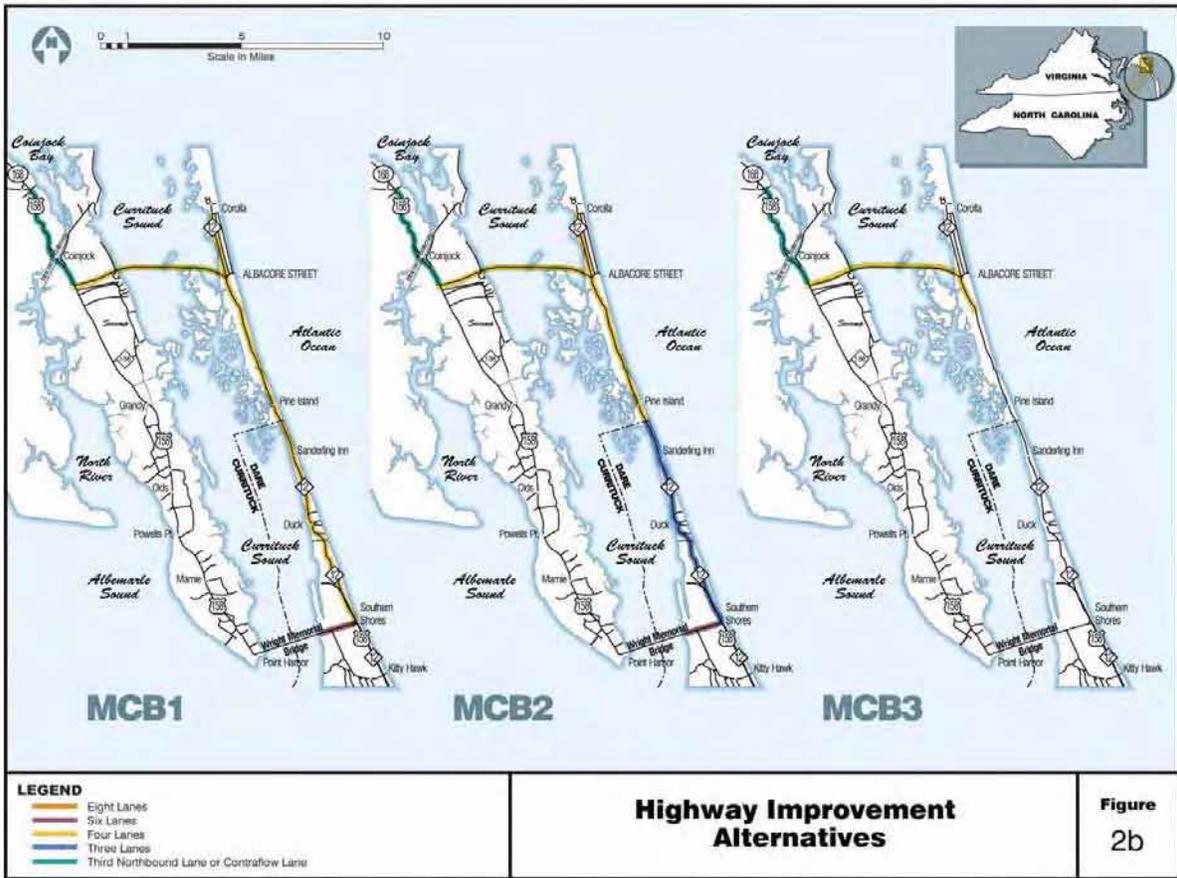
² Based on findings of the *Preliminary Traffic & Revenue Study* (Wilbur Smith Associates, January 2007) and subsequent financial analysis (PFM, February 2007), up to \$250 million could be financed through the use of NCTA Revenue Bonds and Subordinate TIFIA (Transportation Infrastructure Finance and Innovation Act of 1998) Loans. More could be financed in association with a Public Private Partnership (PPP), as is recommended for this project by NC General Statute 136-89.172.

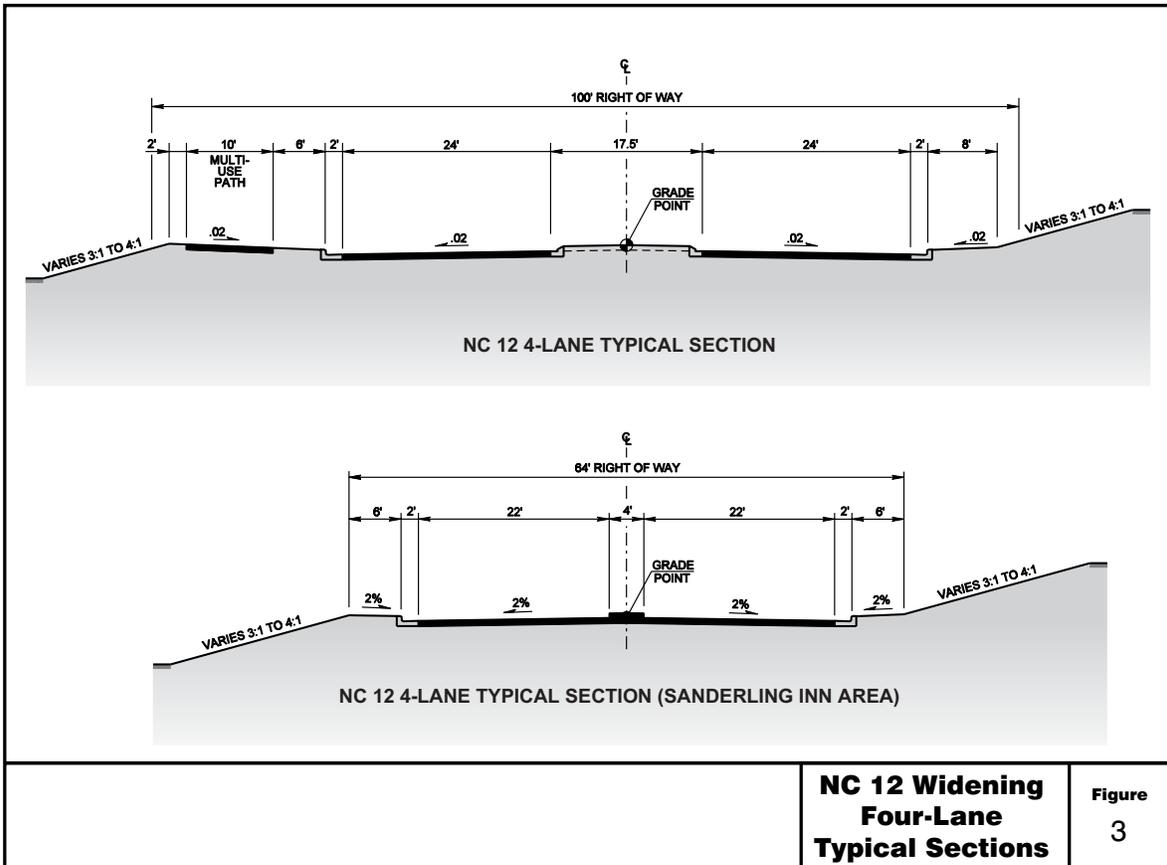
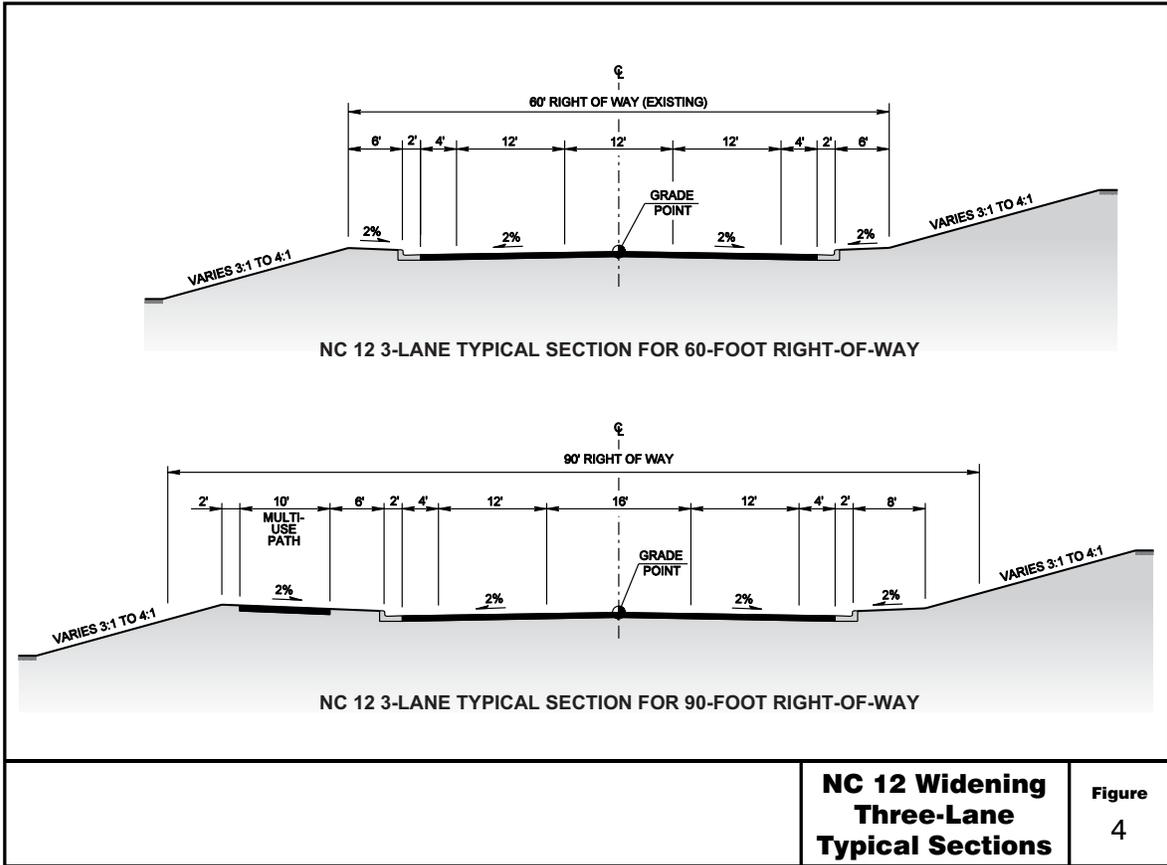
Handout 4

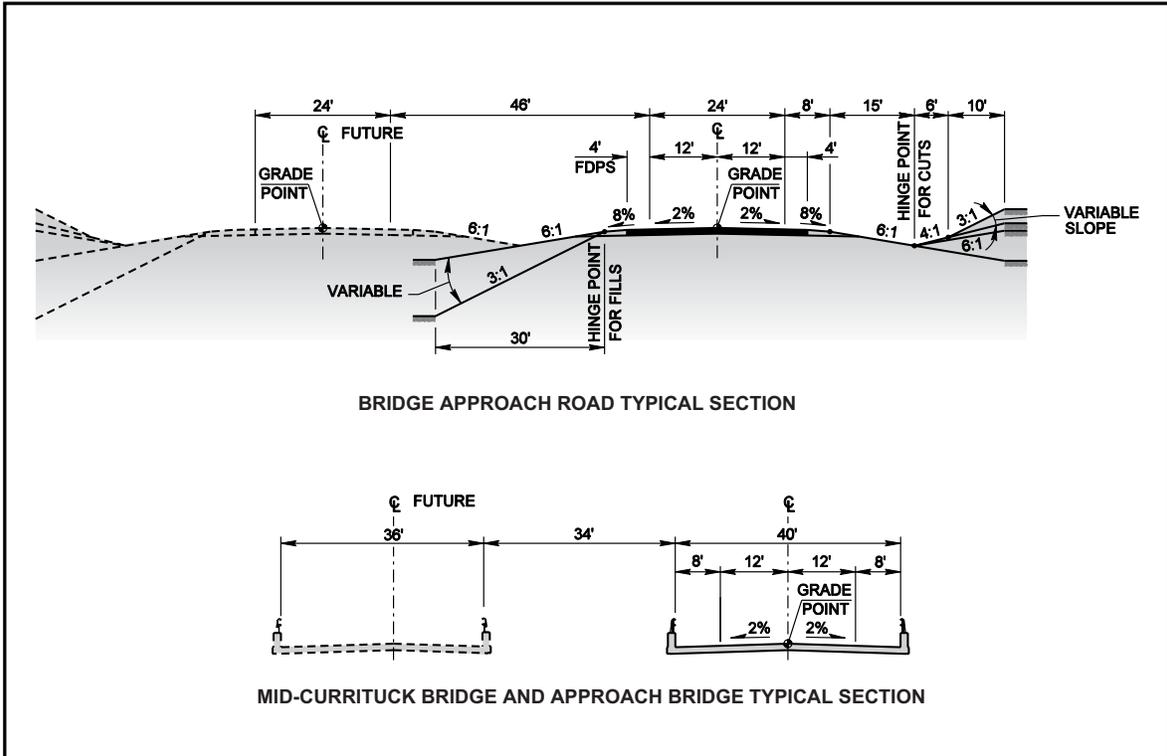
25

May 23, 2007

Mid-Currituck Bridge Study
Analysis of Conceptual Alternatives



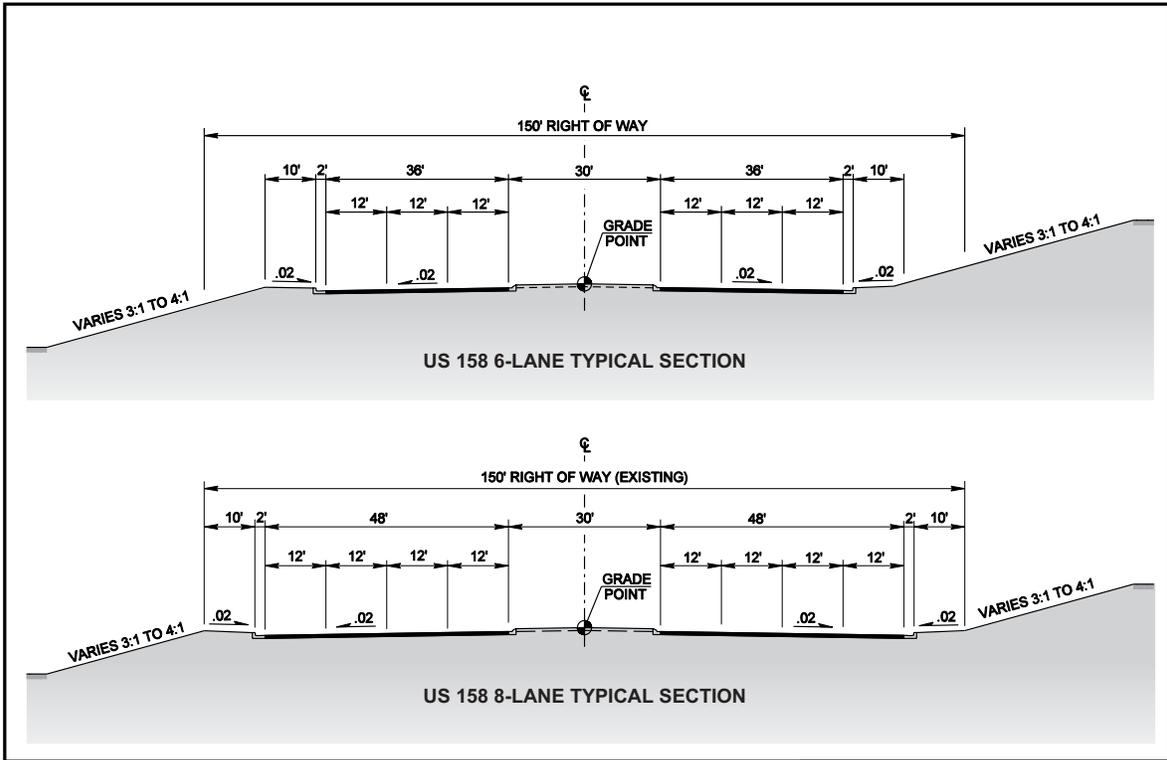




BRIDGE APPROACH ROAD TYPICAL SECTION

MID-CURRUTUCK BRIDGE AND APPROACH BRIDGE TYPICAL SECTION

Bridge Approach Road and Bridge Typical Sections Figure 6



US 158 6-LANE TYPICAL SECTION

US 158 8-LANE TYPICAL SECTION

US 158 Widening Typical Sections (Wright Memorial Bridge to NC 12) Figure 5

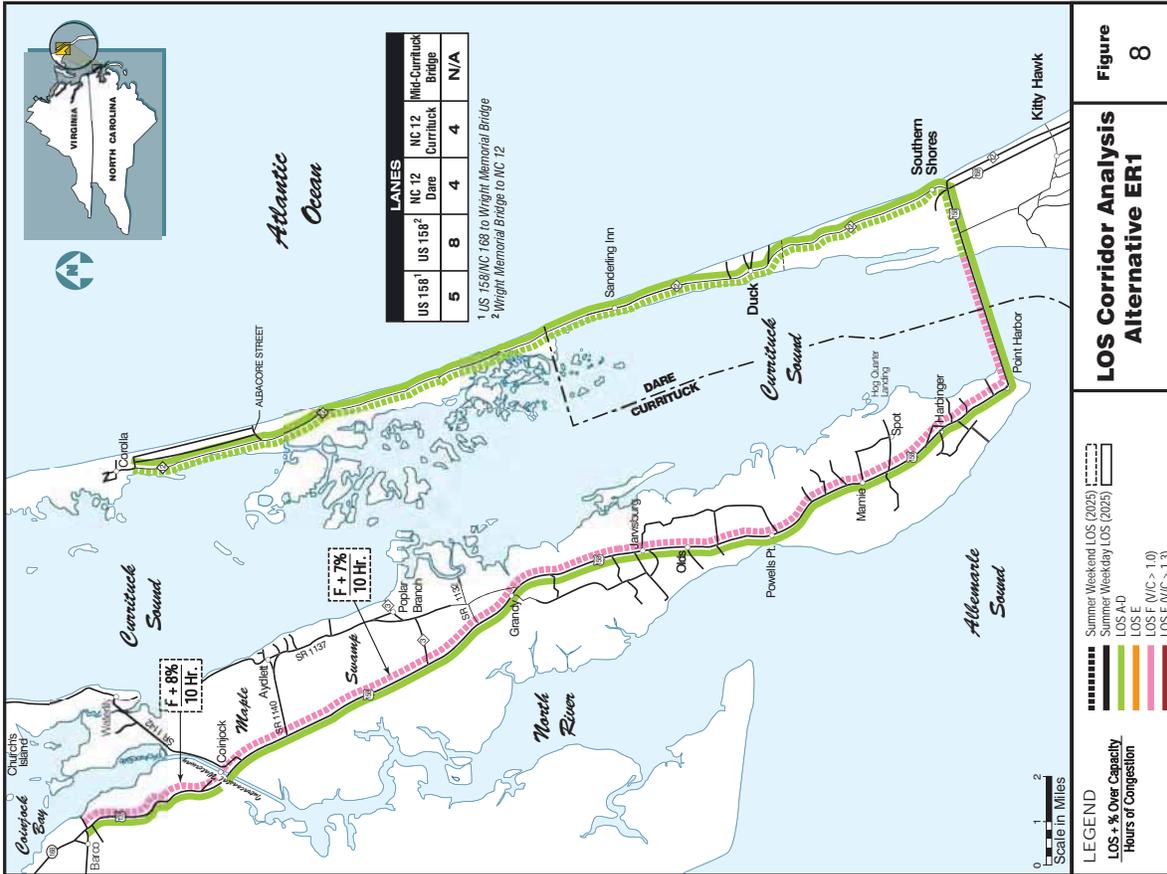


Figure 8
 LOS Corridor Analysis
 Alternative ERI

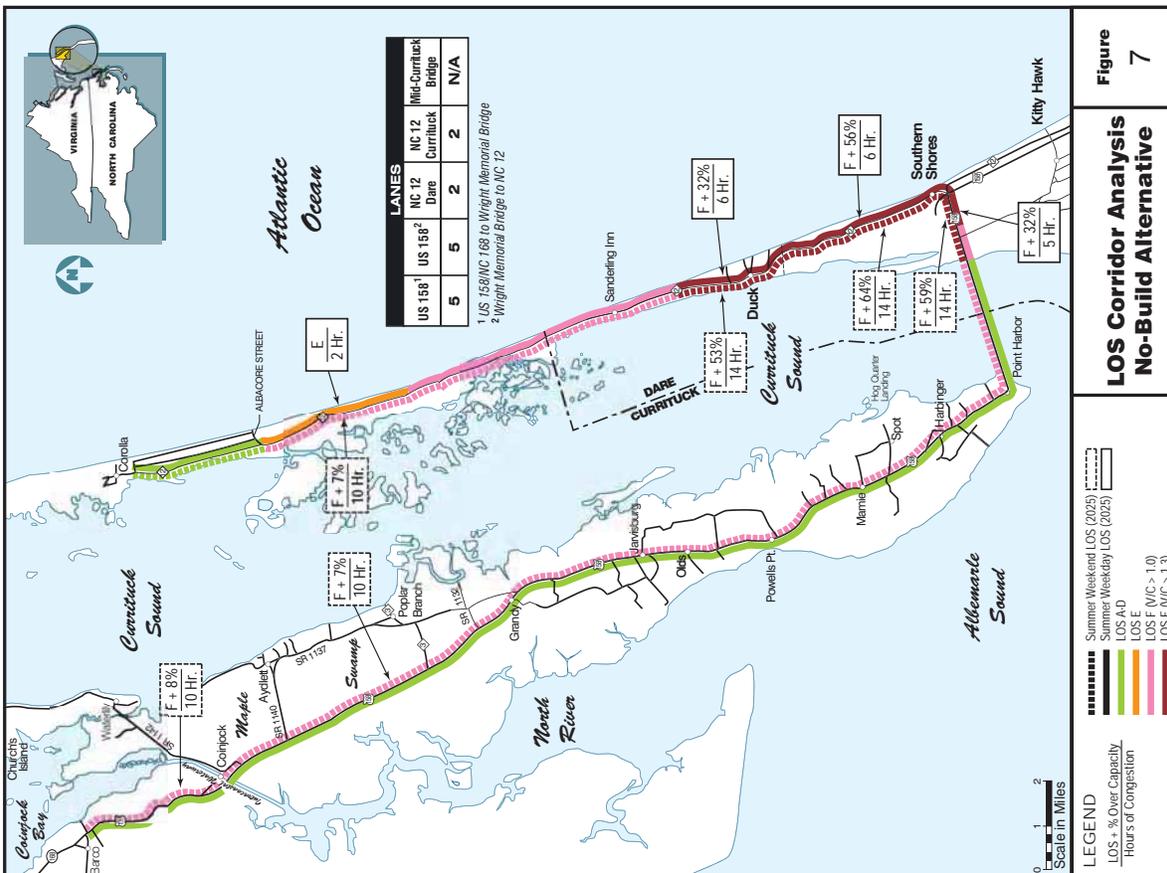


Figure 7
 LOS Corridor Analysis
 No-Build Alternative

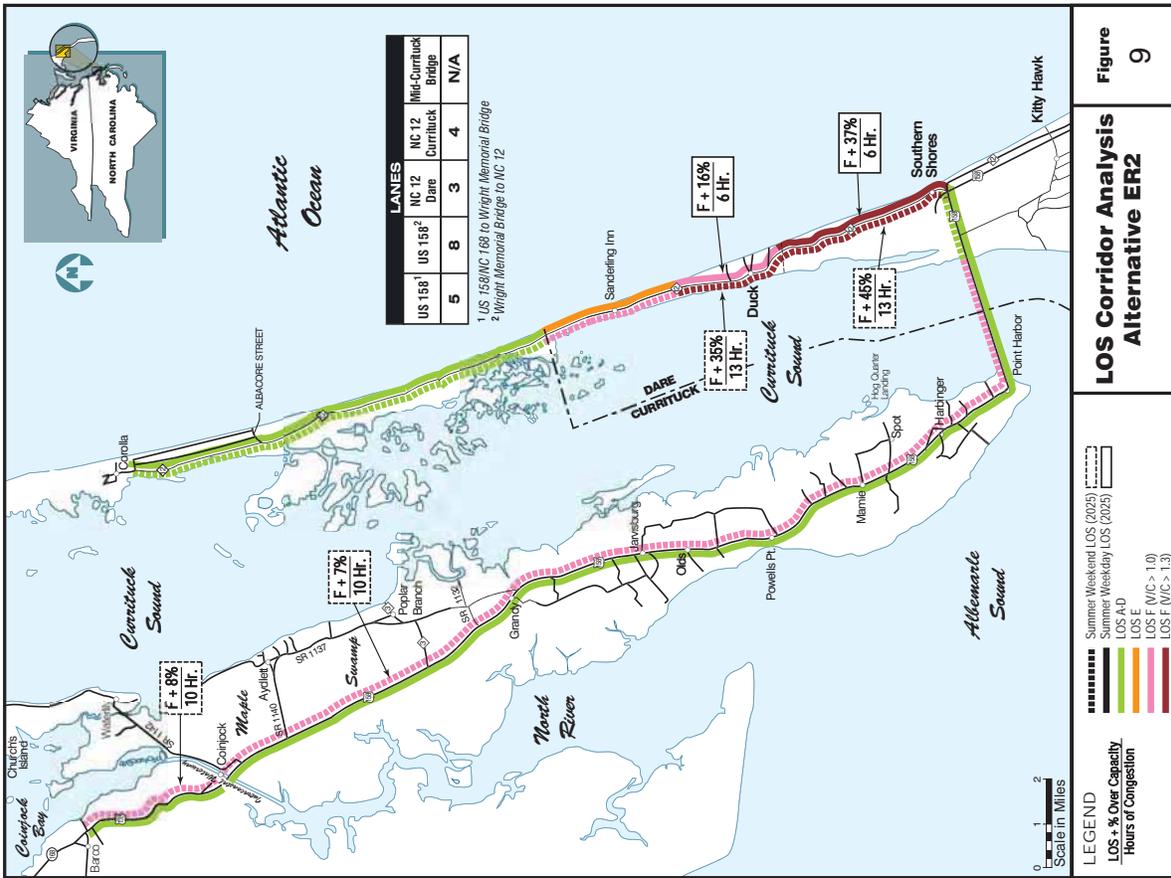


Figure 9
 LOS Corridor Analysis
 Alternative ER2

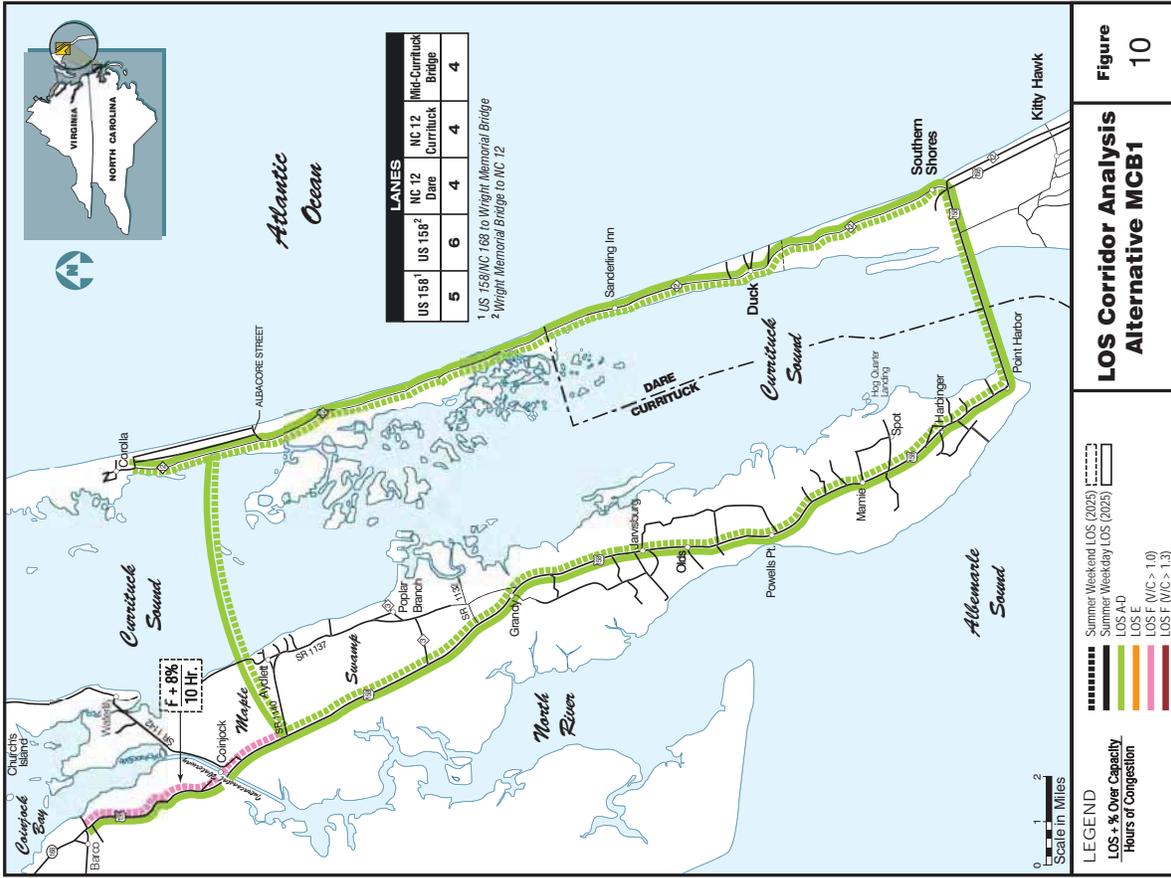


Figure 10
 LOS Corridor Analysis
 Alternative MCB1

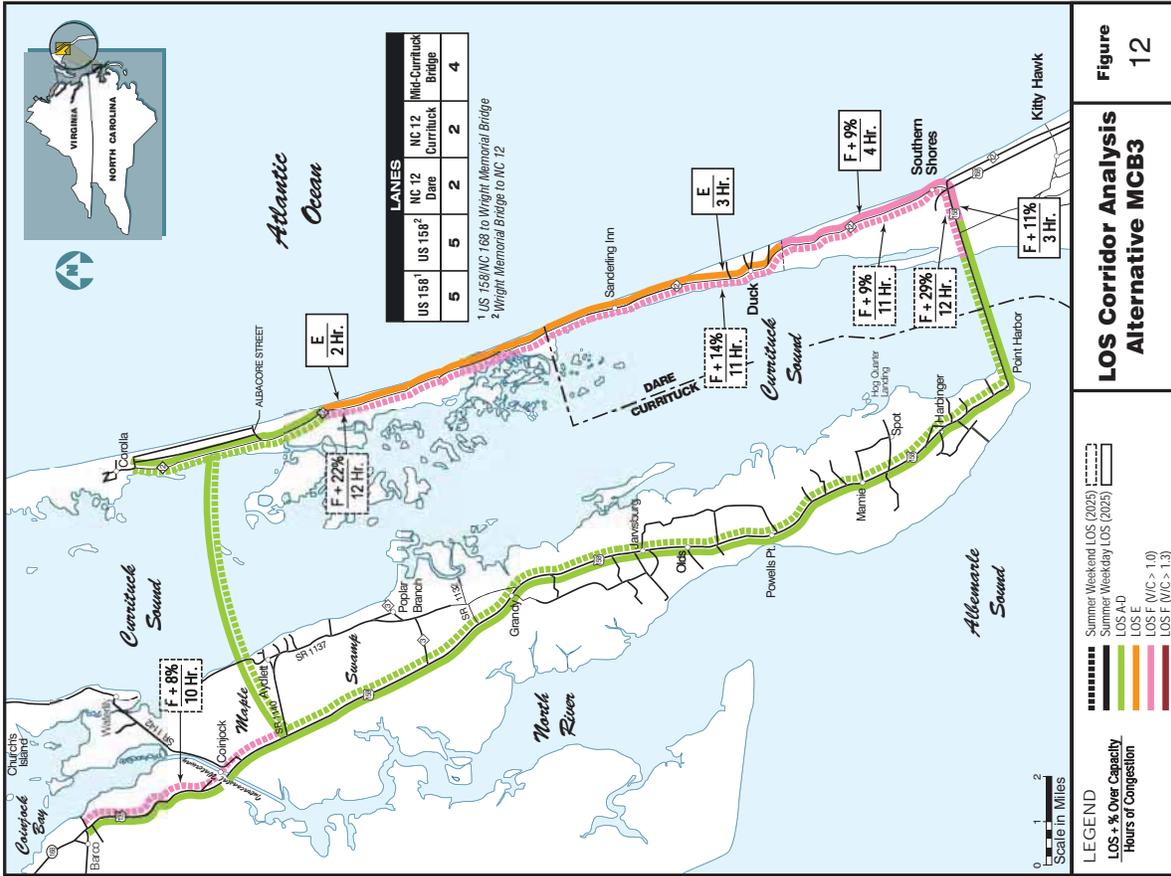
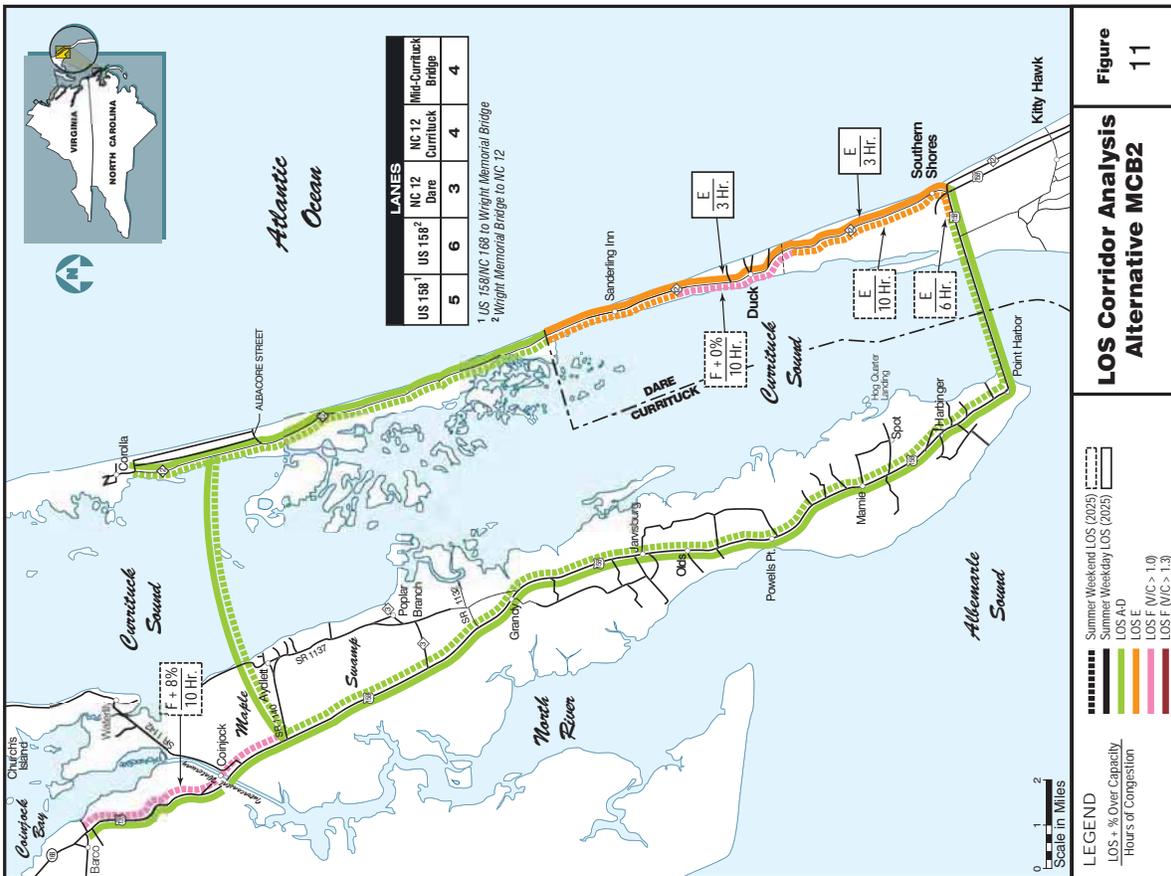


Chart 1. Number of Signalized Intersections Operating at LOS E or F in 2025

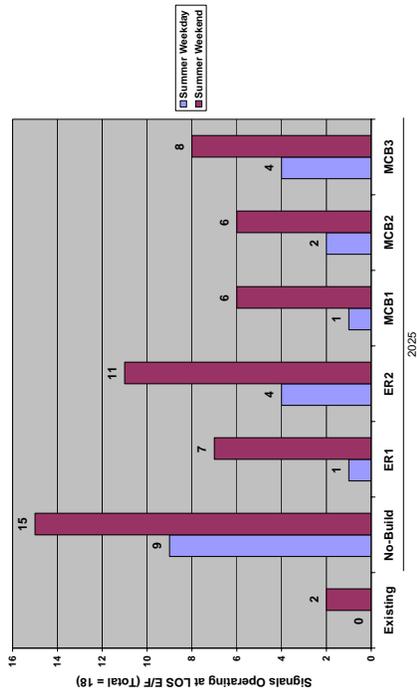
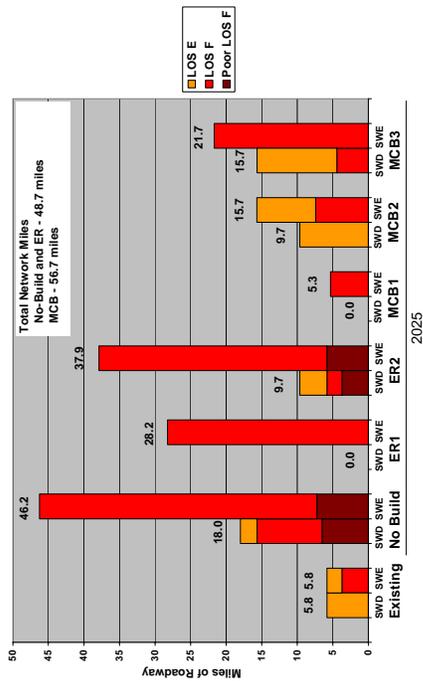


Chart 2. Number of Miles of Road Operating at LOS E or F in 2025



Note: See Figure 7 to Figure 12 for the location of the congested road segments.

Chart 3. Percent Vehicles Operating at LOS E or F in 2025

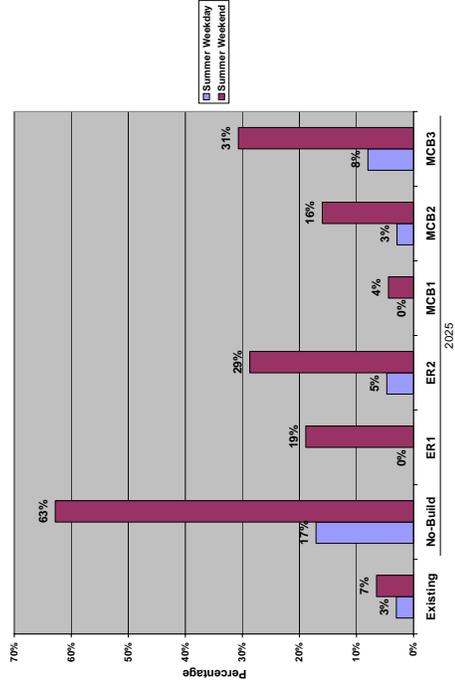


Chart 4. Annual Million Vehicle-Miles Traveled and Congested (LOS E or F) in 2025

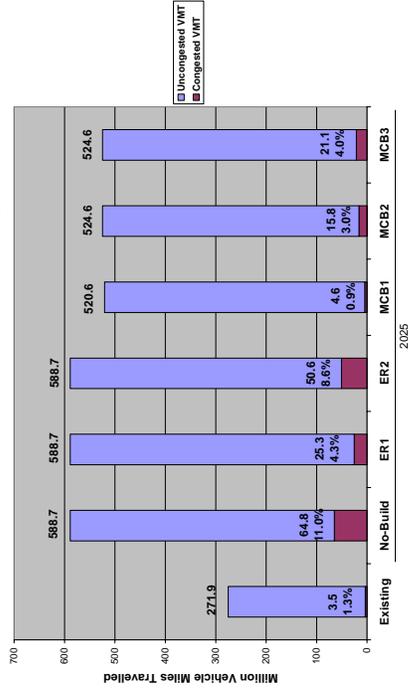


Chart 7. Total Residential and Business Displacement

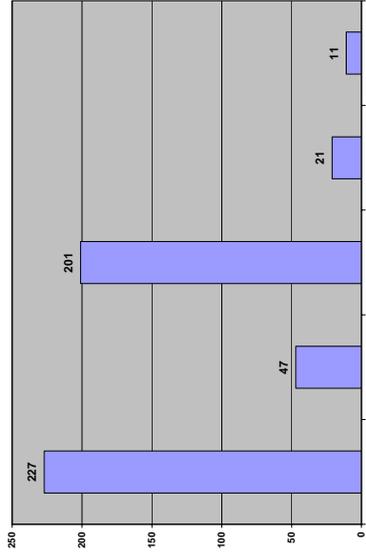


Chart 5. Travel Time in Minutes in 2025 from Aydlett Road on the Currituck County Mainland to Albacone Street on the Currituck County Outer Banks

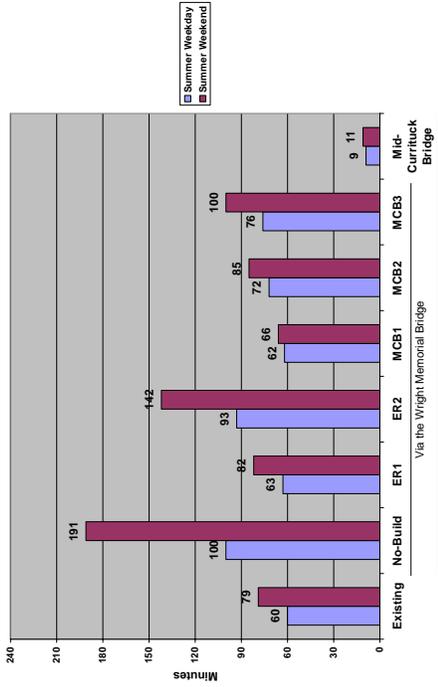


Chart 6. Total Cost

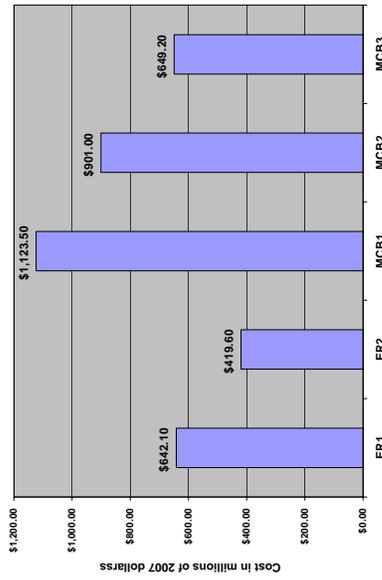


Table 6 (revised). Comparison of Highway Improvement Alternatives

Components	Highway Improvement Alternatives				
	ER1	ER2	MCB1	MCB2	MCB3
• Bridge	NA	NA	4	4	4
• US 158 (Wright Memorial Bridge to NC 12)	8	8	6	6	5
• NC 12 (Dare County north of US 158)	4	3	4	3	2
• NC 12 (Currituck County)	4	4	4	4	2 (4 near bridge)
• Location of US 158 Contraflow or Third Northbound Lane	Wright Memorial Bridge to NC 168 (24.5 miles)		Mid-Currituck Bridge to NC 168 (5 miles)		
Cost and Funding Availability					
Cost (in millions)					
• Mid-Currituck Bridge (average of C1 to C6)	NA	NA	\$546.9	\$546.9	\$546.9
• NC 12	\$526.3	\$303.8	\$526.3	\$303.8	\$77.3
• US 158 in Dare County	\$38.4	\$38.4	\$25.3	\$25.3	\$0.0
• US 158 in Currituck County (third northbound lane)	\$63.9 ¹	\$63.9 ¹	\$21.7	\$21.7	\$21.7
TOTAL COST	\$628.6	\$406.1	\$1,110.0	\$887.5	\$635.7
Available Funding (in millions)					
• Highway Trust Fund (2007 to 2013 TIP)	\$137.5	\$137.5	\$137.5	\$137.5	\$137.5
• Potential Total Revenue Bond Financing	\$0.0	\$0.0	\$284.0	\$284.0	\$284.0
• Potential Transportation Infrastructure Finance and Innovation Act (TIFIA) Financing	\$0.0	\$0.0	\$163.0	\$163.0	\$163.0
Potential Funding Shortfall (total cost minus available funding)	\$491.1	\$268.6	\$525.5	\$303.0	\$51.2
Potential for Public-Private Partnership to cover shortfall	No	No	No	No	Yes



Mid-Currituck Bridge Study

Currituck and Dare Counties

TIP No. R-2576

Highway Improvement Alternatives Comparison Handout 5— June 20, 2007

This handout presents an expansion and refinement of Table 6, which appeared in Handout 4. The factors presented are what the North Carolina Turnpike Authority plans to use to select the types of improvements or components to include in its detailed study alternatives.

This information will not be used in determining which bridge corridors (C1 to C6) to assess as detailed study alternatives. That decision will be based on the information presented in Table 4 of Handout 4, the outcome of the July 10 field trip, comments made by Currituck County representatives at a meeting held on June 8, and final comments made by TEAC representatives after the July 10 field trip.

Items added or changed to Table 6 were:

- Additional information on the availability of funding for the project and its relation to the cost of the alternatives (an addition suggested by agency representatives at the May 23 and 31 TEAC meetings).
- Key statistics related to travel and evacuation benefits derived from the data presented in Table 3 of Handout 4.
- Corrected right-of-way costs where some double counting of parcels was found in the area of the NC 12 bridge terminus after an additional review of the original numbers.
- Additional emphasis on the community impacts associated with the bridge corridors C1, C3, and C5 added after the meeting with local representatives on June 8.

Table 6 (revised). Comparison of Highway Improvement Alternatives

	Highway Improvement Alternatives				
	ER1	ER2	MCB1	MCB2	MCB3
Hurricane Evacuation Benefit (2030)					
• Clearance Time With US 158 Northbound Contraflow Lane in Currituck County	27.0 hrs	27.0 hrs	27.0 hrs	27.0 hrs	27.0 hrs
• Percent of a Reduction from 35.9 hours to 18 hours	50%	50%	50%	50%	50%
• Amount Above 18-hour Goal	8.9 hrs	8.9 hrs	8.9 hrs	8.9 hrs	8.9 hrs
• Clearance time With US 158 Third Northbound Lane in Currituck County	21.4 hrs	21.4 hrs	21.4 hrs	21.4 hrs	26.2 hrs
• Percent of a Reduction from 35.9 hours to 18 hours	81%	81%	81%	81%	54%
• Amount Above 18-hour Goal	3.4 hrs	3.4 hrs	3.4 hrs	3.4 hrs	8.2 hrs
Impact Potential					
Displacement					
• Mid-Currituck Bridge (average of C1 to C6)	0	0	5	5	5
• NC 12	195	15	195	15	5
• US 158 in Dare County	0	0	0	0	0
• US 158 in Currituck County (third northbound lane)	32	32	1	1	1
TOTAL DISPLACEMENT	227	47	201	21	11

Table 6 (revised). Comparison of Highway Improvement Alternatives

	Highway Improvement Alternatives				
	ER1	ER2	MCB1	MCB2	MCB3
Travel Benefits					
Congestion Benefits (2025)					
• Percent Reduction in Congested Annual Millions of Vehicle-Miles Traveled	61%	22%	93%	76%	67%
• Cost-Effectiveness Ratio (Total Cost Divided by Reduction in Vehicle-Miles Traveled)	16	29	18	18	15
• Percent Reduction in Miles of Road Operating at Poor LOS F (volume/capacity ratio 1.3 or greater)					
• Summer Weekday (SWD)	100%	43%	100%	100%	100%
• Summer Weekend (SWE)	100%	20%	100%	100%	100%
• Percent Reduction in Miles of Road Operating at LOS F (volume/capacity ratio 1.0 or greater)					
• Summer Weekday (SWD)	100%	63%	100%	100%	72%
• Summer Weekend (SWE)	39%	18%	88%	84%	53%
Travel Time Benefits (2025 Aydlett Road to Albacore Street)					
• Percent Reduction in Summer Travel Time via the Wright Memorial Bridge (weighted average of SWD and SWE)	46%	15%	50%	40%	34%
• Cost-Effectiveness Ratio (Total Cost Divided by Reduction in Summer Travel Time in Minutes via Wright Memorial Bridge)	11	21	18	18	15
• Percent Reduction in Summer Travel Time via Mid-Currituck Bridge (weighted average of SWD and SWE)	0%	0%	92%	92%	92%

Table 6 (revised). Comparison of Highway Improvement Alternatives

	Highway Improvement Alternatives				
	ER1	ER2	MCB1	MCB2	MCB3
High Quality Resources Filled/Bridged					
• Mid-Currituck Bridge (average of C1 to C6)	0.0/0.0	0.0/0.0	4.8/11.0	4.8/11.0	4.8/11.0
• NC 12	17.8/0.0	16.8/0.0	17.8/0.0	16.8/0.0	0.0/0.0
• US 158 in Dare County	0.2/0.0	0.2/0.0	0.0/0.0	0.0/0.0	0.0/0.0
• US 158 in Currituck County (third northbound lane)	1.4/0.0	1.4/0.0	1.4/0.0	1.4/0.0	1.4/0.0
TOTAL HIGH QUALITY RESOURCES FILLED/BRIDGED	19.4/0.0	18.4/0.0	24.0/11.0	23.0/11.0	6.2/11.0

¹ Construction cost only Aydlett Road (SR 1140) to Wright Memorial Bridge.

Table 6 (revised). Comparison of Highway Improvement Alternatives

	Highway Improvement Alternatives				
	ER1	ER2	MCB1	MCB2	MCB3
Rural/Beach Community Fragmentation	Four through lanes crossed by beach users, shoppers, or hotel guests in Dare County.	New turn lane crossed by beach users or hotel guests in Dare County.	Same as ER1 plus Mid-Currituck Bridge passes through Aydlett (C3 and C4 through center) and C1, C3, and C5 pass through middle of new subdivision	Same as ER2 plus Mid-Currituck Bridge passes through Aydlett (C3 and C4 through center) and C1, C3, and C5 pass through middle of new subdivision	Mid-Currituck Bridge passes through Aydlett (C3 and C4 through center) and C1, C3, and C5 pass through middle of new subdivision
Habitat Fragmentation	None	None	Associated with Mid-Currituck Bridge crossing of Maple Swamp and loss of swamp forest and hardwood forest; C1 to C4 in vicinity of an existing forest edge; C5 and C6 create a new edge and also use bay forest.		
Wetland Filled/Bridged					
• Mid-Currituck Bridge (average of C1 to C6)	0.0/0.0	0.0/0.0	14.0/13.0	14.0/13.0	14.0/13.0
• NC 12	10.9/0.0	10.4/0.0	10.9/0.0	10.4/0.0	6.3/0.0
• US 158 in Dare County	4.2/0.0	4.2/0.0	3.4/0.0	3.4/0.0	0.0/0.0
• US 158 in Currituck County (third northbound lane)	23.1/0.0	23.1/0.0	10.8/0.0	10.8/0.0	10.8/0.0
TOTAL WETLANDS FILLED/BRIDGED	38.2/0.0	37.7/0.0	39.1/13.0	38.6/13.0	31.1/13.0



Mid-Currituck Bridge Study

Currituck and Dare Counties

TIP No. R-2576

1995 Comparison of Bridge Alternatives Handout 6— June 20, 2007

One question asked at our May Turnpike Environmental Agency Coordination (TEAC) meetings was whether bridge corridor alternatives were considered north and south of bridge corridors C1 to C6 (see attached Figure 1 from Handout 4). Corridors C1 to C6 were selected as detailed study alternatives for the 1998 Draft Environmental Impact Statement (DEIS) based on an alternatives study that considered additional corridors to the north and south. This study was posted on the project web site after the May TEAC meetings. The full range of corridors discussed in that alternatives study area shown in the attached Figure 2-3 from the 1998 DEIS. The purpose of this handout is to summarize the reasons the northern and southern corridors were not selected for detailed evaluation in the 1998 DEIS and why corridors even further north and south also were not considered. With one exception, noted in the discussion of the southern corridor, the characteristics of the existing environment that were the basis of the 1995 analysis remain valid.

Summary of Reasons Why Corridors N1, N2, and S Were Not Selected for Detailed Study in 1995

The 1995 alternatives study, as presented in the 1998 DEIS and the 1995 Alternatives Study Report, compared the corridors evaluated from the perspective of numerous different measures related to engineering (including cost), traffic, social-economic-cultural resource, and natural resource considerations. Findings were presented both quantitatively in data tables and qualitatively in a ball chart. The northern and southern alternatives were not selected for detailed study for the following reasons:

- N1 was found to be substantially more costly and to have high social and wetland impacts. N1 would be a longer project (10 miles long versus approximately 7 miles for the other corridor alternatives). This additional length would result in the higher cost, approximately 40 to 46 percent higher (\$71 to \$88 million versus \$50 to \$60 million in 1995 dollars). N1 would bisect the community of Waterlily by placing bridge traffic on SR 1142, which passes through the community. Approximately 51 acres of wetlands would be impacted. In this alternatives analysis, a two-lane bridge

and approach roadway was assumed. Impacts would be greater for a four-lane bridge and including widening SR 1142 to four lanes.

- N2 was found to have higher natural resource impacts and was not supported by citizens or resource agency representatives. This corridor would impact 40.7 acres of wetlands (again assuming a two-lane bridge) would cross Maple Swamp at its widest point, and would not follow an existing forest edge, further fragmenting the habitat.
- S would have high social and natural resource impacts and would use land from a property listed on the National Register of Historic Places. Also, S would not do as well as the other corridors from the perspective of improving level of service on NC 12 because bridge traffic would mix with a larger number of travelers on NC 12 going to and from destinations south of the bridge.
- S would pass through the community of Poplar Branch on the mainland side of the project. As many as 24 homes would be within 250 feet of the project and four homes would be displaced. The presence of the bridge would separate 17 homes from the remaining 103 in the community.
- S would pass through a group of marsh islands currently considered a Significant Natural Heritage Area, although in an area where the islands themselves are least intense. Some islands would be crossed.
- The alternative would pass through the Currituck Shooting Club, which is listed on the National Register. Figure 3-7 from the 1998 DEIS is also attached and shows the Club's boundaries, which are extensive and encompass the marsh islands along the eastern shore of Currituck Sound. Although the hunt club is still listed on the National Register, the associated hunt club building was destroyed by fire in 2003 and much of the Outer Banks portion of the site has been developed as a golf course community. This introduces an additional social impact that was not a factor in 1995, the division of a second community with associated community impacts and increases in the cost of the corridor. If one compares the corridor location with an aerial photograph of the Currituck Club community one finds:
 - The primary impact would be to the golf course. One hole would be displaced (including a water hazard) and three fairways would have to be shortened by either moving the tee box or the green. The easy movement of players from one hole to the next would be affected in two ways, through the loss of the hole and the bridge corridor would separate two remaining holes from the balance of the course. A passageway under the approach road to the bridge from NC 12 would need to be provided for access to those holes.

- The corridor's presence would cause noise and visual impacts to nearby homes (10 homes are presently within 250 feet of the corridor). A local north-south road would need to be bridged to maintain the continuity of the subdivision's existing circulation system. Because the land used is primarily associated with the golf course, no displacement of homes or businesses would occur.
- The cost of land and modifying the golf course would add to the cost of building in the project.

The corridor could be moved to the south or north to take a different pathway through the community. If this were done, in either direction, two golf course holes would be displaced or shortened by several hundred feet. Four to six homes would be displaced.

The reasons for not carrying these alternatives forward as detailed study alternatives in 1995 remain valid today, with the exception of the change associated Corridor S. The change in Corridor S substitutes an historic resource impact for a community impact; however, the study team has concluded that this difference does not result in a different decision now from the 1995 decision.

Reasons for Not Studying Corridors Even Further North and Even Further South

In 1995, alternatives north of Corridor N1 were not assessed for the following reasons:

- They would necessitate a new high level bridge across the Intracoastal Waterway and result in a bridge even longer than that of Corridor N1. Both factors would result in higher costs than Corridor N1, the most expensive of the alternatives considered.
- The Outer Banks terminus would need to be placed at or south of the northern end of NC 12.
- Locations north of the C1, C3, and C5 Outer Banks terminus and south of the end of NC 12 would affect additional wetlands, developed areas, the viewshed of the Whalehead Hunt Club (listed on the National-Register), and/or use land from the Whalehead Hunt Club, Currituck Beach Light Station, or Corolla Historic District (all either listed or eligible for inclusion in the National Register).

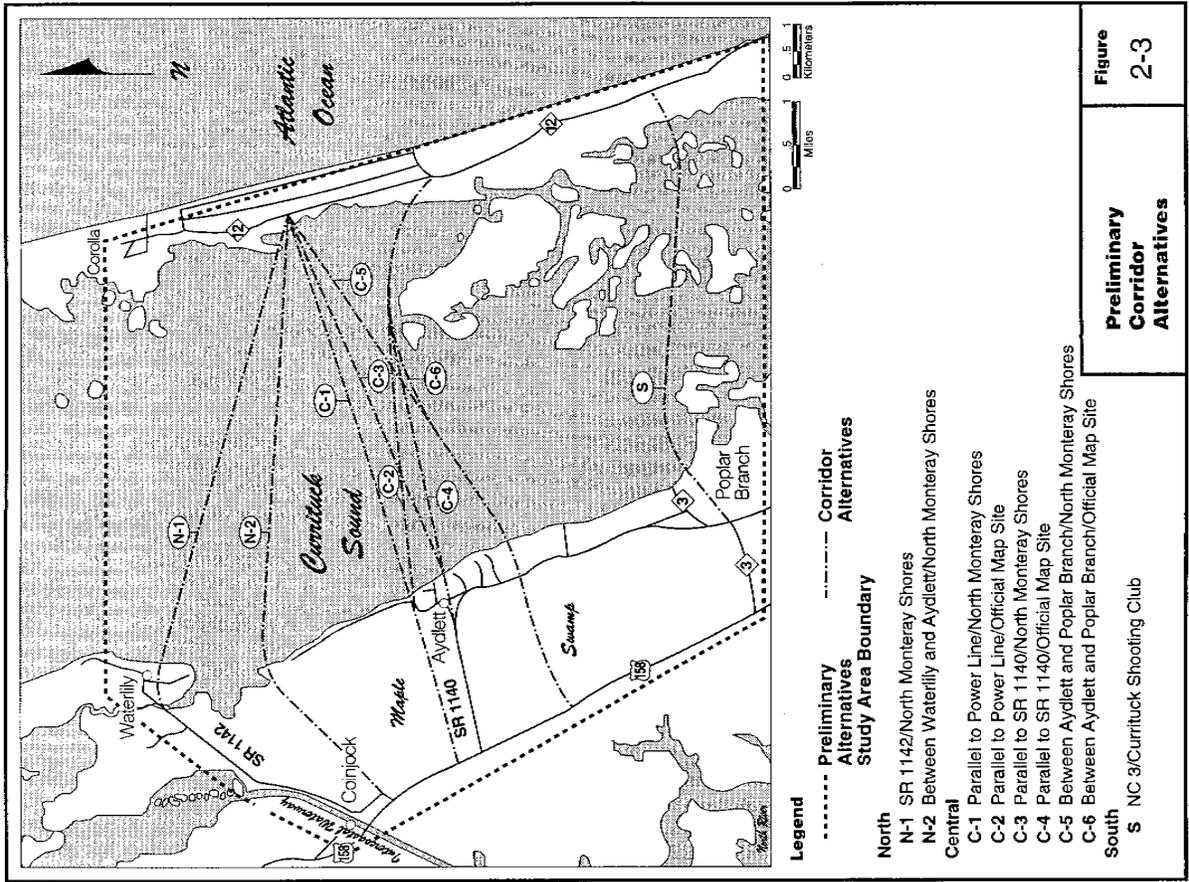
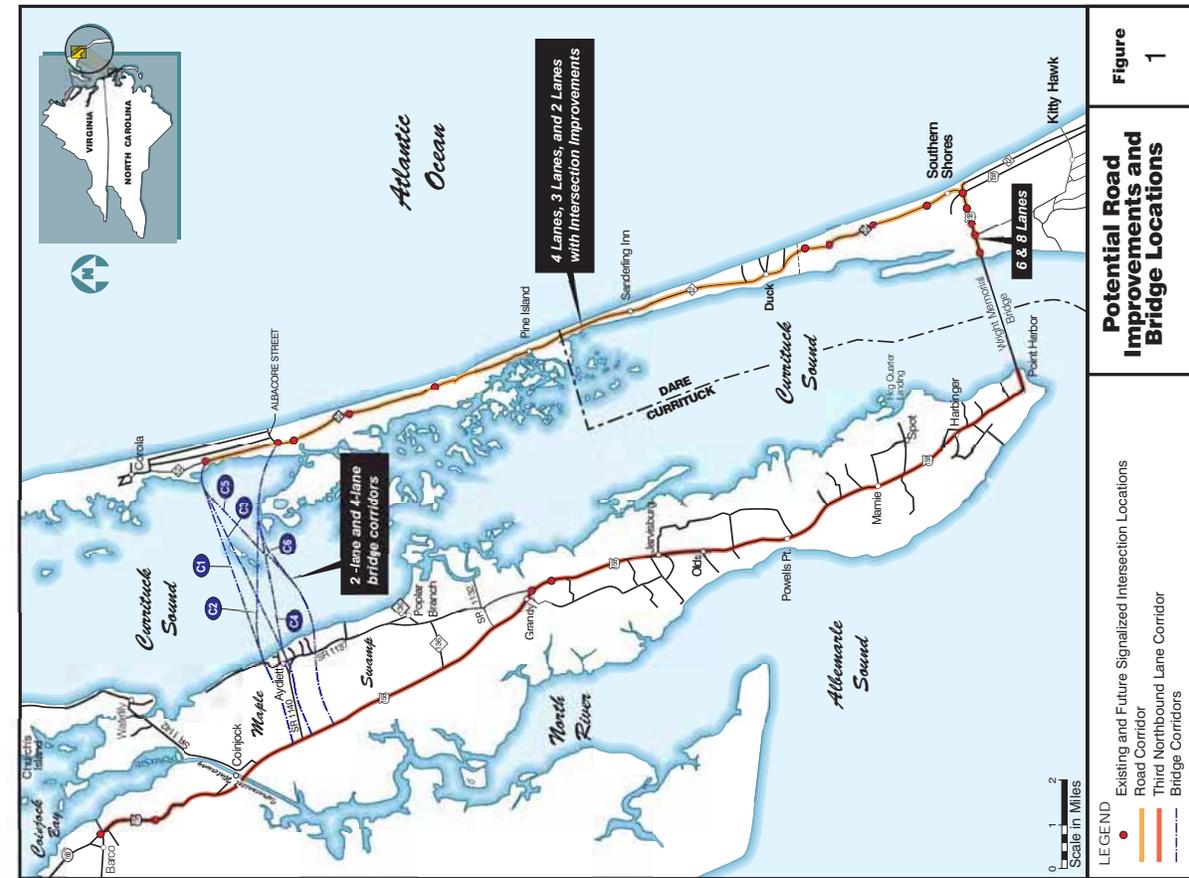
In 1995, alternatives south of Corridor S were not assessed for the following reasons:

- The project is defined as a bridge in Currituck County.
- In order to avoid impacts to the Pine Island Audubon Sanctuary (which is also a Coastal Barrier Resources Act designated area), which parallels NC 12 for

approximately 3.8 miles in Currituck County beginning at the Dare /Currituck County line.

- A bridge in Dare County would bring bridge traffic into the most congested portion of NC 12 where widening the existing road to accommodate traffic coming on an off right-of-way is only 60 feet wide.
- As the bridge is placed further south, less and less travel demand would shift from on NC 12 and US 158 in Dare County where the highest levels of congestion occur in 2025 and therefore the travel benefits of the bridge would diminish.

These findings reflect current conditions in the project area and remain valid.





Mid-Currituck Bridge Study

Currituck and Dare Counties

TIP No. R-2576

Response to Agency Comments May 23 to June 12, 2007 Handout 7 – June 20, 2007

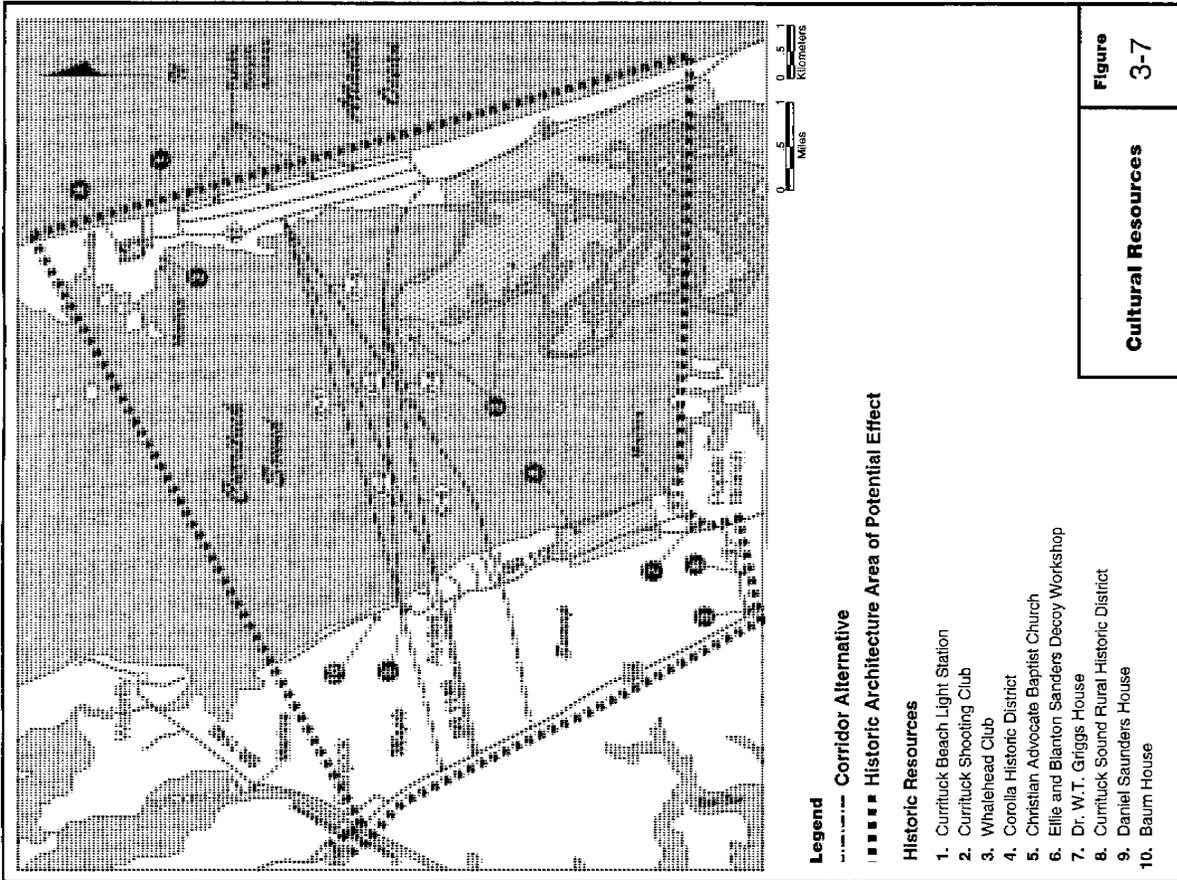
The following presents responses to questions asked by the Turnpike Environmental Agency Coordination (TEAC) meeting participants at the May 23 and 31 TEAC meetings but were not answered at that time, as well as responses to written comments from the NC Division of Water Quality dated June 12, 2007.

Meeting Comments

1. **What process did you follow in 1995 to select C1 to C6 as your detailed study alternatives?**
See Handout 6.
2. **Have you considered an alternative further south in Dare County?**
See Handout 6.
3. **Would multiple ferry terminals provide for enough trips across Currituck Sound to be a viable alternative?**

The following table shows information for three ferry scenarios. The first is a typical or conventional ferry service. It is typical because it has one set of ferry docks, uses a typical ferry boat that is used by the North Carolina Department of Transportation (NCDOT) Ferry Division, and uses a typical ferry schedule. These assumptions were updated after conversations with the Ferry Division after the May 23 TEAC meeting. The ferry information was last updated in 2005 and was assumed to be current in Handout 4; however, the Ferry Division is now phasing out its 22-vehicle boat favoring of a 40-vehicle boat. A typical headway (time between ferries) for the 40-vehicle boat is 30 minutes.

In order for a ferry to offer the same traffic congestion reduction benefits as a Mid-Currituck Bridge, it would need to be able to carry the same number of vehicles as forecast for the bridge during both summer peak periods. The following table



presents the characteristics and costs of a typical ferry service, a ferry service that would carry the same traffic as a Mid-Currituck Bridge during summer weekday peak periods, and a ferry service that would carry the same traffic as a Mid-Currituck Bridge during summer weekend peak periods.

	Typical Ferry Operation		Ferry Operation Whose Maximum Capacity would Service Mid-Currituck Bridge Peak Period Use	
		Summer Weekday	Summer Weekday	Summer Weekend
Number of Operations	1	10	10	20
Number of Operating Ferries	4	40	40	80
Capacity (vehicles per hour)	80 vph	800 vph	800 vph	1,600 vph
Land Needed for Terminals	3 -4 acres	30-40 acres	30-40 acres	60-80 acres
Volume of Sound Bottom Dredge Material and Frequency (cubic yards)				
• Access Channel (6.2 to 6.8 miles long annually)	261,000 cu yds	261,000 cu yds	261,000 cu yds	261,000 cu yds
• Navigation Channel (between docks every 5 years)	2,400,000 cu yds	24,000,000 cu yds	24,000,000 cu yds	48,000,000 cu yds
• Turning Basins (annually)	400,000 cu yds	4,000,000 cu yds	4,000,000 cu yds	8,000,000 cu yds
• Over 50 years	57,050,000 cu yds	453,050,000 cu yds	453,050,000 cu yds	893,050,000 cu yds
Approximate Area of Sound Bottom Affected by Dredging (acres)				
• Access Channel	20 acres	20 acres	20 acres	20 acres
• Navigation Channel	186 acres	1,860 acres	1,860 acres	3,720 acres
• Turning Basins	31 acres	310 acres	310 acres	620 acres
Total Area	237 acres	2,190 acres	2,190 acres	4,360 acres
Ferry Cost				
• Initial Ferry Capital Cost				
• Ferries	\$45,000,000	\$450,000,000	\$450,000,000	\$900,000,000
• Facilities	\$18,500,000	\$185,000,000	\$185,000,000	\$370,000,000
Total Ferry Capital Cost	\$63,500,000	\$635,000,000	\$635,000,000	\$1,270,000,000
• Annual Operating Cost ¹				
• Fixed	\$549,000	\$1,784,000	\$1,784,000	\$2,172,000

	Typical Ferry Operation	Ferry Operation Whose Maximum Capacity would Service Mid-Currituck Bridge Peak Period Use	
		Summer Weekday	Summer Weekend
Dredging	\$865,000	\$6,869,000	\$13,541,000
Vessel & Terminal Labor	\$1,240,000	\$4,030,000	\$4,906,000
Maintenance	\$3,750,000	\$12,188,000	\$14,836,000
Total Annual Operating Cost	\$6,404,000	\$24,871,000	\$35,455,000
• Total Operating Cost Over 50 Years	\$320,200,000	\$1,243,550,000	\$1,772,750,000
• Replacement of Ferries at 30 Years of Use	\$45,000,000	\$450,000,000	\$900,000,000
• Percent of Costs Customarily Paid by User Fares	25%	25%	25%
Access to Ferry Terminal (an additional initial capital cost and maintenance cost)	Aydlett Road to Currituck Sound on mainland and connection to NC 12 on Outer Banks	US 158 interchange and two-lane bridge to Currituck Sound on mainland; connection or connections to NC 12 on Outer Banks	US 158 interchange and two-lane bridge to Currituck Sound on mainland; connection or connections to NC 12 on Outer Banks
Travel Time from Mainland to Outer Banks (compared to 10 to 11 minutes with Mid-Currituck Bridge)	Approximately 60 minutes	Approximately 60 minutes	Approximately 60 minutes

¹ Except for dredging, which independent of operating time, operating costs for the ferry service assumed that when ferries are not needed or idle, they have no operating costs. For the 39 non-summer weeks a year, the cost of operating four ferries was assumed. For summer weekdays the cost of operating 40 ferries was assumed. For summer weekends, the cost operating 80 ferries was assumed.

The table indicates for two bridge service equivalent scenarios that:

- Much of the cost and impact associated with the approach bridges and roads to a bridge over Currituck Sound would remain in order to provide access to ferry terminals by users.

- Substantial land with associated impacts to communities and habitat would be required for ferry terminals.
- Initial capital costs would be more than the cost of a Mid-Currituck Bridge.
- Operating costs would be high and typically the NCDOT only recovers 25 percent of its costs on existing ferries that charge a fare.
- Compared to MCB1, MCB2, and MCB3, travel time would be similar to traveling via the Wright Memorial Bridge on the summer weekday and lower than traveling via the Wright Memorial Bridge on a summer weekend, but substantially higher than what a Mid-Currituck Bridge could achieve at less cost.

In terms of hurricane evacuation, the ferry would not achieve the hurricane evacuation benefit associated with a Mid-Currituck Bridge. The Mid-Currituck Bridge would eliminate the need for a third northbound lane for 20 of the 25 miles of US 158 between NC 168 to the Wright Memorial Bridge. The Ferry Division shuts down its operations 12 hours before the arrival of tropical or gale force winds in order to get its equipment and personnel to safety. The clearance time estimates derived from the hurricane evacuation model are the time it takes for evacuees to reach a point of safety before the arrival of tropical or gale force winds. Thus, the ferry would not operate for 12 of the 21.4 to 27 hours of clearance time (see Table 6 revised in Handout 5) associated with the MCB alternatives. Travel during an evacuation peaks during the middle 50 percent of the clearance time. Thus, the ferry service would not operate during the entire period of peak evacuation traffic and the additional northbound lane on US 158 would be needed for the entire 25 miles when the ferry shuts down to keep peak period evacuees moving at a rate that would still achieve the 21.4- to 27-hour of clearance time associated with a bridge.

4. Explain further why mention of summer weekday traffic should not remain as a part of your first project need.

In traffic planning, one does not usually plan for the worst case. For example, the 30th highest hour of traffic volume is commonly used in urban areas as the “design hourly volume” or the future peak hour volumes for which one designs a road improvement. For this project, traffic studies found that the summer weekday peak period traffic volume most closely represents the typical design hourly volume.

However, we have recognized throughout this project that there is a substantial congestion problem on the summer weekend that, based on current traffic findings, will last 10 to 14 hours per day. Thus, we have continued to generate traffic statistics for both the summer weekday and the summer weekend and continue to believe it is appropriate to consider both summer weekday and summer weekend travel benefits in our decision making. The change in the need statement affirms the relevance of

Handout 7

4

June 20, 2007

the summer weekend data. Examining both allows us to perhaps make a decision that an alternative with notable reductions in both summer weekday and summer weekend congestion has as much merit as an alternative that eliminates summer weekday congestion while having only minimal reductions in summer weekend congestion.

5. Are colonial water birds using the two small islands in the middle of Currituck Sound that are affected by Corridor C3?

The US Geological Survey depicts two tidal flats on the Mossey Islands topographic quadrangle map (1982). These tidal flats are shown in the Currituck Sound within the project area and in the area of Corridor C3. The tidal flats are not apparent on the project aerial photograph or the USGS map base photography. It is assumed then that they are exposed only during low tide. Thus, these areas would be unsuitable for ground-nesting birds and would not contain vegetation that would support nesting herons and related birds. The Natural Heritage Program indicates that they know of no rare species or wading bird colonies in the project area.

NC Division of Water Quality Comments dated June 12, 2007

1. The bridging options proposed as MCB1, MCB2, and MCB3 state a four-lane bridge will be constructed. However, the “Potential Bridging Lanes” sections states that a two-lane bridge may be constructed first. Please clarify.

Several different lane configurations are under consideration. A final decision will be made based on traffic forecasts and further consideration of the best project from the perspective of toll financing. Configurations could include: a two-lane bridge, a three-lane bridge with a reversible center lane, a four-lane bridge, and buying the right-of-way for a four-lane bridge and building two lanes now and two lanes later when traffic warrants the second two lanes. The impact and traffic information in Handout 4 assume a four-lane bridge (two two-lane bridges).

2. It is stated that the impacts shown represent a four-lane bridge, and are presented as a worst-case scenario. However, it is not known if the additional two lanes (either through an additional bridge or expanding the then existing bridge) will occur or if the three-lane option will be built. The DWQ would like to see impacts for each proposed bridge type being considered.

The impact area associated with the US 158 interchange, toll plaza, and NC 12 intersection would be similar with any bridge lane configuration. Irrespective of what the kind of capacity the NCTA chooses to include on the bridge, back-ups at the US 158 interchange, the toll plaza, and the NC 12 intersection are not acceptable and these components would be designed to meet forecast demand. Thus, the primary difference between the different bridge widths is the amount of wetland bridged. The wetland bridged numbers in Handout 4 assume the area of bridge

Handout 7

5

June 20, 2007

deck. In the case of the four-lane bridge, the total deck width would be 76 feet (see Figure 6 in Handout 4). A two-lane bridge would have a deck width of 40 feet and a three-lane bridge would have a deck width of 52 feet. As shown in Table 6 in Handouts 4 and 5, the average area of wetland bridged would be 13 acres with four lanes and 76 feet of deck. The average area of wetland bridged would be 9 acres for three lanes (52 feet of deck) and 7 acres for two lanes (40 feet of deck).

3. **Option MCB3 states that NC 12 would be widened to four lanes from two to four miles south of the proposed bridge. When will it be decided how many miles the widening will be? What is the length the cost of this upgrade in Table 6 is based upon?**

The length of widening on NC 12 would be four miles with the northern Outer banks terminus and two miles with the southern Outer Banks terminus. The cost of \$90.8 million shown in Table 6 (revised) in Handout 5 assumes four miles of widening. The cost would be \$59.9 million for two miles of widening.

4. **It would seem the impacts from building two two-lane bridges would be greater than for a single four-lane bridge. This would mostly be due to the area between the two bridges, which would not exist in a four-lane bridge. It is unclear in the document which type of four-lane bridge the impacts are based on.**

The numbers for the area bridged by four lanes assumes two two-lane bridges and, as noted above, reflects the area of deck. A single four lane bridge would have a similar deck width to a pair of two-lane bridges, 74 feet instead of 76 feet.

5. **A three-lane bridge is mentioned as a potential option. Would such a bridge be constructed such that it would be expandable in the future to four-lanes if needed?**

It is unlikely the NCTA would build a three lane bridge and then add an additional lane or lanes later to create four travel lanes. If the NCTA wishes to defer costs associated with an ultimate four-lane bridge, it would more likely begin with a two-lane bridge.

6. **In the "Findings and Considerations Used in Developing of the Highway Improvement Alternatives" section, there is a list of reasons why a four-lane bridge is appropriate. The second bullet compares a two-lane bridge to the four-lane bridge. A two-lane bridge would only affect LOS on the bridge itself, and not the surrounding network of roads. In fact, the text states, "...therefore differences between a four-lane and a two-lane bridge are small." It is unclear why a four-lane bridge is more appropriate than a two-lane bridge if the additional two lanes only affect LOS on the bridge itself. Does the cost of the additional two lanes justify increasing the LOS just on the bridge itself?**

It would be desirable to build a bridge that does not suffer congestion in the design year (a two-lane bridge would have a peak period level of service E on both the summer weekend and the summer weekend in 2025). As noted in the response to question 1, a final decision will be made based on both traffic forecasts and further consideration of the best project from the perspective of toll financing. For now, we assumed four lanes, the worst case from the perspective of cost and potential impact.

7. **With respect to ferry service analysis, it appears as though the analysis between ferry service and traffic volume was made using traffic counts at the US 158/NC 12 intersection. It does not seem appropriate to use traffic already using NC 12 as a comparison, as it assume that all traffic at this intersection is coming from the Wright Memorial Bridge. It does not take into account traffic moving from the south. It would seem more appropriate to use the estimates that are projected to use the Mid-Currituck Bridge instead, since this is what the ferry service would "replace." In this scenario, and according to Table 3, traffic count comparisons should be based on 22,000 to 35,100 vehicles per day, not the 41,500 that are projected to pass through the NC 12/US 158 intersection. (Note that this is not to imply that ferry service would necessarily meet the purpose and need).**

For the ferry analysis in Handout 4, we assumed a typical ferry service. A typical ferry service would not serve the same number of vehicles as a bridge and so the focus in Handout 4 was on the question of: What would the ferry accomplish in terms of improving traffic flow with its limited capacity? Thus, we asked how would the removal of the ferry trips from the current road network improve traffic flow on a representative worst-case road link, NC 12 just north of (not at) the US 158 intersection. The link north of the intersection includes the traffic coming from the south, as well as the Wright Memorial Bridge.

In the ferry analysis contained in the response to meeting question 3 above, we looked at a ferry service that could carry the same traffic volumes that would use a Mid-Currituck Bridge and therefore offer the same benefits to traffic on US 158 and NC 12 as a Mid-Currituck Bridge. For that analysis we used the bridge traffic forecasts to size the ferry service considered.

8. **No mention is made as to whether the impacts presented in the document include those associated with the tollbooths.**

The functional designs used to assess impacts do include the area needed for toll collection as do the impact numbers.

9. **The "Cost" section states that the cost of adding a third lane to the Knapp Bridge is included in Table 6. Adding an additional lane to this bridge is not discussed anywhere else in the document, why is it included in Table 6? Also, it is unclear**

from Table 6 where the cost of this additional lane is shown on the table – which cost number is it factored into?

The third northbound lane for the Knapp Bridge is a part of the third northbound lane on US 158 in Currituck County needed to reduce hurricane clearance times. That lane would be about 5 miles long with a Mid-Currituck Bridge and about 25 miles long without a Mid-Currituck Bridge. In both cases, a third lane would be added to the Knapp Bridge. The cost of the third northbound lane, including the Knapp Bridge component, is included as the fourth bullet under “Cost” in Table 6. The Knapp Bridge component is approximately \$7 million.

10. The DWQ is concerned about the potential impacts from the ramps and interchanges, especially those associated with the western end of the project. The preliminary design shows rather large impacts to the wetlands on the western side of US 158. Further design modifications may reduce impacts to this area. The NCTA is respectfully reminded that the issuance of 401 Water Quality Certification will require that impacts to wetlands and other natural resources be reduced as much as possible.

The study team worked to minimize wetland impacts in the functional designs used to assess potential wetland impacts in the alternatives analysis. This effort will continue during preliminary design, taking into account delineated wetlands.

The study team’s engineers indicate that the US 158 interchange layout is controlled in part by the design speed for existing US 158, which is 60 mph. The exit ramps in the functional design assume a 50 mph design speed. During preliminary design, the engineers will consider whether they can safely reduce the exit design speed further. The engineers also used a parallel-type exit ramp rather than an angular-type to reduce the distance between the ramp and US 158. Finally, the engineers would result in the shortest bridge over US 158 to approximately 109 degrees (which increased the length of the bridge over US 158), which again helped reduce the impact of the interchange on wetlands. There are, however, limits to how long one can make the bridge over US 158 since it must clear 5 lanes and the shoulders. These assumptions reduced the offset between US 158 and the center line of proposed ramps by approximately 100 feet from what it could have been, narrowing the interchange and reducing wetland impacts.

11. Recent meetings regarding the replacement of Bonner Bridge (TIP B-2500) have shown that this project could exceed \$1 billion dollars. At this cost, Division 1 funds would be severely depleted, limiting funds for other Division projects. According to Table 4, the cost of building this project could run over \$500 million dollars, which is a significant amount. After reviewing GS 136 §136-89.192 it is understood that funds from the sale of the NCTA’s bonds or notes are not subject

to the equity distribution formula, which will most likely be the primary source of funding. Will there be funds allocated to this project that are not included from the sale of such, and would those funds then be subject to the equity formula?

The 2007 to 2013 TIP includes \$137 million dollars allocated to the project from the Highway Trust Fund. These funds take into account the equity formula. Any other funds required and not associated with toll revenue bonds, Transportation Infrastructure Finance and Innovation Act (TIFIA) financing, or a Public-Private Partnership would be subject to the equity formula unless allocated to the project by a special act of the State Legislature, which is not expected. Table 6 (revised) in Handout 5 compares estimated funding availability with the total estimated cost of ER1, ER2, MCB1, MCB2, and MCB3. No funding is assumed to be available for this project outside that associated with the \$137 million, toll revenue bonds, TIFIA financing, and/or a Public-Private Partnership.



Mid-Currituck Bridge Study

Currituck and Dare Counties

TIP No. R-2576

Response to Agency Comments at the July 18, 2007 TEAC Meeting Handout 8 – August 6, 2007 (Updated September 5, 2007)

The following presents responses to questions asked by the Turnpike Environmental Agency Coordination (TEAC) meeting participants at the July 18, 2007 TEAC meeting. Responses to questions 1, 2, 4, and 10 were updated.

Meeting Comments

1. What is the legislative intent of North Carolina General Statute §136-102.7 regarding hurricane evacuation? This legislation refers to a hurricane evacuation standard and not a goal. FHWA should obtain clarification from the NC General Assembly's Transportation Oversight Committee and this information be fully disclosed in the DEIS.

The legislation does say the 18-hours is a standard. It does not, however, dictate how that standard is to be met. It does not mandate that transportation officials achieve that standard in a single project either statewide or regionally. Therefore, for coastal projects that contain a controlling link (a segment of road whose capacity governs the forecast clearance time), state transportation officials currently expect to include hurricane evacuation in the statement of purpose and need and evaluate alternatives with the goal of bringing the forecast clearance time closer to the 18-hour standard. Such alternatives could include both new road infrastructure and emergency management strategies, such as reversing travel lanes during an evacuation.

The FHWA discussed the standard versus goal question with NCDOT Deputy Secretary Coward, who agrees with the mutual NCDOT and Turnpike staff interpretation of the 18-hour "standard" as a goal for individual projects rather than a "must meet" directive. It is Secretary Coward's recollection that this was the intent of the legislature at the time it was adopted, and she does not believe further clarification of the statute with the legislature is necessary.

2. What is the legislative intent of the accelerated pilot toll bridge project (North Carolina General Statute §136-89.183) with specific regard to the terminology "bordering the State of Virginia?"

The statute is referring to the Mid-Currituck Bridge project. The statute does not say the bridge should end at the border with Virginia but at a peninsula that borders the State of Virginia. The peninsula borders Virginia and not the bridge corridor. The project corridors all end on that peninsula. This particular portion of the Turnpike Authority's legislation dates back to the early to mid-1990's. Its original intent was to authorize NCDOT to finance with tolls any project that fit this narrow description. The only pending project that fits that description then and now is the Mid-Currituck Bridge project.

3. What are the FHWA and NCTA's thoughts regarding a Tiered EIS?

FHWA, as the Lead Agency, has considered the comment and does not think that a Tiered EIS is appropriate for this project.

4. What is the breakdown of relocations necessitated by direct impacts and relocations necessitated by reduced lot sizes?

The NCTA's right-of-way consultant counted potential relocations in the field based on conceptual designs prepared by NCTA overlaid on aerial photography. They counted 180 relocations either by direct impacts or lot size reduction in Dare County with the four-lane widening alternative. These relocations consisted of 124 dwelling units and 56 businesses. To identify direct displacements, NCTA counted the number of dwelling units and businesses within the footprint of the four-lane alternative in Dare County, also using its conceptual designs and aerial photography. These counts found 79 dwelling units and 30 businesses in 16 buildings within the project footprint. An additional business would lose all its parking with no space on the remaining lot for more parking for a total direct displacement of 110 dwelling units or businesses.

5. What are the minimum lot size ordinances, prevalence of individual septic systems, and relation of lot size to CAMA Land Use Plan?

Lot Size Ordinances – The *Town of Duck Zoning Ordinance, Sections 17 (d), 18 (d) and 19 (d)* require minimum lot sizes of 20,000 sq.ft. for lots with septic systems and private wells, and 15,000 sq.ft. for lots with septic systems and central water or packaged wastewater systems and central water. The *Town of Southern Shores Code of Ordinances Chapter 11(Zoning Ordinance), Articles VII, Sections 7.01 D., 7.02 D., 7.03 D., and 7.04 D* state that the minimum lot size is 20,000 sq.ft., with the exception of a minimum lot size of 17,802 for multi-family residential (calculated at 3 units) on a community sewage system (Section 7.02 D, [c]).

Prevalence of Individual Septic Systems - The Town of Duck Planner stated that the town is primarily on septic systems with the exception of the Sanderling Inn. Based on the Southern Shores Zoning Ordinance and Land Use Plan it appears that Southern Shores is primarily on septic systems.

Relation of Lot Size to CAMA LUP - Duck and Southern Shores recognize the minimum lot size of 20,000 sq.ft. in their CAMA land use plans for all lots on individual septic systems.¹

Potential Inability to Issue Variances for Lot Size Reduction *North Carolina Administrative Code Title 15A, Subchapter 18A, Rule 1950(a)* states that sanitary sewer systems must be at least 10 feet from the property line, and *Rule 1950(c)* states that nitrification fields and repair areas shall not be located under paved surfaces subject to vehicular traffic. Currently, the locations of septic systems and nitrification fields along NC 12 are yet to be ascertained. Currituck County Environmental Health Specialist Joe Hobbs and Dare County Environmental Health Supervisor Jack Flythe were contacted to ascertain if variances could be granted in cases where the widening of NC 12 could result in non-compliance with the above codes. Mr. Hobbs stated that it is unlikely that variances could be granted for such cases, cases would need to be handled on an individual basis, and would likely have to be considered by the State. Mr. Flythe stated that he does not think that a variance could bypass the State administrative code.

6. **What is the potential of extending NC 12 north?**

County Disposition on Road Extension - Currituck County Chief Planner David Webb stated that the County is not in favor of paving any roads on the beach. Mr. Webb stated that this is due to environmental/ecological concerns, protection of wild horses, and is consistent with the USFWS's position on outer banks ecological preservation.

County Land Use Plan Opposition to Paving Northeastern Outer Banks Area - *Currituck County 2006 Land Use Plan* policies OB6 and OB8 specifically exclude paving in the Carova area. Page 11-11 of the *Currituck County 2006 Land Use Plan* specifically discusses the County's opposition to paving in the Carova area.

Potential Grading for Sand Road - Currituck County Engineer Eric Weathers stated that the County is in the process of negotiating with NCDENR-DCM and the NCDOT regarding issues related to the County's Reimbursement Agreement with

¹ Duck, North Carolina CAMA Core Land Use Plan (02/2005) and Town of Southern Shores 1997 Sketch CAMA Land Use Plan (7/1998).

the NCDOT for the grading (no paving or graveling) of Sandfiddler Road from Swan Beach (immediately north of the USFWS Swan Island Tract) to the Virginia state line. **Information on USFWS Owned Land** - Swan Island, a tract owned by the USFWS, is located between the existing terminus of NC 12 and the northernmost inhabited areas on the peninsula. The USFWS would have to permit a roadway extension through this area.

7. **Have alternative interchange configurations been considered for the US 158/Mid-Currituck Bridge interchange?**

It is possible to reduce wetland impacts on the west side of US 158 at the US 158/Mid-Currituck Bridge interchange. Alternative interchange configurations will be considered during preliminary design after the detailed study corridors are selected.

8. **Can Mid-Currituck Bridge alignment options C3/C4 be modified to minimize impacts to the bay forest and community of Aydlett?**

Based on agency comments related to Maple Swamp, NCTA proposes to study an expanded C1/C2 corridor. This corridor would extend from Aydlett Road to the utility easement north of the existing C1/C2 corridor. This would facilitate additional analysis of the potential impacts of the project and eliminate direct impacts to the loblolly bay community south of Aydlett Road.

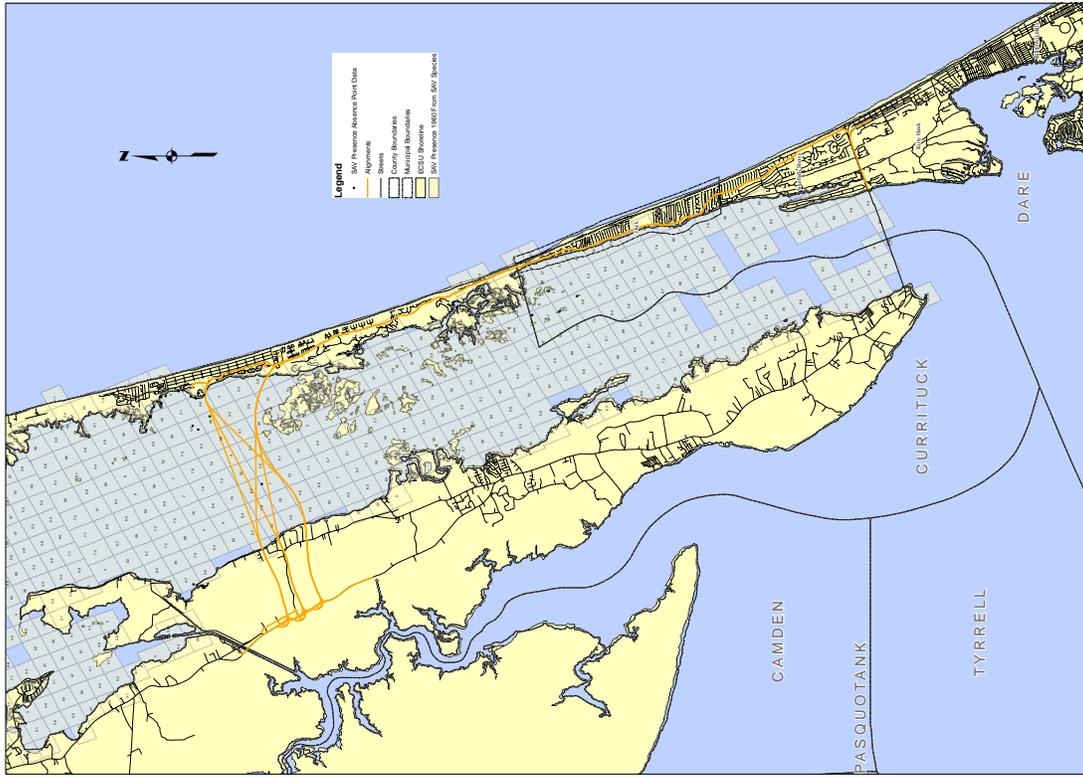
9. **What information is available on the bay forest system from the North Carolina Natural Heritage Program?**

The "Maple Swamp Gordonia" forest is included in the North Carolina Natural Heritage Program database, and is listed as a statewide significant natural area.

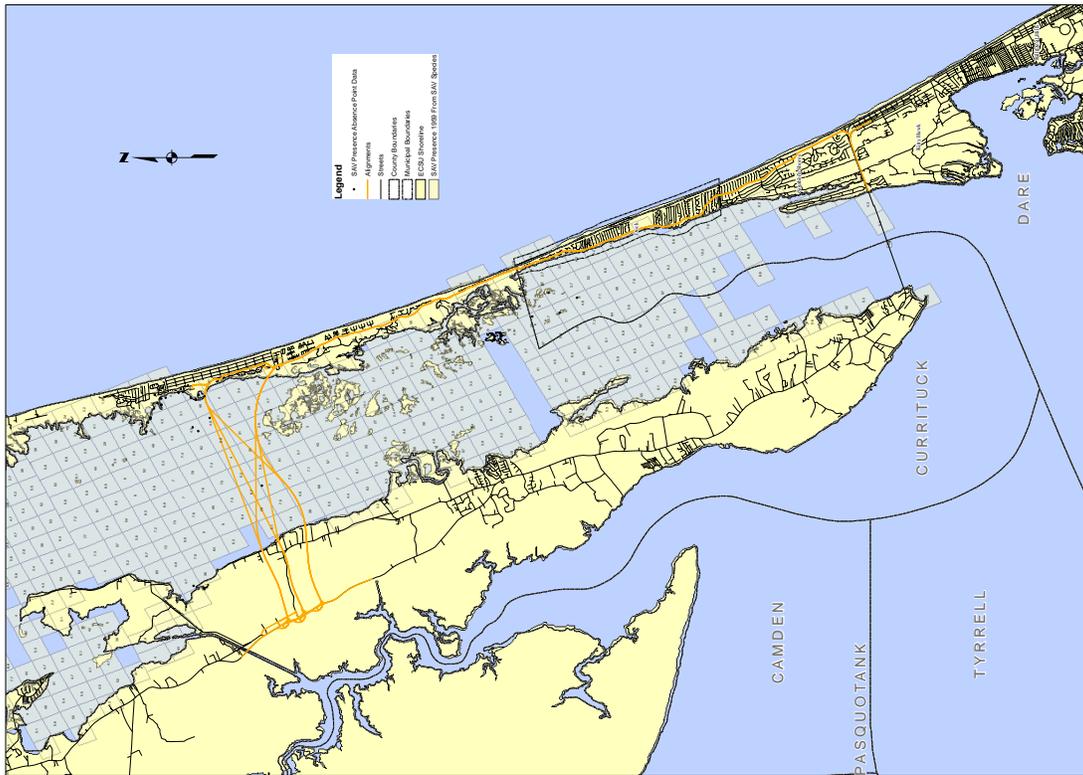
10. **What information is available on the Elizabeth City State University Submerged Aquatic Vegetation (SAV) study?**

NCTA obtained the GIS shapefiles of Elizabeth City State University's (ECSU) 2003 SAV study. Maps showing SAV in Currituck Sound during years 1959, 1960, 1962, 1991 and 2003 are attached to this handout. In the late 50s and early 60s, SAV's were found throughout almost all Currituck Sound. By 1991, SAV's were generally confined to areas near marsh islands and in some locations along the shore. This also was the case in 2003.

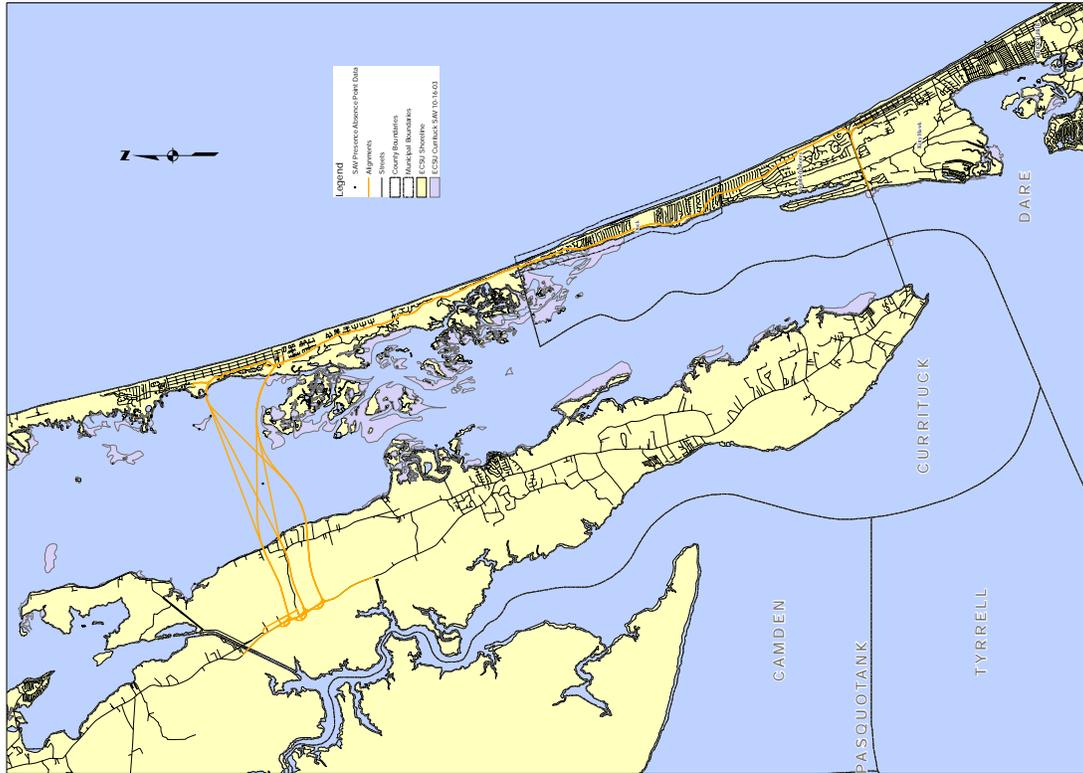
**Currituck Sound Transportation Study
SAV Presence 1960**



**Currituck Sound Transportation Study
SAV Presence 1959**



Currituck Sound Transportation Study
SAV Presence 2003



Mid-Currituck Bridge Study

Currituck and Dare Counties

TIP No. R-2576

Response to Written TEAC Comments Requested in July 2007 Handout 9 – September 19, 2007 Update

The following presents responses to written questions and comments from the US Environmental Protection Agency (USEPA) of August 3, 2007, North Carolina Department of Environment and Natural Resources, Division of Marine Fisheries (NCDENR-DMF) of July 31, 2007, NCDENR, Division of Water Quality (DWQ) of August 31, 2007, and the US Army Corps of Engineers (USACE) of September 12, 2007.

USEPA Comments Dated August 3, 2007

Project Legislation

In 2005, the North Carolina General Assembly issued Article 6H of Chapter 136 of the NC General Statutes that more specifically defined NCTA activities with respect to toll projects. Under Section 136-89.183A, there is a requirement for an accelerated pilot toll bridge project. The statute is very clear in requiring a contract with a single private firm to design, obtain all necessary permits for, and construct the toll bridge described in G.S. 136-89.183(a)(2). The bridge is to be of more than two miles in length going from the mainland to a peninsula bordering the State of Virginia, in order to provide accelerated, efficient, and cost-effective completion of the project. EPA and other agencies interpreted this to mean the Mid-Currituck Bridge project, although the FHWA and NCTA's project study area and proposed corridors are more than 10 miles from the Virginia state border. FHWA and NCTA should confirm this interpretation.

See the response to Comment 2 in Handout 8 (Updated September 5, 2007).

Purpose and Need

1. The hurricane evacuation legislation refers to a standard and not a goal. EPA has requested that FHWA obtain clarification from the N.C. General Assembly's Transportation Oversight Committee and that this information be fully disclosed in the DEIS.

See the response to comment 1 in Handout 8 (Updated September 5, 2007).

2. **EPA is concerned that these projected traffic numbers from NCDOT are not current and that there were assumptions made prior to 2001 that may not be realistic regarding growth along the Outer Banks.**

The traffic forecasts were not based on pre-2001 assumptions. The traffic forecast for 2025 is based upon 24 hour traffic counts taken over 4 to 5 days in August 2001. These counts were adjusted based on data from automatic counters on the Wright Memorial Bridge (24 hours per day, 365 days per year) to determine summer and non-summer, as well as weekday and weekend average travel characteristics. The traffic results represent an average summer weekday and weekend day and not a worst case day, such as July 4.

Land use forecasts were developed based on consultation with local county planners. Full build-out of already platted subdivisions and planned unit developments in the road accessible portion Dare and Currituck counties along NC 12 north of US 158 was assumed. Some development on already platted lots in the non-road accessible Outer Banks was assumed based on recent trends in the issuance of building permits. Growth, but not build-out, was assumed along US 158 in mainland Currituck County and the Outer Banks south of US 158.

The hurricane evacuation travel patterns and peaking characteristics are different from daily travel patterns. The traffic characteristics that generated the hurricane clearance times are not based upon the peak hour traffic forecasts used in the capacity analysis. Also, please see the response to the next question.

3. **EPA is uncertain as to the likelihood of a Category 3-5 hurricane prior to September 1st. Most of the strongest and most damaging storms have occurred later in the hurricane season (September and October). EPA requests that a 'risk analysis' be performed by NCTA and FHWA that documents the past recorded storm events along the Outer Banks that met or exceeded the Category 3 status and the time when these storms occurred.**

Research into the history of hurricanes in North Carolina being prepared by NCDOT in response to an agency query associated with another project indicates that, since 1950 three Category 3 storms have struck North Carolina in August out of 12 hurricanes that have struck North Carolina during the summer months. In the same timeframe, nine Category 3 and 4 storms have struck North Carolina from September to November out of 19 total hurricanes in those months.

Handout 9

2

September 19, 2007

4. **The DEIS needs to fully disclose the assumptions and conditions for full funding and how the available toll funding can fully meet the purpose and need for the project.**

This will be done in the DEIS.

Alternatives Analysis

1. **An alternative of improving (i.e., Widening) Aydlett Road through Maple Swamp needs to be analyzed in the DEIS. This alternative should investigate different potential locations for toll plaza facilities on the mainland and bridge termini in Aydlett rather than along US 158 as is currently proposed. NCTA has cited that there will be significant impacts to the Aydlett community. These potential impacts should be fully explored and examined in the DEIS.**

It is NCTA's intent in its alternatives studies to identify and consider alternatives that attempt to minimize both natural resource and community impacts. A part of that effort has been to limit the direct effects on the community of Aydlett to that associated with the presence of the bridge. The NCTA does not plan to evaluate the alternative suggested. The DEIS will fully explore community impacts in the DEIS.

2. **An investigation of alternatives for the interchanges with US 158 and NC 12 on the Outer Banks should be examined in the DEIS. FHWA and NCTA should perform a full analysis of alternative interchange designs in order to reduce potential impacts to wetlands.**

This will be done in the DEIS.

3. **FHWA and NCTA need to perform a full wetlands assessment using the new "NCWAM" functional assessment for all of the potential alternatives. Each wetland type potentially impacted needs to be fully described and characterized in the DEIS.**

This will be done in the DEIS.

4. **The DEIS should examine and analyze the operational impacts of a proposed bridge facility on Currituck Sound. If the bridge is expected to be ultimately a 4-lane facility, this configuration should be assessed.**

Operational impacts of the bridge will be assessed in the DEIS. The ultimate project associated with serving design year traffic will be assessed.

Handout 9

3

September 19, 2007

5. FHWA and NCTA should also address how stormwater will be collected and treated from any bridge alternatives.

The DEIS will address the impacts of stormwater runoff from the bridge and potential mitigation, including the feasibility of collecting and treating the runoff. This will be coordinated with agencies during preliminary design.

6. Although EPA and other agencies did not explore other termini on Bodie Island, it is clear that each of the two sites investigated during the field meeting would have significant impacts to wetlands and aquatic resources. Other termini need to be considered that have potentially less wetland impacts.

Given NCTA's intent in its alternatives studies to identify and consider alternatives that attempt to minimize both natural resource and community impacts, the presence of established recreational communities between the two locations under consideration, that two proposed Outer Banks corridors would fill 0.79 (C1,C3,C5 revised) or 2.80 (C2/C4/C6) acres of wetland, and the NCTA's intent to seek to further minimize that estimated impact based on a preliminary design and delineated wetlands, the NCTA does not plan to evaluate additional Outer Banks termini alternatives. The reasons for selecting these sites were discussed in the 1995 Alternatives Study Report and reaffirmed in Handout 6 (June 20, 2007).

7. The potential widening of NC 12 needs to be fully examined in the DEIS. EPA has reviewed the July 12, 2007, functional designs for the alternatives. EPA is concerned that without improvements to NC 12, hurricane evacuation clearance times will not be sufficiently reduced. FHWA and NCTA should consider "mixing" of some of the improvement components of the alternatives to achieve a better balance of traffic network conditions.

NC 12 is not a controlling link and thus widening NC 12 cannot improve hurricane evacuation times. Only US 158 improvements can improve hurricane evacuation clearance times. ER1, ER2, MCB1, MCB2, and MCB3 alternatives do represent the mixing of improvement components. In addition, MCB4 alternative was developed at the request of agencies to maximize benefits to hurricane evacuation clearance times with a bridge and limited associated road improvements.

8. FHWA and NCTA have provided a characterization in Table 6 revised referred to as "Rural/Beach Community Fragmentation". EPA is concerned that some of the impacts from the alternatives may be mischaracterized, including C1, C3, C4 and C5 ("Pass through middle of subdivision" or "Passes through Aydlett"). FHWA and NCTA should discuss the Federal and state requirements concerning community impacts (e.g., E.O. 12898 on Environmental Justice, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, etc.).

The NCTA believes that the analysis presented in its alternatives comparison for community impacts is appropriate for the current level of alternatives assessment. In the case of the two federal laws mentioned, the alternatives study found that no concentrations of low income or minority households exist in the corridors under consideration (Tables 4 and 5 of Handout 4). Potential relocation counts prepared in 2007 based on new conceptual designs are included in the analysis.

9. EPA requests that the estimated wetland impacts from the ER1, ER2, MCB1, MCB2 and MCB3 Alternatives be fully identified in the DEIS. EPA cannot ascertain where the impacts to 10+ acres of wetlands would occur along NC 12 from ER1, ER2, MCB1 and MCB2. Similarly, EPA cannot locate the impacts to 23+ acres of wetlands from ER1 and ER2 for the US 158 third northbound lane in Currituck County.

The DEIS will document the findings of the alternatives studies, including wetland impacts. For the detailed study alternatives, wetlands will be delineated and impacts calculated using preliminary designs. Avoidance and minimization of wetland impacts will be considered in developing the preliminary designs. Wetland mapping used for the alternatives study shows 28 wetlands along NC 12 from US 158 to the northern bridge terminus. There are 10 wetlands along the east northbound lane) side of US 158 from the Wright Memorial Bridge to NC 168. The total acres affected are 12.4, rather than 23.1 acres. This is a correction from revised Table 6 (Handout 5). Wetlands in the study area are shown on the natural resources environmental features mapping, which was provided to agencies in June 2007.

10. EPA cannot concur with the estimates for the "high quality resources filled/bridged" presented on Page 6, Table 6 revised from the June 20, 2007 handout. FHWA and NCTA need to provide a full disclosure of how these estimates were developed for high quality resources and what criteria were utilized in ascertaining their quality.

The estimates for high quality resources that are included on the June 20, 2007 Handout 5, Table 6 (revised) are the same estimates as those shown earlier in the May 23, 2007 Handout 4. The high quality resources affected are presented on the natural resource environmental features map. These features assumed to be high quality natural resources are: State Natural Heritage Areas, wildlife refuges, gamelands, and other managed lands. Like all the acreages, project conceptual designs were converted to GIS shape files and overlaid on the GIS features map. GIS was then used to calculate the areas affected by fill and bridging.

11. Relocations (displacements as presented in Table 6) have been estimated based upon past right of way investigations by NCDOT (circa mid-1990's) and it appears that they need to be updated. Furthermore, the DEIS needs to analyze and

disclose that methodology for determining an actual relocation. EPA requests that the minimum 'lot size' issue for Dare County (15,000 square feet) and Currituck County (20,000 square feet) be examined by FHWA and NCTA and discussed in the DEIS. This analysis should include a 'consistency' determination with other projects where structures and necessary services (e.g. well, septic, etc.) were not impacted and minimum zoning lot sizes were used as a 'legal criteria' for relocations.

All relocation counts are new. They are based on a field review of conceptual design drawings developed in 2007. The relocation counts were made by a professional right-of-way consultant under contract to the NCTA to prepare both the right-of-way cost estimates and the displacement counts.

See the response to Comment 5 in Handout 8, dated September 5, 2007 for a response to the lot size question.

12. FHWA and NCTA need to explore a ferry service alternative that is compared both individually to other alternatives as well as combinations of the 'highway' alternatives with a ferry alternative. Discussions with NCTA and FHWA indicate that the ferry service alternative does not meet purpose and need. This alternative needs to be fully examined and explored in the DEIS. A combined 'new bridge alternative' with a robust ferry service could help to improve estimated hurricane evacuation clearance times, especially for critical link segments on Bodie Island.

The Alternatives Analysis Report and DEIS will present a further assessment of the ferry alternative. Four ferry alternatives are being compared, with the ferry used in combination with hurricane evacuation improvements on US 158, as well as NC 12 and US 158 widening on the Outer Banks in a manner similar to the bridge alternatives. The combination of a bridge plus a ferry service would not improve hurricane evacuation times because the controlling road link is US 158. A combination of a ferry and a third northbound lane or contra flow lane on US 158 would improve hurricane evacuation clearance times and is being considered. Further, ferry service would need to be suspended during the peak of the evacuation to allow the evacuation of ferry equipment and personnel.

13. EPA notes that improvements to NC 12 include a 17 foot median, 4 lane facility. Considering the close proximity to pedestrian walkways/bicycle paths along NC 12, FHWA and NCTA should examine the safety aspects of providing a 'higher speed' 4-lane facility so close to these other users.

The typical section of the four-lane NC 12 meets NCDOT design standards. The public, particularly in Dare County, also have raised concerns about the potential effect on pedestrian safety of a four-lane NC 12. This concern is reflected in the

"Rural/Beach Community Fragmentation" observations in revised Table 6 (Handout 5).

14. EPA has requested that FHWA and NCTA examine a new alternative closer to Aydlett Road as well as widening the existing road.

Regarding widening Aydlett Road, see our response to "Alternatives Analysis" question 1. Our response to question 8 in Handout 8 indicates NCTA's willingness to examine alternatives closer to Aydlett Road via an expanded C1/C2 corridor.

Addition Data and Analytical Needs for NEPA Review

1. Depth and benthic profiles of potential roadway corridors and a general description of the entire Currituck Sound ecosystem should be explored during the NEPA process and included in the DEIS.

NCTA has gathered bathymetric data in the corridors under consideration. NCTA will gather benthic information needed to assess impacts in the DEIS. A general description of the entire sound will be developed within the context of the indirect and cumulative impact assessment.

2. Include and provide an analysis of the most recent submerged rooted aquatic vegetation survey data from USGS and/or NOAA of Currituck Sound. Define all benthic sediment and habitat present in the Sound. Consideration of the general habitat and water quality is insufficient.

NCTA will provide an analysis of the submerged aquatic rooted vegetation (SAV) within the area of construction and operational impact in the DEIS. Benthic sediment and habitat of Currituck Sound will be defined as appropriate for the indirect and cumulative impact assessment.

3. The DEIS should evaluate the proposed project in relationship to either conflict or consistency with the management goals and objections set forth by the joint State/Federal National Estuary Program for Currituck Sound. This discussion should also include consultation with State officials concerning the requirements and consistency with the Coastal Zone Management Acts Federal consistency regulations. The DEIS should include a full characterization of the traditional uses for the Currituck Sound, including recreational fishing, commercial fishing, hunting, etc. and what the short-term, long-term and cumulative effects of this proposed project will have on these uses.

This will be done in the DEIS.

4. The DEIS should provide an analysis of the worst-case impact of construction activity on the water quality and aquatic habitats within Currituck Sound. This analysis should include dredging needed to move equipment and materials to and from the project's mainland areas and during construction. Alternative construction methods to minimize impacts should be fully considered and described in the DEIS.

This will be done in the DEIS.

5. EPA is aware that fecal coliform is an issue in shallow water estuaries and that continued runoff from human activities such as parking lots, roadsides, etc., can further degrade water quality and traditional uses of these water bodies. Harmful bacteria in the coastal zone can be very problematic to water quality as there are generally few upland areas available to treat contaminated runoff. The DEIS should analyze this water quality parameter and any potential effect that direct sources of runoff will have on shellfishing and benthic organisms within Currituck Sound. The DEIS should further explore and discuss the issue of 'hydrologic trespass' to new or existing roadway ditches and conveyances.

These items will be done in the DEIS, with the former being a part of the indirect and cumulative impact assessment.

6. Based upon the site visits recently conducted, it is essential that a detailed functional assessment be accomplished for all of the wetlands potentially impacted.

This will be done in the DEIS.

7. EPA and other agencies noted numerous specimen trees during the July 10, 2007 site visit. An arboreal survey should be conducted for all of the new location corridors, including both uplands and wetlands in Maple Swamp, Great Swamp, and at the proposed interchanges and an avoidance strategy developed. Size and species should be documented and mature specimen trees mapped. Cavity and rookery nesting of avian species is highly likely and should also be documented.

In the DEIS, NCTA will describe arboreal wildlife based on the scientific literature and an evaluation of on site habitats. Additional tree data (density, basal area, and species richness) will be collected to characterize mature forest communities. Both tasks will be conducted in the corridors selected for detailed evaluation in the DEIS. As applicable, natural resource surveys will be done according to standard practices described in NCDOT's Natural Resources Investigation Protocols. Avoidance will be considered in the development of preliminary designs.

8. Alternative construction practices should be evaluated for accessing the work areas within wetlands.

This will be done in the DEIS and FEIS to the extent necessary to determine avoidance and minimization efforts.

9. With the exception of small areas of *Phragmites* sp., and Chinese privet along Aydlett Road, the presence of exotic invasive plant species was not evident during the site visit. Therefore, the potential introduction and spread of such species should be considered in the NEPA review and compliance with *Executive Order 13112*, and FHWA guidance should be documented.

This will be done in the DEIS.

10. A cultural impacts assessment is needed and should include potential bisection caused by the roadway and its approaches.

NCTA interprets this comment to refer to assessment of historic architectural and archaeological resources. A Phase IA background study will be conducted as a part of preparation of the DEIS to determine the potential for terrestrial and underwater cultural (archaeological) resources. The outcome of that study, in coordination with the State Historic Preservation Office, will determine what additional work would be appropriate for inclusion in the DEIS. The results of Phase II study of historic resources approved by the State Historic Preservation Office were used in the analysis of alternatives.

11. Because of the documented presence of ancient habitation and early European colonization in this area of the State, there should be extensive survey work of all potential corridors and this new information should be considered in the site selection rather than waiting for a final alignment.

See the response to comment 10 above.

12. The project study area is in the coastal ecosystem and it is possible that potential future sea level rise (SLR) could be an important construction and environmental issue. North Carolina has a Climate Change Commission that includes such coastal geology experts such as Dr. Stan Riggs. He and other experts should be consulted during the planning process regarding the vulnerability of placing additional infrastructure within the dynamic coastal beach setting. Future initiatives by government agencies in response to SLR may influence design year traffic volumes and patterns. The DEIS should examine SLR issues and the potential affect on future traffic volumes and patterns.

Preliminary design of proposed infrastructure will account for future potential sea level rise. Furthermore, future potential sea level rise will be considered as a part of the indirect and cumulative impact assessment.

Other NEPA 'Cross-Cutting Issues

1. Currently, NCTA is not a signatory agency to the Ecosystem Enhancement Program (EEP) Memorandum of Understanding (MOU) for compensatory mitigation needs. The issue of compensatory mitigation should be fully coordinated with the EEP and other agencies to insure that there are adequate mitigation credits available in the hydrologic cataloguing units (HUCs) where the impacts are occurring.

Mitigation credits for potentially affected HUCs will be evaluated and discussed in the DEIS.

2. FHWA and NCTA need to provide detailed mitigation plans for the new location alternatives.

Mitigation plans will be developed at a level of detail appropriate for EIS decision-making.

3. The NCTA should consider some of other potential NEPA 'Cross-cutters' in the DEIS, including compliance with Executive Order 13112 on Invasive Species and the requirements under the Migratory Bird Treaty Reform Act (MBTRA) of 2004. The U.S. Fish and Wildlife Service should be consulted regarding an analysis of avian Federal Species of Concern (FSOC) and potential requirements and considerations under MBTRA.

Other potential NEPA "crosscutters" will be considered.

4. All of the alternatives involving new bridge structures need to fully investigate the potential impacts to migratory birds along the Atlantic flyway.

This will be done in the DEIS.

NCDENR-DMF Comments Dated July 31, 2007

1. Based on the field visit this agency recommends that C1 be pursued.

The position is noted. The NCTA plans to carry C1 forward as one of the detailed study alternatives.

2. The northern mainland alignment through Maple Swamp appears to have the least amount of impacts. However, appropriate mitigation for loss/impacts to wetlands would be needed.

The DEIS will include discussion of appropriate mitigation.

3. As for the terminus on the banks side a shift in the alignment of C1 to the south would reduce the impacts to wetlands.

The alignment of this terminus will be reconsidered during preliminary design development with the goal of reducing wetland impacts.

4. This agency awaits the SAV surveys for the alignments. After review of the surveys the Division would provide additional comments.

Preliminary data was provided at the July 18, 2007 TEAC meeting and is available on the TEAC website. This information is currently being field verified and refined by NCDOT. Past SAV survey information was attached to Handout 8.

5. The mid and southern alignment on the mainland side could not be supported.

The position is noted.

6. The touch down area on the banks side for C2, C4, and C6 would have extensive wetland impacts.

The concern is noted.

7. Since Currituck Sound is a very important nursery area for many estuarine dependent finfish and invertebrate species the Division would be concerned with dredging associated with any of the alternatives. This agency would request as much detail as possible of dredging that would be needed, proposed depths, and estimate of material that would be excavated.

This will be done in the DEIS, if dredging is proposed. Alternatives to dredging will be considered in the DEIS.

NCDENR-DWQ Comments Dated August 31, 2007

1. At the northern bridge landing site (Alternatives C1, C2 [correctly C3], and C5) in Corolla (NC 12), there were discussions among the resource agencies about possibly shifting the corridor to the south enough to reduce wetland impacts. NCTA was able to implement this shift. This resulted in avoiding all of the coastal wetlands, although the non-coastal wetland impacts increased slightly (0.09 acres). Efforts resulted in an overall reduction of wetland impacts by 1.21

acres. Of the two Corolla bridge-landings, this site now has the least amount of wetland impacts. Currently, if a bridge alternative is selected as the LEDPA, this is the DWQ's preferred Corolla alternative.

The position is noted.

2. According to the Natural Resources Conservation Service (NRCS), the most northern extent of the loblolly bay is Tyrell County in North Carolina, which is a little south of the project area. Due to the ecological significance and rarity of the area, the DWQ would like to discuss opportunities to preserve this area with the NCTA. Because of the unique and rare habitat associated with this area, and since there is a corridor that avoids this area, the DWQ feels it will be difficult to issue a permit for the southern alternatives (C3/C4, and C5/C6). The DWQ prefers the northern alternative if a bridge is selected as part of the LEDPA.

The position is noted.

3. Based on what has been provided to the DWQ thus far, the DWQ's preferred alternative, should the LEDPA involve bridge construction, would be the northern most alternative. The DWQ strongly encourages the NCTA to continue working in a manner that will further reduce impacts to Maple Swamp.

The position is noted. The NCTA will continue working in a manner that will seek to further reduce impacts to Maple Swamp.

4. The DWQ is still concerned about the impacts to wetland and forested areas to the west of US 158 where the interchanges are currently placed. The DWQ understands the need to keep traffic on US 158 moving. However, we would like to see the NCTA minimize impact to this area as well. There has been some discussion between team members regarding the use of a traffic light at this location. The DWQ encourages the NCTA to investigate this further.

NCTA will investigate the potential use of a signalized intersection further, but also believes that an alternative interchange design will minimize wetland impacts. An analysis of alternative interchange designs will be done during preliminary design work associated with preparation of the DEIS.

5. The DWQ is concerned about potential impacts to SAV. SAV beds are an important component of the biological function and integrity of the sound. A map reflecting recent survey efforts was made available to team members. It is understood by DWQ, per meeting discussions, that an attempt will be made in August to verify the results of this survey. Nonetheless, the map shows all corridors crossing SAV beds. This is most prominent on the eastern side of Currituck Sound. Alternative C6 appears to impact the largest number of SAV

Handout 9

12

September 19, 2007

beds (five), and consequently also appears to impact the largest area of SAV. Alternatives C1, C3, and C5 appear to impact the least, and only cross one SAV bed. As with other natural resources, the DWQ seeks to protect SAV beds by reducing impacts to them. The DWQ will withhold further comment on SAV until the results of the survey have been verified.

The position is noted. Minimization of impact to SAV beds will be a part of the preliminary design work associated with preparation of the DEIS.

6. During the June 20, 2007 meeting, there was a proposal for another alternative - MCB4. This alternative was essentially alternative MCB3 with an additional northbound lane added to US 158 between NC 12 and the Wright Memorial Bridge. This alternative was discussed further during the July 18, 2007 meeting. The NCTA has stated that alternative MCB4 will meet the 21.4-hour hurricane evacuation time that was met by all other alternatives. According to Table 1 in Handout 4 (May 23, 2007), MCB3 (or MCB4) would not add additional lanes to NC 12 in neither Dare nor Currituck Counties, with exception of a two to four mile stretch south of the Mid-Currituck Bridge landing in Currituck County. All other alternatives involve adding at least one to lane to NC 12 in Dare County, and two lanes in Currituck County. All alternatives, with exception of MCB3, were able to meet a projected hurricane evacuation time of 21.4 hours. Alternative MCB3 was only able to meet an evacuation time of 26.2 hours. It appears as though improvements to NC 12 in Currituck and Dare Counties are necessary for the 21.4 hour evacuation time to be met. It is unclear to the DWQ how the 21.4 hour evacuation time can be met with MCB4 if improvements are not made to NC 12. Has the MCB4 scenario been modeled to show what the actual anticipated hurricane evacuation time would be?

The difference between MCB3 and the other alternatives that affect hurricane clearance times is the improvement of US 158 between the Wright Memorial Bridge and NC 12. ER1, ER2, MCB1, and MCB2 include the widening of this segment of US 158. MCB3 does not. The new MCB4 alternative includes a third northbound lane on US 158 between the Wright Memorial Bridge and NC 12. With that additional improvement, a 21.4-hour clearance time can be achieved just like with ER1, ER2, MCB1, and MCB2. US 158 is the road link that controls area clearance times. NC 12 is not. Thus, widening NC 12 would have no effect on hurricane evacuation clearance times.

7. With respect to the Proposed Mid-Currituck Bridge Preliminary Traffic and Revenue Study, Final Report, it appears as though a Thursday and a Saturday in August were used for the peak-season travel sample dates and a Thursday and a Saturday in September for the off-season travel study dates. The DWQ questions why September was chosen as the off-season travel month. According to Figure 2-

Handout 9

13

September 19, 2007

4 it looks as though January or February would have been a better choice for the off-season travel analysis.

The traffic report referred to above was prepared by Wilbur Smith Associates for estimating toll revenue that could be collected. The results were used in analyzing the financial viability of the project. The Wilbur Smith results were not used by the NEPA study team in determining purpose and need and evaluating alternatives.

The traffic forecasts used to determine the purpose and need and evaluate alternatives considered four time periods: average summer weekend traffic from June to August, average summer weekday traffic from June to August, average non-summer weekend traffic from September to May, and average non-summer weekend traffic from September to May, and their respective peaking characteristics.

8. With respect to the travel study location (near the intersection of NC 12 and US 158 at Chicahauk Trail), it is stated that this location was chosen because "a station at this location was expected to intercept the largest number of potential Mid-Currituck Bridge users." The location is approximately one mile north of where traffic coming off of the Wright Memorial Bridge would turn north onto NC 12. It is unclear to the DWQ why it is expected that this location would contain the largest number of anticipated Mid-Currituck Bridge users. It would seem that the closer to the Mid-Currituck Bridge one gets, the greater the chance of reaching the largest number of potential users. This location is close enough to the Wright Memorial Bridge, which is the free alternative route, which many users may opt to use the free alternative instead of paying to cross the tolled bridge. To get to the sample point, it would probably be quicker at most times than using the Mid-Currituck Bridge, as speed limits on US 158 are higher than those on NC 12 and traffic traveling on NC 12 would be less prone to slowing down as vehicles make turns on and off of NC 12. Therefore, it would seem that a point closer to Corolla would have been a better choice for the traffic survey study, as traffic closer to Corolla would have a higher probability of using the Mid-Currituck Bridge.

Again, the traffic report cited was prepared by Wilbur Smith Associates for estimating toll revenue that could be collected. However, the intersection of NC 12 and US 158 at Chicahauk Trail does carry the largest number of potential bridge users. Without a bridge, all potential bridge users travel through this intersection. This location does not, however, carry only potential bridge users. Even adjacent to a Mid-Currituck Bridge, not all trips on NC 12 would use the bridge. The observation that most travelers traveling between a point north of the project area and the Currituck County Outer Banks would use the Mid-Currituck Bridge and the observation that most travelers traveling between a point north of the project area and the Dare County Outer Banks would use the free Wright Memorial Bridge was

Handout 9 14 September 19, 2007

verified and reflected in the traffic forecasts use to consider purpose and need and alternatives.

9. Table 6 of Handout 5 presents a breakdown of displacements associated with the project. With respect to the relocations associated with the bridge, ramps, and access roadways, the number of displacements is averaged. The DWQ would like to see the actual number of displacements associated with each of the potential routes (C1, C2, C3, etc.). Ideally, the number would be further broken down by the number of displacements in Aydlett and Corolla.

Displacements associated with C1/C2, C3/C4 and C5/C6 are shown in Table 4 in Handout 4. The right-of-way agent did not provide a breakdown between the two sides of the Sound, but it appears that all or almost all of the displacement is on the mainland.

USACE Comments Dated September 12, 2007

1. The North Carolina Turnpike Authority (NCTA) and Federal Highways Administration (FHWA) have presented an initial set of conceptual alternatives to the participating agencies for review and consideration. Based on the last two coordination meetings, it is your intent, because of potential funding shortfalls to drop all the conceptual alternatives except for MCB3. However, based on your information, MCB3 has a projected shortfall of 51.2 million dollars but has the potential for "Public-Private Partnership Funding" to cover the expected shortfall. Based on the information, a Public-Private Partnership is only a concept that may be employed to help fund the project but certainly is not a guarantee that it would happen. We also have concerns that viable alternatives may be precluded because of funding issues associated with the roadway part of the network. Under NEPA and Section 404 requirements, alternatives may still be considered practicable even though current funding is not available for a specific project. Therefore, we recommend not all the conceptual alternatives be dropped at this point in the process.

The President's Council on Environmental Quality (CEQ) in their March 1981 guidance document "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations," indicates that in determining the scope of alternatives to be considered in a National Environmental Policy Act document that the emphasis is on what is "reasonable." The guidance indicates that "reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense". The lack of adequate funding can make an alternative impractical from an economic standpoint. The Alternatives Analysis Report and DEIS include the reasons why alternatives are dropped from

Handout 9 15 September 19, 2007

further consideration, including how the potential availability of funding was taken into consideration in each decision.

2. Is handout #5 dated June 20, 2007, considered the alternatives screening report justifying the elimination of alternatives? If so, has the screening report been made available for public review and comment per section 8.4 of the June 20, 2007 draft coordination plan and is the lead federal agency, FHWA satisfied that all requirements for eliminating alternatives under SAFETA-LU Section 6002 been completed? It is our recommendation that at a minimum, alternatives MCB2 and MCB3 be included as preliminary alternatives to be carried forward for public review and input.

The Alternatives Analysis Report, unlike Handout 5, also will take into consideration the input received from the TEAC. Once coordination with the TEAC on alternatives is complete, the result and the purpose and need coordination results will be made available to the public. Citizens Information Workshops are anticipated this fall and input on purpose and need and alternatives will be solicited from the public. FHWA is satisfied with the work completed to date. Your position on MCB2 and MCB3 is noted.

3. A part of the purpose and need of the project is to reduce hurricane clearance time for residents and visitors who use NC 168 and US 158 during a coastal evacuation. While all the alternatives identified reduce hurricane evacuation times, the only alternative (MCB3) you're considering to fully evaluate in the NEPA document has the greatest clearance time (26.2 hours versus 21.4 hours) of all the alternatives. It is recommended as has been discussed at TEAC meetings that an alternative (MCB4 or MCB3+) be added to improve the critical link in the highway system so hurricane evacuation times can at least equal times represented by the other alternatives. Clarification regarding the legislative intent of North Carolina General Statute 136-102.7 regarding the 18-hour hurricane evacuation timeframe is still needed as it relates to the purpose and need and the alternatives being considered for the project. It has been identified that another proposed NCDOT TIP project along the coast has a unacceptable hurricane evacuation time of 27 hours so why is a comparable hurricane evacuation time (26.2 hours) acceptable for the MCB3 alternative?

Your position on the inclusion of MCB4 as a detailed study alternative is noted and NCTA agrees. Clarification on the legislative intent of the North Carolina General Statute 136-102.7 is presented in the response to question 1 in Handout 8. NCTA assumes that it would be preferable to achieve 21.4 hours rather than 26.2 hours or 27 hours (with the contraflow lane option). However, pending conversations with emergency management representatives, NCTA feels it prudent at this time to keep all hurricane evacuation improvement options open for consideration.

Handout 9 16 September 19, 2007

4. Accurate information concerning relocations necessitated by direct impacts and relocations necessitated by reduced lot sizes needs to be calculated for NC 12 conceptual alternatives.

See the response to question 4 in Handout 8.

5. Alternative interchange configurations must be considered for all project corridors associated with MCB3 to reduce potential wetland impacts. Additionally, bridging options must be explored to reduce impacts to high quality wetlands.

NCTA agrees and plans to do both during preparation of the preliminary designs associated with the DEIS.

6. Impacts to Submerged Aquatic Vegetation (SAV) and migratory bird issues are concerns which need to be studied in depth for any bridging corridor locations associated with the alternatives that cross the Currituck Sound.

NCTA agrees and plans to consider both during preparation of the preliminary designs associated with the DEIS.

7. Of the six project corridors across the Currituck Sound, corridors C1 and C2 on the mainland and C1, C3, and C5 on the island side are preferred because of reduced impacts to wetlands and the reduced impacts to the highest quality bay forest system associated with the crossing of Maple Swamp.

The position is noted.

8. Current information and data presented to date for the project are based on a design year of 2025. Information needs to be updated for 25 years out so decisions concerning alternatives can be based on good sound data.

NCTA is in the process of updating its traffic forecasts to year 2035. They also will include the effect on traffic of tolls. These forecasts primarily will be used to size the US 158 interchange, toll plaza, and NC 12 intersection during preliminary design. The new forecasts will be reviewed to determine if they could affect the alternatives selection decision and necessitate revisiting that decision. We do not believe that additional development in the project area and on the Outer Banks from 2025 to 2035 will generate traffic volumes that will affect the current alternatives decision.

Handout 9 17 September 19, 2007

As a major permitting and cooperating agency we appreciate the opportunity to coordinate and comment with you under the guidelines of SAFETEA-LU Section 6002. The Corps recommends that further evaluation of this project be done within the SAFETEA-LU Section 6002 guidelines prior to the finalization of the DEIS.

NCTA agrees and plans to seek input from the TEAC participants during preparation of the DEIS.



Mid-Currituck Bridge Study

Currituck and Dare Counties
STIP No. R-2576

Detailed Study Alternatives Handout 10—September 19, 2007

At the June 20 and July 18, 2007 Turnpike Environmental Agency Coordination (TEAC) meetings, the NCTA presented its recommendations for the Mid-Currituck Bridge detailed study alternatives for discussion and requested written comments within 30 days. Based on discussions at the July 9 and 10 field trip, comments made at the June and July TEAC meetings, and written comments received since those meetings, NCTA still recommends MCB3 and MCB4 as its detailed study alternatives. These alternatives are shown in Figure 1 and Figure 2. They are:

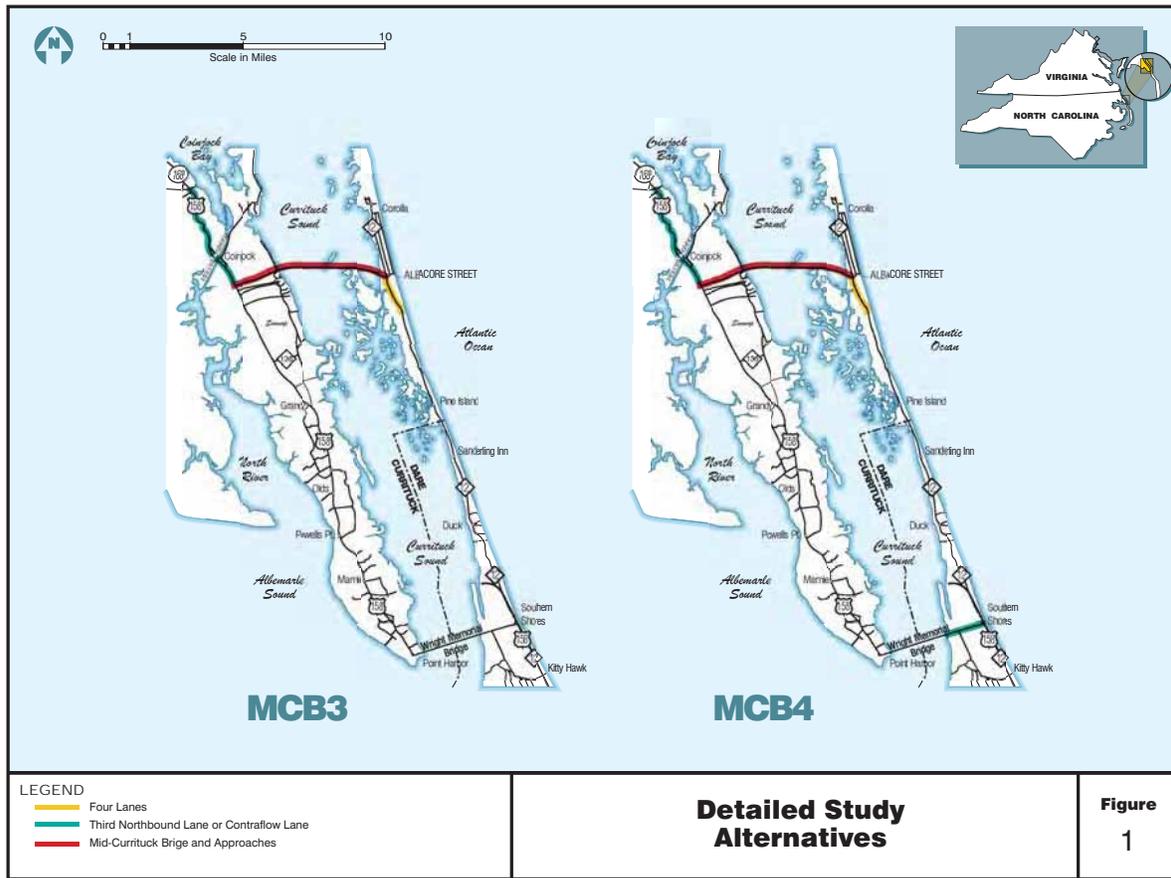
- MCB3— Alternative MCB3 will consist of:
 - Constructing a bridge across the Currituck Sound in Currituck County.
 - Adding a third northbound lane on US 158 from NC 168 to Aydlett Road (SR 1140) as a hurricane evacuation improvement.
 - Widening NC 12 to four lanes for two to four miles from south of the intersection with a Mid-Currituck Bridge to Currituck Club Road.
- MCB4— Alternative MCB4 will consist of:
 - All components of MCB3.
 - Adding a third northbound (westbound) lane on US 158 between the Wright Memorial Bridge and NC 12 as an additional hurricane evacuation improvement.

MCB3 and MCB4 both will include two bridge corridor alternatives:

- C1— On the mainland, Corridor C1 will be between Aydlett Road and a line approximately 500 feet north of the powerline that parallels Aydlett Road. On the Outer Banks, Corridor C1 will end at the southern end of the Corolla Bay subdivision.

Mid-Currituck Bridge Study **Detailed Study Alternatives**

- C2—On the mainland, Corridor C2 will include the same area as Corridor C1 and on the Outer Banks will end at Albacore Road.
- During preliminary design for these two bridge corridors, NCTA will consider the following:
- On the mainland, widening Corridors C1 and C2 as indicated above to provide additional preliminary design flexibility. Detailed environmental resource data, including wetland delineations, will be gathered for this wider corridor and considered in developing the preliminary design to be assessed in the DEIS.
 - At US 158, examine interchange and intersection design alternatives that would minimize wetland impacts west of US 158. The decision to study the C1 and C2 corridors already aids in this effort because a larger area of uplands occurs west of US 158 than with the other corridors.
 - In Currituck Sound, minimize the crossing of Submerged Aquatic Vegetation (SAVs).
 - On the Outer Banks, make adjustments to conceptual alignments considered during the alternatives study to reduce wetland and particularly coastal wetland impact associated with both the C1 and C2 termini.





Mid-Currituck Bridge Study

Currituck and Dare Counties

STIP No. R-2576

Conceptual Alternatives Refinement Handout 11 – November 14, 2007

This handout presents:

- Recent natural resource data gathering in the C1 and C2 corridors;
- The work plan for the Alternatives Study Report; and
- A comparison of several interchange and intersection concepts under consideration in the C1 and C2 corridors.

1.0 Natural Resource Surveys

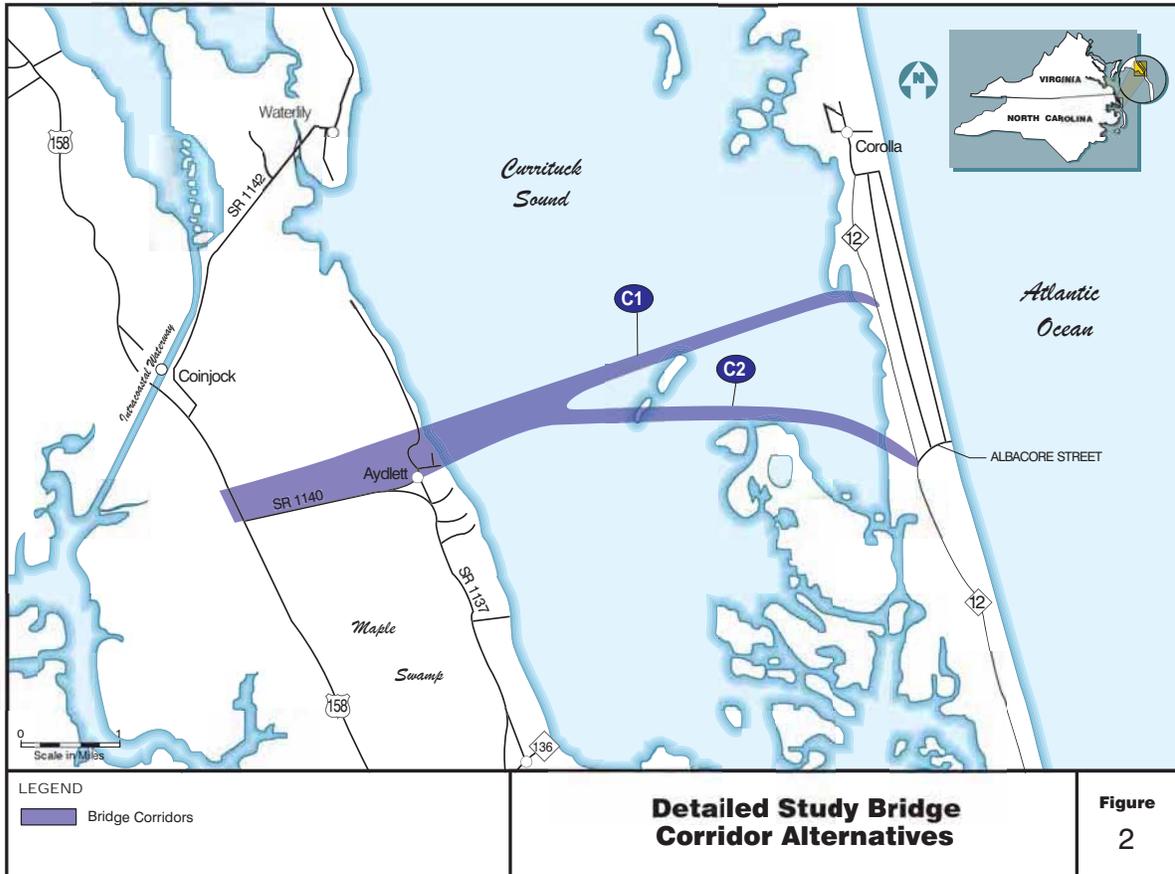
1.1 Submerged Aquatic Vegetation (SAV) and Sound Bathymetry

NC DOT field inspected the SAV results from the Corps of Engineer's side-scan sonar survey. The results are attached. The results of the field inspection revealed that the boundaries of SAV and backscatter generated by the side-scan sonar study are accurate. Areas between the boundaries shown and the shoreline also contain SAVs. The backscatter areas are free of SAV, and the bottom substrate in these areas was much harder than the non backscatter areas. Plants were at or near the surface in waters two to five feet in depth. Areas outside the SAV boundaries were inspected randomly. The area between the two large beds close to the Outer Banks was mostly void of SAV, however, SAV was found in three very isolated locations. Only two or three plants were found at these locations and the plants were three to four inches in length.

The Corps of Engineers' side-scan sonar also identified the bathymetry of the project corridors. The results are attached. It affirms that SAVs are not growing in the deepest parts of the sound in the study area. Other shallow areas in the study area have the potential for SAV growth.

1.2 Wetland Delineations

Wetland delineations are underway in the corridor areas shown in the attached. The comparison of US 158 interchange and NC 12 intersection alternatives presented later in



this handout used boundaries developed from aerial photography and field checked prior to beginning boundary flagging as a part of the delineation and will be refined once the delineations are complete.

1.3 Trees Survey in Maple Swamp

Also attached are the results of a survey for large caliper trees in the C1/C2 corridor in Maple Swamp. It shows the location of trees greater than 22 inches diameter breast high (DBH). Few such trees were found. None were in the area immediately adjacent to the powerline corridor where project conceptual designs prepared to date place a C1/C2 bridge within Maple Swamp.

2.0 Work Plan for Completion of Alternatives Study Report

The following activities are underway or will occur to complete the Alternatives Study Report:

1. Consideration of written comments by TEAC participants:
 - a. NC Division of Marine Fisheries (July 31, 2007 and October 18, 2007)
 - b. US Environmental Protection Agency (August 2, 2007 and October 19, 2007)
 - c. NC Division of Water Quality (August 31, 2007 and October 12, 2007)
 - d. US Army Corps of Engineers (September 12, 2007)
 - e. NC Wildlife Resources Commission (October 15, 2007)
 - f. NC Division of Coastal Management (October 22, 2007);
2. Updating traffic forecasts to 2035 with tolls, and refinements to the comparison of alternatives and statement of purpose and need based on the 2035 results;
3. Preparation of an Alternatives Study Report;
4. Distribution of the Alternatives Study Report to the TEAC participants for comment with a request for comments;
5. Citizens Informational Workshops in January 2008;
6. Distribution of a summary of citizen comments on the alternatives study to the TEAC; and
7. Receipt of final written comments from the TEAC participants.

Handout 11

2

November 14, 2007

Based on TEAC participant comments and discussions to date, we are proceeding with developing and assessing alternatives MCB3 and MCB4 in the expanded bridge corridors C1 and C2. At this time, we believe our primary point of disagreement is on whether or not ER2 and/or MCB2 should be evaluated in detail in the DEIS.

3.0 Comparison of Corridor C1 and C2 US 158 Interchange Concepts

Three interchange concepts were developed in order to avoid or minimize wetland impacts in the interchange area. They are:

- Trumpet interchange with a single toll plaza;
- Compressed Y interchange with ramp toll plazas; and
- Partial interchange/intersection with a single toll plaza.

The toll plaza configuration used with each interchange alternative was the one that would result in the least impact on Maple Swamp, while meeting project geometric design criteria.

Table 1 compares these alternatives from the perspectives of:

- Wetlands bridged and filled;
- Displacement;
- Operational characteristics; and
- Cost.

Based on this information, the NCTA recommends the compressed Y interchange because it would affect the least area of wetlands, provide a high capacity to move traffic, and would be the least expensive. The partial interchange/intersection configuration would have operational limits that risk backups on to US 158 in certain situations and would not minimize wetland impact. The trumpet interchange would have the greatest wetland impact, both in terms of wetlands filled and wetlands bridged. The cost of the latter two interchange configurations would be higher and bridge more wetland because one of the wide approaches to the toll booths would be over wetland and in Maple Swamp.

Pending comments from TEAC participants, NCTA will use the compressed Y interchange in the preliminary design it will develop for the assessment of impacts.

Handout 11

3

November 14, 2007

4.0 Comparison of Corridor C1 and C2 NC 12 Intersection Concepts

As per requests that NCTA consider Outer Banks termini locations that avoid coastal wetlands in the C1 corridor and examine alternatives and expand the C1 and C2 corridors to examine additional locations, NCTA examined seven additional conceptual alignments:

- Original C1;
- C1A – minimize bridging of existing SAVs;
- C1B—use of the narrowest area between sound and NC 12;
- C1C—immediately south of original C1 option 1, avoiding coastal wetlands;
- C1D—immediately south of original C1 option 2, avoiding coastal wetlands;
- Original C2; and
- C2A – south of commercial development.

Table 2 compares these alternatives from the perspectives of:

- SAV bridged;
- Potential SAV habitat bridged (bridge over areas of sound less than 4 feet deep);
- Coastal wetlands bridged;
- Non-coastal wetlands bridged and filled;
- Displacement;
- Community impacts;
- Changes required in local road and driveway access; and
- Proximity to marsh islands (closest point in feet).

Cost was not considered to be a factor in the comparison of these alternatives and was not assessed.

Pending comments from TEAC participants, NCTA will carry forward one of the C1 options and one of the C2 options for detailed evaluation in the DEIS.

Table 1. Comparison of US 158 Interchange Alternatives

	Trumpet Interchange With Single Plaza	Compressed Y Interchange With Ramp Plazas	Partial Interchange/ Intersection With Single Plaza
Wetlands Bridged / Filled (all non-coastal in acres)	14.7 / 5.4	7.8 / 2.1	14.7 / 1.8
Displacement	3 residences and 1 business 1 business	3 residences and 2 businesses 1 business	3 residences and 1 business 1 business
Interchange Capacity	High	High	Medium
Toll Plaza	Single toll plaza for eastbound and westbound flow	Split toll plazas for eastbound and westbound flow	Single toll plaza for eastbound and westbound flow Requires one additional east bound toll lane to account for gaps in traffic caused by traffic signal
Operational Characteristics	Directional interchange (no signals); high speed ramp serving US 158 southbound to bridge (90% of incoming traffic)	Directional interchange (no signals); high speed ramp serving US 158 southbound to bridge (90% of incoming traffic)	Includes a traffic signal; US 158 southbound to bridge (90% of incoming traffic) must pass through or stop at the signal
Ramp Design	US 158 traffic maintained at high speed through interchange	US 158 traffic maintained at high speed through interchange	Potential for signal queuing to backup into US 158 traffic under special conditions ¹
US 158 Through Traffic	\$124	\$92	\$127
Costs (in millions)			

¹ For example, higher than average summer volumes because of peak summer weekends (such as July 4th), special events (such as a beach festival), variations in willingness to pay a toll and use the bridge, and toll plaza maintenance.

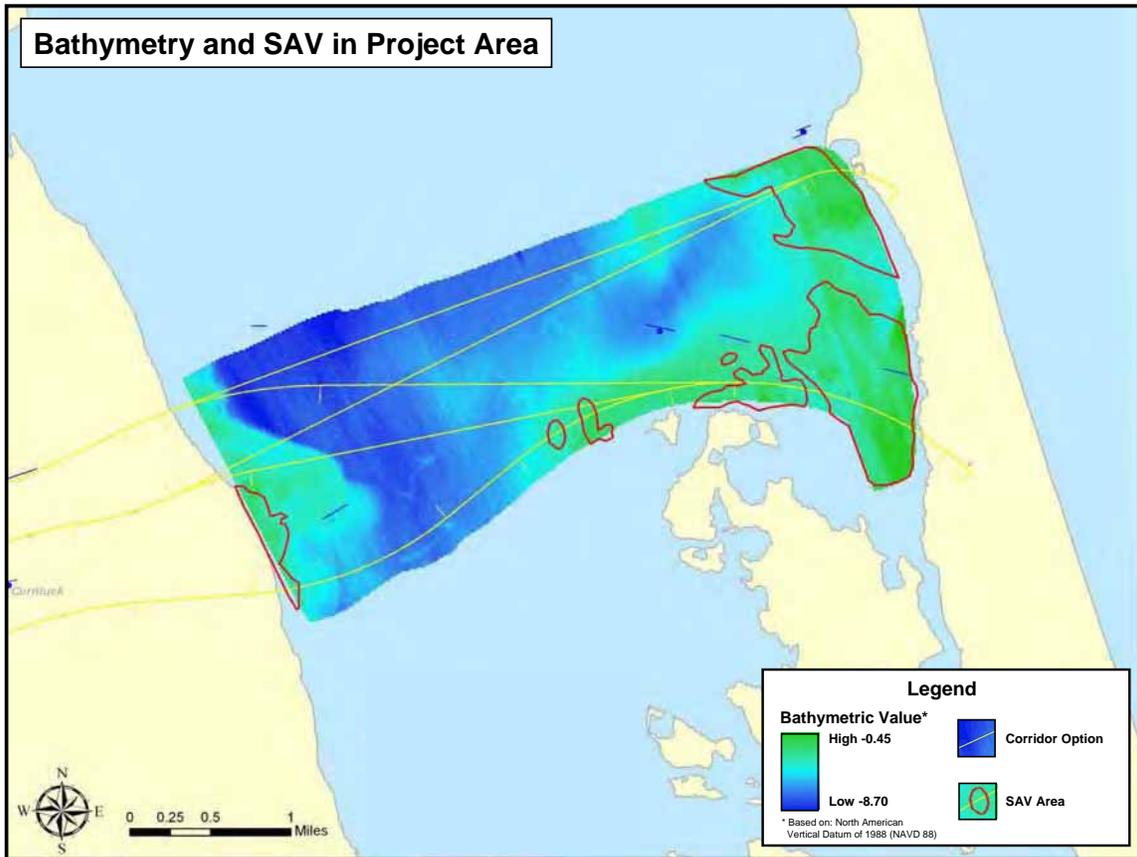


Table 2. Comparison of NC 12 Intersection Alternatives

	Original C1	C1A	C1B	C1C	C1D	Original C2	C2A	
SAV Bridged (in acres)	3.0	0.0	3.8	3.2	3.2	5.6	6.1	
Potential SAV Habitat Bridged (over areas of sound less than 4 feet deep in acres)	2.6	3.9	3.9	3.4	3.2	10.6	9.4	
Coastal Wetlands Bridged / Filled (in acres)	0.7 / 0	0.0 / 0.0	0.0 / 0.0	0.0 / 0.0	0.0 / 0.0	0.8 / 0.0	0.4 / 0.0	
Non-Coastal Wetlands Bridged/Filled (in acres)	0.8 / 0.7	0.3 / 0.4	0.2 / 0.9	0.1 / 1.4	0.4 / 1.5	1.7 / 0.2	1.6 / 0.0	
Displacement	<ul style="list-style-type: none"> • 1 home • 13 vacant residential parcels 	<ul style="list-style-type: none"> • 9 homes • 11 vacant residential parcels 	<ul style="list-style-type: none"> • 2 homes • 1 vacant residential parcels 	<ul style="list-style-type: none"> • 6 homes • 4 vacant residential parcels 	13 vacant residential parcels	1 business	None	
Community Impacts	Bisects a developing subdivision	Bisects existing subdivision; separates approximately 3/4 of homes from community center; substantial change in internal traffic movement.	Passes between two sections of a subdivision but both have independent access to NC 12; pond filled	At edge of a developing subdivision; pond partially filled	Bisects a developing subdivision	None, except those related to NC 12 access	None	
Changes Required in Local Road and Driveway Access (Currituck Clubhouse Road to Virgin Gorda Crescent)	NC 12 Widening to 4 Lanes (in miles)	4.2	3.2	3.7	3.8	4.1	2.5	2.1
	Total NC 12 Access Points	27	19	24	26	26	17	10
	Access Points with Revised Access	13	10	12	12	13	10	3
	<ul style="list-style-type: none"> • Right In - Right Out (RIRO) Only 	10	8	10	8	10	8	3
	<ul style="list-style-type: none"> • Proposed Leftovers (No Left Turns From Access Point) 	3	2	2	3	3	2	0
<ul style="list-style-type: none"> • Road Closure 	0	0	0	1	0	0	0	
Proximity to Marsh Islands (Closest Point in Feet)	Beyond 1,000 feet					900 feet	575 feet	

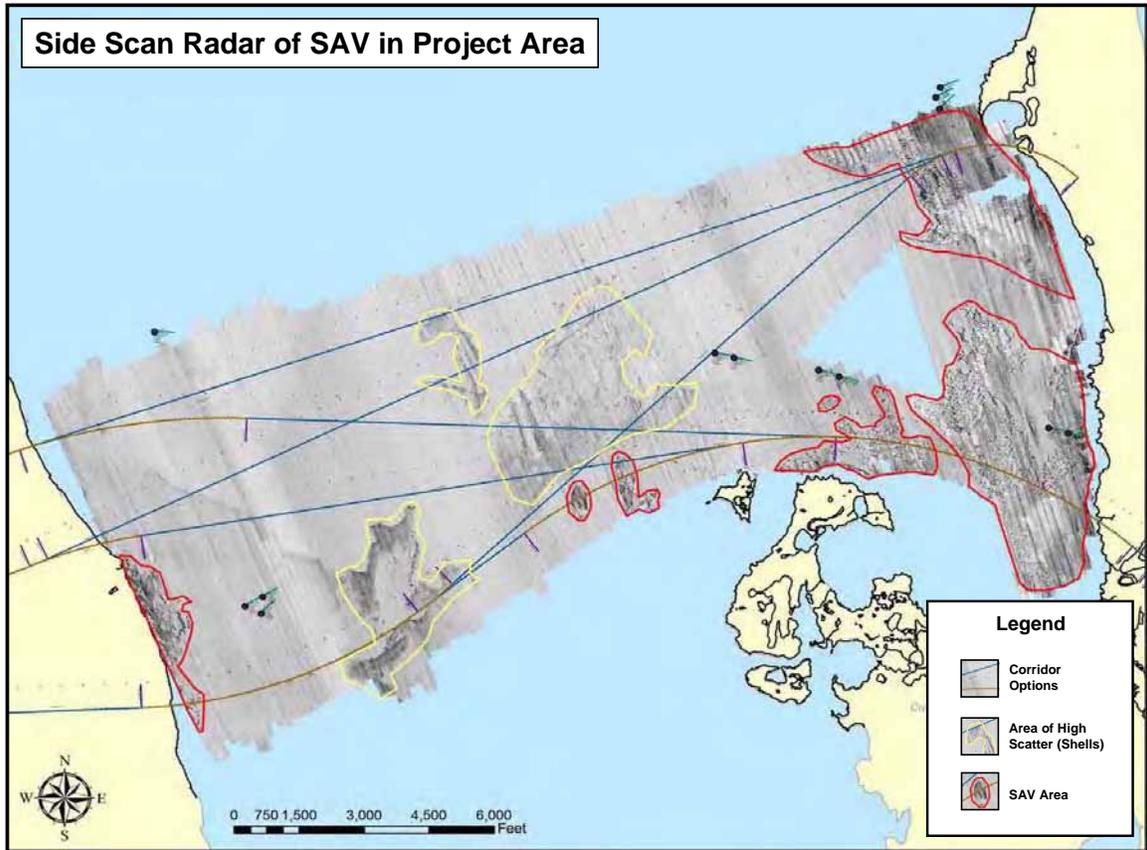
Handout 11

6

November 14, 2007

Mid-Currituck Bridge Study

Conceptual Alternatives Refinement







Mid-Currituck Bridge Study

Currituck and Dare Counties

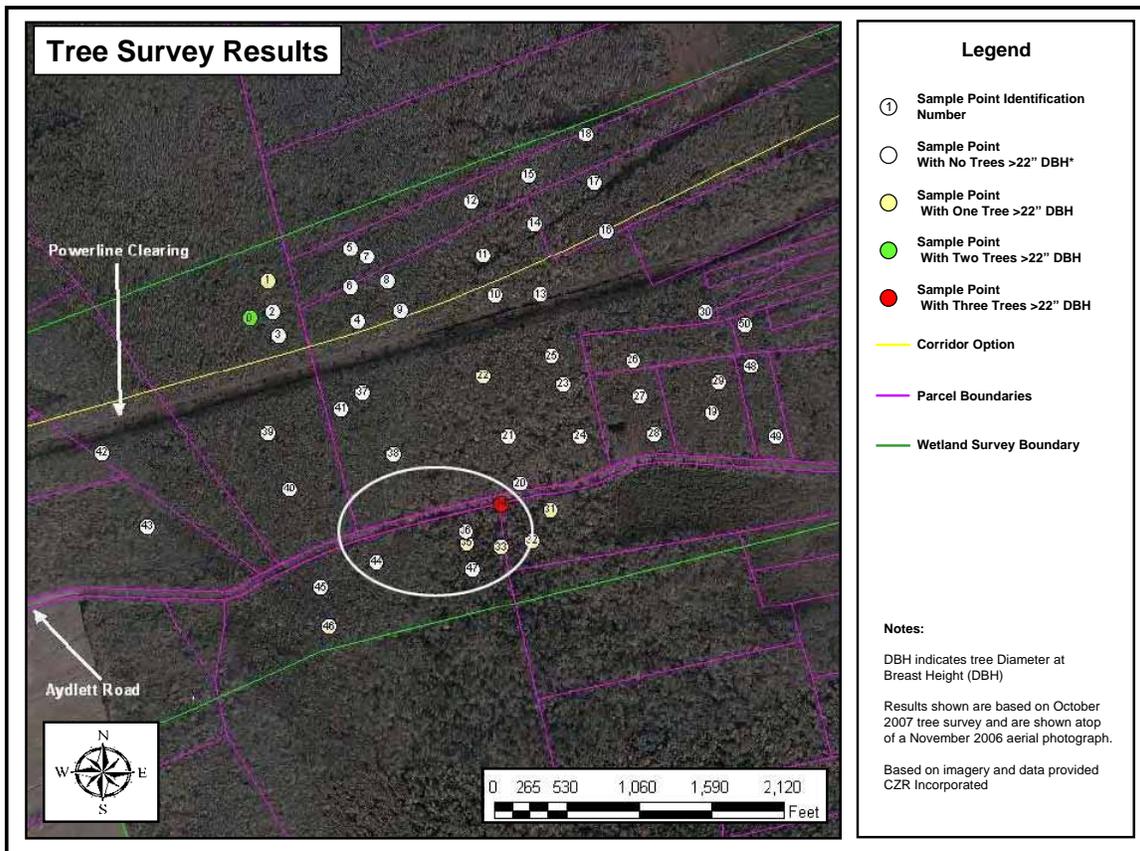
STIP No. R-2576

February 2008 Citizens Informational Workshop Comments Summary Handout 12 – April 8, 2008

Citizens Informational Workshops were held in three locations around the Currituck Sound: Corolla (Currituck Outer Banks), Currituck (mainland), and Southern Shores (Dare County Outer Banks) on February 26, 27, and 28 respectively. These meetings were informal, open house informational sessions that provided the public an opportunity to learn about the project and discuss issues with project staff. The workshops were attended by 180 attendees in Corolla, 203 attendees at Currituck and 185 attendees at Southern Shores for a total of 568 workshop attendees over the three-day period.

These meetings officially marked the beginning of the public comment period, though comments had been accepted and logged prior to this initiative. The official comment period concluded on March 28, 2008. At the closing of the public comment period, a total of 292 comments had been received. These comments came in the form of formal comment sheets distributed at the informational workshops and through the project website, and freeform comments delivered via email, conventional mail, and telephone. The comments include official resolutions from relevant towns and counties and business associations, as well as comments by several elected and appointed government officials. The following list summarizes the comments collected.

Number of Comments Received:	292
Number of Expressed Preferences:	219
In Favor of Bridge Alternatives	186
Opposed to Bridge Alternatives	30
In Favor of ER Alternatives	28
Opposed to ER Alternatives	83
In Favor of No-Build	11
In Favor of Ferry	5
Opposed to Ferry	5



The following is a summary of the comments collected through the public comment period. The numbers in parentheses represent the number of comments received expressing the bulleted viewpoint. Some bullets lack these parenthetical numbers. These are cases in which there was sufficient subjective murkiness to use more qualitative measures.

Regarding Project Need

Project needs commonly cited can be grouped into three categories. These needs were raised by proponents of various project alternatives and by residents throughout the region and beyond.

- Reduction of **traffic congestion** was the most frequently cited need. (83)
- Improved **hurricane evacuation** was also widely cited as a need. (79)
- Enhanced **access** to the Outer Banks and Mainland, as well as their associated services, and economic bases was frequently cited as a need.

Bridge Alternatives Positives

- Reduction of **traffic congestion** was a primary consideration for those in favor of the bridge. (90)
- Enhanced **hurricane evacuation** capacity was a frequently cited benefit of a bridge. (65)
- Many comments mentioned **accessibility** as a primary factor. This included access to the Beaches, the Mainland, the economic assets and services available on either side of the sound. (58)
- There was agreement among bridge supporters and opponents that a bridge would be a boon to tourism (despite disagreement over whether tourists should be prioritized in the planning process), providing them with greater access and shortened travel times. (48)
- Many comments noted that the bridge would have positive economic impacts for the area. These impacts included increased property values, and increased retail and service activity on both sides of the sound. (42)

Some respondents noted that the bridge would reduce total vehicle miles traveled. These comments often made the link between construction of the bridge and improved air quality as well as reductions in fuel costs. Some comments noted that real estate development had out-paced transportation infrastructure and that a bridge is a necessary adjustment of that relationship.

Bridge Alternatives Concerns

- Some comments stated concern that **habitat and wildlife** would be threatened by the construction of a bridge and the resulting increase in auto traffic. Specifically, several comments named ducks and other waterfowl as well as wild horses as species that needed special consideration. (30)
 - Some comments noted concern over the **natural resources** of the area. These comments referred to water pollution and wetland loss, as well as damage to dunes on the Outer Banks. (28)
 - There was concern that the bridge would cause a reduction in the **visual and aesthetic quality** of the area. Respondents noted that they did not wish to have their personal home view of the sound destroyed. The view from the Whalehead Club was also commonly referred to. (20)
 - There was concern, specifically amongst respondents with Currituck Outer Banks addresses that the bridge would result in increased presence of “**day visitors**” from the mainland. (15)
 - Some respondents noted that the bridge might damage or disrupt **historic and archeological resources**. These included the Aydlett Post Office, Currituck Lighthouse, The Whalehead Club, The Rogers Cemetery, and Indian artifacts. (10)
 - Some believe that a bridge would not present a **hurricane evacuation** enhancement. (9)
- Several of these comments referenced a study performed by the Army Corps of Engineers.
- **Noise** was a concern. Generally these concerns were regarding increased traffic, though at least one was concerned about construction noise and the driving of pylons for the bridge. (6)

Though the bridge alternatives received the most support, this support was often accompanied by concerns over impacts. Some respondents felt that the bridge is too expensive. There was some concern that the bridge would provide easy access to criminals that would take advantage of empty houses on the Outer Banks during the off-season. Also, there were concerns that the bridge would impact neighborhoods and communities. Some of these referred to direct impacts of bridge landings, while other referred to the indirect impacts of increased auto traffic. Several comments noted that the northern beaches lack the public facilities that new access would require. Additionally, there was some concern that the bridge would not actually solve the traffic congestion problem. Some comments noted that without road widening, a bottleneck would remain on both sides of the bridge. One respondent noted that the toll plaza

would impact his property in Aydlett and hoped that a narrower design would be pursued. Several respondents expressed significant opposition to the bridge due to direct displacement of homes, property, and in one case, a family cemetery.

Regarding Bridge Alignments and Termini

- Of respondents that expressed preference for bridge alignments, C2 South was the most frequently cited preference.
- Some of these respondents explained that this alignment would have the least general impact on the area. Others specified that C2 South would minimize impacts on existing communities, existing traffic, and disturbance to businesses.
- Several respondents recommended consideration of bridge alignments through Barco or other points north of Aydlett.
- Some of those comments noted that the intersection of US 158 and NC 168 would be an ideal location for the bridge terminus.

Improvement of Existing Roads Alternatives Positives

- Widening the roadway between Southern Shores and Corolla would reduce traffic congestion. (10)
- Improving roads would facilitate hurricane evacuation. (4)
- Roads need to be improved for drainage purposes. (1)

Some respondents felt that roadway improvements were essential to addressing the needs of the area; specifically, that traffic congestion could not be reduced without widening or improving the existing roads. Several comments noted that NC 12 was in need of a center turning lane to facilitate turning into shopping centers and driveways.

Improvement of Existing Roads Concerns

- There was considerable concern that widening roads would damage the distinctive community character. Some comments noted that the character would be so significantly changed that it would deter tourists from visiting the area. (37)
- Several comments noted that widening of existing roads would create an unsafe environment for pedestrians by creating a greater crossing distance.
- Several respondents noted that widening of the existing roads would encourage speeding and expressed concern about related safety issues.
- Several respondents noted that widening the existing roads would have negative impacts on the economy of the area, as it would necessitate removing parking for retail centers.

- Some respondents commented that widening the existing roads would present a health risk as there would be an associated decline in air quality and increase in noise pollution due to homes being closer to the roadway.
- Several respondents expressed concern about use of eminent domain powers. At least (1) respondent threatened to slow project progress through litigation relating to taking of property for road widening.
- Several respondents noted that wider roads would pose an increased risk to wildlife.

A substantial number of comments noted opposition to alternatives that included improvement of existing roads. However, many of these did not elaborate further than to say that they felt these alternatives should be dropped from consideration. One comment noted that the island is getting thinner through erosion and that wider roads would be an inefficient use of space.

No-Build

- Many of those that were in favor of the No-Build alternative explained that traffic congestion was primarily a problem during summer weekends, and that this limited problem is an acceptable inconvenience considering the alternatives up for consideration.
- These comments also expressed concerns about who should be prioritized in the planning process. They drew distinctions between non-resident property owners, tourists, and local residents. They frequently expressed concerns that the needs of local year-round residents were being marginalized.

Ferry Service

Ferry service was not a frequently discussed alternative. Comments regarding ferry service were equally split between proponents and opponents. Several of the detractors commented that ferry service had been tried and was unsuccessful. Others noted that the sound is too shallow and could not sustain ferry service. Some respondents noted that tourists might enjoy the novelty of a ferry and be inclined to use it.

Funding

- Many comments stated a preference for the use of private funding over the use of state funds.
- A majority of comments regarding tolling spoke favorably about the financing tool. There was consensus among supporters and opponents of bridge alternatives that tolls are the best way to pay for the project.

- Many toll proponents felt that the project should include electronic toll collection.
- The EZ Pass system was the most commonly suggested electronic toll collection system. Respondents felt that since the system is used in the north and a majority of tourists visit from the north, that the system would be of greatest convenience
- Many respondents suggested that local residents should pay a discounted fare.
- There was general consensus that visiting tourists should and would pay a high fee.
- Some comments noted that a toll would be an effective tool for reducing the impacts of "Day Visitors" from the mainland.

Some expressed dissatisfaction with tolling tools and felt that tolls do not have a place in North Carolina transportation infrastructure funding. A few viewed tolls as an insult added to injury: they opposed the bridge and did not want to have to pay a toll to use it.

Sensitive Resources

- Whalehead Club and its view (30)
- Currituck Lighthouse (15)
- Wild Horses and other wildlife (14)
- Corolla's Four-Wheel Drive Area
- Rogers Cemetery
- "The View From My Home"
- The Town of Duck

Many comment form respondents were reluctant to list any specific resources that they deemed sensitive. Several explained that experts should determine sensitive resources. Others stated that the project had been under study for so long, that the project team should already be aware of all sensitive resources. A couple of comments, including one from the property owner, mentioned a family cemetery that will be displaced by the recommended bridge alternative. The home owner was very concerned and displeased.

Bicycles and Pedestrians

- Some comments noted that regardless of the alternative pursued, improved pedestrian and bicycle access should be included.
- Several cycling advocates requested bicycle lanes for any bridge option as well as bicycle friendly improvements on US 158 and NC 12.

Geographic Variation

- 35 Out-of-State Comments were received that stated a preference for a project alternative. They represented a mix of tourists and non-resident property owners.
 - 28 preferred only a bridge alternative, 2 opposed a bridge
 - 3 preferred a bridge in conjunction with improvement of Existing Roads
 - 1 preferred ER options, while 11 opposed
 - 1 preferred ER options with Ferry service
 - 1 opposed Ferry Service
- 174 comments that provided addresses within the project area expressed preference for a project alternative.
 - 41 comments were received from Mainland Currituck addresses
 - 60 comments were received from Currituck County Outer Banks addresses
 - 73 comments were received from Dare County addresses
- Of the 41 stated preferences received from Mainland Currituck:
 - 17 preferred only a bridge alternative, while 6 opposed
 - 1 preferred a bridge in conjunction with improvement of Existing Roads
 - 1 preferred ER options with Ferry service
 - 1 preferred ER options only, while 3 opposed
 - 4 preferred No-Build option
- Of the 60 stated preferences received from Currituck County Outer Banks addresses:
 - 32 preferred only a bridge alternative, while 14 opposed
 - 6 preferred a bridge in conjunction with ER alternatives
 - 7 preferred ER options only, while 11 opposed
 - 1 preferred ER alternatives in conjunction with Ferry Service
 - 1 preferred Ferry Service only, while 1 opposed
- Of the 73 stated preferences received from Dare County Addresses:
 - 60 preferred bridge only alternatives, while 3 opposed
 - 2 preferred a bridge alternative in conjunction with ER alternatives
 - 1 preferred an ER alternative only, while 39 opposed
 - 2 preferred No-Build Alternatives
 - 2 opposed Ferry Service

Summary of Resolutions

Towns and counties, as well as businesses and business associations submitted formal resolutions outlining their support or opposition for various project alternatives. The following section summarizes these resolutions.

Towns and Counties

These resolutions were drafted by town and county councils and boards of commissioners as applicable. As drafted by elected representatives, these resolutions offer the official preferences of the towns and counties. The original submission date is listed in parentheses. Some of these resolutions were submitted during earlier comment periods and resubmitted during the current comment period. Where more than one date is listed, additional resolutions were submitted.

Currituck County (September, 2004; March, 2008):

- Strongly supports the construction of the Mid-County Bridge and the recommendations of the North Carolina Turnpike Authority as presented on February 26, 2008.
 - Believes the bridge is necessary to insure the safety of visitors and resident of the Northern Outer Banks
 - Believes the bridge will encourage and induce increased commerce on the Currituck County Mainland

County of Dare (July, 2002; November, 2002; September, 2004):

- Supports immediate construction of the Mid-Currituck Bridge

Believes that transportation routes to the Northern Beaches have not kept pace with development and visitation.

- Acknowledges the importance of local municipalities in impacted areas and believes the local jurisdiction should be highly regarded and supported where transportation projects or programs impact their communities.

- Supports the efforts to include hurricane evacuation as a purpose and need for the Mid-Currituck Bridge project

Camden County (November, 2002):

- Supports immediate construction of the Mid-Currituck County Bridge

Believes the bridge will alleviate traffic congestion and manage safe, efficient traffic flows

Handout 12

- Supports local government jurisdiction

Believes that local governments within the impacted area are the primary stakeholders and maintain valuable knowledge of transportation needs, preservation of community and sustaining economic viability.

Town of Nags Head (September, 2002):

- Supports the construction of the Mid-Currituck Bridge as soon as possible

Believes that the bridge is imperative for travel safety and public service reasons
- Strongly opposes the widening of NC 12 through the town of Southern Shores.

Believes it will destroy the environment and character of the town.

Town of Kill Devil Hills (September, 2002):

Urges the North Carolina Department of Transportation to commit fully and strongly consider and support local governments when they make requests regarding transportation needs and improvement projects within their jurisdictions.

Town of Kitty Hawk (September, 2002):

- Supports the construction of a Mid-Currituck Bridge as soon as possible

Believes construction of the bridge is imperative for traffic safety and public service reasons.
- Supports efforts in building the Mid-Currituck Bridge in such a way that it will have the least impact on the communities on each end of the bridge.

Town of Southern Shores (April, 2000; March 05, 2008):

- Supports construction of the Mid-Currituck Sound Bridge and supports financing of the bridge through imposition of a toll
 - Believes the lack of a bridge is severely damaging the quality of life for communities in Currituck and Dare counties
 - Believes the bridge would most significantly reduce traffic congestion, save energy resources, and provide an alternative route for both human safety and hurricane evacuation.

Town of Duck (October, 2002; March, 2008):

- Agrees with the stated purpose and need for the project

Handout 12

- Believes hurricane evacuation is a legitimate justification for the project as it would help meet the legislative standard evacuation time of 18 hours and provide an alternative evacuation route in the event that NC 12 is blocked during a severe storm event
- Strongly supports Mid-Currituck Bridge (MCB3 and MCB4) alternatives for further study and implementation
 - Believes that the town's land use plan clearly supports a bridge alternative and maintenance of NC 12 in its current configuration and alignment.
 - Believes that the bridge alternatives are in harmony with the Town's Vision Statement that was developed through an extensive public involvement process
 - Opposes widening alternatives
 - Believes road widening would fundamentally change the character of the town
 - Believes that the roadway capacity and level of service would be significantly worse between Aydlett and the US 158/NC 12 intersection with a widening alternative as opposed to the recommended bridge alternative
 - Believes that the ER2 alternative would not address the project purpose and need.
 - Believe that the level of community disruption from a three-lane widening would be overwhelming and completely inconsistent with the goals of the town.
 - Has identified 47 properties that would be displaced by a three-lane widening, many of which are in the community of Duck.
 - Believes that widening would reduce property values through right-of-way acquisitions, decreasing lot sizes and creating zoning, non-conformities Right-of-way acquisitions could also render properties unusable by impacting required septic areas.
 - Believe that widening would also cause additional noise and air quality impacts due to decreased distance to the roadway for residents and businesses.
 - Believes widening would undercut many of the efforts the town has taken to encourage non-motorized travel.
 - Believes that reduction of travel time and improving system efficiency with additional linkages between the mainland and the Outer Banks are two objectives that support bridge alternatives over road widening.

Handout 12 10 April 08, 2008

- Believes that the status of NC 12 as the area's primary bicycle and pedestrian route presents a significant safety concern with regards to high auto traffic volumes.
 - A bridge will reduce the number of vehicle trips by diverting traffic whereas widening NC 12 would not and would pose a greater safety concern to pedestrians.
- The Town of Manteo (October, 2002):*
- Supports the construction of a Mid-Currituck Bridge as soon as possible
 - Believes the bridge would alleviate traffic congestion in the area
 - Opposes Widening of NC 12
 - Believes widening NC 12 would destroy the environment and the character of the town
- Dare County Tourism Board (undated):*
- Supports immediate building of the Mid-Currituck Bridge
 - Believes that transportation routes have not kept pace with development and visitation
 - Supports local government jurisdiction
 - Believes in the importance of local municipalities and believes that local jurisdictions should be highly regarded and supported where transportation projects or programs impact their communities.
- Southern Albemarle Association (an organization of six counties located in the Southern Albemarle area) (February, 2003):*
- Supports the immediate construction of a Mid-Currituck County Bridge
 - Believes a Mid-County Bridge would best address the current traffic congestion, save energy resources, and provide an alternative route for safety and hurricane evacuation.
 - Believes transportation routes to the Northern Beaches have not kept pace with development.
- North Carolina's Northeast (Commission of sixteen Northeast North Carolina counties) (October, 2003):*
- Supports the Construction of the Mid-Currituck Sound Bridge and requests the State of North Carolina to place the highest priority to the completion of said bridge.

Handout 12 11 April 08, 2008

- Believes the bridge will provide northern Outer Banks businesses access to a much larger labor pool and will give residents of North Carolina access to jobs presently going to foreign workers
- Believes the bridge will enhance business-to-business opportunities between the northern Outer Banks and the Mainland counties of Currituck, Camden, Pasquotank, Perquimans, and Chowan
- Cites the collection of over 13,000 signatures in support of the Mid-Currituck Sound Bridge

Businesses and Business Associations

Outer Banks Home Builders Association (February, 2003):

- Supports immediate building of the Mid-County Bridge in Currituck

Believes that the current transportation routes to the northern beaches are inadequate for the current volume of visitation.

- Supports local government jurisdiction

Believes North Carolina Transportation agencies need to recognize the beliefs and opinions of local governments closely involved with projects in their jurisdictions.

Outer Banks Association of Realtors (May, 2000; February, 2003; March, 2005):

- Supports the construction of a Mid-Currituck Sound Bridge and strongly urges the State of North Carolina to assign the highest priority to this project.
 - Believes that increased residential construction as well as increased tourist visitation to the Northern Outer Banks has put strain on the current roadways
 - Believes the overcrowding of roadways negatively impacts the increasing tourist industry and poses a serious safety problem for residents and guests during times of mandatory evacuation
 - Believes a Mid-Currituck Bridge would best address these needs

Outer Banks Hotel/Motel Association (undated):

- Supports the immediate construction of a Mid-Currituck County Bridge
 - Believes a Mid-County bridge would do no harm to the economic health of Dare County and would benefit the economic health of Currituck County
 - Believes the long term transportation infrastructure of Eastern North Carolina would be enhanced by the construction of a Mid-County Bridge

Handout 12 12 April 08, 2008

- Strongly opposes the widening of NC 12 through Southern Shores and Duck. Believes widening of the roadway to accommodate traffic would fundamentally alter the characteristics and attractiveness of Southern Shores and Duck, thereby doing irreparable harm to the economic health of those towns and Dare County

Outer Banks Chamber of Commerce (undated):

- Supports Immediate building of the Mid-Currituck Bridge
 - Believes that a Mid-Currituck Bridge would significantly decrease traffic congestion in Southern Shores, Duck and Corolla and provide a safe alternate travel route.
 - While alternative solutions should be studied to improve infrastructure and keep pace with development, the focus should remain on expedient construction of a Mid-Currituck Bridge
- Believes that local jurisdictions should be highly regarded and supported where transportation projects or programs impact their communities

The Duck Civic Association (January, 2001):

- Supports no general widening of NC 12 between the northern Southern Shores boundary and the Currituck County line. Believes this will maintain the coastal village atmosphere of the community.
- Supports construction of the Mid-Currituck Bridge as soon as possible. Believes the bridge is essential for the safe evacuation of Outer Banks residents and visitors during natural disaster occurrences

Handout 12 13 April 08, 2008



Mid-Currituck Bridge Study

Currituck and Dare Counties

STIP No. R-2576

May 2008 Citizens Purpose and Need and Alternatives Screening Report Comments Summary Handout 13 – July 8, 2008

On April 7, 2008, the North Carolina Turnpike Authority (NCTA) released the Statement of Purpose and Need and Alternatives Screening Report for the Mid Currituck Bridge Study. These documents were delivered to five municipal offices around the project area in Currituck, Corolla, Kitty Hawk, Southern Shores, and Duck, North Carolina and posted on the project website. Stakeholders were notified of the release of these documents through a postcard mailing and via the project website.

A total of 65 comments were received (see table below). These comments were submitted via email, conventional mail, telephone, as well as formal comment sheets distributed through the project website. The Town of Nags Head and the Albemarle Commission submitted official resolutions, and recommendations were made by a special interest group and a property owner's association. This memorandum summarizes the comments collected.

Number of Comments Received:	65
Number of Comments on Statement of Purpose and Need or Alternatives Screening Report	10
Number of Expressed Preferences	47
In Favor of Bridge Alternatives	20
Opposed to Bridge Alternatives	2
In Favor of ER Alternatives	17
Opposed to ER Alternatives	5
In Favor of No-Build	0
In Favor of Ferry	0
Opposed to Ferry	0

Handout 13

1

July 8, 2008

This summary includes all comments submitted after the close of the previous public comment period (March 28, 2008), including those submitted after the official comment period deadline of May 15, 2008 for the Statement of Purpose and Need and Alternatives Screening Report. The numbers in parentheses represent the number of comments received expressing the bulleted viewpoint. Some bullets lack these parenthetical numbers. These are cases in which there was sufficient subjective murkiness to use more qualitative measures.

Statement of Purpose and Need

Five citizen comments were received that specifically referenced the Statement of Purpose and Need. Several of the comments included questions regarding methodology used for figures cited in the report. These comments generally opposed construction of a Mid Currituck Bridge. One comment was a general statement of approval for the report and the project.

- Two comments inquired about methodologies used for population statistics. These questions raised points of clarification over who was included in population counts and how population was projected. They did not question the veracity of the data.
- Two of the comments contested the stated traffic congestion problems. These comments argued that traffic congestion is infrequently experienced and does not constitute a need.
- One respondent disputed the right of communities outside of Currituck County to have input for this study and did not want a copy of the report to be available in those locations south of the county line.

Alternatives Screening Report

Eight citizen comments were received that referenced the Alternatives Screening Report. These respondents generally opposed construction of a Mid Currituck Bridge. One comment was a general statement of approval for the report and the project.

- One respondent felt that noise, visual, and community cohesion impacts for the Town of Aydlett were neglected from the report. It was suggested that the environmental impacts be minimized by utilizing a corridor through a former shooting club [now "The Currituck Club" a developing subdivision]. This respondent also felt that Section 3.4 "Public Comments," was not thorough enough.
- One respondent noted that billboards that she owned adjacent to US 158 near the proposed interchange were not included in the assessment of business impacts.
- One respondent, a mainland Currituck resident who resides on the land where a proposed bridge interchange would occur, felt that the Trumpet interchange design

Handout 13

2

July 8, 2008

would have less impact than the “Y” interchange because the “Y” interchange interferes with drainage.

- One respondent felt that traffic patterns support inclusion of Improvement of Existing Roads (ER) alternatives because drivers that use the bridge would still contribute to traffic in Southern Shores and Duck as they travel for shopping and restaurants.
- One respondent misinterpreted the report and thought that the NCTA was recommending widening of NC 12 through Southern Shores and Duck. This respondent requested that the NCTA reconsider that recommendation.

General Project Comments

In addition to Statement of Purpose and Need and Alternatives Screening Report comments, general project comments were also received during this comment period. Common themes both in favor of and opposed to various alternatives remained similar to comments received during the previous public comment period.

Bridge Alternatives Positives

- Many of the bridge positive comments mentioned improved **accessibility** as a primary factor for support of these alternatives. This included access to the beaches, the Mainland, the economic assets and services available on either side of the sound. (15)
- Reduction of **traffic congestion** was a primary consideration for those in favor of the bridge. (11)
- Enhanced **hurricane evacuation** capacity was also a frequently cited benefit of a bridge. (10)

Twenty comments were received that were in support of a bridge alternative. Some respondents noted that a bridge would reduce travel time and fuel costs.

Bridge Alternatives Concerns

- Some comments stated concern that **habitat and wildlife** would be threatened by the construction of a bridge and the resulting increase in auto traffic. (11)
- Some respondents noted concern that a bridge would encourage over-development and commercialization of the Outer Banks. They frequently cited the need for **growth management**. (8)

- There were concerns that the bridge would impact **neighborhoods and communities**. Some of these referred to direct impacts of bridge landings, while others referred to the indirect impacts of increased auto traffic. (8)
- Some believe that a bridge would not present a **hurricane evacuation** enhancement. (5)

There was some concern that the bridge would provide easy access to criminals that would take advantage of empty houses on the Outer Banks during the off-season. There was also concern that the bridge would cause a reduction in the visual and aesthetic quality of the area. Several comments noted that the northern beaches [those from Southern Shores north] lack the public facilities that new access would require. Additionally, there was some concern that the bridge would not actually solve the traffic congestion problem. Several respondents expressed significant opposition to the bridge due to direct displacement of property.

Improvement of Existing Roads Positives

- Widening the roadway between Southern Shores and Corolla would reduce **traffic congestion**. (2)

Two comments were received with a stated preference for improvement of existing roads. One respondent noted that cars which used the proposed bridge would still contribute to congestion in Southern Shores and Duck as they travel for restaurants and shopping and therefore increase demand for road widening.

Improvement of Existing Roads Concerns

- There was considerable concern that widening roads would damage the distinctive **community character**.
- Several respondents noted that widening of the existing roads would encourage **speeding** and expressed concern about related safety issues.
- Several respondents noted that they felt widening the existing roads would have **negative impacts on the economy** of the area, as it would deter tourists from visiting the area.

Seventeen comments noted opposition to alternatives that included improvement of existing roads. However, several of these did not elaborate beyond a request to drop these alternatives from consideration. One comment noted that the Outer Banks is a narrow strip of land and that wider roads would be an inefficient use of space.

No-Build

- Several comments that were in favor of the No-Build Alternative explained that **traffic congestion** was primarily a problem during summer weekends, and that this limited problem is an acceptable inconvenience considering the proposed alternatives.
- These comments also expressed concerns about who should be prioritized in the **planning process**. They drew distinctions between non-resident property owners, tourists, and local residents. They frequently expressed concerns that the needs of local year-round residents were being marginalized.

Bicycles and Pedestrians

- One comment requested that bicycles be included in the planning of a Mid Currituck Bridge. This respondent cited a North Carolina Department of Transportation study that found that investment in bicycle facilities on the Outer Banks resulted in positive economic impact. The respondent suggested that inclusion of bicycles on a bridge would lure greater numbers of tourists to the Outer Banks.

Summary of Resolutions

Official resolutions were received from the Town of Nags Head and The Albemarle Commission as well as recommendations made by the Build the Bridge – Preserve Our Roads special interest group and the Whalehead Property Owners Association. These resolutions and organizational letters are summarized here.

The Town of Nags Head

- On April 9, 2008, the Town of Nags Head Board of Commissioners formed a Board consensus to fully support the recommendation of the North Carolina Turnpike Authority on the Proposed Mid Currituck Bridge.
- The Board supports only studying bridge alternatives and suggests eliminating the widening of NC 12 north of US 158 from consideration.
- The board agreed that hurricane evacuation is an important justification for the project.
- The board feels that a bridge alternative would reduce the number of vehicle trips through the Town of Duck.

The Albemarle Commission

- On April 2, 2008, the Albemarle Rural Planning Organization adopted a resolution in support of a Mid-Currituck Bridge.

Handout 13

5

July 8, 2008

- The Organization found that in light of increased number of resident and visitors, a single means of ingress and egress to the Currituck Outer Banks, significant summer traffic congestion, and increased congestion during hurricane evacuation, construction of a Mid Currituck bridge would insure safety and have a positive impact on Currituck County's Land Use Plan and Transportation Plan.

Whalehead Property Owner's Association

- The President of the Whalehead Property Owner's Association (WPOA), a voluntary homeowners association with 450 members wrote a letter dated May 11, 2008.
- The WPOA opposes construction of a Mid Currituck Bridge due to concerns about increased traffic, commercialization, and crime.
- A poll of its membership found that of the two proposed termini, there was overwhelming preference for the southern terminus (C2) on the Outer Banks.
- The membership overwhelmingly opposed the Northern terminus (C1) because of concerns that it would increase traffic through their community.

Build The Bridge – Preserve Our Roads, Inc.

- The Board of Build the Bridge – Preserve Our Roads, Inc. found the Statement of Purpose and Need for the Mid Currituck Bridge Study to be comprehensive and insightful.
- The organization believes that there is immediate need for the bridge project and that provision of a new link in the traffic pattern for ingress to and egress from the Outer Banks will reduce congestion, reduce travel times to the Outer Banks, improve hurricane evacuation times, and absolutely improve transportation system efficiency.

Handout 13

6

July 8, 2008



Mid-Currituck Bridge Study

Currituck and Dare Counties

STIP No. R-2576

Summary of Agency Comments Received May 2008 Handout 14 – July 8, 2008

The North Carolina Turnpike Authority (NCTA) requested comments on a revised Statement of Purpose and Need and the Alternatives Screening Report. Both are dated April 2008 and were distributed at the April 8, 2008 Turnpike Environmental Agency Coordination (TEAC) meeting. Written comments were received from the US Army Corps of Engineers; the North Carolina Department of Environment and Natural Resources (NCDENR), Division of Marine Fisheries; the NCDENR Division of Water Quality, Transportation Permitting Unit; the NCDENR Division of Coastal Management; US Environmental Protection Agency, Region 4; the North Carolina Wildlife Resources Commission; and the North Carolina Department of Cultural Resources, State Historic Preservation Office. A summary of the written comments from each agency is presented here.

US Army Corps of Engineers (USACE), May 21, 2008

- The USACE agrees with the term “To substantially” being added to the beginning of each proposed P&N statement.
- There is an “Issue of Concern” with the fourth statement in the Purpose and Need (P&N). The USACE requested that the Turnpike remove “providing a new transportation link” from the P&N statement. This statement eliminates all the alternatives except the bridge alternatives. It is the opinion of the USACE that there are other reasonable alternatives besides a bridge. Section 404 of the Clean Water Act requires consideration of a full range of alternatives. Including this statement may require the USACE to complete additional National Environmental Policy Act (NEPA) studies before a permit may be issued. The USACE believes the statement jeopardizes the goal of issuing a 404 permit without additional analysis.
- The USACE believes that alternatives ER 2 and MCB2 should be carried forward in the Draft Environmental Impact Statement (DEIS). MCB2 may be practicable even though its potential capital funding shortfall is \$155 million more compared to MCB4. MCB2 has much greater system traffic improvement benefits than MCB3 or

Handout 14

1

July 8, 2008

MCB4. ER2 should be carried forward because it is the least expensive and has the least environmental impacts of all alternatives.

- The USACE has not been provided with sufficient information to show that possible non-tolling financing is not available. The NCTA and Federal Highway Administration (FHWA) should demonstrate that using non-tolling financing is not feasible. The USACE questioned if the \$137.5 million stated in the 2007-2013 State Transportation Improvement Program (STIP) for the Mid-Currituck Bridge Project were still available.
- If cost is a consideration, the USACE recommends MCB3 be dropped as an alternative for further study because its hurricane clearance times are the worst of the alternatives (26.6 hours versus 21.8 hours). MCB3 does not have additional system benefits over MCB4 other than a cost savings of \$7 million.
- Environmental impacts from building a new bridge across the Currituck Sound may result in substantial impacts relative to water quality, Submerged Aquatic Vegetation (SAV) habitat, habitat fragmentation, and indirect and cumulative impacts.
- The USACE noticed discrepancies between text and information presented in Table 2 of the Alternatives Screening Report. Also, Table 2 shows higher number of high quality resources being filled than the total number of wetlands. This needs to be clarified.

NCDENR, Division of Marine Fisheries (DMF), May 12, 2008

- There is a significant change in the Statement of Purpose and Need from May 2007 to April 2008. The Division of Marine Fisheries (DMF) questioned why these changes were not previously mentioned. The DMF recommends that the NCTA maintain the report dated May 2007.
- The DMF continues to recommend alternative ER2 be selected for detailed study.
- Questions concerning Table 6 in the Alternatives Screening Report: Are the Submerged Aquatic Vegetation (SAV) Habitat Bridged additive? Based on the table title this is just for the NC 12 Intersection Alternatives. Is this correct?
- The DMF recommends using six-foot deep or less as potential SAV habitat instead of less than four-foot deep. If six-foot deep or less is not used, then reasons should be given with appropriate literature documentation. This agency cannot provide final comments on recommended alternatives until the SAV impacts have been reviewed.

Handout 14

2

July 8, 2008

**NCDENR, Division of Water Quality (DWQ),
Transportation Permitting Unit, May 16, 2008**

- The DWQ would like to see impacts to wetlands broken out by each alternative instead of an average as shown in Table 2 of the Alternatives Screening Report. Ideally, these impacts should be further broken out and stated for both the mainland and the Outer Banks for each alternative.
- In reference to a memorandum from the US Department of Transportation, Federal Highway Administration, to the Colorado Department of Transportation that was used, in part, as guidance for development of the Alternatives Screening Report, the connecting link need narrowly defines the purpose and need that only a toll alternative can be considered. The NCTA also has eliminated the existing upgrade alternatives, based primarily on cost. This seems to be contradictory to the guidance used to develop the screening process.
- The DWQ recommends that the NCTA remove the final need, "The absence of a connecting link between the Currituck County Mainland and the Currituck County Outer Banks results in inefficient, out-of-direction travel, and is consistent with the State's officially adopted transportation system plans." It should not be a need by which alternatives are measured.
- The NCTA statement at the May 6, 2008 TEAC meeting that if a toll road is not built, there is no project seems to show preference for a toll road. This goes against the FHWA guidance used as well as NEPA.
- The DWQ looks to see that avoidance and minimization begins with alternative selection and continues through the selection of the Least Environmentally Damaging Practical Alternative (LEDPA). If impacts on resources in the [Currituck] Sound, especially fishing and wildlife, are shown to be significant, and all non-bridge alternative have been dropped during NEPA review, the DWQ would require the 401 Water Quality Certification application that a non-bridge alternative be evaluated to ensure that proper avoidance and minimization of impacts has occurred.

**NCDENR, Division of Water Quality (DWQ),
Transportation Permitting Unit, April 29, 2008**

- In the revised Purpose and Need Statement, the list of planned improvements in Section 1.7.3 should include U-3815. This project would upgrade the intersection of US 64 and NC 345 near Manteo in Dare County. This project should also be included in Section 1.0 of the Alternatives Screening Report.
- In the Alternatives Screening Report, Section 2.1.1.2 indicates that a bridge would be a single, two-lane bridge. Figures 6 and 7 indicate a four-lane bridge. The maps and text should match.

Handout 14

3

July 8, 2008

- It is unclear if impacts of wetlands in Table 2 in the Alternatives Screening Report are based on delineations performed in December 2007. It is unclear if impacts to several potential isolated wetlands along NC 12 are included in the analysis.
- The purpose and needs of this project have not been established prior to the selection of the detailed alternatives.
- The DWQ believes that the NCTA is not fulfilling requirements of Section 6002 SAFTEA-LU since the NCTA has not collaborated with the participating agencies for the required level of detail for an upgrade existing alternative.
- The DWQ still strongly urges the NCTA to include an upgrade existing alternative in its environmental document to fulfill the requirement of 15A NCAC 02H.0506. The appropriate documentation will be required prior to issuance of 401 Water Quality Certification.
- It may prove difficult for the DWQ to make a permit decision if an upgrade-existing alternative is not included in the environmental documentation.
- The DWQ, as well as other Participating Agencies, have recommended retaining the ER2 alternative for detailed study.
- This project has the potential to impact several apparent stormwater ponds, as well as a wastewater treatment facility. Impacts to these areas will need to be addressed if they occur.

North Carolina Wildlife Resources Commission (NCWRC), May 13, 2008

- The NCWRC noted the addition of the following project need: "The need to improve system efficiency by providing an additional link between the Currituck County mainland and its Outer Banks." This additional statement narrowly defines the project need and dictates a new location alternative.
 - The NCWRC recommends revising the Purpose and Need Statement to allow the previous full range of alternatives.
 - The NCWRC feels it is necessary to study a non-bridge alternative in the DEIS to fully assess direct and indirect impacts and to have a full range of feasible and comparable alternative for public review.
- NCDENR, Division of Coastal Management (DCM), May 6, 2008**
- The DCM does not agree with the Statement of Purpose and Need dated April 2008. Particularly, the DCM does not agree with the addition of the last project need statement. The DCM suggests reverting to the Statement of Purpose and Need dated May 2007.

Handout 14

4

July 8, 2008

- The NCTA should consider potential SAV habitat as areas that are 6 feet deep or less, and recalculate the potential SAV impacts for each of the seven NC 12 intersection alternatives, or provide an explanation as to why areas of the Sound that are between 4 feet and 6 feet deep should not be considered as potential SAV habitat. DCM will only be able to provide comments on the seven NC 12 intersection alternatives after receiving additional information regarding SAV impacts.
- The NCTA should clarify whether the SAV and potential SAV habitat impacts in Table 6 are estimated impacts for the entire bridge corridor. A definition should be provided of what is considered SAV and potential SAV habitat.
- The DCM suggests there should be continued discussion concerning selection of the detailed study alternatives at TEAC meetings.

US Environmental Protection Agency (EPA), Region 4, May 5, 2008

- The added need in the project's purpose and need statement eliminates any of the "improve existing" alternatives.
- The scope and components of the MCB3 and MCB4 alternatives are nearly the exact same. Based on Table 2 in the Alternatives Screening Report, some of the alternatives proposed to be eliminated "out perform" MCB3 and MCB4 for a number of the traffic/travel benefits.
- EPA concurs that Alternatives ER1 and MCB1 are not reasonable and could be eliminated based on potential impacts to the human and natural environment, traffic benefits provided, and more than double the capital costs over other alternatives.
- For comparison purposes under NEPA and to provide a full range of reasonable alternatives for review, EPA strongly encourages MCB2 and ER2 be carried forward for further study in the DEIS.

North Carolina Department of Cultural Resources, State Historic Preservation Office (HPO), April 30, 2008

- Given the presence of several National Register-listed properties in and around Corolla, the HPO would tend to prefer the alignments of C2, C4, and C6 shown in the Alternatives Screening Report.

Summary

The eight agency comment letters received brought up similar issues on a statement contained in the Statement of Purpose and Need and the recommended alternatives for further study identified in the Alternatives Screening Report.

Agency comments were related to a particular statement in the Statement of Purpose and Need, which they felt limits the range of alternatives to a bridge crossing.

Handout 14

5

July 8, 2008

Comments noted that there needs to be a full range of alternatives compared as part of the NEPA documentation; therefore, the agencies feel it is necessary to include a non-bridge alternative for further study. The comments differed on whether part or all of the statement should be removed.

Comments stated that Alternatives ER2 (USACE, DMF, DWQ, EPA, NCWRC, and DCM letters) and MCB2 (USACE and EPA letters) provide travel benefits at reasonable costs and should be continued for further study. These two alternatives would provide a full range of alternatives beyond a toll bridge crossing. MCB3 (USACE letter) is recommended to be eliminated as it does not show significant system benefit compared to MCB4 and has the worst hurricane evacuation times of alternatives.

Additionally, comments were made in reference to wetland information in Table 2 of the Alternatives Screening Report. Comments were also made concerning the Submerged Aquatic Vegetation (SAV) habitat and how it is defined.

Handout 14

6

July 8, 2008



Mid-Currituck Bridge Study

Currituck and Dare Counties

STIP No. R-2576

Scope for Evaluating ER2 and MCB2 as Detailed Study Alternatives in the DEIS

Handout 15 – July 8, 2008

The purpose of this handout is to provide for your information a description of the activities that the North Carolina Turnpike Authority (NCTA) plans to conduct in its evaluation of ER2 and MCB2 as Detailed Study Alternatives in the Mid-Currituck Bridge Study Draft Environmental Impact Statement (DEIS). They include environmental, engineering, traffic, and financial feasibility activities. Given that ER2 and MCB2 involve exclusive or extensive additional improvement of roads operated and maintained by the North Carolina Department of Transportation (NCDOT), NCTA will be working closely with NCDOT in the development of the preliminary design criteria, the preliminary design, and preliminary design-related traffic analyses.

ER2 and MCB2 are defined as follows:

- ER2
 - Adding a third northbound lane on US 158 from NC 168 to the Wright Memorial Bridge as a hurricane evacuation improvement or using the center turn lane as a third northbound evacuation lane;
 - Widening US 158 to eight lanes between the Wright Memorial Bridge and the NC 12 intersection; and
 - Widening NC 12 to three lanes between US 158 and the point where the NC 12 right-of-way expands to 100 feet wide in Currituck County and to four lanes between the point where the NC 12 right-of-way expands to 100 feet wide and Corolla.
- MCB2
 - Constructing a two-lane toll bridge across the Currituck Sound in Currituck County;

Handout 15 1 July 8, 2008

- Adding a third northbound lane on US 158 from NC 168 to Aydlett Road (SR 1140) as a hurricane evacuation improvement or using the center turn lane as a third northbound evacuation lane;
- Widening US 158 to six lanes between the Wright Memorial Bridge and Jupiter Trail/Wal-Mart entrance and eight lanes from Jupiter Trail/Wal-Mart entrance to the NC 12 area; and
- Widening NC 12 to three lanes between US 158 and the point where the NC 12 right-of-way expands to 100 feet wide in Currituck County and to four lanes between the point where the NC 12 right-of-way expands to 100 feet wide and Corolla.

Environmental

The first step in the environmental impact assessment will be to expand our detailed affected environment database to encompass the wider detailed impact assessment study area. This activity will include identifying:

- Wetlands (delineations), other jurisdictional resources, and habitat types, including mapping, along US 158 from the MCB4 interchange area south to NC 12 and along NC 12 from Southern Shores to Currituck Clubhouse Drive (the southern end of the MCB4 NC 12 widening). Delineations will be approved by the US Army Corps of Engineers and the NC Department of Environment and Natural Resources (for isolated wetlands).
- Other natural resource characteristics.
- Community characteristics and services.
- Farmland soils.
- Historic and archaeological resources.
- Existing noise levels.
- Hazardous substance and underground storage tank sites.
- Visual characteristics.

NCTA is expecting to address the same list of environmental impact issues as with MCB4, including:

- Community impacts, including relocation, community cohesion, economic impact, access and other travel changes, pedestrian and bicycle safety, impacts to public services, and farmland impacts.
- Historic resource and archaeological resource impacts.
- Climate change as it relates to impacts of sea level rise and motor vehicle emissions.
- Noise impact and mitigation.
- Water quality, pollutants associated with project run-off, and Best Management Practices for road and bridge runoff.

Handout 15 2 July 8, 2008

- Habitat loss and associated terrestrial and aquatic biological impacts, including submerged aquatic vegetation (SAV).
- Jurisdictional resource loss.
- Protected species effects.
- Impacts associated with other natural resources protected by law and regulation.
- Affects from hazardous substances and underground storage tanks.
- Floodplain and hydraulic impacts.
- Visual impacts.
- Construction impacts.
- Indirect and cumulative impacts.
- Section 4(f) resource impacts and alternatives to those impacts.

We are seeking input from the agencies on any additional specific environmental impact issues to be addressed in the DEIS.

Engineering

The following activities will be completed related to engineering for ER2 and MCB2:

- **Mapping.** Assembly of mapping, including creation of a digital terrain model from existing NCDOT LIDAR data.
- **Preliminary Design Assumptions.** Since the additional alternatives all involve improvements to roads under the jurisdiction of NCDOT, one of the first aspects of developing preliminary designs is to revisit, reaffirm, or revise, as needed, the design assumptions associated with widening NC 12 to three lanes and widening US 158 east of the Wright Memorial Bridge. The primary goal of NCTA remains to develop a preliminary design that minimizes the need for new right-of-way and associated displacement, as well as overall impacts to the natural and human environments. Designs also would consider the coastal setting and overall context of the project area. Items now under discussion with NCDOT related to a three-lane NC 12 are:
 - **Runoff in Southern Shores.** One issue we need to resolve is how to handle the additional runoff from the wider pavement in the Town of Southern Shores, given that there are currently no ocean or sound outfalls and the surrounding land tends to drain towards the existing road, which has no drainage facilities. The choices we plan to discuss with NCDOT are: 1) use of a combination of grassed swales and detention ponds and 2) curb and gutter with an underground infiltration system that both holds runoff and allows runoff to filter/infiltrate into the soil.
 - **Drainage in Duck.** Another issue to resolve is how to handle drainage in the Town of Duck where NC 12 is immediately adjacent to the sound. Currently,

there are no ditches or outfalls on NC 12 and runoff from the developments consists of sheet flow probably towards the sound. Grassed swales could be used on NC 12 but it needs to be determined if the channels can handle the amount of runoff and filter the runoff adequately before draining into the sound. If not, curb and gutter with the underground infiltration system noted above is an alternative option under discussion.

- **Existing Three-Lane Section of NC 12 in Duck.** The NCTA proposes to make no improvements to NC 12 of any kind in the existing three-lane section in the Town of Duck commercial area.
- **Subdivision Access.** For subdivisions with more than one access point, consideration will be given to restricting full turning movements at one intersection and limiting others to right turns only.
- **Existing Substandard Curves.** Multiple substandard curves exist on NC 12. The proposed design may not include bringing these to current standards for the presently posted speed limit. Such improvements were not assumed in NCTA's conceptual design work.

Items now under discussion related to US 158 in Dare County:

- **Typical Section.** Consideration of NCDOT's request that a superstreet typical section be used on US 158 east of the Wright Memorial Bridge as opposed to the originally agreed upon traditional six- to eight-lane divided road.
- **Relationship with US 158/NC 12 Interchange.** Maintaining independent utility between the widening component of ER2 and MCB2 and the NCDOT's US 158/NC 12 interchange project (STIP R-4457).
- **Level of Design.** Complete preliminary designs at the same design level as MCB4 for use in assessing impacts, including three lanes in Dare County on NC 12, four lanes in Currituck County, six to eight lanes on US 158 east of the Wright Memorial Bridge, and provisions for hurricane evacuation from the Wright Memorial Bridge to the Intracoastal Waterway Bridge in Currituck County. MCB4 designs will be integrated into ER2 and MCB2 designs as applicable.
- **Cost.** Prepare right-of-way cost, construction quantities, and capital cost estimates.

Traffic

Additional traffic work that will be associated with the assessment of ER2 and MCB2 will include:

- Develop balanced 24-hour Summer Weekday traffic forecast for both existing road network (applicable to ER2 and No-Build) and with Mid-Currituck Bridge network (MCB2 and MCB4). A balanced forecast takes into account turning movements on and off a road at specific intersections. For this forecast, turn movements will be estimated for intersections with side roads having a Summer Weekday volume greater than 1,000 vehicles per day.
- Perform 2035 capacity analysis of both signalized and unsignalized intersections using the traffic operations model Synchro for the No-Build Alternative, ER2, MCB2, and MCB4 for the portions of the roadway network affected by one or more alternatives.
- With the Synchro analysis, develop recommendations for practical intersection improvements at intersections with a Summer Weekday volume greater than 1,000 vehicles per day keeping in mind right-of-way constraints. In addition, practical generic improvements will be identified for intersections with side roads having less than 1,000 vehicles per day. Minimizing impacts to adjoining properties will be an important consideration in determining the practicality of potential intersection improvements.
- Provide additional traffic analysis as needed to support noise analyses.

Financial Feasibility

Financial feasibility issues to be addressed are:

- The extent to which toll revenues can be used in conjunction with a public-private partnership to fund existing road improvements not directly associated with the operation of a Mid-Currituck Bridge. NCTA will continue with the predevelopment agreement procurement to determine the potential feasibility of the bridge project (with and without substantial existing road improvements). We plan to gauge this by the level of interest and equity the private partners propose to bring to the project.
- The improve existing road alternatives can not be tolled because state law prohibits conversion of existing roads to toll roads and further requires that there be a free alternate route for every toll facility. Therefore, we will investigate the availability of non-toll financing (STIP funds) and likelihood of these funds becoming available within the foreseeable future for use on this project. This additional information may lead to the conclusion that non-toll financing is infeasible.

Handout 15

5

July 8, 2008



Mid-Currituck Bridge Study

Currituck and Dare Counties

STIP No. R-2576

ER2 and MCB2 Detailed Studies Handout 16—October 7, 2008

The purpose of this handout is to describe the results of scope development over the past three months related to ER2 and MCB2. This work is the first step in the completion of the preliminary design for these alternatives. This handout describes several of the activities already complete or in progress for ER2 and MCB2:

NC 12

Typical Section and Design Speed

Based on six meetings with NCDOT Roadway Design, Congestion Management and Hydraulics Unit on June 4, July 11, July 15, August 5, September 3 and September 25, NCTA refined the design assumptions associated with the three-lane and four-lane improvements on NC 12 associated with the detailed study alternatives.

The original assumptions used in the *Alternatives Screening Report* included a curb and gutter typical section. Since the decision in June to study MCB2 and ER2 in detail, research into drainage and water table characteristics along NC 12 and discussion with NCDOT necessitated a change to a shoulder typical section. There are limited or no outfalls for drainage along NC 12, and the water table is high enough, that NC 12 would have to be raised to accommodate pipes under the road, which would increase flooding on adjoining properties.

NC 12 is signed at 45 mph during non-summer seasons and 35 mph in the summer. However, the existing horizontal alignment has multiple curves designed for 35 mph or less. It was agreed with NCDOT Highway Design Branch (subject to the approval of NCDOT Division 1) that NC 12 improvements would be designed for 35 mph. This is the same assumption that was used for the three-lane NC 12 during the alternatives screening.

The existing multi-use path along parts of NC 12 is generally 8-foot-wide and separated from the travel lanes by a 6-foot buffer without any barrier or curb separation. It was agreed with NCDOT that when there is room within the existing right-of-way, a 10-foot

Handout 16

1

October 7, 2008

path with a 10-foot buffer would be used to replace existing multi-use paths, as per current NCDOT design criteria. It is not possible to stay in the existing right-of-way with a 10-foot path where the existing right-of-way is 60 feet. At these locations, an 8-foot path will be provided instead of the recommended 10-foot path and a 10-foot buffer would be used. Where no path exists today, one would not be assumed in the preliminary design but space would be provided for a future path.

Drainage Challenges

The NC 12 is in a topographic depression along almost the entire length of the roadway within the project limits. To the east, the dune area along the coastline forms a ridge line. Similarly, to the west the topography generally rises near Currituck Sound. There are no streams providing positive discharge, or other outlets for runoff. Under existing conditions, stormwater runoff makes its way to low areas, and eventually infiltrates into the ground. Often the road itself is the low point, and there are numerous existing areas along NC 12 that experience chronic flooding problems. Other complicating factors include the groundwater elevation, which is near the surface, and the extensive development that has occurred along NC 12, particularly in the towns of Southern Shores and Duck. As a result of these constraints, any proposed solution to address the existing drainage problems in the context of ER2 and MCB2 will involve trade-offs and compromises.

Drainage Options

Available options for addressing stormwater management needs of the corridor and mitigating the impacts of widening NC 12 fall into the following three (3) general categories:

1. **Discharge to the Atlantic Ocean and/or Currituck Sound.** This alternative would require piping of stormwater runoff to new stormwater outfalls, discharging either to the ocean or to the sound. In Southern Shores, the location of NC 12 close to the ocean would dictate that the new outfalls discharge to the ocean. North of Duck, NC 12 is close to the sound, requiring the new outfalls to discharge in that direction. Within much of Southern Shores and Duck, however, the alignment of NC 12 is not close to either the ocean or the sound, making this option impracticable. In addition, approval of new outfalls is uncertain. This option could potentially involve substantial environmental and community impacts associated with the creation of new outfalls. Ocean outfalls would constitute an unsightly visual impact to the community. In addition, although some degree of water treatment could be possible at some locations, there would be an unavoidable water quality impact at the discharge locations.
2. **Pumping to Storage Areas.** In the Town of Duck, at the intersection of NC 12 and Tuckahoe Road, public works personnel currently drain this area during a rainstorm using a pump. The use of stormwater pumping stations at various locations along

NC 12 could theoretically be considered an option for addressing the flooding problems. However, given the length of the project corridor (20 miles) this is not a practicable alternative because of high operation and maintenance costs. In addition, one still needs somewhere to pump the water to.

3. **Infiltration Strategies.** Infiltration strategies include linear infiltration features (ditches) along the roadway, as well as traditional infiltration basins. In addition, in areas where groundwater is high, basins could be over-excavated in order to create wet ponds. There are numerous such ponds and wetlands at topographic low points throughout the project area, indicating that this is the common pattern of drainage.

Drainage Recommendations

Infiltration strategies are recommended for the majority of the project along NC 12, along with the *possible* use of a limited number of new outfalls to the sound in the Town of Duck. The infiltration strategies would include infiltration basins, wet ponds, and linear infiltration features (ditches). These volume-based Best Management Practices (BMPs) would be sized to temporarily store the runoff from a 10-year storm, as recommended by NCDOT. The construction of these BMPs would involve the purchase of permanent drainage easements in possibly hundreds of residential properties, as well as the possible displacement of a limited number of homes. The other two options (piping and pumping) are considered not to be practicable for the reasons noted above. Infiltration strategies would most closely replicate the existing drainage patterns. The specific approach to be assumed at various locations along NC 12 can be divided into four zones (see Figure 1).

1. **“Zone 1” – Town of Southern Shores -Skyline Drive to Ocean Boulevard**

In this zone, the existing right-of-way is 90 feet wide. Linear infiltration BMPs (ditches) along each side of the road are proposed. These linear infiltration strips would have a level bottom and store and infiltrate runoff from both the road surface and adjacent properties which drain toward the road. The width of the bottom of the infiltration strips would vary between 12 feet (for a 2 year storm) and 21 feet (for a 10 year storm) at a depth of 2 feet (see Figure 2, typical section A).

2. **“Zone 2” – Ocean Boulevard to Town of Duck**

In this zone, the existing right-of-way is 60 feet wide. It is proposed to use linear ditches along each side of the road to convey runoff to infiltration basins or wet ponds located at low points along the road, or as near as possible to the road's low points (see Figure 2, typical section B). Based on field reconnaissance, adequate potential BMP locations have been identified, using lots that are currently vacant. These basins would be sized to temporarily store the runoff from a 10-year storm. Runoff from larger storms would overflow towards local topographic low points as under existing conditions (See Figure 2, typical section B).

3. "Zone 3" – Town of Duck to Hunt Club Drive

Within this zone, NC 12 is in close proximity to Currituck Sound, and there are almost no opportunities for providing BMP's such as infiltration basins or wet ponds. The existing right-of-way is 60-feet wide. In addition, the existing drainage pattern is such that all runoff drains west directly into the sound. There appears to be two options for NC 12 drainage. The first option would allow the road to drain west towards the sound as un-concentrated sheet flow, as under existing conditions. The second option would be to collect the runoff from the road using roadside ditches or pipe systems and direct the runoff to new outfalls discharging into the sound. The advantage of the second alternative is that a small degree of water quality treatment may be possible by providing small forebays just upstream of the outfall points. The disadvantage of the second alternative is the impact to the sound at the outfall points. These options and the solutions proposed in the other zones are being discussed with the DENR of Division of Water Quality at a meeting is scheduled for October 6.

4. "Zone 4" – Hunt Club Drive to the Northern Terminus of C1 Corridor.

Within this zone, the NC 12 existing right-of-way is 100 feet wide. Four lanes are proposed for the detailed study alternatives (MCB2, MCB4, and ER2). In addition, there is relatively less intense development along each side of the road. As a result, 4-foot wide linear infiltration strips (ditches) are proposed along each side of the road (See Figure 3, typical section C). The developments along NC 12 within this zone have been constructed more recently, and these developments generally do not drain towards NC 12. Therefore, the linear infiltration strips need only provide storage for runoff from the road itself (See Figure 3, typical section C).

Super-Street for US 158

One element of both the ER2 and MCB2 alternatives is a widening of US 158 between the Wright Memorial Bridge and the NC 12/US 158 intersection. The alternatives analysis indicated that this section would require an eight-lane typical section for ER2 and a split 6/8 lane section for MCB2. When the decision was made in late May/early June to investigate the ER2 and MCB2 alternatives in greater detail, a meeting was held with NCDOT to confirm widening assumption for this section of US 158.

As part of this meeting (and at subsequent meetings), NCDOT indicated that the widening through this section should be a super-street section (see Figure 4) instead of a conventional arterial section, unlike what was initially assumed for the conceptual design preparation for the alternatives screening. A super-street was preferred by NCDOT because of the high forecast traffic volumes and because high levels of turning traffic would be better served.

Handout 16

4

October 7, 2008

A super-street design, also known as the Michigan left turn, was developed in Michigan in the 1960s as a way to reroute the interlocking left-turn movements along divided highways. Super-streets can be incorporated at intersections where at least one road is a divided boulevard or highway. It is designed so that drivers cannot turn left directly from the minor street onto the major street at the crossing intersection. To accomplish the left turn, the driver must turn right at the intersection, move to the left lane, and perform a U-turn movement, usually at least 600 to 800 feet from the intersection. In the case of US 158, all turning movements and U-turn movements would be signal controlled. Drivers on the major street wishing to turn left onto the minor street would do so in a traditional manner.

The primary advantages of the super-street turn restrictions are that all signals operate as a two phase operation (providing more green time and less transition time). In addition, the eastbound and westbound signals operate separately, allowing for better timing schemes, particularly when traffic flow has a higher directional split.

The basic elements of the design being developed for US 158 from the Wright Memorial Bridge to NC 12 include:

- Multiple turn lanes in the vicinity of the easternmost intersections serving Wal-Mart, Home Depot, and Food Lion.
- Two-phase traffic signals at all U-turns and left turn locations.
- A wide median on the east (over 50 feet); primarily because of overlapping left turn lanes.
- Six lanes on US 158 except in the vicinity of the Wal-Mart intersections, where MCB2 would require eight through lanes and ER2 would require up to 10 through lanes.
- Despite the wider cross section in the Wal-Mart area, preliminary review indicates that although more right-of-way would be required, building takes are not anticipated along US 158 for the super-street.

US 158/NC 12 Intersection

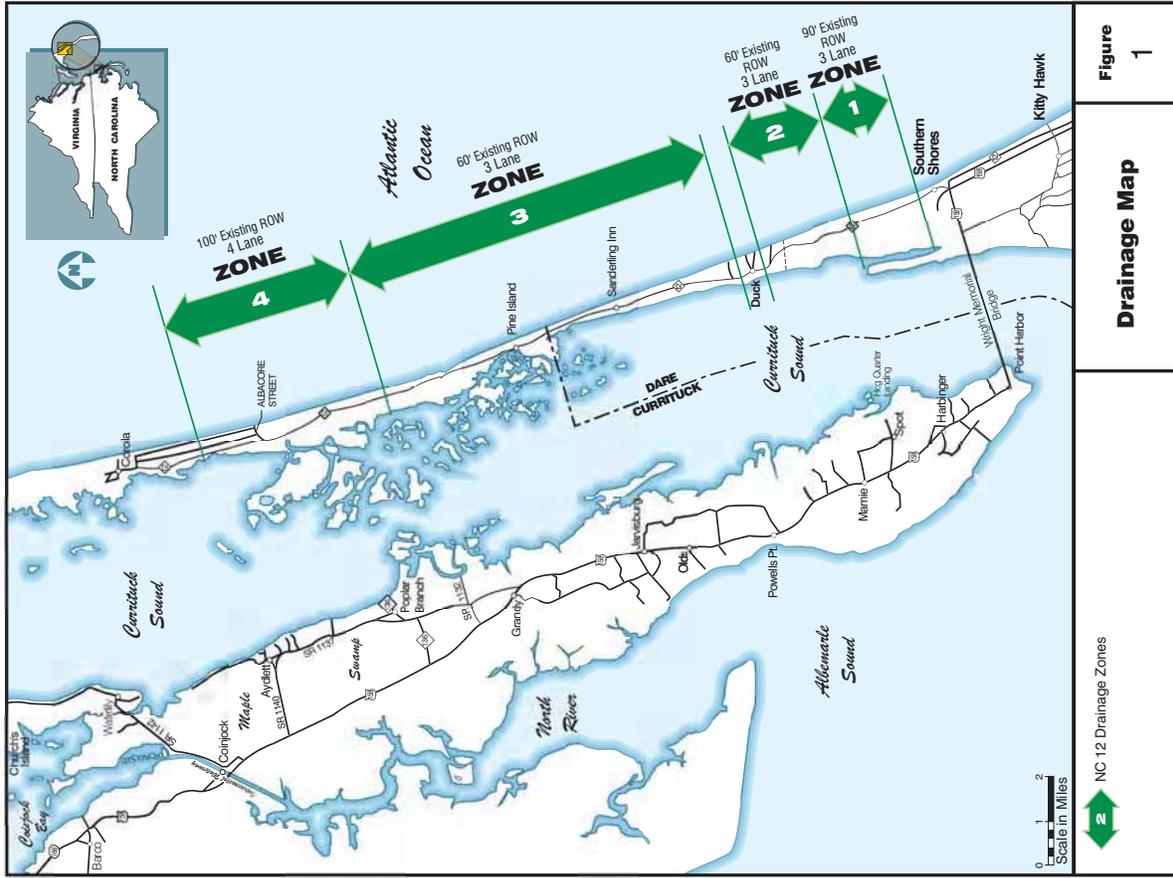
A preliminary design is being developed for each of the detailed study alternatives (MCB2 and ER2) for use in the detailed assessment of environmental impacts. During preliminary design, intersection turning movement forecasts are being developed for the widening components of all three of the detailed study alternatives in order to size signalized intersections so they at least achieve a level of service appropriate for the travel benefits associated with the additional lanes. Such turning movement forecasts were developed for the end-points of a Mid-Currituck Bridge during the alternatives screening. For ER2 and MCB2, this work will include the US 158/ NC 12 intersection

Handout 16

5

October 7, 2008

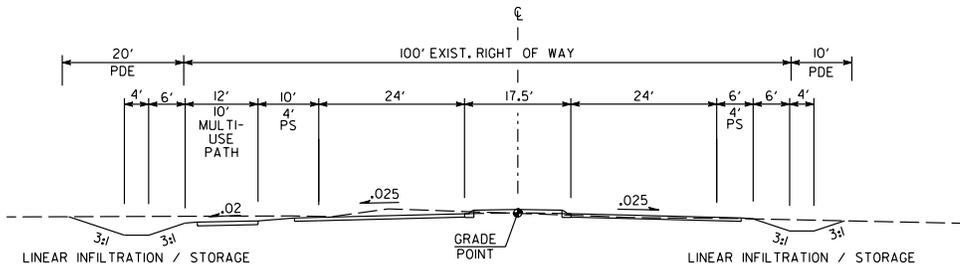
where traffic volumes approaching this intersection forecast for 2035 are great enough that it is possible that an interchange would be required to adequately serve the intersection's turning movements. Although not funded except for planning in the 2009 to 2015 *State Transportation Improvement Program* or shown in the Dare County Thoroughfare Plan, TIPS Project No. R-4457 proposes a US 158/NC 12 interchange. For the Mid-Currituck Bridge DEIS, if turning movement forecasts indicate that an interchange is not warranted, only intersection improvements will be included in the ER2 and MCB2 preliminary designs at this location. With or without an interchange, like the other intersection along these alternatives, US 158/NC 12 intersection improvements with ER2 and MCB2 would be sized to achieve a level of service appropriate for the travel benefits associated with the additional lanes.



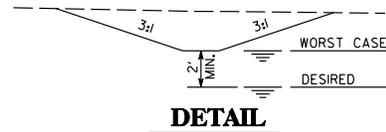
NC 12 Drainage Zones

Drainage Map

Figure 1

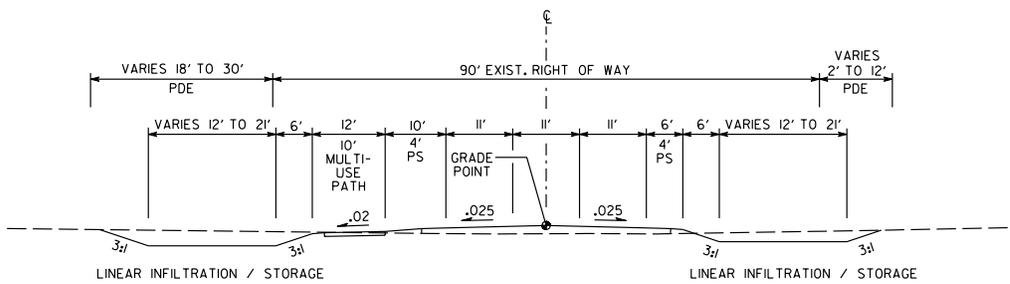


**C. DIVIDED FOUR LANE SHOULDER SECTION
WITH SEPARATED MULTI-USE PATH**

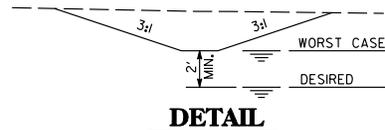


DETAIL

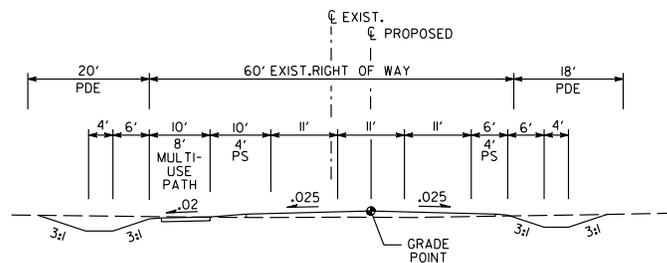
Typical Sections	Figure 3
------------------	----------



**A. THREE LANE SECTION
WITH 10' MULTI-USE PATH**

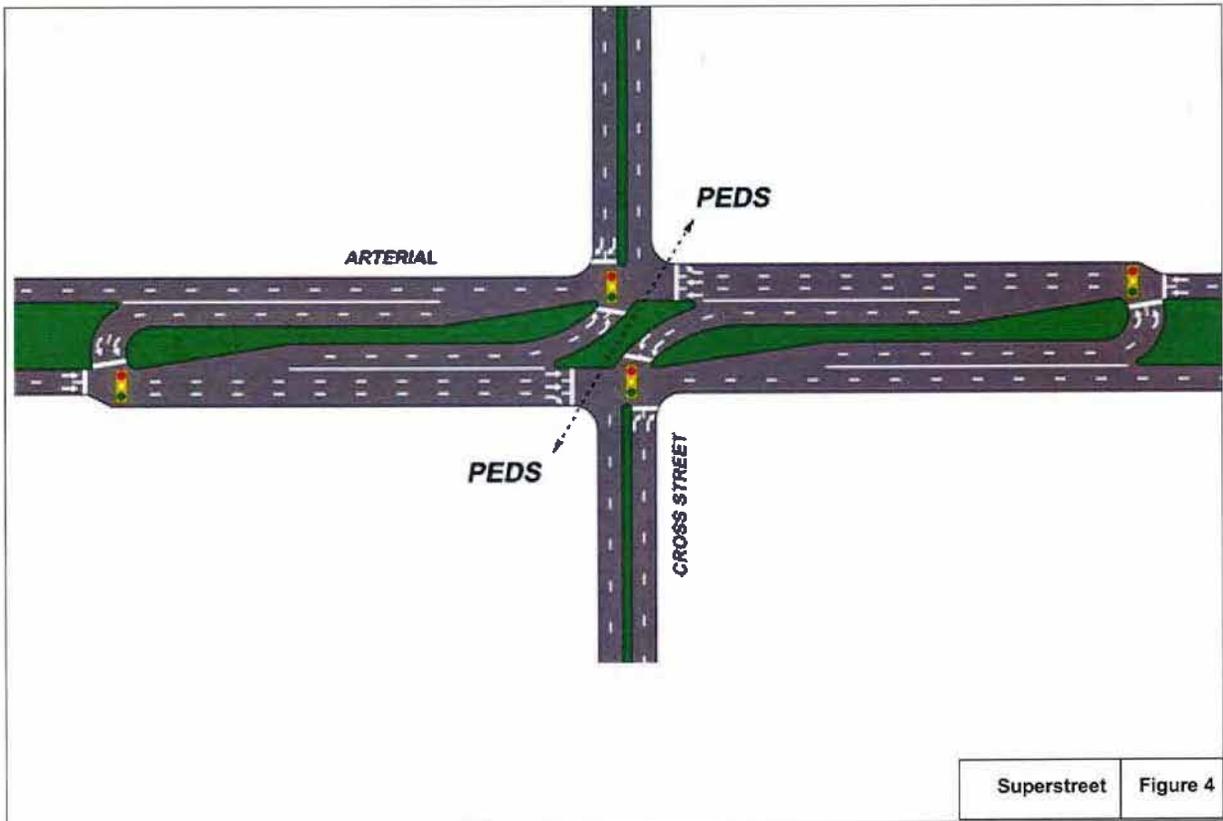


DETAIL



**B. THREE LANE SECTION
WITH 8' MULTI-USE PATH**

Typical Sections	Figure 2
------------------	----------





Mid-Currituck Bridge Study

Currituck and Dare Counties

STIP No. R-2576

DEIS Outline, Technical Reports, and Schedule Handout 17 – June 10, 2009

FHWA and NCTA are preparing a “user-friendly” Draft Environmental Impact Statement (DEIS). The focus of the document will be on findings that are important to the selection of a preferred alternative. Other details will be contained in separate technical reports and other materials. The goal of this is to make the main chapters of the DEIS reader friendly for the public and decision makers by focusing on the bottom line. As appropriate, a question and answer heading format will be used.

DEIS Outline

A. Introductory Material

1. Cover & Title Page
 2. Preface (What is the purpose of a DEIS; What does the DEIS include; What happens next?)
 3. Summary (~15 pages)
 4. Project Commitments (green sheets listing commitments, per NCDOT policy)
 5. Table of Contents
- B. Purpose of and Need for Action (*The Statement of Purpose and Need report will be referenced for more information.*)
- What do you propose to build and where?
 - What needs is the project trying to meet?
 - What purpose will the project serve?

C. Alternatives (*The Alternatives Screening Report will be referenced for more information.*)

Handout 17

1

June 10, 2009

- Describe the alternatives are under consideration.
- Describe how the detailed study alternatives differ in their ability to meet the project purpose and need.
- Explain how much each detailed study alternative would cost and how it would be paid for.
- Explain when and how each alternative will be built.
- Describe the other alternatives that were considered and explain why they are no longer under consideration.
- What alternative is recommended at this time?

D. Affected Environment and Environmental Consequences

1. Community Characteristics and Impacts (*The Community Impact Assessment Technical Report will be referenced for more information.*)
2. Cultural Resource Characteristics and Impacts (*Reference will be made to various HPO coordination materials, which will be contained in the Stakeholder Involvement Technical Memorandum. Historic and archaeological resource survey reports also will be referenced.*)
3. Natural Resource Characteristics and Impacts (*The Natural Resources Technical Memorandum will be referenced. This section will list all of the features discussed in the Natural Resources Technical Memorandum and then indicate that the remainder of the natural resources discussion will focus on describing the relevant characteristics of and impact to features affected by the detailed study alternatives. If a natural resource feature and associated impacts are not relevant to the decision at hand, it will not be discussed here beyond the first listing noted but only in the technical memorandum.*)

4. Physical Characteristics and Impacts (*including noise, air quality, energy, accelerated sea level rise, visual, hazardous materials and underground storage tanks, and floodplains; Noise, Air Quality, and Other Physical Features Technical Memorandums will be referenced for more information.*)

5. Construction Impacts

6. Indirect and Cumulative Impacts (*Summarize the findings of the Indirect and Cumulative Impacts Technical Memorandum.*)

E. Appendices

Handout 17

2

June 10, 2009

1. Comments and Coordination (*The Stakeholder Involvement Technical Memorandum will be referenced for more information.*)
2. List of Preparers
3. List of DEIS Recipients
4. List of Technical Reports and their Tables of Contents
5. List of References and Abbreviations

Technical Reports & Memoranda

The following technical reports and other material will be included with the DEIS on a CD and available on NCTA's website for agency and public review and comment.

- Statement of Purpose and Need
- Alternatives Screening Report
- Community Impact Assessment Report (including relocation reports)
- Traffic Noise Technical Report
- Air Quality Technical Report
- Other Physical Features Technical Report (includes Energy, Accelerated Sea Level Rise, Visual Quality, Hazardous Materials and Underground Storage Tanks, and Floodplains)
- Historical Architecture Resources Reports and HPO coordination materials
- Archaeological Resources Phase 1A Report
- Natural Resources Technical Report (including detailed habitat/wetland maps)
- Essential Fish Habitat Report
- Indirect and Cumulative Effects Technical Report
- Stakeholder Involvement Technical Memorandum (including correspondence, meeting minutes, and meeting materials)
- Public Hearing Maps

Schedule

- DEIS – September 2009
- FEIS – March 2010
- ROD – July 2010



Mid-Currituck Bridge Study

Currituck and Dare Counties

STIP No. R-2576

MCB2 & MCB4 Mainland Corridor Design Options Handout 18 – June 10, 2009

Mainland Corridor Design Options

- **Option A (Bridge on new alignment in the C1/C2 corridor)** – This is the current design assumption with a 1.5-mile bridge over Maple Swamp.
- **Option B (Fill on new alignment in the C1/C2 corridor with removal of Aydlett Road)** – This is a proposed new design option for consideration with MCB2 and MCB4 alternatives. It includes a new crossing of Maple Swamp on fill along the C1/C2 corridor alignment in conjunction with the removal of Aydlett Road and grading to restore natural drainage. NCTA intends to evaluate this option with the detailed study alternatives in the DEIS.

Toll Plaza Location Options

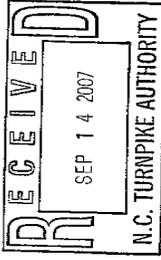
The current approach to tolling for the project involves both cash and cashless toll lanes until such time as technology advances to permit effective cashless operations. This is anticipated to be 10 years following the project opening.

- **Toll plaza west of Maple Swamp** – This is the current location of the toll plaza along the MCB2 and MCB4 alternatives. This option works with alignment Option A. above.
- **Toll plaza east of Maple Swamp** – This design option uses the uplands east of Maple Swamp and west of Currituck Sound near Aydlett. This option could be considered with either of the alignment options above.

Comparison of Option A & Option B	Option A Bridge on new alignment		Option B Fill on new alignment with removal of Aydlett Road	
	Advantages	Disadvantages	Advantages	Disadvantages
Hydraulics	Bridge crossing allows for naturally dynamic flow in Maple Swamp.	Aydlett Road remains as a barrier separating sections of Maple Swamp.	Linear crossing of Maple Swamp with multiple cross drains and/or short bridge section to aid natural hydraulic flow.	Not entirely a bridge.
Environmental	Bridge crossing of Maple Swamp allows potential wetland response, facilitating wildlife passage. Adjacent to existing powerhouse easement and clearing.	Bridge runoff. Aydlett Road remains.	Adjacent to existing powerhouse easement and clearing. Removes existing Aydlett Road and restores wetland habitat (reducing fragmentation). Potential for substantial wetland preservation through the purchase of property that would lose access with the closure of Aydlett Road.	Additional wetland impacts in Maple Swamp. Provisions for wildlife passage could be made but less flexibility for wildlife than a full length bridge.
Community/Safety	Has been presented to the community and is expected. Separate local and bridge traffic.	Maintains an unsignalized intersection at US158 and Aydlett Road, although this is the case for almost all intersections between US 158 and local roads.	Provides enhanced access for local traffic to US 158 via interchange during summer peak travel periods.	Combines local and through traffic on same road. Toll plaza location in Aydlett with associated noise, air quality, and lighting impacts. May introduce additional traffic to Aydlett community
Operations	Allows flexibility in toll plaza location (along US 158 or in Aydlett).	Maintenance of Maple Swamp bridge.	No or short bridge section requiring maintenance.	Toll plaza location restricted to accommodate local traffic. Maintenance of cross pipes.
Indirect & Cumulative	Minimizes the potential for induced commercial development in Aydlett.	None. In that future commercial development on US 158 is anticipated by Currituck County plans.	Protection of a large area of Maple Swamp from logging by purchasing land that would lose access with the closure of Aydlett Road.	Potential interchange at Narrow Shore Road opens upland area for potential commercial development.
Wetland Impacts	Approx. 12.3 acres (all bridges)		Approx. 24.2 acres (all filled) Approx. 9.2 acres restored with removal of Aydlett Road	



DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
 Washington Regulatory Field Office
 P.O. Box 1000
 Washington, North Carolina 27889-1000
 September 12, 2007



IN REPLY REFER TO

Regulatory Division

SUBJECT: Action ID. 199502242, Currituck Sound Area Transportation Study (Mid-Currituck Bridge Study), Currituck and Dare Counties, North Carolina, TIP No. R-2576

Ms. Jennifer Harris, P.E.
 North Carolina Turnpike Authority
 1578 Mail Service Center
 Raleigh, North Carolina 27699-1578

Dear Ms. Harris:

Please reference your August 7, 2007, e-mail correspondence requesting written comments relating to materials provided and discussed over the course of the past few months with respect to alternative development, assessment and conclusions for TIP No. R-2576 in Currituck and Dare Counties, North Carolina. In response to your request we have the following comments:

1. The North Carolina Turnpike Authority (NCTA) and Federal Highways Administration (FHWA) have presented an initial set of conceptual alternatives to the participating agencies for review and consideration. Based on the last two coordination meetings, it is your intent, because of potential funding shortfalls to drop all the conceptual alternatives except for MCB3. However, based on your information, MCB3 has a projected shortfall of 51.2 million dollars but has the potential for "Public-Private Partnership Funding" to cover the expected shortfall. Based on the information, a Public-Private Partnership is only a concept that may be employed to help fund the project but certainly is not a guarantee that it would happen. We also have concerns that viable alternatives may be precluded because of funding issues associated with the roadway part of the network. Under NEPA and Section 404 requirements, alternatives may still be considered practicable even though current funding is not available for a specific project. Therefore, we recommend not all the conceptual alternatives be dropped at this point in the process.
2. Is handout # 5 dated June 20, 2007, considered the alternatives screening report justifying the elimination of alternatives? If so, has the screening report been made available for public review and comment per section 8.4 of the June 20, 2007 draft coordination plan and is the lead federal agency, FHWA satisfied that all requirements for eliminating alternatives under SAFTEA-LU Section 6002 been completed? It is our recommendation

Comparison of Option A & Option B	Option A		Option B	
	Advantages	Disadvantages	Advantages	Disadvantages
Landlocked Parcels/Maple Swamp Preservation	230 acres north of bridge corridor		Fill on new alignment with removal of Ayckett Road	
Cost	\$95M, plus up to \$12M for landlocked parcels		600 acres along Ayckett Road and south of bridge corridor	
			\$18M, plus up to \$20M for access control and landlocked parcels	

that at a minimum, alternatives MCB2 and MCB3 be included as preliminary alternatives to be carried forward for public review and input.

3. A part of the purpose and need of the project is to reduce hurricane clearance time for residents and visitors who use NC 168 and US 158 during a coastal evacuation. While all the alternatives identified reduce hurricane evacuation times, the only alternative (MCB3) you're considering to fully evaluate in the NEPA document has the greatest clearance time (26.2 hours versus 21.4 hours) of all the alternatives. It is recommended as has been discussed at TEAC meetings that an alternative (MCB4 or MCB3+) be added to improve the critical link in the highway system so hurricane evacuation times can at least equal times represented by the other alternatives. Clarification regarding the legislative intent of North Carolina General Statute 136-102.7 regarding the 18-hour hurricane evacuation timeframe is still needed as it relates to the purpose and need and the alternatives being considered for the project. It has been identified that another proposed NCDOT TIP project along the coast has an unacceptable hurricane evacuation time of 27 hours so why is a comparable hurricane evacuation time (26.2 hours) acceptable for the MCB3 alternative?
4. Accurate information concerning relocations necessitated by direct impacts and relocations necessitated by reduced lot sizes needs to be calculated for NC 12 conceptual alternatives.
5. Alternative interchange configurations must be considered for all project corridors associated with MCB3 to reduce potential wetland impacts. Additionally, bridging options must be explored to reduce impacts to high quality wetlands.
6. Impacts to Submerged Aquatic Vegetation (SAV) and migratory bird issues are concerns which need to be studied in depth for any bridging corridor locations associated with the alternatives that cross the Currituck Sound.
7. Of the six project corridors across the Currituck Sound, corridors C1 and C2 on the mainland and C1, C3, and C5 on the island side are preferred because of reduced impacts to wetlands and the reduced impacts to the highest quality bay forest system associated with the crossing of Maple Swamp.
8. Current information and data presented to date for the project are based on a design year of 2025. Information needs to be updated for 25 years out so decisions concerning alternatives can be based on good sound data.

As a major permitting and cooperating agency we appreciate the opportunity to coordinate and comment with you under the guidelines of SAFETEA-LU Section 6002. The Corps recommends that further evaluation of this project be done within the SAFETEA-LU

2

Section 6002 guidelines prior to the finalization of the DEIS. If you have any questions regarding our comments, please do not hesitate to contact me at the Washington Regulatory Field Office, telephone (252) 975-1616, extension 26.

Sincerely,



William J. Biddlecome
Regulatory Project Manager

Copies Furnished:

Mr. Travis Wilson
Eastern Region Highway Project Coordinator
Habitat Conservation Program
1142 I-85 Service Road
Creedmoor, North Carolina 27522

Mr. Gary Jordan
U.S. Fish and Wildlife Service
Fish and Wildlife Enhancement
Post Office Box 33726
Raleigh, North Carolina 27636-3726

Mr. Ron Sechler
National Marine Fisheries Service
101 Pivers Island
Beaufort, North Carolina 28516

Mr. Chris Miltscher
U.S. Environmental Protection Agency
C/O FHWA, Raleigh Office
310 New Bern Avenue, Room 206
Raleigh, North Carolina 27601

Mr. David Wainwright
Water Quality Section

3



DEPARTMENT OF THE ARMY
 WILMINGTON DISTRICT, CORPS OF ENGINEERS
 Washington Regulatory Field Office
 Post Office Box 1000
 Washington, North Carolina 27889-1000
 May 21, 2008

IN REPLY REFER TO

North Carolina Division of Environment
 and Natural Resources
 1650 Mail Service Center
 Raleigh, North Carolina 27699-1650

Ms. Cathy Brittingham
 Division of Coastal Management
 1638 Mail Service Center
 Raleigh, North Carolina 27699-1638

Mr. Clarence W. Coleman, P.E., Operations Engineer
 Federal Highway Administration
 310 New Bern Avenue, Suite 410
 Raleigh, North Carolina 27601-1418

Regulatory Division

SUBJECT: Action ID. 199502242; Currituck Sound Area Transportation Study (Mid-Currituck Bridge Study), Currituck and Dare Counties, North Carolina, TIP No. R-2576

Ms. Jennifer I Harris, P.E.
 North Carolina Turnpike Authority
 1578 Mail Service Center
 Raleigh, North Carolina 27699-1578

Dear Ms. Harris:

The North Carolina Turnpike Authority (NCTA) has requested comments pertaining to two reports titled, The Mid Currituck Bridge Study; "Statement of Purpose and Need" and "Alternatives Screening Report," both dated April, 2008, concerning TIP No. 2576 in Currituck and Dare Counties, North Carolina. These reports were presented to the Cooperating and Participating Agencies during the April 8, 2008, Turnpike Environmental Agency Coordination Meeting. In response to your request we have the following comments:

1. Section 6.3 and 6.4 of the Section 6002 Coordination Plan for Mid-Currituck Bridge Project explain how "General Project Issues" and "Issues of Concern" are to be identified in the 6002 process. We previously didn't have an issue with the preliminary Purpose and Need (P&N) statement for the project. The previous P&N contained the following three statements: a) improve traffic flow on the project area's thoroughfares (NC 12 and US 158), b) reduce travel time for persons traveling between the Currituck County mainland and the Currituck County Outer Banks and c) reduce hurricane clearance time for residents and visitors who use NC 168 and US 158 during a coastal evacuation. The recently updated/amended P&N for the project added the term "To substantially" ... to the beginning of each of the proposed P&N statements. While that term may be subjective and difficult to analyze, we agree with the addition of such language to each of those statements. However, we are very much concerned with the fourth statement of the new P&N which was recently added in the April 2008 document. The new P&N states: "to improve system efficiency and fulfill State transportation planning goals by providing a new transportation link between the Currituck County mainland and the Currituck County Outer Banks." The Corps asked the NCTA and FHWA at the May 6, 2008, Turnpike Environmental Agency Coordination Meeting to remove "by providing a new

transportation link" from the P&N statement. We have identified this as a significant issue at this time depending on your decision whether to keep the stated language or agree to eliminate the portion mentioned. If you choose to keep the language in the P&N statement we will have no choice but to identify this as an "Issue of Concern." As you are aware, an Issue of Concern is an issue that in an agency's judgment could result in denial of a permit or substantially delay issuing a permit. Including this statement as part of the purpose and need eliminates all the alternatives except the bridge alternatives. Section 404 of the Clean Water Act requires us to look at a full range of reasonable alternatives; it is our opinion based on current information that there are other alternatives besides a bridge alternative that are reasonable. By including such language in the P&N, we believe you have defined the location of the alternative and have precluded the consideration of other alternatives that may be less damaging. The inclusion of such a statement in the P&N for this project may require the Corps to complete additional NEPA studies before a permit may be issued. As part 1.2 of the Coordination Plan states, it is your intent to integrate NEPA and Section 404 requirements such that at the conclusion of the NEPA analysis, a Section 404 permit could be issued without additional analysis required under the Clean Water Act. We believe the revised P&N statement jeopardizes this goal.

2. The Alternatives Screening report proposes to eliminate all alternatives except MCB3 and MCB4. While we agree with portions of the report which recommend dropping alternatives such as ferries, shifting rental start times, transportation systems management, and bus transit, we believe alternatives ER 2 and MCB 2 should be carried forward in the Draft EIS as viable practicable alternatives. Economic feasibility (cost and funding capacity) and potential impacts on natural resources and communities have been used as an evaluation criterion to justify dropping all alternatives except MCB3 and MCB4. We disagree with this evaluation because we believe MCB2 may be a practicable alternative as its potential capital funding shortfall is \$155 million more when compared to MCB4. We have not been provided with information that would lead us to conclude that the potential revenue from tolling could not make up the difference for this bridge and road improvement alternative. Our rationale for this is the fact that both MCB3 and MCB4 have road improvement components associated with the bridge that somehow can be financed. We understand the capital shortfall is greater for MCB2 than either MCB3 or MCB4. However, you propose to carry the MCB3 and MCB4 alternatives forward in the environmental document with a revenue shortfall. Additionally, the MCB2 alternative has much greater system traffic improvement benefits than either MCB3 or MCB4. Alternative ER2 should be carried forward also because it is the cheapest and has the least environmental impacts of all the alternatives. To eliminate non-toll alternatives based solely on economic feasibility, NCTA and FHWA should demonstrate that using non-tolling financing is not feasible. We have not been provided with sufficient information that demonstrates possible non-tolling financing isn't available. On page 1-18 of the purpose and need document, it stated the 2007-2013 STIP included \$137.5 million for the

2

Mid-Currituck Bridge Project. Is that money no longer available for the project? If cost is a consideration in having to study multiple alternatives, we recommend that MCB3 be dropped as a study alternative because its hurricane clearance times (26.6 hours versus 21.8 hours) are the worst of the alternatives. Clearly, the only advantage MCB3 has over MCB4 is a cost savings of 7 million dollars with no additional system benefits. While we agree that the potential impacts on natural resources (wetlands specifically) would be less for MCB3 and MCB4 compared to the other roadway improvement alternatives, the environmental impacts from building a new bridge across the Currituck Sound may result in substantial environmental impacts relative to water quality, Submerged Aquatic Vegetation (SAV) habitat, habitat fragmentation, and indirect and cumulative impacts. As stated in our September 12, 2007, comment letter, under NEPA and Section 404 requirements, alternatives may still be considered practicable even though current funding is not available for a specific project.

3. There is confusion in trying to understand the total wetlands filled and the high quality resources filled in Table 2 on page 29 of the Alternatives Screening Report. For example, ER1, ER2, MCB1, and MCB2 all show a higher number of acres of high quality resources being filled than the total number of wetland acres being filled (i.e. ERI shows a total of 10.9 acres being filled on NC 12 and lists 17.8 of those acres being high quality). It appears that the total high quality wetlands being filled on NC 12 should be less than the amount of wetlands being filled or are these two separate wetland numbers that need to be added together to get total wetland impacts for each alternative? Additionally, discrepancies were noted between the written text and the information presented in Table 2 of the document. The document should be reviewed and corrections made so the chart and written text are identical. Which information do we assume to be correct?

As a Cooperating Agency we appreciate the opportunity to comment on the referenced documents. The Corps recommends that further evaluation of this project be done within the SAFETEA-LU Section 6002 guidelines prior to the finalization of the DEIS. If you have any questions regarding our comments, please do not hesitate to contact me at the Washington Regulatory Field Office, telephone (252) 975-1616, extension 26.

Sincerely,


William J. Biddlecome
Regulatory Project Manager

3

George Hoops
Federal Highway Administration
310 New Bern Avenue, Suite 410
Raleigh, North Carolina 27601-1418

Copies Furnished:
Mr. Travis Wilson
Eastern Region Highway Project Coordinator
Habitat Conservation Program
1142 I-85 Service Road
Creedmoor, North Carolina 27522

Mr. Gary Jordan
U.S. Fish and Wildlife Service
Fish and Wildlife Enhancement
Post Office Box 33726
Raleigh, North Carolina 27636-3726

Mr. Ron Sechler
National Marine Fisheries Service
101 Pivers Island Road
Beaufort, North Carolina 28516

Mr. Chris Militscher
U.S. Environmental Protection Agency
C/O FHWA, Raleigh Office
310 New Bern Avenue, Room 206
Raleigh, North Carolina 27601

Mr. David Wainwright
Water Quality Section
North Carolina Division of Environment
and Natural Resources
1650 Mail Service Center
Raleigh, North Carolina 27699-1650

Ms. Cathy Brittingham
Division of Coastal Management
1638 Mail Service Center
Raleigh, North Carolina 27699-1638

Mr. Clarence W. Coleman, P.E. Operations Engineer
Federal Highway Administration
310 New Bern Avenue, Suite 410
Raleigh, North Carolina 27601-1418



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

August 3, 2007

Ms. Jennifer Harris, P. E.
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, North Carolina 27699-1578

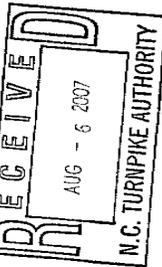
RE: USEPA Scoping Comments:
Mid-Currituck Bridge Study; Currituck County
TIP Project Number: R-2576

Dear Ms. Harris:

The U.S. Environmental Protection Agency (EPA) Region 4 Office has reviewed the June 20, 2007, Turnpike Environmental Agency Coordination (TEAC) information, including the proposed purpose and need, conceptual alternatives report, and the Draft Section 6002 Project Coordination Plan for the Mid-Currituck Bridge Study Toll project in Currituck County. In addition, EPA has also included in this letter its comments following the July 10, 2007, field review meeting for the proposed corridor alignments C1 to C6.

EPA understands that scoping for the proposed Mid-Currituck Sound Bridge began with the Federal Highway Administration (FHWA) and the North Carolina Department of Transportation (NCDOT) in 1994. A Draft Environmental Impact Statement (DEIS) was issued in January of 1998. The FHWA and NCTA basically propose the same corridors (C1 to C6) that were proposed in the 1998 DEIS. Since the issuance of the DEIS and prior to the project being turned over to the NCTA, the proposed project was placed into the NEPA/Section 404 Merger process. According to EPA's tracking database, Concurrence Point 1, Purpose and Need was signed September 15, 2003.

In 2005, the North Carolina General Assembly issued Article 6H of Chapter 136 of the NC General Statutes that more specifically defined NCTA activities with respect to toll projects. Under Section 136-89.183A, there is a requirement for an accelerated pilot toll bridge project. The statute is very clear in requiring a contract with a single private firm to design, obtain all necessary permits for, and construct the toll bridge described in G.S. 136-89.183(a)(2). The bridge is to be of more than two miles in length, going from the mainland to a peninsula bordering the State of Virginia, in order to provide accelerated, efficient, and cost-effective completion of the project. EPA and other agencies interpreted this to mean the Mid-Currituck Bridge project, although the FHWA and NCTA's project study area and proposed corridors are more than 10 miles from the Virginia state border. FHWA and NCTA should confirm this interpretation.



EPA has attached to this letter specific comments on the proposed Purpose and Need for the bridge project, the preliminary alternatives under consideration, data and analytic needs for the NEPA review and other comments and observations from the field review meeting (See Attachment).

EPA appreciates the opportunity for early comments and to highlight some of the issues of environmental concern on this proposed toll facility under SAFETEA-LU Section 6002. Should you have any questions or want to discuss, please feel free to contact Chris Militischer at 919-856-4206 or me at 404-562-9611.

Sincerely,

Heinz J. Mueller, Chief
NEPA Program Office

Cc: Clarence Coleman, FHWA
Scott McLendon, USACE
John Hennessy, NCDWQ
Pete Benjamin, USFWS

Purpose and Need

The 1998 DEIS describes two general purposes for the Mid-Currituck Bridge, including the reduction of road user costs and travel times between Currituck County's Outer Banks and its mainland and to provide public services more efficiently to the Outer Banks. In 2007, NCTA incorporated coastal hurricane evacuation of the Northern Outer Banks into the proposed toll bridge's purpose and need statement. NCTA's consultant provided a coastal hurricane evacuation model and report to develop evacuation clearance times for the years 2004 and 2030 when the project was with the NCDOT. Subsequently, modeling efforts have been updated (Referring to the April 24, 2007, handout on important model development features) and a hurricane evacuation analysis has been developed (Referring to the May 16, 2007, handout time summary prepared by D. Lewis, PBSJ).

The FHWA and FHWA have refined the original purpose and need to improving traffic flow on the project area's thoroughfares, including US 158 and NC 12, to reducing travel times for persons traveling between Currituck County mainland and the Currituck County Outer Banks, and to reducing hurricane clearance time for residents and visitors who use NC 168 and US 158 during coastal evacuation. Details of the primary purposes for the project are included in the May 2007 Statement of Purpose and Need. EPA notes that the statement concerning the NC General Statute Section 136-102.7 for statewide hurricane evacuation clearance time 'goal' on Page 1-4. Unfortunately, the General Statute does not refer to the 18-hour hurricane evacuation standard as merely a goal. This Section specifically states: Hurricane Evacuation Standard (a) Evacuation Standard – The hurricane evacuation standard shall be used for any bridge or highway construction project pursuant to this Chapter shall be no more than 18 hours, as recommended by State Emergency Management officials.

EPA is concerned that this State standard, as it is currently written, is so prescriptive that it will not allow for the FHWA and NCTA to explore a full range of alternatives under NEPA if a proposed project does not meet the 18-hour clearance time as it is applied to a Category 3 storm with a 75% tourist occupancy. Based upon the current purpose and need and the alternatives under consideration by NCTA and FHWA, none of the alternatives or a combination of alternatives strictly meet the 18-hour standard. There is no explanation as to how this legislated requirement might be interpreted as a 'goal' or that all projects must cumulatively add to improved clearance times for hurricane evacuation even if individually they do not meet the 18-hour standard. Existing clearance times well exceed the 18-hour standard along portions of the Outer Banks based upon current projections and multiple bridges, new roadways, and other infrastructure might be required to meet the standard. EPA has requested that FHWA

obtain clarification from the N.C. General Assembly's Transportation Oversight Committee and that this information be fully disclosed in the DEIS.

EPA has reviewed the traffic forecast data, including the Level of Service (LOS) and Annual Average Daily Traffic (AADT) for non-summer weekday, summer weekday, and summer weekend, for the years 2001 and 2025 (Figures 1-4 to 1-7). The project study area is sectioned in to 'links' along US 158 and NC 12. EPA notes that the LOS for most of the US 158 links in 2001 is LOS A and B. Year 2025 projections for these same links (#1, 2, 3, 4 and 5) from Barco to the Wright Memorial Bridge are LOS C or D. NCTA projects that nearly all of the links will be either LOS E or F in the 2025 design year.

Tables 1-3 and 1-4 of the Statement of Purpose and Need document provide base (2001) and future (2025) daily traffic volumes. FHWA and NCTA are projecting a doubling or near doubling of traffic volumes (in AADT provided by NCDOT) at most of the links. Summer weekday and summer weekend traffic volumes are more than double the AADT and non-summer weekday. From these traffic numbers there appears to be no end to future traffic demand in the project study area, particularly at US 158 between the bridge and NC 12 (Link #6), US 158 just west of the NC 12 intersection (Link #7), and US 158 just south of NC 12 intersection (Link #8). Summer weekend traffic numbers (>90,000 AADT) in 2025 would potentially exceed an expanded four-lane type facility at peak hours. EPA is concerned that these projected traffic numbers from NCDOT are not current and that there were assumptions made prior to 2001 that may not be realistic regarding growth along the Outer Banks. Much of the growth has occurred or is occurring now and much of the project study area along the Outer Banks appears to be approaching 'build out', particularly for the upland areas. There are extensive coastal wetlands located in the project study area that may be included in the development estimates for future traffic projections. Permits from regulatory agencies may not allow for as much development as was projected by NCDOT. Furthermore, EPA has concerns that the traffic analyses appear to be based upon the 'worst-case' summer weekday and summer weekend projections. Projections were based upon the summer peak season including the months of June, July and August (Page 1-31). Since hurricane evacuation is such a vital component to the overall purpose and need for the proposed bridge and that the peak hurricane season does not occur until after the peak summer traffic months (i.e., After September 1st), EPA believes that the justification or need for a new bridge may be overestimated. This is also highlighted by the fact that the major failing links of the overall traffic network along the Outer Banks will continue to be LOS E and F in the 2025 design year even with a new bridge (and no other improvements). EPA recommends that traffic forecasts be updated for the base and design year in the DEIS and that current traffic counts also be utilized.

EPA reviewed Table 1-14 regarding year 2004 and 2030 hurricane evacuation clearance times, based upon the Category of hurricane (1-2 and 3-5) and percent occupancy. The 2004 clearance time for a Category 3-5 storm at 75% occupancy is 25.8 hours. The projected year 2030 clearance time for a Category 3-5 storm at 75% occupancy is 39.0 hours. EPA is uncertain as to the likelihood of a Category 3-5

hurricane prior to September 1st. Most of the strongest and most damaging storms have occurred later in the hurricane season (September and October). EPA requests that a risk analysis be performed by NCTA and FHWA that documents the past recorded storm events along the Outer Banks that met or exceeded the Category 3 status and the time when these storms occurred. NCTA and FHWA should be able to provide a model that includes the probability (risk) of a Category 3 storm event along the Outer Banks during the peak summer traffic season. Table 1-14 also includes clearance times for 2030 with the TIP projects shown in Figure 1-3. Even with all of these other 2007-2013 TIP projects (R-4429, R-2574, R-4457, R-2404, and R-2545/2544), the year 2030 with 75% occupancy clearance time for Category 3-5 is 35.9 hours. It is interesting to note that the 2007-2013 TIP includes \$137.5 million for the Mid-Currituck Bridge project. EPA was informed that due to B-2500, Bomer Bridge/NC 12, even the short bridge replacement alternative would use all of the TIP funds for the next several years for Division 1. EPA raised questions during one of the scoping meetings regarding the funding assumptions for a toll facility. It was explained by the NCTA consultants that are examining the different funding scenarios that only the new bridge alternatives could be justified (i.e., Specifically, Alternative MCB3) for the proposed project. The DEIS needs to fully disclose the assumptions and conditions for full funding and how the available toll funding can fully meet the purpose and need for the project.

Alternatives Analysis

EPA has reviewed the June 20, 2007, information (Handout 6) concerning the different alternatives under consideration by the FHWA and NCTA, including ER1, ER2, MCB1, MCB2, and MCB3. Based upon EPA's review of this material, the following comments are offered for FHWA and NCTA's consideration:

1. An alternative of improving (i.e., Widening) Aydlett Road through Maple Swamp needs to be analyzed in the DEIS. This alternative should investigate different potential locations for toll plaza facilities on the mainland and bridge termini in Aydlett rather than along US 158 as is currently proposed. NCTA has cited that there will be significant impacts to the Aydlett community. These potential impacts should be fully explored and examined in the DEIS.
2. An investigation of alternatives for the interchanges with US 158 and NC 12 on the Outer Banks should be examined in the DEIS. FHWA and NCTA should perform a full analysis of alternative interchange designs in order to reduce potential impacts to wetlands. EPA recognizes that there is a potential desire to design a high-speed type interchange facility. However, the development characteristics and traffic conditions along NC 12 in Currituck County do not support this type of high-speed facility.
3. FHWA and NCTA need to perform a full wetlands assessment using the new 'NCWAM' functional assessment for all of the potential alternatives. Each wetland type potentially impacted needs to be fully described and characterized in the DEIS.

4. The DEIS should examine and analyze the operational impacts of a proposed bridge facility on Currituck Sound. If the bridge is expected to be ultimately a 4-lane facility, this configuration should be assessed.
5. FHWA and NCTA should also address how stormwater will be collected and treated from any bridge alternatives.
6. Although EPA and other agencies did not explore other termini on Bodie Island, it is clear that each of the two sites investigated during the field meeting would have significant impacts to wetlands and aquatic resources. Other termini need to be considered that have potentially less wetland impacts.
7. The potential widening of NC 12 needs to be fully examined in the DEIS. EPA has reviewed the July 12, 2007, functional designs for the alternatives. EPA is concerned that without improvements to NC 12, hurricane evacuation clearance times will not be sufficiently reduced. Referring to the June 20, 2007 handout, Table 6 revised, the MCB3 Alternative still exceeds the 18-hour clearance standard by 8.2 hours. NCTA has stated that this is the only alternative that does not have a substantial funding shortfall (i.e., \$51.2 million). Alternatives ER1, ER2, MCB1 and MCB2 are essentially being 'eliminated' due to the potential funding shortfalls (\$268.6 to \$525.5 million). The MCB3 Alternative does not include any improvements to US 158 in Dare County. Alternatives ER1, ER2, MCB1 and MCB2 all include some improvements to US 158 in Dare County. The MCB3 Alternative includes the least amount of improvements to NC 12 from these 5 alternatives (\$77.3 million). FHWA and NCTA should consider mixing some of the improvement components of the alternatives to achieve a better balance of traffic network conditions.
8. FHWA and NCTA have provided a characterization in Table 6 revised referred to as 'Rural/Beach Community Fragmentation'. EPA is concerned that some of the impacts from the alternatives may be mischaracterized, including C1, C3, C4 and C5 (Pass through middle of subdivision or Passes through Aydlett). FHWA and NCTA should discuss the Federal and state requirements concerning community impacts (e.g., E.O. 12898 on Environmental Justice, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, etc.).
9. EPA requests that the estimated wetland impacts from the ER1, ER2, MCB1, MCB2 and MCB3 Alternatives be fully identified in the DEIS. EPA cannot ascertain where the impacts to 10+ acres of wetlands would occur along NC 12 from ER1, ER2, MCB1 and MCB2. Similarly, EPA cannot locate the impacts to 23+ acres of wetlands from ER1 and ER2 for the US 158 third northbound lane in Currituck County.
10. EPA cannot concur with the estimates for the high quality resources filled/bridged presented on Page 6, Table 6 revised form the June 20, 2007, handout. FHWA

and NCTA need to provide a full disclosure of how these estimates were developed for high quality resources and what criteria were utilized in ascertaining their quality.

11. Relocations (displacements as presented in Table 6) have been estimated based upon past right-of-way investigations by NCDOT (circa mid-1990s) and it appears that they need to be updated. Furthermore, the DEIS needs to analyze and disclose the methodology for determining an actual relocation. Noting the comments from WRC and others at one of the past scoping meetings, EPA requests that the minimum lot size issue for Dare County (15,000 square feet) and Currituck County (20,000 square feet) be examined by FHWA and NCTA and discussed in the DEIS. This analysis should include a 'consistency' determination with other projects where structures and necessary services (e.g., Well, septic, etc.) were not impacted and minimum zoning lot sizes were used as the 'legal criteria' for relocations.

12. FHWA and NCTA need to explore a ferry service alternative that is compared both individually to other alternatives as well as combinations of the 'highway alternatives with a ferry alternative. Based discussions with NCTA and FHWA indicate that the ferry service alternative does not meet purpose and need. This alternative needs to be fully examined and explored in the DEIS. A combined 'new bridge alternative' with a robust ferry service could help to improve estimated hurricane evacuation clearance times, especially for critical link segments on Bodie Island.

13. EPA notes that improvements to NC 12 include a 17-foot median, 4-lane facility. Considering the close proximity to pedestrian walkways/bicycle paths along NC 12, FHWA and NCTA should examine the safety aspects of providing a 'higher-speed' 4-lane facility so close to these other users. FHWA and NCTA should fully consider the current tourist conditions and community setting issues along NC 12 and develop plans that incorporate safe, mixed modal activities.

14. EPA might consider NCTA's proposal to eliminate Alternatives C5 and C6 due to the very high quality of the Maple Swamp south of Aydlett Road. However, EPA has requested that FHWA and NCTA examine a new alternative closer to Aydlett Road as well as widening the existing road.

Additional Data and Analytical Needs for NEPA Review

EPA has identified numerous data and analytical needs that should be explored during the NEPA process and provided in the DEIS, including the following:

Currituck Sound

1. Depth and benthic profiles of potential roadway corridors and a general description of the entire Currituck Sound ecosystem.

2. Include and provide an analysis of the most recent submerged rooted aquatic vegetation survey data from USGS and/or NOAA of Currituck Sound. Define all benthic sediment and habitat present in the Sound. Consideration of the general habitat and water quality is insufficient.

3. The DEIS should evaluate the proposed project in relationship to either conflict or consistency with the management goals and objections set forth by the joint State/Federal National Estuary Program for Currituck Sound. This discussion should also include consultation with State officials concerning the requirements and consistency with the Coastal Zone Management Act's Federal consistency regulations. The DEIS should include a full characterization of the traditional uses for the Currituck Sound, including recreational fishing, commercial fishing, hunting, etc. and what the short-term, long-term and cumulative effects of this proposed project will have on these uses.

4. The DEIS should provide an analysis of the worst-case impact of construction activity on the water quality and aquatic habitats within Currituck Sound. This analysis should include dredging needed to move equipment and materials to and from the project's mainland areas and during construction. Alternative construction methods to minimize impacts should be fully considered and described in the DEIS.

5. EPA is aware that fecal coliform is an issue in shallow water estuaries and that continued runoff from human activities such as parking lots, roadsides, etc., can further degrade water quality and traditional uses of these water bodies. Harmful bacteria in the coastal zone can be very problematic to water quality as there are generally few upland areas available to treat contaminated runoff. The DEIS should analyze this water quality parameter and any potential effect that direct sources of runoff will have on shellfishing and benthic organisms within Currituck Sound. The DEIS should further explore and discuss the issue of hydrologic trespass to new or existing roadway ditches and conveyances. Based upon the site visits recently conducted, it is essential that a detailed functional assessment be accomplished for all of the wetlands potentially impacted.

6. EPA and other agencies noted numerous specimen trees during the July 10, 2007 site visit. An arboreal survey should be conducted for all of the new location corridors, including both uplands and wetlands in Maple Swamp, Great Swamp, and at the proposed interchanges and an avoidance strategy developed. Size and species should be documented and mature specimen trees mapped. Cavity and rookery nesting of avian species is highly likely and should also be documented.

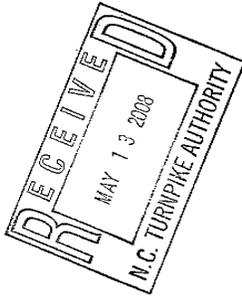
7. Alternative construction practices should be evaluated for accessing the work areas within wetlands.

8. With the exception of small areas of *Phragmites* sp., and Chinese privet along Aydlett Road, the presence of exotic invasive plant species was not evident during the site visit. Therefore, the potential introduction and spread of such species should be considered in the NEPA review and compliance with Executive Order 13112 and FHWA guidance should be documented.

9. A cultural impacts assessment is needed and should include potential bisection caused by the roadway and its approaches.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 REGION 4
 ATLANTA FEDERAL CENTER
 81 FORSYTH STREET
 ATLANTA, GEORGIA 30303-8960



May 5, 2008

Ms. Jennifer Harris, P.E.
 North Carolina Turnpike Authority
 1578 Mail Service Center
 Raleigh, North Carolina 27699-1578

RE: USEPA Comments: Mid-Currituck Bridge Study; Currituck County
 April 2008 Statement of Purpose and Need and Alternatives Screening Report
 TIP Project Number: R-2576

Dear Ms. Harris:

The U.S. Environmental Protection Agency (EPA) Region 4 Office has reviewed the April 2008 reports on the revised Purpose and Need the Alternatives Screening process from the North Carolina Turnpike Authority (NCTA). Please refer to EPA's August 3, 2007, scoping comment letter to NCTA and the Federal Highway Administration (FHWA). Many of EPA's environmental concerns identified in this scoping letter continue to be unresolved.

The project's purpose and need has been recently amended to include: "To improve system efficiency and fulfill State transportation planning goals by providing a new transportation link between the Currituck County mainland and the Currituck County Outer Banks". Essentially, this purpose and need revision eliminates any of the 'improve existing' alternatives and could result in an outcome of reasonable alternatives becoming a 'fait accompli' in the Draft Environmental Impact Statement (DEIS). NEPA requires a full evaluation of reasonable alternatives; including new bridge alternatives without also fully considering other reasonable alternatives do not appear to comply with that requirement.

The Alternatives Screening report eliminates the two improve existing alternatives (i.e., ER1 and ER2) and the new bridge alternatives with other network improvements on US 158 and NC 12 (i.e., MCB1 and MCB2). NCTA and FHWA only propose to carry forward for detailed study in the Draft Environmental Impact Statement (DEIS) MCB-3 and MCB-4. The scope and components of these two bridge alternatives are nearly the exact same. The primary reason for eliminating ER1, ER2, MCB1 and MCB2 appears to be the 'potential for Public-Private Partnership to cover [the] shortfall' (i.e., Full project funding). Based upon the Table 2 evaluation, some of the alternatives that are proposed to be eliminated from further study 'outperform' MCB3 and MCB4 for a number of the traffic/travel benefits (e.g., Percent reduction in Congestion annual Millions of VMT at LOS E or F).

11. Because of the documented presence of ancient habitation and early European colonization in this area of the State, there should be extensive survey work of all potential corridors and this new information should be considered in the site selection rather than waiting for a final alignment.
12. The project study area is in the coastal ecosystem and it is possible that potential future sea level rise (SLR) could be an important construction and environmental issue. North Carolina has a Climate Change Commission that includes such coastal geology experts such as Dr. Stan Riggs. He and other experts should be consulted during the planning process regarding the vulnerability of placing additional infrastructure within the dynamic coastal beach setting. Future initiatives by government agencies in response to SLR may influence design year traffic volumes and patterns. The DEIS should examine SLR issues and the potential affect on future traffic volumes and patterns.

Other NEPA 'Cross-cutting' Issues

Currently, NCTA is not a signatory agency to the Ecosystem Enhancement Program (EEP) Memorandum of Understanding (MOU) for compensatory mitigation needs. The issue of compensatory mitigation should be fully coordinated with the EEP and other agencies to insure that there are adequate mitigation credits available in the hydrologic cataloging units (HUCs) where the impacts are occurring. Please feel free to consult with Ms. Kathy Matthews of EPA's Wetlands Section at matthews.kathy@epa.gov. FHWA and NCTA need to provide detailed mitigation plans for the new location alternatives.

The NCTA should consider some of other potential NEPA 'Cross-cutters' in the DEIS, including compliance with Executive Order 13112 on Invasive Species and the requirements under the Migratory Bird Treaty Reform Act (MBTRA) of 2004. The U.S. Fish and Wildlife Service should be consulted regarding an analysis of avian Federal Species of Concern (FSOC) and potential requirements and considerations under MBTRA. All of the alternatives involving new bridge structures need to fully investigate the potential impacts to migratory birds along the Atlantic flyway.

Sincerely,



Heinz J. Mueller, Chief
NEPA Program Office

cc: Clarence Coleman, FHWA
Scott McLendon, USACE
Brian Wreem, NCDWQ
Pete Benjamin, USFWS

From a consistency standpoint with other similar types of transportation projects, the ability to provide travel benefits, the potential impacts to human and natural resources in light of the potential benefits, EPA does not believe that MCB1 or ER1 are reasonable alternatives. Considering the magnitude of potential impacts to the human and natural environment, the traffic benefits provided and more than double the capital costs, MCB1 or ER1 provide no real comparison to MCB2, MCB3, MCB4 and ER2. EPA concurs that these two alternatives (ER1 and MCB1) are not reasonable and could be eliminated from further study.

Regarding NCTA's determination for the retention of only MCB3 and MCB4, there is almost no traffic benefit difference between the two alternatives. Within MCB3 and MCB4, the six (6) alignments (i.e., C1 to C6) have been reduced down to C1 and C2. There is only a \$7 million cost difference as well for a project that will potentially cost \$500,000,000 or more. The cost difference and scope between MCB3 and MCB4 is essentially insignificant to the total project cost and the traffic benefits provided by each. Both MCB3 and MCB4 have funding shortfalls of more than \$60 million (Table 2).

The U.S. Army Corps of Engineers (ACE) recommended retaining MCB2 for detailed study. The NC Department of the Environment and Natural Resources (DENR) divisions and associated agencies (i.e., Wildlife Resources Commission, Division of Water Quality, Division of Coastal Management, and Division of Marine Fisheries) and EPA have all recommended, in writing, the retention of ER2. Again for comparison purposes under NEPA, EPA strongly encourages NCTA to carry forward MCB2 and ER2 for further study in the DEIS. MCB2 provides some of the best travel benefits at a reasonable cost compared to MCB3 and MCB4.

EPA agrees with the recommendation that the ferry alternatives are not reasonable as discussed on pages 40 to 47 of the Alternatives Screening Report. Similarly, shifting rental times, employing bus transit and traffic systems management (TSM) by themselves do not appear to be reasonable alternatives (Table 3). However, these options were not considered in combination with other "ER" or "MCB" alternatives.

In summary, EPA believes that NEPA requires the consideration of a full range of reasonable alternatives including those reasonable alternatives not within the direct jurisdiction of the lead agency (i.e., NCTA and NCDOT transportation alternatives). We, therefore, recommend that NCTA and FHWA retain alternatives MCB2 and ER2 for further analysis in the DEIS in order to provide a full range of reasonable alternatives for review by the agency team and other stakeholders.

EPA appreciates the additional opportunity to highlight some of the continued issues of environmental concern on this proposed toll facility under SAFETEA-LU Section 6002. Should you have any questions, please feel free to contact Chris Miltschker at 919-856-4206 or me at 404-562-9611.



North Carolina Department of Cultural Resources
State Historic Preservation Office

Peter B. Smithbeck, Administrator

Michael F. Easley, Governor
 Lizabeth C. Evans, Secretary
 Jeffrey J. Cow, Deputy Secretary

Office of Archives and History
 Division of Historical Resources
 David Booth, Director

April 30, 2008

MEMORANDUM

To: Jennifer Harris
 NC Turnpike Authority

From: Renee Gledhill-Easley *RGE*
 Environmental Review Coordinator

Re: Purpose and Need Statement, Alternative Screening Report, Citizen's Comments Summary, Mid-Currituck Bridge, R-2576, Currituck/Dare Counties, CH 94-0809

We have reviewed the above referenced documents, received from your agency on April 9, 2008, and have no comments to offer on the statement of purpose and need or the citizen's comments summary. We would note that given the presence of several National Register-listed properties in and around Corolla, we would tend to prefer the southernmost alignments presented in the Alternative Screening Report.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Easley, environmental review coordinator, at 919-807-6579. In all future communication concerning this project, please cite the above referenced tracking number.

Location: 109 East Jones Street, Raleigh, NC 27601 Mailing Address: 6017 Mail Service Center, Raleigh, NC 27699-4617 Telephone/Fax: (919) 807-6570/(807-6589)



North Carolina Department of Environment and Natural Resources
Division of Coastal Management

James H. Gregson, Director

Michael F. Easley, Governor

William G. Ross Jr., Secretary

October 22, 2007

Ms. Jennifer Harris, P.E.
 North Carolina Turnpike Authority
 1578 Mail Service Center
 Raleigh, NC 27699-1578

RE: TIP No. R-2576, Mid-Currituck Bridge, Currituck County

Dear Ms. Harris:

The N.C. Division of Coastal Management (DCM) has participated in monthly "Turnpike Environmental Agency Coordination (TEAC)" meetings regarding the above referenced project since January 2007. At those meetings, the N.C. Turnpike Authority (NCTA) has presented information regarding the Project Coordination Plan, Purpose and Need, Preliminary Alternatives for Consideration and Recommendations for Detailed Study Alternatives. Although DCM has provided verbal comments during the meetings, we would like to take this opportunity to provide written comments in response to the information that has been provided.

Section 6002 Coordination Plan for Mid-Currituck Bridge Project
 DCM does not object to the Coordination Plan, and we appreciate NCTA's incorporation of our previous written and verbal comments into this document.

Statement of Purpose and Need
 DCM does not object to the Statement of Purpose and Need. DCM is operating with the understanding that the Project Area depicted in Figure 1-2 of the Statement of Purpose and Need is the Study Area for this project. However, it is not labeled as such. This is confusing since the study area depicted in the TIP Detail for R-2576 on the N.C. Department of Transportation (NCDOT) website is much smaller than the Project Area depicted in Figure 1-2 of the Statement of Purpose and Need. The study area should be clearly defined within the Draft Environmental Impact Statement (DEIS).

Alternatives Screening Report
 It is DCM's understanding that NCTA is currently preparing an Alternatives Screening Report. After the Alternatives Screening Report is made available for public review and comment, and DCM receives a report from NCTA summarizing public comments that are reviewed (Step 8.4 of the Coordination Plan), then DCM will likely have additional comments (Step 8.5 of the Coordination Plan). It is DCM's understanding that the Alternatives Screening Report will include all of the alternatives studied to date.

1638 Mail Service Center, Raleigh, North Carolina 27699-1638
 Phone: 919-733-2299 \ FAX: 919-733-1495 \ Internet: www.nccoastalmanagement.net
 An Equal Opportunity \ Affirmative Action Employer - 50% Recycled \ 10% Post Consumer Paper

Sub-aquatic Vegetation

Sub-aquatic vegetation (SAVs) are a coastal resource protected by the Coastal Area Management Act (CAMA). Therefore, DCM cannot provide our final comments on the recommended alternatives for detailed study until we receive estimates of the amount of SAVs that will be impacted by each of the preliminary alternatives that have been considered. This information should be included within the Alternatives Screening Report.

Recommended Alternatives for Detailed Study

At the TEAC meeting on 9/19/07, NCTA distributed Handout 10, which summarizes NCTA's recommendation that MCB3 and MCB4 be selected as detailed study alternatives with each to include two potential bridge corridor locations: revised C1 and revised C2.

DCM believes that MCB3 and MCB4 are very similar to each other, and both alternatives have the potential to cause significant adverse impacts to the natural environment. Therefore, if NCTA only selects MCB3 and MCB4 as detailed study alternatives, then DCM believes that NCTA has not provided a detailed evaluation of a reasonable range of alternatives. DCM also believes that if NCTA only selects MCB3 and MCB4 as detailed study alternatives, then NCTA may not be able to demonstrate that it has selected an alternative that avoids and minimizes environmental impacts to the maximum extent practicable. Therefore, DCM strongly recommends that NCTA select additional detailed study alternatives. This will allow representatives of the federal, state and local government, as well as private individuals and organizations, to review a detailed evaluation of a reasonable range of alternatives so that their comparative merits may be evaluated. This will provide a clear basis for choice of a preferred alternative among decision makers and the public.

The Preliminary Alternatives for Consideration that have been presented at the TEAC meetings are: a ferry across Currituck Sound; transit; shifting rental unit start times; ER1; ER2; MCB1; MCB2; MCB3; and MCB4. For each of the MCB alternatives, bridge corridor locations that have been considered are: C1; revised C1; C2; revised C2; C3; C4; C5; and C6. DCM has provided comments on these alternatives, and one additional recommended alternative, below.

- **ER1.** DCM agrees that ER1 should not be selected as a detailed study alternative due to the large number of estimated displacements.
- **ER2.** DCM believes that ER2 should be selected as a detailed study alternative within the DEIS due to its avoidance and minimization of impacts to significant coastal resources of the Currituck Sound.
- **MCB1.** DCM agrees that MCB1 should not be selected as a detailed study alternative due to the large number of estimated displacements.
- **MCB2.** DCM believes that MCB2 should be selected as a detailed study alternative due to its traffic benefits. NCTA states in the 7/18/07 meeting minutes: "MCB2 performs well in terms of traffic and does not have the high level of displacements as MCB1 and ER1. However, MCB2 would result in a significant gap between cost and potential financing for the project. NCTA proposes to eliminate this alternative, noting that the selection of MCB3 or MCB4 would not preclude NCDOT from implementing other components of MCB2 at a future time when funding is available. These improvements would require a separate environmental document." DCM is concerned that MCB3 and MCB4 may not satisfy the purpose and need of the project. Postponing

other components of MCB2 until a later time by dividing the project into parts that are analyzed in separate environmental documents could result in improper segmentation.

- **MCB3.** DCM agrees that MCB3 should be selected as a detailed study alternative.
- **MCB4.** DCM agrees that MCB4 should be selected as a detailed study alternative.
- **Bridge Corridor Locations C1, revised C1, C2 and revised C2.** DCM agrees that the revised C1 and revised C2 bridge corridor locations as described in Handout 10 dated 9/19/07 should be selected as detailed study alternatives. DCM agrees that the original C1 and original C2 should not be selected as detailed study alternatives. DCM agrees that the expanded corridors of revised C1 and revised C2 on the mainland as described in Handout 10 dated 9/19/07 will provide additional preliminary design flexibility. DCM's recommendation to select the revised C1 bridge corridor location as a detailed study alternative is also based on the decision by NCTA to shift the Outer Banks landing of revised C1 south to avoid CAMA Coastal Wetlands. DCM's recommendation to select the revised C2 bridge corridor location as a detailed study alternative is so that more information about the benefits and disadvantages of this alternative can be considered and so that additional methods to avoid and minimize impacts to CAMA Coastal Wetlands can be explored. DCM is very concerned that revised C2 is estimated by NCTA to impact approximately 1.11 acres of CAMA Coastal Wetlands. This amount of CAMA Coastal Wetland impacts may not be permissible.
- **Bridge Corridor Locations C3, C4, C5 and C6.** DCM agrees that the C3, C4, C5 and C6 bridge corridor locations should not be selected as detailed study alternatives. This is based upon results of the preliminary alternatives analysis, which indicate that these alternatives that are south of Ayldett Road on the mainland would have significant negative impacts on Maple Swamp, a Significant Natural Heritage Area.
- **Recommended additional alternative (additional Outer Banks Termini).** DCM recommends that NCTA study other Outer Banks termini in-between the termini that are currently being considered. DCM notes NCTA's comments in Handout 9 that it does not plan to evaluate additional Outer Banks termini alternatives. NCTA states in Handout 9 that "the reasons for selecting these sites were discussed in the 1995 Alternatives Study Report and reaffirmed in Handout 6." However, DCM did not readily find within the 1995 Alternatives Study Report or Handout 6 a discussion of Outer Banks termini *in-between* the termini that are currently being considered. Any CAMA permit application that is submitted for this project in the future will need to demonstrate that impacts to coastal resources have been avoided and minimized to the maximum extent practicable, including impacts to SAVs and CAMA Coastal Wetlands. From the data that have been provided so far, it appears as though an Outer Banks termini in a new location *in-between* the termini that are currently being considered could avoid impacts to SAVs and CAMA Coastal Wetlands.
- **Ferry Across Currituck Sound.** DCM agrees that ferry alternatives should not be selected as a detailed study alternative based upon the preliminary alternatives analysis.
- **Transit.** DCM agrees that transit should not be selected as a detailed study alternative based upon the preliminary alternatives analysis.

- **Shifting Rental Unit Start Times.** DCM agrees that shifting rental unit start times should not be selected as a detailed study alternative based upon the preliminary alternatives analysis.

In summary, DCM's current recommendation is that the following four Highway Improvement alternatives be selected as detailed study alternatives: ER2; MCB2; MCB3; and MCB4. DCM's current recommendation is that the MCB alternatives should include more than two potential bridge corridor locations: revised C1 as described in Handout 10 dated 9/19/07; revised C2 as described in Handout 10 dated 9/19/07 and with DCM comments as described above; and additional bridge corridor location(s) with Outer Banks termini in-between the termini that are currently being considered. After the Alternatives Screening Report is made available for public review and comment, and DCM receives a report from NCTA summarizing public comments that are received, then DCM will submit final comments on the Recommended Alternatives for Detailed Study (Step 8.5 of the Coordination Plan).

DCM looks forward to our continued involvement as a Participating Agency with this project. Please contact me at (919) 733-2293 x238 or via e-mail at Cathy.Brittingham@ncmail.net if you have any questions or would like additional information.

Sincerely,


Cathy Brittingham

Transportation Project Coordinator

Cc: Jim Gregson, DCM
Frank Jennings, DCM
Jim Hoadley, DCM
George Hoops, FHWA
Bill Biddlecome, USACE
David Wainwright, DWQ
Sara Winslow, DMF
Travis Wilson, WRC
Renec Gledhill-Early, SHPO
Chris Militscher, EPA
Gary Jordan, USFWS
Ron Sechler, NMFS



North Carolina Department of Environment and Natural Resources
Division of Marine Fisheries

Michael F. Easley, Governor
William G. Ross Jr., Secretary

Dr. Louis B. Daniel III, Director

MEMORANDUM

TO: Jennifer Harris, NCTA

FROM: Sara E. Winslow, Northern District Manager

SUBJECT: TIP Project R-2576 – Mid-Currituck Bridge Project

DATE: July 31, 2007

The NC Division of Marine Fisheries submits the following comments relative to the study alternatives for the Mid-Currituck Bridge. Based on the field visit this agency recommends that C1 be pursued. The northern main land alignment through Maple Swamp appears to have the least amount of impacts. However, appropriate mitigation for loss/impacts to wetlands would be needed. As for the terminus on the banks side a shift in the alignment of C1 to the south would reduce the impacts to wetlands. This agency awaits the SAV surveys for the alignments. After review of the surveys the Division would provide additional comments. The mid and southern alignment on the mainland side could not be supported. The touch down area on the banks side for C2, C4, and C6 would have extensive wetland impacts.

Since Currituck Sound is a very important nursery area for many estuarine dependent finfish and invertebrate species the Division would be concerned with dredging associated with any of the alternatives. This agency would request as much detail as possible of dredging that would be needed, proposed depths, and estimate of material that would be excavated.

The Division may provide additional comments after the next meeting when the NCTA provides information relative to issues raised at the last meeting. If you have any questions please let me know.

3441 Arendell Street, P.O. Box 769, Morehead City, North Carolina 28557
Phone: 252 726-7021 | FAX: 252 727-5127 | Internet: www.ncdmi.net



An Equal Opportunity / Affirmative Action Employer – 50% Recycled/10% post Consumer Paper



North Carolina Department of Environment and Natural Resources
Division of Marine Fisheries

Michael F. Easley, Governor
William G. Ross Jr., Secretary
Dr. Louis B. Daniel III, Director

MEMORANDUM:

TO: Jennifer Harris
North Carolina Turnpike Authority

THROUGH: Mike Street, Chief Habitat Section

FROM: Sara E. Winslow, Northern District Manager

SUBJECT: Mid-Currituck Bridge Study, Alternatives for Detailed Study – Currituck and Dare Counties – TIP No. R-2576

DATE: October 18, 2007

The NC Turnpike Authority (NCTA) has proposed to carry forward two alternatives for detailed study in the Draft Environmental Impact Statement (DEIS). During the September 19, 2007 meeting, the agencies were informed by NCTA that they proposed to drop all non-bridge alternatives, therefore selecting to study only two bridge corridor alternatives. The NC Division of Marine Fisheries (NCDMF) does not agree with the elimination of all non-bridge alternatives at this time. This agency requests that alternative ER2 be carried forward for detailed study based on the following:

- Non-bridge alternative would result in less total wetland impacts
 - All alternatives meet purpose and need of the project. Thus, dropping an alternative prior to the DEIS based on which alternative best meets purpose and need is not a sound reason. The purpose of the DEIS is to study in detail the potential impacts and collect public comment on a full range of the alternatives.
 - The inclusion of a non-bridge alternative in the study will provide a full range of alternatives. This will provide a comparison for secondary and cumulative impacts on the marine and estuarine resources and habitat within the project area, which would include impacts to Essential Fish Habitat, and submerged aquatic vegetation.
- In summary, NCDMF feels that including the non-bridge alternative is needed in the DEIS in order to fully evaluate the direct and indirect impacts of this project on the natural environment. If you have any questions relative to the Division's comments please contact me at (252) 264-3911.

3441 Arendell Street, P.O. Box 769, Morehead City, North Carolina 28557
Phone: 252 726-7021 | FAX: 252 727-5127 | Internet: www.ncdmf.net



An Equal Opportunity / Affirmative Action Employer – 50 % Recycled / 100% post Consumer Paper



North Carolina Department of Environment and Natural Resources
Division of Marine Fisheries

Michael F. Easley, Governor
William G. Ross Jr., Secretary
Dr. Louis B. Daniel III, Director

MEMORANDUM

To: Jennifer Harris, North Carolina Turnpike Authority

Through: Anne Deaton, Chief Habitat Section

From: Sara E. Winslow, Northern District Manager

Subject: Comments on Revised Purpose and Need and Alternatives Screening Report for the Proposed Mid-Currituck Bridge, TIP R-2576 – dated April 2008

Date: May 12, 2008

The North Carolina Turnpike Authority (NCTA) distributed an Alternatives Screening Report and Revised Statement of Purpose and Need dated April 2008. The NC Division of Marine Fisheries has reviewed the documents and submits the following comments.

Revised Purpose and Need Statement

The Statement of Purpose and Need included in the document dated April 2008 is a significant change from that dated May 2007. The Division questions why the revision has not been mentioned or discussed during the numerous interagency meetings over the life of the proposed project. Why was this need not included as part of the original project purpose and need, dated May 2007? DMF recommends that NCTA maintain the Statement of Purpose and Need dated May 2007.

Alternatives Screening Report

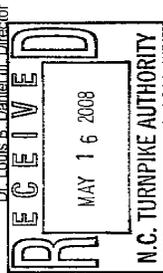
- ❖ This agency expresses concern with the “potential SAV habitat” being less than 4 feet deep in the sound. In Table 6 of the Alternatives and Screening Report the potential SAV habitat bridged is stated to be less than 4 feet deep. SAVs are considered a critical habitat by this agency and others. Potential SAV habitat is considered to be areas with suitable bottom types that are 6 feet deep or less. Even NCDOT has considered this depth in transportation projects in North Carolina.
- ❖ Table 6 - Are the SAV Bridged and Potential SAV Habitat Bridged additive? Based on the table title this is just for the NC 12 Intersection Alternatives. Is this correct?

The DMF recommends that NCTA utilize 6 feet deep or less as potential SAV habitat. Then recalculate the potential impacts for each of the alternatives. If NCTA does not pursue the 6 feet or less “criteria” the reasons should be explained with appropriate literature documentation. This agency as indicated in previous memos, cannot provide final comments on the recommended alternatives for detailed study until the amount of SAV impacts/habitat for the preliminary alternatives have been reviewed.

3441 Arendell Street, P.O. Box 769, Morehead City, North Carolina 28557
Phone: 252 726-7021 | FAX: 252 727-5127 | Internet: www.ncdmf.net



An Equal Opportunity / Affirmative Action Employer – 50 % Recycled / 100% post Consumer Paper





Michael F. Easley, Governor
William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources
Coleen H. Sullins, Director
Division of Water Quality

- ❖ The Alternatives Screening Report indicates that NCTA has selected MCB3 and MCB4 for detailed study analysis.

The Division indicated in its October 18, 2007, memo that the ER2 alternative should be selected for detailed study. The Alternatives Screening Report even states the request by essentially all state and federal resources agencies that this alternative be retained and a detailed study conducted. It does not appear that NCTA is considering the comments from the agencies for this alternative. This agency continues to make the recommendation for alternative ER2.

If you have any questions relative to the Division's comments please contact me at (252) 264-3911 or via email at sara.winslow@nceml.net.

cc: Cathy Brittingham, DCM
Travis Wilson, WRC
Chris Militscher, EPA
Kathy Matthews, EPA
Gary Jordan, USEFWS
Bill Biddlecome, USACOE
David Wainwright, DWQ
Ron Sechler, NMFS

June 12, 2007

MEMORANDUM

To: Jennifer Harris, NCTA

Through: John Hennessy, Supervisor, NC Division of Water Quality, Transportation Permitting Unit

From: David Wainwright, NC Division of Water Quality, Transportation Permitting Unit

Subject: Comments on the proposed Mid-Currituck Bridge and associated improvements in Dare and Currituck County, TIP R-2576

The DWQ has reviewed the Mid-Currituck Bridge Study for the aforementioned project. The DWQ provides the following comments and concerns:

1. The bridging options proposed as MCB1, MCB2, and MCB3 state a four-lane bridge will be constructed. However, the "Potential Bridging Lanes" sections states that a two-lane bridge may be constructed first. Please clarify.
2. It is stated that the impacts shown represent a four-lane bridge, and are presented as a worst-case scenario. However, it is not known if the additional two lanes (either through an additional bridge or expanding the then existing bridge) will occur or if the three-lane option will be built. The DWQ would like to see impacts for each proposed bridge type being considered.
3. Option MCB3 states that NC 12 would be widened to four lanes from two to four miles south of the proposed bridge. When will it be decided how many miles the widening will be? What is the length the cost of this upgrade in Table 6 is based upon?
4. It would seem the impacts from building two two-lane bridges would be greater than for a single four-lane bridge. This would mostly be due to the area between the two bridges, which would not exist in a four-lane bridge. It is unclear in the document which type of four-lane bridge the impacts are based on.
5. A three-lane bridge is mentioned as a potential option. Would such a bridge be constructed such that it would be expandable in the future to four-lanes if needed?
6. In the "Findings and Considerations Used in Developing of the Highway Improvement Alternatives" section, there is a list of reasons why a four-lane bridge is appropriate. The second bullet compares a two-lane bridge to the four-lane bridge. A two-lane bridge would only affect LOS on the bridge itself, and not the surrounding network of roads. In fact, the text states, "...therefore differences between a four-lane and a two-lane bridge are small." It is unclear why a four-lane bridge is more appropriate than a two-lane bridge if the additional two lanes only

Transportation Permitting Unit
1450 State Street, Raleigh, North Carolina 27609-1450
2021 Capital Boulevard, Suite 260, Raleigh, North Carolina 27604
Phone: 919-733-1786 / FAX 919-733-6893 / Internet: <http://it26.enr.state.nc.us/ncowetlands>
An Equal Opportunity/Affirmative Action Employer - 50% Recycled/100% Post Consumer Paper





North Carolina Department of Environment and Natural Resources
Michael F. Easley, Governor
William G. Foshee, Jr., Secretary
Caleen H. Sullins, Director
Division of Water Quality

affect LOS on the bridge itself. Does the cost of the additional two lanes justify increasing the LOS just on the bridge itself?

7. With respect to ferry service analysis, it appears as though the analysis between ferry service and traffic volume was made using traffic counts at the US 158/NC 12 intersection. It does not seem appropriate to use traffic already using NC 12 as a comparison, as it assume that all traffic at this intersection is coming from the Wright Memorial Bridge. It does not take into account traffic moving from the south. It would seem more appropriate to use the estimates that are projected to use the Mid-Currituck Bridge instead, since this is what the ferry service would "replace." In this scenario, and according to Table 3, traffic count comparisons should be based on 22,000 to 35,100 vehicles per day, not the 41,500 that are projected to pass through the NC 12/US 158 intersection. (Note that this is not to imply that ferry service would necessarily meet the purpose and need).

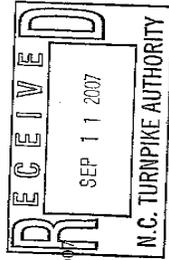
8. No mention is made as to whether the impacts presented in the document include those associated with the tollbooths.

9. The "Cost" section states that the cost of adding a third lane to the Knapp Bridge is included in Table 6. Adding an additional lane to this bridge is not discussed anywhere else in the document, why is it included in Table 6? Also, it is unclear from Table 6 where the cost of this additional lane is shown on the table -- which cost number is it factored into?

10. The DWQ is concerned about the potential impacts from the ramps and interchanges, especially those associated with the western end of the project. The preliminary design shows rather large impacts to the wetlands on the western side of US 158. Further design modifications may reduce impacts to this area. The NCTA is respectfully reminded that the issuance of 401 Water Quality Certification will require that impacts to wetlands and other natural resources be reduced as much as possible.

11. Recent meetings regarding the replacement of Bonner Bridge (TIP B-2500) have shown that this project could exceed \$1 billion dollars. At this cost, Division 1 funds would be severely depleted, limiting funds for other Division projects. According to Table 4, the cost of building this project could run over \$500 million dollars, which is a significant amount. After reviewing GS 136 §136-89.192 it is understood that funds from the sale of the NCTA's bonds or notes are not subject to the equity distribution formula, which will most likely be the primary source of funding. Will there be funds allocated to this project that are not included from the sale of such, and would those funds then be subject to the equity formula?

Thank you for requesting our input at this time. The NCTA is reminded that issuance of a 401 Water Quality Certification requires that appropriate measures be instituted to ensure that water quality standards are met and designated uses are not degraded or lost. If you have any questions or require additional information, please contact David Wainwright at (919) 715-3415.



August 31, 2007

MEMORANDUM

To: Jennifer Harris, North Carolina Turnpike Authority
From: David Wainwright, NC Division of Water Quality, Transportation Permitting Unit
Through: John Hennessy, Supervisor, NC Division of Water Quality, Transportation Permitting Unit
Subject: Comments and concerns regarding the Mid-Currituck Bridge project, TIP R-2576

As part of the Section 6002 process for the proposed Mid-Currituck Bridge, team members have been encouraged by the NCTA to submit any comments, questions, or concerns regarding the project. The DWQ has concerns and questions regarding various aspects of the proposed project. Many of these comments and concerns have come about as a result of discussions from past meetings, document review, and the field visit performed in July 2007. Included below are current comments, questions, and concerns of the DWQ.

1. With respect to the July 10, 2007 field visit:
 - At the northern bridge-landing site (alternatives C1, C2, and C5) in Corolla (NC 12), there were discussions among the resource agencies about possibly shifting the corridor to the south enough to reduce wetland impacts. NCTA was able to implement this shift. This resulted in avoiding all of the coastal wetlands, although the non-coastal wetland impacts increased slightly (0.09acres). Efforts resulted in an overall reduction of wetland impacts by 1.21 acres. Of the two Corolla bridge-landings, this site now has the least amount of wetland impacts. Currently, if a bridge alternative is selected as the LEDEPA, this is the DWQ's preferred Corolla alternative.
 - The team also visited the alternative corridor sites on the mainland near Aydlett. There are three potential corridors in this area, all three cross Maple Swamp. One of the alternatives crosses through the swamp to the north of Aydlett Road; the other two cross to the south. The team was able to view habitat present at only one of the corridors (C3 and C4). Although the team was unable to view the actual habitat that existed at the other two corridors, they were able to see habitat expected to be similar to the other two corridors (C5/C6, and C1/C2). Habitat viewed on the north side of Aydlett Road was very good with respect to habitat quality, and appeared to be undisturbed. The habitat viewed on the south side of Aydlett Road was exceptional. As with the north side, it also appeared to be undisturbed.

Perhaps the most striking feature of the south side was the Loblolly Bay trees. The trees were mature at approximately 65 to 70 feet tall and about three feet in diameter; and were rather numerous. According to the Natural Resources Conservation Service (NRCS), the

most northern extent of the loblolly bay is Tyrrell County in North Carolina, which is a little south of the project area. Due to the ecological significance and rarity of the area, the DWQ would like to discuss opportunities to preserve this area with the NCTA.

Because of the unique and rare habitat associated with this area, and since there is a corridor that avoids this area, the DWQ feels it will be difficult to issue a permit for the southern alternatives (C3/C4, and C5/C6). The DWQ prefers the northern alternative if a bridge is selected as part of the LEDPA.

- The DWQ is also concerned about habitat fragmentation in Maple Swamp with the proposed corridors. For the most part, Maple Swamp is still largely intact, with relatively little fragmentation. The DWQ feels that, in addition to the reasons stated previously, corridors associated with alternatives C3/C4 and C5/C6 will further fragment the area. The northern corridor (alternatives C1/C2) will also fragment the area further, however the corridor is in proximity to the existing power lines, and would appear to a little less of a disturbance. Ideally, the DWQ would encourage the NCTA to route the corridor along, or in very close proximity, to an existing road which would further minimize fragmentation. Based on what has been provided to the DWQ thus far, the DWQ's preferred alternative, should the LEDPA involve bridge construction, would be the northern most alternative. The DWQ *strongly* encourages the NCTA to continue working in a manner that will further reduce impacts to Maple Swamp.

- The DWQ is still concerned about the impacts to wetland and forested areas to the west of US 158 where the interchanges are currently placed. The DWQ understands the need to keep traffic on US 158 moving. However, we would like to see the NCTA minimize impact to this area as well. There has been some discussion between team members regarding the use of a traffic light at this location. The DWQ encourages the NCTA to investigate this further.

2. Concerns from recent meetings:

- The DWQ is concerned about potential impacts to SAV. SAV beds are an important component of the biological function and integrity of the sound. A map reflecting recent survey efforts was made available to team members. It is understood by DWQ, per meeting discussions, that an attempt will be made in August to verify the results of this survey. Nonetheless, the map shows all corridors crossing SAV beds. This is most prominent on the eastern side of Currituck Sound. Alternative C6 appears to impact the largest number of SAV beds (five), and consequently also appears to impact the largest area of SAV. Alternatives C1, C3, and C5 appear to impact the least, and only cross one SAV bed. As with other natural resources, the DWQ seeks to protect SAV beds by reducing impacts to them. The DWQ will withhold further comment on SAV until the results of the survey have been verified.

- During the June 20, 2007 meeting, there was a proposal for another alternative – MCB4. This alternative was essentially alternative MCB3 with an additional northbound lane added to US 158 between NC 12 and the Wright Memorial Bridge. This alternative was discussed further during the July 18, 2007 meeting. The NCTA has stated that alternative

MCB4 will meet the 21.4-hour hurricane evacuation time that was met by all other alternatives.

According to Table 1 in Handout 4 (May 23, 2007), MCB3 (or MCB4) would not add additional lanes to NC 12 in either Dare nor Currituck Counties, with exception of a two to four mile stretch south of the Mid-Currituck Bridge landing in Currituck County. All other alternatives involve adding at least one to lane to NC 12 in Dare County, and two lanes in Currituck County. All alternatives, with exception of MCB3, were able to meet a projected hurricane evacuation time of 21.4 hours. Alternative MCB3 was only able to meet an evacuation time of 26.2 hours. It appears as though improvements to NC 12 in Currituck and Dare Counties are necessary for the 21.4 hour evacuation time to be met. It is unclear to the DWQ how the 21.4 hour evacuation time can be met with MCB4 if improvements are not made to NC 12. Has the MCB4 scenario been modeled to show what the actual anticipated hurricane evacuation time would be?

3. Concerns from other items:

- With respect to the *Proposed Mid-Currituck Bridge Preliminary Traffic and Revenue Study, Final Report*, it appears as though a Thursday and a Saturday in August were used as the peak-season travel sample dates and a Thursday and a Saturday in September for the off-season travel study dates. The DWQ questions why September was chosen as the off-season travel month. According to Figure 2-4 it looks as though January or February would have been a better choice for the off-season travel analysis.

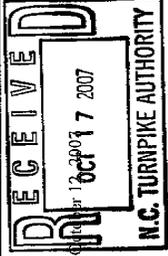
Additionally, with respect to the travel study location (near the intersection of NC 12 and US 158 at Chicheauk Trail), it is stated that this location was chosen because "a station at this location was expected to intercept the largest number of potential Mid-Currituck Bridge users." The location is approximately one mile north of where traffic coming off of the Wright Memorial Bridge would turn north onto NC 12. It is unclear to the DWQ why it is expected that this location would contain the largest number of anticipated Mid-Currituck Bridge users. It would seem that the closer to the Mid-Currituck Bridge one gets, the greater the chance of reaching the largest number of potential users. This location is close enough to the Wright Memorial Bridge, which is the free alternative route, which many users may opt to use the free alternative instead of paying to cross the tolled bridge. To get to the sample point, it would probably be quicker at most times than using the Mid-Currituck Bridge, as speed limits on US 158 are higher than those on NC 12 and traffic traveling on NC 12 would be less prone to slowing down as vehicles make turns on and off of NC 12. Therefore, it would seem that a point closer to Corolla would have been a better choice for the traffic survey study, as traffic closer to Corolla would have a higher probability of using the Mid-Currituck Bridge.

- Table 6 of Handout 5 presents a breakdown of displacements associated with the project. With respect to the relocations associated with the bridge, ramps, and access roadways, the number of displacements is averaged. The DWQ would like to see the actual number of displacements associated with each of the potential routes (C1, C2, C3, etc.). Ideally, the number would be further broken down by the number of displacements in Aydlett and Corolla.



Michael F. Easley, Governor
William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources
Coleen H. Sullins, Director
Division of Water Quality

Thank you for requesting our input at this time. The NCTA is reminded that issuance of a 401 Water Quality Certification requires that appropriate measures be instituted to ensure that water quality standards are met and designated uses are not degraded or lost. If you have any questions or require additional information, please contact David Wainwright at (919) 715-3415.



MEMORANDUM

To: Jennifer Harris, North Carolina Turnpike Authority

From: David Wainwright, NC Division of Water Quality, Transportation Permitting Unit *DW*

Through: John Hennessy, Supervisor, NC Division of Water Quality, Transportation Permitting Unit *JH*

Subject: Response to the NCTA's desire to drop both upgrade-existing alternatives from consideration, and therefore not carry an upgrade-existing alternative forward and therefore not be included in any environmental documentation

The North Carolina Turnpike Authority (NCTA) held an eastern Turnpike Environmental Agency Coordination meeting (TEAC) on September 19, 2007. The main purpose of this meeting was to discuss various aspects of the NCTA's Mid-Currituck Bridge project. The NCTA made it known that the only proposed alternative that it wanted to carry forward and include in the environmental documentation was Alternative MCB4. Alternative MCB4 consists of a bridge across Currituck Sound, an additional northbound lane on US 158 from the new bridge to Barco, the addition of another northbound lane on US 158 from NC12 to the Wright Memorial Bridge (in Dare County), and two-to-four miles of widening along NC 12 in Currituck County where it intersects the bridge.

The NCTA is not considering including an "upgrade-existing" alternative in the environmental document. Initially, there were two upgrade-existing alternatives proposed – ER1 and ER2. Resource Agencies were told by the NCTA that ER1 was not going to be included because of the high capital cost and the high number of displacements that would occur. Alternative ER2 was not going to be included because of the low benefits of travel. The DWQ does not agree with the decision to drop Alternative ER2 at this time and strongly encourages the NCTA to include this upgrade-existing alternative in the environmental documentation. The following explains why the DWQ believes that an upgrade-existing alternative should be included.

The DWQ still views Alternative ER2 as a viable and reasonable option. This alternative still meets the stated purpose and need of the project, which is comprised of three elements (page 2 of the May 23, 2007 meeting minutes). These elements include 1) improved traffic flow on US 158 and NC 12, 2) reduce travel time for travel time between the Currituck County mainland and Currituck County on the Outer Banks, and 3) to facilitate coastal evacuation for users of US 158 and NC 12. The DWQ believes this upgrade-existing alternative still meets the purpose and need based upon the fact that:

- According to Table 6 in Handout 5 (June 20, 2007), it meets the same hurricane evacuation time (21.4 hours) as alternatives MCB1, MCB2, and the proposed MCB4, and is faster than MCB3 by 3.8 hours.
- The addition of extra lanes to both US 158 and NC 12 would improve traffic flow on both.
- The addition of extra lanes to both US 158 and NC 12 would reduce travel times.

Transportation Permitting Unit
1650 Mill Service Center, Raleigh, North Carolina 27609-1650
2321 Crabtree Boulevard, Suite 250, Raleigh, North Carolina 27604
Phone: 919-733-1786 / FAX 919-733-6953 / Internet: <http://trp2a.ent.state.nc.us/newweb0406>
An Equal Opportunity/Affirmative Action Employer – 50% Recycled/10% Post Consumer Paper



the bridge will have on these resources yet, but plans to address these in the environmental document. However, if these impacts are shown to be significant, and all non-bridge alternatives have been dropped during the NEPA review, then the DWQ would require in the 401 Water Quality Certification application that a non-bridge alternative be evaluated to ensure that proper avoidance and minimization of impacts has occurred.

Total impacts to wetlands are greater for MCB4 than for the upgrade-existing alternatives. Factoring the NCTA's corrected impacts for US 158 from the Wright Memorial Bridge to the US 158/US 168 intersection in Barco (page 3 Handout 9, September 19, 2007), total wetland impacts for ER2 are estimated to be 27.0 acres, and 34.5 acres for MCB4 (includes additional lane on US 158 in Dare County; based on Table 6 in Handout 5). After the on-site field review of potential bridging locations on July 10, 2007, the NCTA, at the request of the resource agencies, was able to shift the alignment of the northern most corridor in order to reduce impacts to coastal wetlands by nearly 1.3 acres, which is not reflected above. It appears that Alternative ER2 has the least impacts to wetlands.

The NCTA has not addressed the potential impacts from stormwater run-off from the bridge. Stormwater runoff into Currituck Sound from the bridge could be a major concern for the DWQ, especially given the submerged aquatic vegetation (SAV), essential fish habitat, and general lack of flushing in the sound. Also, the DWQ is required to consider cumulative impacts from projects. As stated in 15A NCAC 02H .0500 (b)(4) with respect to review of permits, a project must show that it "does not result in cumulative impacts, based on past or reasonably anticipated future impacts, that cause or will cause a violation of downstream water quality standards." Due to the dramatically reduced drive times to the Outer Banks, the DWQ believes that a bridge alternative will induce growth on the mainland areas of Currituck County, especially in and near the Town of Aydlett. Conversely, we believe the potential for induced growth in the same area is less for an upgrade-existing alternative. Due to the expected difference in development pressures associated with a bridge alternative, the DWQ anticipates that Currituck Sound will see a dramatic increase in stormwater if a bridge alternative is ultimately selected. The DWQ is concerned about the potential effects of development, the associated increase in stormwater, and the combined effects it will have on water quality in the Sound from a bridge alternative. To that end, the DWQ does not feel confident about dropping Alternative ER2 until additional analysis on the potential cumulative impacts is completed.

The DWQ is concerned about the impacts the bridge will have on the SAV located in the area of the proposed bridge. The NCTA has already shown that significant areas of SAV exist in the proposed eastern end of the proposed bridge corridors. The NCTA has also shown that significant reductions in SAV have occurred in recent decades. It is imperative that these areas be impacted as little as possible. The DWQ is concerned that the runoff from the bridge will have a detrimental effect on existing SAV, which could lead to some loss of biological function. The NCTA will have to show that proper steps have been taken to avoid and minimize impacts to this resource.

Additionally, 15A NCAC 02H.0506 states that 401 Water Quality Certification may be issued to projects where no practicable alternatives exist which reduce impacts to surface waters and wetlands. As discussed above, the DWQ believes that by not carrying an upgrade-existing alternative forward this criterion is not being met. The NCTA has an alternative that may reduce impacts to wetlands and surface waters. If the NCTA chooses not to carry this option forward in the environmental documentation, DWQ may ask for additional information on this alternative in the 401 Water Quality Certification application (15A NCAC 02H.0506).

While ER2 may result in reduced travel benefits, it still meets the requirements set forth in the purpose and need for this project and should not be eliminated from further study based on this.

Additionally, the DWQ does not believe that the alternative should be eliminated based on cost. According to Table 6 in Handout 5, the total cost of Alternative ER2 is \$406.1 million and \$635.7 million for MCB3. However, with Alternative MCB3, the NCTA has proposed adding one additional westbound lane to US 158 in Dare County from NC 12 to the Wright Memorial Bridge). This expanded MCB3 option is currently referred to as the Alternative MCB4 and is the NCTA's preferred alternative option. This additional lane is not factored in to the above total cost for Alternative MCB4. Again, according to Table 6, this would add an additional \$25.3 million to the cost of Alternative MCB4, bringing the approximate total for the NCTA's preferred alternative to \$661 million. Based on this, Alternative MCB4 is \$254.9 million (38.5 percent) more than Alternative ER2.

The NCTA wants to carry forward Alternative MCB4 because it has the least amount of gap funding, and therefore feel that funding to cover the gap can be obtained easier. The DWQ realizes that the funding options for this project are not traditional, as the NCTA expects to recover most of the cost through a tolling option. However, as brought up by EPA at the September 19 TEAC meeting, the NCTA has not secured the necessary gap funding for this project yet. The funding gap for Alternative MCB4 (MCB3 with the additional lane on US 158 is expected to be \$76.5 million) is less than that for any of the other alternatives (ER2 has a projected funding gap of \$286.6 million). Although it may be more difficult to secure the greater gap funding necessary to fund other alternatives, it has not been shown that it cannot be done, nor has it been shown that the NCTA can even secure the gap funding for the preferred alternative. It is not believed that Alternative ER2 should be dropped at this time based on the amount of gap funding required.

There appears to be general sufficiency for right-of-way along NC 12 for Alternative ER2. Page 3 of Handout 2 (April 18, 2007) states that "in Currituck County, there is generally sufficient existing NC12 right-of-way for four lanes" and "in Dare County, there is generally insufficient right-of-way for four lanes, but there is generally sufficient right-of-way for three lanes." Alternative ER2 consists of four lanes in Currituck County and three lanes in Dare County. Based on this statement, there should be enough existing right-of-way to sufficiently widen most of NC12 in Currituck and Dare Counties.

The DWQ, as a permitting agency, must consider certain criteria when deciding whether or not to issue a 401 Water Quality Certification (15A NCAC 02H.0506). The discussion below reflects some of the things that must be considered per the referenced rule.

Applicants seeking 401 Water Quality Certification must show that impacts to the state's natural resources must be minimized to the best extent practicable. According to 15A NCAC 02H.0506 ("Review of Applications"), the DWQ must consider the state's natural resources and determine if impacts have been minimized to the best extent practicable. The rule states, "...the Director [of the Department] shall determine if the proposed activity has the potential to remove or degrade those significant existing uses which are present in the wetland or surface water...." The area of the Pamlico Sound where the bridge is proposed is classified as SC (saltwaters protected for secondary recreation, fishing, aquatic life including propagation and survival, and wildlife). Thus far, it is unclear what effect the proposed bridge will have on these existing uses, especially fishing and wildlife. The Pamlico Sound is an essential fish habitat area. Studies have not been undertaken by the NCTA to determine what effects



Michael F. Easley, Governor
William G. Ross, Jr., Secretary
North Carolina Department of Environment and Natural Resources
Coleen H. Sullins, Director
Division of Water Quality

The NCTA has not presented any impacts to streams or other surface waters. Therefore, aside from impacts to Currituck Sound from the bridge itself, it is assumed at this point that no impacts to these resources are anticipated.

The DWQ feels that the NCTA should consider carrying Alternative ER2 forward. While in many respects it appears as though ER2 has fewer overall impacts than does MCB4, the DWQ will consider all impacts, both natural and human, in its decision making process. It may prove difficult for the DWQ to make a permit decision if an upgrade-existing alternative is not fully explored. The DWQ would like to respectfully remind the NCTA that the state requires applicants seeking 401 Water Quality Certification that to show that impacts to the state's natural resources have been avoided to the best extent practicable, and if impacts cannot be avoided, then they must be minimized. The DWQ strongly urges the NCTA to consider including an upgrade-existing alternative in their environmental document for this project to meet this requirement.

Thank you for requesting our input at this time. If you have any questions or require additional information, please contact David Wainwright at (919) 715-3415.

cc: Travis Wilson, NC Wildlife Resources Commission
Cathy Brittingham, Division of Coastal Management
Chris Millitser, Environmental Protection Agency
Gary Jordan, US Fish and Wildlife Service
Sarah Winslow, Division of Marine Fisheries
Bill Biddlecome, US Army Corps of Engineers
Scott McClendon, US Army Corps of Engineers
Paul Rawls, Division of Water Quality
Tom Reeder, Division of Water Quality
Amy Simes, DENR
File Copy

April 29, 2008

MEMORANDUM

To: Jennifer Harris, North Carolina Turnpike Authority
From: David Wainwright, NC Division of Water Quality, Transportation Permitting Unit
Through: Brian Wrenn, Supervisor, NC Division of Water Quality, Transportation Permitting Unit (BW)
Subject: Comments on revised Purpose and Need and Alternatives Screening Report for the proposed Mid-Currituck Bridge, TIP R-2576.

The NCTA has requested comments regarding a revised Statement of Purpose and Need, dated April 2008, and the recently published (April 2008) Alternatives Screening Report. The DWQ would like to provide the following comments:

Revised Purpose and Need Statement

1. The NCTA has added a new project need in the revised Purpose and Need Statement (statement). The new need refers to a "connecting link" between the Currituck County mainland and the Currituck portion of the Outer Banks. This addition is viewed as a significant change to the statement, therefore:
 - a. The DWQ questions the NCTA as to why this revision has not been discussed, or even mentioned, in previous TEAC meetings. Furthermore, it was not even mentioned at the April 8, 2008 meeting when the document was handed-out at the TEAC meeting. The NCTA indicated only minor revisions had been made, such as allowing for new corridors that had been previously discussed.
 - b. Supporting information for adding this new need dates from 1989 – 2006. It is unclear why the NCTA did not include this need in the original statement, dated May 2007.
2. Section 1.7.3 includes a list of planned improvements for development within or near the project area. The list should include U-3815. This project would upgrade the intersection of US 64 and NC 345 near Manteo, in Dare County. The project is anticipated to greatly improve traffic flow within this heavily traveled intersection.

Alternatives Screening Report

3. The text in Section 2.1.1.2 indicates that if a bridge is constructed it would be a single, two-lane bridge. However, Figures 6 and 7 indicates a four lane bridge. The maps should be updated to reflect a two-lane bridge and match the text.
4. Table 2 (page 29) includes a summary of wetlands filled or bridged. It is unclear if these impacts are based on delineations performed by CZM in December 2007. Additionally, when DWQ visited the area with the CZM field representative, there were several potential isolated wetlands along NC. It is unclear if impacts to these resources are included in the analysis.

Transportation Permitting Unit
1500 Capital Service Center, Raleigh, North Carolina 27699-1650
2324 Capital Service Center, Raleigh, North Carolina 27664
Phone: 919-733-1756 / FAX: 919-733-6853 / Internet: tl062702@emr.state.nc.us / www.nc.gov
An Equal Opportunity/Affirmative Action Employer - 50% Recycled/10% Post-Consumer Paper



5. Section 1.0 includes a list of planned improvements for development within or near the project area. The list should include U-3815. This project would upgrade the intersection of US 64 and NC 345 near Manteo, in Dare County. The project is anticipated to greatly improve traffic flow within this heavily traveled intersection.
 6. Section 7.3 of the Coordination Plan (dated September 13, 2007) states that "the Purpose and Need will be determined by the time of selection of Detailed Study Alternatives." However, both the revised Purpose and Need Statement and Alternatives Screening Report are dated April 2008. Therefore, the purpose and needs of this project have not been established prior to the selection of the detailed alternatives.
 7. SAFETEA-LU, §139(C) states that "the lead agency also shall determine, in collaboration with participating agencies...the level of detail required in the analysis of each alternative for a project." The DWQ believes that by including language in the revised statement that the NCTA is not fulfilling requirements of Section 6002 SAFETEA-LU. The NCTA has not collaborated with the participating agencies for the required level of detail for an upgrade existing alternative.
 8. Section 1.2 of the Coordination Plan states that "the process [Section 6002] established in this plan is intended to ensure that the requirements of NEPA and Section 404 of the Clean Water Act can be satisfied in a single process. Specifically, this plan is intended to ensure that, to the maximum extent practicable...NCDENR can issue Section 401, Riparian Buffer Authorizations, Isolated Wetlands...based on information developed as part of the NEPA process." In a letter dated October 12, 2007, the DWQ notified the NCTA that avoidance and minimization measures per 15A NCAC 02H.0506 must be met. In this same letter, the DWQ strongly urged the NCTA to include an upgrade existing alternative in its environmental document in order to fulfill this requirement. The DWQ still stands by this, and once again respectfully reminds the NCTA that appropriate documentation will be required prior to issuance of 401 Water Quality Certification.
 9. Section 6.3 of the Coordination Plan states that "Participating Agencies will be invited to identify issues that need to be considered by the Lead Agencies in preparing the environmental documentation and making project decisions, including issues that relate to the agencies abilities to approve (or comment favorably on the approval of) any necessary permits for the project." Again, the DWQ expressed concerns over not including an upgrade existing alternative in its October 12, 2007 letter to the NCTA. It was stated that this needs to be considered in the environmental documentation or the permitting process may be slowed later on.
 10. Section 8.6 of the Coordination Plan states that "the Lead Agencies identify the detailed study alternatives based on the comments received from the Participating Agencies and the public. In general, the NCTA and FHWA will seek to resolve any issues or concerns regarding the range of detailed study alternatives at this stage in the process. Any issues that are not resolved at the stage will need to be resolved prior to issuance of a Section 404 permit by the USACE. It is incumbent on all Participating Agencies to raise any issues, concerns, or comments in a timely manner and to also provide suggestions for resolution." Once again, the NCTA is respectfully reminded that the DWQ, along with several other agencies, raised an issue with not including an upgrade existing alternative in the environmental documentation with respect to avoidance and minimization in on October 2007.
- The DWQ suggested the resolution was to include one of the upgrade existing alternatives in the environmental documentation, preferably ER2. The NCTA is also respectfully reminded that a Section 404 permit can not be issued until a Section 401 permit is first issued.

Additionally, the Alternatives Screening Report states that "The North Carolina Wildlife Resources Commission (NCWRC), the North Carolina Department of Natural Resources (NCDENR) Division of Marine Fisheries (DMF), the US Environmental Protection Agency (USEPA), NCDENR Division of Water Quality (DWQ), and NCDENR Division of Coastal Management (DCM) each asked in written letters that the ER2 alternative be retained for detailed study", because of "its potential for less wetland, habitat and natural resource impacts; a desire to have a non-bridge alternative for detailed study; and a disagreement that its slightly higher displacements, poor affordability, and lesser travel benefits are not suitable reasons for its elimination." Based on these statements, it does not appear that the NCTA is considering comments received from the Participating Agencies in selecting which detailed alternatives should be studied.

Other Concerns/Issues

11. DWQ staff visited the project area with a CZM field representative on December 19, 2007. After reviewing the project area in the field, the DWQ would like to make it known to the NCTA that this project has the potential to impact several apparent stormwater ponds, as well as a wastewater treatment facility. The DWQ representative discussed these issues with the CZM field representative. The DWQ respectfully reminds the NCTA that impacts to these areas will need to be addressed if they occur.

Once again, the DWQ feels that the NCTA should consider including Alternative ER2 in its detailed study. While in many respects it appears as though ER2 has fewer overall impacts than does MCB4, the DWQ will consider all impacts, both natural and human, as well as public comment and those of officials in its decision making process. It may prove difficult for the DWQ to make a permit decision if an upgrade-existing alternative is not included in the environmental documentation. The DWQ would like to respectfully remind the NCTA that the state requires applicants seeking 401 Water Quality Certification that to show that impacts to the state's natural resources have been avoided to the best extent practicable, and if impacts cannot be avoided, then they must be minimized. The DWQ strongly urges the NCTA to consider including an upgrade-existing alternative in their environmental document for this project to meet this requirement.

Thank you for requesting our input at this time. If you have any questions or require additional information, please contact David Wainwright at (919) 715-3415.

cc: Travis Wilson, NC Wildlife Resources Commission
 Cathy Brittingham, Division of Coastal Management
 Chris Millscher, Environmental Protection Agency
 Kathy Matthews, Environmental Protection Agency
 Gary Jordan, US Fish and Wildlife Service
 Sarah Winslow, Division of Marine Fisheries
 Bill Biddlecome, US Army Corps of Engineers
 Scott McClendon, US Army Corps of Engineers
 Paul Rawls, Division of Water Quality
 Amy Simes, DENR
 File Copy



Michael F. Easley, Governor
 William G. Ross Jr., Secretary
 North Carolina Department of Environment and Natural Resources
 Coleen H. Sullins, Director
 Division of Water Quality



J. Harris

May 16, 2008

MEMORANDUM

To: Jennifer Harris, North Carolina Turnpike Authority
 From: David Wainwright, NC Division of Water Quality, Transportation Permitting Unit
 Through: Brian Wrenn, Supervisor, NC Division of Water Quality, Transportation Permitting Unit
 Subject: Comments on revised Purpose and Need and Alternatives Screening Report for the proposed Mid-Currituck Bridge, TIP R-2576.

The NCTA has recently updated or released to team members several documents regarding the proposed Mid-Currituck Bridge project. These documents include a revised "Statement of Purpose and Need," an "Alternative Screening Report," and an updated "Section 6002 Coordination Plan for the Mid-Currituck Bridge Project STIP Project R-2576." These documents have led to discussions at recent TEAC meetings between the NCTA and the resource agencies, as well as written comments submitted to the NCTA. While the DWQ submitted comments on the revised Statement of Purpose and Need and the Alternative Screening Report (dated April 29, 2008), we would like to take this opportunity to further comment on the aforementioned documents as well as discussions from the May 6, 2008 TEAC meeting. The DWQ submits the following comments and concerns:

Alternative Screening Report

- Table 2 on page 29 indicates that impacts to wetlands (filled/bridged) are the average of alternatives C1 to C6. The DWQ would like to see impacts for each of the alternatives broken out by the respective alternative. Averaging impacts for six alternatives (or any number of alternatives) does not allow for a true comparison of impacts associated with each alternative. This also applies to high quality resources filled/bridged and displacements, which are also averaged. The DWQ would like to request that these impacts be broken down for each alternative and included in the Environmental Impact Statement (EIS). Ideally, these impacts should be further broken out and stated for both the mainland and the Outer Banks for each alternative.
- The NCTA indicated during the May 6, 2008 TEAC meeting that a memorandum from U.S. Department of Transportation, Federal Highway Administration (FHWA), to the Colorado Department of Transportation (dated October 15, 2004) was used, in part, as guidance for development of the Alternatives Screening Report. A copy of this memorandum was e-mailed to members subsequent to the meeting. The guidance provides a discussion of when an alternative can be eliminated from further study based on economic infeasibility. The first sentence of Section 3 of the memorandum ("When Alternatives Can be Screened out as Economically Infeasible"), states that "If the purpose and need statement is not so narrow as to yield only toll road alternatives, CDOT (Colorado Department of Transportation) might in some circumstances be able to eliminate alternatives early on based on the economic feasibility of the alternatives."

Transportation Permitting Unit
 1650 State Street, Raleigh, North Carolina 27609-1650
 2321 Capital Center, Suite 300, Raleigh, North Carolina 27604
 Phone: 919-733-1786 / FAX: 919-733-6883 / Internet: tlh@tlh.com; <http://tlh.com>
 An Equal Opportunity/Affirmative Action Employer - 50% Recycled/10% Post Consumer Paper



The reference to the connecting link need does so narrowly define, in this case, the purpose and need that only a toll alternative can be considered. Also, the NCTA has eliminated all upgrade existing alternatives for this project, based primarily on cost. This appears to be contradictory to the guidance used to develop the screening process.

Revised Purpose and Need Statement

- As stated in our letter dated April 29, 2008, the DQW questions why the NCTA has waited so long to include the "Absence of a connecting link between the Currituck County Mainland and the Currituck County Outer Banks results in inefficient, out-of-direction travel, and is inconsistent with the State's officially adopted transportation system plans" purpose in the statement. Again, the information contained in support of this statement is dated between 1989 and 2006. The initial Statement of Purpose and Need distributed to team members is dated May 2007. Based on the NCTA's statement regarding the importance of this need, it is unclear why it wasn't included in the initial statement.
- The team members had little indication that this need was going to be included in a revised statement. There was no significant discussion among NCTA and agencies about the revised statement until it was released. While the NCTA did not see this as a significant change to the Purpose and Need Statement, several of the agencies expressed they felt that this change was significant, including the DWQ. The DWQ would prefer that significant changes to purpose and need be provided to the agencies prior to the NCTA meetings with sufficient time to review. This will allow the agencies to consider the proposed changes and provide comment in a timely manner during the meeting.
- Purpose and need statements should be limited to ideas that can be measured or proven, mainly to show that a goal can be met. For example, improving hurricane evacuation time. Current evacuation times can be measured. Evacuation times have been modeled, and can be measured in the future to show that evacuation times have improved. Likewise, travel time and level of service (LOS) can be modeled or measured to show improvement. The DWQ recommends that the NCTA remove the final need, "The absence of a connecting link between the Currituck County mainland and the Currituck County Outer Banks results in inefficient, out-of-direction travel, and is inconsistent with the State's officially adopted transportation system plans." Although this may be a secondary goal, it should not be a need upon which alternatives are measured for approval or elimination from further study
- Again, referring back to the FHWA memorandum mentioned previously, which states that "...merely a preference for constructing toll roads instead of public roads will not be adequate to meet NEPA's standards. If available, CDOT should be sure to explain any other reasons, in addition to economic feasibility, that might also justify eliminating an alternative." The NCTA stated during the May 6, 2008 TEAC meeting that if the toll road is not built, they do not have a project. While this is true, it appears to show preference for a toll road. This goes directly against the guidance used as well as NEPA.

Section 6002 Coordination Plan for Mid-Currituck Bridge Project STIP Project R-2576

- Team members were handed a revised copy of the Section 6002 Coordination Plan for the Mid-Currituck Bridge (dated May 5, 2008) at the May 6, 2008 TEAC meeting. The DWQ was under

the impression that the coordination plan had been finalized in a coordination plan dated September 13, 2007. According to the TEAC website, this was the final coordination plan for this project. While most of the updates in the revised plan do appear to be minor edits, Section 6.3 has been updated. It appears the intent of this update is to better clarify the requirements of raising a general project issue. Again, the DWQ would prefer that changes be provided prior to the meetings to allow agencies to fully consider and comment during NCTA meetings.

15A.NCAC.02H.0500. Water Quality Certification

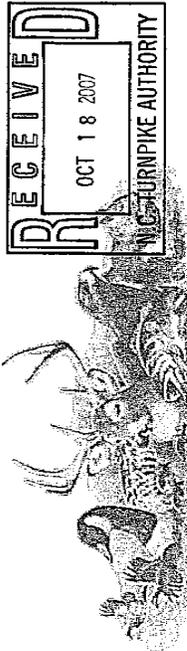
- The NCTA is once again respectfully reminded that, per 15A NCAC 02H.0500, applicants seeking a 401 Water Quality Certification must show that impacts to the state's natural resources have been minimized to the best extent practicable. It should be noted that 15A NCAC 02H.0500 requires that supporting information must be provided such that the DWQ can make an informed decision. The DWQ expects applicants to avoid and minimize impacts to all natural resources *throughout* project development. For applicants with large projects, such as the NCDOT and the NCTA, where an iterative decision and review process is in place to guide the development of projects, the DWQ looks to see that avoidance and minimization begins with alternative selection and continues through the selection of the LEDPA. Once a LEDPA has been selected the applicant must continue to avoid and minimize impacts within the chosen corridor.

Additionally, the DWQ would like to once again remind the NCTA, as stated in our October 12, 2007 letter, that "...the Director [of the Department] shall determine if the proposed activity has the potential to remove or degrade those significant existing uses which are present in the wetland or surface water...." The area of the Pamlico Sound where the bridge is proposed is classified as SC (saltwaters protected for secondary recreation, fishing, aquatic life including propagation and survival, and wildlife). Thus far, it is unclear what effect the proposed bridge will have on these existing uses, especially fishing and wildlife. The Pamlico Sound is an essential fish habitat area. Studies have not been undertaken by the NCTA to determine what effects the bridge will have on these resources yet, but plans to address these in the environmental document. However, if these impacts are shown to be significant, and all non-bridge alternatives have been dropped during the NEPA review, then the DWQ would require in the 401 Water Quality Certification application that a non-bridge alternative be evaluated to ensure that proper avoidance and minimization of impacts has occurred.

In closing, the DWQ will continue to participate and provide input. The agencies, including the DWQ have tried to encourage the NCTA to include an upgrade existing alternative for detailed study in the environmental documentation, and have supported this with numerous letters. The DWQ has tried to explain, in writing, what is needed for an efficient review and approval of an application for a 401 Water Quality Certification as it relates to the coordination plan. Administrative Code 15A NCAC 02H.0500 places the burden of showing avoidance and minimization of impacts on the applicant. The DWQ would have preferred the NCTA to provide recommended changes to documents, such as the Statement of Purpose and Need and the Section 6002 Coordination Plan, to the agencies prior to the meeting with sufficient time for review. Such actions would have led to much more productive meeting discussions.

If you have any questions or require additional information, please contact David Wainwright at (919) 715-3415.

cc: Travis Wilson, NC Wildlife Resources Commission
Cathy Brittingham, Division of Coastal Management
Chris Miltischer, Environmental Protection Agency
Kathy Mathews, Environmental Protection Agency
Gary Jordan, US Fish and Wildlife Service
Sarah Winslow, Division of Marine Fisheries
Bill Biddlecome, US Army Corps of Engineers
Scott McClendon, US Army Corps of Engineers
Paul Rawls, Division of Water Quality
Amy Simes, DENR
File Copy



North Carolina Wildlife Resources Commission

MEMORANDUM

TO: Jennifer Harris
North Carolina Turnpike Authority

FROM: David Cox, Technical Guidance Supervisor
Habitat Conservation Program

DATE: October 15, 2007

SUBJECT: Mid-Currituck Bridge Study, Alternatives for Detailed Study. Currituck and Dare counties, North Carolina. TIP No. R-2576.

On September 19th, the NC Turnpike Authority (NCTA) proposed to carry two alternatives forward for detailed study in the Draft Environmental Impact Statement (DEIS). NCTA proposed to drop all non-bridge alternatives therefore selecting to study only two bridge corridor alternatives. NCWRC cannot agree with the elimination of all non-bridge alternatives at this time, and therefore requests alternative ER2 be carried forward for detailed study based upon the following:

1. Total wetland impacts are less with the non-bridge alternative.
2. Human impacts are preliminary and are based on a standard corridor width. Forty-seven potential displacements compared to a low of eleven for the least human impacts for a bridge alternative is not substantial enough to drop an alternative before it is studied in detail.
3. All the alternatives meet the purpose and need of the project, therefore it is not prudent to drop an alternative prior to the DEIS based on which alternative best meets purpose and need. The intent of the DEIS is to study in detail the potential impacts and gather public comment on a full range of alternatives.
4. Most notably WRC requests a non-bridge alternative be studied to have a full range of alternatives as a comparison for the secondary and cumulative impacts on the fish and wildlife resources with in the project area. These include:
 - Increased development on mainland Currituck leading to a shift from residential to commercial and a potential increase in the pace of development.

Mailing Address: Division of Inland Fisheries • 1721 Mail Service Center • Raleigh, NC. 27699-1721
Telephone: (919) 707-0220 • **Fax:** (919) 707-0028

- Impacts to essential fish habitat
- Impacts to submerged aquatic vegetation (SAV) due to storm water runoff and shading. Bridging alternatives will impact SAV beds in Currituck Sound. SAV's are an important habitat for migratory waterfowl and aquatic species. Mitigation for SAV's is difficult, usually unsuccessful, and can result in a net loss of this habitat type.
- Impacts to migratory waterfowl utilizing the Currituck sound. Currituck sound is a focus area described in the North American Waterfowl Management Plan, bridge alternatives have the highest potential to effect waterfowl usage and effect shoreline development patterns along Currituck sound.
- Bridging alternatives will bisect Maple Swamp, a Significant Natural Area (SNA) identified by the NC Natural Heritage Program as being of state significance. Therefore directly impacting an SNA and further fragmenting habitat

In conclusion, NCWRC feels it is necessary to study a non-bridge alternative in the DEIS in order to fully assess the direct and indirect impacts of this project upon the natural environment and to have a full range of feasible and comparable alternatives for the resource agencies and public to review. If you have questions or need further information regarding our comments, please contact Travis Wilson, Eastern NCDOT Coordinator, at (919) 528-9886.

Cc:

- George Hoops, FHWA
- Bill Biddlecome, USACE
- Chris Mihlischer, USEPA
- Gary Jordan, USFWS
- Cathy Brittingham, DCM
- David Wainwright, DWQ
- Ron Sechler, NMFS



North Carolina Wildlife Resources Commission

MEMORANDUM

TO: Jennifer Harris
North Carolina Turnpike Authority

FROM: David Cox, Technical Guidance Supervisor
Habitat Conservation Program

DATE: May 13, 2008

SUBJECT: Mid-Currituck Bridge Study, Purpose and Need Statement. Currituck and Dare counties, North Carolina. TIP No. R-2576.

NCWRC biologists have reviewed the revised Mid-Currituck Bridge Study Statement of Purpose and Need dated April 2008 provided by the NC Turnpike Authority (NCTA). Amendments to the project need include: "The need to improve system efficiency by providing an additional link between the Currituck County mainland and its Outer Banks." This addition now defines the project need so narrowly it will preclude all upgrade existing alternatives prior to conducting any detailed study, therefore dictating a new location alternative. By excluding the study of alternatives other than those on new location, NCTA would be accepting those impacts as reasonable without a detailed comparison on a full range of alternatives. At this time, we recommend revising the Purpose and Need Statement to allow the previous full range of alternatives.

Furthermore, we have reviewed the alternatives screening report dated April 2008. For the purpose of providing comments toward alternatives to be studied in detail our October 15, 2007 comments on this subject remain valid. NCWRC continues to feel it is necessary to study a non-bridge alternative in the DEIS in order to fully assess the direct and indirect impacts of this project upon the natural environment and to have a full range of feasible and comparable alternatives for public review.

If you have questions or need further information regarding our comments, please contact Travis Wilson, Eastern NCDOT Coordinator, at (919) 528-9886.

- CC:** George Hoops, FHWA
Bill Biddlecome, USACE
Chris Millsosher, USEPA
Gary Jordan, USFWS
Cathy Brittingham, DCM
David Wainwright, DWQ
Ron Seehler, NMFS

Mailing Address: Division of Inland Fisheries • 1721 Mail Service Center • Raleigh, NC 27699-1721
Telephone: (919) 707-0220 • **Fax:** (919) 707-0028



**STATE OF NORTH CAROLINA
TURNPIKE AUTHORITY**

MICHAEL F. EASLEY 1578 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1578

DAVID W. JOYNER
EXECUTIVE DIRECTOR

GOVERNOR

July 2, 2008

Mr. Bill Biddlecome
US Army Corps of Engineers
Washington Regulatory Field Office
Post Office Box 1000
Washington, North Carolina 27889-1000

**Subject: Mid-Currituck Bridge Project (STIP R-2576)
Conclusion of Discussions related to the Statement of Purpose
and Need and Alternatives Screening Report**

Dear Mr. Biddlecome,

The North Carolina Turnpike Authority (NCTA) appreciates your participation in Turnpike Environmental Agency Coordination (TEAC) meetings for the Mid-Currituck Bridge project over the past year and for your comments on the April 2008 Statement of Purpose and Need and Alternatives Screening Report. In preparation for our TEAC meeting on July 8th, I am writing to let you know about changes that we will be making in the Purpose and Need Statement and the Alternatives Screening Report.

Regarding the Statement of Purpose and Need, we have heard and appreciate your concerns regarding the addition of the "fourth bullet" to the Statement of Purpose and Need, which stated that one of those goals of the project is "to improve system efficiency and fulfill State transportation planning goals by completing an additional link between the Currituck County mainland and its Outer Banks." We continue to believe that it is important to acknowledge, in the purpose and need statement, that the North Carolina legislature and the North Carolina Board of Transportation have each identified a goal of completing a new transportation link connecting the Currituck County mainland to the Currituck County Outer Banks. Therefore, we will continue to include a discussion of State transportation plans and legislation in the purpose and need statement. As part of that discussion, we will continue to address the issues of system efficiency and system linkage, as they relate to the State's transportation plans for this area. At the same time, we also have concluded that the underlying objectives of this proposed new link are adequately reflected in the three other elements of the purpose and need. Therefore, we will remove the fourth bullet as a separate element, so that the purposes for the project will be:

- To substantially improve traffic flow on the project area's thoroughfares (NC 12 and US 158);
- To substantially reduce travel time for persons traveling between the Currituck County mainland and the Currituck County Outer Banks; and

NORTH CAROLINA TURNPIKE AUTHORITY
TELEPHONE: 919-571-3000 FAX: 919-571-3015

- To substantially reduce hurricane clearance time for residents and visitors who use NC 168 and US 158 during a coastal evacuation.

With respect to the selection of detailed study alternatives, the NCTA and FHWA recommended carrying forward two build alternatives, MCB3 and MCB4. Each of these alternatives includes construction of a Mid-Currituck Bridge, along with other limited improvements on US 158 to facilitate hurricane evacuation and on NC 12 to ensure efficient operation of the bridge. We received written comments from nearly all of the cooperating and participating agencies, including the US Army Corps of Engineers, US Environmental Protection Agency, North Carolina Department of Environment and Natural Resources (NCDENR)-Division of Water Quality, NCDENR-Division of Coastal Management, NCDENR-Division of Marine Fisheries and North Carolina Wildlife Resources Commission. In these letters, most agencies requested that ER2 and, in some cases, MCB2, also be studied in detail. ER2 includes widening NC 12 to three lanes in Dare County and four lanes in Currituck County, along with widening US 158 to eight lanes in Dare County and improvements for hurricane evacuation in Currituck County, without a Mid-Currituck Bridge. MCB2 includes these improvements in addition to a Mid-Currituck Bridge.

In the Alternatives Screening Report, both ER2 and MCB2 were eliminated, in part, because they were not considered financially feasible. As explained in the report, traditional (non-toll) transportation revenues have been devoted to other needs across the State and are not available to pay for hundreds of millions of dollars of improvements to NC 12 and US 158; in addition, a private investor would not be able to finance these road-improvement costs based on toll revenues from a new Mid-Currituck Bridge. In their comments, the US Army Corps of Engineers and other agencies questioned these conclusions, based on the information in the screening report. We understand and appreciate those concerns. We will be developing more in-depth information to assist all agencies in understanding the importance of economic feasibility and in making judgments about which alternatives are economically feasible and which are not. In our view, economic feasibility has been, and remains, a crucial factor that must be considered in determining the reasonableness and practicability of alternatives.

Despite our continuing concerns about the economic feasibility of any alternatives other than MCB3 and MCB 4, NCTA and Federal Highway Administration (FHWA) have decided to complete the necessary preliminary engineering and detailed environmental studies to evaluate ER2 and MCB2 in the Draft Environmental Impact Statement (EIS) as detailed study alternatives. This decision does not indicate that NCTA or FHWA consider these alternatives to be "reasonable" for purposes of NEPA or "practicable" for purposes of Section 404 of the Clean Water Act. The possibility still exists that one or more of these alternatives will ultimately be found to be unreasonable and/or impracticable. However, we are willing to develop more detailed information about both ER2 and MCB2, as requested by the agencies. This work will include development of the appropriate traffic, engineering, and environmental analyses, as well as an assessment of financial feasibility.

The US Army Corps of Engineers also suggested eliminating MCB3 as a stand-alone alternative, given that MCB3 and MCB4 alternatives are almost identical – except that MCB4 includes an additional \$7 million improvement for hurricane evacuation on US 158 in Dare County between the Wright Memorial Bridge and NC 12. NCTA and FHWA

have considered this recommendation and agree with it. Therefore, NCTA and FHWA intend to eliminate MCB3 from further consideration as a stand-alone alternative and will continue to evaluate MCB4 as a detailed study alternative in the Draft EIS.

Aside from the issues with regard to ER2 and MCB2, all agencies agreed with (or did not comment on) the other recommendations made in the Alternatives Screening Report, including the proposal to eliminate the following alternatives from further consideration: the Shift Rental Times Alternative; the Transportation Systems Management Alternative; the Bus Transit Alternative; Ferry Alternatives; the ER1 Existing Road Alternative; and MCB1 Mid-Currituck Bridge Alternative. A brief discussion of these alternatives will be included in the Draft EIS, but they will not be evaluated in detail. Also, no additional alternatives were suggested for consideration. Therefore, the detailed study alternatives in the Draft EIS will include ER2, MCB2, and MCB4, along with the No Build Alternative.

For the MCB alternatives, the Alternatives Screening Report included a separate analysis of potential bridge corridors. The report recommended dropping corridors C3, C4, C5, and C6, primarily based on their environmental impacts, while carrying forward two bridge-location corridors, C1 and C2. We received no objections to this recommendation. Therefore, the detailed study alternatives in the Draft EIS will include bridge corridors C1 and C2.

We are in the process of developing the scope of work and schedule for the studies of ER2 and MCB2. At the July 8, 2008 TEAC meeting, we plan to discuss our scope and study methodologies for completing detailed studies on the ER2 and MCB2 alternatives and get agency feedback on resource issues in the area. We anticipate that the additional studies will take approximately 6 months and delay the distribution of the Draft EIS until January 2009 (it was originally scheduled to be complete in July 2008).

We would also like to note that FHWA published a notice rescinding the 1998 Draft EIS in the Federal Register on June 3, 2008. Subsequently, a notice of intent to prepare a new Draft EIS was issued on June 16, 2008. Agency comments related to the statement of purpose and need and range of alternatives are reflected in the notice of intent. Copies of these notices are attached for your reference.

The May 5, 2008 Section 6002 Coordination Plan will be updated to reflect the revisions to the schedule, as well as the information with regards to the notice of intent. No other changes are proposed to the Coordination Plan at this time. NCTA will submit the Coordination Plan to FHWA for approval, along with a Notice of Project Initiation.

NCTA is proceeding with the predevelopment agreement (PDA) process to get a private contractor on board this year. The PDA is one method for establishing a public-private partnership (PPP). We will include appropriate conditions in the PDA to acknowledge that the National Environmental Policy Act (NEPA) process is ongoing and that no commitment is being made to a specific alternative.

A summary of all agency comments received on the Statement of Purpose and Need and Alternatives Screening Report and a summary of public comments received on these documents, as well as additional public comments received following the close of the comment period after the February 2008 Citizens Informational Workshops, are posted to the TEAC website (www.nctumpike.org/teac) for your information.

We look forward to seeing you at the July 8, 2008 TEAC meeting at 10:00 am. So far, the following have indicated they will be calling into the meeting: Sara Winslow (NCDENR-Division of Marine Fisheries), Ron Sechler (National Marine Fisheries Service), and Morgan Jethro (Albemarle Rural Planning Organization).

If anyone has any questions or comments in the meantime, please feel free to contact me - (919) 571-3004 or jennifer.harris@ncturnpike.org.

Sincerely,

Jennifer Harris

Jennifer Harris, P.E.
Staff Engineer

Attachment:

cc: David Joyner, NCTA Executive Director
John F. Sullivan, III, P.E., FHWA Division Administrator
Steven D. DeWitt, P.E., NCTA Chief Administrator
George Hoops, P.E., FHWA Major Projects Engineer
Missy Dickens, P.E., NCDOT Staff Engineer

Recipients:

Mr. Bill Biddlecome
US Army Corps of Engineers
Washington Regulatory Field Office
Post Office Box 1000
Washington, North Carolina 27889-1000

Ms. Renee Gledhill-Early
State Historic Preservation Office
4617 Mail Service Center
Raleigh, North Carolina 27699-4617

Mr. Chris Militscher
US Environmental Protection Agency
c/o FHWA, Raleigh Office
310 New Bern Avenue, Room 206
Raleigh, North Carolina 27601

Mr. Bill Brazier
US Coast Guard
431 Crawford Street
Portsmouth, Virginia 23704-5004

Mr. Gary Jordan
US Fish and Wildlife Service
Fish and Wildlife Enhancement
Post Office Box 33376
Raleigh, North Carolina 27636-3726

Mr. Ron Sechler
National Marine Fisheries Service
101 Pivers Island Road
Beaufort, North Carolina 28516

Mr. David Wainwright
NCDENR-Division of Water Quality
1650 Mail Service Center
Raleigh, North Carolina 27699-1650

Mr. Travis Wilson
Eastern Region Highway Project
Coordinator
NC Wildlife Resources Commission
1142 I-85 Service Road
Creedmoor, North Carolina 27522

Ms. Cathy Brittingham
NCDENR-Division of Coastal
Management
1638 Mail Service Center
Raleigh, North Carolina 27699-1638

Ms. Sara Winslow
NCDENR-Division of Marine Fisheries
Post Office Box 769
Morehead City, North Carolina 28557

and approach roadway connecting U.S. 158 on the mainland to NC 12 on the Outer Banks, connecting Currituck Sound. On July 6, 1999, FHWA issued a notice of intent to prepare an environmental impact statement (EIS) for a project in Currituck Sound Bridge project in Currituck and Dare Counties, North Carolina. The FHWA, in cooperation with the NCDOT, issued a Draft Environmental Impact Statement (DEIS) on the project in January 1996. FHWA and NCDOT held a public hearing and provided a comment period on the DEIS.

Since the 1998 DEIS, there have been several changes in the project including the expansion of the project study area, modification of the purpose and need statement, and analysis of additional alternatives. During this time period, state legislation and plans, including the North Carolina Intrastate System and the North Carolina Strategic Highway Corridor System, have also been developed or amended to incorporate the proposed project. In 2006, the Carolina Turnpike Authority (NCTA) for consideration as a candidate toll project, and the environmental studies for the project are now being completed by NCTA, in coordination with FHWA and NCDOT.

In light of these changes the FHWA is now rescinding the notice of intent and 1998 DEIS. The FHWA, NCDOT, and NCTA plan to prepare a new Draft EIS for the proposed project. A notice of intent to prepare the EIS will be issued subsequent to this rescinding notice. The new Draft EIS will include a toll alternative among the full range of alternatives that will be analyzed. Comments or questions about the decision to prepare Final EIS should be directed to FHWA at the address provided above. To ensure that the full range of issues related to this proposed action are addressed and all significant issues identified, comments and suggestions are invited from all interested parties. Comments or questions concerning this proposed action and the EIS should be directed to the FHWA at the address provided above.

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations regarding intergovernmental consultation of Federal programs and activities apply to this program.)

FOR FURTHER INFORMATION CONTACT: Dr. Mary D. Gunnels, Director, Medical Programs, (202) 366-4001, mgunnels@dot.gov; FMCSA, Room 404-224, Department of Transportation, Washington, DC 20590-0001. Office hours are from 8:30 a.m. to 5 p.m. Monday through Friday, except Federal holidays.

SUPPLEMENTARY INFORMATION:

Electronic Access

You may see all the comments online through the Federal Document Management System (FDMS) at: <http://www.regulations.gov>.

Docket: For access to the docket to read background documents or comments, go to <http://www.regulations.gov> and/or Room W12-140 on the ground level of the West Building, 1500 New Jersey Avenue, SE, Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Privacy Act: Anyone may search the electronic form of all comments received into any of DOT's dockets by the name of the individual submitting the comment (or of the person signing the comment, if submitted on behalf of an association, business, labor union, or other entity). You may review DOT's complete Privacy Act Statement in the

Diabetes Mellitus and Driving Experience of the Applicants

The Agency established the current standard for diabetes in 1970 because several risk studies indicated that diabetic drivers had a higher rate of crash involvement than the general population. The diabetes rule provides that "A person is physically qualified to drive a commercial motor vehicle if that person has no established medical condition or clinical diagnosis of diabetes mellitus currently requiring insulin for control" (49 CFR 391.41(b)(3)).

FMCSA established its diabetes exemption program, based on the Agency's July 2000 study entitled, "A Report to Congress on the Feasibility of a Program to Qualify Individuals with Insulin-Treated Diabetes Mellitus to Operate in Interstate Commerce as Drivers of Commercial Motor Vehicles." (The 21st Century Transportation Act for the safe and efficient use of the road to allow safe drivers with ITDM to operate CMVs is feasible. The 2003 Notice (68 FR 52442) in conjunction with the November 8, 2005 (70 FR 6777) Federal Register Notice provides the current protocol for allowing such drivers to operate CMVs in interstate commerce.

These twenty-nine applicants have had ITDM over a range of 1 to 35 years. These applicants present no hypoglycemic reaction that resulted in loss of consciousness or seizure, that required the assistance of another person, or resulted in impaired cognitive function without warning symptoms in the past 5 years (with one year of stability following any such episode). In each case, an endocrinologist has verified that the driver has demonstrated willingness to properly monitor and manage their diabetes, received education related to

Federal Officer of the Advisory Council, has ordered publication of this notice on Financial Literacy will convene its third meeting on Wednesday, June 18, 2008, in the Capital Room, Main Department Building, 1500 Pennsylvania Avenue, NW, Washington, DC, beginning at 10 a.m. Eastern Time. The meeting will be open to the public.

Because the meeting will be held in a secured facility, members of the public who plan to attend the meeting must contact the Office of Financial Education at 202-622-1783 or FinancialLiteracyCouncil@do.treas.gov by 5 p.m. Eastern Time on Friday, June 13, 2008, to provide the information that will be required to facilitate entry into the Main Department Building.

During this meeting, the Council Committees, Outreach, Research, Underserved, Workplace and Youth), which are subgroups of the President's Council, will be reporting back to the Council on their progress.

Dated: May 28, 2008.
Executive Secretary,
Financial Literacy Council.
(FR Doc. E8-12372 Filed 6-2-08; 8:45 am) BILLING CODE 4810-52-P

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Environmental Impact Statement: Currituck and Dare Counties, NC

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Rescinding of Notice of Intent and Draft Environmental Impact Statement (DEIS).

SUMMARY: The FHWA is issuing this notice to advise the public that we are rescinding the notice of intent and the public notice to prepare an environmental impact statement (EIS) for a proposed highway project in Currituck and Dare Counties, North Carolina.

FOR FURTHER INFORMATION CONTACT: Mr. George Hoops, P.E., Major Projects Engineer, Federal Highway Administration, 310 Bern Avenue, Suite 410, Raleigh, North Carolina 27601-1418. Telephone: (919) 747-7022.

SUPPLEMENTARY INFORMATION: The FHWA, in cooperation with the North Carolina Department of Transportation (NCDOT) and the North Carolina Turnpike Authority (NCTA), is rescinding the notice of intent to prepare an EIS for a proposed bridge

Room of the Main Department Building, 500 Pennsylvania Avenue, NW, Washington, DC, beginning at 10 a.m. Eastern Time. The meeting will be open to the public. Members of the public who plan to attend the meeting must contact the Office of Financial Education at 202-622-1783 or FinancialLiteracyCouncil@do.treas.gov by 5 p.m. Eastern Time on Friday, June 13, 2008, to provide the information that is required to facilitate entry into the Main Department Building.

ADDRESSES: The public is invited to submit written statements with the President's Advisory Council on Financial Literacy by any one of the following methods:

Electronic Statements

E-mail: FinancialLiteracyCouncil@do.treas.gov; or

Paper Statements

Send paper statements in triplicate to President's Advisory Council on Financial Literacy, Office of Financial Education, Room 1332, Department of the Treasury, 1500 Pennsylvania Avenue, NW, Washington, DC 20220. In general, the Department will post all statements on its website (<http://www.finance.doe.gov/offices/institution/financialliteracy/inbox/index.shtml>) without charge, including any business or personal information provided such as names, addresses, e-mail addresses, or telephone numbers. The Department will make such statements available for public inspection and copying in the Department's library, room 1428, Main Department Building, 1500 Pennsylvania Avenue, NW, Washington, DC 20220, on official business days between the hours of 10 a.m. and 5 p.m. You can make an appointment to inspect statements by telephoning (202) 622-0990. All statements, including attachments and other supporting materials, received as part of the public record and subject to public disclosure. You should submit only information that you wish to make available publicly.

FOR FURTHER INFORMATION CONTACT: Edwin Bodensiek, Director of Outreach, Department of the Treasury, Main Department Building, 1500 Pennsylvania Avenue, NW, Washington, DC 20220, at ed.bodensiek@do.treas.gov.

SUPPLEMENTARY INFORMATION: In accordance with section 10(a) of the Federal Advisory Committee Act, 5 U.S.C. App. 2 and the regulations thereunder, Dubis Correal, Designated

for the proper performance of our functions. Estimate the accuracy of our estimate of the burden of the proposed collection, including the validity of the methodology and assumptions used.

- Enhance the quality, utility, and clarity of the information to be collected.
- Minimize the reporting burden on those who are to respond, including the use of automated collection techniques or other forms of technology.

Abstract of proposed collection: The export and brokering of defense articles, defense services and related technical data are licensed by the Directorate of Defense Trade Controls in accordance with the International Traffic in Arms Regulations (22 CFR parts 120-130) and section 38 of the Arms Export Control Act. Those of the public who manufacture or export defense articles, defense services, and related technical data, or the brokering thereof, must register with the Department of State. Persons desiring to engage in export, temporary import, and brokering activities must submit an application or certification to the Department to obtain a decision, whether it is in the interests of U.S. foreign policy and national security to approve the transaction.

Also, registered brokers must submit annual reports regarding all brokering activity that was transacted, and registered manufacturers and exporter must maintain records of defense trade activities for five years.

Methodology: These forms/information collections may be sent to the Directorate of Defense Trade Controls via the following methods: Electronically, mail, personal delivery, and/or fax.

Dated: May 5, 2008.

Frank J. Ruggiero,
Deputy Assistant Secretary for Defense Trade and Regional Security, Bureau of Political-Military Affairs, U.S. Department of State.
(FR Doc. E8-12403 Filed 6-2-08; 8:45 am) BILLING CODE 7110-52-P

DEPARTMENT OF THE TREASURY

Open Meeting of the President's Advisory Council on Financial Literacy

AGENCY: Office of Financial Education, Treasury.

ACTION: Notice of meeting.

SUMMARY: The President's Advisory Council on Financial Literacy (Council) will convene its third meeting on Wednesday, June 18, 2008, in the Cash

Docket Number: DOT–OST–2008–0123.
Date Filed: March 28, 2008.
Parties: Members of the International Air Transport Association.
Subject: Mail Vote 560—Flex Fares Package; TC23/123 Europe-Japan, Korea Special Passengers Amending Resolutions Between Europe and Korea (Rep. Of, Korea (Dem. Rep. Of, (Memo 0169). Intended effective date: 1 June 2008.

Notice of Approval of the Record of Decision for Proposed Development at the Flying Cloud Airport, Eden Prairie, MN
AGENCY: Federal Aviation Administration (FAA), DOT.
ACTION: Notice of approval of the Record of Decision (ROD).
SUMMARY: The FAA is announcing approval of the Record of Decision on the Final Environmental Impact Statement and Section 303c Evaluation for proposed development at the Flying Cloud Airport (FCM), Eden Prairie, Minnesota.

FOR FURTHER INFORMATION CONTACT: Mr. Glen Orant, FAA, Airports District Office, 6020 28th Avenue South, Suite 102, Minneapolis, MN 55450, telephone (612) 713-4354; fax: (612) 713-4364.
SUPPLEMENTARY INFORMATION: The ROD approves the proposed development at Flying Cloud Airport including: extension of the main runway to 5,000 feet and the other parallel runway to 3,900 feet; the construction of a new building area; land acquisition; service roads around the east and west ends of the parallel runways; hangar removal; Federal actions regarding installation of navigational aids, airspace use, and approach and departure procedures associated with the proposed development; and noise mitigation requirements included in the Final Agreement and MOU between the Metropolitan Airports Commission and the City of Eden Prairie.
 The ROD indicates the project is consistent with existing environmental policies and objectives as set forth in the National Environmental Policy Act (NEPA) of 1969, as amended, and will not significantly affect the quality of the environment. In reaching this decision, the FAA has given careful consideration to: (a) The role of FCM in the national air transportation system, (b) aviation safety, (c) preferences of the airport owner, (d) anticipated environmental impact, and (e) the decisions of the Minnesota State Legislature.
 Discussions of these factors are documented in the Draft Environmental Impact Statement, the Final Environmental Impact Statement (FEIS) and Section 303c Evaluation, for the project. The notice of availability of the FEIS appeared in the Federal Register on June 18, 2004 (Volume 69, Number 117, Pages 34161–34162), and the comment period ran through September

17, 2004. The FAA's determinations on the project are outlined in the ROD, which was approved on May 15, 2008. Issued in Minneapolis, Minnesota, on May 28, 2008.
Robert A. Huber,
Manager, Minnesota Airports District Office, FAA, Great Lakes Region.
FAA Doc. EB-13521 Filed 6-13-08; 8:45 am
BILLING CODE 4910-14-P

DEPARTMENT OF TRANSPORTATION
[4910-22]
Federal Highway Administration
Environmental Impact Statement: Carrutuck and Dare Counties, North Carolina

AGENCY: Federal Highway Administration (FHWA), DOT.
ACTION: Notice of Intent (NOI).
SUMMARY: The FHWA is issuing this notice to advise the public that an Environmental Impact Statement (EIS) will be prepared for a proposed project in Carrutuck and Dare Counties, North Carolina.

FOR FURTHER INFORMATION CONTACT: Mr. George Ho, P.E., Major Projects Engineer, Federal Highway Administration, 310 New Bern Avenue, Suite 4110, Raleigh, North Carolina 27601-1418, Telephone: (919) 747-7022.

SUPPLEMENTARY INFORMATION: Pursuant to Title 23, Code of Federal Regulations, Part 771, Environmental Impact and Related Procedures, the FHWA, in cooperation with the North Carolina Department of Transportation (NCDOT) and the North Carolina Turnpike Authority (NCTA) will prepare an EIS address (NCDOT) will prepare improvements in the Carrutuck Sound area. The proposed study area includes (including the Wright Memorial Bridge) and NC 12 north of its intersection with U.S. 158 to its terminus in Carrutuck County. The proposed action is included in NCDOT's 2007-2013 State Transportation Improvement Program (STIP), as well as NCDOT's Draft 2009-2015 STIP, and the Thoroughfare Plan for Carrutuck County.

On July 6, 1995, FHWA published a notice of intent to prepare an environmental impact statement (EIS) for a Mid-Carrutuck Sound Bridge project in Carrutuck County, North Carolina. The Mid-Carrutuck Sound Bridge project involved a proposal to build a bridge and approach roadways connecting U.S. 158 on the mainland to

NC 12 on the Outer Banks. The FHWA, in cooperation with the North Carolina Department of Transportation (NCDOT), issued a Draft Environmental Impact Statement (DEIS) on the project in January 1998. FHWA and NCDOT held public hearings and provided a comment period on the DEIS. Since the 1998 DEIS, there have been several changes in the project. These changes led to the decision to rescind the 1995 notice of intent and the 1998 DEIS [Federal Register Vol. 73, No. 107, page 31733] and to issue this notice of intent. Before releasing this notice of intent, FHWA and NCTA began coordinating with Federal and state environmental regulatory and resource agencies and the public in the development of the purpose and need for the proposed action and a conceptual design of the alternatives in the project area. The draft EIS includes the following elements: (i) Improving traffic flow on the project area's thoroughfares (NC 12 and U.S. 158), (ii) reducing travel time for persons traveling between Carrutuck County mainland and Carrutuck County Outer Banks, and (iii) reducing hurricane clearance times for residents and visitors who use NC 168 and U.S. 158 during a coastal evacuation.

The EIS for the proposed action will consider alternatives that include improving existing roadways (NC 12 and U.S. 158), as well as alternatives that involve building a new Mid-Carrutuck Sound bridge in combination with improving existing roads. The analysis will also include a range of non-highway improvement alternatives, including no-build, ferry service, expanding transit services, transportation demand management/shifting travel unit start times, and (TSM) alternatives. In addition, NCTA is considering a range of alternatives for the proposed bridge crossing, including (1) Two, three, or four-lane bridges; (2) various interchange configurations for the bridge's connections to the existing roadway network; and (3) a range of potential corridors for the bridge. As part of the EIS, NCTA will also study the feasibility and impacts of developing the proposed project as a tolled facility.

FHWA and NCTA will continue to provide the agencies, local governments, and the public with opportunities for involvement through informational workshops, project newsletters, informational mailings, and other means. Information on the dates, times, and locations of future citizens informational workshops will be posted on the NCTA Web site and will be

advertised in the local news media, and newsletters will be mailed to those on the project mailing list. If you wish to be placed on the mailing list, contact Jennifer Harris at the address listed below or by submitting an e-mail to midcourttuck@curttuck.org. Once completed, the Draft EIS will be available for public and agency review and comment prior to the public hearing.

To ensure the full range of issues related to the proposed action are addressed and all significant issues identified, comments and suggestions are invited from all interested parties. Comments and questions concerning the proposed action should be directed to the FHWA at the address provided above or directed to: Ms. Jennifer Harris, P.E., Staff Engineer, North Carolina Turnpike Authority, 5400 Glenwood Avenue, Suite 400, Raleigh, North Carolina 27612, Telephone (919) 571-3000.

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway National Implementation Executive Order 12372 Regarding Intergovernmental Consultation of Federal Programs and Activities apply to this program.)
 Issued on June 10, 2008.
George Hoops,
Major Projects Engineer, Federal Highway Administration, Raleigh, North Carolina.
FAA Doc. EB-13444 Filed 6-13-08; 8:45 am
BILLING CODE 4910-22-P

DEPARTMENT OF TRANSPORTATION
Maritime Administration
[Docket No. MARAD-2008 0052]
Requested Administrative Waiver of the Coastwise Trade Laws

AGENCY: Maritime Administration, Department of Transportation.
ACTION: Invitation for public comments on requested administrative waiver of the Coastwise Trade Laws for the vessel CHUT LOON.

SUMMARY: As authorized by Pub. L. 105-383 and Pub. L. 107-285, the Secretary of Transportation, as represented by the Maritime Administration (MARAD), is authorized to grant waivers of the U.S. build requirement of the coastwise laws under certain circumstances. A request for such a waiver has been received by MARAD. The vessel, and a brief description of the proposed service, is listed below. The complete application and locations of future citizens informational workshops will be posted on the NCTA Web site and will be

effect this action may have on U.S. vessel builders or businesses in the U.S. that use U.S.-flag vessels. If MARAD determines, in accordance with Pub. L. 105-383 and MARAD's regulations at 46 CFR Part 388 (68 FR 23084; April 30, 2003), that the issuance of the waiver will have an unduly adverse effect on a U.S.-vessel builder or a business that uses U.S.-flag vessels in that business, a waiver will not be granted. Comments should refer to the docket number of this notice and the vessel name in order for MARAD to properly consider the comments. Comments should also state the commenter's interest in the waiver application, and address the waiver criteria given in § 388.4 of MARAD's regulations at 46 CFR Part 388.

DATES: Submit comments on or before July 16, 2008.
ADDRESSES: Comments should refer to docket number MARAD-2008-0052. Written comments may be submitted by hand or by mail to the Docket Clerk, U.S. Department of Transportation, Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590. You may also send comments electronically via the Internet at <http://www.regulations.gov>. All comments will become part of this docket and will be available for inspection and copying at the above address between 10 a.m. and 5 p.m., E.T., Monday through Friday, except federal holidays. An electronic version of this document and all documents entered into this docket is available on the World Wide Web at <http://www.regulations.gov>.

FOR FURTHER INFORMATION CONTACT: Joann Spittle, U.S. Department of Transportation, Maritime Administration, 1200 New Jersey Avenue, SE., Room W21-203, Washington, DC 20590, Telephone 202-366-5979.
SUPPLEMENTARY INFORMATION: As described by the applicant the intended service of the vessel CHUT LOON is: "Intended Use: 'charters.'"
Geographic Region: "San Sebastian River, ICW from Oyster Creek Marina in St. Augustine, Florida."
Privacy Act
 Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the Federal Register

interested parties may comment on the



STATE OF NORTH CAROLINA
TURNPIKE AUTHORITY

1578 MAIL-SERVICE CENTER, RALEIGH, N.C. 27699-1578

MICHAEL F. EASLEY
GOVERNOR

DAVID W. JOYNER
EXECUTIVE DIRECTOR

October 21, 2008

Deborah M. Barbour, P.E.
Director of Preconstruction
NC Department of Transportation
1541 Mail Service Center
Raleigh, NC 27699-1541

John F. Sullivan, III, P.E.
Division Administrator
FHWA North Carolina Division
310 New Bern Avenue, Suite 410
Raleigh, NC 27601-1418

RE: STIP R-2576 Mid-Currituck Bridge Project
Section 6002 Project Coordination Plan

Dear Mr. Sullivan and Ms. Barbour,

In accordance with Section 6002 of SAFETEA-LU, the North Carolina Turnpike Authority (NCTA) has developed a "Project Coordination Plan" for the proposed Mid-Currituck Bridge project for coordinating public and agency participation in the planning process. The plan discusses the project schedule, sets a schedule for monthly coordination meetings, establishes agency review times, identifies a process for resolving issues of concern, and lists Cooperating and Participating Agencies.

Development of the Section 6002 Project Coordination Plan has been completed in consultation with other Lead Agencies, FHWA and NCDOT. The Lead Agencies are in agreement with this coordination plan. Draft versions of the plan were shared with Cooperating and Participating Agencies and discussed at monthly agency coordination meetings. Written comments on the plan were received from US Army Corps of Engineers, US Environmental Protection Agency, North Carolina Department of Environment and Natural Resources (NCDENR) Wildlife Resources Commission, NCDENR-Division of Coastal Management, and North Carolina Department of Cultural Resources, and the plan was revised to incorporate these comments.

The final Section 6002 Project Coordination Plan for the Mid-Currituck Bridge project is attached for your information. Also included with this letter for reference are copies of invitation letters to Cooperating and Participating Agencies (distributed November 14, 2007) and their responses.

If you have any questions or would like to discuss the project in more detail, please contact Jennifer Harris at (919) 571-3004.

Sincerely,

Steven D. DeWitt, P.E.
Chief Engineer

NORTH CAROLINA TURNPIKE AUTHORITY
TELEPHONE: 919-571-3000 FAX: 919-571-3015

cc: Mr. George Hoops, P.E., FHWA-Major Projects Engineer
Ms. Jennifer Harris, P.E., NCTA
Mr. John Wadsworth, P.E., NCDOT
Ms. Missy Dickens, P.E., NCDOT-PDEA

**Section 6002 Coordination Plan for Mid-Currituck Bridge Project
STIP Project R-2576**

COORDINATION PLAN

1. Purpose of Plan.

- 1.1. **Section 6002 Compliance.** This plan is intended to satisfy the requirement for a Coordination Plan under Section 6002 of SAFETEA-LU (23 U.S.C § 139) for the Mid-Currituck Bridge project (STIP No. R-2576).
- 1.2. **Integration of NEPA and Section 404 Requirements.** The process established in this plan is intended to ensure that the requirements of NEPA and Section 404 of the Clean Water Act can be satisfied as part of a single process. Specifically, this plan is intended ensure that, to the maximum extent practicable,
 - there is regular communication and collaborative discussion among all agencies that have information, experience, and/or expertise relevant to issues considered in Section 404 permitting;
 - NCDENR can issue Section 401, Riparian Buffer Authorizations, Isolated Wetland Permits, State Stormwater Permits and CAMA permits based on information developed as part of the NEPA process; and
 - the USACE can issue a Section 404 permit for the project promptly following the end of the NEPA process, without the need for supplemental NEPA studies,
 - so that any other required permits or approvals can be obtained without unexpected issues or delays, such as those required by the U.S. Coast Guard.

- 1.3. **Agency Communication.** This plan establishes a framework for regular communication among all of the agencies involved in the environmental review process. This communication will include regular agency coordination meetings. These meetings will provide a forum for open discussion and dialogue among agencies. Meetings with one or more individual agencies also may occur as part of this process. When possible, all Participating Agencies will be informed of a smaller meeting to ensure all appropriate parties are included and will be updated after the meeting.

2. Project Initiation

- 2.1. **Project Initiation Notice.** The environmental review process for a project is initiated when the North Carolina Turnpike Authority submits a project initiation notice to the FHWA. This notice was provided in the form of a letter from NCTA to FHWA on July 15, 2008 and is attached as Exhibit 1.

- 2.2. **Notice of Intent.** A Notice of Intent to prepare an Environmental Impact Statement (EIS) for this project was issued on July 6, 1995 and posted in the Federal Register. This notice, and the 1998 Draft EIS, was rescinded by FHWA on June 3, 2008 by notice in the Federal Register. A Notice of Intent to prepare a new Draft EIS for the project was issued on June 16, 2008. These notices are attached as Exhibit 1.

3. Project Schedule

- 3.1. **Schedule.** The NCTA will prepare a project schedule showing projected dates for completing all environmental studies and permitting. The schedule will conform to SAFETEA-LU time frames for comment periods and the FHWA "Vital Few Goal" of achieving a median time frame of three years for completing an EIS. A draft schedule for the Mid-Currituck Bridge project is shown in Table 1.

Table 1: Draft Project Schedule

Notice of Intent (NOI)	July 6, 1995
Rescind 1995 NOI and 1998 DEIS; Issue new NOI	June 3 2008; June 16, 2008
Identify Detailed Study Alternatives	July 2, 2008
DEIS	First Quarter 2009
Identify Preferred Alternative	Second Quarter 2009
FEIS	Fourth Quarter 2009
ROD	First Quarter 2010
Permit Application(s)	First Quarter 2010
Let Contract/Begin Construction	First Quarter 2010

- 3.2. **Agency Consultation.** The schedule will be shared with the agencies and discussed at a TEAC meeting. Agency comments will be considered and the schedule may be revised as appropriate.
- 3.3. **Updating Schedules.** The project schedule may be revised from time to time by the lead agencies during the environmental review process. Schedule changes will be communicated to all participating agencies and the public. Under the statute, the schedule may be extended by the lead agencies for good cause, and may be shortened only with the consent of Cooperating Agencies, if Cooperating Agencies are designated.

4. Agency Roles

- 4.1. **Lead Federal Agency.** FHWA will be the lead Federal agency. As lead Federal agency in the Section 6002 process, FHWA is responsible for making certain decisions as

specified in Section 6002. In addition, FHWA has an overall responsibility for facilitating the expeditious completion of the environmental review process.

4.2. Joint Lead Agencies. NCTA will be a joint lead agency, and thus will share with FHWA the responsibilities of the "lead agency" under the process defined in Section 6002. NCDOT also will have the status of a joint lead agency; however, NCDOT will primarily have a review/support role in the process, consistent with the Preconstruction Guidelines adopted by NCDOT and NCTA in July 2006.

4.3. Participating Agencies. NCTA will issue letters inviting Federal and non-Federal agencies to serve as Participating Agencies for each project developed under this plan. Participating Agencies include any Federal, State, or local agencies that may have an interest in the project.

4.3.1. Invitation List. Invitations for this project were sent to Federal and non-Federal agencies that, in the judgment of FHWA and NCTA, have an interest in the project. Additional Participating Agencies may be added later in the process based on new information, changes in the project, or changed circumstances. Table 2 lists agencies identified as having an interest in the Mid-Currituck Bridge project. Invitations were distributed on November 14, 2007. All agencies accepted.

Table 2: Agency Roles

	Cooperating Agency	Participating Agency
US Army Corps of Engineers	✓	✓
US Coast Guard	✓	✓
US Environmental Protection Agency		✓
US Fish and Wildlife Service		✓
National Marine Fisheries Service		✓
NC Department of Cultural Resources – Historic Preservation Office		✓
NC Department of Environment & Natural Resources		✓
Division of Coastal Management		✓
Division of Marine Fisheries		✓
Division of Water Quality		✓
Wildlife Resources Commission		✓

4.3.2. Deadline. Invitation letters will specify a 30-day deadline for agencies to respond to the invitation. For this project, responses were requested by December 14, 2007.

4.3.3. Federal Invitees. A Federal agency that is invited to be a Participating Agency will be presumed to have accepted the invitation, unless the agency informs NCTA in writing, by the deadline, that it: "(A) has no jurisdiction or authority with respect to the project; (B) has no expertise or information relevant to the project; and (C) does not intend to submit comments on the project."

4.3.4. Non-Federal Invitees. Non-Federal agencies are not required to accept designation; they become Participating Agencies only if they affirmatively accept the invitation. If a non-Federal agency declines or does not respond to the invitation, the agency will not be considered a Participating Agency.

4.3.5. No Implied Support. Designation as a Participating Agency shall not imply that the Participating Agency supports a proposed project; or has any jurisdiction over, or special expertise with respect to evaluation of, the project.

4.3.6. No Effect on Other Laws. Nothing in Section 6002, or in this Coordination Plan, preempts or interferes with any power, jurisdiction, responsibility, or authority that a Federal, State, or local government agency, metropolitan planning organization, Indian tribe, or project sponsor has with respect to carrying out a project or any other provisions of law applicable to projects, plans, or programs.

4.4. Cooperating Agencies. A Participating Agency also may be designated as a Cooperating Agency. The responsibilities of a "Cooperating Agency" are defined in the CEQ regulations and are unchanged by SAFETEA-LU. In general, designation as a Cooperating Agency signifies a somewhat higher level of involvement and responsibility in the environmental review process. Federal, State, or local government agencies can be designated as Cooperating Agencies. Table 2 identifies proposed Cooperating Agencies for this project. It is recognized that due to other program commitments, Cooperating Agencies will not be responsible for funding or writing portions of the NEPA document.

5. Turnpike-Environmental Agency Coordination (TEAC) Meetings

5.1. TEAC Meetings. The principal method for agency coordination on turnpike projects will be Turnpike-Environmental Agency Coordination (TEAC) meetings, which will be hosted by NCTA. These meetings will be used as a forum for discussing all turnpike projects, including those being studied under other procedures as well as those being studied under Section 6002. All TEAC meetings will be held at the NCTA office in Raleigh, unless otherwise specified in the meeting invitation.

5.2. Meeting Dates. The schedule for the TEAC meetings will be determined by FHWA and NCTA after consultation with NCDOT and the Participating Agencies. This schedule will be established, to the extent possible, for 12-month periods. The schedule will be coordinated with NCDOT interagency meetings to avoid or minimize conflicts and minimize travel. Changes to the schedule will be provided to the Participating Agencies as far in advance as possible. The schedules for 2007 and 2008 are attached as Exhibit 2.

5.3. Meeting Agenda and Objectives. The agenda for each TEAC meeting will be circulated via e-mail to all Participating Agencies. The agenda will identify (a) any specific issues that NCTA would like to resolve at the meeting and (b) any specific issues on which NCTA is seeking comments from the Participating Agencies at the meeting.

5.4. Meeting Materials. NCTA will post the agenda and materials for each TEAC meeting on a secure web site accessible to all TEAC members. Guidelines for circulating meeting materials are provided below.

5.4.1. Timing of Circulation. To the greatest extent possible, NCTA will post the agenda and materials at least two weeks in advance of the meeting. In some cases, materials will be provided less than two weeks in advance, or will be circulated in the TEAC meeting itself. NCTA will not seek to resolve issues or obtain Participating Agency comments on materials that the Participating Agencies received less than two weeks in advance of the meeting.

5.4.2. Availability of Paper Copies. In addition to posting documents on the TEAC web site, NCTA will make paper copies of TEAC meeting materials available to all attendees at each TEAC meeting.

5.4.3. Large Documents. Documents that would be difficult or time-consuming for agencies to reproduce (e.g., large maps, lengthy bound documents with color, fold-out pages, etc.) will be made available to Participating Agencies in hard-copy format at a TEAC meeting (or by mail two weeks or more in advance) for discussion at a subsequent TEAC meeting. NCTA will consult with the Participating Agencies to determine when this type of distribution is appropriate.

5.5. Meeting Summaries. After each TEAC meeting, the NCTA will prepare a meeting summary. The summary will list the attendees, topics discussed, unresolved issues, action items, resolutions, and conclusions. The Meeting Summary will be posted in draft form to the NCTA web site for review and comment two weeks in advance of the next meeting. Meetings will be recorded on audiotape; the recording will be used in preparing the meeting summaries. The meeting summaries will be included in the administrative record.

5.6. Attendees. Participating Agencies (including Cooperating Agencies) will designate primary contacts for each turnpike project. These primary contacts will regularly attend TEAC meetings. Attendance may vary from month to month depending on the issues being discussed. Primary contacts for the Mid-Currituck Bridge project are listed in Table 3.

Table 3: Primary Agency Contacts

US Army Corps of Engineers	Bill Biddlecome
US Coast Guard	Bill Brazier
US Environmental Protection Agency	Chris Militscher
US Fish and Wildlife Service	Gary Jordan
National Marine Fisheries Service	Ron Sechler
NC Department of Cultural Resources – Historic Preservation Office	Peter Sanbeck
NC Department of Environment & Natural Resources	--
Division of Coastal Management	Cathy Brittingham
Division of Marine Fisheries	Sara Winslow
Division of Water Quality	David Wainwright
Wildlife Resources Commission	Travis Wilson

6. Identification and Resolution of Project Issues

6.1. Constraint Mapping and Environmental Data. As early as practicable in project development, NCTA will provide FHWA and the Participating Agencies with mapping that shows key environmental resources, communities, topographic conditions, and other constraints in the project area. This mapping also will identify potential conceptual alternatives for the project, to the extent possible. (An “alternative” at this stage will generally be defined as a corridor.) The mapping may be accompanied by other supporting materials. This mapping may be presented to the Participating Agencies over a series of TEAC meetings and/or field meetings.

6.2. Field Visits and Agency Meetings. One or more field visits may be held with Participating Agencies to discuss constraints and obtain early input into development of alternatives. Attendees in field visits may be a sub-set of the Participating Agencies, depending on the issues to be discussed on the field visit; however, all Participating Agencies will be informed of upcoming meetings to determine interest in attending. The results of the field visit(s) will be discussed at a TEAC meeting, which will provide another opportunity for agency input.

6.3. General Project Issues. Throughout the process, Participating Agencies will be invited to identify issues that need to be considered by the Lead Agencies in preparing the environmental documentation and making project decisions, including issues that relate to the agencies’ ability to approve (or comment favorably on the approval of) any necessary permits for the project. These issues will be referred to as “general project issues.” Agencies should be prepared to answer the following questions when they raise general project issues at TEAC meetings or in correspondence:

- What is the specific issue or aspect of the issue which the agency would like addressed?

- Has the agency established standards, criteria, or thresholds related to the issue?
- What methodology does the agency recommend to evaluate the issue?
- What data or information can the agency provide to assist in evaluating the issue?
- Does the agency believe that the issue is significant or could be an "issue of concern" (see Section 6.4)?

6.4. Issues of Concern. At any time in the process, a Participating Agency may identify an "issue of concern" as defined in SAFETEA-LU, which is an issue that in the agency's judgment could result in denial of a permit or substantial delay in issuing a permit.

6.4.1. Format. Participating agencies will be strongly encouraged to submit any "issues of concern" in writing to FHWA and NCTA on agency letterhead. Issues of concern submitted in other formats (e.g., e-mail) will also be considered.

6.4.2. Timing. Participating Agencies are required by statute to identify any issues of concern "as early as practicable" in the environmental review process, but this determination is based on information provided by the lead agencies. In some cases, it may not be practicable to identify an issue of concern until late in the process. The statute does not set a specific deadline for raising these issues.

6.4.3. Request for Comment. At any point in the process, the NCTA may ask the Participating Agencies to state in writing whether there are any issues of concern. If such a request is made, NCTA will consult with the Participating Agencies before setting a deadline for a response. If agreed by the Lead and Participating Agencies, a deadline longer than 30 days could be established.

6.5. Monitoring and Updating. NCTA will maintain a list of both "general project issues" and "issues of concern" (if any) identified by the Participating Agencies. Separate meetings may be scheduled to resolve general project issues and/or any issues of concern. Additional issues may be added to the list based on new information or changed circumstances at any point in project development. This list will be posted to the TEAC web site.

6.6. Resolving General Project Issues. General project issues that are not resolved among the regular participants in the TEAC meetings can be elevated for consideration by the more senior officials within the relevant agencies. Any agency – Lead or Participating – can invoke the elevation process. The process is intended to be flexible, with specific procedures determined on a case-by-case basis depending on the nature of the issue. In general, the elevation process will involve the following steps:

- A TEAC member requests elevation on an issue within the jurisdiction of that agency. This request can be made in a TEAC meeting or in a letter or e-mail to the other TEAC members.
- The request for elevation is placed on the agenda for discussion at a subsequent TEAC meeting.
- If the issue is not resolved at that subsequent TEAC meeting, the issue is elevated to more senior officials within the TEAC agencies.

- Each TEAC member is responsible for identifying the more senior official(s) within his or her agency who will be directly involved in the elevation.
- The TEAC members will work together to plan the logistics and timing of the elevation process, including any briefing materials or other documents that need to be prepared prior to a resolution of the issue.

6.7. Resolving Issues of Concern. Under the statute, NCTA or the Governor may request a meeting at any time to resolve issues of concern. If such a meeting is requested, FHWA will convene a meeting in accordance with SAFETEA-LU to resolve the specified issues of concern. If an issue of concern is not resolved within 30 days after such a meeting, a report must be submitted to Congress and to the heads of certain agencies, as provided in SAFETEA-LU. If such a meeting is not requested, FHWA and NCTA will seek to address and resolve the agencies' issues of concern as part of normal agency coordination during the environmental review process. NCTA anticipates that this process will be invoked rarely.

7. Development of Purpose and Need

7.1. Preliminary P&N with Supporting Information. Early in project development, NCTA will prepare a brief preliminary statement of purpose and need – generally no more than one page in length. The preliminary statement purpose and need will be distributed to the agencies. This preliminary statement will be accompanied by supporting information to the extent that it is available. This information will include:

- GIS map of study area (with study area identified)
- Summary of local concerns that resulted in project addition to LRTP and MTIP
- Traffic data related to project needs
- Justification for designation as turnpike project (based on funding needs, etc.)
- Description of how the action will address the need.

7.2. Discussion at TEAC Meeting. The preliminary purpose and need will be discussed with the Participating Agencies at a TEAC meeting. This will provide an early opportunity for agency input into the Purpose and Need for the project. In accordance with Section 6002, the comment period will be 30 days (unless otherwise agreed).

7.3. Determination of Purpose and Need. The purpose and need will be refined, as appropriate, based on input from the Participating Agencies and the public. Refinement of the purpose and need may be a gradual, iterative process that occurs during the alternatives development and screening process. This process will include an opportunity for agencies and the public to comment on the purpose and need as part of their review of the alternatives screening report. (See Part 8.4 and 8.5 below.) The Purpose and Need will be determined by the time of selection of Detailed Study Alternatives.

8. Development and Screening of Alternatives

- 8.1. Conceptual Alternatives. An initial set of conceptual alternatives will be developed as early as practicable in the process. The conceptual alternatives may be developed concurrently with the preliminary purpose and need statement. These alternatives will be provided to the agencies along with the environmental constraint mapping that provides the basis for identifying issues of concern. (See Part 6.1 above.)
- 8.2. Alternatives Development. Through agency coordination and public involvement, NCTA will develop a range of preliminary alternatives for consideration. This range may extend beyond the initial set of conceptual alternatives. This effort is intended to be comprehensive and inclusive. NCTA will maintain a summary of all alternatives suggested by Participating Agencies and the public.
- 8.3. Alternatives Screening Report. The NCTA will prepare an alternatives screening report that presents the justification for eliminating alternatives from further consideration, and identifies alternatives proposed for detailed study. The alternatives screening report will be provided to the Participating Agencies and discussed in a TEAC meeting.
- 8.4. Opportunity for Public Input. A summary of the Purpose and Need and alternatives screening report has been made available for public review and comment. A public meeting (or meetings) was held in the project area prior to the distribution of this report. A summary of information detailed in the report was presented at the public meetings and comments were solicited. A report summarizing public input was provided to Participating Agencies. Copies of the report were then made available via the NCTA's website as well as at local government offices for public review. Postcards were distributed to notify the public of the reports' availability and opportunity to provide comment. This comment period will serve as the public's opportunity for involvement in both developing the purpose and need and determining the range of alternatives to be considered in the EIS. Agencies were given notice of the public meeting and were welcome to attend.
- 8.5. Opportunity for Agency Input. Participating Agencies were given a 30-day period to provide additional comments on the alternatives screening report following distribution of the report summarizing public comments from the public workshops. Participating Agencies will not be asked to concur on the alternatives screening report. Participating Agencies were asked to submit any significant objections to the alternatives screening report in writing to FHWA and NCTA on agency letterhead.
- 8.6. Lead Agency Decision. The Lead Agencies identify the detailed study alternatives based on the comments received from Participating Agencies and the public. In general, the NCTA and FHWA will seek to resolve any issues or concerns regarding the range of detailed study alternatives at this stage of the process. Any issues that are not resolved at this stage will need to be resolved prior to issuance of a Section 404 permit by the USACE. It is incumbent on all Participating Agencies to raise issues, concerns, or comments in a timely manner and to also provide suggestions for resolution.

October 21, 2008

9

9. Methodologies and Level of Detail for Alternatives Analysis

- 9.1. Proposed Methodologies. Early in project development, NCTA will prepare materials outlining proposed methodologies for analyzing alternatives. The materials will summarize the methodologies intended to be used for each substantive area within the EIS – noise, air, water resources, traffic issues, secondary and cumulative impacts, etc. Standard procedures will simply be referenced, where applicable. Any modifications to standard procedures will be identified and discussed in more depth.
- 9.2. Opportunity for Agency Input. The proposed methodologies will be developed in consultation with agencies having relevant information, experience, or expertise. For example, the USACE and NCDENR and other Participating Agencies as appropriate will be consulted in developing the methodology for analyzing impacts to aquatic resources; the SHPO will be consulted in developing methodologies for analyzing impacts to historic sites (including both architectural and archeological resources).
- 9.3. Ongoing Coordination. Methodologies for alternatives analysis will be refined throughout the environmental review process. The Lead Agencies will discuss adjustments, as appropriate, with Participating Agencies at TEAC meetings.
- 9.4. Level of Detail. The Lead Agencies, in consultation with the Participating Agencies, will determine the appropriate level of design detail for preliminary alternatives, for the detailed study alternatives, and for the preferred alternative.
- 9.4.1. Preliminary Alternatives. Functional design will be complete for all preliminary alternatives and used as the basis for comparing impacts to aid in the selection of Detailed Study Alternatives.
- 9.4.2. Detailed Study Alternatives. For this project, preliminary design will be used as the basis for comparing the impacts of the alternatives in the DEIS (known as the Detailed Study Alternatives) and will be used for developing the cost estimates presented in the DEIS.
- 9.4.3. Bridging Decisions. The Lead Agencies, in consultation with USACE and NCDENR (and, if appropriate, other Participating Agencies) will determine bridge locations and approximate lengths for each of the Detailed Study Alternatives. These issues also will be discussed in TEAC meetings with all Participating Agencies.
- 9.4.4. Preferred Alternative. The Preferred Alternative may be developed to a higher level of detail in the FEIS, in accordance with procedures specified in FHWA/FTA guidance for the Section 6002 process. If phased construction is anticipated, the higher level of design detail may be developed for a portion of the Preferred Alternative. As allowed under Section 6002, the higher level of design detail may be prepared for the purpose of developing mitigation measures and/or for complying with permitting requirements (e.g., Section 404 permitting).

October 21, 2008

10

9.5. Lead Agency Decision. If there are disagreements about methodology, or about the appropriate level of design detail, FHWA and NCTA will seek to resolve those disagreements with the agencies having the concern and those with relevant expertise – for example, the SHPO on historic property issues. After consultation, the Lead Agencies will determine the methodology to be used in the NEPA document. The basis for that decision will be documented in the project file and provided to the Participating Agencies.

10. Selection of Preferred Alternative/LEDPA

10.1. Timing for Identifying Preferred Alternative. The following actions will be completed before NCTA submits a Preferred Alternative Report to the Participating Agencies:

- the DEIS has been issued (including a Conceptual Mitigation Proposal) and submitted to the State Clearinghouse;
- a Section 404 Public Notice Request has been submitted to USACE, and the Public Notice has been issued by the USACE;
- a public hearing on the DEIS has been held, and the comment period on the DEIS has ended,

10.2. Process for Identifying Preferred Alternative. The process for identifying a preferred alternative will include:

- the NCTA will prepare an information package containing an impacts comparison matrix, responses to substantive comments on the DEIS that relate to selection of the preferred alternative, and other pertinent information;
- the NCTA will provide the information package to the Participating Agencies at least two weeks prior to the TEAC meeting at which the package will be discussed.
- the Participating Agencies will be given a 30-day period following the TEAC meeting to provide comments on the information package, and there will be a discussion of the alternatives comparison package at a TEAC meeting; and
- if requested by the Participating Agencies, the NCTA will arrange for a field review of the alternatives.

10.3. Preparation of Preferred Alternative Report. The NCTA will prepare a report identifying its preferred alternative and the justification for selecting that alternative. The report will address all applicable regulatory requirements, such as Section 404 and 401 of the Clean Water Act, Section 4(f) of the USDOT Act, and the North Carolina Coastal Area Management Act. The report will be prepared in coordination with FHWA and with input from the Participating Agencies as described in Section 10.2.

10.4. Opportunity for Agency Input. The NCTA will provide FHWA, NCDOT, and all Participating Agencies with a copy of the preferred alternative report. The report will be

discussed at a TEAC meeting. Agencies will be provided with a 30-day period to comment on the report after the meeting (in addition to the comment opportunities provided under Section 10.1 above). Agencies will not be asked to concur in this report. Agencies will be asked to submit any significant objections in writing to FHWA and NCTA on agency letterhead.

10.5. Lead Agency Decision. FHWA will formally identify its preferred alternative after considering all comments received from Participating Agencies, including both written comments and comments provided in TEAC meetings.

11. Avoidance, Minimization, Mitigation, and Enhancement

11.1. Integration into Project Development. Opportunities to avoid, minimize, and mitigate impacts, and to enhance the impacted resources, will be considered throughout the process, including during initial development of alternatives. As allowed under Section 6002, the preferred alternative may be developed to a higher level of detail for purposes of developing mitigation measures and meeting permitting requirements.

11.2. Required Compensatory Mitigation. The Lead Agencies will consult with USACE and NCDENR (and other Participating Agencies as appropriate) to determine the type, size, and location of required compensatory mitigation for impacts to waters of the United States.

11.2.1. On-Site Mitigation. The potential for on-site mitigation for impacts to waters of the United States will be considered in the DEIS for each of the Detailed Study Alternatives. This discussion will typically include a discussion of conceptual on-site mitigation locations. The potential for on-site mitigation will be discussed in more detail for the Preferred Alternative in the FEIS.

11.2.2. Off-Site/Ecosystem Enhancement Program (EEP). Where applicable, the NCTA will coordinate with the Ecosystem Enhancement Program (EEP) during project development and design regarding the use of credits from the EEP to meet mitigation requirements for impacts to waters of the United States. The EEP also may be used to carry out on-site mitigation on behalf of NCTA.

12. Section 404/401 Permitting and Other Permits/Approvals

12.1. Early Coordination. NCTA will conduct early coordination with the Participating Agencies to identify applicable permitting requirements and to determine the analysis and documentation required to satisfy those requirements. See Parts 6 and 9 above. Permits that may be applicable to this project include:

- Section 404/401 Permits
- US Coast Guard Bridge Permit
- CAMA Permit

12.6. Public Hearing. The public hearing on the DEIS will also serve as the public hearing for the Section 404 permit application.

12.7. Refining the Permit Application. After selection of a preferred alternative, the NCTA will coordinate on a regular basis with the USACE, NCDENR, and other Participating Agencies as appropriate regarding all applicable permit applications for the project. This coordination may occur as part of the TEAC meetings and/or in separate meetings convened to discuss permitting issues. These meetings will include discussions of:

- avoidance and minimization measures
- compensatory mitigation
- review of hydraulic design
- review of stormwater management plans
- review of final permit drawings

12.8. Permit Application and Decision. After the permitting meetings described above, the NCTA will submit an updated Section 404 permit application to the USACE and an Section 401 certification request to NCDENR. Permit applications under other applicable laws (e.g., a bridge permit, or a CAMA permit) will also be filed. All permit applications shall be filed in accordance with the respective agency permitting requirements in place at the time of application. All respective permitting agencies shall forward the permit applications to other agencies for review as required by the respective agency regulations and/or rules.

12.9. Permit Decisions. The permitting agencies will consider and act upon the permit applications in accordance with their procedures.

12.10. Permitting Delay. If a Section 404 permit (or any other permit or approval) is not issued within 180 days after the FHWA issues a ROD and a complete permit application is submitted, the USDOT will be required by Section 6002 to submit a report to the Congress – specifically, to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure in the House of Representatives. Reports must be submitted every 60 days thereafter until the issue is resolved. The same requirement applies to other permitting decisions.

12.11. Coordination After Permit Issuance. After permit issuance, NCTA will coordinate directly with permitting agencies and others as required by the terms of project permits. Such coordination may include issues such as reviewing final project plans, tracking compliance with permit conditions, and modifying permits to address changes to the project's design, construction methodology or construction timeframe.

12.12. Permitting for Phased Construction. [This is a placeholder. If a phased approach is contemplated for a project, a section will be added here to describe that approach. It will be modeled on phasing as used in the NCDOT Merger agreement.]

- Stormwater Permit

12.2. Comment Opportunities. The environmental review process includes multiple opportunities for comment by Participating Agencies, as described below:

12.2.1. Participating Agencies may submit comments at the monthly TEAC meetings and in other meetings or field visits held during the environmental review process. NCTA will prepare meeting summaries for all substantive meetings with Participating Agencies. The meeting summaries will document comments provided by Participating Agencies.

12.2.2. Participating Agencies also will be invited to provide written comments at various points in the process as noted above. Agencies are encouraged to provide their written comments on agency letterhead; in particular, agencies are strongly encouraged to use letterhead when identifying issues of concern. However, all written comments submitted by agencies, including comments submitted by email, will be accepted and considered in decision-making.

12.2.3. If a Participating Agency raises an issue of concern, the Lead Agencies will confer with that agency, and with other agencies as appropriate, to address those issues.

12.2.4. Meeting summaries and written agency comments (regardless of format) be considered by the Lead Agencies in decision-making and will be included in the project files.

12.3. Jurisdictional Determinations. The NCTA will prepare the necessary documentation to obtain jurisdictional determinations by the USACE (and, as appropriate, NCDENR) for all wetlands and streams within a corridor along each of the detailed study alternatives (unless otherwise determined as part of the discussion of methodologies in accordance with Section 9 of this plan). These determinations will be used as the basis for comparing wetlands and stream impacts in the DEIS. The width of the corridor within which jurisdictional determinations are made will be determined on a project-by-project basis.

12.4. Pre-Application Consultation. The NCTA will engage in pre-application consultation, as appropriate, with each agency that is responsible for making a permit decision on the project. For projects requiring a Section 401 and Section 404 permits and/or CAMA permits for those projects located within the 20 coastal counties, the pre-application consultation will include a detailed hydraulic design review.

12.5. Request for Public Notice. The NCTA will submit the Section 404 permit application to the USACE at the time the DEIS is issued. This application will typically be submitted prior to identification of a preferred alternative; therefore, it typically will not identify the specific alternative for which the permit is being requested. This submittal will enable the USACE to issue a public notice and to use the FHWA/NCTA public hearing on the DEIS as the USACE's public hearing on the Section 404 application.

Exhibit 1

**PROJECT INITIATION NOTICE
&
FEDERAL REGISTER NOTICES**



STATE OF NORTH CAROLINA
TURNPIKE AUTHORITY

MICHAEL F. EASLEY
GOVERNOR

1578 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1578

DAVID W. JOYNER
EXECUTIVE DIRECTOR

July 15, 2008

John F. Sullivan, III, P.E.
Division Administrator
FHWA North Carolina Division
310 New Bern Avenue, Suite 410
Raleigh, NC 27601-1418

**RE: STIP R-2576 Mid-Currituck Bridge Project
Notification of Project Initiation under Section 6002 of SAFETEA-LU**

Dear Mr. Sullivan,

In accordance with Section 6002 of SAFETEA-LU, the North Carolina Turnpike Authority (NCTA) is notifying the Federal Highway Administration (FHWA) that planning, environmental, and engineering studies for the proposed Mid-Currituck Bridge project in Currituck and Dare Counties are underway. The project is included in the 2007-2013 North Carolina State Transportation Improvement Program (STIP) as Project R-2576.

NCTA, in cooperation with North Carolina Department of Transportation (NCDOT), is preparing an Environmental Impact Statement (EIS) addressing proposed improvements in the Currituck Sound area. The proposed study area includes US 158 from NC 168 to NC 12 (including the Wright Memorial Bridge) and NC 12 north of its intersection with US 158 to its terminus in Currituck County.

It is anticipated that a Clean Water Act 404 Individual Permit will be required from the US Army Corps of Engineers (USACE), and a US Coast Guard (USCG) Bridge Permit will be required. NCTA will coordinate throughout project development with the USACE and USCG to ensure that their concerns are addressed and incorporated into the EIS.

On July 6, 1995, FHWA published a notice of intent to prepare an environmental impact statement (EIS) for a Mid-Currituck Sound Bridge project in Currituck County, North Carolina, which involved a proposal to build a bridge and approach roadways connecting US 158 on the mainland to NC 12 on the Outer Banks. The FHWA, in cooperation with the NCDOT, issued a Draft EIS on the project in January 1998. FHWA and NCDOT held public hearings and provided a comment period on the Draft EIS. Since the 1998 Draft EIS, there have been several changes in the project. These changes led to the decision to rescind the 1995 notice of intent and the 1998 Draft EIS (Federal Register Vol. 73, No. 107, page 31733) and to issue a new notice of intent. The new notice of intent was issued on June 16, 2008 (Federal Register Vol. 73, No. 116, page 34065). Copies of these are attached for your reference.

NORTH CAROLINA TURNPIKE AUTHORITY
TELEPHONE: 919-371-5000 FAX: 919-371-3015

for the proper performance of our functions.

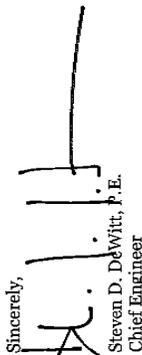
- Evaluate the accuracy of our estimate of the burden of the proposed collection, including the validity of the methodology and assumptions used.
- Enhance the quality, utility, and clarity of the information to be collected.
- Minimize the reporting burden on those who are to respond, including the use of automated collection techniques or other forms of technology.

Abstract of proposed collection: The export temporary import, temporary report and brokering of defense articles, defense services and related technical data are licensed by the Directorate of Defense Trade Controls, in accordance with the International Traffic in Arms Regulations (22 CFR parts 120-130) and section 38 of the Arms Export Control Act. Those of the public who manufacture or export defense articles, defense services, and related technical data, or the brokering thereof, must register with the Department of State. Persons desiring to engage in export, temporary import, and brokering activities must submit an application or written request to conduct the transaction to the Department to obtain a decision whether it is in the interests of U.S. foreign policy and national security to approve the transaction. Also, registered brokers must submit annual reports regarding all brokering activity that was transacted, and registered manufacturers and exporter must maintain records of defense trade activities for five years.

Methodology: These forms/information collections may be sent to the Directorate of Defense Trade Controls via the following methods: Electronically, mail, personal delivery, and/or fax.

Dated: May 5, 2008.
 Frank J. Ruggiero,
 Deputy Assistant Secretary for Defense Trade and Regional Security, Bureau of Political-Military Affairs, U.S. Department of State.
 [FR Doc. E8-12403 Filed 6-2-08; 8:45 am]
 BILLING CODE 4710-26-P

If you have any questions or would like to discuss the project in more detail, please contact Jennifer Harris at (919) 571-3004.

Sincerely,

 Steven D. DeWitt, P.E.
 Chief Engineer

cc: Mr. George Hoops, P.E., FHWA
 Ms. Jennifer Harris, P.E., NCTA
 Ms. Deborah Barbour, P.E., NCDOT

Federal Officer of the Advisory Council, has ordered publication of this notice on that the President's Advisory Council on Financial Literacy will convene its third meeting on Wednesday, June 18, 2008, in the Cash Room in the Main Department Building, 1500 Pennsylvania Avenue, NW., Washington, DC, beginning at 10 a.m. Eastern Time. The meeting will be open to the public.

Because the meeting will be held in a secured facility, members of the public who plan to attend the meeting must contact the Office of Financial Education at 202-622-1783 or FinancialLiteracyCouncil@do.treas.gov by 5 p.m. Eastern Time on Friday, June 13, 2008, to provide the information that will be required to facilitate entry into the Main Department Building.

During this meeting, the Council Committees, (Outreach, Research, Underserved, Workplace and Youth), which are subgroups of the President's Council, will be reporting back to the Council on their progress.

Dated: May 28, 2008.
 Taijya Smith,
 Executive Secretary.
 [FR Doc. E8-12372 Filed 6-2-08; 8:45 am]
 BILLING CODE 4810-25-P

Room of the Main Department Building, 1500 Pennsylvania Avenue, NW., Washington, DC, beginning at 10 a.m. Eastern Time. The meeting will be open to the public. Members of the public who plan to attend the meeting must contact the Office of Financial Education at 202-622-1783 or FinancialLiteracyCouncil@do.treas.gov by 5 p.m. Eastern Time on Friday, June 13, 2008, to provide the information that is required to facilitate entry into the Main Department Building.

ADDRESSES: The public is invited to submit written statements with the President's Advisory Council on Financial Literacy by any one of the following methods:

Electronic Statements
 E-mail: FinancialLiteracyCouncil@do.treas.gov; or

Paper Statements
 Send paper statements in triplicate to President's Advisory Council on Financial Literacy, Office of Financial Education, Room 1332, Department of the Treasury, 1500 Pennsylvania Avenue, NW., Washington, DC 20220. In general, the Department will post all statements on its Web site (<http://www.treas.gov/offices/domesticfinance/financial-institution/meducation/council/index.shtml>) without change, including any business or personal information provided such as names, addresses, e-mail addresses, or telephone numbers. The Department will make such statements available for public inspection and copying in the Department's library, room 1428, Main Department Building, 1500 Pennsylvania Avenue, NW., Washington, DC 20220, on official business days between the hours of 10 a.m. and 5 p.m. You can make an appointment to inspect statements by telephoning (202) 622-0990. All statements, including attachments and other supporting materials, received are part of the public record and subject to public disclosure. You should submit only information that you wish to make available publicly.

FOR FURTHER INFORMATION CONTACT: Mr. Edwin Bodensiek, Director of Outreach, Department of the Treasury, Main Department Building, 1500 Pennsylvania Avenue, NW., Washington, DC 20220, at ed.bodensiek@do.treas.gov.

SUPPLEMENTARY INFORMATION: In accordance with section 10(a) of the Federal Advisory Committee Act, 5 U.S.C. App. 2 and the regulations thereunder, Dubis Correal, Designated

DEPARTMENT OF THE TREASURY
Open Meeting of the President's Advisory Council on Financial Literacy
 Treasury
ACTION: Notice of meeting.

DEPARTMENT OF TRANSPORTATION
Federal Highway Administration
Environmental Impact Statement: Currituck and Dare Counties, NC
 AGENCY: Federal Highway Administration (FHWA), DOT.
ACTION: Rescinding of Notice of Intent and Draft Environmental Impact Statement (DEIS).

SUMMARY: The FHWA is issuing this notice to advise the public that we are rescinding the notice of intent and the public notice to prepare an environmental impact statement (EIS) for a proposed highway project in Currituck and Dare Counties, North Carolina.

FOR FURTHER INFORMATION CONTACT: Mr. George Hoops, P.E., Major Projects Engineer, Federal Highway Administration, 310 Bern Avenue, Suite 410, Raleigh, North Carolina 27601-1418. Telephone: (919) 747-7022.

SUPPLEMENTARY INFORMATION: The FHWA, in cooperation with the North Carolina Department of Transportation (NCDOT) and the North Carolina Turnpike Authority (NCTA), is rescinding the notice of intent to prepare an EIS for a proposed bridge

for the proper performance of our functions.

- Evaluate the accuracy of our estimate of the burden of the proposed collection, including the validity of the methodology and assumptions used.
- Enhance the quality, utility, and clarity of the information to be collected.
- Minimize the reporting burden on those who are to respond, including the use of automated collection techniques or other forms of technology.

Abstract of proposed collection: The export temporary import, temporary report and brokering of defense articles, defense services and related technical data are licensed by the Directorate of Defense Trade Controls, in accordance with the International Traffic in Arms Regulations (22 CFR parts 120-130) and section 38 of the Arms Export Control Act. Those of the public who manufacture or export defense articles, defense services, and related technical data, or the brokering thereof, must register with the Department of State. Persons desiring to engage in export, temporary import, and brokering activities must submit an application or written request to conduct the transaction to the Department to obtain a decision whether it is in the interests of U.S. foreign policy and national security to approve the transaction. Also, registered brokers must submit annual reports regarding all brokering activity that was transacted, and registered manufacturers and exporter must maintain records of defense trade activities for five years.

Methodology: These forms/information collections may be sent to the Directorate of Defense Trade Controls via the following methods: Electronically, mail, personal delivery, and/or fax.

Dated: May 5, 2008.
 Frank J. Ruggiero,
 Deputy Assistant Secretary for Defense Trade and Regional Security, Bureau of Political-Military Affairs, U.S. Department of State.
 [FR Doc. E8-12403 Filed 6-2-08; 8:45 am]
 BILLING CODE 4710-26-P

DEPARTMENT OF THE TREASURY
Open Meeting of the President's Advisory Council on Financial Literacy
 Treasury
ACTION: Notice of meeting.

DEPARTMENT OF TRANSPORTATION
Federal Highway Administration
Environmental Impact Statement: Currituck and Dare Counties, NC
 AGENCY: Federal Highway Administration (FHWA), DOT.
ACTION: Rescinding of Notice of Intent and Draft Environmental Impact Statement (DEIS).

SUMMARY: The FHWA is issuing this notice to advise the public that we are rescinding the notice of intent and the public notice to prepare an environmental impact statement (EIS) for a proposed highway project in Currituck and Dare Counties, North Carolina.

FOR FURTHER INFORMATION CONTACT: Mr. George Hoops, P.E., Major Projects Engineer, Federal Highway Administration, 310 Bern Avenue, Suite 410, Raleigh, North Carolina 27601-1418. Telephone: (919) 747-7022.

SUPPLEMENTARY INFORMATION: The FHWA, in cooperation with the North Carolina Department of Transportation (NCDOT) and the North Carolina Turnpike Authority (NCTA), is rescinding the notice of intent to prepare an EIS for a proposed bridge

for the proper performance of our functions.

- Evaluate the accuracy of our estimate of the burden of the proposed collection, including the validity of the methodology and assumptions used.
- Enhance the quality, utility, and clarity of the information to be collected.
- Minimize the reporting burden on those who are to respond, including the use of automated collection techniques or other forms of technology.

Abstract of proposed collection: The export temporary import, temporary report and brokering of defense articles, defense services and related technical data are licensed by the Directorate of Defense Trade Controls, in accordance with the International Traffic in Arms Regulations (22 CFR parts 120-130) and section 38 of the Arms Export Control Act. Those of the public who manufacture or export defense articles, defense services, and related technical data, or the brokering thereof, must register with the Department of State. Persons desiring to engage in export, temporary import, and brokering activities must submit an application or written request to conduct the transaction to the Department to obtain a decision whether it is in the interests of U.S. foreign policy and national security to approve the transaction. Also, registered brokers must submit annual reports regarding all brokering activity that was transacted, and registered manufacturers and exporter must maintain records of defense trade activities for five years.

Methodology: These forms/information collections may be sent to the Directorate of Defense Trade Controls via the following methods: Electronically, mail, personal delivery, and/or fax.

Dated: May 5, 2008.
 Frank J. Ruggiero,
 Deputy Assistant Secretary for Defense Trade and Regional Security, Bureau of Political-Military Affairs, U.S. Department of State.
 [FR Doc. E8-12403 Filed 6-2-08; 8:45 am]
 BILLING CODE 4710-26-P

DEPARTMENT OF THE TREASURY
Open Meeting of the President's Advisory Council on Financial Literacy
 Treasury
ACTION: Notice of meeting.

DEPARTMENT OF TRANSPORTATION
Federal Highway Administration
Environmental Impact Statement: Currituck and Dare Counties, NC
 AGENCY: Federal Highway Administration (FHWA), DOT.
ACTION: Rescinding of Notice of Intent and Draft Environmental Impact Statement (DEIS).

SUMMARY: The FHWA is issuing this notice to advise the public that we are rescinding the notice of intent and the public notice to prepare an environmental impact statement (EIS) for a proposed highway project in Currituck and Dare Counties, North Carolina.

FOR FURTHER INFORMATION CONTACT: Mr. George Hoops, P.E., Major Projects Engineer, Federal Highway Administration, 310 Bern Avenue, Suite 410, Raleigh, North Carolina 27601-1418. Telephone: (919) 747-7022.

SUPPLEMENTARY INFORMATION: The FHWA, in cooperation with the North Carolina Department of Transportation (NCDOT) and the North Carolina Turnpike Authority (NCTA), is rescinding the notice of intent to prepare an EIS for a proposed bridge

NC 12 on the Outer Banks. The FHWA, in cooperation with the North Carolina Department of Transportation (NCDOT), issued a Draft Environmental Impact Statement (DEIS) on the project in January 1998. FHWA and NCDOT held public hearings and provided a comment period on the DEIS. Since the 1998 DEIS, there have been several changes in the project. These changes led to the decision to rescind the 1995 notice of intent and the 1998 DEIS (Federal Register Vol. 73, No. 107, page 31733) and to issue this notice of intent. Before releasing this notice of intent, FHWA and NCTA began coordinating with Federal and state environmental regulatory and resource agencies and the public in the development of the purpose and need for the proposed action and a conceptual range of alternatives in the project study area. The draft purpose and need for the proposed action includes the following elements: (i) Improving traffic flow on the project area's thoroughfares (NC 12 and U.S. 158), (ii) reducing travel time for persons traveling between Currituck County mainland and Currituck County Outer Banks, and (iii) reducing hurricane clearance times for residents and visitors who use NC 168 and U.S. 158 during a coastal evacuation.

The EIS for the proposed action will consider alternatives that include improving existing roadways (NC 12 and U.S. 158), as well as alternatives that involve building a new Mid-Currituck Sound bridge in combination with improving existing roads. The analysis will also include a range of non-highway improvement alternatives, including no-build, ferry service, expanding transit service, transportation demand management/shifting rental unit start times, and transportation systems management (TSM) alternatives. In addition, NCTA is considering a range of alternatives for the proposed bridge crossing, including (1) Two, three, or four-lane bridges; (2) various interchange configurations for the bridge's connections to the existing roadway network; and (3) a range of potential corridors for the bridge. As part of the EIS, NCTA will also study the feasibility and impacts of developing the proposed project as a toll facility.

FHWA and NCTA will continue to provide the agencies, local governments, and the public with opportunities for involvement through informational workshops, project newsletters, informational meetings, and other means. Information on the dates, times, and locations of future citizens' informational workshops will be posted on the NCTA Web site and will be

advertised in the local news media, and newsletters will be mailed to those on the project mailing list. If you wish to be placed on the mailing list, contact Jennifer Harris at the address listed below or by submitting an e-mail to midcurrituck@ncturnpike.org. Once completed, the Draft EIS will be available for public and agency review and comment prior to the public hearing.

To ensure the full range of issues related to the proposed action are addressed and all significant issues identified, comments and suggestions are invited from all interested parties. Comments and questions concerning the proposed action should be directed to the FHWA at the address provided above or directed to: Ms. Jennifer Harris, P.E., Staff Engineer, North Carolina Turnpike Authority, 5400 Glenwood Avenue, Suite 400, Raleigh, North Carolina 27612. Telephone (919) 571-3000.

(Catalog of Federal Domestic Assistance, Program Number 20.205, Highway Research, Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation of Federal programs and activities apply to this program.)

Issued on: June 10, 2008.

George Hoops,
Major Projects Engineer, Federal Highway Administration, Raleigh, North Carolina.
[FR Doc. 08-13444 Filed 6-13-08; 8:45 am]
BILLING CODE 4910-22-P

DEPARTMENT OF TRANSPORTATION

Maritime Administration

[Docket No. MARAD-2008 0052]

Requested Administrative Waiver of the Coastwise Trade Laws

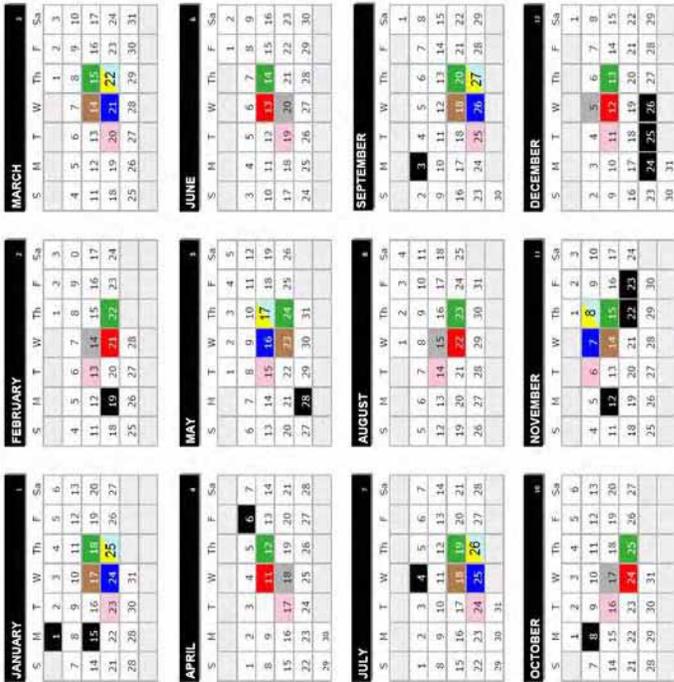
AGENCY: Maritime Administration, Department of Transportation.
ACTION: Invitation for public comments on a requested administrative waiver of the Coastwise Trade Laws for the vessel CHUT LOON.

SUMMARY: As authorized by Pub. L. 105-363 and Pub. L. 107-295, the Secretary of Transportation, as represented by the Maritime Administration (MARAD), is authorized to grant waivers of the U.S.-built requirement of the coastwise laws under certain circumstances. A request for such a waiver has been received by MARAD. The vessel, and a brief description of the proposed service, is listed below. The complete application is given in DOT docket MARAD-2008-0052 at <http://www.regulations.gov>. Interested parties may comment on the

Exhibit 2

2007 CONCURRENCE AND INTERAGENCY MEETINGS

© 2008, United LLC
www.marad.com



- State and Federal Holidays
- Eastern Concurrence Meetings
- Eastern Hydraulics Meetings
- NC Turnpike Authority East
- Interagency Meetings - Mornings
- Western Concurrence Meetings
- Western Hydraulics Meetings
- NC Turnpike Authority West - Afternoon

3) Timely review and comment on documents provided for your agency's input during the environmental review process.

Please respond to this invitation prior to December 14, 2007. A federal agency that does not decline the invitation by this date will automatically be designated as a participating agency. If you wish to decline, we ask that your agency submit a separate letter stating your reason for declining the invitation to Ms. Jennifer Harris, P.E., NCTA Staff Engineer, at 5400 Glenwood Avenue, Suite 400, Raleigh, North Carolina 27612. Pursuant to SAFETEA-LU Section 6002, any federal agency that chooses to decline the invitation to be a participating agency must specifically state in its response that it:

- Has no jurisdiction or authority with respect to the project;
- Has no expertise or information relevant to the project; and
- Does not intend to submit comments on the project.

If you have any questions or would like to discuss in more detail the project or our agencies' respective roles and responsibilities during the preparation of the EIS, please contact Mr. George Hoops, FHWA Major Projects Engineer, at (919) 856-4350 or Ms. Harris at (919) 571-3004.

Thank you for your cooperation and interest in this project.

Sincerely,


John F. Sullivan, III, P.E.
Division Administrator

cc: Mr. George Hoops, P.E., FHWA
Ms. Jennifer Harris, P.E., NCTA
Mr. Scott McLendon, USACE



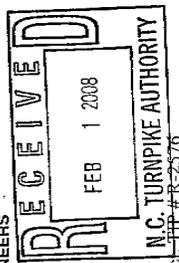
DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS

P.O. BOX 1890
WILMINGTON, NORTH CAROLINA 28402-1890

January 29, 2008

IN REPLY REFER TO

Regulatory Division



SUBJECT: Action ID. 199502242, Mid-Currituck Bridge Project, TRP #R-2376

John F. Sullivan, III, P.E.
Division Administrator
Federal Highway Administration
North Carolina Division
310 New Bern Avenue, Suite 410
Raleigh, NC 27601

Dear Mr. Sullivan:

Reference your letter dated November 14, 2007 in which you invited us to participate as a Cooperating agency in the development of the EIS for the proposed transportation improvements in the Currituck Sound area between US 158 and NC 12, Currituck County, North Carolina. In addition, you have also requested that we participate as a Participating Agency pursuant to Section 6002 of SAFETEA-LU.

In accordance with the Council on Environmental Quality, (40 CFR 1501.6 Cooperating Agencies), we agree to participate as a Cooperating Agency. It is our intention to formally adopt the FHWA NEPA document, in whole or in part, provided it meets our requirements relative to Section 404 of the Clean Water Act and NEPA when the Record of Decision (or Finding of No Significant Impact, as appropriate) is completed. Please note that other program commitments will preclude us from funding or writing any portion of the subject document. However, it is our intention to fully participate in the development of the necessary document throughout the NEPA process. We would also like to reiterate, that although the NC TA has elected to not follow the NEPA/404 Merger process, we fully expect that at the end of this process, that our requirements pursuant to Section 404 of the Clean Water Act, including our Public Interest Review, and Section 10 of the Rivers and Harbors Act are fully satisfied.

Finally, we also agree to Participating Agency status, pursuant to Section 6002 of SAFETEA-LU, and will provide you with issues of concern regarding environmental or socioeconomic impacts as early as possible in the planning process that could substantially delay or prevent our agency from granting a permit for the project.



U.S. Department
of Transportation
**Federal Highway
Administration**

North Carolina Division

November 14, 2007

310 New Bern Avenue, Suite 410
Raleigh, North Carolina 27601

Thank you for your time and cooperation. Questions or comments may be addressed to Mr. Bill Biddlecome, Washington Regulatory Field Office, Post Office Box 1000, Washington, North Carolina, 27789, or telephone 252-975-1616, extension 26.

2

Sincerely,

Scott C. McLendon
Assistant Division Chief

Copies Furnished:

- Ms. Jennifer Harris, P.E. ✓
NCTA Staff Engineer
5400 Glenwood Avenue, Suite 400
Raleigh, North Carolina 27612
- Mr. Pete Benjamin
U.S. Fish and Wildlife Service
Fish and Wildlife Enhancement
Post Office Box 33726
Raleigh, North Carolina 27636-3726
- Mr. Ron Sechler
National Marine Fisheries Service
101 Pivers Island
Beaufort, North Carolina 28516

- Mr. David Wainwright
Water Quality Section
North Carolina Division of Environment
and Natural Resources
1650 Mail Service Center
Raleigh, North Carolina 27699-1650
- Ms. Cathy Brittingham
Division of Coastal Management
1638 Mail Service Center
Raleigh, North Carolina 27699-1638

In Reply Refer To:
HDA-NC

Mr. Bill Brazier
US Coast Guard
431 Crawford Street
Portsmouth, VA 23704-5004

RE: Invitation to Become a Participating Agency and Cooperating Agency
Mid-Currituck Bridge Project
Currituck County/STIP Project: R-2576

Dear Mr. Brazier:

The Federal Highway Administration (FHWA), in cooperation with the North Carolina Turnpike Authority (NCTA) and North Carolina Department of Transportation (NCDOT), is preparing an Environmental Impact Statement (EIS) for improvements in the Currituck Sound area between US 158 and NC 12 in Currituck County. This project is included in the 2007-2013 North Carolina State Transportation Improvement Program (STIP) as STIP Project R-2576. The purpose of this project, as currently defined, is to improve traffic flow on the area's thoroughfares, reduce travel time for persons traveling between the Currituck County mainland and the Currituck County Outer Banks, and reduce hurricane clearance time for residents and visitors who use NC 168 and US 158 during a coastal evacuation.

Your agency was identified as an agency that may have an interest in the project. With this letter, we are extending to your agency an invitation to be a participating agency with the FHWA in the development of the EIS for the subject project. This designation does not imply that your agency either supports the proposal or has any special expertise with respect to evaluation of the project.

FHWA also requests the participation of the US Coast Guard as a cooperating agency in the preparation of the Draft EIS and Final EIS, in accordance with 40 CFR 1501.6 of the Council on Environmental Quality's (CEQ) Regulations for Implementing the Procedural Provision of the National Environmental Policy Act.

Pursuant to Section 6002 of SAFETEA-LU, participating agencies are responsible to identify, as early as practicable, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. We suggest that your agency's role in the development of the above project include the following as they relate to your area of expertise:

- 1) Provide meaningful and early input on defining the purpose and need, determining the range of alternatives to be considered, and the methodologies and level of detail required in the alternatives analysis.
- 2) Participate in coordination meetings and joint field reviews as appropriate.
- 3) Timely review and comment on documents provided for your agency's input during the environmental review process.

**MOVING THE
AMERICAN
ECONOMY**

Please respond to this invitation prior to December 14, 2007. A federal agency that does not decline the invitation by this date will automatically be designated as a participating agency. If you wish to decline, we ask that your agency submit a separate letter stating your reason for declining the invitation to Ms. Jennifer Harris, P.E., NCTA Staff Engineer, at 5400 Glenwood Avenue, Suite 400, Raleigh, North Carolina 27612. Pursuant to SAFETEA-LU Section 6002, any federal agency that chooses to decline the invitation to be a participating agency must specifically state in its response that it:

- Has no jurisdiction or authority with respect to the project;
- Has no expertise or information relevant to the project; and
- Does not intend to submit comments on the project.

If you have any questions or would like to discuss in more detail the project or our agencies' respective roles and responsibilities during the preparation of the EIS, please contact Mr. George Hoops, FHWA Major Projects Engineer, at (919) 856-4350 or Ms. Harris at (919) 571-3004.

Thank you for your cooperation and interest in this project.

Sincerely,


 For John F. Sulhavan, II, P.E.,
 Division Administrator

cc: Mr. George Hoops, P.E., FHWA
Ms. Jennifer Harris, P.E., NCTA



U.S. Department
of Transportation
**Federal Highway
Administration**

North Carolina Division
November 14, 2007

310 New Bern Avenue, Suite 410
Raleigh, North Carolina 27601

In Reply Refer To:
HDA-NC

Mr. Gary Jordan
US Fish and Wildlife Service
P.O. Box 33726,
Raleigh, NC 27636-3726

RE: Invitation to Become a Participating Agency
Mid-Currituck Bridge Project
Currituck County/STIP Project: R-2576

Dear Mr. Jordan,

The Federal Highway Administration (FHWA), in cooperation with the North Carolina Turnpike Authority (NCTA) and North Carolina Department of Transportation (NCDOT), is initiating an Environmental Impact Statement (EIS) for improvements in the Currituck Sound area between US 158 and NC 12 in Currituck County. This project is included in the 2007-2013 North Carolina State Transportation Improvement Program (STIP) as STIP Project R-2576. The purpose of this project, as currently defined, is to improve traffic flow on the area's thoroughfares, reduce travel time for persons traveling between the Currituck County mainland and the Currituck County Outer Banks, and reduce hurricane clearance time for residents and visitors who use NC 168 and US 158 during a coastal evacuation.

Your agency was identified as an agency that may have an interest in the project. With this letter, we are extending to your agency an invitation to be a participating agency with the FHWA in the development of the EIS for the subject project. This designation does not imply that your agency either supports the proposal or has any special expertise with respect to evaluation of the project.

Pursuant to Section 6002 of SAFETEA-LU, participating agencies are responsible to identify, as early as practicable, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. We suggest that your agency's role in the development of the above project include the following as they relate to your area of expertise:

- 1) Provide meaningful and early input on defining the purpose and need, determining the range of alternatives to be considered, and the methodologies and level of detail required in the alternatives analysis.
- 2) Participate in coordination meetings and joint field reviews as appropriate.
- 3) Timely review and comment on documents provided for your agency's input during the environmental review process.

Please respond to this invitation prior to December 14, 2007. A federal agency that does not decline the invitation by this date will automatically be designated as a participating agency. If you wish to decline,



we ask that your agency submit a separate letter stating your reason for declining the invitation to Ms. Jennifer Harris, P.E., NCTA Staff Engineer, at 5400 Glenwood Avenue, Suite 400, Raleigh, North Carolina 27612. Pursuant to SAFETEA-LU Section 6002, any federal agency that chooses to decline the invitation to be a participating agency must specifically state in its response that it:

- Has no jurisdiction or authority with respect to the project;
- Has no expertise or information relevant to the project; and
- Does not intend to submit comments on the project.

A federal agency that does not decline the invitation by the date specified above will automatically be designated as a participating agency.

If you have any questions or would like to discuss in more detail the project or our agencies' respective roles and responsibilities during the preparation of the EIS, please contact please contact Mr. George Hoops, FHWA Major Projects Engineer, at (919) 856-4350 or Ms. Harris at (919) 571-3004.

Thank you for your cooperation and interest in this project.

Sincerely,



Roy John P. Sullivan, III, P.E.
Division Administrator

cc: Mr. George Hoops, P.E., FHWA
Ms. Jennifer Harris, P.E., NCTA
Mr. Pete Benjamin, USFWS



US Department
of Transportation
**Federal Highway
Administration**

North Carolina Division

November 14, 2007

310 New Bern Avenue, Suite 410
Raleigh, North Carolina 27601

In Reply Refer To:
HDA-NC

Mr. Chris Militscher
US Environmental Protection Agency
310 New Bern Ave, Suite 410
Raleigh, NC 27601

RE: Invitation to Become a Participating Agency
Mid-Currituck Bridge Project
Currituck County/STIP Project: R-2576

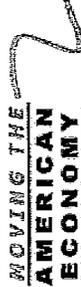
Dear Mr. Militscher,

The Federal Highway Administration (FHWA), in cooperation with the North Carolina Turnpike Authority (NCTA) and North Carolina Department of Transportation (NCDOT), is preparing an Environmental Impact Statement (EIS) for improvements in the Currituck Sound area between US 158 and NC 12 in Currituck County. This project is included in the 2007-2013 North Carolina State Transportation Improvement Program (STIP) as STIP Project R-2576. The purpose of this project, as currently defined, is to improve traffic flow on the area's thoroughfares, reduce travel time for persons traveling between the Currituck County mainland and the Currituck County Outer Banks, and reduce hurricane clearance time for residents and visitors who use NC 168 and US 158 during a coastal evacuation.

Your agency was identified as an agency that may have an interest in the project. With this letter, we are extending to your agency an invitation to be a participating agency with the FHWA in the development of the EIS for this subject project. This designation does not imply that your agency either supports the proposal or has any special expertise with respect to evaluation of the project.

Pursuant to Section 6002 of SAFETEA-LU, participating agencies are responsible to identify, as early as practicable, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. We suggest that your agency's role in the development of the above project include the following as they relate to your area of expertise:

- 1) Provide meaningful and early input on defining the purpose and need, determining the range of alternatives to be considered, and the methodologies and level of detail required in the alternatives analysis.
- 2) Participate in coordination meetings and joint field reviews as appropriate.
- 3) Timely review and comment on documents provided for your agency's input during the environmental review process.



Please respond to this invitation prior to December 14, 2007. A federal agency that does not decline the invitation by this date will automatically be designated as a participating agency. If you wish to decline, we ask that your agency submit a separate letter stating your reason for declining the invitation to Ms. Jennifer Harris, P.E., NCTA Staff Engineer, at 5400 Glenwood Avenue, Suite 400, Raleigh, North Carolina 27612. Pursuant to SAFETEA-LU Section 6002, any federal agency that chooses to decline the invitation to be a participating agency must specifically state in its response that it:

- Has no jurisdiction or authority with respect to the project;
- Has no expertise or information relevant to the project; and
- Does not intend to submit comments on the project.

A federal agency that does not decline the invitation by the date specified above will automatically be designated as a participating agency.

If you have any questions or would like to discuss in more detail the project or our agencies' respective roles and responsibilities during the preparation of the EIS, please contact please contact Mr. George Hoops, FHWA Major Projects Engineer, at (919) 856-4350 or Ms. Harris at (919) 571-3004.

Thank you for your cooperation and interest in this project.

Sincerely,



John F. Sullivan, III, P.E.
Division Administrator

cc: Mr. George Hoops, P.E., FHWA
 Ms. Jennifer Harris, P.E., NCTA
 Mr. Ted Bisterfeld, EPA-Atlanta



U.S. Department
 of Transportation
**Federal Highway
 Administration**

North Carolina Division

November 14, 2007

310 New Bern Avenue, Suite 410
 Raleigh, North Carolina 27601

In Reply Refer To:
 HDA-NC

Mr. Ron Sechler
 National Marine Fisheries Service
 101 Pivers Island Road
 Beaufort, NC 28516

RE: Invitation to Become a Participating Agency
 Mid-Currituck Bridge Project
 Currituck County/STIP Project: R-2576

Dear Mr. Sechler,

The Federal Highway Administration (FHWA), in cooperation with the North Carolina Turnpike Authority (NCTA) and North Carolina Department of Transportation (NCDOT), is preparing an Environmental Impact Statement (EIS) for improvements in the Currituck Sound area between US 158 and NC 12 in Currituck County. This project is included in the 2007-2013 North Carolina State Transportation Improvement Program (STIP) as STIP Project R-2576. The purpose of this project, as currently defined, is to improve traffic flow on the area's thoroughfares, reduce travel time for persons traveling between the Currituck County mainland and the Currituck County Outer Banks, and reduce hurricane clearance time for residents and visitors who use NC 168 and US 158 during a coastal evacuation.

Your agency was identified as an agency that may have an interest in the project. With this letter, we are extending to your agency an invitation to be a participating agency with the FHWA in the development of the EIS for the subject project. This designation does not imply that your agency either supports the proposal or has any special expertise with respect to evaluation of the project.

Pursuant to Section 6002 of SAFETEA-LU, participating agencies are responsible to identify, as early as practicable, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. We suggest that your agency's role in the development of the above project include the following as they relate to your area of expertise:

- 1) Provide meaningful and early input on defining the purpose and need, determining the range of alternatives to be considered, and the methodologies and level of detail required in the alternatives analysis.
- 2) Participate in coordination meetings and joint field reviews as appropriate.
- 3) Timely review and comment on documents provided for your agency's input during the environmental review process.



Please respond to this invitation prior to December 14, 2007. A federal agency that does not decline the invitation by this date will automatically be designated as a participating agency. If you wish to decline, we ask that your agency submit a separate letter stating your reason for declining the invitation to Ms. Jennifer Harris, P.E., NCTA Staff Engineer, at 5400 Glenwood Avenue, Suite 400, Raleigh, North Carolina 27612. Pursuant to SAFETEA-LU Section 6002, any federal agency that chooses to decline the invitation to be a participating agency must specifically state in its response that it:

- Has no jurisdiction or authority with respect to the project;
- Has no expertise or information relevant to the project; and
- Does not intend to submit comments on the project.

A federal agency that does not decline the invitation by the date specified above will automatically be designated as a participating agency.

If you have any questions or would like to discuss in more detail the project or our agencies' respective roles and responsibilities during the preparation of the EIS, please contact please contact Mr. George Hoops, FHWA Major Projects Engineer, at (919) 856-4350 or Ms. Harris at (919) 571-3004.

Thank you for your cooperation and interest in this project.

Sincerely,


 For Mr. F. Sullivan, III, P.E.
 Division Administrator

cc: Mr. George Hoops, P.E., FHWA
Ms. Jennifer Harris, P.E., NCTA



STATE OF NORTH CAROLINA
TURNPIKE AUTHORITY

MICHAEL F. EASLEY
GOVERNOR

1578 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1578

DAVID W. JOTTNER
EXECUTIVE DIRECTOR



November 14, 2007

Ms. Cathy Brittingham
NCDENR-Division of Coastal Management
1638 Mail Service Center
Raleigh, NC 27699-1638

RE: Invitation to Become Participating Agency
Mid-Currituck Bridge Project
Currituck County/STIP Project: R-2576

Dear Ms. Brittingham,

The Federal Highway Administration (FHWA), in cooperation with the North Carolina Turnpike Authority (NCTA) and North Carolina Department of Transportation (NCDOT), is preparing an Environmental Impact Statement (EIS) for improvements in the Currituck Sound area between US 158 and NC 12 in Currituck County. This project is included in the 2007-2013 North Carolina State Transportation Improvement Program (STIP) as STIP Project R-2576. The purpose of this project, as currently defined, is to improve traffic flow on the area's thoroughfares, reduce travel time for persons traveling between the Currituck County mainland and the Currituck County Outer Banks, and to reduce hurricane clearance time for residents and visitors who use NC 168 and US 158 during a coastal evacuation.

Your agency was identified as an agency that may have an interest in the project. With this letter, we are extending to your agency an invitation to be a participating agency with the FHWA in the development of the EIS for the subject project. This designation does not imply that your agency either supports the proposal or has any special expertise with respect to evaluation of the project.

Pursuant to Section 6002 of SAFETEA-LU, participating agencies are responsible to identify, as early as practicable, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. We suggest that your agency's role in the development of the above project include the following as they relate to your area of expertise:

- 1) Provide meaningful and early input on defining the purpose and need, determining the range of alternatives to be considered, and the methodologies and level of detail required in the alternatives analysis.
- 2) Participate in coordination meetings and joint field reviews as appropriate.
- 3) Timely review and comment on documents provided for your agency's input during the environmental review process.

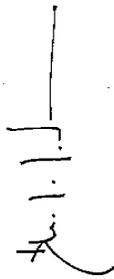
NORTH CAROLINA TURNPIKE AUTHORITY
TELEPHONE: 919-571-3000 FAX: 919-571-3015

Please respond to this invitation prior to December 14, 2007. If you wish to accept this invitation, please sign in the space below and return a copy to Ms. Jennifer Harris, P.E., NCTA Staff Engineer, at 5400 Glenwood Avenue, Suite 400, Raleigh, North Carolina 27612. If you wish to decline, we ask that your agency submit a separate letter stating your reason for declining the invitation.

If you have any questions or would like to discuss in more detail the project or our agencies' respective roles and responsibilities during the preparation of the EIS, please contact Ms. Harris at (919) 571-3004.

Thank you for your cooperation and interest in this project.

Sincerely,



Steven D. DeWitt, P.E.
Chief Engineer

cc: Mr. George Hoops, PE, FHWA
Ms. Jennifer Harris, PE, NCTA

We accept the invitation to become a participating agency.

Catherine Brittingham
Print Name
Catherine P. Brittingham
Signature

12/11/07
Date



STATE OF NORTH CAROLINA
TURNPIKE AUTHORITY



MICHAEL F. EASLEY
GOVERNOR

1578 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1578

DAVID W. JOYNER
EXECUTIVE DIRECTOR

November 14, 2007

Ms. Sara Winslow
NCDENR-Division of Marine Fisheries
1367 US 17 South
Elizabeth City, NC 27909

RE: Invitation to Become Participating Agency
Mid-Currituck Bridge Project
Currituck County/STIP Project: R-2576

Dear Ms. Winslow,

The Federal Highway Administration (FHWA), in cooperation with the North Carolina Turnpike Authority (NCTA) and North Carolina Department of Transportation (NCDOT), is preparing an Environmental Impact Statement (EIS) for improvements in the Currituck Sound area between US 158 and NC 12 in Currituck County. This project is included in the 2007-2013 North Carolina State Transportation Improvement Program (STIP) as STIP Project R-2576. The purpose of this project, as currently defined, is to improve traffic flow on the area's thoroughfares, reduce travel time for persons traveling between the Currituck County mainland and the Currituck County Outer Banks, and to reduce hurricane clearance time for residents and visitors who use NC 168 and US 158 during a coastal evacuation.

Your agency was identified as an agency that may have an interest in the project. With this letter, we are extending to your agency an invitation to be a participating agency with the FHWA in the development of the EIS for the subject project. This designation does not imply that your agency either supports the proposal or has any special expertise with respect to evaluation of the project.

Pursuant to Section 6002 of SAFETEA-LU, participating agencies are responsible to identify, as early as practicable, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. We suggest that your agency's role in the development of the above project include the following as they relate to your area of expertise:

- 1) Provide meaningful and early input on defining the purpose and need, determining the range of alternatives to be considered, and the methodologies and level of detail required in the alternatives analysis.
- 2) Participate in coordination meetings and joint field reviews as appropriate.
- 3) Timely review and comment on documents provided for your agency's input during the environmental review process.



STATE OF NORTH CAROLINA
TURNPIKE AUTHORITY

DAVID W. JOYNER
EXECUTIVE DIRECTOR

1578 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1578

MICHAEL F. EASLEY
GOVERNOR

November 14, 2007

Mr. David Wainwright
NCDENR-Division of Water Quality
1650 Mail Service Center
Raleigh, NC 27699-1650

RE: Invitation to Become Participating Agency
Mid-Currituck Bridge Project
Currituck County/STIP Project: R-2576

Dear Mr. Wainwright,

The Federal Highway Administration (FHWA), in cooperation with the North Carolina Turnpike Authority (NCTA) and North Carolina Department of Transportation (NCDOT), is preparing an Environmental Impact Statement (EIS) for improvements in the Currituck Sound area between US 158 and NC 12 in Currituck County. This project is included in the 2007-2013 North Carolina State Transportation Improvement Program (STIP) as STIP Project R-2576. The purpose of this project, as currently defined, is to improve traffic flow on the area's thoroughfares, reduce travel time for persons traveling between the Currituck County mainland and the Currituck County Outer Banks, and to reduce hurricane clearance time for residents and visitors who use NC 168 and US 158 during a coastal evacuation.

Your agency was identified as an agency that may have an interest in the project. With this letter, we are extending to your agency an invitation to be a participating agency with the FHWA in the development of the EIS for the subject project. This designation does not imply that your agency either supports the proposal or has any special expertise with respect to evaluation of the project.

Pursuant to Section 6002 of SAFETEA-LU, participating agencies are responsible to identify, as early as practicable, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. We suggest that your agency's role in the development of the above project include the following as they relate to your area of expertise:

- 1) Provide meaningful and early input on defining the purpose and need, determining the range of alternatives to be considered, and the methodologies and level of detail required in the alternatives analysis.
- 2) Participate in coordination meetings and joint field reviews as appropriate.
- 3) Timely review and comment on documents provided for your agency's input during the environmental review process.

NORTH CAROLINA TURNPIKE AUTHORITY
TELEPHONE: 919-571-3000 FAX: 919-571-3015

Please respond to this invitation prior to December 14, 2007. If you wish to accept this invitation, please sign in the space below and return a copy to Ms. Jennifer Harris, P.E., NCTA Staff Engineer, at 5400 Glenwood Avenue, Suite 200, Raleigh, North Carolina 27612. If you wish to decline, we ask that your agency submit a separate letter stating your reason for declining the invitation.

If you have any questions or would like to discuss in more detail the project or our agencies' respective roles and responsibilities during the preparation of the EIS, please contact Ms. Harris at (919) 571-3004.

Thank you for your cooperation and interest in this project.

Sincerely,

Steven D. DeWitt, P.E.
Chief Engineer

cc: Mr. George Hoops, PE, FHWA
Ms. Jennifer Harris, PE, NCTA

We accept the invitation to become a participating agency.

Sara E. Winslow
Print Name

Signature

11-20-07
Date

Please respond to this invitation prior to December 14, 2007. If you wish to accept this invitation, please sign in the space below and return a copy to Ms. Jennifer Harris, P.E., NCTA Staff Engineer, at 5400 Glenwood Avenue, Suite 400, Raleigh, North Carolina 27612. If you wish to decline, we ask that your agency submit a separate letter stating your reason for declining the invitation.

If you have any questions or would like to discuss in more detail the project or our agencies' respective roles and responsibilities during the preparation of the EIS, please contact Ms. Harris at (919) 571-3004.

Thank you for your cooperation and interest in this project.

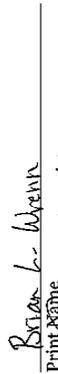
Sincerely,



Steven D. DeWitt, P.E.
Chief Engineer

cc: Mr. George Hoops, PE, FHWA
Ms. Jennifer Harris, PE, NCTA
Mr. John Hennessy, NCDENR-DWQ

We accept the invitation to become a participating agency.


Print Name


Signature

11/19/2007
Date



STATE OF NORTH CAROLINA
TURNPIKE AUTHORITY

MICHAEL F. EASLEY
GOVERNOR

1578 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1578

DAVID W. JOYNER
EXECUTIVE DIRECTOR



November 14, 2007

Mr. Travis Wilson
NC Wildlife Resources Commission
1142 I-85 Service Rd.
Creedmoor, NC 27522

RE: Invitation to Become Participating Agency
Mid-Currituck Bridge Project
Currituck County/STIP Project: R-2576

Dear Mr. Wilson,

The Federal Highway Administration (FHWA), in cooperation with the North Carolina Turnpike Authority (NCTA) and North Carolina Department of Transportation (NCDOT), is preparing an Environmental Impact Statement (EIS) for improvements in the Currituck Sound area between US 158 and NC 12 in Currituck County. This project is included in the 2007-2013 North Carolina State Transportation Improvement Program (STIP) as STIP Project R-2576. The purpose of this project, as currently defined, is to improve traffic flow on the area's thoroughfares, reduce travel time for persons traveling between the Currituck County mainland and the Currituck County Outer Banks, and to reduce hurricane clearance time for residents and visitors who use NC 168 and US 158 during a coastal evacuation.

Your agency was identified as an agency that may have an interest in the project. With this letter, we are extending to your agency an invitation to be a participating agency with the FHWA in the development of the EIS for the subject project. This designation does not imply that your agency either supports the proposal or has any special expertise with respect to evaluation of the project.

Pursuant to Section 6002 of SAFETEA-LU, participating agencies are responsible to identify, as early as practicable, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. We suggest that your agency's role in the development of the above project include the following as they relate to your area of expertise:

- 1) Provide meaningful and early input on defining the purpose and need, determining the range of alternatives to be considered, and the methodologies and level of detail required in the alternatives analysis.
- 2) Participate in coordination meetings and joint field reviews as appropriate.
- 3) Timely review and comment on documents provided for your agency's input during the environmental review process.

Please respond to this invitation prior to December 14, 2007. If you wish to accept this invitation, please sign in the space below and return a copy to Ms. Jennifer Harris, P.E., NCTA Staff Engineer, at 5400 Glenwood Avenue, Suite 400, Raleigh, North Carolina 27612. If you wish to decline, we ask that your agency submit a separate letter stating your reason for declining the invitation.

If you have any questions or would like to discuss in more detail the project or our agencies' respective roles and responsibilities during the preparation of the EIS, please contact Ms. Harris at (919) 571-3004.

Thank you for your cooperation and interest in this project.

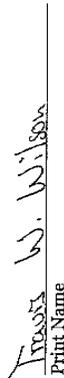
Sincerely,



Steven D. DeWitt, P.E.
Chief Engineer

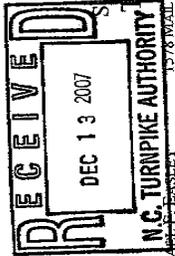
cc: Mr. George Hoops, PE, FHWA
Ms. Jennifer Harris, PE, NCTA

We accept the invitation to become a participating agency.


Print Name


Signature

December 4, 2007
Date



STATE OF NORTH CAROLINA
TURNPIKE AUTHORITY

MICHAEL W. WATSON, GOVERNOR
1578 WALKER SERVICE CENTER, RALEIGH, N.C. 27699-1578

NOV 13 2007
DAVID W. JOYNER
EXECUTIVE DIRECTOR

November 14, 2007

CJL 94-0609

Mr. Peter Sandbeck
State Historic Preservation Office
4617 Mail Service Center
Raleigh, NC 27699-4617

RE: Invitation to Become Participating Agency
Mid-Currituck Bridge Project
Currituck County/STIP Project: R-2576

Dear Mr. Sandbeck,

The Federal Highway Administration (FHWA), in cooperation with the North Carolina Turnpike Authority (NCTA) and North Carolina Department of Transportation (NCDOT), is preparing an Environmental Impact Statement (EIS) for improvements in the Currituck Sound area between US 158 and NC 12 in Currituck County. This project is included in the 2007-2013 North Carolina State Transportation Improvement Program (STIP) as STIP Project R-2576. The purpose of this project, as currently defined, is to improve traffic flow on the area's thoroughfares, reduce travel time for persons traveling between the Currituck County mainland and the Currituck County Outer Banks, and to reduce hurricane clearance time for residents and visitors who use NC 168 and US 158 during a coastal evacuation.

Your agency was identified as an agency that may have an interest in the project. With this letter, we are extending to your agency an invitation to be a participating agency with the FHWA in the development of the EIS for the subject project. This designation does not imply that your agency either supports the proposal or has any special expertise with respect to evaluation of the project.

Pursuant to Section 6002 of SAFETEA-LU, participating agencies are responsible to identify, as early as practicable, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. We suggest that your agency's role in the development of the above project include the following as they relate to your area of expertise:

- 1) Provide meaningful and early input on defining the purpose and need, determining the range of alternatives to be considered, and the methodologies and level of detail required in the alternatives analysis.
- 2) Participate in coordination meetings and joint field reviews as appropriate.
- 3) Timely review and comment on documents provided for your agency's input during the environmental review process.

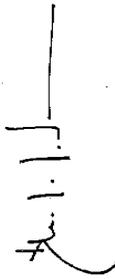
NORTH CAROLINA TURNPIKE AUTHORITY
TELEPHONE: 919-571-3000 FAX: 919-571-3015

Please respond to this invitation prior to December 14, 2007. If you wish to accept this invitation, please sign in the space below and return a copy to Ms. Jennifer Harris, P.E., NCTA Staff Engineer, at 5400 Glenwood Avenue, Suite 400, Raleigh, North Carolina 27612. If you wish to decline, we ask that your agency submit a separate letter stating your reason for declining the invitation.

If you have any questions or would like to discuss in more detail the project or our agencies' respective roles and responsibilities during the preparation of the EIS, please contact Ms. Harris at (919) 571-3004.

Thank you for your cooperation and interest in this project.

Sincerely,



Steven D. DeWitt, P.E.
Chief Engineer

cc: Mr. George Hoops, PE, FHWA
Ms. Jennifer Harris, PE, NCTA
Ms. Renee Gledhill-Early, SHPO

We accept the invitation to become a participating agency.

Renee Gledhill-Early for SHPO

Print Name

Renee Gledhill-Early

Signature

11-19-07

Date