

FINAL STAKEHOLDER INVOLVEMENT REPORT

For

ADMINISTRATIVE ACTION ENVIRONMENTAL IMPACT STATEMENT



Wake and Johnston Counties

STIP Project Nos. R-2721, R-2828, and R-2829
State Project Nos. 6.401078, 6.401079, and 6.401080
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1 INTRODUCTION

This technical report describes the scoping process, agency coordination process, and public involvement activities, as well as the key issues and pertinent information received through these efforts during preparation of the Draft Environmental Impact Statement (EIS) and Final EIS for the Complete 540 project. This version of the report supersedes the March 2015 and December 2017 versions of the report. The March 2015 version was prepared prior to the release of the Draft EIS. Following release of the Draft EIS, there was substantial stakeholder involvement. The December 2017 version of the report included information about the stakeholder involvement activities that occurred following release of the Draft EIS and prior to release of the Final EIS. The current version of this report also documents stakeholder involvement activities that occurred following release of the project's Final EIS.

1.1 PROPOSED ACTION AND PROJECT PURPOSE

The North Carolina Department of Transportation (NCDOT), in cooperation with the Federal Highway Administration (FHWA), proposes transportation improvements in the project study area and surrounding region to address transportation needs as defined in the project's *Purpose and Need Statement* (Lochner, 2011). The focus of these improvements is a potential extension of the Triangle Expressway (NC 540) from its current terminus at the NC 55 Bypass in Apex to the US 64/US 264 Bypass (I-495) in Knightdale. This action is designated as three projects in the NCDOT 2018-2027 STIP: R-2721, R-2828, and R-2829. Together, these STIP projects would combine to complete the 540 Outer Loop around the Raleigh metropolitan area. In some instances, the project is referred to as having two phases: Phase I is the western portion of the study area between NC 55 Bypass in Apex and I-40 near the Wake/Johnston County line; Phase II is the eastern portion of the study area between I-40 and US 64/US 264 Bypass (I-495) in Knightdale. NCDOT established a protected corridor for the project between NC 55 Bypass and I-40 in 1996 and 1997. For purposes of meeting the requirements of the National Environmental Policy Act (NEPA), both phases are being examined in the current study as a single and complete project. It is likely that the project would be constructed in phases, but depending on the availability of funding, may or may not be consistent with the current phase descriptions noted.

The project study area is located south and southeast of the City of Raleigh between the towns of Holly Springs to the west and Knightdale to the east. The project study area extends as far south as NC 42 between Fuquay-Varina and Clayton. While most of the project study area is within Wake County, a small portion of western Johnston County is also included. **Figure 1** shows the project study area.

This project, referred to as the Complete 540 - Triangle Expressway Southeast Extension, is intended to improve transportation mobility and reduce forecast traffic congestion. The proposed action is included in the Capital Area Metropolitan Planning Organization (MPO) and Durham-Chapel Hill-Carrboro MPO joint *2045 Metropolitan Transportation Plan (MTP)*, as well as the Capital Area MPO *2018 – 2027 Metropolitan Transportation Improvement Program (MTIP)*. In addition, the proposed action is included in the state's system of Strategic Transportation Corridors (STC) aimed at providing a safe, reliable, and high-speed network of highways within North Carolina (NCDOT, 2015). NCDOT developed the *Purpose and Need Statement* (Lochner, 2011) for this project with input from federal and state environmental regulatory and resource agencies, local government representatives, and the public.

1.2 PROJECT ALTERNATIVES

The project's *Alternatives Development and Analysis Report* (Lochner, 2014) evaluated several possible alternatives associated with this project through a three-tiered screening process. The alternatives remaining under consideration fall into two main categories: No-Build and Build Alternatives.

The No-Build Alternative is the baseline comparative alternative. It assumes that the transportation systems in the project study area will continue to develop as currently planned in the Capital Area MPO and Durham-Chapel Hill-Carrboro MPO joint 2035 LRTP, but without the proposed Complete 540 - Triangle Expressway Southeast Extension project.

The project's Build Alternatives were developed and evaluated as color-coded segments termed Preliminary Corridor Alternatives. Combinations of the various Preliminary Corridor Alternatives comprise end-to-end project alternatives. The end-to-end project alternatives remaining following the screening process outlined in the *Alternatives Development and Analysis Report* were termed Detailed Study Alternatives (DSAs) and were documented and evaluated in detail in the project's Draft EIS. Ten Preliminary Corridor Alternatives comprised seventeen end-to-end DSAs. **Figure 2** shows the locations of the Preliminary Corridor Alternatives that made up the DSAs for the project. **Table 1** lists the Preliminary Corridor Alternatives that made up each of the DSAs. The Orange Corridor Alternative between NC 55 Bypass and I-40 corresponds to a protected corridor established by NCDOT for this project in 1996 and 1997; it remained in place until 2016, when the North Carolina General Assembly repealed the Transportation Corridor Official Map Act.

Table 1. Preliminary Corridor Alternatives Comprising Each Detailed Study Alternative

DSA	Preliminary Corridor Alternatives
1	Orange to Green
2	Orange to Green to Mint Green to Green
3	Orange to Brown (South) to Tan (North) to Green
4	Orange to Brown to Green
5	Orange to Green to Teal to Brown to Green
6	Orange to Red to Green
7	Orange to Red to Mint Green to Green
8	Orange to Purple-Blue-Lilac to Green
9	Orange to Purple-Blue-Lilac to Green to Mint Green to Green
10	Orange to Purple-Blue-Lilac to Brown (South) to Tan (North) to Green
11	Orange to Purple-Blue-Lilac to Brown to Green
12	Orange to Purple-Blue-Lilac to Teal to Brown to Green
13	Orange to Lilac to Green
14	Orange to Lilac to Green to Mint Green to Green
15	Orange to Lilac to Brown (South) to Tan (North) to Green
16	Orange to Lilac to Brown to Green
17	Orange to Lilac to Green to Teal to Brown to Green

The Draft EIS for the Complete 540 project was signed on November 2, 2015, and subsequently made available for public and agency review on the NCDOT website on November 6, 2015. A notice of

availability was published in the Federal Register on Friday, November 20, 2015 (Federal Register Vol. 80, No. 224, Pg. 72719). Copies of the document were distributed to public review locations and agencies between November 7 and 13, 2015. Public meetings were held on December 7, 8 and 9, 2015, and a Public Hearing was held on December 9, 2015. The public comment period for the Draft EIS ended on January 8, 2016. The Final EIS for the Complete 540 project was signed on December 20, 2017, and subsequently made available for public and agency review on the NCDOT website on December 22, 2017. A notice of availability was published in the Federal Register on Friday, December 29, 2017 (Federal Register Vol. 82, No. 249, Pg. 61757). Copies of the document were distributed to public review locations and agencies in late December 2017. The public comment period for the Final EIS ended on February 2, 2018.

1.3 PREFERRED ALTERNATIVE

A Draft *Preferred Alternative Report*, identifying DSA 2 as NCDOT's recommended Preferred Alternative, was submitted to the environmental resource and regulatory agencies in February 2016. Two Interagency Meetings were held to discuss the recommended Preferred Alternative, in February and March 2016. No Issues of Concern, as defined in the project's Section 6002 Coordination Plan, were raised by any of the agencies on the recommended Preferred Alternative. **DSA 2 is the Preferred Alternative for the Complete 540 project.** The *Preferred Alternative Report* (Lochner, 2017) was finalized following the agency coordination efforts.

The project is proposed to be a toll facility. An open road (highway speed) transponder-based system will likely be used as the primary means of toll collection. This would allow drivers to travel unobstructed through the toll collection points at highway speeds.

2 AGENCY COORDINATION

In compliance with the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) Section 6002 (23 U.S.C. § 139), a Section 6002 Project Coordination Plan has been prepared for the Complete 540 – Triangle Expressway Southeast Extension project. This plan describes the process for agency coordination and public involvement in the project development process. The Project Coordination Plan was first presented to resource and regulatory agency representatives at the resource and regulatory agency meeting held on December 8, 2009, and agencies approved a draft of the Plan following the August 10, 2010 resource and regulatory agency meeting. The Plan has been updated as needed during the course of the project, with the most recent update occurring in November of 2013. A copy of the current version of this document is included in **Appendix A**.

2.1 SCOPING

As part of preparation of an EIS, NEPA requires there to be an early and open process with project stakeholders for determining the major and important issues that need to be addressed during the study. This process is called scoping. To initiate the scoping process, NCDOT sent a formal scoping letter, as required by NEPA, to state and federal resource and regulatory agencies on January 25, 2010. A separate letter was sent to local agencies and officials on February 4, 2010. The purpose of these letters was to solicit comments and collect pertinent project information early in the alternatives development process. Coordination between NCDOT, FHWA, and the agencies has assisted with the development of the DSAs. Copies of the formal scoping letters are included in **Appendix B**. The resource and regulatory agency meeting held on February 16, 2010, served as the agency scoping meeting for the project to discuss project study area environmental features and community characteristics and potential issues of concern. More information about agency scoping for the project is in **Section 2.3.2**.

2.2 NOTICE OF INTENT

Pursuant to Title 23, CFR Part 771, Environmental Impact and Related Procedures, the FHWA published a Notice of Intent (NOI) to prepare an EIS for the proposed Complete 540 – Triangle Expressway Southeast Extension project. The NOI was published in the Federal Register on November 30, 2009 (Vol. 74, No. 228). A copy of the NOI is included with the Section 6002 Project Coordination Plan in **Appendix A**.

2.3 INTERAGENCY MEETINGS

The principal method for interagency coordination on NCDOT projects is through meetings of the resource and regulatory agencies, hosted by NCDOT.

For the Complete 540 project, agencies participating in the process are:

Lead Agency

- Federal Highway Administration

Cooperating Agency

- US Army Corps of Engineers

Participating Agencies

- US Army Corps of Engineers
- US Environmental Protection Agency
- US Fish and Wildlife Service
- NC Department of Cultural Resources
- NC Department of Environment and Natural Resources
 - Division of Water Resources
 - Division of Marine Fisheries
 - NC Wildlife Resources Commission
- Capital Area Metropolitan Planning Organization

Designation as a Cooperating Agency signifies a somewhat higher level of involvement and responsibility in the environmental review process. A Cooperating Agency can also be a Participating Agency. Participating Agencies include any federal, state, or local agencies that may have an interest in the project.

The sections below describe the resource and regulatory agency meetings that have been held for the Complete 540 project to date. Detailed summaries of each of these meetings are in **Appendix C**.

2.3.1 December 8, 2009 Meeting

The purpose of this meeting was to introduce the project to representatives of the resource and regulatory agencies. At this meeting, the project team presented a draft Section 6002 Coordination Plan for the project and a draft Notice of Intent for announcing the project in the Federal Register. Agency representatives had the opportunity to provide input on each of these items during and following this meeting.

The project team also presented a map of the draft study area for developing project alternatives. Following an initial request by the US Environmental Protection Agency, the resource and regulatory agencies expressed interest in shifting the originally proposed northern study area boundary farther to the north. This was suggested in order to allow early consideration of potentially shorter alternatives closer to more heavily developed portions of the area and to allow evaluation of a larger number of potential locations for the crossing of Swift Creek, providing options for minimizing impacts to habitat of the federally protected dwarf wedgemussel. As a result of this request, the northern study area boundary west of I-40 was shifted from its original location near Ten Ten Road to north of Lake Wheeler and Lake Benson. This shift resulted in most of the area within the town of Garner being added to the project study area.

2.3.2 February 16, 2010 Meeting

As described in **Section 2.1**, this meeting served as the agency scoping meeting for the project. The meeting discussion included initial information and input on the potential key project issues and key environmental constraints that would affect the project. The project team also presented a preliminary summary of the key elements of the need for the project and a preliminary draft statement of the project's purpose.

Four agencies (US Environmental Protection Agency, US Fish and Wildlife Service, NC Department of Environment and Natural Resources, and NC Department of Cultural Resources) prepared formal scoping responses, as did two local governments (Cary and Holly Springs) and the Capital Area

Metropolitan Planning Organization (MPO). Copies of the scoping responses are in **Appendix B**. The following summarizes scoping comments made by these agencies and organizations:

US Environmental Protection Agency (EPA)

- Project expected to have significant direct impacts to jurisdictional wetland and streams, protected water supply areas, protected mussel species, residences and business, prime and unique farmland, and air quality.
- Project anticipated to have significant indirect and cumulative effects to human and natural environmental resources in southern Wake County and western Johnston County.
- Recommends that improvements to Ten Ten Road, including a new location extension from NC 50 to I-40 interchange at Clayton Bypass be evaluated as a build alternative.

US Fish and Wildlife Service (USFWS)

- Project expected to have significant impacts on streams, wetlands, upland forest and other habitat types. Impacts will include direct loss of habitat and fragmentation effects on remaining habitat.
- USFWS is particularly concerned about impacts to the dwarf wedgemussel population in Swift Creek. Impacts will include direct effects from project construction and indirect effects on water quality from secondary development.
- Additional cumulative impacts to Swift Creek may occur in conjunction with the proposed widening of I-40 (STIP No. I-5111).
- Proposed eastern terminus of protected corridor, with interchange at I-40 and US 70 Bypass would impact several tributaries of Swift Creek and is in close proximity to Swift Creek mainstem. USFWS recommends alternative interchange locations away from Swift Creek and its tributaries be considered.
- NCTA should explore innovative conservation measures to minimize effects to dwarf wedgemussel.
- Surveys for Michaux's sumac should be conducted within the species' survey window (May-October).

NC Department of Environment and Natural Resources (NCDENR)

Natural Heritage Program

- There are a number of records of rare species, significant natural heritage areas, and conservation/managed areas within the project area.
- Project will cross nationally significant Swift Creek Aquatic Habitat, which contains numerous existing records of rare mussel species, including dwarf wedgemussel.
- It is important to keep sediment from reaching the Neuse River as there are rare aquatic species locations farther south toward Clayton.

Division of Water Quality (now called Division of Water Resources)

- All named streams in project area have supplemental classification of nutrient sensitive waters (NSW) of the State. Agency is concerned with sediment and erosion impacts.
- Swift Creek, Middle Creek, Walnut Creek, and Little Creek are listed as 303(d) waters of the State. Agency is concerned with sediment and erosion impacts.
- Project area includes surface waters classified as Water Supply Critical Area (WSCA).
- Riparian buffer impacts shall be avoided and minimized to the greatest extent possible.
- Quantitative secondary and cumulative impacts analysis will be required because the project is a new location road in areas with impaired streams and WSCA.

NC Wildlife Resources Commission

- NCWRC is concerned about potential impacts due to new crossings of Swift Creek, Middle Creek and the Neuse River, which contain several State and federal listed species.
- Neuse River in this area is designated as an Anadromous Fish Spawning Area and an Inland Primary Nursery Area.

NC Department of Agriculture and Consumer Services

- Project would increase the loss of prime farm and forest land, negatively impacting agricultural environmental balance in the project area.
- Location of the project should include consideration of farms near existing Voluntary Agricultural Districts (VAD).
- Economic impacts due to loss of agribusiness jobs associated with loss of agricultural production are a concern.

NC Department of Cultural Resources

- Project area contains numerous archaeological sites which may be eligible for the National Register of Historic Places.
- Much of the study area has never been surveyed to determine the presence or significance of archaeological resources.

Town of Cary

- NCTA should investigate providing an interchange within the Town of Cary Comprehensive Planning Area. Due to growth and development, an additional interchange may be needed near the intersection of Kildaire Farm Road and Holly Springs Road, where there is currently one interchange proposed.
- Moving the corridor off the protected alignment could negatively impact residential communities, proposed greenways, proposed parks, and proposed thoroughfare improvements.

Town of Holly Springs

- Holly Springs supports the completion of the project and the project's location in the current proposed corridor.
- Planned interchange at Holly Springs Road and Kildaire Farm Road needs special evaluation. Protected corridor area in the location is not adequate for on and off ramps.
- Town would prefer that the project be elevated on an overpass over Sunset Lake Road.

Capital Area MPO

- Phases I and II should be developed as a single design and right-of-way acquisition project to the extent possible.
- Project should provide a balanced transportation facility design that includes multimodal considerations.
- CAMPO supports inclusion of Intelligent Transportation System (ITS) components in the project design.
- Design of facility should minimize negative impacts to Swift Creek watershed and water supply area.

2.3.3 August 10, 2010 Meeting

At this meeting, the project team reviewed a revised Section 6002 Coordination Plan and received a copy of a *Draft Purpose and Need Statement* for the project. The project team also began discussion of alternatives development, evaluation, and screening at this meeting, presenting an overview of the proposed methods for screening alternatives and discussing preliminary results of a qualitative first tier screening of broad Alternative Concepts and a quantitative second tier screening of preliminary alternatives.

The agencies agreed to eliminate from further consideration several of the preliminary alternatives that were presented at the meeting. These preliminary alternatives each included a proposed new location segment (known as Segment 38) east of I-40, near the Wake and Johnston County line; this is described in detail in the project's *Alternatives Development and Analysis Report*. These options were eliminated because their potential negative environmental effects did not appear to be offset by other benefits, as compared to other preliminary alternatives under consideration.

2.3.4 September 8, 2010 Meeting

The purpose of this meeting was to discuss the project's *Draft Purpose and Need Statement* and to continue discussing the screening of preliminary alternatives under consideration for the project. A preliminary alternative that would have combined upgrading existing roads west of I-40 with a new location roadway east of I-40 (known as Hybrid Alternative #3) was eliminated at this meeting. It was eliminated because it would have required many more relocations than other options under consideration without providing any relative advantages. This is described in detail in the project's *Alternatives Development and Analysis Report*.

This meeting also served as a preview of the Public Informational Meetings that were held later this same month.

2.3.5 November 2, 2010 Meeting

The primary purpose of this meeting was to review the results of the September 2010 Public Informational Meetings and to review the project's preliminary alternatives in light of impact data and the results of the meetings. NCDOT summarized the public meetings, explaining that most public comment expressed continued support of the project's protected corridor between NC 55 Bypass and I-40, and opposed several of the other corridors under consideration, particularly the Red, Blue, and Purple Corridor Alternatives. The agencies agreed with NCDOT's recommendation to eliminate several of the preliminary alternative corridors presented at the September 2010 public meetings, including the Blue, Purple, and Yellow Corridor Alternatives.

Following this meeting, and following subsequent coordination with the agencies and the area local governments, NCDOT added four additional preliminary alternative corridors into consideration to provide additional opportunities for avoiding or minimizing potential effects to community resources and neighborhoods in the eastern part of the project study area. These were the Tan, Brown, Teal, and Mint Green Corridor Alternatives.

2.3.6 January 20, 2011 Meeting

At this meeting, the project team discussed the extensive public input that occurred since the time of the previous agency meeting in November 2010. Based on this public input and a closer review of the

existing data, NCDOT recommended eliminating the Red Corridor Alternative due to its significant community impacts and the Pink Corridor Alternative due to both its impacts and its inability to serve traffic needs as well as other alternatives. The agencies agreed with the recommendation to eliminate the Pink Corridor Alternative, but recommended retaining the Red Corridor Alternative due to its potential for avoiding habitat for the federally protected dwarf wedgemussel.

2.3.7 August 22, 2012 Meeting

State legislation passed in March 2011, described in **Section 4.4**, limited evaluation of certain options under consideration for the project, including the Red Corridor Alternative. This resulted in a temporary halting of most project activities. The purpose of the August 2012 agency meeting was to discuss approaches to advancing the project in light of the restrictions put in place by the State legislation. One approach discussed was introducing new Preliminary Corridor Alternatives into consideration for their ability to potentially reduce wetland impacts to a similar degree as the Red Corridor Alternative while minimizing community impacts. One of these, the Lilac Corridor Alternative, showed potential to balance impacts similarly to other options under consideration.

2.3.8 December 12, 2012 Meeting

At this meeting, the project team discussed the status of the project in light of the project advancement approaches considered at the August 22, 2012, meeting. Coordination between the agencies to advance the project in light of the State legislation was also discussed.

2.3.9 September 19, 2013 Meeting

Following the June 2013 passage of subsequent State legislation removing the alignment restrictions previously imposed on the project by the 2011 legislation, NCDOT was able to resume project activities. The Lilac Corridor Alternative was formally introduced into consideration. In addition, the previously eliminated Blue and Purple Corridor Alternatives were reconsidered based on a potential alignment following the Purple to Blue to the Lilac Corridor Alternative, based on the potential of this alignment to reduce overall wetland impacts and to balance impacts similarly to other options under consideration. These options were discussed at the September 2013 agency meeting.

At this meeting, NCDOT also presented its recommended DSAs, along with a revised *Draft Alternatives Development and Analysis Report* documenting these recommendations.

2.3.10 December 12, 2013 Meeting

The purpose of this meeting was to finalize the DSAs for the project. At the meeting, the agencies confirmed that they did not require any additional time (as covered by Section 8.5 of the Section 6002 Coordination Plan) to review the project's *Draft Alternatives Development and Analysis Report* and the recommended DSAs in light of the public and local government comments made since the October 2013 public meetings. USACE noted agreement to waive the additional time period for reviewing the report as noted in the Section 6002 plan. Additionally, no agencies raised any objections to proceeding with the 17 end-to-end alternatives as DSAs, and no agencies asked for any additional alternatives to be considered. To date, no agencies have raised any Issues of Concern (per the Section 6002 Coordination Plan) on the project purpose and need, range of alternatives, alternatives screening, or DSAs. Additionally, no Issues of Concern relative to these four areas of the study were raised at the meeting.

2.3.11 November 13, 2014 Meeting

The main purpose of this meeting was to discuss the appropriate locations and lengths of bridges over natural resources along the project's DSAs. To expedite this discussion, NCDOT reviewed project information on natural resources, hydrology, and proposed designs in order to make suggestions about which sites should be bridged. The agencies agreed with many of NCDOT's suggestions, but requested a field review of four of the sites before agreeing to the suggestions at those sites. The agencies also suggested design modifications at another site in order to determine if a bridge would be feasible.

The project team then held a field review meeting on December 2, 2014, to review the four sites requested by the agencies. At this meeting, NCDOT and the agencies came to agreements on the appropriate hydraulic conveyance structure at each of these four sites. NCDOT then incorporated design modifications necessary to accommodate the agreed upon structure at each site.

Following selection of the project's Preferred Alternative and Least Environmentally Damaging Practicable Alternative (LEDPA), the project team and agency partners will review proposed bridge sites and other sites on the LEDPA in greater detail.

2.3.12 August 19, 2015 Meeting

This was an informational meeting to explain to the project team the reader-friendly format used to prepare the Draft EIS. The project team also provided a project status update and explained the project's next steps following publication of the Draft EIS.

2.3.13 February 17, 2016 Meeting

At this meeting, the project team provided an overview of the Public Meetings and Public Hearing held in December 2015, summarized the public and agency input received following release of the Draft EIS, and explained the reasons why DSA 2 was NCDOT's recommended Preferred Alternative. Prior to the meeting, NCDOT distributed the *Draft Preferred Alternative Report* to the agencies. NCDOT and FHWA reiterated the definition of Issues of Concern under Section 6002 and asked the agencies to indicate any known Issues of Concern relative to selecting DSA 2 as the Preferred Alternative. No Issues of Concern were raised at the meeting, and no Issues of Concern were submitted to NCDOT prior to the March 18, 2016, deadline.

2.3.14 March 16, 2016 Meeting

This was a follow-up informational meeting to review the development of the functional preliminary plans for the 17 DSAs considered in the project's Draft EIS. The main purposes of the information provided was to explain the level of detail included in the functional preliminary plans and summarize how impact avoidance and minimization were an important element of plan development. No Issues of Concern regarding selection of DSA 2 as the Preferred Alternative were noted at this meeting. The *Preferred Alternative Report* was finalized after this meeting.

Following this meeting, USEPA submitted written comments relative to the functional preliminary designs. The comments were marked on a set of the Public Hearing Maps. The comments included and responses to each are noted in the summary of this meeting included in **Appendix C**.

2.3.15 June 15, 2017 Meeting

The main purpose of this meeting was to explain the methods used to quantitatively assess the potential indirect and cumulative effects (ICE) of the project on land use and development and on water quality in the project vicinity. The project team also summarized the preliminary results of the ICE analysis.

2.3.16 July 12, 2017 Meeting

The main purpose of this meeting was to summarize how avoidance and minimization of impacts to environmental resources have been incorporated into the current preliminary designs for the Preferred Alternative. This included a discussion of the ways that earlier, less detailed functional designs were refined following selection of DSA 2 as the Preferred Alternative, and an explanation of the different ways impacts were calculated for the earlier functional designs and the current preliminary designs. The project team explained the ways that prior design decisions, including selection of layouts for each interchange and proposing to bridge eight wetland/stream sites beyond what is needed for hydraulic conveyance, helped to avoid and minimize natural system impacts. The project team also described several alignment shifts that were incorporated into the preliminary designs to minimize impacts to environmental resources. No issues of concern were raised by any agencies during this meeting. NCDWR did indicate that would be interested in further discussion of streams related to Swift Creek as the project progresses.

2.3.17 February 15, 2018 Meeting

The main purpose of this meeting was to review and identify necessary modifications to the preliminary hydraulic design plans for the project's R-2721 segment (from NC 55 Bypass to US 401).

2.3.18 May 9, 2018 Meeting

The main purpose of this meeting was to review and identify necessary modifications to the permit drawings for the project's R-2721 segment (from NC 55 Bypass to US 401).

2.4 AGENCY COORDINATION ON TECHNICAL REPORTS

2.4.1 Purpose and Need Statement

While there was extensive discussion of the project's *Purpose and Need Statement* at several resource and regulatory agency meetings (described in Section 2.3), only one agency submitted formal comments about the *Draft Purpose and Need Statement*. This was the NC Division of Water Quality (now known as the NC Division of Water Resources); a copy of the letter is in **Appendix D**. In general, the comments in this letter suggested the following:

- Removing consistency with the State's Strategic Highway Corridors Initiative as an element of the project's purpose;
- Clarifying the difference between the project's study area used for alternatives development and the study area used for traffic analysis purposes; and
- Making sure that the criteria used to screen project alternatives match the measures of effectiveness described in the *Purpose and Need Statement*.

The project team incorporated and addressed each of these suggestions in a revised *Purpose and Need Statement*.

2.4.2 Alternatives Development and Analysis Report

A copy of the *Draft Alternatives Development and Analysis Report*, dated January 13, 2012, was distributed January 13, 2012 to the cooperating and participating agencies involved in the environmental review process for this project, along with other organizations that requested to receive a copy. This included:

- Federal Highway Administration
- US Army Corps of Engineers
- US Environmental Protection Agency
- US Fish and Wildlife Service
- NC Department of Cultural Resources
- NC Department of Environment and Natural Resources
 - Secretary's Office
 - Division of Water Resources
- NC Wildlife Resources Commission
- Capital Area MPO
- NC Department of Transportation
 - State Highway Administrator
 - Project Development and Environmental Analysis
 - PDEA Human Environment Unit
 - Office of Civil Rights
- Town of Garner
- Regional Transportation Alliance

NCDOT requested that recipients of the report provide written comments on the information and conclusions in the report, including the report's recommendations for DSAs. NCDOT also requested that agency recipients identify any potential issues of concern that would result in the denial or significant delay in the issuance of any environmental permits.

Written comments were received from the following agencies and organizations:

- US Army Corps of Engineers
- US Environmental Protection Agency
- US Fish and Wildlife Service
- NC Department of Cultural Resources
- NC DENR Division of Water Resources
- Capital Area MPO
- Regional Transportation Alliance

In addition, a letter from the Southern Environmental Law Center (SELC) and a letter from the Town of Garner regarding the project and *Draft Alternatives Development and Analysis Report* were received.

Copies of all the written comments and letters are included in **Appendix D**. NCDOT responses to these comments were provided in the project's revised *Alternatives Development and Analysis Report*. The

revised *Alternatives Development and Analysis Report* also included report edits and updates that were part of the responses.

A revised version of the *Draft Alternatives Development and Analysis Report*, dated September 2013, was distributed on September 5, 2013, to the agencies and the organizations listed above. This version of the report included revisions to the January 2012 version, as well as added material. It also included NCDOT/FHWA recommended DSAs for detailed study in the project's Draft EIS. Three agencies submitted written responses to the revised report. The NC Division of Water Resources and NC Division of Cultural Resources concurred with the recommended alternatives for detailed study. USACE indicated that the alternatives recommended for detailed study meet the agency's requirements under Section 404 of the Clean Water Act and NEPA. Copies of these responses are included in **Appendix D**. The remaining agencies submitted no further response. In accordance with item 8.5 of the Section 6002 Coordination Plan for this project, no response is interpreted to mean that the participating agency had no significant objections to the alternative screening report.

2.4.3 Draft EIS

A Notice of Availability of the Draft EIS for the Complete 540 project was published in the Federal Register on November 20, 2015 (Federal Register Vol. 80, No. 224, Pg. 72719). Printed copies of the Draft EIS were distributed for public review beginning on November 7, 2015, at public libraries and local government offices in the project area, as noted in Appendix A of the Draft EIS. The Draft EIS was also posted to the official project website (<https://www.ncdot.gov/projects/complete540/Complete540Documents.html>) on November 6, 2015.

Copies of the Draft EIS were distributed to the cooperating and participating agencies involved in the environmental review process for this project, along with other local governmental and stakeholder organizations. This included:

- Federal Highway Administration
- US Army Corps of Engineers
- US Environmental Protection Agency
- US Fish and Wildlife Service
- US Department of Commerce - National Marine Fisheries Service
- US Department of Agriculture
- US Department of Energy
- Federal Railroad Administration
- NC Department of Commerce
- NC Department of Cultural Resources
- NC Department of Economic and Community Development
- NC Department of Environment and Natural Resources
- NC Department of Public Instruction
- NC Wildlife Resources Commission
- NC Attorney General
- NC State Clearinghouse
- Capital Area MPO
- City of Raleigh
- Greater Raleigh Chamber of Commerce
- Harnett County Board of Commissioners

- Johnston County Schools
- Regional Transportation Alliance
- Town of Angier
- Town of Apex
- Town of Cary
- Town of Clayton
- Town of Fuquay-Varina
- Town of Garner
- Town of Knightdale
- Town of Holly Springs
- Town of Wendell
- Triangle J Council of Governments
- Wake County Board of Commissioners
- Wake County Public School System

Comments received from federal and state agencies on the Draft EIS are discussed in **Section 5** of this report.

2.4.4 Preferred Alternative Report

A copy of the *Draft Preferred Alternative Report*, dated February 2016, was distributed to the cooperating and participating agencies and to other key stakeholder agencies. This included:

- Federal Highway Administration
- US Army Corps of Engineers
- US Environmental Protection Agency
- US Fish and Wildlife Service
- NC Department of Cultural Resources
- NC Department of Environment and Natural Resources
 - Secretary's Office
 - Division of Water Resources
- NC Wildlife Resources Commission
- Capital Area MPO
- NC Department of Transportation
 - State Highway Administrator
 - Project Development and Environmental Analysis
 - PDEA Human Environment Unit
 - Office of Civil Rights
- Town of Garner
- Regional Transportation Alliance

NCDOT requested that recipients of the report provide written comments on the report and its recommendation of DSA 2 as the Preferred Alternative for the project. NCDOT also requested that agency recipients identify any potential Issues of Concern regarding selection of DSA 2 as the Preferred Alternative that would result in the denial or significant delay in the issuance of any environmental permits.

Table 2 lists each of the agencies that submitted comments on the *Draft Preferred Alternative Report* and summarizes those comments. None of the agencies identified any Issues of Concern relative to selection of DSA 2 as the Preferred Alternative for the Complete 540 project, either in written comments or in oral comments at Interagency Meetings.

Table 2: Federal and State Agency Review Comments on Draft Preferred Alternative Report

Agency	Comments
NC Wildlife Resources Commission (2/23/16)	<ul style="list-style-type: none"> • Concerned that potential negative effects in area watersheds will continue to degrade aquatic habitat • Concerned about high wetland, stream, and buffer impacts.
NC Division of Water Resources (2/25/16)	<ul style="list-style-type: none"> • Avoidance of Water Supply Critical Area watersheds by DSA 2 is a positive. • Concerned about high wetland, stream, and buffer impacts.
US Environmental Protection Agency (3/10/16)*	<ul style="list-style-type: none"> • Would like to see information on impacts to forested land, floodways, and 500-year floodplain. • Would like to see preliminary designs for DSA 2 and DSA 7. • Would like to see quantitative information on indirect and cumulative effects. • Would like to see information on predicted pollutant loading and avoidance/minimization measures to reduce this effect.
US Army Corps of Engineers (3/18/16)	<ul style="list-style-type: none"> • No objections to proceeding with DSA 2 as the Preferred Alternative.

* Preliminary designs were presented to the agencies at the March 16, 2016, informational Interagency Meeting. A quantitative assessment of indirect and cumulative effects was subsequently prepared to compare the build to the no-build scenario; the results are summarized in the Final EIS. Impacts to forested land, floodways, and the 500-year floodplain were not a notable factor in comparing the project DSAs.

2.4.5 Final EIS

A Notice of Availability of the Final EIS for the Complete 540 project was published in the Federal Register on December 29, 2017 (Federal Register Vol. 82, No. 249, Pg. 61757). Printed copies of the Final EIS were distributed for public review in late December 2017 at public libraries and local government offices in the project area, as noted in Appendix 1 of the Final EIS. The Final EIS was also posted to the official project website (<https://www.ncdot.gov/projects/complete540/Complete540Documents.html>) on December 22, 2017.

Copies of the Final EIS were distributed to the cooperating and participating agencies involved in the environmental review process for this project, along with other local governmental and stakeholder organizations. This included:

- Federal Highway Administration
- US Army Corps of Engineers
- US Environmental Protection Agency
- US Fish and Wildlife Service
- US Department of Commerce - National Marine Fisheries Service
- US Department of Agriculture

- US Department of Energy
- Federal Railroad Administration
- NC Department of Commerce
- NC Department of Cultural Resources
- NC Department of Economic and Community Development
- NC Department of Environment and Natural Resources
- NC Department of Public Instruction
- NC Wildlife Resources Commission
- NC Attorney General
- NC State Clearinghouse
- Capital Area MPO
- City of Raleigh
- Greater Raleigh Chamber of Commerce
- Harnett County Board of Commissioners
- Johnston County Schools
- Regional Transportation Alliance
- Town of Angier
- Town of Apex
- Town of Cary
- Town of Clayton
- Town of Fuquay-Varina
- Town of Garner
- Town of Knightdale
- Town of Holly Springs
- Town of Wendell
- Triangle J Council of Governments
- Wake County Board of Commissioners
- Wake County Public School System

Comments received from federal and state agencies and other organizations on the Final EIS are discussed in **Section 6** of this report. None of the agencies identified any Issues of Concern in their written comments or in oral comments at Interagency Meetings.

3 PUBLIC INVOLVEMENT

The public involvement process is integral to the entire project development and decision-making process. Public involvement activities described below are related to the development of the project's purpose and the development and evaluation of alternatives.

3.1 PUBLIC MEETINGS PRIOR TO DRAFT EIS PUBLICATION

NCDOT held public meetings on September 21, 22, and 23, 2010. The September 21 meeting was at Wake Technical Community College from 4:00 p.m. to 7:30 p.m.; 558 people attended. The September 22 meeting was at Holly Springs High School from 6:00 p.m. to 9:00 p.m.; 473 people attended. The September 23 meeting was at Barwell Road Community Center in southeast Raleigh from 4:30 p.m. to 7:30 p.m.; 146 people attended. The purpose of the meetings was to solicit public input on the project including the project's study area, purpose, and preliminary alternatives. Displays at the meetings included maps of the project study area, Preliminary Corridor Alternatives, and Improve Existing and Hybrid Alternatives, along with information on the transportation planning process and the preliminary purpose for this project. Comment sheets were distributed to obtain public input on the project study area, identified project needs and purposes, and range of alternatives. This input helped to ensure that the range of reasonable alternatives, including broad Alternative Concepts, covered the full spectrum of potential alternatives.

Over 2,100 comments were received during or following the meetings. The most common concerns and issues raised by meeting attendees included:

- Continued support of the Orange Corridor Alternative between NC 55 Bypass and I-40, which the public has been aware of for nearly twenty years as the protected corridor, and opposition to other new location corridors. Approximately 90 percent of those expressing an alternative preference indicated support for the Orange Corridor Alternative.
- Opposition to new alternatives (other than the Orange corridor), particularly the Blue and Purple Corridor Alternatives through Holly Springs and the Red Corridor Alternative in Garner.
- Concern about the perceived inequity of a tolled Complete 540 project when existing segments of I-540 are untolled.

Following introduction of the Tan Corridor Alternative, NCDOT held another public meeting on December 2, 2010, at the Barwell Road Community Center from 4:30 p.m. to 7:30 p.m.; 399 people attended. The purpose of this meeting was to solicit input on the Tan Corridor Alternative and the Green Corridor Alternative and to present information about these options in the Phase II area, which extends between I-40 and US 64/US 264 Bypass. Over 250 comments were received at or following this meeting. Most of these comments expressed opposition to the Tan Corridor Alternative due to potential neighborhood impacts and support for using publicly-owned land in the Randleigh Farm property for the project.

NCDOT held an additional round of three public meetings in October 2013 to present and receive public comment on the NCDOT/FHWA recommended DSAs for evaluation in the project's Draft EIS. The first meeting was at Wake Technical Community College on October 14 from 4:00 p.m. to 7:30 p.m.; 810 people attended. The next meeting was at Barwell Road Community Center on October 15 from 4:00 p.m. to 7:30 p.m.; 330 people attended. The third meeting was at Holly Springs High School on October 16 from 6:00 p.m. to 9:00 p.m.; 545 people attended. Displays included maps of the recommended DSAs, preliminary impact information, an illustration of the proposed typical section, and a summary of the project purpose and need. A brief informational video providing an overview of

the project was shown on a continuous loop at each meeting. A handout brochure describing the project, the recommended DSAs, the environmental review process, and the project schedule was distributed. Comment sheets were provided at the meeting.

Over 1,100 comments were received during or following the meetings. The most common concerns and issues raised by meeting attendees included:

- Strong opposition to the Purple-Blue-Lilac Corridor and a desire to see this option dropped from consideration before the DSAs are finalized.
- Opposition to the Lilac Corridor.
- Continued opposition to the Red Corridor.
- Continued support for the Orange Corridor.

3.2 PUBLIC MEETINGS FOLLOWING DRAFT EIS PUBLICATION

NCDOT held three public meetings and a formal Corridor Public Hearing in December 2015 to present details on the DSAs under consideration for the project and the findings of the Draft EIS and its associated technical studies. The meetings and the Corridor Public Hearing served as opportunities for the public and other project stakeholders to review the project DSAs and the findings of the Draft EIS. Displays at these meetings included maps showing the preliminary functional designs for each of the DSAs, information summarizing the potential impacts of each DSA, an illustration of the proposed typical section, and information on the project's purpose and need. A brief informational video providing an overview of the study process and the project DSAs was shown on a continuous loop at each meeting. A handout brochure with information about each of the DSAs, potential impacts, the study process, and the project schedule, was distributed. All displays and meeting materials were available on the project website (www.ncdot.gov/projects/complete540). **Table 3** summarizes public participation for the meetings and Corridor Public Hearing.

During the comment period for the Draft EIS, from early November 2015 through January 8, 2016, comments addressing the DSAs, the Draft EIS, or other substantive project issues were received from 1,476 commenters. The comments included 255 individual written comment forms plus one completed comment form photocopied and signed by 527 different individuals, 387 emails, 6 letters, and a petition with 239 signatures. The petition received was signed by residents of Holly Springs, Apex and Cary expressing support for the Orange Corridor and opposition to the Purple and Blue Corridors. The photocopied completed comment form supported DSA 1 (Orange Corridor/Green Corridor) and opposed the Red Corridor and was individually signed by 527 area residents associated with Springfield Baptist Church.

There were also 34 people who gave oral comments during the Corridor Public Hearing and 5 people who gave oral comments at the public meetings on the preceding days. A transcript of the Corridor Public Hearing is in **Appendix E**. There were also 23 people who submitted comments via NCDOT's mySidewalk site. Most of the comments expressed support for and/or opposition to various project alternatives or specific color-coded corridor segments.

The written comment forms included check boxes for commenters to indicate their preferred DSAs. Commenters could indicate more than one preferred DSA. Most commenters did indicate preferred DSAs. Public comments received that addressed the Draft EIS or selection of a Preferred Alternative are discussed in **Section 5** of this report.

Table 3: Public Participation at December 2015 Public Meetings and Public Hearing

Date	Type of Meeting	Location	Time	Number of Attendees	Number of Written Comments Received at Meeting	Number of Oral Comments Recorded at Meeting
12/7/15	Public Meeting	Barwell Road Elementary School, Raleigh	6:00 – 8:00 pm	210	12	5
12/8/15	Public Meeting	Holly Springs High School	6:00 – 8:00 pm	264	37	
12/9/15	Public Meeting	Wake Technical Community College, Raleigh	4:00 – 6:30 pm	532	85	34
	Public Hearing		7:00 – 9:30 pm			

3.3 PUBLIC MEETINGS FOLLOWING FINAL EIS PUBLICATION

NCDOT held three public meetings and a formal Design Public Hearing in February to present the preliminary design plans for the Complete 540 project’s Preferred Alternative. Displays included maps showing the preliminary designs for the Preferred Alternative, information summarizing its potential environmental impacts, an illustration of the proposed typical section, and information about the proposed project schedule. A brief informational video providing an overview of the study process and the Preferred Alternative and a video showing a 3D visualization of the project were shown on a continuous loop at each meeting. These meetings did not focus on the Final EIS, but copies of the document and its supporting technical reports were also available for review at the meetings. A handout brochure with information about the Preferred Alternative, the study process, the traffic noise study, and the project schedule, was distributed. All displays, meeting materials, and project documentation were also available on the project website. (www.ncdot.gov/projects/complete540). **Table 4** summarizes public participation for the meetings and Design Public Hearing.

The comment period following the meetings ended on March 23, 2018. During the comment period, 86 written comments addressing the Preferred Alternative, other substantive project design issues, or general project issues were received, including 42 submitted at the meetings, were received. There were also 21 people who gave oral comments during the Design Public Hearing. A transcript of the Design Public Hearing is in **Appendix F**. There were also 30 people who submitted comments via NCDOT’s PublicInput.com site. Slightly more than half of all the written and oral comments received expressed general opinions and concerns about the project, while the remainder included specific comments about the proposed project designs (some comments included both general concerns and specific requests). Supporters of the project cited increased mobility, reduced congestion, higher travel speeds, time savings, and alignment with long-range planning and planned growth for the area. Opponents of the project cited environmental concerns (wetlands, water quality, air quality, noise, deforestation, wildlife, and protected species), impacts to low-income and minority populations, tolls, and the need to look at other alternatives (mass transit and improvements to existing roadways). A more detailed summary of the comments received at and following the public meetings, and a summary of NCDOT’s internal post-Design Public Hearing meeting are in **Appendix F**.

Table 4: Public Participation at February 2018 Public Meetings and Public Hearing

Date	Type of Meeting	Location	Time	Number of Attendees	Number of Written Comments Received at Meeting	Number of Oral Comments Recorded at Meeting
2/20/18	Public Meeting	Holly Springs High School	6:00 – 8:00 pm	262	19	--
2/21/18	Public Meeting	Barwell Road Community Center, Raleigh	6:00 – 8:00 pm	179	3	
2/22/18	Public Meeting	Wake Technical Community College, Raleigh	4:00 – 6:30 pm	539	20	34
	Public Hearing		7:00 – 9:30 pm			

Public comments received during the Final EIS comment period that ran from late December 2017 through February 2, 2018, are summarized in **Section 6** of this report.

3.4 PUBLIC OUTREACH METHODS

NCDOT is using several different methods for communicating project information to the public, soliciting feedback, and responding to comments and questions. These methods are described below:

3.4.1 Newsletters

To date, eight project newsletters have been distributed to all property owners in the project study area, a mailing list including over 56,000 individuals. The first newsletter, distributed in March 2010, announced the start of the project study and provided introductory information about the project. The second newsletter, distributed in September 2010, announced the public meetings and included a map of the preliminary new location Corridor Alternatives. The third newsletter was distributed in September 2013 to announce the October 2013 public meetings and to present and solicit input on the recommended DSAs. A fourth newsletter was distributed in February 2014 to announce the selection of the DSAs. A fifth newsletter was distributed in November 2015 to announce the release of the Draft EIS, list the review locations for the Draft EIS, and to publicize the December 2015 Public Meetings and Corridor Public Hearing. A sixth newsletter was distributed in April 2016 to announce the selection of DSA 2 as the Preferred Alternative for the project. Copies of these newsletters are included in **Appendix G**. Newsletter 7 was distributed in early January 2018 to notify the public of the availability of the Final EIS. Newsletter 8 was a postcard mailer distributed in February 2018 to announce the public meetings and Design Public Hearing for the project. Newsletter 9 is planned for announcing the completion of the environmental process in conjunction with the publication of the Record of Decision in the Federal Register.

3.4.2 Project Website

The project website (<http://www.ncdot.gov/complete540>) includes project information, documents, maps, newsletters, meeting handouts, press releases, other project materials, and project contact information. Visitors to the website can also submit comments and questions electronically through the website.

3.4.3 Toll-Free Telephone Hotline/E-mail

A toll-free telephone number (800-554-7849) is available for the public to call with questions, request information, or to provide comments about the project. In addition, the public can e-mail the project team with comments or questions at complete540@ncdot.gov. To date, over 1,700 people have called the project hotline and over 6,500 e-mails have been received.

3.5 SMALL GROUP MEETINGS

Throughout the study process, the project team has met with local organizations and citizens groups to discuss the project. Several meetings were held during the development of preliminary alternatives in the project study area. Meetings were requested by and held with the following groups:

- Protected Corridor Public Information Workshop (January 27, 2010) – Open to the public; meeting notification sent to all property owners within 500 feet of the project’s protected corridor (between NC 55 Bypass and I-40)
- Upchurch Place Homeowners Association (August 14, 2010)
- Bentwinds Homeowners Association (October 13, 2010)
- Wake Technical Community College engineering staff (October 14, 2010)
- Cary Oil employees (October 14, 2010)
- Bells Pointe and Village of Wynchester Homeowners Associations (November 9, 2010)
- Village at Aversboro Homeowners Association (November 15, 2010)
- Ridgebrook, Ridgebrook Bluffs, and Westbury Homeowners Associations (November 16, 2010)
- Preserve at Long Branch Farm Homeowners Association (November 16, 2010)
- River Ridge Homeowners Association (November 22, 2010)
- Springfield Baptist Church leaders (November 23, 2010)
- Vandora Pines Homeowners Association (December 2, 2010)
- Jamison Park Homeowners Association (December 7, 2010)
- Bingham Station Homeowners Association (December 14, 2010)
- Springfield Baptist Church congregation (December 15, 2010)
- Penske Truck Leasing (January 12, 2011)
- Bridgepoint Construction Services and WRAL (January 14, 2011)
- Good Samaritan Baptist Church (January 24, 2011)
- Bridgepoint Construction Services and WRAL (February 16, 2011)
- McCullers Ruritan Club (July 24, 2012)

- Sunset Oaks Homeowners Association (October 7, 2013)
- Bentwinds Homeowners Association (October 22, 2013)
- Fuquay-Varina Future Leaders class (November 19, 2014)
- Keller Williams Realty Cary (March 22, 2016)
- McCullers Ruritan Club (May 24, 2016)
- Fair Oaks Property Owners Association (June 23, 2016)
- Keller Williams Realty Garner (July 20, 2016)

3.6 PETITIONS

Following the Public Informational Meetings in September 2010 and October 2013, several neighborhood groups circulated petitions regarding the project. Petitions have been submitted by the following groups:

- Tyler Farms and Brookstone Homeowners – 86 signatures supporting the Orange Corridor Alternative and opposing the Purple, Blue and Pink Corridor Alternatives.
- Upchurch Place Homeowners – 37 signatures opposing the Blue Corridor Alternative, the project as a toll facility, and the project as a whole.
- Windward Pointe – 107 signatures opposing the Blue Corridor Alternative in the vicinity of Holly Springs.
- The Village at Aversboro – 63 signatures opposing the Red Corridor Alternative.
- Ridgbrook, Ridgebrook Bluffs, and Westbury Homeowners – 121 signatures opposing the Red Corridor Alternative, supporting selection of the Purple-to-Blue Corridor Alternative, and requesting that if the Orange Corridor Alternative is selected, that the intersection at Lake Wheeler Road be located as far south as possible with sound barriers.
- Bells Pointe Homeowners – 24 signatures opposing the Orange Corridor Alternative.
- Springfield North – 30 signatures supporting the Orange Corridor Alternative and opposing the Purple and Blue Corridor Alternative.
- Bentwinds and surrounding neighborhoods – 470 signatures supporting the Orange Corridor Alternative and opposing the Blue and Purple Corridor Alternatives.
- Jamison Park Board Homeowners Association Board of Directors – Signatures of Board members supporting the Blue Corridor Alternative and opposing the Orange Corridor Alternative and the Purple Corridor Alternative.
- Town of Garner – 356 signatures opposing the Red Corridor Alternative.
- Springfield Baptist Church – 1,096 signatures opposing the Red and Pink Corridor Alternatives and the Preliminary Study Alternative that would connect the Orange Corridor Alternative to the Red Corridor Alternative via improvements to a segment of I-40.
- Sunset Oaks – 858 signatures expressing support for the Orange Corridor and opposition to the Purple and Blue Corridors.
- Bentwinds and surrounding neighborhoods – 458 signatures expressing support for the Orange Corridor and opposition to the Purple and Blue Corridors. The petition was also signed by NC Representatives Paul Stam and Nelson Dollar, Wake County Commissioner Phil Matthews, and Fuquay-Varina Mayor John Byrne.

- Brookstone and surrounding neighborhoods – 245 signatures expressing support for the Orange Corridor and opposition to the Purple, Blue, and Lilac Corridors.
- Talicud Trail – 20 signatures expressing support for the Orange Corridor and opposition to the Purple-Blue-Lilac Corridor.
- High Grove – 47 signatures expressing support for the Orange Corridor and opposition to the Purple-Blue-Lilac Corridor.
- Hillington West and Turner Farms – 86 signatures expressing opposition to the Lilac Corridor.
- Upchurch Place – 19 signatures expressing opposition to both the Orange and Blue Corridors, and also to the project as a whole.
- Residents of Holly Springs, Apex, and Cary – 239 signatures expressing support for the Orange Corridor and opposing the Purple and Blue Corridors.

4 LOCAL GOVERNMENT COORDINATION

4.1 CAPITAL AREA MPO MEETINGS

NCDOT provides project updates at monthly meetings of the Capital Area MPO Executive Board and Technical Coordinating Committee (TCC). These committees include representatives of all local governments and other transportation-related groups in the region. Monthly meetings of these committees provide a forum for presenting important project information, answering comments and questions, and engaging local government representatives in the project development process.

NCDOT presented project updates at Executive Board meetings on:

- February 17, 2010
- March 17, 2010
- April 21, 2010
- May 19, 2010
- June 16, 2010
- September 15, 2010
- October 20, 2010
- January 17, 2011
- February 16, 2011
- March 16, 2011
- October 25, 2017

NCDOT presented project updates at TCC meetings on:

- March 18, 2010
- April 1, 2010
- June 3, 2010
- August 5, 2010
- September 2, 2010
- November 4, 2010
- January 6, 2011
- February 3, 2011
- March 3, 2011
- April 7, 2011
- September 1, 2016

CAMPO also established a Complete 540 Working Group to provide a forum for the affected local governments to discuss the project. To date, the working group has held five meetings:

- September 5, 2013
- October 3, 2013
- January 9, 2014
- November 19, 2014
- November 5, 2015

Summaries of these meetings are in **Appendix H**.

4.2 SMALL GROUP MEETINGS

NCDOT has met with local government staff and elected officials during development of preliminary alternatives to solicit input, respond to local concerns, and receive updates on local issues and constraints relative to the project. NCDOT staff attended the following meetings:

- Garner Town Council (September 28, 2010)
- Town of Holly Springs Engineering and Planning staff and Comprehensive Transportation Plan consultant (October 4, 2010)
- Town of Garner Planning staff (October 8, 2010)
- Wake County Planning and Community Services staff (October 11, 2010)
- Durham-Chapel Hill-Carrboro MPO (October 13, 2010)
- Wake County Board of Commissioners (October 18, 2010)
- City of Raleigh Public Utilities and Engineering staff (October 25, 2010)
- Wake County Planning Board (November 3, 2010)
- Holly Springs Engineering staff (November 8, 2010)
- Wake County Historic Preservation Commission (November 16, 2010)
- Town of Garner Meeting (November 17, 2010)
- Garner Town staff (November 23, 2010)
- Garner Town staff (December 3, 2010)
- Clayton Town staff and Johnston County staff (December 14, 2010)
- City of Raleigh staff (January 7, 2011)
- City of Raleigh, Wake County, and CAMPO staff (January 19, 2011)
- Garner Town staff (February 15, 2011)
- Garner Town representatives and stakeholders (February 24, 2011)
- Garner Town Council (August 6, 2012)
- Southern Wake County mayors and managers, CAMPO, and Regional Transportation Alliance (August 7, 2012)
- Wake County Board of Commissioners (August 20, 2012)
- Garner Town staff and stakeholders (August 22, 2012)
- Southern Wake County mayors and managers, CAMPO, and Regional Transportation Alliance (July 7, 2013)
- Wake County Board of Commissioners (August 20, 2013)
- Garner representatives and stakeholders (August 22, 2013)
- Holly Springs Town Council (October 1, 2013)
- Triangle Mobility Action Partnership (October 16, 2015)
- Triangle Mobility Action Partnership (April 1, 2016)
- Town of Benson economic development representatives (February 23, 2017)

4.3 LOCAL GOVERNMENT RESOLUTIONS AND STAFF COMMENTS

Following the Public Informational Meetings in September 2010, several local governments passed resolutions regarding Complete 540:

- The Town of Holly Springs passed a resolution supporting construction of the project in the Orange Corridor Alternative (September 21, 2010).
- The Town of Garner passed a resolution supporting construction of the project in the Orange corridor and opposing the Red Corridor Alternative (October 4, 2010).
- The Wake County Board of Commissioners passed a resolution supporting construction of the project in the Orange Corridor Alternative and opposing the Blue, Purple, and Red Corridor Alternatives (October 18, 2010).
- The Town of Fuquay-Varina passed a resolution supporting construction of the project in the Orange Corridor Alternative (October 19, 2010).
- The Town of Knightdale adopted a resolution in support of NCDOT building a new roadway for both phases of the Triangle Expressway Southeast Extension (October 20, 2010).
- The Capital Area MPO passed a resolution supporting the Orange Corridor Alternative and urging that the entire remaining portion of the Outer Loop be built as a single project (October 20, 2010).
- The Capital Area MPO passed a resolution opposing the Red and Tan Corridor Alternatives (March 17, 2011).
- The North Carolina General Assembly passed legislation to prevent construction of the project north of the Orange Corridor Alternative; the legislation was signed into law (March 18, 2011).
- The Capital Area MPO passed a resolution expressing its “unwavering support for construction of the Wake Outer Loop, as quickly as possible, in a location that meets the needs of area citizens and requirements of federal law” (May, 16, 2012).
- The Capital Area MPO passed a resolution requesting that North Carolina Session Law 2011-7 be repealed to allow study of alternative routes for the project in accordance with NEPA and other federal laws and to allow construction of the project as quickly as possible (December 12, 2012). On December 20, 2012, the Capital Area MPO sent a letter to the North Carolina General Assembly echoing this.
- Town of Holly Springs passed a resolution supporting construction of the project in the Orange Corridor Alternative (October 1, 2013).
- The Town of Fuquay-Varina passed a resolution supporting construction of the project in the Orange Corridor Alternative (October 19, 2013).
- The Wake County Board of Commissioners passed a resolution supporting construction of the project in the Orange and Green Corridor Alternatives (October 21, 2013).
- The Town of Garner passed a resolution supporting construction of the project in the Orange Corridor Alternative (October 22, 2013).
- The Capital Area Metropolitan Planning Organization (CAMPO) passed a motion to continue support of the Orange Corridor Alternative (November 20, 2013).
- The Towns of Holly Springs and Fuquay-Varina passed a resolution supporting construction of the project in the Orange Corridor and indicating that the Purple and Blue Corridors would be more disruptive to the two communities (June 16, 2015).

- The Town of Garner passed a resolution supporting construction of the project in the Orange Corridor (July 7, 2015).
- The Wake County Board of Commissioners passed a resolution supporting construction of the project in the Orange Corridor and indicating opposition to the Blue, Purple, Red, and Lilac Corridors (September 8, 2015).
- The Wake County Mayors' Association passed a resolution supporting construction of the project in the Orange Corridor and indicating that the Purple and Blue Corridors would be more disruptive to residents of Wake County (September 23, 2015).
- The Town of Benson passed a resolution supporting immediate funding and construction of Complete 540 (April 10, 2018).
- The Benson Chamber of Commerce passed a resolution supporting immediate funding and construction of Complete 540 (April 17, 2018).

Copies of these resolutions are in **Appendix I**.

Several local governmental and regulatory agencies, local interest groups, and local elected officials have also submitted formal letters regarding Complete 540:

- The Wake County Parks, Recreation & Open Space Department sent a letter (October 6, 2010) raising concerns about Purple, Red, and Blue Corridor Alternatives crossing segments of priority streams along Middle and Swift Creeks. Additionally there was concern expressed specifically about the Blue Corridor Alternative near the planned Southeast Regional Park. Modification of the Blue Corridor Alternative would avoid the acquired land for this park; however, Wake County is in negotiations for an adjacent piece of land to expand the park that could not reasonably be avoided with the Blue Corridor Alternative. They expressed support for the Orange Corridor Alternative.
- The Town of Holly Springs supports the Orange Corridor Alternative and sent comments (October 21, 2010) relative to the various alternative routes under consideration. The Town further supports the use of the Orange Corridor Alternative and not the Blue or Purple Corridor Alternatives at Holly Springs.
- The Garner Chamber of Commerce sent a letter (October 19, 2010) in support of the Orange Corridor Alternative and in opposition to the Red Corridor Alternative. They cited impacts to businesses and residences as the primary reason for their opposition to the Red Corridor Alternative.
- The Town of Garner sent a list of concerns (October 20, 2010) in support of eliminating the Red and Pink Corridor Alternatives. The reasons cited related to parks, recreational facilities, orderly growth, planned industrial development, community cohesion, water quality, access, and neighborhood impacts. The town reiterated in the letter their strong support for the Orange Corridor Alternative.
- The Town of Cary sent a letter (October 20, 2010) in support of designating the project as a bypass for the US 64 corridor and provided comments about the project's purpose and need statement.
- The YMCA of Garner and the YMCA of the Triangle sent a letter (October 22, 2010) opposing the Red Corridor Alternative due to potential impacts on a planned YMCA site on Aversboro Road.

- The North Carolina General Assembly’s Garner delegation, including two State Representatives and two State Senators, sent a letter (November 30, 2010) asking NCDOT to eliminate the Red and Pink Corridor Alternatives from further consideration, citing potential impacts to Garner neighborhoods, the local tax base, and parks and other community facilities.
- The Wake County Board of Commissioners sent a letter (December 8, 2010) requesting elimination of the Tan Corridor Alternative.
- The Mayor of Raleigh sent a letter (January 11, 2011) stating opposition to the Tan Corridor Alternative and requesting that NCDOT work to develop other alternatives in the Phase II project area.
- USACE sent a letter (January 26, 2011) indicating its opposition to eliminating the Red Corridor Alternative.
- The Johnston County Board of Commissioners sent a letter (February 8, 2011) stating its opposition to the Tan Corridor Alternative and requesting its elimination.
- USFWS sent a letter (February 17, 2011) regarding the Dwarf Wedgemussel studies and data needs.
- USACE sent a letter (March 23, 2011) requesting more information regarding the Red and Pink Corridor Alternatives.
- The Town of Garner sent a letter (October 6, 2011) expressing continued opposition to study, consideration, or construction of the Red Corridor Alternative.
- USACE sent a letter (February 17, 2012) affirming its position that the project’s Environmental Impact Statement should “rigorously explore and objectively evaluate” the Red Corridor Alternative.
- The Town of Garner sent a letter (March 7, 2012) stressing its concerns about detrimental community impacts that could arise with continued “construction and/or study” of the Red Corridor Alternative.
- The Wake County Board of Commissioners sent a letter (August 29, 2012) reaffirming the County’s support of the Orange and Green Corridor Alternatives and requesting that the study be completed as quickly as possible.
- FHWA and USACE sent a letter (December 7, 2012) indicating that the Red Corridor Alternative should be studied in detail in the Draft Environmental Impact Statement.
- NC Representative Paul Stam submitted a letter (October 23, 2013) requesting that NCDOT complete studies on the Purple Corridor Alternative as quickly as possible and expressing support for the Orange Corridor Alternative.
- NC Representative Darren Jackson submitted a letter (November 12, 2013) suggesting that the Orange Corridor Alternative is the best option for the project west of I-40 and that potential impacts east of I-40 on the Sherriff’s training center and the wastewater treatment spray fields should carry more weight than potential impacts to the Randleigh Farm property. The letter also suggested that NCDOT complete necessary work as soon as possible in order to eliminate the Red Corridor Alternative.
- NC Senator Tamara Barringer and Representative Nelson Dollar submitted a letter (November 12, 2013) expressing support for the Orange Corridor Alternative and opposition to the Red, Blue, Purple, and Lilac Corridor Alternatives.
- The Town of Holly Springs submitted a letter (November 12, 2013) detailing the reasons why the Town supports the Orange Corridor Alternative and opposes the Purple Corridor Alternative.

- The Wake County Planning, Development and Inspections Division submitted a letter (November 12, 2013) expressing support for the Orange Corridor west of I-40 and the Green Corridor east of I-40, citing the importance of these routes in supporting the Wake County Land Use Plan.
- The Wake County Division of Parks, Recreation and Open Space submitted a letter (November 12, 2013) expressing support for the Orange Corridor Alternative west of I-40 and the Green Corridor Alternative east of I-40, citing impacts to Wake County priority stream corridors, the planned Southeast County Park, and a Natural Heritage site along Middle Creek as concerns about the Purple, Blue, and Red Corridor Alternatives.
- The Regional Transportation Alliance submitted a letter (March 20, 2018) indicating that the regional business community's top transportation priority is accelerating the completion of Complete 540.
- The Wake County Mayors Association submitted a letter (March 20, 2018) indicating that all of the Wake County Mayors support the implementation and completion of the project as soon as possible.

Copies of these letters are in **Appendix J**. Comments received from local governments and other stakeholder interest groups following publication of the Draft EIS are discussed in **Section 5** of this report.

4.4 STATE LEGISLATION

North Carolina House Bill 225 and Senate Bill 165, which both passed the State General Assembly, prevent implementation of the Complete 540 – Triangle Expressway Southeast Extension north of the Orange Corridor Alternative. Governor Beverly Perdue signed the bill into law as North Carolina Session Law (NCSL) 2011-7 on March 18, 2011. A copy of the legislation is in **Appendix I**.

As indicated in Section 6.3.3, the Capital Area MPO passed a resolution on December 12, 2012, requesting that NCSL 2011-7 be repealed to allow study of alternative routes for the project in accordance with NEPA and other federal laws and to allow construction of the project as quickly as possible. The Capital Area MPO sent a copy of the resolution to the North Carolina General Assembly to encourage repeal of the law. On January 23, 2013, the Town of Garner sent a letter to the Wake County delegation of the General Assembly affirming its opposition to the repeal of the law. A copy of this letter is in **Appendix I**.

During its 2013 session, the North Carolina General Assembly passed two bills removing the alignment restrictions previously imposed on the project by NCSL 2011-7. Governor Pat McCrory signed House Bill 10 into law as NCSL 2013-94 on June 12, 2013, and signed House Bill 817 into law as NCSL 2013-183 on June 26, 2013. By removing the restrictions imposed by NCSL 2011-7, this legislation allowed NCDOT to fully resume the project's environmental study. Copies of this legislation are in **Appendix I**.

5 COMMENTS ON DRAFT EIS

5.1 FEDERAL AND STATE AGENCIES

Following publication of the Draft EIS, NCDOT received formal review comments from several federal and state agencies. Comments addressed a number of topics, including potential impacts to protected species, water quality impacts, and impacts to wetlands and streams. Copies of all the comments received from federal and state agencies are in **Appendix K**. Also included in **Appendix K** are tables listing each individual comment, along with NCDOT’s response to each comment. **Table 5** summarizes the agency comments that specifically addressed the project’s DSAs, noting whether the agency indicated any preference among the project’s DSAs, and indicating other key information the agency provided about its perspective on the DSAs.

Table 5: Federal and State Agency Review Comments on DSAs

Agency	DSA Preference?	Comments
US Fish & Wildlife Service (11/25/15)	None noted	<ul style="list-style-type: none"> • DSAs 6 and 7 (Red Corridor) have lowest impacts on wetlands & streams and the least direct and indirect effects on the dwarf wedgemussel (DWM). • USFWS understands the intense opposition to the Red Corridor due to its disproportionate impacts on the human environment. • DSAs 1 through 5 (Orange Corridor) greatly minimize impacts to human environment; however, they have great potential to adversely affect the DWM. USFWS finds the Orange Corridor very problematic. • DSAs 8 through 17 (Lilac Corridor) would have very similar, albeit somewhat lesser adverse effects on the DWM. • Ability to propagate DWM and augment the population in Swift Creek will factor significantly in analysis to determine whether the Complete 540 project will jeopardize the continued existence of the species. • USFWS would prefer that the Clemmons Educational State Forest not be impacted.
US Environmental Protection Agency (1/4/16)	None noted	<ul style="list-style-type: none"> • Notes that DSAs 6 and 7 “appear to most closely meet the Complete 540’s ‘Purpose and Need.’” • Environmentally prefers DSAs 6 and 7 as having least impacts to jurisdictional streams and wetlands. • Finds DSAs 8-17 problematic because they would have the most potential to induce indirect effects.
National Marine Fisheries Service (12/15/15)	DSAs 6 & 7	<ul style="list-style-type: none"> • Prefers DSAs 6 and 7 because they avoid impacts to shad and striped bass and their habitats in Swift Creek, would have smaller impacts to the Neuse River, and would impact the smallest amount of wetlands and streams.
NC Wildlife Resources Commission (12/9/15)	None noted	<ul style="list-style-type: none"> • Indirect and cumulative effects of the project on induced land development will be a key aspect in selecting the Least Environmentally Damaging Practicable Alternative (LEDPA). • NCWRC has concerns about the effect of continued development in the lower Swift Creek watershed, below the

Agency	DSA Preference?	Comments
		Lake Benson dam, on long-term viability of the DWM and other sensitive aquatic species.

Note: NCDOT also received comment letters from the U.S. Department of the Interior, U.S. Department of Agriculture, North Carolina Division of Water Resources, and North Carolina Division of Waste Management. These comment letters did not specifically address support for or opposition to project DSAs but they are included in Appendix K.

5.2 PUBLIC COMMENTS

As described in **Section 3.2** of this report, during the comment period for the Draft EIS, from early November 2015 through January 8, 2016, comments addressing the DSAs, the Draft EIS, or other substantive project issues were received from 1,476 commenters. Emailed comments, letters, and the petition generally cited only particular color-coded corridor segments, rather than end-to-end DSAs, when indicating preferences and opposition. Some comments indicated both opposed and preferred corridor segments, while others indicated only one or the other. Many comments indicated more than one corridor segment that were preferred or opposed. Key conclusions from a review of expressed preferences and opposition in all of the comments included the following:

- There was overwhelming support for the Orange Corridor west of I-40. About 93 percent of submitted comments (those stating support for a color corridor west of I-40) expressed a clear preference for the Orange Corridor.
- Support for the Red, Purple/Blue, and Lilac Corridors was at 2 percent, 4 percent, and 2 percent, respectively.
- There was widespread opposition to the Red (58 percent of those stating opposition to a color corridor west of I-40) and Purple/Blue Corridors (34 percent of those stating opposition to a color corridor west of I-40).
- There was also notable opposition to the Lilac Corridor, with 7 percent of those stating opposition to a color corridor west of I-40.
- Only 1 percent of those stating opposition to a color corridor west of I-40 were opposed to the Orange Corridor.
- There was less of a clear pattern of support and opposition to corridors east of I-40, with most comments not specifically addressing these options. However, among comments that specifically addressed the corridors east of I-40, the Green Corridor was most commonly preferred. The Brown Corridor and the Tan Corridor were most commonly opposed.

While some of the written comments indicated only route preferences, without citing specific reasons for those preferences, most of the comments that gave specific reasons cited concern about potential effects on their neighborhoods, communities, and homes, in indicating support for the Orange Corridor and opposition to other corridors. Many of these responders cited the fact that communities have planned around the Orange Corridor and residents have made location decisions based on the Orange Corridor since its protection in 1996 and 1997. Many responders also indicated an opinion that minimizing impacts on homes, businesses, and neighborhoods should take precedence over minimizing impacts on natural resources. For the smaller number of responders that specifically mentioned considerations east of I-40, many also indicated that since a route similar to the Green Corridor has been shown on planning maps for the past two decades, they have also made location decisions based on that assumed location for completing the 540 outer loop.

While the large majority of public comments dealt with preference for or opposition to certain DSAs or color-coded corridor segments, other issues were cited in some of the public comments. Some of the more common issues raised included:

- Questions about whether traffic/toll revenue on the existing portions of NC 540 is meeting the levels predicted by NCDOT.
- Concern about the perceived unfairness of tolling the extension of the 540 Outer Loop into southern Wake County when the northern sections of the Outer Loop are not tolled.
- Statements citing the fact that, since the mid-1990s, the decisions local residents have been making about where to live and local governments have been making about future land use plans have been based on the belief that the project would be constructed along the protected corridor (Orange Corridor).
- Questions about why the project has taken so long and why NCDOT didn't just start the environmental documentation process after the protected corridor was established.
- Questions about why NCDOT can't just widen existing roads (e.g., NC 55, NC 42, Ten Ten Road) instead of building a new road.
- Questions about where noise barriers will be constructed and when a noise impact study will be done.

There were also more specific comments that addressed aspects of the project design, the project development process, or information included in the Draft EIS. **Appendix K** includes a table listing each substantive public comment received during the Draft EIS comment period, along with NCDOT's response to each. It is important to note that many of these comments were expressed by numerous commenters. As listed in the table in **Appendix K**, each comment is paraphrased to capture the common issue expressed by those who addressed that particular topic.

5.3 LOCAL GOVERNMENTS AND OTHER STAKEHOLDER GROUPS

Several local governments other stakeholder groups in the Complete 540 project area submitted formal comments following release of the Draft EIS. Copies of all the comments received from local governments and other stakeholder groups are in **Appendix K**. Also included in **Appendix K** are tables listing each individual comment, along with NCDOT's response to each comment.

The City of Raleigh's Mayor and Office of Transportation submitted letters expressing support for DSA 2 and opposition to the Red, Lilac, Green, Brown, and Tan Corridors, and also noting some design- and infrastructure related issues. The Town of Cary submitted an email with editorial comments about the Draft EIS and a comment about greenway accommodations. The Town of Garner submitted a comment reiterating its support for the Orange Corridor and opposition to the Red and Lilac Corridors. The Town of Benson submitted a letter expressing support for the Orange Corridor.

The Regional Transportation Alliance and the Morrisville Chamber of Commerce submitted comments expressing clear support for project overall. The Triangle Greenways Council submitted comments about potential greenway and natural resources impacts. The Southern Environmental Law Center submitted a letter detailing their concerns about the analyses used in the project, indicating a clear opposition to a new location roadway alternative for the project, and suggesting that NCDOT give greater consideration to other options, such as improving existing roadways.

6 COMMENTS ON FINAL EIS

6.1 FEDERAL AND STATE AGENCIES

Following publication of the Final EIS, NCDOT received formal review comments from several federal and state agencies. Comments addressed a number of topics, including potential impacts to protected species, water quality impacts, and impacts to wetlands and streams. Copies of all the comments received from federal and state agencies are in **Appendix L**. Also included in **Appendix L** are tables listing each individual comment, along with NCDOT's response to each comment.

6.2 PUBLIC COMMENTS

The comment period for the Final EIS ran from late December 2017 through February 2, 2018. During this period, NCDOT received 84 individual emailed comments. Most of these comments focused on expressing support or opposition to the project, with 56 comments expressing opposition and 18 expressing support. Comments that expressed opposition typically cited the project's potential effects on the natural environment as a key reason for the opposition, and many expressed a preference for widening existing roads and expanding transit instead of constructing the project. Several of the opposition comments and several comments that expressed neither opposition nor support cited unhappiness about financing the project through tolls. Many of the comments that expressed support also expressed a desire to see the project constructed as quickly as possible, with several comments noting a strong need for the project. In addition to these comments, 595 individuals submitted copies of the same email noting opposition to the project, noting concerns about impacts to the natural environment and a preference for widening existing roads and expanding transit instead of the project. Also, 157 individuals submitted similar versions of another email noting support for the project, citing the need for the project and the belief that the Selected Alternative minimizes environmental impacts to the greatest extent possible.

A separate public comment period during and following the project's Design Public Hearing ran from February 20 through March 23, 2018. While the main purpose of that comment period was to solicit comments about the proposed project designs, and many of the comments submitted during that period did focus on the proposed designs, several comments did indicate project support, project opposition, or other concerns. The comments submitted during that period included 18 that noted support for the project and 6 that noted opposition to the project. Several of the comments submitted during that period noted concerns about the project's noise impacts and about tolls. More information about these comments is in **Section 3.3** of this report.

6.3 LOCAL GOVERNMENTS AND OTHER STAKEHOLDER GROUPS

Several local governments other stakeholder groups in the Complete 540 project area submitted formal comments following release of the Final EIS. Copies of all the comments received from local governments and other stakeholder groups are in **Appendix L**. Also included in **Appendix L** are tables listing each individual comment, along with NCDOT's response to each comment. As part of responding to some of these stakeholder comments, NCDOT prepared two additional summary memoranda to provide additional information. The first of these, included in **Appendix M**, is titled "Access2040 Claims and Performance Assessment" (HNTB, 2018). It reviews cost claims and assesses the performance of an alternative concept for the project, called Access2040, released by SELC. The second memo, included in **Appendix N**, is titled "Responses to Southern Environmental Law Center Comments on the Complete 540 Final Environmental Impact Statement's Indirect and Cumulative

Effects Discussion” (Baker, 2018). It provides more detailed information to address SELC’s comments regarding the project’s quantitative indirect and cumulative effects analysis, which NCDOT conducted following selection of the project’s Preferred Alternative and documented in the Final EIS.

7 STAKEHOLDER INPUT FOLLOWING DRAFT EIS

7.1 SECTION 4(F) DE MINIMIS COORDINATION

The Preferred Alternative would result in minor effects to two publicly-owned recreational resources subject to Section 4(f) of the Department of Transportation Act of 1966, as amended (49 USC 303 and 23 CFR 774)—Middle Creek School Park and the Neuse River Trail. Federal law (SAFETEA-LU Section 6009(a)) amended Section 4(f) to simplify the processing and approval of projects that have only minor impacts, known as *de minimis* impacts, on lands protected by Section 4(f).

Three criteria must be satisfied in order to determine that the effects of the Preferred Alternative on these two resources would constitute *de minimis* impacts:

1. FHWA must determine that the transportation use of the Section 4(f) resource does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f);
2. The public must be afforded an opportunity to review and comment on the effects of the project on the protected activities, features, and attributes of the Section 4(f) resource; and
3. The official(s) with jurisdiction over the properties must be informed of FHWA's intent to make the *de minimis* impact determination based on their written concurrence that the project will not adversely affect the activities, features, and attributes that qualify the property for protection under Section 4(f).

As documented in the Draft EIS, FHWA has determined that the use of each of these two resources would not adversely affect their recreational activities, features, and attributes, fulfilling the first criterion. Detailed information about the evaluation of the potential impacts of the project on these recreational resources, and about the finding that their recreational activities, features, and attributes would not be adversely affected by the project, are included in an appendix to the Draft EIS.

The public had the opportunity to review and comment on the potential effects of the project DSAs on these resources following publication of the Draft EIS, by reviewing the document, and at public hearings held after publication of the document, fulfilling the second criterion. There was no expressed opposition by citizens to the *de minimis* determinations for these resources.

As documented in **Appendix K**, the Southern Environmental Law Center (SELC) in their comments on the Draft EIS expressed their opinion that impacts associated with the proposed highway on the Neuse River Trail would not be *de minimis*. SELC indicated that the highway crossing of the trail would create unusual conditions along the trail. What SELC failed to acknowledge is that the Neuse River Trail crosses over or under several transportation facilities including similar highway facility crossings at I-540, I-495, US 1, US 401, and US 64.

Concerning the Middle Creek School Park, SELC in their comments on the Draft EIS questioned the current use of the wooded open space that would be impacted by the highway project. NCDOT has addressed this question in **Appendix K**, noting that this area has no formal park function and currently serves as a wooded area behind a residential neighborhood.

NCDOT and FHWA have completed coordination with the officials with jurisdiction over these properties to make the *de minimis* impact determination, fulfilling the third criterion. Concurrence letters from the City of Raleigh and the Town of Cary are in **Appendix O**. The City of Raleigh has concurred with the FHWA *de minimis* determination relative to the Neuse River Trail. Likewise, the Town of Cary has concurred with the *de minimis* determination for the Middle Creek School Park.

6.2 SOUTHERN ENVIRONMENTAL LAW CENTER LETTERS

Following SELC's January 8, 2016, letter documenting the organization's comments on the Draft EIS, SELC sent two additional letters to NCDOT concerning the Complete 540 project. Copies of both of these letters are in **Appendix P**.

The first letter, dated March 7, 2016, was a letter sent jointly by SELC and the Regional Transportation Alliance (RTA). This letter requested additional information and clarifications about the project. NCDOT sent a detailed response letter, dated April 28, 2016, to SELC and RTA. This response letter, also included in **Appendix P**, includes the requested additional information and clarifications.

The second letter, dated July 5, 2016, suggested that NCDOT revisit its analysis of the Complete 540 project alternatives in light of the North Carolina Supreme Court's 2016 decision in *Kirby v. North Carolina Department of Transportation*. In this decision, the Supreme Court held that property restrictions authorized by the Roadway Corridor Official Map Act amount to a taking of property, triggering a constitutional requirement for the government to compensate property owners. The letter suggested that a Supplemental Draft Environmental Impact Assessment (DEIS) should be prepared as a result of the *Kirby* ruling, and that the US Army Corps of Engineers should be given the opportunity to review this revised document.

After reviewing the *Kirby* ruling, NCDOT does not believe that a Supplemental DEIS is required. NCDOT believes that the cost data presented in the Draft EIS and Final EIS do not conflict with the *Kirby* ruling. NCDOT notes the following information:

- The project's right-of-way cost estimates were based on current property values, with the same estimating method used for each of the project's DSAs.
- NCDOT understands the *Kirby* ruling to require paying property owners the difference between the value of their property immediately before the Roadway Corridor Official Map was recorded and the value immediately after, taking into account all factors including the reduction in ad valorem taxes on the property. While the net effect of this before-and-after comparison has yet to be determined, NCDOT does not expect it will increase the cost of alternatives using all or some of the Protected (Orange) Corridor.
- Payments to be made as a result of the *Kirby* ruling will be a "sunk cost," i.e., one that will be required of NCDOT regardless of which alternative was selected as the preferred. Therefore, the additional cost as a result of the *Kirby* ruling would be additive to the project, without regard to the Preferred Alternative.
- NCDOT will incorporate updated right-of-way cost information, when available for the Complete 540 project, in the Strategic Mobility Formula for prioritizing projects under the Strategic Transportation Investment law. The reprioritization of projects is done periodically as part of the updating process for the State Transportation Improvement Program.

8 STAKEHOLDER INPUT FOLLOWING FINAL EIS

SELC submitted a letter to NCDOT and FHWA on January 2, 2018, requesting an extension to the original February 2, 2018, deadline for submitting comments regarding the Final EIS. The letter, included in **Appendix P**, expressed concern about the earlier-than-anticipated release date of the Final EIS and the subsequent length of the review period. On January 8, 2018, NCDOT sent a response letter, included in **Appendix P**, to SELC granting an extension, indicating that SELC could submit review comments as late as February 22, 2018. SELC then submitted review comments on the Final EIS on February 22, 2018 (see **Section 6.3**).

SELC submitted another letter, included in **Appendix P**, to NCDOT on March 23, 2018 raising concerns about correspondence between Wake County Mayors Association and CAMPO. This correspondence cited economic benefits as an element of the Mayors' support for the project. SELC indicated that this appeared to be in conflict with conclusions summarized in the Final EIS, which concluded that the project "would induce negligible growth and development in the project area." NCDOT responded with a letter on March 27, 2018, included in **Appendix P**, explaining the distinctions between the anticipated economic benefits cited by the Mayors and the findings presented in the Final EIS.

NCDOT and FHWA held informal meetings with SELC following the Final EIS and after SELC's submittal of comments on the Final EIS. These meetings were an opportunity for discussions and understanding concerning the project in general and specific areas of concern for SELC and their clients. One of the meetings addressed project related concerns in a broad perspective. The other meetings focused specifically on protected species and on traffic analyses.

9 REFERENCES

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APPENDICES

APPENDIX A
Section 6002 Coordination Plan
(Including Notice of Intent)

**Final Section 6002 Coordination Plan
for the Triangle Expressway Southeast Extension Project
(STIP Projects R-2721, R-2828, & R-2829)**

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 Triangle Expressway Southeast Extension, also known as the Southern and Eastern Wake Expressway, project (North Carolina Department of Transportation [NCDOT] State Transportation Improvement Program [STIP] Projects R-2721, R-2828, and R-2829).

1.2. Integration of NEPA and Section 404 Requirements. The process established in this plan is intended to ensure that the requirements of the National Environmental Policy Act (NEPA) of 1969, as amended, 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;
- the North Carolina Department of Environment and Natural Resources (NCDENR) can issue Section 401, Riparian Buffer Authorizations, Isolated Wetland Permits, and State Stormwater Permits based on information developed as part of the NEPA process; and
- the US Army Corps of Engineers (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.

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 (NCTA) submits a project initiation notice to the Federal Highway Administration (FHWA). This notice was provided in the form of a letter from NCTA to FHWA on November 20, 2009. A draft Notice of Intent was included with this notice.
- 2.2. Notice of Intent. A Notice of Intent to prepare an Environmental Impact Statement (EIS) for this project was published in the Federal Register on November 30, 2009. The project initiation notice and the Notice of Intent 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. A draft schedule for the Southern and Eastern Wake Expressway project is shown in Table 1.

Table 1: Draft Project Schedule

Notice of Intent	November 2009
Identify Detailed Study Alternatives	Q1 2011
DEIS	Q1 2012
Identify Preferred Alternative	Q2 2012
FEIS	Q1 2013
ROD	Q4 2013
Permit Application(s)	Q1 2014*
Let Contract/Begin Construction	Q2 2014*

*Contingent upon funding.

- 3.2. Agency Consultation. The schedule will be shared with the agencies and discussed at a Turnpike Environmental Agency Coordination (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 and Cooperating 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.
- ## 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. Lead State Agency. NCTA, a division of the NCDOT, will be the Lead State Agency, and thus will share with FHWA the responsibilities of the “Lead Agency” under the process defined in Section 6002.
- 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 were sent to Federal and non-Federal agencies that, in the judgment of FHWA and NCTA, may have an interest in the project. Table 2 lists agencies identified as having an interest in the Southern and Eastern Wake Expressway project. With the exception of the NC Department of Environment and Natural Resources (NCDENR), Division of Marine Fisheries, all agencies have agreed to serve as participating agencies for this project. Instead, NCDENR, Division of Marine Fisheries indicated that it will defer to NCDENR, Division of Water Quality. Invitation letters and agency responses thereto are included as Exhibit 2 to this Plan.

Table 2: Agency Roles

	Cooperating Agency	Participating Agency
US Army Corps of Engineers	✓	✓
US Environmental Protection Agency		✓
US Fish and Wildlife Service		✓
NC Department of Cultural Resources – Historic Preservation Office		✓
NC Department of Environment & Natural Resources		✓
Division of Marine Fisheries		✓
Division of Water Quality		✓
Wildlife Resources Commission		✓
Capital Area Metropolitan Planning Organization		✓

- 4.3.2. Deadline. Invitation letters specify a 30-day deadline for agencies to respond to the invitation.
- 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 or FHWA 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. As shown in Table 2, the USACE was invited to become a Cooperating Agency 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.
- 4.5. Local Government Coordination. The Capital Area Metropolitan Planning Organization (CAMPO) will serve as the official local representative for the project. CAMPO staff will be provided the same opportunities for input as other Participating Agencies. Local municipalities will be kept apprised of project developments through their involvement with CAMPO. The following municipalities are represented by CAMPO: City of Raleigh, City of Creedmoor, Town of Angier, Town of Apex, Town of Butner, Town of Cary, Town of Clayton, Town of Franklinton, Town of Fuquay-Varina, Town of Garner, Town of Holly Springs, Town of Knightdale, Town of Morrisville, Town of Rolesville, Town of Wake Forest, Town of Wendell, Town of Youngsville, Town of Zebulon, Wake County, and portions of Franklin, Granville, Harnett, and Johnston Counties.
 - 4.5.1. CAMPO Technical Coordinating Committee (TCC). A NCTA staff member will represent NCTA at CAMPO Technical Coordinating Committee (TCC) meetings.
 - 4.5.2. Meeting Summaries. Summaries of monthly TEAC meetings will be provided to CAMPO members.

5. Turnpike-Environmental Agency Coordination (TEAC) Meetings

- 5.1. TEAC Meetings. The principal method for agency coordination on NCTA projects will be TEAC meetings, which will be hosted by NCTA. These meetings will be used as a forum for discussing all NCTA 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. Each year, once available, a new schedule will be distributed.
- 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 Participating Agencies. Guidelines for circulating meeting materials are provided below.
 - 5.4.1. Secure Web Site. Meeting materials will be made available to Participating Agencies via NCTA's Constructware Site (<http://ncturnpike.constructware.com>).
 - 5.4.2. 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.
 - 5.4.3. Availability of Paper Copies. In addition to posting documents on the TEAC web site, NCTA will make paper copies of meeting materials available to all attendees at each meeting.
 - 5.4.4. 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 meeting (or by mail two weeks or more in advance) for discussion at a subsequent meeting. NCTA will consult with the Participating Agencies to determine when this type of distribution is appropriate.

- 5.5. Meeting Summaries. After each meeting, the NCTA will prepare a meeting summary. The summary will list the attendees, topics discussed, unresolved issues, and action items. The meeting summary will be posted in draft form to the TEAC web site for review and comment two weeks in advance of the next meeting. Meetings may be recorded on audiotape; the recording may 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 NCTA 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 Southern and Eastern Wake Expressway project are listed in Table 3.

Table 3: Primary Agency Contacts

US Army Corps of Engineers	Eric Alsmeyer
US Environmental Protection Agency	Chris Militscher
US Fish and Wildlife Service	Gary Jordan
NC Department of Cultural Resources – Historic Preservation Office	Peter Sandbeck
NC Department of Environment & Natural Resources	--
Division of Marine Fisheries	Kevin Hart
Division of Water Quality	Brian Wrenn
Wildlife Resources Commission	Travis Wilson
Capital Area Metropolitan Planning Organization	Chris Lukasina

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."
- 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, 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 record 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 record based on new information or changed circumstances at any point in project development. This record 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 Participating Agency 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 Participating Agencies and/or Lead Agencies.
 - 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 agencies.
- Each Participating Agency is responsible for identifying the more senior official(s) within his or her agency who will be directly involved in the elevation.
- The Participating Agencies 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, and will resolve the issue before proceeding with subsequent studies. NCTA anticipates that this process will be invoked rarely.

7. Development of Purpose and Need

7.1. Preliminary Purpose and Need Statement 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 of 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 may include:

- GIS map of study area (with study area identified)
- Summary of local concerns that resulted in project addition to the local transportation plan(s)
- Traffic data related to project needs
- Justification for designation as NCTA 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 statement 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 Statement. The purpose and need statement will be refined, as appropriate, based on input from the Participating Agencies and the public. Refinement of the purpose and need statement 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

statement as part of their review of the alternatives screening report. (See Part 8.4 and 8.5 below.) The purpose and need statement 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 development of alternatives, 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 will be made available for public review and comment. A public meeting (or meetings) may be held in the project area during the public comment period on this report. 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. A summary of public input will be provided to Participating Agencies. Agencies will be given notice of the public meeting and will be welcome to attend.
- 8.5. Opportunity for Agency Input. Participating Agencies will be given a 30-day period to provide additional comments on the alternatives screening report following distribution of the report summarizing public comments. Participating Agencies will not be asked to concur on the alternatives screening report. Participating Agencies will be 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.

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 that vary from standard procedures 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 HPO 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 may 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. The level of design for the detailed study alternatives will be determined in consultation with the Participating Agencies. There is no presumption that any specific level of design is needed; this issue will be determined based on the information needed to allow informed decision-making.
- 9.4.2. Detailed Study Alternatives. In general, functional design will be used as the basis for comparing the impacts of the alternatives in the Draft EIS (known as the Detailed Study Alternatives) and will be used for developing the cost estimates presented in the Draft EIS. A higher level of design detail may be developed for Detailed Study Alternatives in some cases; this issue will be discussed with Participating Agencies in accordance with Sections 9.1, 9.2, and 9.3.
- 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 Final EIS, 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).

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 HPO on historic resource 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. Recommended Alternative. The NCTA may choose to identify a Recommended Alternative in the Draft EIS. The Recommended Alternative is only a recommendation and is not a final decision.

10.2. Timing for Identifying Preferred Alternative. The following actions will be completed before NCTA selects a Preferred Alternative:

- the Draft EIS has been issued 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 Draft EIS has been held, and the comment period on the Draft EIS has ended.

10.3. 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 Draft EIS 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.

10.4. Opportunity for Agency Input. The NCTA will provide FHWA and all Participating Agencies with a copy of the preferred alternative information package. 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 on the Preferred Alternative. Agencies will be asked to submit any significant objections in writing to FHWA and NCTA on agency letterhead.

10.5. Lead Agency Decision. The NCTA and FHWA will formally identify the Preferred Alternative after considering all comments received from Participating Agencies, including both written comments and comments provided on the Draft EIS and 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 Draft EIS for 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 in the Final EIS.

11.2.2. Off-Site/Ecosystem Enhancement Program (EEP). The NCTA will coordinate with the Ecosystem Enhancement Program (EEP) during project development and design regarding the use of credits from the EEP's off-site mitigation sites to meet mitigation requirements for impacts to waters of the United States. The EEP also may 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
- Successful completion of Section 7 consultation
- Successful completion of Section 106 process (and Section 4(f), if applicable)

- 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 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 Delineations. The NCTA will prepare the necessary documentation to obtain preliminary jurisdictional verification by the USACE (and, as appropriate, NCDENR) for all delineated 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 delineations will be used as the basis for comparing wetlands and stream impacts in the Draft EIS. The width of the corridor within which jurisdictional delineations are made will be determined through coordination with the Participating Agencies. Jurisdictional determination on Detailed Study Alternatives will be performed as preliminary, and once the Preferred Alternative is determined, the final jurisdictional determination will be conducted. NCTA will prepare the necessary documentation to obtain final jurisdictional verification (i.e., Rapanos jurisdictional determination forms) for the Preferred Alternative.
- 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.
- 12.5. Request for Public Notice. The NCTA will submit the Section 404 permit application to the USACE at the time the Draft EIS 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 Draft EIS as the USACE's public hearing on the Section 404 application.

- 12.6. Public Hearing. The public hearing on the Draft EIS 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 construction methods
 - 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 a Section 401 certification request to NCDENR. Permit applications under other applicable laws 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 Record of Decision (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.

Exhibit 1

**PROJECT INITIATION LETTER
&
NOTICE OF INTENT**



STATE OF NORTH CAROLINA
TURNPIKE AUTHORITY

BEVERLY E. PERDUE
GOVERNOR

1578 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1578

DAVID W. JOYNER
EXECUTIVE DIRECTOR

November 20, 2009

John F. Sullivan, III, P.E.
Division Administrator
FHWA North Carolina Division
310 New Bern Avenue, Suite 410
Raleigh, NC 27601-1418

**RE: STIP Projects R-2721, R-2828, and R-2829
Notification of Project Initiation**

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 Southern and Eastern Wake Expressway project are underway. The project is included in the 2009-2015 North Carolina Department of Transportation (NCDOT) State Transportation Improvement Program (STIP) as Projects R-2721, R-2828, and R-2829. These three projects are being developed as a single project in a single Environmental Impact Statement (EIS).

NCTA, a division of NCDOT, will prepare an EIS on the proposed southern and eastern portions of the Outer Loop around Raleigh and surrounding communities in Wake and Johnston Counties. The project extends from the vicinity of NC 55 at SR 1172 (Old Smithfield Road) near Apex to the vicinity of US 64/US 264 Bypass in Knightdale, a distance of approximately 28 miles. The proposed project would complete the Outer Loop.

It is anticipated that a Clean Water Act 404 Individual Permit will be required from the US Army Corps of Engineers (Corps). NCTA will coordinate throughout project development with the Corps to ensure that their concerns are addressed and incorporated into the EIS.

Enclosed, please find a Draft Notice of Intent to begin work on the environmental document for the Southern and Eastern Wake Expressway project. 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: Ms. Deborah Barbour, P.E., NCDOT
Ms. Jennifer Harris, P.E., NCTA

NORTH CAROLINA TURNPIKE AUTHORITY
TELEPHONE: 919-571-3000 FAX: 919-571-3015

NOTICES

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Environmental Impact Statement; Wake and Johnston Counties, NC

December __, 2009

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 Wake and Johnston 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: Pursuant to Title 23, Code of Federal Regulations, Part 771, Environmental Impact and Related Procedures, the FHWA, in cooperation with the North Carolina Turnpike Authority (NCTA), a division of the North Carolina Department of Transportation (NCDOT), will prepare an EIS addressing the proposed completion of the Raleigh Outer Loop. The proposed study area boundary begins in Wake County at NC 55 in the vicinity of Apex and Holly Springs. The boundary extends southward along NC 55 and turns eastward to parallel NC 42, crossing into Johnston County near Benson Road (NC 50). The boundary turns northward near Clayton, extending to US 64/US 264 Bypass, in Knightdale. The study area includes southeastern limits of Raleigh and the southern limits of Garner and Cary. The proposed action is included in the 2035 Long Range Transportation Plan approved by the Capital Area Metropolitan Planning Organization (CAMPO).

This project is designated as three projects in the NCDOT State Transportation Improvement Program (STIP) – Projects R-2721, R-2828, and R-2829. These projects combine to form the southern and eastern portions of the Outer Loop around Raleigh and surrounding communities, completing the Outer Loop. The northern portion of the Outer Loop is open to traffic and the western portion, the Western Wake Freeway, is currently under construction. The southern portion of this project is proposed to tie into the Western Wake Freeway near Apex. The eastern portion of this project is proposed to tie into the northern portion of the Outer Loop at the US 64/US 264 Bypass in Knightdale.

The EIS for the proposed action will consider alternatives that include improving existing roadways as well as alternatives that involve building a new location facility. Multiple alternative

corridors for a new location facility may be evaluated. The analysis will also include a range of non-highway improvement alternatives, including the “No-Build” alternative (continuation of the existing condition), expanding transit service, transportation demand management (TDM), and transportation system management (TSM). As part of the EIS, NCTA will study the feasibility and impacts of developing the proposed project as a tolled facility.

Letters describing the proposed action and soliciting comments will be sent to appropriate Federal, State and local agencies. Scoping will occur over a series of meetings with the agencies and citizens informational workshops with the public. Information on the dates, times, and locations of the citizens informational workshops 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. 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, at 5400 Glenwood Avenue, Suite 400, Raleigh, North Carolina, 27612. Telephone: (919)571-3000. Email: sewake@ncturnpike.org.

(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:

George Hoops, P.E. – Major Projects Engineer
Federal Highway Administration
Raleigh, North Carolina

Consumptive Use of up to 1.999 mgd;
Modification Date: October 28, 2009.

31. Novus Operating, LLC, Pad ID:
Wilcox #1, ABR-20090803, Covington
Township, Tioga County, Pa.;

Consumptive Use of up to 0.999 mgd;
Transferred Date: October 22, 2009.

32. Novus Operating, LLC, Pad ID:
Brookfield #1, ABR-20090804,
Brookfield Township, Tioga County,
Pa.; Consumptive Use of up to 0.999
mgd; Transferred Date: October 22,
2009.

Authority: Public Law 91-575, 84 Stat.
1509 et seq., 18 CFR Parts 806, 807, and 808.

Dated: November 17, 2009.

Stephanie L. Richardson,

Secretary to the Commission.

[FR Doc. E9-28514 Filed 11-27-09; 8:45 am]

BILLING CODE 7040-01-P

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Environmental Impact Statement: Wake and Johnston Counties, NC

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 will be
prepared for a proposed project in Wake
and Johnston 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: Pursuant
to Title 23, Code of Federal Regulations,
Part 771, Environmental Impact and
Related Procedures, the FHWA, in
cooperation with the North Carolina
Turnpike Authority (NCTA), a division
of the North Carolina Department of
Transportation (NCDOT), will prepare
an environmental impact statement
(EIS) addressing the proposed
completion of the Raleigh Outer Loop.
The proposed study area boundary
begins in Wake County at NC 55 in the
vicinity of Apex and Holly Springs. The
boundary extends southward along NC
55 and turns eastward to parallel NC 42,
crossing into Johnston County near
Benson Road (NC 50). The boundary
turns northward near Clayton,
extending to US 64/US 264 Bypass, in
Knightdale. The study area includes
southeastern limits of Raleigh and the
southern limits of Garner and Cary. The
proposed action is included in the 2035

Long Range Transportation Plan
approved by the Capital Area
Metropolitan Planning Organization
(CAMPO).

This project is designated as three
projects in the NCDOT State
Transportation Improvement Program
(STIP)—Projects R-2721, R-2828, and
R-2829. These projects combine to form
the southern and eastern portions of the
Outer Loop around Raleigh and
surrounding communities, completing
the Outer Loop. The northern portion of
the Outer Loop is open to traffic and the
western portion, the Western Wake
Freeway, is currently under
construction. The southern portion of
this project is proposed to tie into the
Western Wake Freeway near Apex. The
eastern portion of this project is
proposed to tie into the northern portion
of the Outer Loop at the US 64/US 264
Bypass in Knightdale. The EIS for the
proposed action will consider
alternatives that include improving
existing roadways as well as alternatives
that involve building a new location
facility. Multiple alternative corridors
for a new location facility may be
evaluated. The analysis will also
include a range of non-highway
improvement alternatives, including the
“No-Build” alternative (continuation of
the existing condition), expanding
transit service, transportation demand
management (TDM), and transportation
system management (TSM). As part of
the EIS, NCTA will study the feasibility
and impacts of developing the proposed
project as a tolled facility.

Letters describing the proposed action
and soliciting comments will be sent to
appropriate Federal, State and local
agencies. Scoping will occur over a
series of meetings with the agencies and
citizens informational workshops with
the public. Information on the dates,
times, and locations of the citizens
informational workshops 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. 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, at 5400 Glenwood
Avenue, Suite 400, Raleigh, North

Carolina 27612. *Telephone:* (919) 571-
3000. *E-mail:* sewake@ncturnpike.org.

(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: November 23, 2009.

George Hoops,

*Major Projects Engineer, Federal Highway
Administration, Raleigh, North Carolina.*

[FR Doc. E9-28626 Filed 11-27-09; 8:45 am]

BILLING CODE 4910-22-P

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

[WisDOT Project 1206-07-03]

Notice of Intent to Prepare a Supplemental Draft Environmental Impact Statement; USH 18 & 151, CTH PD to USH 12 & 14, Madison Urban Area; Dane County, WI

AGENCY: Federal Highway
Administration (FHWA), DOT.

ACTION: Notice of Intent to Prepare a
Supplemental Draft Environmental
Impact Statement.

SUMMARY: The FHWA is issuing this
notice to advise the public that a
Supplemental Draft Environmental
Impact Statement (SDEIS) is being
prepared for transportation
improvements to the USH 18 & 151
(Verona Rd) corridor from CTH PD to
USH 12 & 14 in the Madison Urban
Area, Dane County, Wisconsin, WisDOT
Project 1206-07-03. The SDEIS is being
prepared in conformance with 40 CFR
1500 and FHWA regulations.

SUPPLEMENTARY INFORMATION: The
Federal Highway Administration
(FHWA), in cooperation with the
Wisconsin Department of
Transportation (WisDOT), is preparing a
Supplemental Draft Environmental
Impact Statement (SDEIS) on
improvements needed to provide
capacity for existing and projected
traffic demand, to reduce high crash
rates, and to provide better connectivity
between land areas adjacent to the
highways on approximately 2 miles of
existing USH 18 & 151 (Verona Road)
from CTH PD (McKee Rd) to USH 12 &
14 (Madison South Beltline Hwy). The
previous DEIS corridor included three
focus areas: (1) The West Madison
Beltline Hwy (USH 12 & 14 from USH
14 in Middleton to Todd Dr in
Madison), (2) Interchange upgrades and
new grade separations on the West
Madison Beltline, and (3) the same

Exhibit 2

**PARTICIPATING AGENCY INVITATIONS
&
AGENCY RESPONSES**



U.S. Department
of Transportation

**Federal Highway
Administration**

North Carolina Division

August 17, 2010

310 New Bern Avenue, Suite 410
Raleigh, North Carolina 27601

In Reply Refer To:
HDA-NC

Mr. Eric Alsmeyer
US Army Corps of Engineers
Raleigh Field Office
3331 Heritage Trade Drive, Suite 105
Wake Forest, North Carolina 27587

RE: Invitation to Become Participating Agency and Cooperating Agency
Triangle Expressway Southeast Extension
Wake & Johnston Counties/STIP Projects: R-2721, R-2828, R-2829

Dear Mr. Alsmeyer:

The Federal Highway Administration (FHWA) in cooperation with the North Carolina Turnpike Authority (NCTA), a division of North Carolina Department of Transportation (NCDOT), is initiating the project development, environmental, and engineering studies for the proposed Triangle Expressway Southeast Extension project, also known as the Southern and Eastern Wake Expressway, in Wake and Johnston Counties. This project is included in the 2009-2015 NCDOT State Transportation Improvement Program (STIP) as Projects R-2721, R-2828, and R-2829. The study area boundary begins in Wake County at NC 55 in the vicinity of Apex and Holly Springs. The boundary extends southward along NC 55 and turns eastward to parallel NC 42, crossing into Johnston County near Benson Road (NC 50). The boundary turns northward near Clayton, extending to US 64/US 264 Bypass, in Knightdale. The study area includes southeastern limits of Raleigh and the southern limits of Garner and Cary. A Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) was published on November 30, 2009 (Federal Register Vol. 74, No. 228, page 62629).

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 Army Corps of Engineers 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:

**MOVING THE
AMERICAN
ECONOMY**



- 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.

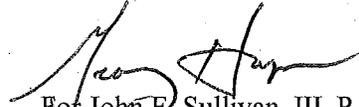
A federal agency who does not respond to this letter will automatically be designated as a participating agency. If you wish to decline, we ask that your agency submit a separate letter stating your reason for declining the invitation to Ms. Jennifer Harris, P.E., NCTA Director of Planning and Environmental Studies, at 5400 Glenwood Avenue, Suite 400, Raleigh, North Carolina 27612 by September 15, 2010. 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) 747-7022 or Ms. Harris at (919) 571-3004.

Thank you for your cooperation and interest in this project.

Sincerely,



For John E. Sullivan, III, P.E.
Division Administrator

cc: Mr. George Hoops, P.E., FHWA
Ms. Jennifer Harris, P.E., NCTA
Mr. Scott McLendon, USACE



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

September 15, 2010

Regulatory Division

SUBJECT: Action ID 2009-02240; TIP Project Nos. R-2721, R-2828 and R-2829,
Triangle Expressway Southeast Extension

Mr. John F. Sullivan, III, P.E.
Division Administrator, North Carolina Division
US Department of Transportation
Federal Highway Administration
310 New Bern Avenue, Suite 410
Raleigh, North Carolina 27601

Dear Mr. Sullivan:

Please reference your August 17, 2010 letter requesting the participation of the US Army Corps of Engineers as a cooperating agency in the preparation of the Draft Environmental Impact Statement (EIS) and Final EIS for the proposed TIP Project Nos. R-2721, R-2828 and R-2829, Triangle Expressway Southeast Extension, in Wake and Johnston Counties, North Carolina. It is our understanding that this project is being developed and will likely be constructed under authority of the North Carolina Turnpike Authority (NCTA) as a toll facility.

Pursuant to the Council on Environmental Quality, (40 CFR 1501.6 Cooperating Agencies), we would be pleased to participate in the development of the necessary environmental document as a Cooperating Agency as you have requested, with the understanding that the Federal Highway Administration (FHWA) will act as the lead Federal agency. It is our intention to formally adopt the FHWA National Environmental Policy Act (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 EIS development process.

Should you have any questions, please contact the undersigned in the Raleigh Field Office at (919) 554-4884, extension 23.

Sincerely,



Eric C. Alsmeyer
Regulatory Project Manager

Copies Furnished:

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

Mr. Brian Wrenn
NCDENR-DWQ
Wetlands Section
585 Waughtown Street
Winston-Salem, NC 27107

Mr. Gary Jordan
United States Fish & Wildlife Service
Fish and Wildlife Enhancement
Post Office Box 33726
Raleigh, NC 27636-3726

Mr. Christopher Militscher
USEPA Raleigh Office
Office of Environmental Assessment
310 New Bern Avenue, Room 206
Raleigh, NC 27601

Mr. Travis Wilson
Highway Coordinator
North Carolina Wildlife Resources Commission
1142 I-85 Service Road
Creedmoor, NC 27522



U.S. Department
of Transportation

**Federal Highway
Administration**

North Carolina Division

August 17, 2010

310 New Bern Avenue, Suite 410
Raleigh, North Carolina 27601

In Reply Refer To:
HDA-NC

Mr. Gary Jordan
US Fish and Wildlife Service
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636

RE: Invitation to Become Participating Agency and Cooperating Agency
Triangle Expressway Southeast Extension
Wake & Johnston Counties/STIP Projects: R-2721, R-2828, R-2829

Dear Mr. Jordan

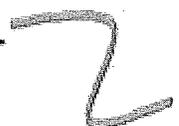
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Your agency was identified as an agency that may have an interest in the project. With this letter, we are extending to your agency an invitation to be a participating agency with the FHWA in the development of the EIS for the subject project. This 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.

**MOVING THE
AMERICAN
ECONOMY**



A federal agency who does not respond to this letter 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 Director of Planning and Environmental Studies, at 5400 Glenwood Avenue, Suite 400, Raleigh, North Carolina 27612 by September 15, 2010. 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:

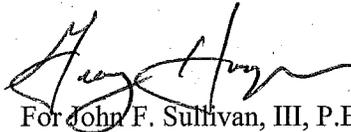
- Has no jurisdiction or authority with respect to the project;
- Has no expertise or information relevant to the project; and
- Does not intend to submit comments on the project.

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) 747-7022 or Ms. Harris at (919) 571-3004.

Thank you for your cooperation and interest in this project.

Sincerely,



For John F. Sullivan, III, P.E.
Division Administrator

cc: Mr. George Hoops, PE, FHWA
Ms. Jennifer Harris, PE, NCTA
Mr. Brian Cole, USFWS



U.S. Department
of Transportation

**Federal Highway
Administration**

North Carolina Division

August 17, 2010

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 Avenue, Suite 410
Raleigh, North Carolina 27601

RE: Invitation to Become Participating Agency and Cooperating Agency
Triangle Expressway Southeast Extension
Wake & Johnston Counties/STIP Projects: R-2721, R-2828, R-2829

Dear Mr. Militscher:

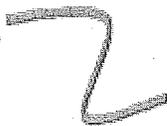
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Your agency was identified as an agency that may have an interest in the project. With this letter, we are extending to your agency an invitation to be a participating agency with the FHWA in the development of the EIS for the subject project. This 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:

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AMERICAN
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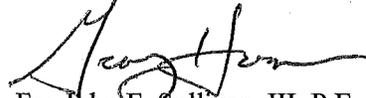
A federal agency who does not respond to this letter will automatically be designated as a participating agency. If you wish to decline, we ask that your agency submit a separate letter stating your reason for declining the invitation to Ms. Jennifer Harris, P.E., NCTA Director of Planning and Environmental Studies, at 5400 Glenwood Avenue, Suite 400, Raleigh, North Carolina 27612 by September 15, 2010. 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) 747-7022 or Ms. Harris at (919) 571-3004.

Thank you for your cooperation and interest in this project.

Sincerely,



For John F. Sullivan, III, P.E.
Division Administrator

cc: Mr. George Hoops, P.E., FHWA
Ms. Jennifer Harris, P.E., NCTA
Mr. Ted Bisterfield, EPA-Atlanta



STATE OF NORTH CAROLINA
TURNPIKE AUTHORITY

BEVERLY E. PURDUE
GOVERNOR

1578 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1578

DAVID W. JOYNER
EXECUTIVE DIRECTOR

August 10, 2010

Mr. Travis Wilson
NC Wildlife Resources Commission
1142 I-85 Service Road
Creedmoor, NC 27522

RE: Invitation to Become Participating Agency and Cooperating Agency
Triangle Expressway Southeast Extension
Wake & Johnston Counties/STIP Projects: R-2721, R-2828, R-2829

Dear Mr. Wilson:

The Federal Highway Administration (FHWA) in cooperation with the North Carolina Turnpike Authority (NCTA), a division of North Carolina Department of Transportation (NCDOT), is initiating the project development, environmental, and engineering studies for the proposed Triangle Expressway Southeast Extension project, also known as the Southern and Eastern Wake Expressway, in Wake and Johnston Counties. This project is included in the 2009-2015 NCDOT State Transportation Improvement Program (STIP) as Projects R-2721, R-2828, and R-2829. The study area boundary begins in Wake County at NC 55 in the vicinity of Apex and Holly Springs. The boundary extends southward along NC 55 and turns eastward to parallel NC 42, crossing into Johnston County near Benson Road (NC 50). The boundary turns northward near Clayton, extending to US 64/US 264 Bypass, in Knightdale. The study area includes southeastern limits of Raleigh and the southern limits of Garner and Cary. A Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) was published on November 30, 2009 (Federal Register Vol. 74, No. 228, page 62629).

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 September 15, 2010. If you wish to accept this invitation, please sign in the space below and return a copy to Ms. Jennifer Harris, P.E., NCTA Director of Planning and Environmental Studies, 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 or Mr. George Hoops, FHWA Major Projects Engineer, at (919) 747-7022.

Thank you for your cooperation and interest in this project.

Sincerely,

Jennifer Harris

for 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.

Francis W. Wilson

Print Name

[Signature]

Signature

8-10-2010

Date



STATE OF NORTH CAROLINA
TURNPIKE AUTHORITY

BEVERLY E. PURDUE
GOVERNOR

1578 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1578

DAVID W. JOYNER
EXECUTIVE DIRECTOR

August 10, 2010

Mr. Brian Wrenn
NCDENR-Division of Water Quality
1650 Mail Service Center
Raleigh, NC 27699-1650

RE: Invitation to Become Participating Agency and Cooperating Agency
Triangle Expressway Southeast Extension
Wake & Johnston Counties/STIP Projects: R-2721, R-2828, R-2829

Dear Mr. Wrenn:

The Federal Highway Administration (FHWA) in cooperation with the North Carolina Turnpike Authority (NCTA), a division of North Carolina Department of Transportation (NCDOT), is initiating the project development, environmental, and engineering studies for the proposed Triangle Expressway Southeast Extension project, also known as the Southern and Eastern Wake Expressway, in Wake and Johnston Counties. This project is included in the 2009-2015 NCDOT State Transportation Improvement Program (STIP) as Projects R-2721, R-2828, and R-2829. The study area boundary begins in Wake County at NC 55 in the vicinity of Apex and Holly Springs. The boundary extends southward along NC 55 and turns eastward to parallel NC 42, crossing into Johnston County near Benson Road (NC 50). The boundary turns northward near Clayton, extending to US 64/US 264 Bypass, in Knightdale. The study area includes southeastern limits of Raleigh and the southern limits of Garner and Cary. A Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) was published on November 30, 2009 (Federal Register Vol. 74, No. 228, page 62629).

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:

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- 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 September 15, 2010. If you wish to accept this invitation, please sign in the space below and return a copy to Ms. Jennifer Harris, P.E., NCTA Director of Planning and Environmental Studies, 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 or Mr. George Hoops, FHWA Major Projects Engineer, at (919) 747-7022.

Thank you for your cooperation and interest in this project.

Sincerely,

Jennifer Harris

for

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.

Brian Wenn

Print Name

B. Wenn

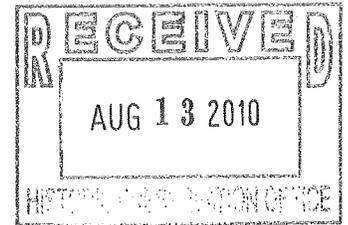
Signature

1/20/11

Date



STATE OF NORTH CAROLINA
TURNPIKE AUTHORITY



BEVERLY E. PURDUE
GOVERNOR

1578 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1578

DAVID W. JOYNER
EXECUTIVE DIRECTOR

August 10, 2010

CH 98-0457

Mr. Peter Sandbeck
State Historic Preservation Office
North Carolina Department of Cultural Resources
4610 Mail Service Center
Raleigh, NC 27699-4610

RE: Invitation to Become Participating Agency and Cooperating Agency
Triangle Expressway Southeast Extension
Wake & Johnston Counties/STIP Projects: R-2721, R-2828, R-2829

Dear Mr. Sandbeck:

The Federal Highway Administration (FHWA) in cooperation with the North Carolina Turnpike Authority (NCTA), a division of North Carolina Department of Transportation (NCDOT), is initiating the project development, environmental, and engineering studies for the proposed Triangle Expressway Southeast Extension project, also known as the Southern and Eastern Wake Expressway, in Wake and Johnston Counties. This project is included in the 2009-2015 NCDOT State Transportation Improvement Program (STIP) as Projects R-2721, R-2828, and R-2829. The study area boundary begins in Wake County at NC 55 in the vicinity of Apex and Holly Springs. The boundary extends southward along NC 55 and turns eastward to parallel NC 42, crossing into Johnston County near Benson Road (NC 50). The boundary turns northward near Clayton, extending to US 64/US 264 Bypass, in Knightdale. The study area includes southeastern limits of Raleigh and the southern limits of Garner and Cary. A Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) was published on November 30, 2009 (Federal Register Vol. 74, No. 228, page 62629).

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 September 15, 2010. If you wish to accept this invitation, please sign in the space below and return a copy to Ms. Jennifer Harris, P.E., NCTA Director of Planning and Environmental Studies, 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 or Mr. George Hoops, FHWA Major Projects Engineer, at (919) 747-7022.

Thank you for your cooperation and interest in this project.

Sincerely,

Jennifer Harris

for 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, ERC/SHPO

Print Name

Renee Gledhill-Early

Signature

8.31.10

Date



STATE OF NORTH CAROLINA
TURNPIKE AUTHORITY

BEVERLY E. PURDUE
GOVERNOR

1578 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1578



August 10, 2010

Mr. Ed Johnson
Director
Capital Area Metropolitan Planning Organization
127 West Hargett Street, Suite 800
Raleigh, NC 27601

RE: Invitation to Become Participating Agency and Cooperating Agency
Triangle Expressway Southeast Extension
Wake & Johnston Counties/STIP Projects: R-2721, R-2828, R-2829

Dear Mr. Johnson:

The Federal Highway Administration (FHWA) in cooperation with the North Carolina Turnpike Authority (NCTA), a division of North Carolina Department of Transportation (NCDOT), is initiating the project development, environmental, and engineering studies for the proposed Triangle Expressway Southeast Extension project, also known as the Southern and Eastern Wake Expressway, in Wake and Johnston Counties. This project is included in the 2009-2015 NCDOT State Transportation Improvement Program (STIP) as Projects R-2721, R-2828, and R-2829. The study area boundary begins in Wake County at NC 55 in the vicinity of Apex and Holly Springs. The boundary extends southward along NC 55 and turns eastward to parallel NC 42, crossing into Johnston County near Benson Road (NC 50). The boundary turns northward near Clayton, extending to US 64/US 264 Bypass, in Knightdale. The study area includes southeastern limits of Raleigh and the southern limits of Garner and Cary. A Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) was published on November 30, 2009 (Federal Register Vol. 74, No. 228, page 62629).

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.

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Thank you for your cooperation and interest in this project.

Sincerely,

Jennifer Harris

for

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.

EPISAN JOHNSON

Print Name

Episan Johnson
Signature

AUG. 17, 2010

Date



STATE OF NORTH CAROLINA
TURNPIKE AUTHORITY

BEVERLY E. PURDUE
GOVERNOR

1578 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1578

DAVID W. JOYNER
EXECUTIVE DIRECTOR

August 10, 2010

Mr. Sean McKenna
NCDENR-Division of Marine Fisheries
Pamlico District Office
943 Washington Square Mall
Washington, NC 27889

RE: Invitation to Become Participating Agency and Cooperating Agency
Triangle Expressway Southeast Extension
Wake & Johnston Counties/STIP Projects: R-2721, R-2828, R-2829

Dear Mr. McKenna:

The Federal Highway Administration (FHWA) in cooperation with the North Carolina Turnpike Authority (NCTA), a division of North Carolina Department of Transportation (NCDOT), is initiating the project development, environmental, and engineering studies for the proposed Triangle Expressway Southeast Extension project, also known as the Southern and Eastern Wake Expressway, in Wake and Johnston Counties. This project is included in the 2009-2015 NCDOT State Transportation Improvement Program (STIP) as Projects R-2721, R-2828, and R-2829. The study area boundary begins in Wake County at NC 55 in the vicinity of Apex and Holly Springs. The boundary extends southward along NC 55 and turns eastward to parallel NC 42, crossing into Johnston County near Benson Road (NC 50). The boundary turns northward near Clayton, extending to US 64/US 264 Bypass, in Knightdale. The study area includes southeastern limits of Raleigh and the southern limits of Garner and Cary. A Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) was published on November 30, 2009 (Federal Register Vol. 74, No. 228, page 62629).

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.

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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 or Mr. George Hoops, FHWA Major Projects Engineer, at (919) 747-7022.

Thank you for your cooperation and interest in this project.

Sincerely,



for 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

Date

Giugno, Kiersten R

From: Hart, Kevin
Sent: Tuesday, January 25, 2011 3:56 PM
To: Giugno, Kiersten R
Cc: Deaton, Anne
Subject: RE: Southeast Extension (participating agency invitation)

Kiersten,
At this time the NCDMF will defer to the NCWRC on this project.
If you have any questions please let me know.
Kevin Hart

From: Giugno, Kiersten R
Sent: Wednesday, January 19, 2011 11:54 AM
To: Mckenna, Sean
Subject: Southeast Extension (participating agency invitation)

Sean - attached is an invitation for DMF to serve as a participating agency pursuant to Section 6002 of SAFETEA-LU. I do not believe NCTA has received a response from DMF. Please review and respond for our records.

Thank you,

Kiersten R. Giugno
Senior Transportation Planner

NCTA General Engineering Consultant
5400 Glenwood Ave., Suite 400
Raleigh, NC 27612

1578 Mail Service Center
Raleigh, NC 27699-1578

Tel 919.420.7558

Email correspondence to and from this sender is subject to the N.C. Public Records Law and may be disclosed to third parties.

APPENDIX B
Scoping Letters and Responses



STATE OF NORTH CAROLINA
TURNPIKE AUTHORITY

BEVERLY E. PERDUE
GOVERNOR

1578 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1578

DAVID W. JOYNER
EXECUTIVE DIRECTOR

January 25, 2010

Ms. Chrys Baggett
North Carolina Department of Administration
1301 Mail Service Center
Raleigh, NC 27699-1301

RE: Start of Study and Agency Scoping Meeting Notification
Southern & Eastern Wake Expressway, Wake and Johnston Counties
STIP Projects R-2721, R-2828, and R-2829

Dear Ms. Baggett,

The North Carolina Turnpike Authority (NCTA), a division of the North Carolina Department of Transportation (NCDOT), has initiated the project development, environmental, and engineering studies for the proposed Southern and Eastern Wake Expressway in Wake and Johnston Counties (see attached figure). As it is currently defined, the project would address the proposed completion of the Raleigh 540 Outer Loop, from NC 55 in Wake County in the vicinity of the Towns of Apex and Holly Springs, east to the US 64/US 264 Bypass, in the Town of Knightdale, a distance of approximately 28 miles. The proposed study area also includes the southeastern limits of the City of Raleigh, the southern limits of the Towns of Garner and Cary, and portions of the Town of Clayton and Johnston County. A Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) was published on November 30, 2009 (Federal Register Vol. 74, No. 228, page 62629).

This project is included in the 2009-2015 NCDOT State Transportation Improvement Program (STIP) as Projects R-2721, R-2828, and R-2829. These three projects are being developed as a single project in a single EIS. The three projects combine to form the southern and eastern portions of the Outer Loop around Raleigh and surrounding communities, completing the Outer Loop. The northern portion of the Outer Loop is open to traffic and the western portion, the Western Wake Freeway, is currently under construction. The southern portion of this project is proposed to tie into the Western Wake Freeway near Apex. The eastern portion of this project is proposed to tie into the northern portion of the Outer Loop in Knightdale.

While much of the project area is rural and agricultural in nature, the area's proximity to employment centers in Raleigh and Research Triangle Park is stimulating a transition to suburban land uses. Based on previous studies and natural systems screening, the project corridor includes a number of streams, wetlands, and floodplains, as well as potential habitat for four federally protected species: dwarf wedgemussel (*Alasmidonta heterodon*), Tar River spiny mussel (*Elliptio steinstansana*), Michaux's sumac (*Rhus michauxii*), and the red-cockaded woodpecker (*Picoides borealis*).

NCTA plans to prepare an EIS for the Southern and Eastern Wake Expressway project in accordance with the National Environmental Policy Act (NEPA). The EIS will consider

alternatives that include improving existing roadways, alternatives that involve building a new location facility, and various non-highway alternatives. We would appreciate any information you might have that would be helpful in establishing the study area and project purpose and need, identifying preliminary corridors, evaluating the potential environmental impacts of those corridors, and establishing a viable range of alternatives for consideration. Also, please identify any permits or approvals or other requirements of your agency.

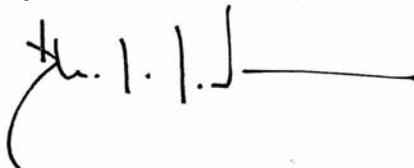
In lieu of strictly following the NCDOT's merger process, this project will follow coordination procedures authorized under Section 6002 of SAFETEA-LU for the environmental review process. The key difference in the two approaches is that under the Section 6002 process formal agency concurrence is not required at decision points in the study. However, NCTA still expects agencies to highlight issues of concern, particularly those that could affect later permitting decisions.

An agency scoping meeting will be held at the Turnpike Environmental Agency Coordination Meeting on February 16, 2010 in the NCTA Board Room (Address: 5400 Glenwood Avenue, Suite 400, Raleigh, NC 27612). This meeting will be from 8:30 AM to 10:30 AM. The purpose of the meeting will be to identify significant issues related to the proposed action that should be considered during the study process. We strongly encourage you or a representative of your agency to participate in this meeting; however, if your agency can not be represented, please provide written comments by March 31, 2010. Your response should be mailed to the following:

Ms. Jennifer Harris, PE
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699-1578

If you have any questions concerning the proposed project, please call Ms. Harris at (919) 571-3004. Public inquiries about the project can also be made via e-mail at sewake@ncturnpike.org.

Sincerely,

A handwritten signature in black ink, appearing to read "S.D. DeWitt", followed by a horizontal line extending to the right.

Steven D. DeWitt, P.E.
Chief Engineer

Attachment: Project Study Area Figure

cc: Mr. David Joyner, NCTA
Ms. Jennifer Harris, P.E., NCTA
Ms. Reid Simons, NCTA
Mr. Roy Bruce, P.E., H.W. Lochner



STATE OF NORTH CAROLINA
TURNPIKE AUTHORITY

BEVERLY E. PURDUE
GOVERNOR

1578 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1578

DAVID W. JOYNER
EXECUTIVE DIRECTOR

February 4, 2010

ADDRESS

RE: Start of Study and Local Officials Scoping Meeting Notification
Triangle Expressway Southeast Connector
Wake and Johnston Counties

Dear ADDRESSEE,

The North Carolina Turnpike Authority, a division of the North Carolina Department of Transportation (NCDOT), is moving forward with planning, environmental and engineering studies for the proposed Triangle Expressway Southeast Connector, also known as the Southern and Eastern Wake Expressway, project in Wake and Johnston Counties.

This project is included in the 2009-2015 NCDOT State Transportation Improvement Program (STIP) as Projects R-2721, R-2828, and R-2829. These three projects are being developed as a single project in a single planning study. This project combines to form the southern and eastern portions of the Outer Loop around Raleigh and surrounding communities, completing the Outer Loop. The northern portion of the Outer Loop is open to traffic and the western portion, the Triangle Expressway, is currently under construction.

Construction of the Southeast Connector is currently scheduled to be completed in phases. Phase I is between NC 55 in Apex and Interstate 40 near the Johnston County line. Phase II continues the project at I-40 and ends at US 64/US 264 Bypass in Knightdale. The entire project is nearly 30 miles long.

The Turnpike Authority anticipates preparing an environmental impact statement (EIS) for the Southeast Connector project in accordance with the National Environmental Policy Act (NEPA). The EIS will consider alternatives that include improving existing roadways, alternatives that involve building a new location facility and various non-highway alternatives.

Beginning this month, the Turnpike Authority will provide monthly updates on the project at Capital Area Metropolitan Planning Organization (CAMPO) Transportation Advisory Committee (TAC) meetings, as well as at monthly Technical Coordinating Committee (TCC) meetings. At the February 17, 2010 TAC meeting, the Authority will provide an overview of the project, the proposed project study area and preliminary purpose and need for the project. In addition, the Authority will seek input from local representatives to identify potential issues related to the proposed action that should be considered during the study process.

The CAMPO TAC meeting is scheduled for February 17, 2010 at 4:00 P.M. in Suite 800 of The Professional Building, 127 West Hargett Street. We strongly encourage you or a representative to participate in this meeting and/or to provide written comments. Written comments are appreciated by March 26, 2010. Your response should be mailed to the following:

Ms. Jennifer Harris, PE
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699-1578

If you have any questions concerning the proposed project, please call Ms. Harris at (919) 571-3000.

Sincerely,

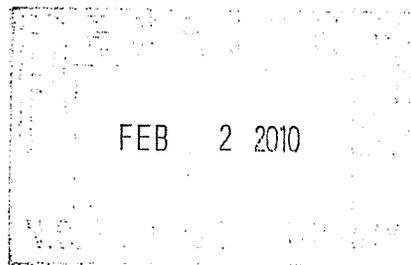
Steven D. DeWitt, P.E.
Chief Engineer

cc: Mr. David Joyner, NCTA
Ms. Jennifer Harris, P.E., NCTA
Mr. George Hoops, P.E., FHWA
Mr. Roy Bruce, P.E., H.W. Lochner
Mr. Beau Memory, NCDOT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960



January 25, 2010

Ms. Jennifer Harris, P.E.
North Carolina Turnpike Authority/NCDOT
5400 Glenwood Avenue
Suite 400
Raleigh, North Carolina 27612

SUBJECT: EPA Comments on the Pre-Scoping Information, Notice of Intent to Prepare an Environmental Impact Statement and Section 6002 Draft Coordination Plan for R-2721/R-2828/R-2829, Southern and Eastern Wake Expressway Project, Wake and Johnston Counties

Dear Ms. Harris:

The U.S. Environmental Protection Agency (EPA) Region 4 Office is providing scoping comments for the above referenced project consistent with Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA). The North Carolina Turnpike Authority (NCTA) as part of the North Carolina Department of Transportation (NCDOT) and the Federal Highway Administration (FHWA) are proposing to construct an approximately 30-mile, multi-lane toll facility between NC 55 near the towns of Apex and Holly Springs and US 64/US 264 Bypass in Knightdale. The proposed project is considered to be the completion of the Raleigh Outer Loop. The Southern and Eastern Wake Expressway projects are also referred to by some entities as the Raleigh Southern Outer Loop or Interstate 540. EPA notes that Exhibit 28 of the September 2, 2004, Strategic Highway Corridor Vision Plan that was adopted by the NCDOT shows the proposed projects as Interstate 640.

The NCTA presented information at a Corridor Study and EIS pre-scoping meeting on December 8, 2009, in which Mr. Christopher Militscher of my staff participated. The presentation included a project history that began in 1996 with NCDOT filing for a Protected Corridor for Southern Wake Expressway. The project was put on hold several times due to traffic forecasts. Thirty (30) parcels in Wake County have been purchased by NCDOT for a preferred corridor. EPA requested that the identification of the parcels and acreage be provided in the Draft Environmental Impact Statement (DEIS). Mr. Militscher also requested that NCTA and FHWA consider expanding the proposed Project Study Area to include areas between Lake Wheeler, Lake Benson, and the Town of Garner and existing Interstate 40/440.

The proposed project is expected to have significant direct impacts to jurisdictional wetlands and streams, protected water supply areas, protected mussel species, residences and businesses, prime and unique farmlands, air quality, etc. The proposed project is also anticipated to have significant indirect and cumulative effects to human and natural environmental resources in southern Wake County and western Johnston County.

The Notice of Intent to prepare a DEIS dated November 30, 2009, identifies that NCTA and FHWA will also examine the "No-build", expanding transit service, transportation demand management (TDM) and transportation system management (TSM) as non-highway improvement alternatives. The Notice of Intent does not state that these non-highway alternatives will be examined in combination with one another or combined with interim improvements or upgrades to other existing roadways in the project study area. Other NCDOT Transportation Improvement Program (TIP) projects should be identified and evaluated during scoping including I-5111, I-40 Widening in Johnston County and R-2609, US 401 Widening in southern Wake County (Part of Strategic Highway Corridor #42, NC 210 to I-40). EPA notes that improvements (e.g. Widening to multi-lanes) to several existing east-west routes in southern Wake County have not been identified in area transportation plans. Ten-Ten Road (State Route 1010) which is a major east-west route in southern Wake County starts in Apex and US 1 and ends at NC 50. It is mostly a two-lane facility. NC 42 begins at US 401 and NC 55 near Fuquay-Varina and joins with US 70 Business in Clayton. Except for a small segment around Exit 312 at I-40, most of NC 42 in southern Wake County and western Johnston County is a two-lane roadway. EPA believes that these routes are in need of improvements and upgrades, including additional turn lanes and possible extended multi-lane sections.

Overall, there appears to have been very few highway improvements to existing major roadways in southern Wake County in more than a decade. EPA acknowledges improvements to Tryon Road, the proposed extension of Timber Drive in Garner, the ongoing I-540 toll road that terminates at NC 55 north of Holly Springs, and the US 70 Clayton Bypass. EPA recommends that improvements to Ten-Ten Road, including a new location extension from NC 50 to the new I-40 Interchange for the US 70 Clayton Bypass be evaluated as a 'highway build alternative' combined with other non-highway measures as identified in the Notice of Intent.

Under the Section 6002 draft Coordination Plan dated December 1, 2009, EPA notes that in Section 10.3, Process for Identifying Preferred Alternative or Section 10.4, Opportunity for Agency Input, there is no reference to the U.S. Army Corps of Engineers (USACE) determination of the Least Environmentally Damaging Practicable Alternative (LEDPA). As with other NCTA-lead projects, EPA continues to recommend that the transportation agencies make better use of the well-established NEPA/Section 404 Merger 01 Process. EPA plans to be a Participating Agency as per Section 4.3 of the draft Coordination Plan.

EPA will continue to stay involved with this proposed project and will offer more specific scoping comments when additional information, such as traffic forecasts, are available for review. Please contact Mr. Christopher A. Militscher of my staff at 919-856-4206 or by e-mail at militscher.chris@epa.gov should you have any questions concerning these comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Mueller", with a horizontal line extending to the right.

Heinz J. Mueller, Chief
NEPA Program Office

Cc: J. Sullivan, FHWA
D. Barbour, NCDOT
S. McClendon, USACE
B. Wrenn, NCDWQ



United States Department of the Interior

FEB 5 2010

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

February 3, 2010

Ms. Jennifer Harris, PE
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, North Carolina 27699-1578

Dear Ms. Harris:

This letter is in response to your request for comments from the U.S. Fish and Wildlife Service (Service) on the potential environmental effects of the proposed Southern and Eastern Wake Expressway in Wake and Johnston Counties (TIP No. R-2721, R-2828, R-2829). These comments provide information in accordance with provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

Overall, the project will have significant impacts on fish and wildlife resources, including impacts to streams, wetlands, upland forest and other habitat types. These impacts will be in the form of direct loss of habitat and fragmentation effects on remaining habitat. Although these habitats are already fragmented by multiple land uses, additional cumulative habitat fragmentation effects will occur. The negative effects of habitat fragmentation usually extend well beyond the project footprint. Forest fragmentation can lead to increased predation of some species and increased brown-headed cowbird (*Molothrus ater*) parasitism of the nests of neotropical migrant birds. Habitat fragmentation can also facilitate invasive and/or nonnative species colonization of fragmented lands. Roads also act as physical barriers to wildlife movement and cause significant wildlife mortality in the form of road-killed animals.

Section 7(a)(2) of the Endangered Species Act requires that all federal action agencies (or their designated non-federal representatives), in consultation with the Service, insure that any action federally authorized, funded, or carried out by such agencies is not likely to jeopardize the continued existence of any federally threatened or endangered species. The North Carolina Natural Heritage Program (NCNHP) database lists four federally listed species for Johnston and Wake Counties: dwarf wedgemussel (*Alasmidonta heterodon*), Tar River spiny mussel (*Elliptio steinstansana*), red-cockaded woodpecker (*Picoides borealis*) and Michaux's sumac (*Rhus michauxii*). While the Tar River spiny mussel and red-cockaded woodpecker are unlikely to occur within the project study area, the dwarf wedgemussel and Michaux's sumac are both known to occur within the study area.

The Service is particularly concerned about impacts to the dwarf wedgemussel population in Swift Creek. The protected southern corridor and preliminary eastern corridor cross Swift Creek and its tributaries. This population of dwarf wedgemussel is at risk from direct effects associated

with construction of the project (e.g. erosion and siltation from construction area), and from indirect effects associated with the degradation of water quality from secondary development induced by the new road. Increased impervious surface and storm water runoff from additional development would likely further degrade the water quality within Swift Creek and its tributaries. The rapid development in the last 10-15 years within the watershed of Swift Creek below the Lake Benson Dam has already severely impacted the dwarf wedgemussel, with the result that the species is increasing more difficult to find. Additional cumulative impacts may occur in conjunction with the proposed widening of I-40 within this same study area (TIP No. I-5111). The Turnpike Authority should begin to develop a strategy to avoid contributing to the degradation of the water quality of the Swift Creek watershed.

The protected southern corridor and the preliminary eastern corridor appear to connect with I-40 at a particularly unfavorable location with regard to potential impacts to the dwarf wedgemussel. This location puts the interchanges with I-40 and US 70 Bypass on top of several tributaries to Swift Creek and also in close proximity to Swift Creek mainstem. The Service recommends additional alternatives be considered which locate the interchange(s) farther away from Swift Creek and its tributaries. In addition, the Turnpike Authority should explore innovative conservation measures to minimize effects to the species. Additional mussel survey data would be useful in assessing the current status of the dwarf wedgemussel within Swift Creek.

The Service anticipates a formal Section 7 consultation for this project. Sufficient time must be allowed for the completion of this process. From the time that a complete consultation initiation package is received, the Service has 135 days to provide a final Biological Opinion. However, communication regarding the consultation should be occurring long before formal consultation is initiated.

Since Michaux's sumac is known to occur within the project study area, surveys should be conducted within suitable habitat to determine the presence or absence of this species. The survey window for Michaux's sumac is May – October.

The Service appreciates the opportunity to comment on this project. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520, ext. 32.

Sincerely,


for Pete Benjamin
Field Supervisor

cc: Eric Alsmeyer, USACE, Wake Forest, NC
Travis Wilson, NCWRC, Creedmoor, NC
Chris Militscher, USEPA, Raleigh, NC
John Sullivan, FHWA, Raleigh, NC



North Carolina Department of Administration

Beverly Eaves Perdue, Governor

Moses Carey, Jr., Secretary

March 30, 2010

Ms. Jennifer Harris
State of N.C. Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699-1578

Re: SCH File # 10-E-4220-0283; SCOPING; Scoping notice for the Southern and Eastern Wake Expressway, STIP Projects R-2721,-2828 and R-2829. Completion of the 540 Outer Loop from NC 55 in Wake County to the US 64/US 264 bypass in Knightdale , approximate distance of 29 miles.

Dear Ms. Harris:

The above referenced environmental impact information has been submitted to the State Clearinghouse under the provisions of the National Environmental Policy Act. According to G.S. 113A-10, when a state agency is required to prepare an environmental document under the provisions of federal law, the environmental document meets the provisions of the State Environmental Policy Act. Attached to this letter for your consideration are the comments made by agencies in the course of this review.

If any further environmental review documents are prepared for this project, they should be forwarded to this office for intergovernmental review.

Should you have any questions, please do not hesitate to call.

Sincerely,

Chrys Baggett (576)

Ms. Chrys Baggett
State Environmental Review Clearinghouse

Attachments

cc: Region J

Mailing Address:
1301 Mail Service Center
Raleigh, NC 27699-1301

Telephone: (919)807-2425
Fax (919)733-9571
State Courier #51-01-00
e-mail state.clearinghouse@doa.nc.gov

Location Address:
116 West Jones Street
Raleigh, North Carolina



North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary



MEMORANDUM

TO: Valerie McMillan
State Clearinghouse

FROM: Melba McGee *MM*
Environmental Review Coordinator

RE: 10-0283 Scoping, Southern and Eastern Wake Expressway in Wake
County to US 64/264 Bypass in Knightdale

DATE: March 26, 2010

The Department of Environment and Natural Resources has reviewed the proposed project. The attached comments are for the applicant's consideration. More specific comments will be provided during the environmental review process.

Thank you for the opportunity to respond. If during the preparation of the environmental document, additional information is needed, the applicant is encouraged to notify our respective divisions.

Attachments



North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

March 22, 2010



MEMORANDUM

TO: Melba McGee, DENR Environmental Coordinator

FROM: ^{HL} Harry LeGrand, Natural Heritage Program

SUBJECT: Scoping – Southern and Eastern Wake Expressway (Completion of the 540 Outer Loop from NC 55 in Wake County to the US 64/264 Bypass in Knightdale), Wake County; STIP Projects R-2721, R-2828, and R-2829

REFERENCE: Project No. 10-0283

The Natural Heritage Program has a number of records of rare species, significant natural heritage areas, and conservation/managed areas within the project area. The comments below are arranged from west (NC 55) to east (US 64-264 Bypass), and they only relate to features in our database located within a mile of the proposed corridor, not for the entire study area boundary. Several maps are enclosed that show such features.

The proposed corridor would be located several tenths of a mile north of Middle Creek Park, owned and operated by Wake County. It appears that the park will not be impacted, if the highway is built where shown in the scoping notice.

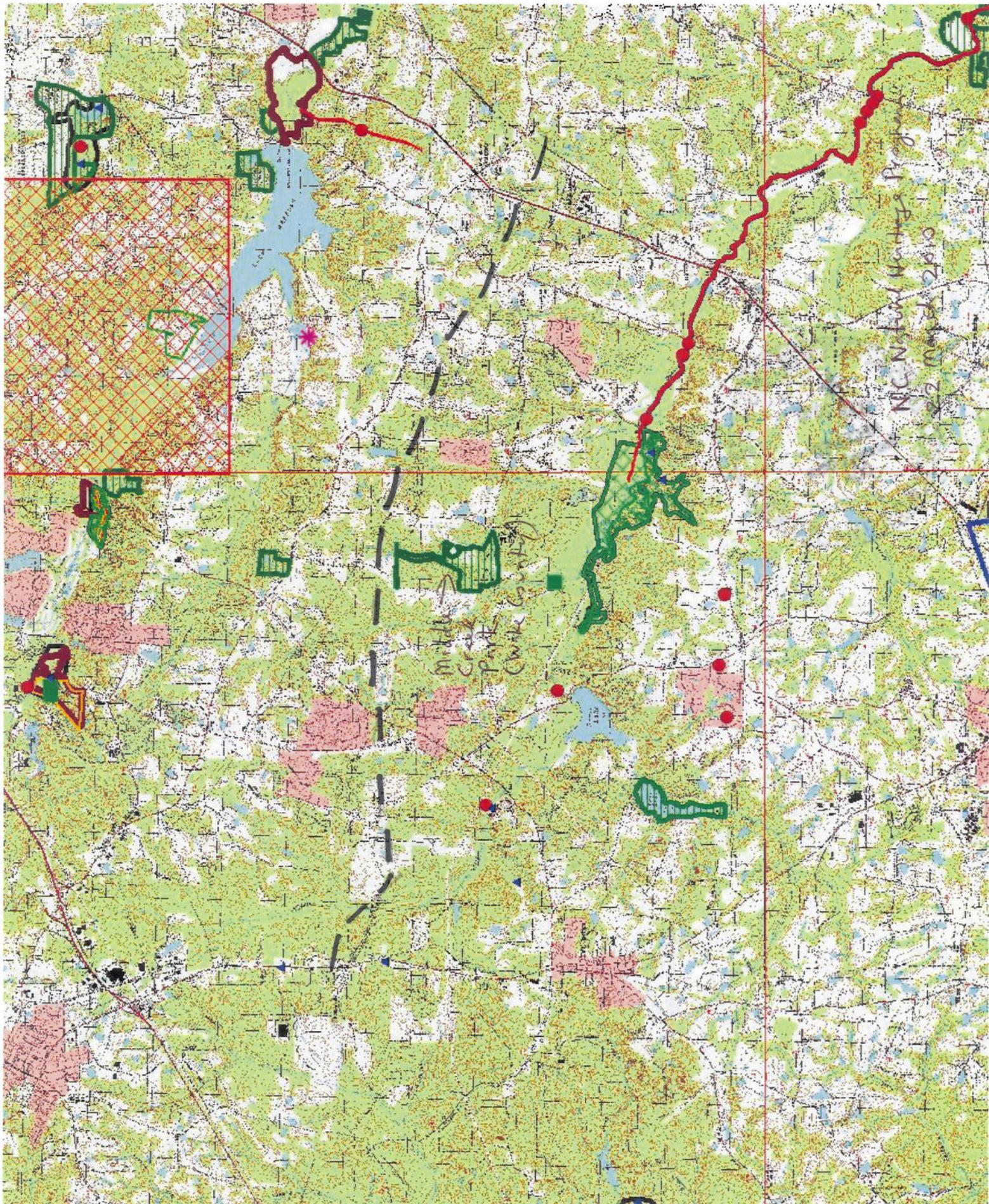
The proposed highway will cross the Nationally significant Swift Creek (Wake/Johnston) Aquatic Habitat. This body of water contains numerous existing records of rare mussel species (see attached Swift Creek Aquatic Habitat material), including the Federally Endangered dwarf wedgemussel (*Alasmidonta heterodon*). Thus, it is extremely important that consultation with the U.S. Fish and Wildlife Service about the project and potential impacts to this species, as well as to other rare species, be done early in the planning process.

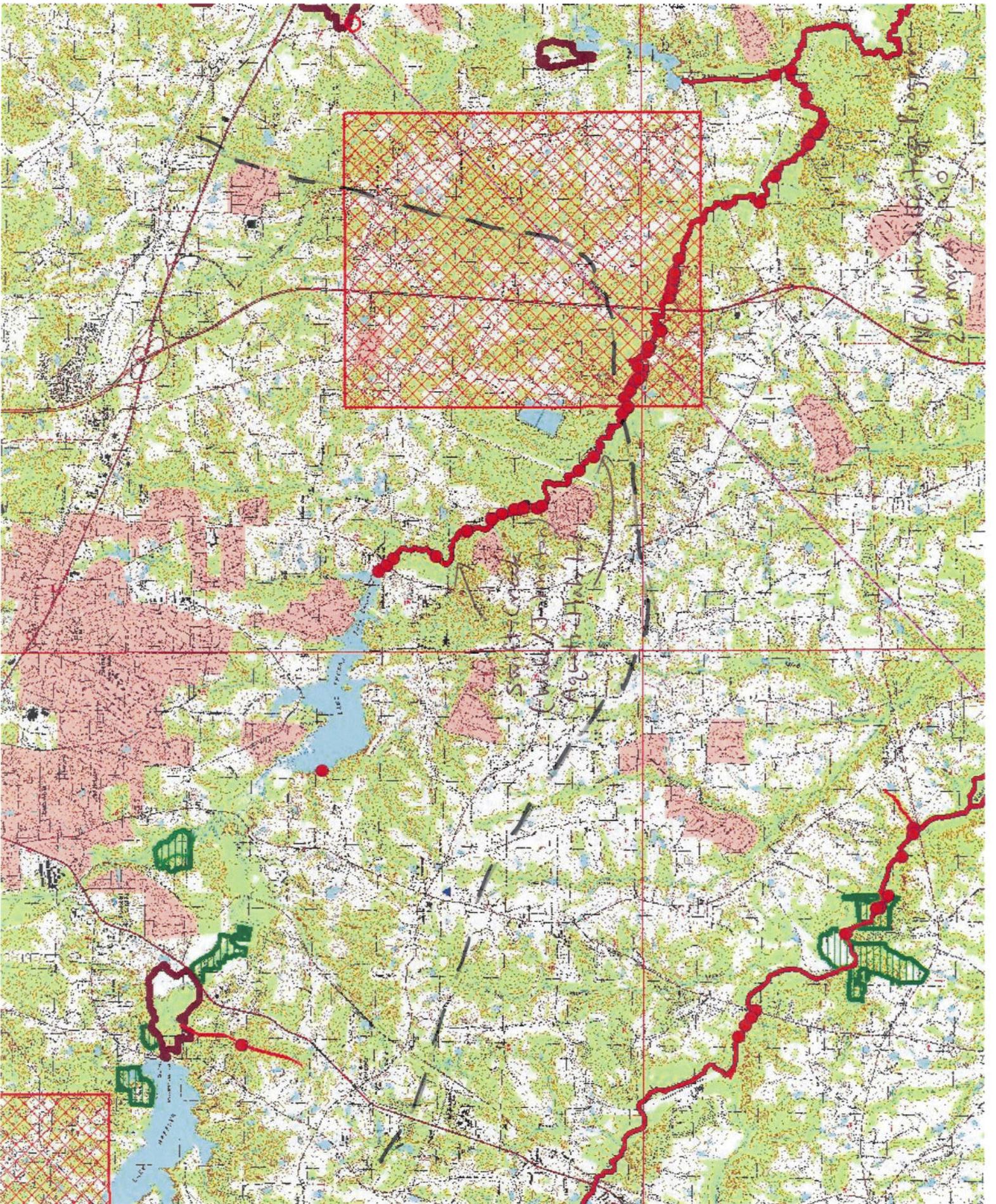
The proposed highway will also cross the Neuse River, near a small tract owned by Wake County, as open space land. In addition, there is a County-significant natural area identified as the Neuse River (Clayton) Forests that lies along a considerable stretch of the river. Though the impacts to the natural area are inevitable with a new bridge crossing, impacts to the river itself do not appear to be of Natural Heritage concern because of the apparent absence of rare species near the crossing and for a number of miles downstream. Nonetheless, it is important to keep sediment from reaching the river, as there are rare aquatic species locations in the river much farther south toward Clayton.

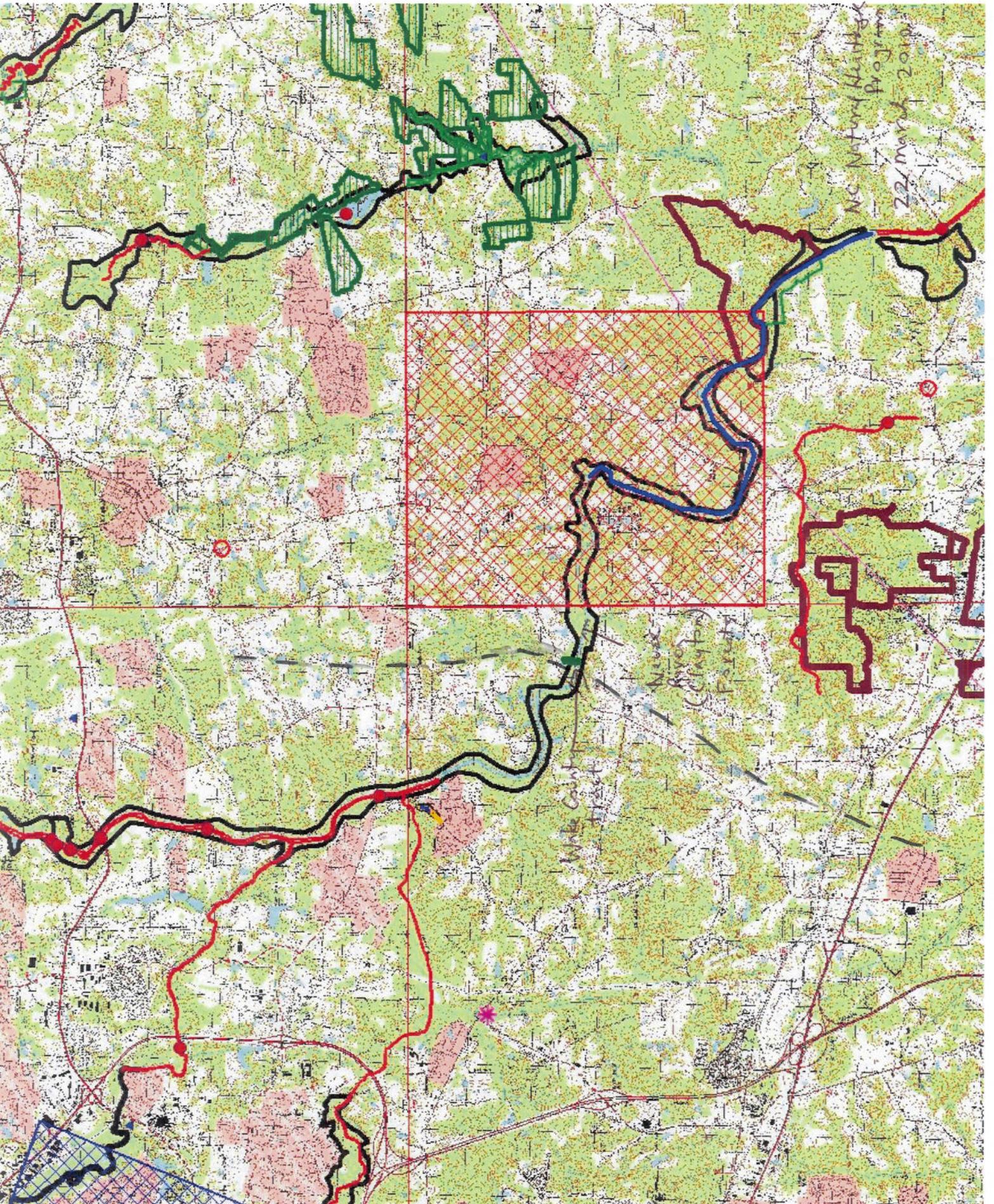
In general, the proposed route does not appear to impact any significant sites and rare species, away from Swift Creek and the Neuse River. However, there will likely be impacts to the forests along the Neuse River, and there is considerable concern for impacts to the waters of Swift Creek.

Please do not hesitate to contact me at 919-715-8697 if you have questions or need further information.

Enclosures







NC Natural Heritage Program
22 March 2010

White County
New River (Catawbas)

UNIVERSITY OF NORTH CAROLINA

Significant Natural Heritage Area Report

22 March 2010

Name Swift Creek (Wake/Johnston) Aquatic Habitat

IDENTIFIERS

Site ID 781

Site Alias

Macro Site Name

Mega Site Name

Site Relations



Owner Abbr.

Owner

Owner Comments

PW NC PUBLIC WATERS

LOCATORS

County Johnston (NC)
Wake (NC)

Latitude 353455N Longitude 0783029W

Quad Powhatan Edmondson Garner Watershed Upper Neuse

Directions This portion of Swift Creek is located in the Neuse River Basin of Johnston and Wake counties. The significant portion of the aquatic habitat includes the reach below Lake Benson Dam in Wake County to the confluence with Middle Creek in Johnston County. Also includes portion of White Oak Creek from the confluence with Swift Creek upstream to Austin Pond.

SITE DESCRIPTION

Minimum Elevation:	Feet	Meters	Survey P
Maximum Elevation:	Feet	Meters	

Site Description This aquatic habitat is contained entirely in the Piedmont Province. The rare species located in the creek include: dwarf wedge mussel, yellow lance, Atlantic pigtoe, green floater, triangle floater, Roanoke slabshell, squawfoot, eastern lampmussel, notched rainbow, Neuse River waterdog, and Carolina madtom.

Key Enviro Factors

Climate Description

Land Use History

Cultural Features

Additional Topics NW->SE VECTOR

SITE DESIGN

Site Mapped Mapped Date

Designer

Boundary Justification

Primary and Secondary Area 242.45 Acres **Primary Area** 242.45 Acres

Site Comments

Ground Survey Date 1998 **Aerial Survey Date**

SITE SIGNIFICANCE

Significance National

Site Significance Comments Endangered animal species; high quality aquatic ecosystem.

Biodivsig rating B1 - Outstanding

Biodivsig Comments

Other Values

Other Values Comments

Significant Natural Heritage Area Report

22 March 2010

Name Swift Creek (Wake/Johnston) Aquatic Habitat

Protection Urgency

Protection Urgency Comments

Management Urgency

Management Urgency Comments

REAL ESTATE/PROTECTION

Conservation Intentions High Quality Waters designation

Number of Tracts

Designation

Protection Comments No protection status

MANAGEMENT

Land Use Comments

Natural Hazard Comments

Exotics Comments

Offsite

Information Needs

Management Needs

Managed Area Relations

ELEMENT OCCURRENCES

<u>Scientific Name</u>	<u>Common Name</u>	<u>G Rank</u>	<u>S Rank</u>	<u>EO Rank</u>	<u>EO ID</u>
Noturus furiosus	Carolina Madtom	G2	S2	H?	9621
Alasmidonta heterodon	Dwarf Wedgemussel	G1G2	S1	BC	13799
Alasmidonta undulata	Triangle Floater	G4	S2	E	8700
Elliptio lanceolata	Yellow Lance	G2G3	S1	BC	21894
Elliptio lanceolata	Yellow Lance	G2G3	S1	BC	21890
Elliptio roanokensis	Roanoke Slabshell	G3	S1	E	6291
Elliptio roanokensis	Roanoke Slabshell	G3	S1	E	26000
Fusconaia masoni	Atlantic Pigtoe	G2	S1	AB	11695
Lasmigona subviridis	Green Floater	G3	S1	X?	15369
Strophitus undulatus	Creeper	G5	S2	E	14759
Strophitus undulatus	Creeper	G5	S2	E	6567
Villosa constricta	Notched Rainbow	G3	S3	E	5097

REFERENCES

<u>Reference Code</u>	<u>Full Citation</u>
U93SMI01NCUS	Smith, I.K., H.E. LeGrand, S.P. Hall, Z.E. Murrell, C.W. Nordman, and M.P. Schafale. 1993. Regional inventory for critical natural areas, wetland ecosystems, and endangered species habitats, of the Albemarle-Pamlico Estuarine region: Phase 3. NC Natural Heritage Program, Div. of Parks and Recreation, Dept. of Environment, Health, and Natural Resources, Raleigh, NC.
U92ALD01NCUS	Alderman, J.M. 1992. Station locations by species for proposed critical habitats. NC Wildlife Resources Report. Nongame and Endangered Wildlife Program, NC Wildlife Resources Commission, Division of Wildlife Management, Raleigh, NC.
U91ALD01NCUS	Alderman, J.M. 1991. North Carolina Status Surveys for Fusconaia masoni, Elliptio lanceolata, and Toxolasma pullus. Nongame Project Report to U.S. Fish and Wildlife Service. Nongame and Endangered Wildlife Program, NC Wildlife Resources Commission, Division of Wildlife Management, Raleigh, NC.

VERSION

Significant Natural Heritage Area Report

22 March 2010

Name Swift Creek (Wake/Johnston) Aquatic Habitat

Version Date 2003-02-24

Version Author Kopplin

NC NHP County Element Search Results

Returned Elements: 92 using: WAKE ALL

[Animal Assemblage 1] [Invertebrate Animal 17] [Natural Community 17] [Nonvascular Plant 4] [Vascular Plant 39]
[Vertebrate Animal 14]

Major Group	Scientific Name	Common Name	State Status	Federal Status	State Rank	Global Rank	County - Status	Map - Habitat
Animal Assemblage	<i>Colonial Wading Bird Colony</i>	None	None	None	S3	G5	Wake - Current	Link
* Invertebrate Animal	<i>Alasmidonta heterodon</i>	Dwarf Wedgemussel	E	E	S1	G1G2	Wake - Current	Link
* Invertebrate Animal	<i>Alasmidonta undulata</i>	Triangle Floater	T	None	S2	G4	Wake - Current	Link
Invertebrate Animal	<i>Cambarus davidi</i>	Carolina Ladle Crayfish	SR	None	S2S3	G3	Wake - Current	Link
Invertebrate Animal	<i>Dibusa angata</i>	A Caddisfly	SR	None	S2	G5	Wake - Current	Link
* Invertebrate Animal	<i>Elliptio lanceolata</i>	Yellow Lance	E	FSC	S1	G2G3	Wake - Current	Link
* Invertebrate Animal	<i>Elliptio roanokensis</i>	Roanoke Slabshell	T	None	S1	G3	Wake - Current	Link
Invertebrate Animal	<i>Erynnis martialis</i>	Mottled Duskywing	SR	None	S2S3	G3	Wake - Obscure	Link
* Invertebrate Animal	<i>Fusconaia masoni</i>	Atlantic Pigtoe	E	FSC	S1	G2	Wake - Current	Link
Invertebrate Animal	<i>Gomphus septima</i>	Septima's Clubtail	SR	FSC	S1S2	G2	Wake - Obscure	Link
Invertebrate Animal	<i>Lampsilis radiata</i>	Eastern Lampmussel	T	None	S1S2	G5	Wake - Current	Link
Invertebrate Animal	<i>Lasmigona subviridis</i>	Green Floater	E	FSC	S1	G3	Wake - Current	Link
Invertebrate Animal	<i>Lithophane lemmeri</i>	Lemmer's Pinion	SR	None	S1S3	G3G4	Wake - Obscure	Link
Invertebrate Animal	<i>Orconectes carolinensis</i>	North Carolina Spiny Crayfish	SC	None	S3	G3	Wake - Historical	Link
Invertebrate Animal	<i>Papilio cresphontes</i>	Giant Swallowtail	SR	None	S2	G5	Wake - Obscure	Link
Invertebrate Animal	<i>Schizura sp. 1</i>	A New Prominent Moth	SR	None	S1S3	GU	Wake - Obscure	Link
* Invertebrate Animal	<i>Strophitus undulatus</i>	Creeper	T	None	S2	G5	Wake - Current	Link
* Invertebrate Animal	<i>Villosa constricta</i>	Notched Rainbow	SC	None	S3	G3	Wake - Current	Link
Natural Community	<i>Basic mesic forest (piedmont subtype)</i>	None	None	None	S2	G5T3	Wake - Current	Link
Natural Community	<i>Coastal plain semipermanent impoundment</i>	None	None	None	S4	G5	Wake - Current	Link
Natural Community	<i>Coastal plain small stream swamp (brownwater subtype)</i>	None	None	None	S2S3	G5T3T4	Wake - Current	Link
Natural Community	<i>Dry-mesic oak--hickory forest</i>	None	None	None	S5	G5	Wake - Current	Link
Natural Community	<i>Floodplain pool</i>	None	None	None	S2S3	G3?	Wake - Current	Link
Natural Community	<i>Granitic flatrock</i>	None	None	None	S2	G3	Wake - Current	Link

Natural Community	<i>Low elevation seep</i>	None	None	None	S3	G4?	Wake - Current	Link
Natural Community	<i>Mesic mixed hardwood forest (piedmont subtype)</i>	None	None	None	S4	G5T5	Wake - Current	Link
Natural Community	<i>Piedmont longleaf pine forest</i>	None	None	None	S1	G1?	Wake - Current	Link
Natural Community	<i>Piedmont monadnock forest</i>	None	None	None	S4	G5	Wake - Current	Link
Natural Community	<i>Piedmont/coastal plain acidic cliff</i>	None	None	None	S2?	G4	Wake - Current	Link
Natural Community	<i>Piedmont/coastal plain heath bluff</i>	None	None	None	S3	G4?	Wake - Current	Link
Natural Community	<i>Piedmont/low mountain alluvial forest</i>	None	None	None	S5	G5	Wake - Current	Link
Natural Community	<i>Piedmont/mountain bottomland forest</i>	None	None	None	S3?	G5	Wake - Current	Link
Natural Community	<i>Piedmont/mountain levee forest</i>	None	None	None	S3?	G5	Wake - Current	Link
Natural Community	<i>Piedmont/mountain semipermanent impoundment</i>	None	None	None	S4	G5	Wake - Current	Link
Natural Community	<i>Ultramafic outcrop barren</i>	None	None	None	S1	G1	Wake - Current	Link
Nonvascular Plant	<i>Campylopus oerstedianus</i>	Oersted's Campylopus	SR-D	None	S1	G1G3	Wake - Historical	Link
Nonvascular Plant	<i>Cleistocarpidium palustre</i>	Prairie Pleuridium	SR-D	None	S1	G5?	Wake - Current	Link
Nonvascular Plant	<i>Sphagnum subsecundum</i>	Orange Peatmoss	SR-P	None	S1	G5	Wake - Historical	Link
Nonvascular Plant	<i>Tortula plinthobia</i>	A Chain-teeth Moss	SR-O	None	S1?	G4G5	Wake - Historical	Link
Vascular Plant	<i>Acmispon helleri</i>	Carolina Birdfoot-trefoil	SR-T	FSC	S3	G3	Wake - Current	Link
Vascular Plant	<i>Agastache nepetoides</i>	Yellow Giant-hyssop	SR-P	None	S1	G5	Wake - Historical	Link
Vascular Plant	<i>Buchnera americana</i>	American Bluehearts	SR-P	None	SH	G5?	Wake - Historical	Link
Vascular Plant	<i>Cardamine douglassii</i>	Douglass's Bittercress	SR-P	None	S2	G5	Wake - Current	Link
Vascular Plant	<i>Carex reniformis</i>	Kidney Sedge	SR-P	None	S1	G4?	Wake - Historical	Link
Vascular Plant	<i>Carex tetanica</i>	Rigid Sedge	SR-P	None	S1	G4G5	Wake - Historical	Link
Vascular Plant	<i>Cirsium carolinianum</i>	Carolina Thistle	SR-P	None	S2	G5	Wake - Historical	Link
Vascular Plant	<i>Clematis catesbyana</i>	Coastal Virgin's-bower	SR-P	None	S2	G4G5	Wake - Historical	Link
Vascular Plant	<i>Cyperus granitophilus</i>	Granite Flatsedge	SR-T	None	S2	G3G4Q	Wake - Current	Link
Vascular Plant	<i>Dichantheium annulum</i>	Ringed Witch Grass	SR-P	None	S1	GNR	Wake - Historical	Link
Vascular Plant	<i>Dichantheium sp. 9</i>	A Witch Grass	SR-L	None	S2	G2G3	Wake - Historical	Link
Vascular Plant	<i>Didiplis diandra</i>	Water Purslane	SR-P	None	S1	G5	Wake - Current	Link
Vascular Plant	<i>Fothergilla major</i>	Large Witch-alder	SR-T	None	S3	G3	Wake - Current	Link
Vascular Plant	<i>Gillenia stipulata</i>	Indian Physic	SR-P	None	S2	G5	Wake - Current	Link

Vascular Plant	<i>Helenium brevifolium</i>	Littleleaf Sneezeweed	E	None	S2	G4	Wake - Historical	Link
Vascular Plant	<i>Isoetes piedmontana</i>	Piedmont Quillwort	T	None	S2	G3	Wake - Current	Link
Vascular Plant	<i>Liatris squarrulosa</i>	Earle's Blazing-star	SR-P	None	S2	G4G5	Wake - Current	Link
Vascular Plant	<i>Lindera subcoriacea</i>	Bog Spicebush	T	FSC	S2S3	G2G3	Wake - Current	Link
Vascular Plant	<i>Magnolia macrophylla</i>	Bigleaf Magnolia	SR-P	None	S2	G5	Wake - Current	Link
Vascular Plant	<i>Matelea decipiens</i>	Glade Milkvine	SR-P	None	S2	G5	Wake - Current	Link
Vascular Plant	<i>Micranthes pensylvanica</i>	Swamp Saxifrage	SR-P	None	S1	G5	Wake - Current	Link
Vascular Plant	<i>Monotropsis odorata</i>	Sweet Pinesap	SR-T	FSC	S3	G3	Wake - Historical	Link
Vascular Plant	<i>Polygala senega</i>	Seneca Snakeroot	SR-D	None	S2	G4G5	Wake - Current	Link
Vascular Plant	<i>Portulaca smallii</i>	Small's Portulaca	T	None	S2	G3	Wake - Current	Link
Vascular Plant	<i>Pseudognaphalium helleri</i>	Heller's Rabbit-Tobacco	SR-P	None	S3	G3G4	Wake - Current	Link
Vascular Plant	<i>Pycnanthemum virginianum</i>	Virginia Mountain-mint	SR-P	None	S1?	G5	Wake - Current	Link
Vascular Plant	<i>Rhus michauxii</i>	Michaux's Sumac	E-SC	E	S2	G2G3	Wake - Current	Link
Vascular Plant	<i>Ruellia humilis</i>	Low Wild-petunia	T	None	S1	G5	Wake - Historical	Link
Vascular Plant	<i>Ruellia purshiana</i>	Pursh's Wild-petunia	SR-O	None	S2	G3	Wake - Historical	Link
Vascular Plant	<i>Sagittaria weatherbiana</i>	Grassleaf Arrowhead	SR-T	FSC	S2	G3G4	Wake - Historical	Link
Vascular Plant	<i>Scutellaria australis</i>	Southern Skullcap	SR-P	None	S1	G4?Q	Wake - Historical	Link
Vascular Plant	<i>Scutellaria nervosa</i>	Veined Skullcap	SR-P	None	S1	G5	Wake - Historical	Link
Vascular Plant	<i>Silphium terebinthinaceum</i>	Prairie Dock	SR-P	None	S2	G4G5	Wake - Historical	Link
Vascular Plant	<i>Solidago radula</i>	Western Rough Goldenrod	SR-P	None	S1	G5?	Wake - Historical	Link
Vascular Plant	<i>Symphotrichum laeve</i> var. <i>concinnum</i>	Narrow-leaf Aster	SR-P	None	S2	G5T4	Wake - Historical	Link
Vascular Plant	<i>Thermopsis mollis</i>	Appalachian Golden-banner	SR-P	None	S2	G3G4	Wake - Current	Link
Vascular Plant	<i>Tradescantia virginiana</i>	Virginia Spiderwort	SR-P	None	S1	G5	Wake - Current	Link
Vascular Plant	<i>Trifolium reflexum</i>	Buffalo Clover	SR-T	None	S1S2	G3G4	Wake - Current	Link
Vascular Plant	<i>Trillium pusillum</i> var. <i>virginianum</i>	Virginia Least Trillium	E	FSC	S1	G3T2	Wake - Current	Link
Vertebrate Animal	<i>Aimophila aestivalis</i>	Bachman's Sparrow	SC	FSC	S3B,S2N	G3	Wake - Historical	Link
Vertebrate Animal	<i>Ambloplites cavifrons</i>	Roanoke Bass	SR	FSC	S2	G3	Wake - Current	Link
Vertebrate Animal	<i>Ambystoma tigrinum</i>	Eastern Tiger Salamander	T	None	S2	G5	Wake - Current	Link
Vertebrate Animal	<i>Condylura cristata</i> pop. 1	Star-nosed Mole - Coastal Plain Population	SC	None	S2	G5T2Q	Wake - Current	Link
Vertebrate Animal	<i>Haliaeetus leucocephalus</i>	Bald Eagle	T	None	S3B,S3N	G5	Wake - Current	Link

Vertebrate Animal	<i>Hemidactylium scutatum</i>	Four-toed Salamander	SC	None	S3	G5	Wake - Current	Link
Vertebrate Animal	<i>Heterodon simus</i>	Southern Hognose Snake	SC	FSC	S2	G2	Wake - Obscure	Link
Vertebrate Animal	<i>Lampetra aepyptera</i>	Least Brook Lamprey	T	None	S2	G5	Wake - Current	Link
Vertebrate Animal	<i>Lanius ludovicianus</i>	Loggerhead Shrike	SC	None	S3B,S3N	G4	Wake - Current	Link
Vertebrate Animal	<i>Myotis austroriparius</i>	Southeastern Myotis	SC	FSC	S2	G3G4	Wake - Historical	Link
Vertebrate Animal	<i>Necturus lewisi</i>	Neuse River Waterdog	SC	None	S3	G3	Wake - Current	Link
Vertebrate Animal	<i>Noturus furiosus</i>	Carolina Madtom	T	FSC	S2	G2	Wake - Current	Link
Vertebrate Animal	<i>Picoides borealis</i>	Red-cockaded Woodpecker	E	E	S2	G3	Wake - Historical	Link
Vertebrate Animal	<i>Sciurus niger</i>	Eastern Fox Squirrel	SR	None	S3	G5	Wake - Current	Link

NC NHP database updated on Friday, February 12th, 2010.
 Search performed on Monday, 22 March 2010 @ 10:15:47 EDST
[Explanation of Codes](#)



North Carolina Department of Environment and Natural Resources

Division of Water Quality
Coleen H. Sullins
Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

March 23, 2010



MEMORANDUM

To: Melba McGee, Environmental Coordinator, Office of Legislative and Intergovernmental Affairs

From: Brian Wrenn, Transportation Permitting Unit, NC Division of Water Quality *BLW*

Subject: Scoping comments on proposed Southern and Eastern Wake Expressway from NC55 to US 64/US 264 Bypass in Wake County, TIP Project Nos. R-2721, R-2828, and R-2829, State Clearinghouse Project No. 10-0283.

Reference your correspondence dated January 25, 2010 in which you requested comments for the referenced project. Preliminary analysis of the project reveals the potential for multiple impacts to perennial streams and jurisdictional wetlands in the project area. More specifically, impacts to:

Stream Name	River Basin	Stream Classification(s)	Stream Index Number	303(d) Listing
Lake Wheeler	Neuse	WS-III;NSW	27-43-(1)	
Lake Benson	Neuse	WS-III;NSW;CA	27-43-(5.5)	
Swift Creek	Neuse	C;NSW	27-43-(8)	Biological Integrity
Dutchman's Branch	Neuse	WS-III;NSW	27-43-4.5	
Sunset Lake	Neuse	B;NSW	27-43-15-(2)	
Bass Lake	Neuse	B;NSW	27-43-15-3	
Camp Branch	Neuse	C;NSW	27-43-15-5	
Rocky Branch	Neuse	C;NSW	27-43-15-4.5	
Bells Lake	Neuse	C;NSW	27-43-15-6	
Panther Branch	Neuse	C;NSW	27-43-15-9	
Terrible Creek	Neuse	B;NSW	27-43-15-8	
Middle Creek	Neuse	C;NSW	27-43-15	Biological Integrity, Low DO, Turbidity
White Oak Creek	Neuse	C;NSW	27-43-11	
Mahlers Creek	Neuse	C;NSW	27-43-9	
Walnut Creek	Neuse	C;NSW	27-34-(4)	Biological Integrity, Copper, PCB, Turbidity
Big Branch	Neuse	C;NSW	24-34-11	
Neuse River	Neuse	C;NSW	27-(36)	
Little Creek	Neuse	C;NSW	27-43-15-10	Biological Integrity
Gully Branch	Neuse	C;NSW	27-43-15-10-2	

Transportation Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1650
Location: 2321 Crabtree Blvd., Raleigh, North Carolina 27604
Phone: 919-733-1786 \ FAX: 919-733-6893
Internet: <http://h2o.enr.state.nc.us/ncwetlands/>

One North Carolina Naturally

Further investigations at a higher resolution should be undertaken to verify the presence of other streams and/or jurisdictional wetlands in the area. In the event that any jurisdictional areas are identified, the Division of Water Quality requests that the NC Turnpike Authority (NCTA) consider the following environmental issues for the proposed project:

Project Specific Comments:

1. All of the named streams in the study area have a supplemental classification of NSW waters of the State. NCDWQ is very concerned with sediment and erosion impacts that could result from this project. NCDWQ recommends that highly protective sediment and erosion control BMPs be implemented to reduce the risk of nutrient runoff to these streams. NCDWQ requests that road design plans provide treatment of the storm water runoff through best management practices as detailed in NCDOT's NPDES BMP Toolbox.
2. Swift Creek, Middle Creek, Walnut Creek, and Little Creek are listed as 303(d) waters of the State. They are listed for a variety of reasons including biological integrity, low dissolved oxygen, copper, PCBs, and turbidity. NCDWQ is very concerned with sediment and erosion impacts that could result from this project. NCDWQ recommends that the most protective sediment and erosion control BMPs be implemented in accordance with *Design Standards in Sensitive Watersheds* to reduce the risk of nutrient runoff to these creeks. Of particular concern is the listing for Middle Creek due to copper. A recent NCDOT study on stormwater runoff from bridges has shown that copper is a pollutant in stormwater runoff that frequently exceeds state standards. NCDWQ requests that road design plans provide treatment of the storm water runoff through structural best management practices as detailed in NCDOT's NPDES BMP Toolbox.
3. Review of the project reveals the presence of surface waters classified as Water Supply Critical Area (WS CA) in the project study area. Given the potential for impacts to these resources during the project implementation, NCDWQ requests that NCDOT strictly adhere to North Carolina regulations entitled *Design Standards in Sensitive Watersheds* (15A NCAC 04B .0124) throughout design and construction of the project. This would apply for any area that drains to streams having WS CA classifications. Should a crossing be located within the WS CA, NCDOT will be required to design, construct, and maintain hazardous spill catch basins in the project area. The number of catch basins installed shall be determined by the design of the crossing. Runoff shall enter the basin(s) prior to flowing into the stream. The basin(s) shall be designed in consultation with NCDWQ.
4. This project is within the Neuse River Basin. Riparian buffer impacts shall be avoided and minimized to the greatest extent possible pursuant to 15A NCAC 2B.0233.
5. Due to the fact that this project is a new location road being constructed in areas with impaired streams and water supply watershed critical areas, NCDWQ will require a quantitative secondary and cumulative impacts analysis. This analysis shall quantitatively model impacts to water quality from secondary and cumulative development resulting from this road project. This analysis shall be conducted in consultation with NCDWQ.
6. It is NCDWQ's understanding that NCTA intends to develop this project using FHWA's SAFETEA-LU 6002 process. NCDWQ would prefer that NCTA, as a division of NCDOT, develop this project and all future projects under the multi-agency Merger Process. NCDOT along with its partnering and participating agencies, and under the direction of the Interagency Leadership Team, has expended considerable time and money to develop, implement, and streamline the Merger Process. Furthermore, NCDWQ is of the opinion that the Merger Process is a more accountable process that

results in projects that hold up under scrutiny of the NEPA process and Sections 404 and 401 of the Clean Water Act.

General Project Comments:

1. The environmental document shall provide a detailed and itemized presentation of the proposed impacts to wetlands and streams with corresponding mapping. If mitigation is necessary as required by 15A NCAC 2H.0506(h), it is preferable to present a conceptual (if not finalized) mitigation plan with the environmental documentation. Appropriate mitigation plans will be required prior to issuance of a 401 Water Quality Certification.
2. Environmental assessment alternatives shall consider design criteria that reduce the impacts to streams and wetlands from storm water runoff. These alternatives shall include road designs that allow for treatment of the storm water runoff through best management practices as detailed in the most recent version of NCDWQ *Stormwater Best Management Practices*, such as grassed swales, buffer areas, preformed scour holes, retention basins, etc.
3. After the selection of the preferred alternative and prior to an issuance of the 401 Water Quality Certification, NCDOT is respectfully reminded that they will need to demonstrate the avoidance and minimization of impacts to wetlands (and streams) to the maximum extent practical. In accordance with the Environmental Management Commission's Rules {15A NCAC 2H.0506(h)}, mitigation will be required for impacts of greater than 1 acre to wetlands. In the event that mitigation is required, the mitigation plan shall be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as wetland mitigation.
4. In accordance with the Environmental Management Commission's Rules {15A NCAC 2H.0506(h)}, mitigation will be required for impacts of greater than 150 linear feet to any single perennial stream. In the event that mitigation is required, the mitigation plan shall be designed to replace appropriate lost functions and values. The NC Ecosystem Enhancement Program may be available for use as stream mitigation.
5. NCDWQ is very concerned with sediment and erosion impacts that could result from this project. NCDOT shall address these concerns by describing the potential impacts that may occur to the aquatic environments and any mitigating factors that would reduce the impacts.
6. If a bridge is being replaced with a hydraulic conveyance other than another bridge, NCDWQ believes the use of a Nationwide Permit may be required. Please contact the US Army Corp of Engineers to determine the required permit(s).
7. If the old bridge is removed, no discharge of bridge material into surface waters is allowed unless otherwise authorized by the US ACOE. Strict adherence to the Corps of Engineers guidelines for bridge demolition will be a condition of the 401 Water Quality Certification.
8. Whenever possible, NCDWQ prefers spanning structures. Spanning structures usually do not require work within the stream or grubbing of the streambanks and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges shall allow for human and wildlife passage beneath the structure. Fish passage and navigation by canoeists and boaters shall not be blocked. Bridge supports (bents) shall not be placed in the stream when possible.
9. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes,

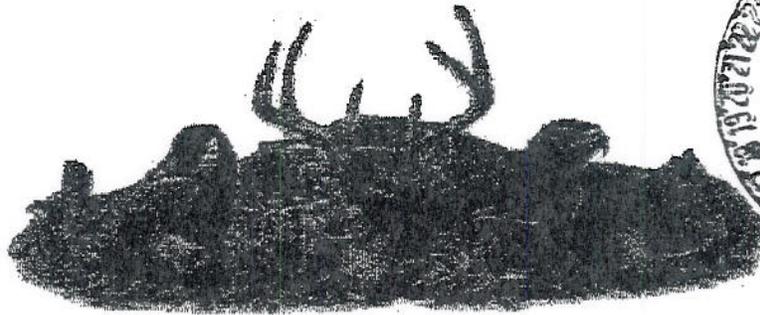
vegetated buffers, etc.) before entering the stream. Please refer to the most current version of NCDWQ's *Stormwater Best Management Practices*.

10. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.
11. If temporary access roads or detours are constructed, the site shall be graded to its preconstruction contours and elevations. Disturbed areas shall be seeded or mulched to stabilize the soil and appropriate native woody species should be planted. When using temporary structures the area shall be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact allows the area to re-vegetate naturally and minimizes soil disturbance.
12. Placement of culverts and other structures in waters, streams, and wetlands shall be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in disequilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by NCDWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.
13. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation, floodplain benches, and/or sills may be required where appropriate. Widening the stream channel shall be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.
14. If foundation test borings are necessary; it should be noted in the document. Geotechnical work is approved under General 401 Certification Number 3624/Nationwide Permit No. 6 for Survey Activities.
15. Sediment and erosion control measures sufficient to protect water resources must be implemented and maintained in accordance with the most recent version of North Carolina Sediment and Erosion Control Planning and Design Manual and the most recent version of NCS000250.
16. All work in or adjacent to stream waters shall be conducted in a dry work area unless otherwise approved by NCDWQ. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures should be used to prevent excavation in flowing water.
17. Sediment and erosion control measures shall not be placed in wetlands and streams.
18. Borrow/waste areas shall avoid wetlands to the maximum extent practical. Impacts to wetlands in borrow/waste areas could precipitate compensatory mitigation.

19. While the use of National Wetland Inventory (NWI) maps, NC Coastal Region Evaluation of Wetland Significance (NC-CREWS) maps and soil survey maps are useful tools, their inherent inaccuracies require that qualified personnel perform onsite wetland delineations prior to permit approval.
20. Heavy equipment shall be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams. This equipment shall be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.
21. In most cases, NCDWQ prefers the replacement of the existing structure at the same location with road closure. If road closure is not feasible, a temporary detour should be designed and located to avoid wetland impacts, minimize the need for clearing and to avoid destabilizing stream banks. If the structure will be on a new alignment, the old structure shall be removed and the approach fills removed from the 100-year floodplain. Approach fills should be removed and restored to the natural ground elevation. The area shall be stabilized with grass and planted with native tree species. Tall fescue shall not be used in riparian areas.
22. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed.

Thank you for requesting our input at this time. NCDOT 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 Brian Wrenn at 919-733-5715.

cc: Eric Alsmeyer, US Army Corps of Engineers, Raleigh Field Office
Clarence Coleman, Federal Highway Administration
Chris Militscher, Environmental Protection Agency (electronic copy only)
Travis Wilson, NC Wildlife Resources Commission
File Copy



☒ North Carolina Wildlife Resources Commission ☒

Gordon Myers, Executive Director

MEMORANDUM

TO: Melba McGee
Office of Legislative and Intergovernmental Affairs, DENR

FROM: Travis Wilson, Highway Project Coordinator
Habitat Conservation Program

DATE: March 16, 2010

SUBJECT: Response to the start of study notification from the N. C. Turnpike Authority regarding fish and wildlife concerns for the proposed Southern and Eastern Wake Expressway, Wake and Johnston Counties, North Carolina. TIP Nos. R-2721, R-2828, and R-2829, SCH Project No. 10-0283

This memorandum responds to a request for our concerns regarding impacts on fish and wildlife resources resulting from the subject project. Biologists on the staff of the N. C. Wildlife Resources Commission (NCWRC) have reviewed the proposed improvements. Our comments are provided in accordance with certain provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667d).

NCTA is proposing to construct a multilane facility on new location. We have review the project study area and identified multiple resources that should be considered for avoidance and minimization during the planning of this project. Potential impacts include new crossings of Swift Creek, Middle Creek and the Neuse River. Our records indicate the following state and federal listed species are located in these drainages:

<i>Alasmidonta heterodon</i>	Dwarf Wedgemussel
<i>Alasmidonta undulata</i>	Triangle Floater
<i>Elliptio lanceolata</i>	Yellow Lance
<i>Elliptio roanokensis</i>	Roanoke Slabshell
<i>Fusconaia masoni</i>	Atlantic Pigtoe
<i>Lampsilis radiata</i>	Eastern Lampmussel
<i>Strophitus undulatus</i>	Creeper
<i>Villosa constricta</i>	Notched Rainbow
<i>Noturus furiosus</i>	Carolina Madtom
<i>Necturus lewisi</i>	Neuse River Waterdog

Mailing Address: Division of Inland Fisheries • 1721 Mail Service Center • Raleigh, NC 27699-1721
Telephone: (919) 707-0220 • **Fax:** (919) 707-0028

Memo

2

March 16, 2010

The Neuse River at this location is also designated as an Anadromous Fish Spawning Area as well as an Inland Primary Nursery Area.

Furthermore we will reiterate the benefits of utilizing the NEPA/404 Merger Process for the planning and development of this project. The Merger process is the product of years of interagency coordination that has resulted in a valuable method for progressing transportation projects through planning by outlining expectations for the level of information and feedback provided by all parties at specific points in the process. Having participated in both the Section 6002 and Merger processes, the Merger process presents a consistent and predictable platform for decision making and documentation. However to help further facilitate document preparation and the review process, our general informational needs are outlined below:

1. Description of fishery and wildlife resources within the project area, including a listing of federally or state designated threatened, endangered, or special concern species. Potential borrow areas to be used for project construction should be included in the inventories. A listing of designated plant species can be developed through consultation with:

NC Natural Heritage Program
Dept. of Environment & Natural Resources
1601 Mail Service Center
Raleigh, NC 27699-1601.
WWW.ncnhp.org

and,

NCDA Plant Conservation Program
P. O. Box 27647
Raleigh, N. C. 27611
(919) 733-3610

2. Description of any streams or wetlands affected by the project. The need for channelizing or relocating portions of streams crossed and the extent of such activities.
3. Cover type maps showing wetland acreages impacted by the project. Wetland acreages should include all project-related areas that may undergo hydrologic change as a result of ditching, other drainage, or filling for project construction. Wetland identification may be accomplished through coordination with the U. S. Army Corps of Engineers (COE). If the COE is not consulted, the person delineating wetlands should be identified and criteria listed.
4. Cover type maps showing acreages of upland wildlife habitat impacted by the proposed project. Potential borrow sites should be included.
5. The extent to which the project will result in loss, degradation, or fragmentation of wildlife habitat (wetlands or uplands).
6. Mitigation for avoiding, minimizing or compensating for direct and indirect degradation in habitat quality as well as quantitative losses.

Memo

Page 3

March 16, 2010

7. A cumulative impact assessment section which analyzes the environmental effects of highway construction and quantifies the contribution of this individual project to environmental degradation.
8. A discussion of the probable impacts on natural resources which will result from secondary development facilitated by the improved road access.
9. If construction of this facility is to be coordinated with other state, municipal, or private development projects, a description of these projects should be included in the environmental document, and all project sponsors should be identified.

Thank you for the opportunity to provide input in the early planning stages for this project. If we can further assist your office, please contact me at (919) 528-9886.

cc: Gary Jordan, U.S. Fish and Wildlife Service, Raleigh
Rob Ridings, DWQ, Raleigh
Eric Alsmeyer, USACE, Raleigh
Chris Militscher, EPA

DEPARTMENT OF ENVIRONMENT AND
NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

Inter-Agency Project Review Response

FEB 18 2010

NC PWSS

Project Number
10-0283

County
Wake, Johnston

Project Name NC Turnpike Authority/NCDOT

Type of Project

Scoping - Scoping notice for Southern & Eastern Wake Expressway, STIP Projects R-2721, R-2828 & R-2829. Complete 540 Outer Loop from NC55 to US 64/US 264 bypass, approx 29 miles

Comments provided by:

- Regional Program Person
 Regional Supervisor for Public Water Supply Section
 Central Office program person

Name Michael Douglas-Raleigh RO

Date: 02/12/2010

Telephone number: 919-791-4200

Program within Division of Environmental Health:

Public Water Supply

Other, Name of Program: _____

Response (check all applicable):

- No objection to project as proposed
 No comment
 Insufficient information to complete review
 Comments attached
 See comments below



Any relocation of water mains must be approved by the Public Water Supply Section - Technical Services Branch prior to construction or relocation.

Return to:
Public Water Supply Section
Environmental Review Coordinator for the
Division of Environmental Health

FEB 15 2010

DEPARTMENT OF ENVIRONMENT AND
NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH



Project Number 10-0283
County Wake, Johnston

Inter-Agency Project Review Response

Project Name NC Turnpike Authority/NCDOT Type of Project Scoping - Scoping notice for Southern & Eastern Wake Expressway, STIP Projects R-2721, R-2828 & R-2829. Complete 540 Outer Loop from NC55 to US 64/US 264 bypass, approx 29 miles

- The applicant should be advised that plans and specifications for all water system improvements must be approved by the Division of Environmental Health prior to the award of a contract or the initiation of construction (as required by 15A NCAC 18C .0300et. seq.). For information, contact the Public Water Supply Section, (919) 733-2321.
- This project will be classified as a non-community public water supply and must comply with state and federal drinking water monitoring requirements. For more information the applicant should contact the Public Water Supply Section, (919) 733-2321.
- If this project is constructed as proposed, we will recommend closure of _____ feet of adjacent waters to the harvest of shellfish. For information regarding the shellfish sanitation program, the applicant should contact the Shellfish Sanitation Section at (252) 726-6827.
- The soil disposal area(s) proposed for this project may produce a mosquito breeding problem. For information concerning appropriate mosquito control measures, the applicant should contact the Public Health Pest Management Section at (919) 733-6407.
- The applicant should be advised that prior to the removal or demolition of dilapidated structures, an extensive rodent control program may be necessary in order to prevent the migration of the rodents to adjacent areas. For information concerning rodent control, contact the local health department or the Public Health Pest Management Section at (919) 733-6407.
- The applicant should be advised to contact the local health department regarding their requirements for septic tank installations (as required under 15A NCAC 18A. 1900 et. sep.). For information concerning septic tank and other on-site waste disposal methods, contact the On-Site Wastewater Section at (919) 733-2895.
- The applicant should be advised to contact the local health department regarding the sanitary facilities required for this project.
- If existing water lines will be relocated during the construction, plans for the water line relocation must be submitted to the Division of Environmental Health, Public Water Supply Section, Technical Services Branch, 1634 Mail Service Center, Raleigh, North Carolina 27699-1634, (919) 733-2321.
- For Regional and Central Office comments, see the reverse side of this form.

<u>Jim McRight</u>	<u>PWSS</u>	<u>02/12/2010</u>
Reviewer	Section/Branch	Date

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

COUNTY: WAKE
JOHNSTON

F02: HIGHWAYS AND ROADS

STATE NUMBER: 10-E-4220-028
DATE RECEIVED: 02/03/2010
AGENCY RESPONSE: 03/23/2020
REVIEW CLOSED: 03/27/2020

CLEARINGHOUSE COORDINATOR
CC&PS - DIV OF EMERGENCY MANAGEMENT
FLOODPLAIN MANAGEMENT PROGRAM
MSC # 4719
RALEIGH NC



RECEIVED

FEB 4 2010

NC Floodplain Mapping Program

REVIEW DISTRIBUTION

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DENR LEGISLATIVE AFFAIRS
DEPT OF AGRICULTURE
DEPT OF CULTURAL RESOURCES
DEPT OF TRANSPORTATION
TRIANGLE J COG

PROJECT INFORMATION

APPLICANT: State of N.C. Turnpike Authority
TYPE: National Environmental Policy Act
Scoping

DESC: Scoping notice for the Southern and Eastern Wake Expressway, STIP Projects R-2721, -2828 and R-2829. Completion of the 540 Outer Loop from NC 55 in Wake County to the US 64/US 264 bypass in Knightdale, approximate distance of 29 miles.

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: NO COMMENT COMMENTS ATTACHED

SIGNED BY:

Jennifer Shee

DATE:

2/22/2010

The proposed alignment crosses multiple special flood hazard areas and FEMA regulated floodways. Each crossing within areas

a floodway will require, prior to construction, either a:

(1) no-rise certification for crossings that do not cause an increase in base flood elevations; or

(2) submittal and approval of Conditional Letter of Map Revision for projects that increase base flood elevations.

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

COUNTY: WAKE
JOHNSTON

F02: HIGHWAYS AND ROADS

STATE NUMBER: 10-E-4220-0283
DATE RECEIVED: 02/03/2010
AGENCY RESPONSE: 03/23/2020
REVIEW CLOSED: 03/27/2020

MS HOLLY GILROY
CLEARINGHOUSE COORDINATOR
DEPT OF AGRICULTURE
1001 MSC - AGRICULTURE BLDG
RALEIGH NC

REVIEW DISTRIBUTION

CC&PS - DIV OF EMERGENCY MANAGEMENT
DENR LEGISLATIVE AFFAIRS
DEPT OF AGRICULTURE
DEPT OF CULTURAL RESOURCES
DEPT OF TRANSPORTATION
TRIANGLE J COG



PROJECT INFORMATION

APPLICANT: State of N.C. Turnpike Authority
TYPE: National Environmental Policy Act
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If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: NO COMMENT COMMENTS ATTACHED

SIGNED BY: Holly Gilroy

DATE: 2/19/2010



Steven W. Troxler
Commissioner

North Carolina Department of Agriculture
and Consumer Services
Agricultural Services

Dewitt Hardee
Environmental Program
Manager

Ms. Valerie McMillan
State Clearinghouse
N.C. Department of Administration
1301 Mail Service Center
Raleigh, North Carolina 27699-1301

February 19, 2010



State #: 10-E-4220-0283
RE: Southern and Eastern Wake Expressway

Dear Ms McMillan:

The footprint of the proposed Southern and Eastern Wake Expressway has potential of irreversible damage and increases the loss of prime farm and forest land thereby negatively impacting agricultural environmental balance in the immediate area. The US DOT and the NCDOT should give due consideration of routing and / or designs that reduce to loss of farm and forest land activities due to potential negative environmental and economic impacts by the placement of the road's footprint. Providing friendly and accessible agricultural crossover points for agricultural equipment and livestock in conjunction with the use of agricultural easements at access points and along the proposed right ways would lessen the negative impacts on the adjacent farms and forest land.

Farm and forest lands are natural resources with no mitigation process. These agribusiness resources cannot be replaced nor relocated once converted to other uses. Placement of the Expressway should give consideration of farms near existing Voluntary Agricultural Districts (VAD) designed to recognize and protect key agricultural production centers. Transportation planning priorities should be considered highway placement and its potential negative impact on VAD and land resources. These plans should also negate the formation of incompatible and inaccessible land units that degrades agricultural production capabilities.

Agricultural production incomes from locally grown products have a considerable multiplier influence. It is estimated that for every 40 acres converted from agricultural production, one agribusiness job and its associated economic activity is lost indefinitely. Additional acreage loss is most likely to occur beyond the Southern and Eastern Wake Expressway footprint due to the subdivision and reduced agricultural production capacity from development pressures. Furthermore the costs of community services used by agricultural business are minimal and therefore are net contributors to county budgets. Both current and future cost for the conversion land from production agriculture is needed for an accurate evaluation which is not accurately recognized by the Farmland Conversion Impact Rating using Form AD 1006.

Based on the secondary, cumulative, and direct impacts, this project has potential to adversely impact the agricultural environmental and economic resources in the proposed area. The total negative impact on the environmental and agribusiness economy will be proportionately related to the total acres of farm and forest land taken out of production.

Respectfully,

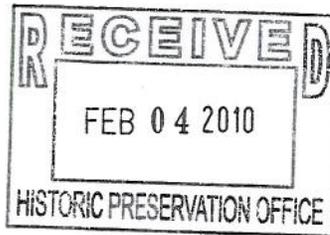
Dewitt Hardee
Environmental Program Manager

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

COUNTY: WAKE
JOHNSTON

F02: HIGHWAYS AND ROADS

STATE NUMBER: 10-E-4220-0283
DATE RECEIVED: 02/03/2010
AGENCY RESPONSE: 03/23/2020
REVIEW CLOSED: 03/27/2020



MS RENEE GLEDHILL-EARLEY
CLEARINGHOUSE COORDINATOR
DEPT OF CULTURAL RESOURCES
STATE HISTORIC PRESERVATION OFFICE
MSC 4617 - ARCHIVES BUILDING
RALEIGH NC

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DEPT OF AGRICULTURE
DEPT OF CULTURAL RESOURCES
DEPT OF TRANSPORTATION
TRIANGLE J COG

PROJECT INFORMATION

APPLICANT: State of N.C. Turnpike Authority
TYPE: National Environmental Policy Act
Scoping



CH 98-0457

A - DAA
2/5/10

S - PSE 2/11/10

Due 2/11/10

DESC: Scoping notice for the Southern and Eastern Wake Expressway, STIP Projects R-2721,-2828 and R-2829. Completion of the 540 Outer Loop from NC 55 in Wake County to the US 64/US 264 bypass in Knightdale, approximate distance of 29 miles.

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If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: NO COMMENT COMMENTS ATTACHED

SIGNED BY:

Renee Gledhill-Earley

DATE:

2.10.10

FEB 05 2010



North Carolina Department of Cultural Resources
State Historic Preservation Office

Peter B. Sandbeck, Administrator

Beverly Eaves Perdue, Governor
Linda A. Carlisle, Secretary
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History
Division of Historical Resources
David Brook, Director

February 15, 2010

MEMORANDUM

TO: Jennifer Harris
North Carolina Turnpike Authority

FROM: Peter Sandbeck *PBS*

SUBJECT: Start of Study and Agency Scoping Meeting Notification, Southern And Eastern Wake Expressway, R-2721, R-2828 and R-2829, Wake and Johnston Counties, CH 98-0457



Thank you for your letter of January 25, 2010, concerning the above project. We have reviewed the information that accompanied your letter and offer the following comments.

The proposed study area for the Southern and Eastern Expressway contains numerous Native American and historic period archaeological sites, some of which may be eligible for inclusion in the National Register of Historic Places. In addition, much of the study area has never been surveyed to determine the presence or significance of archaeological resources. We recommend that you or your cultural resource consultants contact us as project corridors and alternates are developed for the project. We will then be able better able to evaluate the potential effects upon archaeological resources and the need for any additional archaeological investigations prior to project implementation.

In terms of historic buildings and districts, we urge your consultants to consult our maps and files for the latest updates to the Wake County inventory.

We look forward to working with you and your staff on this project. Representatives of our agency plan to attend the scoping meeting on February 16, 2010.

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, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/807-6579. In all future communication concerning this project, please cite the above referenced tracking number.

cc: Steven D. DeWitt, NC Turnpike Authority
Matt Wilkerson, NCDOT
State Clearinghouse



OFFICE OF THE MAYOR

TOWN of CARY

P.O. Box 8005

316 North Academy Street

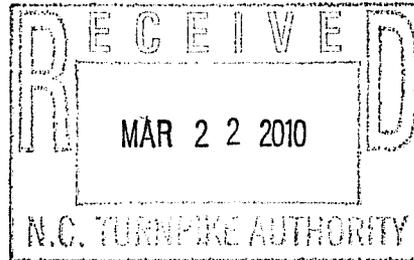
Cary, NC 27512-8005

tel: 919-469-4011

fax: 919-460-4910

www.townofcary.org

March 17, 2010



Ms. Jennifer Harris, P.E.
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699

Subject: Comments on the Study of the Triangle Expressway Southeast Connector

Dear Ms. Harris:

On behalf of the Cary Town Council, I respectfully submit the following comments in response to your February 4, 2010 request for comments on the environmental impact study (EIS) process for the Triangle Expressway Southeast Connector from NC 55 in Apex to the US 64/US 264 Bypass in Knightdale. The comments are listed below and include phases of the project such as the environmental impact study process, design, and construction.

- The NCTA should work closely with the Town to establish a thorough and proactive communications plan. The NCTA should implement an aggressive public information and educational initiative for the potentially impacted residents and neighborhoods. The NCTA should hold regular meetings with the Town of Cary to present the communications plan and discuss concerns with the environmental impact study, construction effects on the quality of life, and traffic flow impacts among other issues. The NCTA should provide ample time for press releases such as community meetings, detours, and other pertinent information.
- The NCTA should investigate providing an interchange within the Town of Cary Comprehensive Planning Area. An interchange is currently proposed at the intersection of Kildaire Farm Road and Holly Springs Road. Due to growth and development, there may be too much traffic at a single point and an additional interchange may be needed in this area.
- The NCTA should closely investigate any impacts of moving the corridor off the protected alignment. This could negatively impact residential communities, proposed greenways, proposed parks, and proposed thoroughfare improvements. The NCTA should avoid impacting four current and proposed parks within the study area, including the existing Middle Creek Park and the proposed Barley Park. In addition, there are three greenways existing and proposed that cross perpendicular to the protected corridor. The greenway names are: Middle Creek Greenway, Camp

Ms. Jennifer Harris, P.E.
March 17, 2010

Branch Greenway, and Optimist Farm Greenway. There is an existing historical farm, the Olive Farm, located south of the protected corridor. In addition, there are several small historical buildings within the study area. There is an existing water treatment facility, the South Cary Water Reclamation Facility, located at the southern end of West Lake Road. Future thoroughfare improvements and development site plans have been planned with respect to the location of the protected corridor.

- The NCTA should address Town of Cary concerns about how changes to the protected corridor could impact the recently adopted Cary Comprehensive Transportation Plan. The Comprehensive Transportation Plan (CTP) was adopted by Town Council in 2008. The transportation network in Cary was analyzed for connectivity, social, economic, ecological, and traffic data with respect to the location of the protected corridor. Potential impacts to these components of the CTP should be considered through the EIS.
- The NCTA should work closely with Town of Cary to review and provide comments for the alternate alignments that will be included in the draft EIS. The NCTA should contact the Town of Cary in a reasonable amount of time prior to releasing the draft EIS for review and comments. The Town will review and provide comments to proactively form a communications plan to respond to the anticipated release of the draft EIS. The NCTA should continue to accept and review stakeholder comments throughout the EIS, design, and construction stages of the project.
- The NCTA should plan for and address noise impacts before, during and after construction. The NCTA should revise the NCDOT Traffic Noise Abatement Policy to plan for and provide noise barriers for all subdivisions approved, not just properties with building permits, prior to the record of decision (ROD). The NCDOT should revise this policy prior to the final EIS for the Triangle Expressway Southeast Connector, and the revised policy should apply for this project.
- The NCTA should work closely with the Town of Cary early in the process to identify and mitigate utility conflicts. Excavations and heavy construction operations over and around utility infrastructure have the potential to damage lines and disrupt service. Potential proposed and existing Town of Cary utility conflicts within the study area include: the South Cary Water Reclamation Facility, water towers, fiber optic cable, traffic signal cable, water and sanitary sewer service (see Attachment A for approximate existing and proposed water and sewer locations). Potential proposed and existing external utility conflicts include Progress Energy distribution lines, substations, and transmission lines. Other possible proposed and existing conflicts include Time Warner Cable, gas lines, and cellular towers, among others.

Ms. Jennifer Harris, P.E.
March 17, 2010

- The Town of Cary requests that the NCTA evaluate traffic impacts associated with construction. The NCTA should evaluate emergency response routes to ensure that service can be maintained. Traffic detour routes can lead to increased congestion and delays, which would increase driver inconvenience, confusion, and frustration. It is standard practice at the Town of Cary to give ample notice to drivers and residents of when, where, and how long a detour will be in place. In addition, the NCTA should give consideration to coordinating with schools and bus routes, coordinating signal work with the Town of Cary, coordinating the C-Tran bus route with the Town of Cary, and ensure that mobility is maintained through the construction area. The NCTA should evaluate and study the corridor for transit improvements, such as an HOV lane, buses, and rail.
- The NCTA should consider impacts to existing and proposed subdivision and site plans. Subdivisions and site plans will continue to be approved and lots platted throughout the EIS process. Subdivisions and site plans that are within 500' of the Triangle Expressway Southeast Connector protected corridor and the Town of Cary Comprehensive Planning Area as of March 8, 2010 are listed below (see Attachment B for the map of locations).

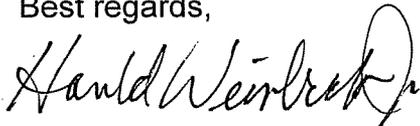
Subdivisions within 500' of the Protected Corridor and the Town of Cary Comprehensive Planning Area (List as of March 8, 2010)		
Subdivision Name	Acres	Lots
South Lake PH3	13.9398	15
Oxford Greene	32.6973	24
Clancy-Morrison	19.4583	5
Langston	77.802	72
Betty Truelove Daniels	6.81494	3
Belle Point	40.138	26
Brookshire Manor	23.4825	17
Jamison Park PH1	53.4068	136
Jamison Park PH2	78.0921	73
South Lake PH2	11.9468	12

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Site Plans within 500' of the Protected Corridor and the Town of Cary Comprehensive Planning Area (List as of March 8, 2010)				
Site Plan Number	Project Name	Status	Acres	Use
00-SP-034	Middle Creek Park Softball Fields	Complete	90.23	Softball Fields
99-SP-153	Middle Creek High School	Complete	203	High School
99-SP-247	Middle Creek Park	Complete	203	Park

The Town would appreciate advance notification of any opportunities for additional public input on the EIS, including public workshops and hearings so that we may alert our citizens. We appreciate your consideration of our comments on this important matter. Please feel free to contact Kristen Dwiggin in our Engineering Department at (919) 462-3930 or via email at kristen.dwiggin@townofcary.org should you have any further questions relating to this issue. The Town of Cary looks forward to working with the Turnpike Authority on this important study process.

Best regards,



Harold Weinbrecht, Jr.
Mayor



**TOWN OF HOLLY SPRINGS
ENGINEERING DEPARTMENT
PO Box 8 Holly Springs, NC 27540
(919) 557-3938 • FAX (919) 552-9881**

**I-540 SOUTHEAST CONNECTOR
1st COMMENTS
3/25/2010**

Please feel free contact Kendra Parrish, PE, CFM at 557-3931 or Kendra.Parrish@hollyspringsnc.us with any questions or comments regarding these comments.

Comments:

- 1. Holly Springs supports the completion of the I-540 Southeast Connector!**
2. The Town of Holly Springs supports the location of the I-540 Southeast Connector in the current corridor protection area. If for some reason the location of I-540 cannot be located in this area we request that the new location be south of Holly Springs due to all of the existing development within the town limits.
3. Holly Springs is getting ready to embark upon a major multimodal Transportation Plan Update. We would like to meet with the Turnpike Authority a couple times throughout the process for coordination.
4. The planned interchange at Holly Springs Rd/Kildare Farm Road/I-540 needs special evaluation. What is in the corridor protection plan is not adequate to NCDOT design standards for on and off ramps. This presents a problem for Holly Springs because as development plans come in we know there needs to be more right of way however, NCDOT can not endorse a design due to NEPA.
5. Holly Springs requests a copy of the environmental investigation in our area for documentation.
6. Holly Springs prefers that the grade separated bridge over Sunset Lake Road be an overpass.
7. There are 3 greenway connections planned that cross I-540 and will need to be accommodated. These greenways are major connectors between adjacent municipalities. 1-behind the Scott's Laurel Subdivision off of Kildare Farm Rd, 2-Woodcreek Subdivision on Sunset Lake Road, 3-Area that runs parallel to Pierce Olive Road.
8. Adjacent to Middle Creek the Town has a major existing sewer trunk line. This will need to be preserved and factored into the road design.



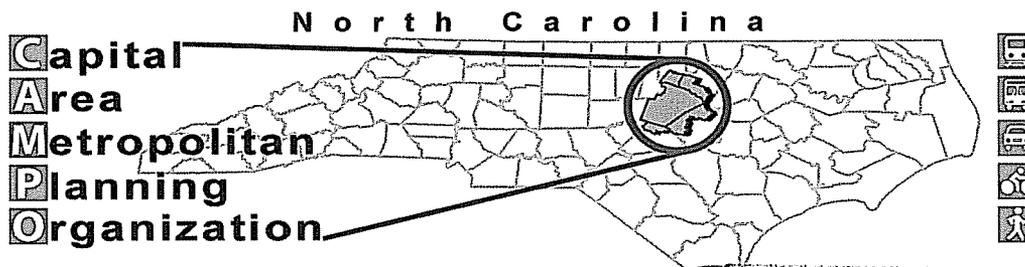
**TOWN OF HOLLY SPRINGS
ENGINEERING DEPARTMENT
PO Box 8 Holly Springs, NC 27540
(919) 557-3938 • FAX (919) 552-9881**

9. The overpass of Main Street (east of NC 55 Bypass) shall accommodate 100 ft right of way for a 4 lane median divided facility.
10. Sunset Lake Rd and Kildare Farm Rd are both 100 ft right of way with 4 lane median divided facilities as well.
11. Holly Springs would like to discuss noise walls and when the warrants will be evaluated. If needed what materials and height would be evaluated.

Questions:

1. If I-540 is relocated outside of the corridor protection area onto existing facilities that will be upgraded, will it still remain a toll road?
2. Will transit corridor be included with the I-540 design?

Thank you for the opportunity to comment on the process.



March 18, 2010



Ms. Jennifer Harris, PE
Staff Engineer
North Carolina Turnpike Authority
5400 Glenwood Avenue
Raleigh, NC 27612

Re: Southern & Eastern Wake Expressway (STIP Projects R-2721, R-2828, and R-2829)
Notice of Intent Agency Response

Dear Ms Harris,

In reference to the Notice of Intent published in the Federal Register on November 30, 2009, this letter is to inform the North Carolina Turnpike Authority (NCTA) that the Capital Area Metropolitan Planning Organization (MPO) is supportive of the development of an environmental impact statement for the proposed action.

The Capital Area MPO wishes to continue to build upon the cooperative planning relationship established in the Memorandum of Understanding dated May 13th, 2007 (attached). As the designated agency responsible for the 3-C planning process under Section 134 of Title 23 United State Code and Chapter 136 of the North Carolina General Statutes, CAMPO looks forward to the opportunity to serve as a participating agency in the planning and design development process for this project.

The MPO encourages NCTA to develop and designate a preferred corridor and alignment in a timely manner in order to assist in proper transportation planning and coordination of development activities in this rapidly growing area. A designated corridor is also essential to expedite the acquisition of necessary right of way for the project, thus keeping overall project costs to a minimum.

Planning and design of this major transportation facility should be in harmony with the adopted regional Long Range Transportation Plan and Triangle Regional Model. This should include consideration for the long term needs of the transportation corridor by accommodating the ultimate cost effective design of this facility rather than incorporating design elements to minimize initial construction costs that will result in higher retrofits in the future such as resizing of bridges or interchanges once tolls are removed from the facility. The MPO recognizes that the current regional model has produced traffic volumes that are lower than the initial model that included this project. The MPO wishes to express the need for continued coordination with NCTA to ensure reasonable traffic volumes are included in an update of the Triangle Regional Model currently under development.

The Southern and Eastern Wake Expressways are portions of the larger 540 Outer Loop project. As such these projects should be developed as a single design and right-of-way acquisition project to the extent possible. This will minimize long term project costs and result in an overall savings for the taxpayers. Any study of financial, economic and congestion impacts should include an analysis of the full completion of the Outer Loop.

The Southern and Eastern Wake Expressway will serve as the backbone of the transportation network in this area and should provide a balanced transportation facility design that includes multimodal considerations such as:

- Park and Ride facilities at major interchanges and other appropriate locations.
- Transit Vehicle toll exemption and priority.
- Transit vehicle and High Occupancy Vehicle priority through the use of designated lanes, toll stalls or other means.
- Coordination with existing and proposed bicycle and pedestrian facilities in the project corridor.

The MPO supports the inclusion of Intelligent Transportation System (ITS) components in the project design that are consistent with the adopted regional ITS architecture. This will maximize the transportation investment by enabling the most efficient management of traffic operations within the corridor.

The design of this new facility should minimize negative impacts to the Swift Creek Watershed and water supply area. To accomplish this, the ultimate facility design should include a toolbox of sustainable design elements such as use of BMPs throughout the project and consideration of onsite storm water treatment such as sustainable landscaping elements that are compatible with local soil type and drainage capability and that are native to the region.

The staff at CAMPO looks forward to working with NCTA to develop this vital transportation facility for the future. If you need any further assistance or have questions please contact my office at (919) 996-4400.

Sincerely,



Edison H. Johnson, Jr., PE, FITE
Executive Director, N.C. Capital Area MPO

cc: George Hoops, P.E. - Federal Highway Administration

APPENDIX C
Agency Meeting Summaries



Turnpike Environmental Agency Coordination (TEAC) Meeting

MEETING MINUTES FINAL

Date: December 8, 2009
9:00 a.m. To 10:15 a.m.
NCTA Board Room

Project: STIP R-2721, R-2828, and R-2929 – Southern and Eastern Wake Expressway

Southern and Eastern Wake Expressway Spotlight:

Attendees:

George Hoops, FHWA	Tony Houser, NCDOT-Roadway Design Unit
Christopher Militscher, USEPA	Lonnie Brooks, NCDOT-Structure Design Unit
Eric Alsmeyer, USACE	Jennifer Harris, NCTA
Gary Jordan, USFWS	Christy Shumate, HNTB
Rob Ridings, NCDWQ	Spencer Franklin, HNTB
Deanna Riffey, NCDOT-NEU	Kevin Markham, ESI
Erica McLamb, NCDOT-NEU	Roy Bruce, Lochner
Rachelle Beauregard, NCDOT-NEU	Kristin Maseman, Lochner
Amy Simes, NCDENR	Karin Ertl, Lochner
Missy Pair, NCDOT-PDEA	Brian Eason, Lochner
Steve Gurganus, NCDOT-PDEA-HEU	Steve Browde, Lochner
Dewayne Sykes, NCDOT-Roadway Design Unit	Wendee Smith, Mulkey

Presentation Materials (Posted on TEAC website):

- Agenda
- Project Introduction PowerPoint Presentation
- Draft Project Study Area Map
- Notice of Intent
- Draft Section 6002 Project Coordination Plan
- Draft 2010 Calendar for Concurrence, Interagency, and NCTA Meetings

Purpose:

Introduce project and present draft project study area, Notice of Intent, and draft Section 6002 Project Coordination Plan for the project.

General Discussion:

The following information was discussed at the meeting:

- **Project Introduction:** Lochner gave a brief PowerPoint presentation to introduce the project and provide background information. Printed copies of the PowerPoint slides were provided to meeting attendees. Highlights of the presentation are as follows:

- Project length is about thirty miles, extending from NC 55 at the Western Wake Freeway/NC 540 to I-540 at the Knightdale Bypass.
- Initial project studies were conducted by NCDOT in the 1990s and a protected corridor for the Southern Wake Expressway has been filed. The protected corridor for R-2721 (NC 55 to US 401) was filed in 1996; the protected corridor for R-2828 (US 401 to I-40) was filed in 1997. To date, approximately thirty parcels have been purchased by NCDOT in order to preserve the corridor.
- In addition to the No-Build Alternative, multiple Build Alternatives, including alternatives on new location and upgrading existing roadway alternatives, as well as alternative modes, will be evaluated in this study. Alternative modes may include mass transit, transportation demand management, transportation system management, and others as identified.
- Key project issues that have been identified to date include potential impacts on area streams, the presence of federally-protected mussel species, potential indirect and cumulative effects, widespread residential development in the project area, and coordination with multiple jurisdictions. Other project issues will be identified through scoping and as the study progresses.
- Under the current draft schedule, the Draft EIS is scheduled for completion in early 2012, with a Record of Decision in late 2013.

Lochner then displayed a video simulation of an aerial flyover of the protected corridor for Southern Wake and a representative corridor for Eastern Wake to highlight locations of key area features. The representative corridor shown for Eastern Wake has not been protected—it is simply shown for reference purposes.

- **Notice of Intent:** NCTA provided printed copies of the Notice of Intent (NOI) for the project, which was published in the Federal Register on November 30, 2009. NCTA highlighted key information in the NOI, stressing that a range of alternatives will be evaluated for the project, including multiple new location and upgrade existing roadway alternatives along with several types of non-highway improvement alternatives.
- **Draft Project Study Area:** Maps showing the boundaries of the draft project study area were displayed and discussed. Lochner pointed out that the northern boundary of the study area in southern Wake County was set to avoid the Swift Creek watershed to the north, but to include Ten-Ten Road, an east-west facility. The western and southern boundaries were set to include NC 42 and NC 55, which together form a key east-west route through the study area.

Following an initial request by EPA, the resource and regulatory agencies expressed interest in the proposed northern study area boundary shifted to the north to allow early consideration of potentially shorter alternatives closer to more heavily developed portions of the area. This shift, which would create a larger study area, may also allow evaluation of a larger number of potential locations for the crossing of Swift Creek. This could be helpful in considering how to best minimize impacts to federally-protected mussel species.

NCDOT had a suggestion about the proposed southern study area boundary in light of potential issues at the I-40 interchange at NC 42. The study area will be shifted slightly in this area to include the area around the NC 42 and the Clayton Bypass.

- **Draft Section 6002 Project Coordination Plan:** In lieu of following the NCDOT's merger process, this project will follow coordination procedures authorized under Section 6002 of SAFETEA-LU for the environmental review process. The key difference in the two approaches is that formal concurrence is not required at decision points in the study. However, NCTA still

expects the agencies to highlight issues of concern, particularly those that could affect later permitting decisions. Printed copies of the draft Project Coordination Plan prepared for this project were provided. The plan contains a list of suggested cooperating and participating agencies for the project. Formal invitation letters will be sent to request formal agreement to act as cooperating or participating agencies. The current draft Project Coordination Plan will be finalized in the coming few months as the scoping process proceeds. After this, revisions can be made to the Project Coordination Plan at any time throughout the study as conditions warrant. Participants will be apprised of all revisions to the Project Coordination Plan and will be afforded opportunity to discuss the revisions.

Q&A:

1. *How much of the project study area is shown in the flyover video?*
The width of the area shown is fairly small (roughly one mile wide)—the project study area is a lot wider than the area shown (as much as twelve miles wide in some locations).
2. *Why doesn't the study area include areas to the north of the existing northern boundary? Is the Swift Creek watershed a critical water supply watershed?*
The existing northern boundary would keep any new location alternatives south of the Swift Creek water supply watershed. NCTA will determine if it is a critical water supply watershed.

Note: Within the Swift Creek watershed, the Lake Benson watershed area has been designated by DWQ as a Critical Area (WS-III). The Lake Wheeler portion of the Swift Creek watershed is designated as WS-III, but not as a Critical Area.

3. *Could the study area boundary be shifted to the north? This could allow development of shorter new location alternatives.*
The boundary could and will be shifted for the purposes of environmental constraints mapping and preliminary screening of alternative concepts.
4. *What existing facilities would this project likely alleviate traffic from? Is reduction of traffic congestion on existing facilities likely to be an element of the project purpose?*
The project would likely draw traffic off of I-40, I-440, Ten-Ten Road, NC 42 and other adjacent facilities. Reduction of traffic congestion will likely be an element of the project purpose.
5. *The agencies would like information on the parcels already acquired by NCDOT under corridor protection.*
All 30 parcels were acquired as a result of hardship requests from the original property owners. Key details of the acquired parcels will be provided.
6. *What happens to parcels acquired through corridor protection if the protected corridor is not chosen as the preferred alternative?*
Each parcel is first offered for purchase to its original owner, then to adjacent property owners, and then to the wider public.

Previous Action Items:

- None

New Action Items:

- TEAC members will provide to NCTA comments on the draft Project Coordination Plan and the draft study area.
- Lochner will update the draft project study area boundary and NCTA will provide copies of updated maps.
- NCTA will determine the protective status of the Swift Creek watershed (see above).
- NCTA will provide details of parcels acquired by NCDOT under corridor protection; details will include acreage, location, and, if possible, purchase price.

Resolutions:

- None

Next Steps:

- Continue to consider potential adjustments to the draft study area boundary; begin to consider scoping issues.
- Next meeting will be the scoping meeting; it is tentatively scheduled for February 16, 2010. Coordinate with HPO and NCWRC representatives, who were not able to attend this meeting, to provide information about this meeting and the upcoming scoping meeting.



Turnpike Environmental Agency Coordination (TEAC) Meeting

MEETING MINUTES

Date: February 16, 2010
8:30 a.m. To 10:15 a.m.
NCTA Board Room

Project: STIP R-2721, R-2828, and R-2929 – Triangle Expressway Southeast Extension (Raleigh Outer Loop)

Triangle Expressway Southeast Extension Spotlight:

Attendees:

George Hoops, FHWA
Christopher Militscher, USEPA
Eric Alsmeyer, USACE
Gary Jordan, USFWS
Brian Wrenn, NCDWQ
Travis Wilson, NCWRC
Dolores Hall, NCOSA (via telephone)
Amy Simes, NCDENR
Mickey Sugg, USACE
Missy Pair, NCDOT-PDEA
Derrick Weaver, NCDOT-PDEA
Steve Gurganus, NCDOT-PDEA-HEU
Nilesh Surti, NCDOT-TPM

Dewayne Sykes, NCDOT-Roadway Design Unit
Aketa Emptage, NCDOT-OCR
Neal Strickland, NCDOT-Right of Way Branch
Tony Houser, NCDOT-Roadway Design Unit
Jennifer Harris, NCTA
Christy Shumate, HNTB
Kevin Markham, ESI
Roy Bruce, Lochner
Kristin Maseman, Lochner
Karin Ertl, Lochner
Steve Browde, Lochner
Wendee Smith, Mulkey

Presentation Materials (Posted on TEAC website):

- Agenda
- Revised Section 6002 Project Coordination Plan
- Revised Project Study Area Map
- Scoping Handout
- Community Characteristics Summary
- Draft Preliminary Purpose and Need
- Environmental Constraints Map and Legend
- Swift Creek Critical Watershed Area Map
- Area Socioeconomic Characteristics Maps

Purpose:

Obtain agency scoping comments; discuss preliminary statement of purpose and need.

General Discussion:

The following information was discussed at the meeting:

- **Project Name:** NCTA explained that the project name is under development. “Triangle Expressway Southeast Connector” and “Triangle Expressway Extension” have both been used as project names. The Notice of Intent for the project, which was published in November 2009, referenced the project as the “Raleigh Outer Loop.” NCTA will need to make it clear when the project ROD is filed with EPA that the project’s NOI referenced the earlier name. Regardless of the project name, NCTA will study the full range of alternatives during the NEPA study.
- **Revised Project Study Area:** Lochner presented the revised project study area map, showing the expanded study area boundary. The study area was revised following the December TEAC meeting per USEPA comments. The expanded study area incorporates the Swift Creek Water Supply Watershed area, the Town of Garner, and the NC 42/Clayton Bypass area in Clayton. NCTA stressed that the study area reflects the area within which new location alternatives will be considered. For the purposes of the overall NEPA project, upgrade existing facilities alternatives will be considered throughout the Raleigh area.

NCDWQ has concerns about potential impacts to critical watershed areas by any alternatives developed in these areas. USFWS has concerns about potential impacts to endangered mussel species south of the Lake Benson dam. USEPA asked that the expanded study area boundary be retained rather than reduced to eliminate options that may impact the critical watershed areas.

- **Section 6002 Coordination Plan:** NCTA explained that the Section 6002 Coordination Plan has been revised slightly since the December 2009 TEAC meeting. Revisions were minor editorial changes. USEPA has recently provided input on the Plan to NCTA and this input will be incorporated into another revision. USACE asked that NCTA make every effort to provide agencies with TEAC meeting materials two weeks in advance of meetings where decisions will be required.

Several agencies expressed a desire for the NCTA to follow the NCDOT merger process. Agencies indicated that the merger process allows for concurrent activity on the project while also facilitating linear decision-making, and that the merger process makes it clear what decisions are expected for each meeting. Agencies also indicated that the merger process has been fine tuned through the years through the collaborative work of various agencies and also includes a useful dispute resolution process.

NCDOT noted that the merger process is Section 6002 compliant; however, neither NCDOT nor NCTA is required to follow merger. FHWA noted that NCTA should clearly identification of decision points prior to TEAC meetings. Both Section 6002 and the merger process flow through the same decision points and address the same issues. If new issues arise during either process, they must be addressed by the team. FHWA asked for agency ideas on ways to enhance the Section 6002 process. NCTA and FHWA has considered agencies’ positions on using the merger process versus the Section 6002 process and has elected to continue to use the Section 6002 process in lieu of the merger process.

- **Scoping Handout:** Lochner reviewed this summary of the project, highlighting some of the key project issues that have been identified and noting key environmental constraints. Maps showing the locations of known environmental constraints were also displayed.

USEPA asked for clarification on Limited English Proficiency (LEP) issues with regards to the project. Environmental Justice (EJ) and LEP are covered by two separate Executive Orders. NCDOT Office of Civil Rights asked to be actively included in the development of the project approach relative to EJ and LEP issues.

NCDOT noted that voluntary agricultural districts (VADs) have their own public hearing requirements if they may be directly impacted by the project. NCDOT recommends that VAD hearings be held around the time of the corridor public hearing for the project. NCDOT

recommended that NCTA review Governor Hunt's 1981 Executive Order relative to Soil and Water Conservation District coordination for this project.

USEPA requested that only reasonable preliminary alternatives be brought to the agencies for consideration; options should be kept simple, without excessive crossover connectors and numerous alternative segments.

USEPA inquired about the status of the traffic forecasts for this project since this issue has delayed the project in the past. NCTA responded that the "no-build" traffic for 2035 is complete, and that data are already available for an analysis of a "build" alternative along the protected corridor. This information will be posted to Constructware. USEPA expressed concern about the range of percentage increases in predicted traffic volumes along segments of NC 42.

NCDWQ noted the significance of indirect and cumulative effects (ICE) associated with this project and the potential impacts on the numerous streams in the area. USEPA is also concerned about ICE and the ability of the area to support development from water supply and wastewater treatment capacity perspectives. The project team should collect information on the status of area wastewater treatment plants, including their capacity and permit status. The project team should also obtain information on the new Dempsey Benton wastewater treatment plant on NC 50. NCDOT recommended that a screening ICE report be prepared. NCWRC noted that effective addressing of ICE will require a strong cooperative approach with local governments. USFWS noted that Section 7 will be a major project issue.

- **Purpose and Need:** Lochner summarized the key study area characteristics underlying the need for the project and described preliminary concepts for the project purpose. The project purpose includes a primary goal, improving transportation mobility between areas south and east of Raleigh and areas west and north of the city, as well as other desirable outcomes.

With regards to local government support for the project, which will be an important element of the project need, USEPA expressed concern that local communities in the study area are competing for growth and development with the expressed desire to grow and expand their municipal boundaries. USEPA is concerned that there is not a coordinated effort relative to growth management and the ability of the area to provide public services. USEPA expects serious environmental issues in the project area relative to water supply and wastewater treatment capacity because of this growth competition.

USACE and USEPA noted that Research Triangle Park (RTP) and other areas west and north of Raleigh are not the only employment centers/trip destinations in the area; there are other strong trip attractors. USACE noted that this project provides connectivity for the entire 540 Loop.

NCDOT suggested that the discussion of project need include a clear explanation about why the Capital Area Metropolitan Planning Organization (CAMPO) has included this project in its Long Range Transportation Plan (LRTP). NCDOT also recommended that economic development not be included in the project purpose and need as a desirable outcome.

- **General:** Future graphics and maps displayed at TEAC meetings should include the date when they were printed or last revised.

NCTA has placed maps showing the locations of protected corridor parcels purchased by NCDOT on Constructware. NCTA has also posted spreadsheets listing details for each of these approximately 30 parcels.

Q&A:

1. *What is the definition of Limited English Proficiency?*

LEP individuals are unable to speak, read, or write in English. Project materials must be translated into another language if either 5% of the individuals in a community or 1,000 individuals in the community are classified as LEP.

2. *What is the large historic site shown on the constraints map on Old Stage Road just north of the protected corridor?*

It is the Williams Crossroads site; it was placed on the State Study List but is not currently listed on the National Register.

Previous Action Items:

- TEAC members will provide to NCTA comments on the draft Project Coordination Plan and the draft study area.
- Lochner will update the draft project study area boundary and NCTA will provide copies of updated maps. (*Completed*)
- NCTA will determine the protective status of the Swift Creek watershed. (*Completed*)
- NCTA will provide details of parcels acquired by NCDOT under corridor protection; details will include acreage, location, and, if possible, purchase price. (*Completed*)

New Action Items:

- Agencies to review scoping handout and constraints mapping and provide to NCTA information about additional environmental issues and constraints.
- NCTA/FHWA to review process for agency coordination.
- Lochner will add STIP project R-2609 (US 401) to the list of other projects in the study area.
- Lochner will contact NCDOT Office of Civil Rights to coordinate on LEP and EJ considerations and analysis for the project.
- NCTA/Lochner will coordinate with County Soil and Water Conservation Districts.
- NCTA will place completed traffic forecast and analysis reports to Constructware.
- Lochner will collect information on study area wastewater treatment plants.

Resolutions:

- None

Next Steps:

- NCTA will continue to develop project purpose and need. Continue to consider potential adjustments to the draft study area boundary; begin to consider scoping issues.
- Develop Community Characteristics Report.
- Public workshops to be held in summer 2010.



Turnpike Environmental Agency Coordination (TEAC) Meeting

MEETING MINUTES

Date: August 10, 2010
10:00 a.m. to 11:30 a.m.
NCTA Board Room

Project: STIP R-2721, R-2828, and R-2929 – Triangle Expressway Southeast Extension

Triangle Expressway Extension Spotlight:

Attendees:

Rob Ayers, FHWA	Jason Moore, NCDOT-Roadway Design Unit
Christopher Militscher, USEPA	BenJetta Johnson, NCDOT-TMSD
Eric Alsmeyer, USACE	Chris Lukasina, CAMPO
Scott McLendon, USACE	Jennifer Harris, NCTA
Gary Jordan, USFWS	Christy Shumate, HNTB
Brian Wrenn, NCDENR-DWQ	Spencer Franklin, HNTB
Travis Wilson, NCWRC	Gail Tyner, ESI
Amy Simes, NCDENR (via telephone)	Joanna Rocco, URS
Renee Gledhill-Earley, NCDCCR-HPO (via telephone)	Roy Bruce, Lochner
Missy Pair, NCDOT-PDEA	Brian Eason, Lochner
Herman Huang, NCDOT-PDEA, HEU	Kristin Maseman, Lochner
Doug Taylor, NCDOT-Roadway Design Unit	Karin Ertl, Lochner
Sam St. Clair, NCDOT-Roadway Design Unit	Steve Browde, Lochner
Tony Houser, NCDOT-Roadway Design Unit	Wendee Smith, Mulkey

Presentation Materials (Posted on TEAC website):

- Agenda
- Final Meeting Minutes – 2/16/10 TEAC Meeting
- Revised Section 6002 Draft Project Coordination Plan
- Draft Purpose and Need Statement
- Handout 1 – Alternatives Screening Methodology Summary
- Handout 2 – Qualitative First Tier Screening of Alternative Concepts
- Handout 3 – Quantitative Second Tier Screening of Alternative Concepts

Purpose:

Discuss purpose and need statement and alternatives screening process.

General Discussion:

The following information was discussed at the meeting:

- **Project Coordination Plan:** NCTA stated that a revised version of the Draft Project Coordination Plan has been posted to Constructware. The revisions were based on similar edits that were

made to the Project Coordination Plan for the Cape Fear Skyway project. NCTA distributed invitation letters to representatives of State agencies, asking for the agencies to become participating agencies under the Project Coordination Plan. FHWA will distribute a similar letter to representatives of federal agencies. Agencies are requested to submit to NCTA any final comments on the Project Coordination Plan before the next TEAC meeting on September 8, 2010.

- **Purpose and Need:** Lochner summarized the three key elements of the project need: the need for improved mobility in the project, underscored in the Capital Area Metropolitan Planning Organization (CAMPO) Long Range Transportation Plan (LRTP); the limited transportation options for efficient local and through travel in the region due to increasing congestion on existing freeways and a lack of alternative routes and travel modes; and existing and projected poor levels of service (LOS) on major roadways in the project area. Lochner summarized the project purpose as improving transportation mobility to enhance connectivity in the area and to provide additional high-speed, efficient regional transportation infrastructure for local and regional traffic. Other desirable outcomes include system linkage and support for federal sustainability and livability goals.

NCDENR-DWQ asked how a reduction in congested vehicle miles traveled (one of the measures of effectiveness listed in the Draft Purpose and Need Report for meeting project purpose) would differ from improvement in LOS. HNTB explained that measuring changes in congested vehicle miles traveled provides information on congestion levels throughout the local transportation network. LOS only provides information on congestion levels for a specific link in that network.

NCDENR-DWQ asked whether the study area for traffic analysis is different from the study area for alternatives development. NCTA explained that the limits of the study area for traffic analysis are broader than those for alternatives development because the former must consider more of the regional transportation network outside the immediate project area. NCDENR-DWQ stated that this discrepancy between the two study areas is confusing in the Draft Purpose and Need Report and suggested that this issue be clarified in the report.

FHWA suggested that more information be provided about potential thresholds for meeting the project purpose under each of the measures of effectiveness listed in the Draft Purpose and Need Report. NCTA explained that it could be difficult to set thresholds that do not arbitrarily eliminate otherwise reasonable alternatives. CAMPO indicated that their LRTP includes measures of effectiveness but does not identify minimum requirements for meeting them.

USEPA asked why information about US 401 is not included in the traffic figures in the Draft Purpose and Need Statement. HNTB explained that traffic data for existing conditions and no-build scenarios are available for US 401. HNTB will include this information in the figures.

NCDENR-DWQ questioned the appropriateness of including the NC Strategic Highway Corridor vision as part of the need for the project. NCTA explained that this was included as supporting information to explain that current and projected LOS do not support that vision. NCTA will more closely examine this issue and consider revising the report text to clarify.

FHWA asked how public involvement will be incorporated into purpose and need development. Lochner explained that public workshops to present this information, along with information about alternatives development will be held in late September. Project purpose and need will be finalized after considering all public and agency comments received. NCTA explained that agency comments received will also be considered in finalizing the project purpose and need. The Draft Purpose and Need Statement will be posted to the project website.

- **Alternatives Screening:** NCTA summarized the methodology used for screening alternative concepts and preliminary alternative corridors and then provided an overview of the results of screening alternative concepts (Qualitative First Tier Screening). NCTA stressed that improve

existing and hybrid new location/improve existing concepts may prove to be worthy of more consideration for this project than for past NCTA projects.

NCTA explained that for the first screening, alternative concepts were qualitatively compared to the no-build alternative. USEPA asked whether combinations of concepts could be considered as such combinations may be better able to meet elements of project purpose and need than each concept alone. USEPA also stated that “maybe” could be a more accurate answer than “yes” or “no” in qualitatively assessing whether each alternative concept meets each element of purpose and need.

NCDOT-PDEA asked if CAMPO has done any modeling to see how much transit ridership is needed to achieve quantitative improvements in, for example, area commute times. CAMPO indicated that in its traffic model the Southeast Extension is assumed to be a multimodal facility, with mass transit using the roadway along with cars and trucks. CAMPO expects that the Southeast Extension will be developed so that it is consistent with the LRTP.

FHWA asked why the measures of effectiveness for meeting the project purpose were not used to screen alternative concepts. NCTA responded that it would be difficult to quantify the ability of each alternative concept to meet the measures of effectiveness for the project purpose. Lochner added that the first tier screening of alternative concepts is meant to determine whether each concept would be able to fulfill the main points of the project and purpose and need; those that meet those points will then be subject to the quantifiable measures of effectiveness. Several agencies suggested that NCTA consider qualitatively screening the alternative concepts according to the measures of effectiveness. NCDENR-DWQ and NCWRC also suggested the NCTA consider eliminating the following two elements of the first tier screening: consistency with the NC Strategic Highway Corridor program and ability to improve system linkage. Several agencies also suggested that NCTA more clearly explain the first tier screening process.

FHWA asked whether CAMPO has any documentation of how mode choices for specific areas are made for the LRTP. CAMPO stated that regardless of mode, there is no east-west corridor in southern and eastern Wake County that can handle projected traffic volumes. CAMPO views the 540 Outer Loop as the backbone of the transportation network in this area.

Lochner presented preliminary alternative corridors currently under consideration. These include several new location alternatives, as well as improving existing facilities alternatives and hybrid new location/improve existing facilities alternatives. Lochner described preliminary impact estimates for these alternatives. NCTA recommended several alternatives for elimination based on magnitude of impacts on relocations and jurisdictional resources. USFWS asked that NCTA not eliminate Alternative O from further consideration at this point because, while it would require a large number of relocations and would directly impact the Swift Creek Watershed Critical Area, it is the only new location alternative that would avoid dwarf wedgemussel habitat. The agencies agreed to eliminate Alternatives B, D, F, H, K, and M from further consideration. These alternatives each use Segment 38, rather than Segment 9, at the eastern project terminus. In all cases, alternatives using Segment 38 would have greater impacts to jurisdictional resources and would require more relocations than similar alternatives using Segment 9. The agencies also agreed to eliminate Improve Existing Alternative #2 and Hybrid Alternative #2 (each includes upgrading and widening NC 55 and NC 42) due to the large number of relocations each would require. NCTA and Lochner will complete the third tier qualitative screening on the remaining alternatives.

Previous Action Items:

- Agencies to review scoping handout and constraints mapping and provide to NCTA information about additional environmental issues and constraints.
[Scoping responses were received from USEPA, USFWS, NCDCR-HPO, NCDENR-DWQ, NCWRC, NCDENR-NHP, NCDENR-DEH, NC Floodplain Mapping Program, and NCDACS (NC Department of Agriculture and Consumer Services), as well as CAMPO, Cary, and Holly Springs.]

- NCTA/FHWA to review process for agency coordination.
[After additional discussion, the NCTA and FHWA have determined that the Section 6002 Project Coordination Plan process will be followed for this project.]
- Lochner will add STIP project R-2609 (US 401) to the list of other projects in the study area.
[Completed]
- Lochner will contact NCDOT Office of Civil Rights to coordinate on LEP and EJ considerations and analysis for the project.
[Completed]
- NCTA/Lochner will coordinate with County Soil and Water Conservation Districts.
[Completed]
- NCTA will place completed traffic forecast and analysis reports to Constructware.
[Posted under 2010-02-16 folder.]
- Lochner will collect information on study area wastewater treatment plants.
[This information has been added to study area environmental constraints mapping.]

New Action Items:

- FHWA to distribute letters inviting federal agencies to become cooperating/participating agencies under the Project Coordination Plan.
[Distributed on August 17, 2010.]
- Agencies to provide final comments to NCTA on Project Coordination Plan by September 8, 2010.
- NCTA/Lochner to clarify distinction between traffic study area and project study area for alternatives development in Purpose and Need Report.
- HNTB to review existing and projected traffic for US 401 and add this information to traffic figures in the Purpose and Need Report.
- Agencies to provide comments on Draft Purpose and Need Statement by September 8, 2010.
- NCTA/Lochner to consider revising first tier qualitative screening of alternative concepts to clarify the link between this screening and the measures of effectiveness for project purpose.
- NCTA/Lochner to complete third tier qualitative screening of alternatives and present results at September TEAC meeting.
- Agencies to provide comments on alternatives screening methodology and draft alternative concepts by September 8, 2010.

Resolutions:

- None

Next Steps:

- TEAC meeting – September 8, 2010.
- Public workshops scheduled for September 21, 22, and 23, 2010.
- Revise Purpose and Need Statement following review of agency and public comments.
- Complete third tier quantitative screening for preliminary alternative corridors.



Turnpike Environmental Agency Coordination (TEAC) Meeting

MEETING MINUTES

Date: September 8, 2010
8:30 a.m. To 9:00 a.m.
NCTA Board Room

Project: STIP R-2721, R-2828, and R-2929 – Triangle Expressway Extension (Raleigh Outer Loop)

Triangle Expressway Extension Spotlight:

Attendees:

George Hoops, FHWA	John Burris, HNTB
Eric Alsmeyer, USACE	Joanna Rocco, URS
Gary Jordan, USFWS	David Griffin, URS
Travis Wilson, NCWRC	Roy Bruce, Lochner
Deloris Hall, NCDCCR (via telephone)	Brian Eason, Lochner
Doug Taylor, NCDOT-Roadway Design Unit	Kristin Maseman, Lochner
Jennifer Harris, NCTA	Wendee Smith, Mulkey
Christy Shumate, HNTB	

Presentation Materials (Posted on TEAC website):

- Agenda
- Draft Meeting Minutes – 8/10/10 TEAC Meeting
- Handout 4 – Alternatives Screening, Quantitative Third Tier Screening of Alternative Concepts
- Newsletter #2

Purpose:

Continue discussion on purpose and need statement and alternatives screening.

General Discussion:

The following information was discussed at the meeting:

- **Purpose and Need and Alternatives Screening Methodology:** NCTA has received comments on the draft Purpose and Need Report from NCDENR-DWQ. Comments on both purpose and need and the alternatives screening methodology will be accepted until after the September public workshops. A revised Purpose and Need Report and a draft Alternatives Report will then be completed and made available to agencies, local governments and the public for comments. Other agencies indicated they do not plan to submit written comments and will defer to NCDENR-DWQ's comments.
- **Alternatives Screening:** Lochner summarized the results of the quantitative third tier screening of alternatives carried forward from the second tier screening, which included nine new location alternatives, two improve existing facilities alternatives, and two hybrid new location/improve

existing facilities alternatives. This round of screening included more evaluation criteria and a more detailed examination of impacts than the second round of screening.

USFWS and NCWRC stated that National Heritage Program (NHP) occurrences should not be used in the impacts summary table in Handout 4 because the NHP GIS database is too general to provide useful comparative information. Instead, they suggested that federal and state listed species occurrences would provide more useful comparative information.

The agencies agreed to eliminate Improve Existing Alternative #3 and Hybrid Alternative #3 (each includes upgrading and widening Ten-Ten Road) because each of these would require much larger numbers of relocations than all other alternatives without providing clear advantages. In addition, because Improve Existing Alternative #1 and Hybrid Alternative #1 remain under consideration, viable alternatives are not limited to new location options at this point.

NCTA will discuss with NCDOT Roadway Design staff the nine new location alternatives, Improve Existing Alternative #1, and Hybrid Alternative #1 to identify geometric constraints and other design considerations influencing the further development of these alternatives. After presenting these alternatives to the public at the September workshops, NCTA expects to select Detailed Study Alternatives (DSAs) by November of this year.

- **Section 6002 Cooperating Agency Invitation:** USACE has received the FHWA letter inviting it to be a cooperating agency under the Project Coordination Plan and will sign and return it to FHWA soon.

Previous Action Items:

- FHWA to distribute letters inviting federal agencies to become cooperating/participating agencies under the Project Coordination Plan.
[Letters were distributed on August 17, 2010.]
- Agencies to provide final comments to NCTA on Project Coordination Plan.
[No additional comments were received.]
- NCTA/Lochner to clarify distinction between traffic study area and project study area for alternatives development in Purpose and Need Report.
[Clarification will be included in revised Purpose and Need Report, available by mid-October, after the public workshops.]
- HNTB to review existing and projected traffic for US 401 and consider adding this information to traffic figures in the Purpose and Need Report.
[This information was not included on the initial traffic figures because only segments that experienced more than 10 percent change in traffic between the No-Build and Build scenarios were modeled; however, this traffic information for US 401 will be added for information.]
- Agencies to provide comments on Draft Purpose and Need Report.
[Written comments were received from NCDENR-DWQ. Other agencies indicated that they will not provide additional written comments.]
- NCTA/Lochner to consider revising first tier qualitative screening of alternative concepts to clarify the link between this screening and the measures of effectiveness for project purpose.
[Clarification will be included in draft Alternatives Report, available by mid-October, after the public workshops.]
- NCTA/Lochner to complete third tier qualitative screening of alternatives and present results at September TEAC meeting.
[Handout 4 presented at the September TEAC meeting includes the results of the third tier qualitative screening.]
- Agencies to provide comments on alternatives screening methodology and draft alternative concepts.
[A draft Alternatives Report will be prepared following public workshops in late September and made available for agency and public review and comment.]

New Action Items:

- Lochner to revise alternatives impact table to replace Natural Heritage Program Occurrences as an evaluation criterion with separate breakouts of federal and state protected species.

Resolutions:

- None

Next Steps:

- Public workshops on September 21, 22, and 23, 2010.
- Revise Purpose and Need Report according to agency and public comments.
- Prepare draft Alternatives Report and circulate for agency and public review and comment.



Turnpike Environmental Agency Coordination (TEAC) Meeting

MEETING MINUTES

Date: November 2, 2010
9:30 a.m. To 11:30 a.m.
NCTA Board Room

Project: STIP R-2721, R-2828, and R-2929 – Triangle Expressway Southeast Extension
(Raleigh Outer Loop)

Triangle Expressway Extension Spotlight:

Attendees:

George Hoops, FHWA	Chris Lukasina, CAMPO
Christopher Militscher, USEPA	Gerald Daniel, CAMPO
Eric Alsmeyer, USACE	Steve DeWitt, NCTA
Gary Jordan, USFWS	Jennifer Harris, NCTA
David Wainwright, NCDENR-DWQ	Christy Shumate, HNTB
Travis Wilson, NCWRC	John Burriss, HNTB
Amy Simes, NCDENR	Kevin Markham, ESI
Delores Hall, OSA (via telephone)	Joanna Rocco, URS
Regina Page, NCDOT Congestion Management (via telephone)	Roy Bruce, Lochner
Deanna Riffey, NCDOT-Natural Environment Unit	Kristin Maseman, Lochner
Steve Gurganus, NCDOT-Human Environment Unit	Doug Wheatley, Lochner
Derrick Weaver, NCDOT-PDEA	Steve Browde, Lochner
Doug Taylor, NCDOT-Roadway Design Unit	Wendee Smith, Mulkey
Tony Houser, NCDOT-Roadway Design Unit	Tim Savidge, Catena Group
	Mike Wood, Catena Group

Presentation Materials (Posted on TEAC website):

- Agenda
- Draft Meeting Minutes – 9/8/10 TEAC Meeting
- Handout 5 – Public Informational Meetings (Sept. 2010), Summary and Comment Analysis
- Handout 6 – Preliminary Alternative Corridors, Major Constraints/Issues
- Impact Table – Southeastern Extension Preliminary Alternative Corridors by Phase, Summary of Potential Impacts

Purpose:

Discuss revisions to purpose and need statement, summary of public comments and alternatives screening discussion.

General Discussion:

The following information was discussed at the meeting:

- **Purpose and Need Update:** NCTA stated that the revised version of Purpose and Need is on Constructware. The revisions address comments from earlier TEAC meetings and written comments from NCDENR-DWQ. Also, written responses to NCDENR-DWQ comments are posted to Constructware.
- **Alternatives Screening:** The Alternatives Development and Analysis Report is being prepared and should be distributed prior to next month's TEAC meeting.
- **Summary of Public Comments (Handout 5):** Lochner presented the summary of public responses to date, indicating that over 1,000 people attended the September Public Informational Meetings. To date over 2,000 comments have been received. Several neighborhood petitions have also been received with nearly 1,000 signatures. Most comments express support for the project located in the protected corridor and dismay over other new location alternatives. Some comments related to the perceived "fairness issue" of tolling only a portion of this loop facility.

Lochner stated that the public comments are helpful in evaluating alternative corridors as they typically include details relative to human and natural environment impacts.

Several local governments have passed resolutions regarding the project. Most indicate support for the project located in the project corridor. The Wake County Board of Commissioners resolution states opposition to the blue, purple, red, and pink corridors. The City of Garner resolution states opposition to the red corridor.

NCTA explained that public involvement activities have included significant effort to educate the public on the project development process. That included explaining to citizens the role of the protected corridor in the study process.

- **Alternatives Screening Discussion (Handout 6):** Lochner summarized the major constraints and relative advantage of each corridor in the Phase I and Phase II areas, mentioning a few new constraints that have emerged since the Public Informational Meetings. There is a proposed mixed-use development (Randleigh Farm property) planned jointly by Wake County and City of Raleigh and purchased using open space funds. The green corridor in Phase II would bisect this property. Adjacent to Randleigh Farm is a potential historic site known to include remnants of a nineteenth century mill and with anecdotal evidence of Civil War significance. OSA suggested meeting with NCTA staff to review the known facts related to the historic significance of this property. To avoid or minimize impacts to the Randleigh Farm and the adjacent potential historic sites, two other corridor alternatives in the Phase II area were reintroduced. The tan corridor would impact Randleigh Farm along its eastern edge, reducing the amount of direct impacts to the site relative to the green corridor. The grey corridor would completely avoid the Randleigh Farm area, including an eastern swing into Johnston County.

USACE asked whether there have been traffic projections for the various alternative corridors. HNTB stated that preliminary traffic projections are similar for the protected corridor (orange) and the blue and purple corridors to the south. The red corridor to the north is projected to serve smaller traffic volumes than the others. USEPA requested that traffic data be made available to TEAC members and NCTA agreed.

NCTA asked for agency feedback on eliminating some of the preliminary alternative corridors from further consideration. In considering the red corridor, discussion turned to dwarf wedgemussel habitat in the Swift Creek watershed. USFWS indicated that the red corridor may be the only alternative with a chance for a "no adverse effect" determination for the species. The Catena Group has found fairly young dwarf wedgemussel individuals in Swift Creek in the vicinity of the Wake-Johnston County line, near the protected corridor. They have not yet surveyed the area between Lake Wheeler and Lake Benson, and there have been limited past surveys in this area. State listed



Turnpike Environmental Agency Coordination (TEAC) Meeting

MEETING MINUTES

Date: January 20, 2011
1:00 p.m. To 4:00 p.m.
NCTA Board Room

Project: STIP R-2721, R-2828, and R-2929 – Triangle Expressway Southeast Extension
(Raleigh Outer Loop)

Triangle Expressway Extension Spotlight:

Attendees:

George Hoops, FHWA (via telephone)	Jennifer Harris, NCTA
Christopher Militscher, USEPA	Kiersten Giugno, HNTB
Eric Alsmeyer, USACE	Spencer Franklin, HNTB
Gary Jordan, USFWS	John Burris, HNTB
Brian Wrenn, NCDWQ	Kevin Markham, ESI
Travis Wilson, NCWRC	Roy Bruce, Lochner
Delores Hall, OSA (via telephone)	Kristin Maseman, Lochner
Doug Taylor, NCDOT-Roadway Design Unit	Doug Wheatley, Lochner
Michael Bright, NCDOT-Utilities	Steve Browde, Lochner
Herman Huang, NCDOT-PDEA HEU	Jay Bissett, Mulkey
Ronnie Williams, Mayor-Town of Garner	Wendee Smith, Mulkey
Hardin Watkins, Town of Garner	Tim Savidge, Catena Group
Chris Lukasina, CAMPO	Russ Owen, Garner resident
David Joyner, NCTA	Jeff Swain, Garner resident
Steve DeWitt, NCTA	

Presentation Materials (Posted on TEAC website):

- Agenda
- Handout 7 – Public Involvement – November 2010 through January 2011
- Handout 8 – Red and Pink Corridor Elimination
- Red and Pink Corridor Elimination slideshow

Purpose:

Continue discussion of alternatives

General Discussion:

The following information was discussed at the meeting:

- **Summary of Public Involvement (Handout 7):** Lochner presented the summary of public involvement activities between November 2010 and the present. Public involvement has centered around two main issues. The first was presenting and receiving comments on the Tan

corridor, an alternative added in the Phase II area to minimize impacts to the Randleigh Farm property and to avoid three large communications towers. NCTA held a Public Informational Meeting in December to solicit input on the Tan and Green corridors. NCTA has received nearly 300 public comments opposing the Tan corridor, mostly due to neighborhood impacts. Local residents have also submitted a petition opposing the Tan corridor, signed by over 700 people. On December 8, 2010, the Wake County Board of Commissioners sent a letter to NCTA asking that NCTA remove the Tan corridor from consideration. On January 5, 2011, the Raleigh City Council voted to send a letter asking NCTA to remove the Tan corridor from further consideration and to seek other alternative routes.

The second main issue in recent public involvement has been strong opposition to the Red and Pink corridors. In November, over 1,000 local residents attended a public meeting organized by Town of Garner to discuss the Red corridor. Attendees overwhelmingly expressed strong opposition to the Red corridor. In December, several hundred local residents attended a public meeting organized by the Springfield Baptist Church to address potential impacts of the Red and Pink corridors to church-owned property. Garner residents have submitted a petition signed by 356 people opposing the Red corridor. Springfield Baptist Church has submitted a petition signed by 1,086 people, and letters from 970 individuals, opposing the Red and Pink corridors. To date, NCTA has also received several hundred e-mail comments, letters, and telephone hotline comments opposing the Red corridor and several hundred comments opposing the Pink corridor. Garner's State Legislative delegation also submitted a letter asking for the Red and Pink corridors to be eliminated.

Lochner stated that the Town of Garner asked NCTA to look at another potential corridor that would follow I-40 north from the Orange protected corridor, but would turn eastward south of White Oak Road to avoid the Greenfield South Business Park and Springfield Baptist Church area. This was shown on maps as the Forest Green corridor. This corridor has not yet been presented to the general public.

- **Draft Alternatives Report:** Lochner explained that the Draft Alternatives Report is still being reviewed but is anticipated to be distributed to the agencies within a month.
- **Corridor Elimination Discussion (Handout 8):** Lochner presented a slideshow summarizing the development and evaluation of project alternatives to date. Following the November TEAC meeting, the Blue, Purple and Yellow corridors were eliminated from further study, the Pink corridor was modified to connect to the Orange protected corridor, and the Tan and I-40 corridors were added. Since then, the Forest Green corridor was developed, as described in the previous discussion. USACE asked what advantage the Forest Green corridor would provide over the Green corridor and NCTA explained that it would create an alignment following a portion of I-40 but avoiding the Greenfield South Business Park area farther north. It would also shift a portion of the I-40 interchange area out of the immediate vicinity of Swift Creek. USFWS stated that the Forest Green would not offer an avoidance or minimization option for Dwarf wedgemussel impacts.

Catena provided a brief summary of recent Dwarf wedgemussel surveys. Biologists found three mussel species in Swift Creek between Lake Benson and Lake Wheeler, but none were rare species. Downstream of Lake Benson, biologists have found five Dwarf wedgemussel individuals. USFWS stressed that this number is representative and does not mean there are only five Dwarf wedgemussel individuals in this part of Swift Creek. In 2007 surveys in this area, biologists found seven individuals; in 2001 and 2002, they found one or two individuals. This suggests that the species is still reproducing in this part of Swift Creek, but does not provide enough information to make conclusions about long-term viability of the species.

Only one mussel was found in Mahler's Creek, a tributary of Swift Creek downstream of Lake Benson, but it was not a rare species. Current conditions in Mahler's Creek make it poor quality habitat for the Dwarf wedgemussel.

General natural resource habitat quality in Swift Creek between Lake Benson and Lake Wheeler is quite good; the area is largely forested.

Lochner then showed the Town of Garner's "Visual Letter to the North Carolina Turnpike Authority", a roughly 15-minute video explaining local officials' and residents' concerns about the Red corridor. After the video, Lochner summarized the key disadvantages of the Red corridor and Pink corridor and explained the reasons why NCTA recommends eliminating these two corridors as they are not reasonable corridor for detailed study in the EIS.

USFWS stated that it has no legal authority to tell NCTA not to eliminate the Red or Pink corridors. However, USFWS could not go on record agreeing with the Orange protected corridor as the Least Environmentally Damaging Practicable Alternatives (LEDPA) based on the information currently available. The recovery plan for the Dwarf wedgemussel, adopted in the early 1990s, requires a viable population of the species in Swift Creek. USFWS has to make judgments based on this goal. Unless we uncover information demonstrating that Swift Creek does not contain viable habitat that will promote the long-term survival of the species, the agency's decisions must err on the side of protecting the species and its habitat. This lack of information could push the USFWS towards a Jeopardy Opinion. It is imperative that the right questions be identified and answers found.

USFWS has applied for federal funding to do detailed studies of Dwarf wedgemussel viability in Swift Creek. These studies would include: 1) provide an accounting (compliance/success) of existing conservation measures in the Swift Creek watershed; 2) evaluate the effectiveness of existing conservation measures; 3) determine habitat and mussel population viability in Swift Creek. If the application for funding is denied, then the USFWS may ask the NCTA to fund the studies. NCTA is interested in further discussions with USFWS about these studies

If the Dwarf wedgemussel population is found not to be viable, but habitat is found to be viable, USFWS would consider captive propagation as a mitigation technique. The technology for this has already been developed at Virginia Tech.

USACE asked whether any monitoring has been done on the effectiveness of Dwarf wedgemussel impact mitigation for the Clayton Bypass project. USFWS replied that it was not aware of any recent monitoring efforts, although Johnston County did do some monitoring in the past.

USACE asked whether USFWS would need to wait until Section 7 consultation is complete to be able to support the protected corridor as the project LEDPA. USFWS replied that since the project is not going through the merger process, it does not have to provide concurrence on LEDPA. USFWS also stated that the Section 7 process can't be completed until after a LEDPA is selected. NCTA remarked that on the Monroe Bypass project, it selected a tentative LEDPA to be finalized pending the conclusion of Section 7 consultation.

USEPA remarked that much of the analysis presented today would be the kind of information that would typically be included in the Draft EIS and that typically, agencies wouldn't be asked to consider elimination of all but one alternative until the Draft EIS is published. USEPA also pointed out that it could be problematic from a 404 Permit standpoint to eliminate the Red corridor prior to preparing the Draft EIS since it would have lower wetlands impacts than the protected corridor. USEPA stressed that it would have concerns about NEPA compliance if the Red corridor is eliminated at this point.

NCTA explained that, due to its impacts and lack of public support, construction of the project in the Red corridor would have extreme difficulty being funded and likely never be built. NCTA also stressed that the community and economic impacts of waiting until 2012 to eliminate the Red corridor are highly significant.

USACE stated that it is concerned about eliminating the Red corridor at this point because it has the smallest amount of wetland and stream impacts. It could be difficult to issue a 404 Permit for the project knowing that this alternative was eliminated before it could be studied in detail for inclusion in the Draft EIS.

USEPA emphasized the need for stormwater controls at each crossing of Swift Creek (Red and Orange) to avoid potential contamination by a hazardous spill. This is an issue for water quality related the critical watershed area along the Red corridor and related to endangered species along the Orange corridor.

NCTA asked whether USACE would oppose elimination of the Pink corridor, too. USACE explained that it might not oppose eliminating it if the Red corridor remained under consideration.

USFWS stressed that federal agencies must fully comply with all applicable laws, statutes, policies, procedures, etc., and are under constant risk of being sued for not doing so.

There was some discussion about whether there may be other alternatives in the project study area that would meet the needs of NEPA while avoiding such major community impacts. The project team has not been able to identify any other alternatives that would avoid these impacts and despite extensive community involvement, there have been no suggestions from the public for new alternatives. Agency representatives were asked if they knew of any other potential alternatives NCTA should consider, but no such alternatives were suggested. It is possible that the Improve Existing Alternative, which would widen I-40, I-440 and US 64/US 264 Bypass up to twelve lanes, could be reintroduced into consideration. It was eliminated at the November TEAC meeting because of concerns about its feasibility and its ability to meet the project's traffic needs.

USFWS mentioned that it is more concerned with the indirect and cumulative effects of the project on loss of habitat than on direct impacts on the Dwarf wedgemussel.

NCDWQ stated that in the past, agencies have accepted letters of commitment as proof that agreed-upon mitigation strategies will be implemented. NCDWQ now requires stronger proof through enactment of local ordinances.

NCDWQ also questioned whether there was any relative advantage to the new Forest Green corridor. Lochner explained that this option would shift a portion of the I-40 interchange out of the Swift Creek area. USFWS did not feel that this shift would offer much advantage from a habitat impact standpoint. Each agency representative agreed that the Forest Green corridor and the I-40 corridor, which would connect the protected corridor to the Red corridor, should be eliminated from further consideration.

USACE requested a detailed explanation of the how the traffic analysis information shown in Handout 8 (comparing traffic volumes on project segments along the Red or Pink corridors and the protected corridor) was derived. There was also interest in more information about impacts of various alternatives on the existing roadway network. NCTA will provide this information.

As long as another option for minimizing Dwarf wedgemussel impacts is studied in detail, the agencies could support elimination of the Pink corridor since it would require out of direction travel, limiting it ability to meet the project's traffic needs.

Phase II (Eastern) Corridors: NCTA explained that in the time since the September public informational meetings, it has learned of additional constraints in the Phase II (eastern) project area. The project team has been exploring new and modified alternative alignments in this area. Lochner reviewed these, describing the Tan corridor, Brown corridor and Teal corridor. The Brown corridor would begin near the southern end of the Tan corridor, avoid Good Samaritan Baptist Church (impacted by the Tan corridor), and follow the general alignment of Brownfield Road, extending through sprayfields for a City of Raleigh water treatment plant and avoiding the Preserve and Long Branch Farm neighborhood. The Teal corridor would connect the Green corridor to the northern end of the Brown corridor.

USACE asked why the Tan corridor is still under consideration since the City of Raleigh has asked that NCTA eliminate it. NCTA responded that Raleigh has asked NCTA to look at other options besides the Tan corridor, but hasn't stated that the Green corridor should be selected.

There was some discussion about the three communications towers adjacent to the Green corridor. One of the guying wires for one of these three towers is within the corridor. NCTA has learned that the guying wire cannot be shifted without having to dismantle and relocate the tower. It could cost \$15 million to \$20 million to move the tower and take at least five years to complete permitting and construction prior to dismantling the current tower.

There was agency interest in further evaluation of the Brown corridor and elimination of the Tan corridor. NCTA mentioned that if new corridors in the Phase II area, such as the Brown corridor, are retained for further study, there will need to be public outreach to notify the community.

At the conclusion of the meeting Garner Mayor Ronnie Williams spoke about the enormous stress the Garner community is under while it waits for the Red corridor to be eliminated.

Previous Action Items:

- NCTA/Lochner will follow up with Dolores Hall regarding Randleigh Farm property and adjacent potential historic site. *(Completed. NCDOT archaeologists have consulted with Dolores Hall; NCDOT then provided information to NCTA/Lochner)*
- Catena Group to survey Swift Creek above Lake Benson Dam and Mahler's Creek and review existing survey data for White Oak Creek and Little Creek. They will coordinate scope, etc. directly with Kevin Markham. *(Completed)*
- Lochner will eliminate the following corridors: blue, purple, yellow, grey, and options west of NC 55 Bypass (white). *(Completed)*
- NCTA will prepare a press release to publicize corridor eliminations; Lochner will develop an accompanying email distribution list. *(Completed)*
- Lochner will explore the following corridor modifications/additions: orange-to-pink; orange-to-widen I-40 (to 10 lanes)-to red. Lochner will prepare basic impacts information and summarize major constraints. *(Completed)*
- NCTA will make traffic analysis for improve existing and hybrid options available to TEAC members. *(Completed)*
- NCTA/Lochner will complete Draft Alternatives Development and Analysis Report ASAP *(in progress)*.

New Action Items:

- NCTA/Lochner will consider eliminating the Red and Tan corridors
- NCTA/Lochner will eliminate the Forest Green and Pink corridors
- NCTA will meet with USFWS and NCWRC to discuss Dwarf wedgemussel study needs and approach to Section 7 consultation.
- HNTB will prepare more detailed explanation of traffic impacts of Red corridor, including effects on existing roadway network.

- NCTA/Lochner will continue to develop corridor options for Phase II of the project for future discussion at a TEAC meeting
- NCTA/Lochner will distribute Draft Alternatives Development and Analysis Report ASAP.

Resolutions:

- None.

Next Steps:

- Complete Draft Alternatives Development and Analysis Report and circulate for agency review and comment.



Interagency Project Meeting

MEETING MINUTES FINAL

Date: August 22, 2012
8:30 a.m. to 10:30 a.m.
NCDOT Century Center – Structure Design Conference Room C

Project: STIP R-2721, R-2828, and R-2929 – Triangle Expressway Southeast Extension
(Raleigh Outer Loop)

Attendees:

George Hoops, FHWA	Phil Harris, NCDOT – NES
Clarence Coleman, FHWA	Colin Mellor, NCDOT – NES
Christopher Militscher, USEPA (via telephone)	Elizabeth Lusk, NCDOT – NES-PMG
Scott McLendon, USACE	Deanna Riffey, NCDOT – NES-PMG
Monty Matthews, USACE (via telephone)	BenJetta Johnson, NCDOT – TMSD
Eric Alsmeyer, USACE	Mark Staley, NCDOT – Roadside Env. Unit
Gary Jordan, USFWS	Art McMillan, NCDOT – Hydraulics
Rob Ridings, NCDWQ	Matt Lauffer, NCDOT – Hydraulics
Travis Wilson, NCWRC	John Rouse, NCDOT – Division 4
Delores Hall, OSA (via telephone)	Wally Bowman, NCDOT – Division 5
Amy Simes, DENR	Kiersten Bass, HNTB
Ronnie Williams, Mayor-Town of Garner	Fred Skaer, Dawson & Associates
Hardin Watkins, Town Manager, Town of Garner	John Studt, Dawson & Associates
Ed Johnson, CAMPO	Roy Bruce, Lochner
Chris Lukasina, CAMPO	Kristin Maseman, Lochner
Scott Slusser, NCDOJ	Jeff Schlotter, Lochner
Greg Thorpe, NCDOT – PDEA	Steve Browde, Lochner
Eric Midkiff, NCDOT – PDEA	Jay Bissett, Mulkey
Jennifer Harris, NCDOT – PDEA	Wendee Smith, Mulkey
Harrison Marshall, NCDOT – PDEA-PICS	Michael Wood, Catena Group
Tony Houser, NCDOT – Roadway Design Unit	Tim Savidge, Catena Group
Kevin Fischer, NCDOT – Structures Mgmt.	Nancy Scott, Catena Group

Presentation Materials:

- Agenda
- Handout 9 (revised) – FHWA Project Advancement Plan
- Handout 10 (revised) – Potential Purpose and Need Refinement
- Handout 11 – Potential Additional New Location Corridors
- Project Advancement Presentation

Purpose:

Present project status update; discuss project advancement; discuss purpose and need refinement.

General Discussion:

The following information was discussed at the meeting:

- **Project Status Update:** Lochner provided an update on project activities that have occurred since the last TEAC meeting in January 2011. NC Session Law 2011-7, which was passed in March 2011, has limited advancement of the project, although NCDOT has continued to coordinate with agencies to find a path forward. NCTA/NCDOT published the Draft Alternatives Development and Analysis Report (DADAR) in January 2012 and sent copies to the agencies. Several agencies submitted written responses to the report. To date, Detailed Study Alternatives (DSAs) for inclusion in the Draft Environmental Impact Statement (EIS) have not been finalized. FHWA has indicated that NCTA/NCDOT should identify a clear plan for moving the project forward—in response, NCTA/NCDOT prepared a Project Advancement Plan in July 2012 through collaborative efforts with local and regional partners. Dawson & Associates, a Washington DC based environmental policy firm, was engaged to guide and assist in developing the Advancement Plan.
- **FHWA Project Advancement Plan:** Dawson & Associates provided an overview of the Project Advancement Plan, explaining that agency acceptance, community support, and legal defensibility are key goals of the Plan. The major elements of the Plan are: 1) refinement of the project Purpose and Need Statement, 2) evaluation of additional alternatives, 3) revised screening of project alternatives, and 4) additional public involvement. Purpose and Need refinement is supported by SAFETEA-LU Section 6002, FHWA guidance, and MAP-21 considerations. Two elements—support for local planning objectives and financial viability—are being evaluated as NCDOT considers refining the Purpose and Need Statement.
- **Potential Purpose and Need Refinement:** Dawson & Associates explained that 404(b)(1) guidelines, which are one of the key elements of USACE's review of environmental documents, require evaluation of alternatives' "practicability" in light of the overall project purpose. Including local planning as part of the NEPA project purpose could be appropriate, but it is unlikely to be appropriate with respect to the 404 guidelines. It is suggested that the revised Purpose and Need Statement include both a statement of overall project purpose that would apply to 404 guidelines, along with a more detailed statement of project purpose under NEPA. The latter could be refined to include local planning considerations.
- **Potential Additional Alternatives:** Dawson & Associates explained that the alternatives screening process will be updated to include evaluation with respect to a refined Purpose and Need Statement. It will also include evaluation of new Alternative Corridors, possibly including Lilac, Plum, and a modified version of Red. The Lilac and Plum Alternative Corridors were identified as possible ways to minimize wetland impacts and impacts to Dwarf wedgemussel habitat in Swift Creek relative to the Orange Corridor Alternative, while also avoiding the community impacts associated with other alternatives. The modified version of the Red Corridor Alternative was identified to evaluate whether Section 4(f) impacts in the vicinity of the Red Corridor can be avoided.
- **Comments/Questions:** USACE stated that it is sensitive to local planning efforts with respect to this project, but that it must consider this factor at the appropriate step in the process. USACE also reminded the group that alternatives screened out of further consideration based on the NEPA project purpose could still be "practicable" under the 404 guidelines. USACE has not yet seen evidence allowing the agency to determine that the Red Corridor Alternative is not practicable from a 404 perspective and therefore allowing USACE to support dropping the alternative. However, USACE also stated that they believed that practicability information may be developed for the screening process, and the Red Corridor may be screened out since there is another alternative. USACE would prefer that the environmental process not separate the 404 process from the NEPA process.

Several agencies stated that they have not yet seen a NEPA project successfully use local planning as a primary component of project purpose. FHWA indicated that it had tried in the past on other projects to use consistency with local plans as a primary project purpose but had encountered pushback from some of the agencies. As a result, consistency with plans was

sometimes used as a screening factor rather than as a primary project purpose. USEPA stated that NEPA documents often discuss whether alternatives are consistent with local plans, but do not require alternatives to match or mirror local planning objectives. USACE indicated that it would be problematic to have a local planning component front and center in the project purpose. USACE also pointed out that local plans are not developed according to NEPA.

There was some discussion about the impact of the Red Corridor Alternative on Section 4(f) resources. The project team explained that the Red Corridor Alternative would impact Section 4(f) resources, but a modified version of it (known as the Red Modified Corridor Alternative) would avoid them. However, the Red Modified Corridor only appears to meet the minimum roadway design standards.

USEPA asked what corridor width is being used to evaluate impacts at this stage and how those corridors were laid out. Lochner explained that impacts are being evaluated both for the 1,000-foot study corridors and for 300-foot conceptual right-of-way widths. The conceptual rights-of-way were laid out to minimize impacts to the greatest extent possible. Dawson & Associates explained that impact screening criteria are being refined and more information will be presented at a future agency meeting. USEPA asked for the uniquely different length of the Lilac Corridor Alternative and asked that information on the existing and new alternative corridors include information on the length of each color-coded corridor segment. The Lilac Corridor Alternative where it is uniquely different from other corridors is 9.2 miles long. Impacts will be reported for end-to-end project alternatives including the various color-coded corridors.

USFWS asked whether the I-40 interchange on the Plum Corridor Alternative would actually be two separate interchanges. Lochner confirmed that it would. NCDOT expressed concern at the close proximity of the two extra interchanges on Plum with respect to the NC 50 interchange and the US 42 interchange.

USACE asked for clarification about whether NC Session Law 2011-7 poses a problem for evaluating alternatives for impacts. Dawson & Associates explained that the desktop-level analysis that appears to be permissible relative to the law should allow a robust screening of impacts. USACE asked if NWI wetland maps would be used to screen for wetland impacts and the project team stated that they would.

USACE asked if FHWA has approved the Project Advancement Plan. FHWA responded that it is comfortable with the process as outlined in the Plan, but has not issued any formal approval. A letter (dated August 7, 2012) from FHWA to NCDOT relative to the advancement plan was provided to all participants in the revised Handout 9 at the meeting.

USEPA asked for a description of "Environmental Sensitive Zones" as indicated in the Johnston County 2030 Comprehensive Plan in Handout 10. The project team explained that this is a Johnston County designation. Lochner will provide more information about how this designation is defined in the Comprehensive Plan in future project documentation. CAMPO indicated that Johnston County does not extend water or sewer infrastructure into Environmental Sensitive Zones.

USEPA asked whether one of the new corridor alternatives impacts the City of Raleigh sprayfields near I-40. Dawson & Associates confirmed that the Lilac Corridor Alternative does impact this area, but also stated that this facility is being transitioned to a solid application facility and that an alternative could likely be designed consistent with the solid application facility. USEPA asked whether these sprayfields could be considered a Section 4(f) resource. FHWA stated that it did not appear that this site would be a Section 4(f) resource, but that it would verify this.

USACE confirmed that it would prefer to consider more than one alternative in the Draft EIS. If another corridor exists that minimizes jurisdictional impacts relative to the Orange Corridor

Alternative it could certainly be considered. USACE stressed that it is committed to finding a way for the project to move forward, that it has not made a preference regarding alternatives, and that it wants a document and decision that are defensible.

CAMPO asked for more clarification about why support for local planning objectives is too specific for the overall project purpose for 404 guidelines. Dawson & Associates explained that the overall project purpose needs to be broad enough not to automatically preclude alternatives. Several agencies reiterated this.

USEPA asked whether agency comment letters submitted in response to the January 2012 DADAR would receive formal responses. The project team confirmed that responses would be prepared as part of the next revision of the DADAR.

FHWA suggested reviewing the Section 6002 Project Coordination Plan to consider updating it to allow for written agency approval of the determination of DSAs in the environmental process and to revise the schedule included in the Plan.

USFWS suggested that future mapping of project alternatives show the Plum Corridor Alternative more fully, clearly showing that the traffic movements are bifurcated and result in roadway on both sides of Swift Creek.

Previous Action Items:

- NCTA/Lochner will consider eliminating the Red corridor and southern portion of the Tan corridor (Southern portion of the *Tan corridor was eliminated after January 2011 TEAC meeting; Red corridor remains under consideration*)
- NCTA/Lochner will eliminate the Forest Green and Pink corridors (*Completed*)
- NCTA will meet with USFWS and NCWRC to discuss Dwarf wedgemussel study needs and approach to Section 7 consultation (*Held initial meeting – additional coordination is ongoing*)
- HNTB will prepare more detailed explanation of traffic impacts of Red and protected corridor alignments, including effects on existing roadway network (*Completed*)
- NCTA/Lochner will continue to develop corridor options for Phase II of the project for future discussion at a TEAC meeting (*Completed*)
- NCTA/Lochner will distribute draft alternatives report (*Completed*)

New Action Items:

- NCDOT/Lochner will provide lengths for all of the color-coded Corridor Alternatives in future project documentation
- Lochner will provide more information about how the Environmental Sensitive Zone designation is defined in the Johnston County Comprehensive Plan in future project documentation
- NCDOT will review the Section 6002 Coordination Plan to determine whether any updates need to be made
- Lochner will revise maps of alternatives to display the Plum Corridor Alternative more fully
- Written comments on the Project Advancement Plan, if desired, should be submitted to NCDOT as soon as possible following this meeting

Resolutions:

- None

Next Steps:

- Investigate refinement of project purpose and need to include support for local planning objectives and financial viability



Interagency Project Meeting

MEETING MINUTES FINAL

Date: December 12, 2012
8:30 a.m. to 9:00 a.m.
NCDOT Century Center – Hydraulics Conference Room

Project: STIP R-2721, R-2828, and R-2829 – Triangle Expressway Southeast Extension
(Raleigh Outer Loop)

Attendees:

George Hoops, FHWA	Jennifer Harris, NCDOT – PDEA (via telephone)
Christopher Militscher, USEPA (via telephone)	Tris Ford, NCDOT – PDEA-PICS
Eric Alsmeyer, USACE (via telephone)	Tony Houser, NCDOT – Roadway Design Unit
Gary Jordan, USFWS	Rachelle Beauregard, NCDOT – NES-PMG
Rob Ridings, NCDWQ (via telephone)	Deanna Riffey, NCDOT – NES-PMG
Travis Wilson, NCWRC	Matt Lauffer, NCDOT – Hydraulics
Dolores Hall, OSA (via telephone)	John Rouse, NCDOT – Division 4 (via telephone)
Renee Gledhill-Early, HPO	Wally Bowman, NCDOT – Division 5
Amy Simes, DENR	Chris Murray, NCDOT – Division 5
Amy Chapman, DENR	Kiersten Bass, HNTB
Hardin Watkins, Town of Garner	Fred Skaer, Dawson & Associates (via telephone)
Ed Johnson, CAMPO	John Studt, Dawson & Associates (via telephone)
Chris Lukasina, CAMPO	Roy Bruce, Lochner
Eric Midkiff, NCDOT – PDEA	Kristin Maseman, Lochner

Presentation Materials:

- December 7, 2012, letter from FHWA and USACE to NCDOT regarding the project

Purpose:

Discuss letter and project status.

General Discussion:

The following information was discussed at the meeting:

- NCDOT summarized the December 7, 2012, letter from FHWA and USACE to NCDOT. NCDOT explained that the letter indicates that the Project Advancement Plan (discussed at the August 22, 2012, Interagency Project Meeting) would not support USACE permitting requirements. The letter also indicates that both agencies do not support modifying the NEPA project purpose for this project to include local plan support. The letter also indicates that USACE believes that the Red Corridor will need to be studied in detail in the Draft Environmental Impact Statement (EIS) and that FHWA plans to rescind the project's Notice of Intent (NOI) due to the complication created by NC Session Law 2011-7. A new NOI can be filed once this issue is resolved.

- NCDOT confirmed that the State still intends to pursue the project as it is in the STIP and CAMPO's LRTP and expects that rescinding the NOI will create only a temporary pause in the project until a new NOI can be filed once the items raised in the letter are adequately addressed to allow for full NEPA compliance.
- USEPA asked if FHWA's increased emphasis on expeditious project development was part of the reason FHWA will rescind the NOI. FHWA stated that while efficiency is important, the lack of a clear path for project advancement in light of NC Session Law 2011-7 is the main reason for rescinding the NOI.
- USFWS expressed concern that the pause in the project could hinder continued studies on the Dwarf Wedgemussel (DWM) being funded through this project. The field season for the species will begin in the Spring; if the survey window elapses while the project is paused, an entire year could be lost from the perspective of this work. NCDOT indicated that it will try to see if this work can continue even while the NOI is rescinded because the work has value beyond just this project.
- USEPA asked if there have been efforts to address the problems created by NC Session Law 2011-7. CAMPO indicated that State legislators are aware of the problems and may work to address them during the 2013 legislative session.
- CAMPO has had conversations with FHWA about future land use modeling and its influence on indirect and cumulative effects (ICE) analysis. CAMPO is in the process of finalizing new forecasts using a new modeling method (Community Viz), which should produce more robust and defensible results. This could be incorporated into project analysis as documented in the Draft EIS.

Previous Action Items:

- NCDOT/Lochner will provide lengths for all of the color-coded Corridor Alternatives in future project documentation (*Completed*)
- Lochner will provide more information about how the Environmental Sensitive Zone designation is defined in the Johnston County Comprehensive Plan in future project documentation (*Completed*)
- NCDOT will review the Section 6002 Coordination Plan to determine whether any updates need to be made (*Completed*)
- Lochner will revise maps of alternatives to display the Plum Corridor Alternative more fully (*Completed*)
- Written comments on the Project Advancement Plan, if desired, should be submitted to NCDOT as soon as possible following this meeting (*Completed*)

New Action Items:

- None

Resolutions:

- None

Next Steps:

- To be determined



U.S. Department
of Transportation

**Federal Highway
Administration**

FEDERAL HIGHWAY ADMINISTRATION

North Carolina Division
310 New Bern Avenue, Suite 410
Raleigh, NC 27601
HDA-NC



DEPARTMENT OF THE ARMY

Wilmington District, Corps of Engineers
69 Darlington Avenue
Wilmington, NC 28403-1343
Regulatory Division/1145b

December 7, 2012

Mr. Terry R. Gibson, P.E.
Chief Engineer
North Carolina Department of Transportation (NCDOT)
1536 Mail Service Center
Raleigh, NC 27699-1536

SUBJECT: Action ID 2009-02240; STIP Nos. R-2721, R-2828, and R-2829

Dear Mr. Gibson:

This letter is in regards to the North Carolina Session Law 2011-7 (N.C.S.L. 2011-7) and its impact on the Triangle Expressway Southeast Extension project proposed by the North Carolina Turnpike Authority (NCTA). The law, which was passed on March 18, 2011, states that the Triangle Expressway Southeast Extension project shall not be located north of an existing protected corridor established by the North Carolina Department of Transportation (NCDOT) in 1995, except in the area of Interstate 40 East. Consequently, the law restricts the location of alternative corridors prior to the engineering and environmental analysis required by the National Environmental Policy Act (NEPA) and other Federal laws. Based on this restriction, Federal Highway Administration (FHWA) found it imperative that the process to advance the project be fully supported and concurred with by all Federal agencies. In an effort to do this, a series of meetings and discussions were held with multiple stakeholders to resolve issues and advance the project. Through these meetings, the following concerns have been identified by the Army Corps of Engineers (Corps) and FHWA regarding the approach and its ability to successfully advance the project under the requirements of NEPA and Section 404 (b)(1) Guidelines (40 CFR Part 230).

The NCDOT and NCTA, in consultation with Dawson and Associates, developed a Project Advancement Plan which included a proposal to evaluate refinements to the project purpose to reflect input from public involvement [possibly including local plan support and financial viability as elements of the NEPA project purpose] and an evaluation of additional potential alternatives. Both the Corps and FHWA have concerns that, for this project, including local plan support as a primary NEPA project purpose may inappropriately limit the study of a full range of Detailed Study Alternatives. The Corps believes that it would not support their requirement

under the 404 (b)(1) Guidelines (40 CFR Part 230) to analyze and objectively compare alternatives for this project that requires a Clean Water Act permit.

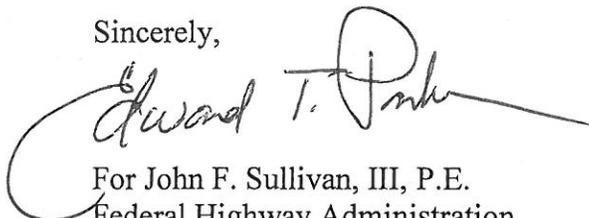
In the evaluation of alternatives, the Corps continues to believe that in regards to streams and wetlands, the Orange to Red to Green Alternative appears to be a less environmentally damaging alternative and should be included as an alternative to be analyzed in the Draft Environmental Impact Statement (DEIS). Please note that, at this time, the Corps is not able to make a decision on the practicability of any of the alternatives. That decision will not be made until after the Corps has issued a public notice (following publication of the DEIS) seeking comments from the public, Federal, State and local agencies, including any consolidated state viewpoint or written position of the Governor, on the Detailed Study Alternatives and the factors that the Corps considers in our public interest decision. The decision will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest, and will reflect the national concern for both protection and utilization of important resources. Factors, including the cumulative effects thereof, which may be relevant to the proposal that will be considered include, but are not necessarily limited to community cohesion, relocations, impacts to existing and proposed business centers, recreation, including parks, historic properties (Section 4(f) issues), water supply and conservation, ecological conservation, economics, aesthetics, general environmental concerns, wetlands, fish and wildlife values, flood hazards, flood plain values (in accordance with Executive Order 11988), land use, navigation, shoreline erosion and accretion, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. The Corps evaluation process for this project is consistent with the review for all other transportation projects in North Carolina, and with Section 404 of the Clean Water Act, including the 404 (b)(1) Guidelines (40 CFR Part 230).

Therefore, in consideration of the concerns above, the Corps and the FHWA believe the project can no longer move forward with the Project Advancement Plan and satisfy all Federal environmental requirements in a concurrent manner. As a result, the FHWA will withdraw the Notice of Intent (NOI), meaning we will no longer continue to develop the environmental impact statement and federally fund the project. Our withdrawal does not prevent the project from being reinitiated in the future. NCDOT or other applicant/sponsors may restart the project at any time by requesting a new NOI with sufficient support that all constraints have been relieved to allow compliance with NEPA.

Should you have any questions, please call George Hoops of the FHWA at (919) 747-7001 or Eric Alsmeyer of the Corps at (919) 554-4884, extension 23.

Sincerely,

Sincerely,



For John F. Sullivan, III, P.E.
Federal Highway Administration
Division Administrator



Steven A. Baker
Colonel, U. S. Army
District Commander

Copies Furnished:

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4619 Mail Service Center
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Interagency Project Meeting

MEETING MINUTES FINAL

Date: September 19, 2013
10:00 a.m. to 11:00 a.m.
NCDOT Century Center – Structure Design Conference Room C

Project: STIP R-2721, R-2828, and R-2929 – Complete 540 - Triangle Expressway Southeast Extension (Raleigh Outer Loop)

Attendees:

George Hoops, FHWA	Steve McKee, NCDOT – Utilities
Clarence Coleman, FHWA	Don Proper, NCDOT – Utilities
Christopher Militscher, USEPA (via telephone)	Ed Reams, NCDOT – Utilities
Eric Alsmeyer, USACE	Kyle Pleasant, NCDOT – Utilities
Henry Wicker, USACE (via telephone)	Robert Memory NCDOT – Utilities (on telephone)
Gary Jordan, USFWS	BenJetta Johnson, NCDOT – TMSD
Rob Ridings, NCDWR	Nick Lineberger, NCDOT – TMSD
Travis Wilson, NCWRC	Rupal Desai, NCDOT – TPB
Amy Simes, NCDENR	Andie Cozzarelli, NCDOT – TPB
Renee Gledhill-Early, SHPO (via telephone)	Adam Snipes, NCDOT – TIP
Ed Johnson, CAMPO	Alla Lyudmirskaya, NCDOT - WZTC
Jennifer Harris, NCDOT – PDEA	Kiersten Bass, HNTB
Eric Midkiff, NCDOT – PDEA	Joe Milazzo, Regional Transportation Alliance
Tony Houser, NCDOT – Roadway Design Unit	Fred Skaer, Dawson & Associates (via telephone)
Wally Bowman, NCDOT – Division 5	John Studt, Dawson & Associates (via telephone)
Tris Ford, NCDOT – HES	Roy Bruce, Lochner
Greg Smith, NCDOT – HES	Kristin Maseman, Lochner (via telephone)
Deanna Riffey, NCDOT – NES	Jeff Schlotter, Lochner (via telephone)
Mary Pope Furr, NCDOT – Historic Architecture	Brian Eason, Lochner

Presentation Materials:

- Agenda
- Final Interagency Project Meeting Minutes – December 12, 2012
- Handout 12 – Project Status Update
- Handout 13 – Revised Draft Alternatives Development and Analysis Report Summary
- Handout 14 – Recommended Detailed Study Alternatives
- Handout 15 – Project Schedule
- Newsletter No. 3
- Frequently Asked Questions
- Presentation

Purpose:

Present project status update; discuss revised Draft Alternatives Development and Analysis Report; discuss recommended Detailed Study Alternatives.

General Discussion:

The following information was discussed at the meeting:

- **Project Status Update (Handout 12):** Lochner provided an update on project activities that have occurred since the TEAC meetings in January 2011, August 2012, and December 2012. In late 2010 and early 2011, efforts were underway to determine the Detailed Study Alternatives (DSAs) for full evaluation in the Draft Environmental Impact Statement (EIS). NC Session Law 2011-7, passed in March 2011, limited advancement of the project in the area of the Red Corridor. NCDOT continued to coordinate with agencies and local groups to find an effective path forward. A Draft Alternatives Development and Analysis Report was published in January 2012. Agencies submitted written comments on the draft report. Additional study corridors (Lilac and Plum) were developed and preliminarily evaluated. In December 2012, FHWA and USACE sent a joint letter to NCDOT indicating that full evaluation of the Red Corridor would be required to advance the project. NC Session Laws 2013-94 and 2013-183 were passed that repealed the 2011 law that limited project advancement. Following this two and a half year pause in the study, the immediate project objective remains to determine the DSAs for inclusion in the Draft EIS. Previously eliminated corridors have been reevaluated in conjunction with the additional corridors that were developed.
- **Revised Draft Alternatives Development and Analysis Report (Handout 13):** The January 2012 draft report was revised and updated to address agency comments and incorporate new project information and analysis. The current draft report was issued in early September for review and comment. The revised draft report contains responses to agency comments, evaluation of additional corridors (Lilac and Plum), and recommended DSAs. Agency comments on the September 2013 version of the draft report are due to NCDOT by October 21, 2013.
- **Recommended Detailed Study Alternatives (Handout 14):** Lochner presented the NCDOT rationale for recommending ten color-coded corridors as the building blocks for the DSAs. These ten color-coded corridors can be combined to form 17 unique end-to-end routes that make up the DSAs.
- **Project Schedule (Handout 15):** An aggressive schedule has been established for the project in order to expedite the selection of a Preferred Alternative in accordance with Section 2 of NC Session Law 2013-94. Some elements of study have been and will continue to be completed in segments or phases culminating in a Draft EIS in the spring of 2015 with Public Hearings that summer and the selection of a Preferred Alternative by fall of 2015.
- **Discussion:**
USEPA sought clarification on how the NC Session Law 2011-7 restrictions were removed. NCDOT explained that the text that was added in 2011 was stricken with the 2013 legislation. There are now no legislative restrictions on any corridors under consideration for this project.

There was interest in the current status of the additional mussel surveys and assessments that have been ongoing during this pause in the study process. The agreed upon work has progressed in accordance with the mutually defined scope of study. The work is not finished and is not ready for agency review at this time. NCDOT will provide additional information at a subsequent interagency meeting. This information will be fully documented for review and included in the Draft EIS.

USEPA asked about added development in the Red Corridor during the pause in the study, particularly in reference to the Village of Aversboro subdivision and the Greenfield Business Park. The Village of Aversboro has continue to build and sell homes in the north phase of the development as that project moves towards completion and build-out. The two businesses that were in the process of developing in the Greenfield Business Park are complete and in operation.

The SHPO inquired about the way Section 4(f) resources are reported on the impacts chart. They would like to see separate impacts for historic resources and parks/recreation areas. All of the impacts on the table are park impacts and there are no historic impacts based on the available data used for the preliminary screening. This will be noted on the tables in the Draft Alternatives Development and Analysis Report and other relevant materials.

The NCDWR asked that the tables be expanded to include impacts for any Outstanding Resource Waters (ORW) or any High Quality Waters (HQW) in addition to the Critical Watershed Areas and the 303(d) streams. Subsequent to the meeting, it was reconfirmed that there are no ORW or HQW streams in the project study area.

The SHPO asked when historic architecture information would be available for the Purple and Blue Corridors. The survey work has not yet started. The SHPO requested the data be made available if the Purple and Blue Corridors will be considered for elimination.

NCDOT asked if there were any comments on the Draft Alternatives Development and Analysis Report or Recommended DSAs. No comments regarding these items were made during the meeting.

Previous Action Items:

- None

New Action Items:

- Agency review comments on the September 2013 Draft Alternatives Development and Analysis Report due to NCDOT by October 21, 2013.
- NCDOT will provide a status update on mussel surveys at a future interagency meeting.
- Impact tables to be adjusted to reflect no historic resource impacts and note that Section 4(f) impacts that are listed are for parks/recreational areas.
- Add impacts to ORW and HQW to tables, if appropriate. There are none of these resources in the study area. (*Completed*)

Resolutions:

- None

Next Steps:

- Public Meetings on recommended DSAs
- Agency comments on Draft Alternatives Development and Analysis Report
- November and/or December interagency meeting to discuss comments made by the agencies on the Draft Alternatives Report, review public comments, and select DSAs



Interagency Project Meeting

MEETING MINUTES FINAL

Date: December 12, 2013
11:45 a.m. – 12:45 p.m.
NCDOT Century Center – Structure Design Conference Room C

Project: STIP R-2721, R-2828, and R-2829 – Complete 540, Triangle Expressway Southeast Extension

Attendees:

George Hoops, FHWA
Clarence Coleman, FHWA
Christopher Militscher, USEPA (via telephone)
Eric Alsmeyer, USACE
Jean Gibby, USACE
Thomas Brown, USACE
Gary Jordan, USFWS
Rob Ridings, NCDWR
Travis Wilson, NCWRC
Amy Simes, NCDENR
Renee Gledhill-Early, SHPO (via telephone)
Dolores Hall, NCOSA (via telephone)
Ed Johnson, CAMPO (via telephone)
Eric Midkiff, NCDOT – PDEA
Jennifer Harris, NCDOT – PDEA
Richard Hancock, NCDOT - PDEA
Tony Houser, NCDOT – Roadway Design Unit
Tim Little, NCDOT – Division 4

Wally Bowman, NCDOT – Division 5
Nick Lineberger, NCDOT – TMSD
Tris Ford, NCDOT – HES
Deanna Riffey, NCDOT – NES
Matt Lauffer, NCDOT - Hydraulics
Kyle Pleasant, NCDOT – Utilities
Donald Proper, NCDOT – Utilities
Mark Staley, NCDOT – REU
Kiersten Bass, HNTB
Fred Skaer, Dawson & Associates (via telephone)
John Studt, Dawson & Associates (via telephone)
Roy Bruce, Lochner
Kristin Maseman, Lochner
Jeff Schlotter, Lochner
Michael Wood, Catena Group
Tim Savidge, Catena Group
Nancy Scott, Catena Group

Presentation Materials:

- Agenda
- Final Interagency Project Meeting Minutes – September 19, 2013
- Handout 16 – Public Meetings - Summary and Comment Analysis
- Handout 17 – Revised Draft Alternatives Development and Analysis Report
- Handout 18 – Detailed Study Alternatives
- Handout 19 – Section 6002 Coordination Plan Update
- Presentation

Purpose:

Present project status update and summary of public comments; discuss revised Draft Alternatives Development and Analysis Report; discuss recommended Detailed Study Alternatives.

General Discussion:

The following information was discussed at the meeting:

- **Project Status Update:** Lochner provided an update on project activities that have occurred since the Interagency Meeting in September 2013, when the revised Draft Alternatives Development Analysis and Report and the recommended Detailed Study Alternatives (DSAs) for

the project were discussed. Agencies were then asked to submit comments about the revised report and the recommended DSAs. The CAMPO Working Group met on October 3 to discuss the recommended DSAs. Three public meetings were held on October 14, 15, and 16 to present the recommended DSAs and to solicit public comments. To the extent possible, work including some field investigations and preliminary design, has continued on the project during this period in order to expedite the overall project schedule.

- **Public Meetings – Summary and Comment Analysis (Handout 16):** The three public meetings in October were very well attended and there has been extensive public comment about the recommended DSAs. The input from these meetings was combined with input received from the public in late 2010 and early 2011 on preliminary alternatives. To date, public comments about project alternatives reveal strong support for the project and the Orange Corridor, and strong opposition to the Red, Purple, Blue, and Lilac Corridors. Several local governments have also passed resolutions supporting the Orange Corridor and opposing others.
- **Revised Draft Alternatives Development and Analysis Report (Handout 17):** Four agencies responded to NCDOT's request for comments on the revised Draft Alternatives Development and Analysis Report; three agencies did not submit responses. The agency comments either explicitly or implicitly support proceeding with the recommended DSAs. None of the comments request eliminating, adding, or modifying any alternatives.
- **Detailed Study Alternatives (Handout 18):** Lochner reviewed the ten color-coded corridors that are the building blocks for the DSAs. These ten color-coded corridors can be combined to form 17 unique end-to-end routes that make up the DSAs. Based on the preliminary data available for the project, the previously recommended DSAs remain as viable feasible alternatives that appear to have sufficient merit to warrant further evaluation and study as part of the Draft Environmental Impact Statement. Therefore, all 17 of the previously recommended DSAs will be carried forward in the environmental study. Should additional project information become available as studies are completed that substantially alters the merits of any alternative, this decision could be reevaluated at that time.
- **Section 6002 Coordination Plan Update (Handout 19):** Lochner reviewed changes that have been made to the Section 6002 Coordination Plan for this project since its previous January 2011 version. Changes include an update to the project schedule and primary agency contacts.
- **Update on Dwarf Wedgemussel Studies:** The Catena Group reviewed the work that has been completed to date on the Dwarf Wedgemussel (DWM) studies requested by USFWS. This work is being documented in a technical report that will be submitted to NCDOT in February or March of 2014. The studies have included a review of existing conservation measures established for DWM as part of other projects in the Swift Creek watershed, characterization of the Swift Creek watershed with respect to DWM habitat, and an assessment of historical trends and current viability of the species in Swift Creek.
- **Discussion:**
HPO reminded the group that their response letter to the revised Draft Alternatives Development and Analysis Report stated that the report did not include any mention of archaeological studies for the DSAs. NCDOT will indicate in the final report that the required archaeological studies will be completed and documented in the Draft Environmental Impact Statement.

USEPA asked for clarification on why the “bulbouts” at different interchanges on the map of DSAs are different sizes. NCDOT explained that the bulbout areas correspond to the wider study corridor around the interchange areas and vary depending on the roadway geometry, existing facilities, and other constraints at each interchange area. The bulbout areas do reflect the relative magnitude of each interchange area. In particular, the size of the interchange areas at 540, I-40, and the US 70 Bypass were questioned since they are substantially larger than other

interchanges. The geometry of ramp movements in a freeway to freeway high speed interchange require more land area than a typical interchange. At 540, I-40, and US 70 Bypass there are three freeways converging at a single interchange.

NCDOT Utilities inquired about the basis of the preliminary wetland impacts along the Purple and Blue Corridors. These impacts are based on National Wetlands Inventory mapping data and the 300 foot preliminary right of way within the larger study corridor.

The NCDOT suggested that the agencies would not require any additional time (as described in Section 8.5 of the Section 6002 Coordination Plan) to review the Draft Alternatives Development and Analysis Report and the recommended DSAs in light of the public and local government comments made since the October public meetings. The reason provided by NCDOT included that the public comments remain consistent with those previously provided and therefore would not cause the need to make additional adjustments to the DADAR. USACE noted agreement that no additional review would be necessary based on the information presented during this meeting and no other agencies objected.

No agencies raised any objections to proceeding with the 17 end-to-end alternatives as DSAs, and no agencies asked for any additional alternatives to be considered.

Based on today's discussion, past Issues of Concern (per the Section 6002 Coordination Plan) have been resolved and that there are no outstanding issues regarding the project purpose and need, range of alternatives, alternatives screening, or DSAs. Additionally, no Issues of Concern relative to these four areas of the study were raised at the meeting.

USEPA informed the group that there is a new Executive Order (EO) pertaining to the impact of federal projects on children's health, and suggested that NCDOT seek guidance from FHWA regarding the need to address the EO in the Draft Environmental Impact Statement (EIS).

Previous Action Items:

- Agency review comments on the September 2013 Draft Alternatives Development and Analysis Report due to NCDOT by October 21, 2013 (revised to November 4, 2013). (*Completed*)
- NCDOT will provide a status update on mussel surveys at a future interagency meeting. (*Completed*)
- Impact tables to be adjusted to reflect no historic resource impacts and note that Section 4(f) impacts that are listed are for parks/recreational areas. (*Completed*)
- Add impacts to ORW and HQW to tables, if appropriate. There are none of these resources in the study area. (*Completed*)

New Action Items:

- NCDOT will indicate in the final Alternatives Development Analysis and Report that the required archaeological studies will be completed and documented in the Draft Environmental Impact Statement.
- Lochner will investigate the requirements of the new EO pertaining to the impact of federal projects on children's health and work with NCDOT and FHWA regarding the appropriate method for addressing it.

Next Steps:

- Public announcement of Detailed Study Alternatives
- CAMPO Working Group meeting – January 9, 2014
- Complete technical base studies on DSAs
- Prepare Draft Environmental Impact Statement



Interagency Project Meeting

MEETING MINUTES FINAL

Date: November 13, 2014
9:00 a.m. – 11:00 a.m.
NCDOT Century Center – Structure Design Conference Room C

Project: STIP R-2721, R-2828, and R-2929 – Complete 540 - Triangle Expressway Southeast Extension (Raleigh Outer Loop)

Attendees:

Clarence Coleman, FHWA	Matt Lauffer, NCDOT – Hydraulics
Cynthia Van Der Wiele, USEPA	Charles Smith, NCDOT – Hydraulics
Gary Jordan, USFWS	Kyle Pleasant, NCDOT – Utilities
Rob Ridings, NCDWR	Donald Proper, NCDOT – Utilities
Travis Wilson, NCWRC	Mark Staley, NCDOT – REU
Dolores Hall, SHPO (via telephone)	Kiersten Bass, HNTB
Alex Rickard, CAMPO	Fred Skaer, Dawson & Associates (via telephone)
Eric Midkiff, NCDOT – PDEA	John Studt, Dawson & Associates (via telephone)
Jennifer Harris, NCDOT – PDEA	Roy Bruce, Lochner
Maria Baez, NCDOT – PDEA	Brian Eason, Lochner
Tony Houser, NCDOT – Roadway Design Unit	Doug Wheatley, Lochner
Maira Ibarra, NCDOT – Roadway Design Unit	Kristin Maseman, Lochner
Nick Lineberger, NCDOT – TMSD	Wendee Smith, Mulkey
Colin Mellor, NCDOT – NES	Jonathan Scarce, Mulkey
Deanna Riffey, NCDOT – NES	Brian Dustin, Mulkey
Rachelle Beauregard, NCDOT – NES	

Presentation Materials:

- Agenda
- Handout 20 – Approach to Interagency Coordination on Bridging Decisions
- Handout 21 – Hydraulic Conveyance Suggestions
- Handout 22 – Suggested Bridge Length Locations and Lengths
- Presentation

Purpose:

Present project status update and review bridging suggestions to be used in evaluating Detailed Study Alternatives (DSAs).

General Discussion:

The following information was discussed at the meeting:

- **Project Status Update:** Lochner provided an update on project activities that have occurred since the Interagency Meeting in December 2013, when the DSAs for the project were finalized. A CAMPO Working Group meeting was held on January 9, 2014. The project team has been completing various required technical studies and documenting the results of these studies in corresponding technical reports.

- **Approach to Interagency Coordination on Bridging Decisions (Handout 20):** There are a total of over 1,200 natural system sites, which include wetlands, streams or ponds, inside the study corridors along the roughly 100 total miles of the DSAs. Preliminary hydraulic analysis showed that there were 81 sites along the DSAs where hydraulic conditions and proposed designs require incorporation of a major hydraulic conveyance structure (defined as a 72-inch pipe or larger). Based solely on hydraulic analysis, 17 of these sites would require bridges, with the remaining 64 requiring culverts.

To increase the efficiency of interagency coordination on bridging decisions, the project team reviewed the preliminary hydraulic recommendations and the characteristics of the natural systems sites along the DSAs to make additional suggestions for bridging. The project team compiled this information and distributed it as part of the Interagency Meeting information distributed on October 9, 2014, and presented this information to USACE and NCDWR in consultation on October 23, 2014, to receive input on those suggestions. Based on the consultation with USACE and NCDWR, two handouts were revised and distributed to the agencies on November 6, 2014.

- **Hydraulic Conveyance Suggestions (Handout 21):** Of the original 17 sites found to require bridging on the basis of preliminary hydraulic analysis, the project team suggested extensions of 7 of the bridges; additional bridging was not recommended at the remaining 10 sites.

Of the 64 sites for which preliminary hydraulic analysis recommended culverts for hydraulic conveyance, the project team considered bridging 8 of the sites. Following consultation with USACE and NCDWR, 5 of the 64 sites were found to warrant additional interagency discussion. Following distribution of the Interagency Meeting information in October, USFWS requested that Site 74 be discussed during the Interagency Meeting.

- **Suggested Bridge Locations and Lengths (Handout 22):** The project team presented a detailed table compiling the original preliminary hydraulic recommendations and any suggested modifications for each hydraulic site along the DSAs. The project team also presented aerial mapping of the sites recommended for bridging (including those recommended for extended bridges), the sites where a bridge is suggested instead of the originally recommended culvert, and the sites noted by USACE, NCDWR, and USFWS for additional discussion.
- **Discussion:**
The meeting discussion focused on certain hydraulic sites identified by agency representatives. For some of the sites, agency representatives requested a field visit in order to better understand conditions at the site—a field meeting is scheduled for December 2, 2014, to view these sites. Discussion according to site number as shown on the meeting handouts was as follows:

Site 34 (Swift Creek, Red Corridor) – The project team recommendation was an extended bridge. USFWS asked if it would be feasible to lengthen the bridge further or to shift the service road proposed in this location in order to minimize the encroachment into the floodplain with the service road. Minimization of impacts in this area could be beneficial for dwarf wedgemussel habitat. The project team will investigate possible minimization and will also try to determine the property value of the adjacent undeveloped residential parcel. *A field review of this site was requested prior to making any final determinations about bridging at this site.*

Site 35 (Yates Branch, Red Corridor) – NCDOT Roadway Design Unit staff indicated that the interchange design at this site may need to be modified to better accommodate the ramp terminals with respect to the end of the bridges. The interchange design will be coordinated with the NCDOT Roadway Design Unit now that approximate bridge lengths have been identified at this location.

Site 63 (Tributary to Swift Creek, Orange Corridor) – NCDWR asked if it would be possible to make modifications at this site so that stream SEW (as shown on mapping) would be under the

bridge. These modifications could include extending the proposed bridge or possibly relocating the stream. This would require bridge extensions on both the mainline and the ramp. Mulkey noted that the stream is intermittent and that its quality may not warrant this modification. No additional changes will be needed at this site beyond what was suggested in the meeting materials.

Site 21 (Tributary to Swift Creek, Orange Corridor) – Habitat connectivity was raised by NCWRC and NCDWR as a consideration for this site. There was discussion about ways to maintain habitat connectivity while possibly shortening the bridge to reduce costs. At this site, NCDWR indicated that maintaining stream integrity would have a higher priority than minimizing the total wetland impact. *A field review of this site was requested prior to making any final determinations about bridging at this site.*

Site 24 (Tributary to Swift Creek, Orange Corridor) – USFWS and NCWRC indicated that it is important to consider this site from the perspective of aquatic and terrestrial habitat connectivity. Depending on the size, stability and condition of this stream, placing the mainline and the ramps on the north side of the site on bridges could be a preferred modification. *A field review of this site was requested prior to making any final determinations relative to bridging at this site.*

Site 33 (Tributary to Neuse River, Green Corridor) – The project team explained the proposed bridge could be shortened slightly, providing a cost savings, while only slightly increasing the wetland impact at the site. There was consensus that this would be a worthwhile modification.

Site 43 (White Oak Creek, Red Corridor) – The project team also proposed shortening the recommended bridge slightly to provide a notable cost savings, with a small increase in wetland impact. There was consensus that this would be a worthwhile modification.

Site 1 (Middle Creek, Orange Corridor) – This site, currently proposed to have a culvert, had been noted for further bridging consideration at the October 23 meeting with USACE and NCDWR. It was explained that there is substantial urban development in this area, with a culvert downstream of this location, and that a bridge would add roughly \$3.5 million to the construction cost. *A field review of this site was requested prior to making any final determinations about bridging at this site.*

Site 3 (Rocky Branch, Orange Corridor) – USEPA asked why a culvert is proposed for this site instead of a bridge. It was explained that the interchange design in this location already minimizes the total project footprint in this area. To modify the design to include a bridge, the footprint would need to expand to accommodate the bridge ramps, which would increase impacts to wetlands and streams downstream of the site. The consensus at the meeting was that no bridging will be included at this site.

Site 4 (Camp Branch, Orange Corridor) – This site, currently proposed to have a culvert, had been noted for further bridging consideration at the October 23 meeting with USACE and NCDWR. Mulkey explained that this stream channel is notably incised and has minimal connectivity to nearby wetlands, so the quality of the site was relatively low, suggesting that a bridge would not be necessary. The consensus at the meeting was that no bridging will be included at this site.

Site 17 (Tributary to Guffy Branch, Orange Corridor) – This site is in the vicinity of a National Register historic site known as the Panther Branch School. HPO has requested that bridging not be incorporated in the vicinity of this site in order to minimize the project's visual impacts to the site. NCDWR suggested that alternative minimization techniques (other than bridging) could be considered at this site and expressed a willingness to work together with HPO to achieve impact minimization to both the historic site and the natural systems in this area. The consensus at the meeting was that no bridging will be included at this site.

Site 76 (Guffy Branch, Blue Corridor) – This site, currently proposed to have two culverts, was noted for further discussion about bridging. Agency representatives noted that this site's location along a continuous wooded segment of Guffy Branch make habitat connectivity upstream and downstream of the site an important consideration. USFWS and NCWRC have reviewed all of the hydraulic sites with respect to habitat connectivity considerations and noted this site and Site 74 (discussed below) as the two sites where this is a particularly important consideration. Lochner explained that notable design modifications would be needed at this site to accommodate a bridge. These modifications would include raising the profile at this site to the extent that it would also affect profiles of grade separated highways east and west of this site. NCWRC indicated that it will be very important for the project team to document the design constraints that would make bridging this site difficult and to note that further strategies for minimizing habitat connectivity impacts at this site will be considered if the Preferred Alternative includes the Blue Corridor. Alternative conveyance structures, such as dry floodplain barrels, might be preferable because they could accommodate some upstream/downstream permeability to wildlife. The consensus at the meeting was that no bridging will be included at this site at this time.

Site 74 (Little Creek, Blue Corridor) – This site, currently proposed to have a culvert, was noted for further discussion about bridging. As for Site 76, USFWS and NCWRC noted that this was one of the two sites noted where habitat connectivity considerations are an important factor. Mulkey indicated that the wetland at this site is isolated and the stream channel is somewhat incised. USFWS and NCWRC noted this site as a particularly good candidate for modification to provide a means for wildlife to cross the site. The agencies suggested that the project team investigate the possibility of a single span slab bridge at this site. The consensus at the meeting was that bridging will be included at this site.

All Other Sites – No issues of concern were raised at the meeting with the hydraulic conveyance suggestions for all other sites. Hydraulic conveyance for these sites will be as described in the meeting materials.

Meeting attendees also briefly discussed the timeframe for Section 7 consultation for the dwarf wedgemussel. NCDOT anticipates completing subsequent phases of the dwarf wedgemussel studies after the Draft EIS is prepared. It was noted that the Draft EIS will likely indicate that the Biological Opinion is unresolved, and then formal consultation with USFWS will begin once a Preferred Alternative is selected. USFWS noted that this sequence of events would not impede their ability to appropriately consider the Preferred Alternative or determine the LEDPA.

Previous Action Items:

- NCDOT will indicate in the final Alternatives Development Analysis and Report that the required archaeological studies will be completed and documented in the Draft Environmental Impact Statement. (*Completed*)

New Action Items:

- NCDOT will arrange a field review meeting on December 2, 2014. At this meeting, agency representatives will view Sites 1, 21, 24, and 34. Final determinations about bridging at these sites will be made during the field review meeting.
- Lochner will investigate possible minimization and modifications at Site 76 as noted above.

Next Steps:

- Complete technical study reports – January 2015
- Prepare Draft Environmental Impact Statement – Spring 2015



Interagency Project Field Meeting

MEETING MINUTES FINAL

Date: December 2, 2014
8:00 a.m. – 2:00 p.m.
NCDOT Greenfield Parkway Offices

Project: STIP R-2721, R-2828, and R-2929 – Complete 540 - Triangle Expressway Southeast Extension (Raleigh Outer Loop)

Attendees:

Eric Alsmeyer, USACE
Cynthia Van Der Wiele, USEPA
Gary Jordan, USFWS
Rob Ridings, NCDWR
Travis Wilson, NCWRC
Charles Smith, NCDOT – Hydraulics

Ray Lovinggood, NCDOT – Hydraulics
Roy Bruce, Lochner
Brian Eason, Lochner
Wendee Smith, Mulkey
Jonathan Scarce, Mulkey
Brian Dustin, Mulkey

Presentation Materials:

- Field Handout of Maps and Table for the four sites to be visited.

Purpose:

This field review meeting is adjunct to the Interagency Meeting for the project held on November 13, 2014. During that meeting to review bridging suggestions to be used in evaluating Detailed Study Alternatives (DSAs), four hydraulic crossing locations were identified for field review prior to making final determinations about bridging at these sites.

General Discussion:

The following information was discussed during the field review:

- **Site 24 (Tributary to Swift Creek, Orange Corridor):** At the Interagency Meeting in November, USFWS and NCWRC indicated that Site 24 should be visited in the field in order to consider this site from the perspective of aquatic and terrestrial habitat connectivity. Depending on the size, stability and condition of this stream, placing the mainline and the ramps on the north side of the site on bridges could be a preferred modification. However, after visiting Site 24, all agreed to keep the bridging at this site as it was suggested at the Interagency Meeting in November. Should the Orange Corridor be the Preferred Alternative, floodplain culverts should be added under the mainline and the ramps on the north side of Site 24.
- **Site 21 (Tributary to Swift Creek, Orange Corridor):** Habitat connectivity was raised by NCWRC and NCDWR as a consideration for this site during the Interagency Meeting in November. There was discussion about ways to maintain habitat connectivity while possibly shortening the bridge to reduce costs. At this site, NCDWR indicated that maintaining stream integrity would have a higher priority than minimizing the total wetland impact. During the field visit, possible reductions in the suggested bridge lengths were discussed. It was agreed that the bridges should be shortened on both ends while maintaining the streams and associated buffers. On the west end, the bridge should be shortened to the extent practicable and still maintain streams and buffers. This will increase wetland impacts. On the east end, the bridge also should

be shortened to the extent possible and still maintain streams and buffers. There was discussion concerning possible alignment adjustments and shifts to improve the stream and wetland crossings at this site. The proximity of the NC 50 interchange, the Turner Farms subdivision, and hydraulic crossing Sites 20 and 21 make it difficult to adjust the alignment at Site 21.

- **Site 34 (Swift Creek, Red Corridor):** During the Interagency Meeting in November, the USFWS asked if it would be feasible to lengthen the suggested bridge further or to shift the service road proposed in this location in order to minimize the encroachment into the floodplain with the service road. The project team agreed to investigate possible minimization of the impact of the service road and agreed to estimate the property value of the adjacent undeveloped residential parcel. During the field visit, a revised plan for the service road was presented. The plan shifts the service road from one side of 540 to the other. This would require a bridge over 540 to access the undeveloped residential parcel. The estimated cost of the revised service road is approximately \$4.5 million. An estimate of the value of the land south of 540 that would be landlocked without the service road is around \$3.1 million. All agreed that the revised service road or buying the land was preferable to what was proposed previously for the service road. This concept will be presented to NCDOT Roadway Design and if they approve the design revision, the modified service road concept will be used. Next the group discussed the previously suggested bridge extension on the west end. All agreed during the field visit to drop the roughly 700 feet of bridge extension at this location. If the Red Corridor is the Preferred Alternative, floodplain culverts should be provided in the western area of the floodplain for equalization of flood flow.
- **Site 1 (Middle Creek, Orange Corridor):** This site, currently proposed to have a culvert, was identified as a site for field review, particularly the existing crossing of Middle Creek at Sunset Lake Road. During the field review meeting, there was a desire expressed to have the existing pipes under Sunset Lake Road be replaced with a bridge instead of the planned triple box culvert. There are several streams at the mainline crossing location. It was decided to provide a bridge at the mainline crossing of Middle Creek (main channel) with buffers. This can likely be accomplished with a roughly 90 foot long single span bridge. To minimize stream impacts, other streams in the area can be routed to the main channel. Additional design analysis will be needed to determine the bridge length that best accommodates the main stream and buffers. At the Sunset Lake Road crossing of Middle Creek, it was decided that a single-span cored-slab bridge should be provided instead of the triple box culverts suggested.

Previous Action Items:

- NCDOT will arrange a field review meeting on December 2, 2014. At this meeting, agency representatives will view Sites 1, 21, 24, and 34. Final determinations about bridging at these sites will be made during the field review meeting. (*Completed*)
- Lochner will investigate possible minimization and modifications at Site 76 as noted in the November Interagency Meeting notes. (*Completed*)

New Action Items:

- Lochner will coordinate with NCDOT Roadway Design on the planned changes to the functional design plans, particularly the service road shift at Site 34.
- Functional design plan revisions will be made at the above sites as indicated in the summary notes.
- Update the Hydraulics Study Report to include design analysis for Site 1A – Middle Creek at Sunset Lake Road.

Next Steps:

- Complete technical study reports – January 2015
- Prepare Draft Environmental Impact Statement – Spring 2015



Interagency Project Meeting

FINAL MEETING MINUTES

Date: August 19, 2015
2:15 p.m. – 3:30 p.m.
NCDOT Century Center – Structure Management Conference Room

Project: STIP R-2721, R-2828, and R-2929 – Complete 540 - Triangle Expressway Southeast Extension

Attendees:

Donnie Brew, FHWA	Mary Pope Furr, NCDOT Historic Architecture
Eric Alsmeyer, USACE	Matt Lauffer, NCDOT Hydraulics
Gary Jordan, USFWS	Bill Elam, NCDOT Hydraulics
Rob Ridings, NCDWR	Craig Lee, NCDOT Hydraulics
Dolores Hall, OSA*	Mark Staley, NCDOT REU
Renee Gledhill-Earley, SHPO*	Mike Stanley, NCDOT STIP
Chris Lukasina, CAMPO	Alan Shapiro, NCDOT Division 5
Eric Midkiff, NCDOT PDEA	Joey Hopkins, NCDOT Division 5
Jeffrey Teague, NCDOT Roadway Design	Kiersten Bass, HNTB
Neil Medlin, NCDOT NES	Jennifer Harris, HNTB
Jim Hauser, NCDOT NES	Fred Skaer, Dawson & Associates*
Chris Rivenbark, NCDOT NES	John Studt, Dawson & Associates*
Tris Ford, NCDOT HES	Roy Bruce, Lochner
Jamille Robbins, NCDOT HES	Jeff Schlotter, Lochner
Drew Joyner – NCDOT HES*	

* Participated via telephone

Presentation Materials:

- Agenda
- Presentation

Purpose:

Project status, introduce the reader friendly format for the Draft Environmental Impact Statement (EIS), and next steps

General Discussion:

The following information was discussed at the meeting:

- **Project Status and Draft EIS Presentation:** Roy Bruce and Jeff Schlotter of Lochner gave a presentation on the current status of the Complete 540 project, an overview of the reader friendly approach to the Draft Environmental Impact Statement (EIS), and the next steps in the study process. The presentation was made available to meeting participants in advance of the meeting.
- **Public Hearings:** Eric Alsmeyer noted that the NCDOT Public Hearings for the project will not be an official USACE Public Hearing but will suffice for their needs at this stage of the project development. USACE will issue a Public Notice for the project and will participate in the NCDOT Public Hearings. It is the USACE's intent to issue the Public Notice approximately 3 weeks in advance of the Public Hearings. Eric Alsmeyer requested that the transcripts of the Public Hearings be provided to the USACE.
- **Interagency Meetings:** The need for an interagency meeting between the issuance of the Draft EIS and the Public Hearing was questioned. The purpose for this meeting is to present the results of the technical studies, to review the public involvement activities on the project, and to answer

questions on the project documentation. This meeting will be kept on the schedule as a placeholder and a final decision on holding the meeting will be made after the Draft EIS has been distributed. Eric Midkiff or his designee will coordinate with Eric Alsmeyer to determine if the meeting will be held. An alternative to holding this meeting prior to the Public Hearing would be to hold it after the Public Hearing and before the Preferred Alternative Report is prepared.

- **USEPA Coordination:** Since USEPA was not present for today's meeting, NCDOT will make sure that the presentation and the meeting summary are made available to them and will address any questions that USEPA may have after reviewing the meeting materials.

Previous Action Items:

- NCDOT will arrange a field review meeting on December 2, 2014. At this meeting, agency representatives will view Sites 1, 21, 24, and 34. Final determinations about bridging at these sites will be made during the field review meeting. *(Completed)*
- If the Blue Corridor is selected as the Preferred Alternative, Lochner will investigate possible minimization and modifications at Site 76 as noted. *(Pending)*

New Action Items:

- NCDOT will make sure that the presentation and the meeting summary are made available to USEPA. *(Completed)*
- NCDOT will address any questions USEPA has regarding the meeting materials. *(Pending)*
- Eric Midkiff or his designee will schedule an interagency meeting once the Draft EIS is approved. It will be scheduled to occur prior to the public hearing and at least two weeks after the Draft EIS has been made available to the resource agencies. *(Pending)*
- Eric Alsmeyer will coordinate with the resource agencies after the Draft EIS has been provided to the agencies to ascertain their preference for conducting the scheduled interagency meeting. *(Pending)*
- Eric Midkiff or his designee and Eric Alsmeyer will discuss resource agency preferences regarding the timing for the next interagency meeting and make a final determination on whether to hold an interagency meeting prior to the public hearing. Eric Midkiff or his designee will communicate to the decision to the resource agencies. *(Pending)*

Next Steps:

- Publish Draft Environmental Impact Statement – Summer 2015
- Hold Public Hearings – Early Fall 2015



Interagency Project Meeting

FINAL MEETING SUMMARY

Date: February 17, 2016, 1:00 p.m. – 3:00 p.m.
NCDOT Century Center – Structure Design Conference Room

Project: STIP R-2721, R-2828, and R-2929 – Complete 540 - Triangle Expressway Southeast Extension

Attendees:

Donnie Brew, FHWA	Mary Pope Furr, NCDOT Historic Architecture
Eric Alsmeyer, USACE	Matt Lauffer, NCDOT Hydraulics
Cynthia Van Der Wiele, Phd., USEPA	Bill Elam, NCDOT Hydraulics
Rob Ridings, NCDWR	Craig Lee, NCDOT Hydraulics
Travis Wilson, NCDWR	John Pilipchuk, NCDOT Geotech*
Ken Riley, NMFS*	Kyle Pleasant – NCDOT Utilities
Renee Gledhill-Earley, HPO*	Mark Staley, NCDOT REU
Amy Chapman, NCDWR	Mike Stanley, NCDOT STIP
Chris Lukasina, CAMPO	Rupal Desai, NCDOT TPB
Eric Midkiff, NCDOT PDEA	Doumit Ishak – NCDOT Congestion Management
Richard Hancock, NCDOT PDEA	Tom Childrey, NCDOT ROW
Rob Hanson, NCDOT PDEA	Alan Shapiro, NCDOT Division 5
Tony Houser – NCDOT Roadway Design	Joey Hopkins, NCDOT Division 5
Jeffrey Teague, NCDOT Roadway Design	Dennis Jernigan, NCDOT Division 5
LeiLani Paugh, NCDOT NES	Keith Hanson, Contractor to NMFS
Neil Medlin, NCDOT NES	Kiersten Bass, HNTB
Jim Hauser, NCDOT NES	Jennifer Harris, HNTB
Colin Mellor, NCDOT NES	Fred Skaer, Dawson & Associates*
Jamille Robbins, NCDOT HES	John Studt, Dawson & Associates*
Drew Joyner – NCDOT HES	Roy Bruce, Lochner
Herman Huang – NCDOT HES	Kristin Maseman, Lochner

* Participated via telephone

Meeting Materials: Agenda, Handout #23 (Draft Preferred Alternative Report Exhibits), Public Information Meeting Brochure, and Presentation

Purpose: Project status, Draft Preferred Alternative Report review and discussion, next steps, and schedule

General Discussion: The following information was discussed at the meeting:

- **Project Status:** Roy Bruce gave a presentation on the current status of the Complete 540 project, the public and agency input received following release of the Draft Environmental Impact Statement (EIS), and the recommended Preferred Alternative for the project. The presentation included an overview of the Public Meetings and Public Hearing held in December 2015, a comparative review of the environmental impacts of the project's Detailed Study Alternatives (DSAs), and a review of the public and agency comments submitted. It also included a brief summary of the reasons why DSA 2 is recommended by NCDOT as the Preferred Alternative.
- **Draft Preferred Alternative Report:** Discussion on the information in the Draft Preferred Alternative Report included the following points:
 - NCHPO expressed appreciation for the efforts of NCDOT and their consultants with regard to avoiding impacts to historic resources.
 - USACE asked for clarification about why NCDOT prefers DSA 2 to DSAs 4 and 5, when the latter two DSAs would appear to minimize some impacts in comparison to DSA 2. Lochner explained that DSA 4 would impact the Clemmons Educational State Forest, with DSA 4 also affecting a

Section 4(f)-protected trail in the forest (DSAs 2 and 5 would avoid the forest and the trail). NC Forest Service and the USFWS felt impacts to Clemmons Educational State Forest are noteworthy. DSAs 4 and 5 would affect wastewater sprayfields at the Neuse River Wastewater Treatment Plant and would also affect a City of Raleigh policy training facility; DSA 2 would avoid these resources. Also, as compared to DSA 2, the Neuse River Trail would require more substantial realignments/improvements to accommodate the crossing by DSA 4 or 5. The wetland and stream impacts are relatively similar between DSA 2 and DSA 5.

- While USFWS staff was unable to attend the meeting, the agency provided verbal comments to Eric Midkiff in advance of the meeting. NCDOT presented those comments, which reiterated the agency's continued attention to potential effects on the dwarf wedgemussel (DWM), but also noted the ongoing coordination between NCDOT and USFWS in the multiphase DWM viability study. NMFS and NCWRC mentioned that there are moratoria that will limit construction in-water activities for this project; these are to protect fish species such as striped bass and American shad. The State moratorium is more stringent, limiting activity between February 15 and September 30. Further coordination on this matter will be appropriate as more detailed project plans are developed.
- Under the Section 6002 process, the agencies will continue to have input in further impact avoidance and minimization efforts after the Preferred Alternative is selected and the project development process continues.
- The USEPA has submitted preliminary written comments on the Draft Preferred Alternative Report and will be submitting additional comments after coordination with the agency's attorneys has concluded. At this time, USEPA does not have an environmentally-preferred alternative since, they note, impacts to the human and natural environment are speculative absent a preliminary design. The USEPA's primary concerns pertain to jurisdictional aquatic resources, relying on riparian buffers to protect water quality from additional non-point source pollutants, 303(d) stream impacts, TMDL issues, and the ability to satisfactorily protect endangered species, including the DWM.
- **Issues of Concern:** FHWA reiterated the definition of Issues of Concern from the SAFETEA-LU legislation. An issue of concern is any issue that could delay the project or could prevent an agency from granting a permit or other approval that is needed for the project. None of the agencies raised any issues of concern at the meeting.
- **Timing for Comments:** NCDOT previously noted to the agencies by email, dated December 4, 2015, that they would appreciate receiving written comments on the Draft Preferred Alternative Report and/or the identification of any Issues of Concern within 30 days from receipt of the Draft Preferred Alternative Report (March 2, 2016). USEPA indicated that their staff and attorneys will require the full 30 days from today's meeting as stated in the Complete 540 Section 6002 Coordination Plan for production of their written response. Therefore, the deadline for responses is March, 18, 2016.

Previous Action Items (from August 19, 2015 IAM):

- NCDOT will make sure that the presentation and the meeting summary are made available to USEPA. *(Completed)*
- NCDOT will address any questions USEPA has regarding the meeting materials. *(Completed)*

New Action Items:

- Agencies will submit written comments, identifying any Issues of Concern and noting any items about the Draft Preferred Alternative Report, by March 18. Agencies not planning to submit written comments should notify Kiersten Bass by email at kbass@hntb.com.
- Agencies will notify USACE about any Issues of Concern as soon as possible and prior to submitting written comments to NCDOT.

Next Steps:

- Finalize Preferred Alternative Report – Spring 2016
- Final Environmental Impact Statement – To be determined



Interagency Project Meeting

FINAL MEETING SUMMARY

Date: March 16, 2016
1:00 p.m. – 2:30 p.m.
H. W. Lochner Inc. – Conference Room

Project: STIP R-2721, R-2828, and R-2929 – Complete 540 - Triangle Expressway Southeast Extension

Attendees:

Donnie Brew, FHWA	Tony Houser, NCDOT Roadway Design
Eric Alsmeyer, USACE	Keith Hanson, Contractor to NMFS
Cynthia Van Der Wiele, Phd., USEPA	Kiersten Bass, HNTB
Rob Ridings, NCDWR	Jennifer Harris, HNTB
Chris Lukasina, CAMPO	Roy Bruce, Lochner
Brian Yamamoto, NCDOT PDEA	Brian Eason, Lochner
Nora McCann, NCDOT PDEA	Doug Wheatley, Lochner
Rob Hanson, NCDOT PDEA	

Meeting Materials: Agenda, Presentation, Public Hearing Maps, and Functional Preliminary Plans

Purpose: Interagency informational meeting on the development of functional preliminary plans for the 17 Detailed Study Alternatives (DSA) for the project

General Discussion: The following information was discussed at the meeting:

- **Introductions and Overview/Purpose of the Meeting:** Donnie Brew welcomed all and thanked everyone for their attendance at the meeting. He reviewed the purpose of the meeting and led introduction of participants.
- **Presentation:** Roy Bruce gave a presentation that showed the progression of design from concept through functional preliminary plans for the 17 DSAs and how impact avoidance and minimization was a focus at each step of the process. The following items were discussed during and following the presentation:
 - All design was done to the same level of detail and following the same process for each of the 10 color-coded corridor segments that are then combined to form the 17 DSAs.
 - Multiple interchange designs were evaluated at each of the proposed interchange locations.
 - The selected interchange type at each of the interchange locations meets the operational requirements for the project and minimizes impacts to human and natural resources to the extent practical.
 - The design effort on this project was consistent with or exceeded other similar large-scale new location highway projects for NCDOT.
- **Example Locations and Corridor Reviews:** Brian Eason reviewed several locations along various color-coded corridor segments where impacts had been minimized during the design process through alignment shifts (within the 1,000 foot corridor), or bridging. Additionally, the functional preliminary designs in several of the color-coded corridor segments were reviewed. The following items were discussed during the corridor reviews:
 - Development of the next level of design (preliminary plans) will be done for the Preferred Alternative only. At this time, NCDOT has indicated their preference for DSA 2 (Orange-Green-Mint-Green).
 - The Section 6002 Coordination Plan has a provision for additional agency participation during development of the preliminary plans at a minimization meeting for the Preferred Alternative (a

Concurrence Point 4A type meeting in the Merger Process). This meeting will take place before additional design public meetings or hearings are held on the project.

- During the conceptual and functional design phases, each of the interchanges are typically represented as standard diamond interchanges with provisions for future loop ramps. These interchanges are reconsidered during preliminary design for functionality and minimization of impacts. For the Complete 540 project, most of the interchanges have already been reviewed and minimization has been incorporated into the current designs. This does not preclude discussion of further minimization during preliminary design for the preferred alternative.
- Shifting an alignment in a corridor was not a simple matter because avoidance or minimization of specific resources at one location added or increased impacts to resources at another location. There are many tradeoffs in impacts to the human and natural environment in locating a highway such as 540 in an urbanizing area.
- **Coordination with the City of Raleigh:** FHWA let the agencies know that there has recently been some coordination between the City of Raleigh, NCDOT, FHWA, and USACE relative to various infrastructure elements owned by Raleigh along the various color-coded corridors.
- **Meeting Conclusion:** FHWA asked the agencies present if they have, or are aware of, any Issues of Concern. None were noted.

Previous Action Items (from February 17, 2016 IAM):

- Agencies will submit written comments, identifying any Issues of Concern and noting any items about the Draft Preferred Alternative Report, by March 18. Agencies not planning to submit written comments should notify Kiersten Bass by email at kbass@hntb.com. *(as of March 18, 2016 no Issues of Concern regarding the recommendation of DSA 2 as the Preferred Alternative have been raised)*
- Agencies will notify USACE about any Issues of Concern as soon as possible and prior to submitting written comments to NCDOT. *(as of March 18, 2016 no Issues of Concern regarding the recommendation of DSA 2 as the Preferred Alternative have been raised)*

New Action Items:

- NCDOT and FHWA will review the comments on the draft Preferred Alternative Report and determine if there is need for an additional agency coordination meeting.
- NCDOT will address comments on the Draft Preferred Alternative Report either in the Final Preferred Alternative Report of Final EIS, as appropriate.

Next Steps:

- Announce selection of the Preferred Alternative – Spring 2016
- Finalize Preferred Alternative Report – Spring 2016
- Final Environmental Impact Statement – To be determined
- Record of Decision – To be determined

USEPA Comments Received Post Meeting:

Following the conclusion of the meeting, USEPA provided comments relative to the functional preliminary designs to FHWA. The comments were marked on a set of the Public Hearing Maps that had been provided by the study team to USEPA on 3/3/16. There were no comments on Sheets 3, 6B, 7A, 7B, 7E, 8, and the Key Map. The following are the comments received and responses.

Sheet 1

Comment: Orange Corridor between NC 55 Bypass and Sunset Lake Road - Avoidance here was “avoid subdivision and go on top of stream/wetland system” . . . Alignment does not appear to be “best fit”; looks like dead center.

Response: The existing alignment for the already constructed portion of the Triangle Expressway at NC 55 Bypass sets the beginning alignment for the project. The subdivisions Sunset Hills, Miramonte, and Fair Oaks were constructed immediately adjacent to the Protected Corridor. Avoidance of the stream and

wetlands in this area is not possible. Moving the alignment towards and into Sunset Hills will not likely reduce stream impacts as the stream impacts avoided near Miramonte will be replaced with additional stream impacts east of Sunset Hills. Similarly, moving the alignment towards and into Fair Oaks is a tradeoff of stream impacts. The situation for wetlands is similar. This crossing of Middle Creek (site 1) was discussed at the project Interagency Bridging Meeting on 11/13/14 and was also discussed during the agency field review on 12/3/14. The conclusion at those meetings was to bridge the main channel of Middle Creek with roughly 90 foot long bridges. Hydraulically this crossing requires a triple 11'x11' box culvert. This area is common to all 17 DSAs and can be reviewed further for additional minimization in the future.

Comment: Orange Corridor at the Holly Springs Road interchange – Why is all this needed for a high speed thru route?

Response: Kildaire Farm Road and Holly Springs Road both carry a relatively high amount of traffic as two-lane roads. The intersection that joins these two roads will be relocated in conjunction with the Complete 540 project. Each of these roads is planned for widening in the future as growth continues in the area. In order to accommodate the traffic volumes and movements associated with the Complete 540 project, improvements are needed along both Kildaire Farm Road and Holly Springs Road.

Comment: Orange Corridor at the Bells Lake Road interchange – Why massive interchange on a little secondary road?

Response: The Bells Lake Road interchange is included in the Capital Area Metropolitan Planning Organization's Metropolitan Transportation Plan for the region. This interchange is to provide access to the residences and businesses in this portion of the study area. The next interchange to the west is at Holly Springs Road about two miles away and the next interchange to the east is at Fayetteville Road also about two miles away. The size of the proposed interchange is smaller than a typical diamond interchange at a secondary road since all movements have been consolidated into two interchange quadrants. This consolidation was done to minimize impacts to streams, ponds, and wetlands.

Sheet 2

Comment: Orange Corridor and Red Corridor at the Fayetteville Road (US 401) interchange – Any other type of interchange design that'll work or has a smaller footprint?

Response: Several interchange configurations were developed and reviewed at these two locations. None of the other interchange configurations were smaller than the ones shown and met the operational needs for the interchange and this heavily traveled US highway with multiple access points to adjacent properties.

Comment: Red Corridor at the extension of Caddy Road – What is this all about?

Response: The existing intersection of Caddy Road and Fayetteville Road (US 401) would be in the interchange area and therefore must be relocated. This new connection could have been along the outside of the fill of the ramp in the southeast quadrant of this interchange and tie to an existing development access road away from the interchange. Alternatively, a new connection could be created by extending Caddy Road to Ten Ten Road east of Fayetteville Road. If the Red Corridor is part of the DSA selected as the Preferred Alternative, this property access road matter can be further addressed.

Comment: Red Corridor at Swift Creek crossing – How about bridging from wetland edge to wetland edge?

Response: This crossing of Swift Creek (site 34) was discussed at the project Interagency Bridging Meeting on 11/13/14 and was also discussed during the agency field review on 12/3/14. The conclusion at those meetings was to bridge Swift Creek with the size of bridge that is needed hydraulically. If the Red Corridor is part of the DSA selected as the Preferred Alternative, this bridge length can be reviewed further for additional minimization in the future.

Comment: Orange Corridor at Old Stage Road interchange – Why do you need a massive interchange for Old Stage Road? You're not going highway to highway.

Response: The proposed interchange is a diamond configuration that allows for future loops in both the northeast and southwest quadrants. This interchange type is the standard interchange form utilized by NCDOT for a “service” interchange. A “system” interchange that would allow for access from high speed highway to highway would be a different configuration and be a larger footprint. If the Orange Corridor is part of the DSA selected as the Preferred Alternative, this design can be discussed further relative to minimization of impacts.

Sheet 4

Comment: Red Corridor at Reedy Creek crossing – Doesn’t look like best fit.

Response: Shifting the alignment to the north at Reedy Creek in the Red Corridor (site 38) would potentially reduce stream and wetland impacts at this location. The tradeoff would be substantially greater residential relocations in the Heather Ridge and Heather Hills subdivisions. Additionally, shifting the alignment to the north would also impact Timber Drive Elementary School and possibly conflict with existing Timber Drive.

Comment: Red Corridor at I-40 – Two massive interchanges this close together?

Response: The proximity of the existing US 70 and I-40 interchange to the proposed 540 and I-40 interchange is not ideal and requires the inclusion of collector distributor ramps along I-40 in order to allow the two interchanges to function together. These collector distributor ramps are included in the functional preliminary plans as part of the interchange complex.

Comment: Red Corridor at I-40 – Bridge the system from wetland edge to wetland edge.

Response: It is not clear from the comment what stream crossing is being referenced (possible sites 42, 43, or 44). However, if the Red Corridor is part of the DSA selected as the Preferred Alternative, this wetland crossing can be reviewed further for additional minimization in the future.

Sheet 5A

Comment: Orange Corridor at Juniper Branch – I’m seeing a design that is dead center rather than best fit. No bridging from wetland edge to wetland edge.

Response: The subdivisions of Crest of Carolina and Tavernier were developed up to the Protected Corridor in this location. The alignment in the center of the corridor at this location may be the best fit. Shifting to the south in the corridor would result in a similar stream impact and more wetland impacts. Plus this would likely result in an alignment that is closer to the Panther Branch School, which is listed on the National Register of Historic Places. Shifting to the north in the corridor would increase stream impacts and possibly somewhat reduce wetland impacts. This shift would impact the homes for a half mile along Contender Drive in Crest of Carolina. The bridging that is shown at Juniper Branch is as was discussed at the project Interagency Bridging Meeting on 11/13/14. If the Orange Corridor is part of the DSA selected as the Preferred Alternative, this bridging can be discussed further relative to minimization of impacts.

Comment: Orange Corridor at Benson Road (NC 50) interchange – Any other interchange design options?

Response: Several interchange configurations were reviewed at this location. The interchange that is included is a standard diamond interchange with the movements from the northern quadrant included in the western quadrant. This design was selected to minimize impacts on streams. Changing to a more urban interchange would increase stream impacts.

Comment: Orange Corridor at a tributary to Swift Creek – How about bridging the system?

Response: This crossing (site 21) was discussed at the project Interagency Bridging Meeting on 11/13/14 and was also discussed during the agency field review on 12/3/14. The conclusion at those meetings was to bridge the wetlands associated with this system at this skewed crossing. If the Orange Corridor is part of the DSA selected as the Preferred Alternative, this bridging can be discussed further relative to minimization of impacts.

Sheet 5B

Comment: Orange Corridor – No preliminary design here . . .

Response: Sheet 5B intentionally only shows the preliminary design for the Blue Corridor. Sheet 5A shows the design for the Orange and the Lilac Corridors. This was done in this manner to facilitate easier viewing of the corridors in this section of the project because of overlapping adjacent designs at the Benson Road interchange location.

Sheet 6A Inset O-G

Comment: Orange Corridor – Interchange design. Spanning structures.

Response: The exact meaning of this comment is unclear. Several interchange configurations were reviewed at this location where I-40, the Clayton Bypass, and 540 come together. This is a complicated system to system interchange. Additionally, entrance ramps to 540 were separated from other ramps because of 540 operating as a toll facility. At a tributary to Swift Creek west of I-40 (site 24) two ramps have bridges and the mainline and other ramps have a culvert. This crossing was discussed at the project Interagency Bridging Meeting on 11/13/14 and was also discussed during the agency field review on 12/3/14. The conclusion at those meetings is what is shown in the current plans.

Sheets 7C & 7D (duplicate comment & related response)

Comment: Red Corridor at Rock Quarry Road interchange – Big diamond for secondary road?

Response: The size of the proposed interchange is typical for a diamond interchange. This interchange form is the standard interchange form utilized by NCDOT. If the Red Corridor is part of the DSA selected as the Preferred Alternative, this design can be discussed further relative to minimization of impacts. Because there is no interchange provided on the Red Corridor at US 70 Business, the Rock Quarry Road interchange serves the US 70 Business traffic. To better accommodate this traffic, Rock Quarry Road is improved and extended to US 70 Business as part of this interchange. No interchange is provided on the Red Corridor at US 70 Business because of the close proximity to the existing interchange along US 70 Business at Greenfield Parkway, to the intersection of Auburn-Knightdale Road and Raynor Road with US 70 Business, and to the I-40 interchange along the Red Corridor.



Interagency Project Meeting

FINAL MEETING SUMMARY

Date: June 15, 2017
3:00 p.m. – 3:45 p.m.
NCDOT Century Center – Structure Design Conference Room

Project: STIP R-2721, R-2828, and R-2929 – Complete 540 - Triangle Expressway Southeast Extension

Attendees:

Donnie Brew, FHWA
Clarence Coleman, FHWA
Gary Jordan, USFWS
Monte Matthews, USACE
Cynthia Van Der Wiele, USEPA
Ntale Kajumba, USEPA*
Rob Ridings, NCDWR
Travis Wilson, NCWRC
Chris Lukasina, CAMPO
Rodger Rochelle, NCTA
Brian Yamamoto, NCDOT Project Development
Nora McCann, NCDOT Project Development
Jim Hauser, NCDOT EAU
Deanna Riffey, NCDOT EAU
Jared Gray, NCDOT Biological Surveys Group
Herman Huang – NCDOT Community Studies
Mary Pope Furr, NCDOT Historic Architecture
Craig Lee, NCDOT Hydraulics
John Pilipchuk, NCDOT Geotech*
Chris Kreider, NCDOT Geotech*
Todd Lapham – NCDOT Utilities
Donna Jackson, NCDOT Utilities

Kevin Fischer – NCDOT Structures Management
Mike Stanley, NCDOT STIP
Scott Walston, NCDOT TPB*
Rupal Desai, NCDOT TPB*
Braden Walker – NCDOT Congestion Management
Tim Little, NCDOT Division 4
Alan Shapiro, NCDOT Division 5
Joey Hopkins, NCDOT Division 5
Brian Rogers, NCDOT Division 5 ROW
Kiersten Bass, HNTB
Jennifer Harris, HNTB
Ken Gilland, HNTB
Tim Savidge, Three Oaks Engineering
Nancy Scott, Three Oaks Engineering
Bill Hartwig, Dawson & Associates*
Dave Barrows, Dawson & Associates*
Tris Ford, RK&K
Lorna Parkins, Michael Baker
Emaly Simone, Michael Baker
Roy Bruce, Lochner
Kristin Maseman, Lochner

* Participated via telephone

Meeting Materials:

- Agenda, Presentation

Purpose:

Project status update; review quantitative indirect and cumulative effects analysis methods/results

Discussion:

The following information was discussed at the meeting:

- **Project Status:** Roy Bruce gave a brief presentation, reviewing the project's Section 6002 coordination to date, summarizing the project status, and describing the technical work and coordination that have occurred since the Preferred Alternative was identified in April 2016. Following the presentation on the quantitative indirect and cumulative effects (ICE) analysis described below, he described the anticipated project schedule.

During the portion of the status update on protected species, USFWS emphasized that the yellow lance was proposed for listing in April 2017 and if there are no changes should be listed as "threatened" in April of 2018. USFWS also noted that there are no official updates on the

possible listing status for the Atlantic pigtoe, Neuse River waterdog, or the Carolina madtom. Roy noted that species surveys have been completed for each of these species in the project area.

- **Quantitative ICE Analysis:** Lorna Parkins gave a presentation summarizing the methods used in the project's quantitative ICE analysis and the results of the analysis.
- **Comments/Questions:**
 - USFWS asked whether the 2040 Build scenario in the ICE analysis took into account the anticipated construction phasing for the project. The project team responded that the modeling used in the analysis reflected anticipated 2040 conditions, at which time all segments of the Complete 540 would be constructed, based on the current construction schedule.
 - USFWS asked how the project's Biological Assessment (BA) will fit into the overall schedule. The project team responded that a working draft of the BA is under internal review and is anticipated to be ready to submit to USFWS in late summer. NCDOT and FHWA understand that the aggressive schedule may mean that the Final EIS may need to be published prior to issuance of the Biological Opinion (BO) by USFWS. USFWS agreed that as long as the BO is issued prior to the ROD, this should not be problematic.
 - NCDOT HES asked that the documentation of the quantitative ICE analysis be clear about how data are reported. It is important to note if reporting is a number (e.g., the estimated percent impervious for a watershed is 5 percent) or a percentage difference (e.g., the difference in percent impervious for the watershed between the Build and No-Build scenarios is less than one percentage point).
 - USFWS requested a copy of this meeting's presentation. This will be provided with the meeting summary distribution (see enclosed).
 - NCDWR asked if the ICE Report will be part of the Final EIS. The project team responded that the report is still being finalized, but that it will be incorporated in the Final EIS by reference and the report's findings will be summarized in the Final EIS. USFWS explained that it will need to be able to review a copy of the ICE Report before it can issue the BO.

Previous Action Items (March 16, 2016 IAM):

- NCDOT and FHWA will review the comments on the draft Preferred Alternative Report and any identified Issues of Concern and determine the need for an additional agency coordination meeting. *(Completed)*
- NCDOT will address comments on the draft Preferred Alternative Report and finalize the report. *(Completed)*

New Action Items:

- The presentation will be attached to the meeting summary and distributed to the meeting attendees.



Interagency Project Meeting

FINAL MEETING SUMMARY

Date: June 15, 2017
3:00 p.m. – 3:45 p.m.
NCDOT Century Center – Structure Design Conference Room

Project: STIP R-2721, R-2828, and R-2929 – Complete 540 - Triangle Expressway Southeast Extension

Attendees:

Donnie Brew, FHWA
Clarence Coleman, FHWA
Gary Jordan, USFWS
Monte Matthews, USACE
Cynthia Van Der Wiele, USEPA
Ntale Kajumba, USEPA*
Rob Ridings, NCDWR
Travis Wilson, NCWRC
Chris Lukasina, CAMPO
Rodger Rochelle, NCTA
Brian Yamamoto, NCDOT Project Development
Nora McCann, NCDOT Project Development
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Deanna Riffey, NCDOT EAU
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Roy Bruce, Lochner
Kristin Maseman, Lochner

* Participated via telephone

Meeting Materials:

- Agenda, Presentation

Purpose:

Project status update; review quantitative indirect and cumulative effects analysis methods/results

Discussion:

The following information was discussed at the meeting:

- **Project Status:** Roy Bruce gave a brief presentation, reviewing the project's Section 6002 coordination to date, summarizing the project status, and describing the technical work and coordination that have occurred since the Preferred Alternative was identified in April 2016. Following the presentation on the quantitative indirect and cumulative effects (ICE) analysis described below, he described the anticipated project schedule.

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possible listing status for the Atlantic pigtoe, Neuse River waterdog, or the Carolina madtom. Roy noted that species surveys have been completed for each of these species in the project area.

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 - NCDWR asked if the ICE Report will be part of the Final EIS. The project team responded that the report is still being finalized, but that it will be incorporated in the Final EIS by reference and the report's findings will be summarized in the Final EIS. USFWS explained that it will need to be able to review a copy of the ICE Report before it can issue the BO.

Previous Action Items (March 16, 2016 IAM):

- NCDOT and FHWA will review the comments on the draft Preferred Alternative Report and any identified Issues of Concern and determine the need for an additional agency coordination meeting. *(Completed)*
- NCDOT will address comments on the draft Preferred Alternative Report and finalize the report. *(Completed)*

New Action Items:

- The presentation will be attached to the meeting summary and distributed to the meeting attendees.



Interagency Project Meeting

FINAL MEETING SUMMARY

Date: July 12, 2017
10:00 a.m. – Noon
NCDOT Century Center – Structure Design Conference Room

Project: STIP R-2721, R-2828, and R-2829 – Complete 540 - Triangle Expressway Southeast Extension

Attendees:

Donnie Brew, FHWA	Doumit Ishak, NCDOT Congestion Mgmt.
Gary Jordan, USFWS	Bill Elam, NCDOT Hydraulics
Eric Alsmeyer, USACE	Matt Lauffer, NCDOT Hydraulics*
Rob Ridings, NCDWR	Kathy Smith, NCDOT ROW*
Travis Wilson, NCWRC	Rupal Desai, NCDOT TPB
Chris Lukasina, CAMPO	Matt Wilkerson, NCDOT HEC
Kenneth Withrow, CAMPO	Richard Hancock, NCDOT Division 5
Brian Yamamoto, NCDOT Project Development	Neal Strickland, NCDOT ROW
Nora McCann, NCDOT Project Development	Kiersten Bass, HNTB
Jim Hauser, NCDOT EAU	Jennifer Harris, HNTB/NCTA
Deanna Riffey, NCDOT EAU	David Bass, HNTB
Chris Rivenbark, NCDOT EAU	Michael Wood, Three Oaks Engineering
Leilani Paugh, NCDOT EAU	Nancy Scott, Three Oaks Engineering
Jared Gray, NCDOT Biological Surveys Group	Frank Fleming, Ecological Engineering
Herman Huang, NCDOT Community Studies	Bill Hartwig, Dawson & Associates*
Mary Pope Furr, NCDOT Historic Architecture	Roy Bruce, Lochner
John Pilipchuk, NCDOT Geotech*	Brian Eason, Lochner
Mark Staley, NCDOT REU	Christina Yokeley, Lochner

* Participated via telephone

Presentation Materials:

- Agenda
- Handout #24 - Impact Minimization for the Preferred Alternative

Purpose:

Project status update; review locations of project avoidance and minimization efforts.

Project Discussion:

The following information was discussed at the meeting:

- **Project Status and Meeting Purpose:** Lochner reviewed previous agency coordination for the project, summarizing the project status and describing the technical work and coordination that have occurred since the Preferred Alternative was identified in April 2016.
- **Design Changes from Functional to Preliminary:** Lochner summarized the differences between the functional designs (used to calculate the impacts reported in the Draft EIS) and the current preliminary designs. Key distinctions between the functional and preliminary designs are:

- Impacts based on functional designs were calculated within 40 feet of the construction limits (slope stakes) on each side, while current impacts based on preliminary designs were calculated within 25 feet of the construction limits.
- Preliminary designs include the results of a detailed service road study, where access for every impacted property was identified, while functional designs only included service road access provisions to large parcels.
- While the functional designs used a 2:1 maximum slope ratio, NCTA and the NCDOT Geotechnical Unit directed the project team to use 3:1 for maximum slopes in cuts for the preliminary designs due to issues with slope stability experienced by the adjacent Triangle Expressway project.
- The current preliminary designs incorporate horizontal and vertical alignment shifts to avoid and minimize impacts.
- **Prior Avoidance and Minimization:** Lochner explained that prior design decisions, including selection of layouts for each interchange and proposing to bridge eight wetland/stream sites beyond what is needed for hydraulic conveyance, have helped to avoid and minimize natural system impacts.
- **Retaining Walls:** Lochner explained that changing the cut slopes from a 2:1 maximum slope to a 3:1 maximum slope would create additional impacts to adjoining developed parcels. To avoid these additional impacts, the project team incorporated retaining walls in some locations.
- **Alignment Shifts:** Lochner reviewed each alignment shift that has been incorporated into the preliminary designs to avoid or minimize impacts following selection of the Preferred Alternative.
 - **US 401:** The horizontal alignment was shifted to the north about 110 feet to help minimize impacts to two streams and one wetland. This also reduced the impact to a cemetery adjacent to the interchange and Donnie Brook Road.
 - **Benson Road:** This alignment shift helped minimize impacts to two wetlands and one “WDN” stream.
 - **Swift Creek/Turner Farms:** This alignment shift resulted from a public request to minimize impacts to the Turner Farms subdivision. The functional designs would have affected several properties along Fantasy Moth Drive. Shifting the alignment slightly in this area helped eliminate partial property impacts along Fantasy Moth Drive, produced a more perpendicular crossing of Swift Creek, and minimized impacts to several wetlands and streams.
 - **I-40:** This alignment shift, which mainly occurs on the I-40 interchange ramps is a result of refinement of the interchange design. This shift results in smaller impacts to a wetland and a stream in this area.
 - **Auburn Knightdale Road:** The interchange ramp alignments in this area were revised to minimize impacts to three wetlands, one stream, and floodplains.
 - **US 64/264:** The proposed design of the interchange at US 64/264 was refined based on the latest traffic forecast and a modification to the interchange ramp flyover for US 264 WB to 540 SB. This refinement increased the overall footprint of the interchange which increased impacts to four wetlands, four streams, and one pond.
 - **Neuse River Crossing:** The functional designs included a culvert crossing for the existing Neuse River Greenway Trail. The City of Raleigh has since requested relocating the trail under the proposed bridge for the Neuse River crossing in lieu of a culvert. The preliminary designs reflect this change.
- **Comments/Questions:**
 - USFWS asked if the handout packet was the same as what was sent out with the meeting invite. Roy Bruce confirmed, that the handouts were the same.

- USACE asked if 3:1 cut slope recommendations were for the entire project or certain locations within the project. NCDOT explained that the current preliminary slope recommendations are for the entire project, but reiterated that these are preliminary recommendations and still subject to change. NCDOT Geotechnical Unit is currently working on finalizing the project geotechnical recommendations.
- USACE asked if the area shown on Figure 18 incorporated a retaining wall to reduce wetland impacts. Lochner explained that retaining walls were incorporated only in locations where the 3:1 cut slopes impacted developed neighborhoods and were not used to minimize wetland or stream impacts.
- USACE asked if the alignment shift shown on Figure 20 would impact the NCDOT Underhill Mitigation Site. NCDOT explained that while the shift does move the alignment slightly more inside the mitigation site, the site is being bridged.
- NCDOT EAU, asked if there was embankment (fill) at the Underhill Mitigation Site. The project team explained that because the mitigation site is being bridged, no embankment would be placed on this site under the current proposed preliminary designs.
- NCDOT EAU asked if any temporary impacts during construction for access would be allowed, such as a temporary causeway in the Swift Creek area. NCWRC stated there should be no causeway allowed in the Swift Creek area.
- NCDOT EAU mentioned that properties with substantial natural resources would be considered for preservation as part of the overall mitigation plan.
- USACE asked if the alignment shift shown on Figure 41 would increase wetland and stream impacts. NCDOT confirmed that it would increase the impacts, but reiterated that the alignment shift provides a safer design that consistent with driver expectations, and the additional impacts were also a result of the new two-lane ramp alignment necessary to accommodate the traffic volumes in the latest traffic forecast.
- USACE asked if the modification that takes the Neuse River Trail under the Neuse River Bridge would result in any additional natural resource impacts. During the meeting, NCDOT stated that there would be no additional impacts to wetlands and streams.

Correction: Following the meeting, the project team determined that relocating the Neuse River Trail would, in fact, increase impacts. See the table below for additional impacts associated with relocating the Neuse River Trail.

Neuse River Trail Impacts (R-2829)						
Streams (lf)	Buffer Zone 1 (acres)	Buffer Zone 2 (acres)	Wetlands (acres)	Floodway (acres)	100 Yr Flood (acres)	500 Yr Flood (acres)
162	0.22	0.11	0.004	0.77	2.01	2.08

- USACE asked about the purpose of the two service roads near Poole Road (Figure 39), one just north of Poole Road and one just south. NCDOT explained that they both were to provide access to large parcels that were bisected by 540. USACE asked if these parcels had access issues prior to 540. Lochner responded that the parcels do have existing access to Hodge Road; since the parcels will be bisected by 540, the service roads will provide access to the portions of the parcels that would have otherwise been landlocked.
- NCDOT EAU noted that the area shown on Figure 39 south of Poole Road and east of 540 may be a suitable site for on-site preservation.
- NCWRC asked if the total impacts included impacts within the interchange. Lochner confirmed that these project impacts are inclusive of impacts inside the interchange.
- NCDOT Historic Architecture explained that 7 of the 168 surveyed archaeological sites are being carried forward for more analysis. Analysis on a Revolutionary War cemetery is

- continuing. There is also continuing consultation occurring on a mill site that was previously considered potentially eligible (OSA does not consider the site to be eligible).
- NCDOT Historic Architecture explained that there were no adverse effect calls based on the functional designs. This should be confirmed once the final noise report is completed to determine if the recommended noise walls will have any impacts on historic properties.
 - NCDOT Historic Architecture stated that NCDOT Division 5 has a project near the Donny Brook Road/Optimist Farm Road intersection that may need to be coordinated with the Complete 540 project.
 - CAMPO asked if the Neuse River Greenway will remain open during construction. NCDOT indicated that the design-build contract could include a provision to maintain access through the project site for the greenway during construction. CAMPO requested that all existing greenways remain open during construction with the understanding that there may need to be some short-term closures for certain construction activities.
 - USACE indicated awareness that there are several locations where the current preliminary design shows conflicts with the Colonial Pipeline, which will require relocation of the pipeline prior to 540 construction. There could be additional impacts associated with the pipeline relocation.
 - NCDOT asked each agency team member to indicate any issues of concern that could potentially delay the issuance of a permit.
 - NCDWR indicated that it has no current issues of concern, but stressed that the project designs include adequate right of way to accommodate stormwater management devices.
 - NCWRC asked if there are any additional measures to avoid or minimize the impacts to the large stream (UT to Swift Creek) just east of NC 50. NCWRC questioned how stormwater would impact this area, given the proximity of the stream to the NC 50 interchange, and asked if there was opportunity for on-site mitigation. NCDOT explained and that this is one of the sites that the agencies visited during the December 2014 bridging meeting. Hydraulic conveyance requirements for this site are dual 6' x 5' box culverts. This site was not recommended for bridging during the agency review. Additional opportunities for further minimizing impacts to this stream will be considered further as design progresses.
 - NCDOT Hydraulics asked if a temporary bridge will be allowed at Swift Creek. NCWRC agreed that this could be helpful.
 - USACE asked if it is possible to realign the stream outside of Triassic Basin. No response was given.
 - USFWS did not express any issues of concern and noted they are satisfied with the proposed avoidance and minimization measures, but explained that it needs to complete formal consultation on the Biological Assessment (BA). The BA should be ready for USFWS review by mid-August.
 - FHWA, USACE, and CAMPO indicated that they had no issues of concern.
 - Since USEPA was not present at the meeting, NCDOT and USACE will contact USEPA to discuss the avoidance and minimization efforts and determine if USEPA has any issues of concern relative to the project.
 - NCDOT EAU stated that they will continue to seek on-site mitigation sites, where appropriate for each project.
 - NCDOT explained that the current Draft STIP has funding for R-2721 and R-2828 beginning in in Fiscal Year 2020, but there is a push to have these projects advanced, particularly R-2721.

Action Items:

- NCDOT will provide agencies with a copy of this meeting's presentation and meeting summary ~ *completed*.
- NCDOT (B. Yamamoto) and USACE (E. Alsmeyer) will contact USEPA (C. Militscher) to convey information from this meeting and determine if USEPA has any issues of concern with the project ~ *completed*. Subsequent to this meeting, a coordination meeting with USEPA was held on July 25, 2017 to discuss avoidance and minimization for the project. A summary of that meeting follows.

Date: July 25, 2017
3:00 pm
NCDOT Century Center – Photogrammetry Conference Room

Project: STIP R-2721, R-2828, and R-2829 – Complete 540 - Triangle Expressway Southeast Extension

Attendees:

Donnie Brew, FHWA
Chris Militscher, USEPA
Brian Yamamoto, NCDOT Project Development
Nora McCann, NCDOT Project Development
Kiersten Bass, HNTB
Jennifer Harris, HNTB/NCTA
Roy Bruce, Lochner
Brian Eason, Lochner
Christina Yokeley, Lochner
USACE and NCDWR were notified of this meeting in advance of it being held

Presentation Materials:

- Agenda from the July 12, 2017 Interagency Meeting
- Handout #24 - Impact Minimization for the Preferred Alternative

Purpose:

In accordance with an action item from the July 12, 2017 interagency meeting for the Complete 540 project, Brian Yamamoto arranged this subsequent meeting to provide USEPA with a project status update and review locations of project avoidance and minimization efforts.

Project Discussion:

The following information was discussed at the meeting:

- **Complete 540 overview:** USEPA indicated that they had no issues of concern about this project. They do expect that their comments on the Draft Environmental Impact Statement (EIS) will be addressed as part of the Final EIS documentation. USEPA noted that at this time, they know of no issues with this project that would cause them to elevate this project or delay the permits for the project.
- **Climate Change and Global Warming Analysis:** USEPA noted that the Executive Order and prior guidance on climate change and global warming has been rescinded. Therefore, the USEPA comment on the Draft EIS relative to this matter can note this withdrawal in the response and note the comment. If NCDOT and FHWA wish to respond further, they should limit the response to non-speculative analysis. They may wish to address resiliency as it relates hydraulic design for the project and the conveyance of 100-year flood.
- **Environmental Documentation:** USEPA indicated appreciation for the organization and condensed nature of the Draft EIS for this project. The focus on the areas of significance in the

Draft EIS and the use of referencing to technical documentation was encouraged. USEPA referenced the CEQ NEPA Regulations section 1500.4 on reducing paperwork. This same approach is anticipated for the Final EIS for the project. The anticipated timing of the Final EIS in early 2018 and the Record of Decision in mid-2018 was discussed.

- **Avoidance and Minimization:** Lochner provided the same information from the July 12, 2017 interagency meeting in the form of the presentation and handout. USEPA complimented the study team for their efforts to avoid and minimize impacts along a 28-mile-long project. USEPA indicated that they had no issues of concern relative to the avoidance and minimization efforts to date.
- **Alignment Shifts:** USEPA requested to examine more closely the alignment shifts near US 401 and in the Swift Creek watershed. Lochner reviewed the alignment shifts in the areas that have been incorporated into the preliminary designs to avoid or minimize impacts following selection of the Preferred Alternative.
 - **US 401:** The horizontal alignment was shifted to the north about 110 feet to help minimize impacts to two streams and one wetland. This also reduced the impact to a cemetery adjacent to the interchange and Donnie Brook Road.
 - **Swift Creek/Turner Farms:** This alignment shift resulted from a public request to minimize impacts to the Turner Farms subdivision. The functional designs would have affected several properties along Fantasy Moth Drive. Shifting the alignment slightly in this area helped eliminate partial property impacts along Fantasy Moth Drive, produced a more perpendicular crossing of Swift Creek, and minimized impacts to several wetlands and streams.
- **FAST 41 Project List:** USEPA noted that this project is on the Federal Permitting Improvement Steering Council's (FPISC) FAST 41 list of projects on their permitting dashboard. Title 41 of the FAST Act was designed to improve the timeliness, predictability, and transparency of the Federal environmental review and authorization process for covered infrastructure projects. See www.permits.performance.gov/projects/southern-and-eastern-wake-expressway-n.
- **Comments/Questions:**
 - USEPA asked if the study team had information on relocation changes associated with the avoidance and minimization efforts. The initial interchange layout effort attempted to avoid and minimize both impacts to the human and natural environments. Relocation information from the Draft EIS is all that is available at this time. An updated right of way and relocation report is underway for the Preferred Alternative based on the preliminary design plans. There will be some increase in right of way because property access (service roads) has been fully addressed as part of the preliminary design. The use of retaining walls was considered to minimize right of way impacts in cut areas along the highway because of the geotechnical recommendation to use 3:1 side slopes in cut areas. These walls did not reduce relocations but reduced property acquisition from the backyards of homes that will be adjacent to the highway.
 - USEPA inquired about noise studies and sound barrier. Lochner indicated that the preliminary noise analysis and abatement considerations was being updated for the Final EIS based on current conditions.
 - USEPA requested an update on the efforts relative to protected species and the Biological Assessment (BA) for the project. NCDOT indicated that the BA should be ready for USFWS review by mid-August. There was some discussion on the planned propagation facility and the potential for take for the species.

Action Items:

- NCDOT will incorporate the summary of this meeting with the meeting summary for the interagency meeting on July 12, 2017 ~ *completed*.

APPENDIX D
Agency Comments on Draft Purpose and Need Statement
and Draft Alternatives Development and Analysis Report



North Carolina Department of Environment and Natural Resources

Division of Water Quality
Coleen H. Sullins
Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

September 7, 2010

MEMORANDUM

To: Christy Shumate, NCTA

From: Brian Wrenn, NCDWQ, Transportation Permitting Unit

Subject: Comments on proposed Purpose and Need Statement for the Triangle Expressway Southeast Extension in Wake and Johnston Counties, TIP Nos. R-2721, R-2828, R-2829.

NCDWQ has reviewed the Draft Purpose and Need Statement for the subject project. Below are our comments regarding the Draft Purpose and Need statement:

1. In Section 2.2 summary of Need for Proposed Action, Need #3, contains the following language in the last paragraph:

“This type of congestion is not consistent with the purpose of the State’s Strategic Highway Corridors Initiative, which is to provide a safe, reliable, and high-speed network of highways.”

Strategic Highway Corridor (SHC) initiatives are not appropriate problem statements for Purpose and Need statements. The problem is previously identified in Needs #1, #2, and earlier sections of Need #3. Any reference to SHC initiatives should be removed from the Purpose and Need Statement.

2. In Section 2.3 Purpose of Proposed Action, the opening paragraph details the purpose statement. It includes language regarding improving mobility in the study area. It was explained in the August 10, 2010 that the study area (for traffic analysis purposes) is bigger than the project study area (for alternatives analysis purposes). Use of such similar terminology is confusing. NCDWQ recommends that a clearer distinction be made between the traffic study area and the project study area.
3. In Section 2.3.2 Measures of Effectiveness for Meeting the Project Purpose, NCTA provides four measures for measuring the effectiveness of alternatives to meet the project purpose. NCDWQ is in agreement with these metrics. In Handout #2, NCTA provides criteria for alternatives screening. The screening criteria are different from the Measures of Effectiveness in Section 2.3.2, and include references to the SHC initiative and system linkage, neither of which is included in the project purpose. The screening criteria should not include language that references desired outcomes of the project. Desired outcome criteria should only be considered when analyzing detailed study alternatives at later stages of the selection process. The alternatives screening criteria should mirror the measures of effectiveness stated in the Draft Purpose and Need statement.

Thank you for requesting our input at this time. 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 me at 919-733-5715 or 336-771-4952.

cc: Eric Alsmeyer, US Army Corps of Engineers, Raleigh Field Office
George Hoops, Federal Highway Administration
Chris Militscher, Environmental Protection Agency (electronic copy only)
Travis Wilson, NC Wildlife Resources Commission
File Copy



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Raleigh Field Office

Post Office Box 33726

Raleigh, North Carolina 27636-3726

January 25, 2012

Jennifer Harris, PE
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, North Carolina 27699-1578

Dear Ms. Harris:

This letter is in response to your January 13, 2012 Draft Alternatives Development and Analysis Report for the Triangle Expressway Southeast Extension project in Wake and Johnston Counties, North Carolina (TIP Nos. R-2721, R-2828, R-2829). The U.S. Fish and Wildlife Service (Service) provides the following comments in accordance with provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543).

General Comments

As you know, the Service has been very involved in this project through the Turnpike Environmental Agency Coordination meetings. At these meetings, the Service has frequently stated its concern regarding the likely adverse effects of the project on the federally endangered dwarf wedgemussel (DWM, *Alasmidonta heterodon*) within the Swift Creek watershed (Neuse River basin). It is anticipated that the Federal Highway Administration (FHWA), as the lead federal action agency, will initiate formal Section 7 consultation by submitting to the Service an initiation package which includes a Biological Assessment (BA). In return, the Service will conduct an analysis to determine if the project will jeopardize the continued existence of the dwarf wedgemussel and issue a Biological Opinion (BO). Since there is a significant lack of information needed to develop the Environmental Baseline portions of the BA and BO, the NC Turnpike Authority (NCTA) has agreed to fund additional studies within the Swift Creek watershed to fill in the information gaps. We applaud the NCTA's decision to fund these studies, and we believe that the information obtained will expedite the Section 7 consultation and increase the probability of accurate conclusions.

In order to avoid a Jeopardy BO, the action agency must not "engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species." In order for the Service to ultimately recover the DWM, the 1993 Dwarf Wedgemussel Recovery Plan requires, among other criteria, that a viable population (i.e. a population containing a sufficient number of reproducing adults to maintain genetic variability,

and annual recruitment is adequate to maintain a stable population) occur in Swift Creek. Therefore, maintenance of such a population in the post-project Swift Creek watershed is vitally important. We cannot understate the significance of this issue.

Rapid development within the Swift Creek watershed below the Lake Benson Dam over the last 10-15 years has severely impacted the DWM. Mussel survey data from this timeframe implies a declining population. It is currently unknown if the DWM population in Swift Creek is viable, or whether the habitat conditions are sufficient to maintain a viable population. We are hopeful that the aforementioned studies will answer these questions. Also, as part of the Service's recovery efforts for the DWM in North Carolina, a workshop was recently held to initiate the evaluation of statewide conservation actions for the species. Workshop participants included species experts from the Service, the NC Wildlife Resources Commission, NC Natural Heritage Program, North Carolina State University and environmental consultants. The long-term vision of the workshop was to provide a foundation for strategic planning for conservation of DWM in North Carolina. The next step coming out of this workshop is to develop predictive models useful for comparing the effectiveness of proposed actions. The Service and our partners plan to test the models on Swift Creek (Neuse Basin). Therefore, Swift Creek weighs very heavily in our plans to recover the DWM.

The Draft Alternatives Development and Analysis Report states that the NCTA continues to recommend the elimination of the Red Corridor Alternative, thus leaving only one remaining corridor alternative (Orange) within Phase I. We acknowledge and understand the NCTA's rationale for arriving at this conclusion, especially noting the Red Corridor's significant and disproportionate impacts on the human environment. The Orange Corridor, being the protected corridor with right-of-way purchases made many years ago prior to any comprehensive environmental analysis, obviously greatly minimizes impacts on the human environment. However, the Orange Corridor has great potential to adversely affect the DWM since it crosses Swift Creek, tributaries to Swift Creek, and a significant portion of the watershed. The Orange Corridor connects to I-40 at a particularly unfavorable location for the DWM. This location puts the interchanges with I-40 and US 70 Bypass on top of several tributaries to Swift Creek and also is in close proximity to the Swift Creek main stem. The DWM is at risk from direct effects associated with construction of the project (e.g. erosion and siltation from construction) and from indirect effects associated with the degradation of water quality from secondary development induced by the new road. Increased impervious surface and storm water runoff from additional development would likely further degrade the water quality of Swift Creek and its tributaries. Also, other proposed projects within the same study area such as the proposed widening of I-40 (TIP No. I-5111) and at least two bridge replacements on Swift Creek could cumulatively contribute to a decline in habitat quality for the DWM. In summary, the Service finds the Orange Corridor very problematic.

In the event that the Service issues a "No Jeopardy" BO (which remains to be determined), the action agency will be required to implement Reasonable and Prudent Measures (RPM) in order to minimize the effects of take on the species. The information developed from the additional studies being conducted will assist in the Jeopardy Analysis and in developing the RPM and the Terms and Conditions for implementing them. Although there is a wide range of RPM of different forms and scope which may be developed, one possible RPM may involve captive

propagation and augmentation of DWM in the Swift Creek watershed. Though much of the technical and procedural knowledge for propagating DWM has previously been developed, the Service and our partners lack a dedicated facility and staff to conduct DWM propagation on a large scale. The ability or the lack thereof, to propagate DWM and augment the population in Swift Creek may factor significantly in our analysis to determine whether this project will jeopardize the continued existence of the species.

Specific Comments

Page 4-5 states “the dam on the southeast side of Lake Benson acts as a barrier between populations of the species upstream and downstream of this point, precluding genetic exchange between these two populations.” This statement would be true if there were DWM upstream of Lake Benson. To the best of our knowledge, the species has never been collected upstream of Lake Benson.

Page 5-16 states “Because the Orange Corridor Alternative would cross I-40 in this area, it has the potential to negatively impact habitat important for the survival of the Dwarf Wedgemussel in Wake County.” We would add Johnston County to this, as most DWM observations have been in Johnston County, and the Johnston County portion of the Swift Creek DWM population is exposed to water quality degradation from a larger amount of the overall watershed.

The Service appreciates the opportunity to review this document. We look forward to discussing it at the next Turnpike Environmental Agency Coordination meeting. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520, ext. 32.

Sincerely,


for Pete Benjamin
Field Supervisor

Electronic copy: Chris Militscher, USEPA, Raleigh, NC
Travis Wilson, NCWRC, Creedmoor, NC
Eric Alsmeyer, USACE, Raleigh, NC
Scott McLendon, USACE, Wilmington, NC
George Hoops, FHWA, Raleigh, NC
Brian Wrenn, NCDWQ, Raleigh, NC

Maseman, Kristin

From: Alsmeyer, Eric C SAW [<mailto:Eric.C.Alsmeyer@usace.army.mil>]

Sent: Tuesday, February 14, 2012 1:23 PM

To: Bass, Kiersten R

Cc: Roberts, Tracy; Wrenn, Brian; Chris.Lukasina@campo-nc.us; militscher.chris@epa.gov; Midkiff, Eric; gary_jordan@fws.gov; george.hoops@dot.gov; Harris, Jennifer; Gledhill-earley, Renee; Wilson, Travis W.; McLendon, Scott C SAW

Subject: RE: Southeast Extension Alternatives Development and Analysis Report/AID SAW-2009-02240 (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Kiersten: The Corps has the following comments on the Draft Alternatives Development and Analysis Report (DADAR) that was submitted on 1/9/2012.:

- 1) Please note that we have NOT reached a decision regarding your recommendation to eliminate the Orange to Red to Green alternative from further study in the draft EIS.
- 2) Figure 5-3, "Potential Impacts to Planned Parks and Recreational Facilities", should show a 300 foot optimized corridor (similar to Figure 5-4) to give a better depiction of how the facilities would likely be impacted by the corridor.
- 3) As we discussed at our meeting on December 20, 2011, Table 5-9 on page 5-36 should include a row for the Orange Corridor Alternative showing the values for "predicted" wetlands and streams, to allow a valid comparison between the Red and Orange Alternatives.
- 4) The results of the Prediction Methodology, in Table 1 of Appendix I, do not seem to demonstrate that the Prediction Methodology provided much, if any, more reliability at predicting wetland acreages than the NWI Wetlands. Statistical analysis to show the accuracy of the Prediction Methodology will be required before it can be used to compare the Red and Orange Alternatives.

Please reply or call if you have any questions or if I may serve you in any other way.

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at our website at <http://per2.nwp.usace.army.mil/survey.html> to complete the survey online (Paper copies available upon request).

Eric Alsmeyer
Project Manager
Raleigh Regulatory Field Office
US Army Corps of Engineers, Wilmington District
3331 Heritage Trade Drive, Suite 105, Wake Forest, NC 27587
Tel: (919) 554-4884, x23
Fax: (919) 562-0421
Regulatory Homepage: <http://www.saw.usace.army.mil/WETLANDS>

Classification: UNCLASSIFIED

Caveats: NONE



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

February 17, 2012

Regulatory Division/1145b

SUBJECT: Action ID 2009-02240; STIP Nos. R-2721, R-2828, and R-2829

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

Dear Mr. DeWitt:

Reference the proposed North Carolina Turnpike Authority (NCTA) project known as the Triangle Expressway Southeast Extension toll facility (TIP Nos. R-2721, R-2828, and R-2829), from NC 540 currently under construction at NC 55 in Holly Springs, to existing I-540 north of Poole Road and Clayton, in southern Wake and northeastern Johnston Counties, North Carolina. Reference also my March 23, 2011 letter asking for additional information regarding alternatives; my meeting on December 20, 2011, with representatives of the North Carolina Department of Transportation, including the NCTA and its consultants, and of the Federal Highway Administration; and NCTA's submittal on January 9, 2012, of the revised Draft Alternatives Development and Analysis Report (DADAR), for the subject project.

We understand that Governor Perdue signed legislation (Senate Bill 165) on March 18, 2011, that restricted the study, planning, and development of the Triangle Expressway Southeast Extension from the area north of the protected corridor and west of Interstate 40 (the area of the Red and Pink Corridors). We believe that state law which restricts the consideration of reasonable and practicable alternatives does not preclude our requirement under the 404 (b)(1) Guidelines (40 CFR Part 230) to analyze and objectively compare alternatives for this or any project that requires a Clean Water Act permit. While we are sensitive to the potential impacts to communities, public recreation facilities, and an industrial park in the Town of Garner, associated with the Red Corridor, we believe that its elimination from further consideration compromises our ability to satisfy our statutory requirements under the Guidelines.

The DADAR recommends that the Orange to Red to Green Corridor not be included as a reasonable and practicable alternative for detailed study in the Draft Environmental Impact Statement (DEIS) because it has significant and disproportionate impacts on the human environment, has limited ability to meet traffic needs, and is not a feasible and prudent Alternative under Section 4(f) of the Department of Transportation Act of 1966.

Our permit program requires that we make a complete, thorough, and unbiased review of all factors associated with a proposed project within jurisdictional waters of the United States.

A major component of the review is the consideration of reasonable and practicable alternatives, required by both the National Environmental Policy Act (NEPA) and the Clean Water Act 404 (b)(1) Guidelines (40 CFR Part 230). The 404 (b)(1) Guidelines require that the Corps can permit a project only if the applicant demonstrates that other alternatives are not practicable, available or less environmentally damaging. Practicable relates to cost, logistics or technology. As is FHWA, we are required to satisfy the provisions of NEPA which include the requirement to develop an EIS to examine all reasonable alternatives to the proposal, with reasonable alternatives including those that are practical or feasible from the technical and economic standpoint, rather than simply desirable from the standpoint of the applicant. Table 5-2 in the DADAR, Preliminary Alternatives – Summary of Potential Impacts, describes impacts to 43.7 acres of wetlands, and 29,770 linear feet of stream, for a 300- foot right-of-way for the end-to-end Orange to Red to Green Alternative that includes the Red Corridor, based on map data including the National Wetlands Inventory. This compares to impacts to 88.1 acre of wetlands and 36,110 linear feet of stream for the end-to-end Orange to Green Alternative. Furthermore, the US Fish and Wildlife Service has indicated that construction within the Orange Corridor would result in an adverse impact to the federally endangered dwarf wedge mussel (*Alasmidonta heterodon*) and that formal consultation will be required. Based on this information, the Orange to Red to Green Alternative appears to be a less environmentally damaging alternative and should be included as an alternative to be studied the Draft Environmental Impact Statement (DEIS). Nothing in our administrative record for this project indicates that the Orange to Red to Green Alternative is not practicable under the 404 (b) (1) Guidelines.

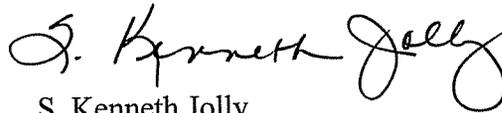
We are being asked to eliminate every alternative segment for a major portion of the corridor, with the exception of one, including the elimination of the least environmentally damaging alternative, prior to the release of a DEIS and before we, the agencies and the public have had an opportunity to conduct a side-by-side comparison of the one remaining segment alternative with the Red Corridor, with the usual level of data that is available after the DEIS, including detailed wetland delineation information, functional design, an analysis of the indirect and cumulative impacts, and additional data related to our twenty-one public interest review factors. Where we have previously elected to eliminate alternatives from further consideration prior to release of a DEIS, 1) the eliminated alternative clearly had unacceptable impacts to either the natural or human environment as compared to other alternatives under consideration, and 2) there was a sufficient number of remaining alternatives that encompassed a range of impacts to both the natural and human environment that the alternatives could be reasonably compared. Therefore, we believe it is premature to eliminate what we believe to be the environmentally preferable alternative from further consideration

We understand that FHWA has determined that several 4(f) properties may be impacted by the Red Corridor. Furthermore, we are also aware of the restriction that Section 4(f) of the Department of Transportation Act of 1966 places upon FHWA including a stipulation that FHWA cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless there is no feasible and prudent alternative to the use of land, or the action includes all possible planning to minimize harm to the property resulting from use. While this may be a consideration utilized by FHWA in determining a preferred alternative, we do not concur that the Department of Transportation Act should be used to define a reasonable range of alternatives under NEPA, and believe that it

cannot be used to eliminate alternatives that should otherwise be considered under the Clean Water Act 404(b)(1) Guidelines. We continue to believe that in order for the EIS to satisfy our respective agencies' responsibilities, it should rigorously explore and objectively evaluate the Red corridor. For the reasons discussed above, if the NCTA elects to complete its NEPA analysis and release a DEIS without including the Orange to Red to Green Alternative as an alternative for detailed study, and the NCTA intends to pursue Department of the Army authorization for this project, we may find it necessary to terminate our cooperating agency status with the FHWA and supplement the FHWA EIS with our own document.

Should you have any questions, please call Mr. Alsmeyer at (919) 554-4884, extension 23.

Sincerely,



S. Kenneth Jolly
Chief, Regulatory Division
Wilmington District

Copies Furnished:

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Washington, DC 20515

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Federal Highway Administration
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Mr. Brian Wrenn
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North Carolina Department of Environment and Natural Resources

Division of Water Quality
Charles Wakild, P.E.
Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

February 16, 2012

MEMORANDUM

To: Jennifer Harris, PE, Director of Planning and Environmental Services, Turnpike Authority

From: Brian Wrenn, Transportation Permitting Unit, Division of Water Quality *BW*

Subject: Comments on the Draft Alternatives Development and Analysis Report related to the proposed Triangle Expressway Southeast Extension, Wake and Johnston Counties, Federal Aid Project No. STP-0540(19), State Project Nos. 6.401078, 6.401079, and 6.401080, TIP Project Nos. R-2721, R-2828, and R-2829.

This office has reviewed the referenced document dated received January 18, 2012. The NC Division of Water Quality (NCDWQ) is responsible for the issuance of the Section 401 Water Quality Certification for activities that impact Waters of the U.S., including wetlands. It is our understanding that the project as presented will result in impacts to jurisdictional wetlands, streams, and other surface waters. NCDWQ offers the following comments based on review of the aforementioned document:

1. NCDWQ agrees with carrying forward the alternatives identified in section 5.8, page 5-38. However, NCDWQ feels that the Red Alternative should continue to be studied through the DEIS.
2. Any alternatives in this analysis and the DEIS should be compared using data gathered through the same methodologies. Table 5-9, page 5-36 states that the data for the Red Alternative was gathered using a predictive model while the Orange Alternative data was based on delineated streams and wetlands. This is not a fair comparison and should be corrected to provide consistency throughout the analysis.

NCDWQ appreciates the opportunity to provide comments on your project. Should you have any questions or require any additional information, please contact Brian Wrenn at 919-807-6365.

cc: Eric Alsmeyer, US Army Corps of Engineers, Raleigh Field Office (electronic copy only)
George Hoops, Federal Highway Administration
Chris Militscher, Environmental Protection Agency (electronic copy only)
Gary Jordan, US Fish and Wildlife Service (electronic copy only)
Travis Wilson, NC Wildlife Resources Commission
File Copy

Transportation and Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1617
Location: 512 N. Salisbury St. Raleigh, North Carolina 27604
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North Carolina Department of Cultural Resources
State Historic Preservation Office

Ramona M. Bartos, Administrator

Beverly Eaves Perdue, Governor
Linda A. Carlisle, Secretary
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History
Division of Historical Resources
David Brook, Director

February 20, 2012

MEMORANDUM

TO: Jennifer Harris
Planning and Environmental Studies
NC Turnpike Authority

FROM: Ramona M. Bartos *RMB for Ramona M. Bartos*

SUBJECT: Triangle Expressway Southeast Extension Project, R-2721, R-2828 and R-2829,
Wake and Johnston Counties, CH 98-0457

Thank you for your memorandum of January 13, 2012, transmitting the Draft Alternatives Development and Analysis Report for the above cited project. We have reviewed the document and offer the following comments.

The elimination of an alternative based on its potential to affect historic resources appears to be premature in that the only historic resources considered to this point are those that are already National Register-listed properties. The possibility that National Register-eligible properties may or may not be present in any of the alternatives has not been taken into consideration. Thus, alternatives that may have as yet unidentified Section 106 and 4(f) properties in them may become unusable.

We would also note that while National Register-listed or eligible properties are mentioned as being protected by Section 4(f), the lack of detail in the several figures and text give the impression that only public parks are being given full consideration under the regulation.

With regard to archaeological resources, we have no issues that involve alternative selection and concur with the decision to retain the five preliminary study alternatives outlined in the report. As the project develops further, we will continue to consult regarding the need for archaeological investigations once the preferred alternative is selected. We look forward to working with you and your staff on this project.

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, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/807-6579. In all future communication concerning this project, please cite the above referenced tracking number.

cc: Matt Wilkerson, NCDOT
Mary Pope Furr, NCDOT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

February 16, 2012

Ms. Jennifer Harris, P.E.
Director of Planning and Environmental Studies
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, N.C. 27699-1578

SUBJECT: Draft Alternatives Development and Analysis Report; Triangle Expressway Southeast Extension (Raleigh Southern Outer Loop); Wake and Johnston Counties; TIP Nos.: R-2721/R-2828/R-2829

Dear Ms. Harris:

The North Carolina Turnpike Authority (NCTA) and the Federal Highway Administration (FHWA) have requested comments on the above subject report in consideration of the Turnpike Environmental Agency Coordination (TEAC) process. The U.S. Environmental Protection Agency (EPA) is providing preliminary technical assistance comments as requested and consistent with the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act (CAA).

EPA understands that the intent of this draft report is to document the alternatives development and screening process utilized by the NCTA and to present NCTA's findings of detailed study alternatives for the Draft Environmental Impact Statement (DEIS). The NCTA is also requesting that EPA provide any issues of concern that would result in the denial or significant delay in the issuance of any environmental permits for the proposed project. EPA has attached some NEPA technical assistance comments for the transportation agencies to consider as the NEPA process goes forward (See Attachment A).

EPA proposes to stay involved with the transportation, permitting and resource agencies under NEPA for the proposed project to help to ensure that a reasonable and appropriate range of alternatives under NEPA be evaluated. It is recommended that consideration of a non-toll combination or 'hybrid' alternative that will potentially meet some or part of the project purpose be carried forward for detailed study for comparative purposes under NEPA, such as Mass Transit, TSM and with specific roadways improvements. Additionally, the environmental benefits of Mass Transit "Hybrid" might also be evaluated in a comparative fashion to the new location DSAs (Orange to Green or Brown), including potentially air quality benefits, less impacts and disruption to neighborhoods, schools and places of worship, reduced natural resource impacts such as wetlands, streams, and endangered species habitat, etc. Under a Mass Transit 'Hybrid' option, the transportation agencies may also wish to consider evaluating

express bus services between major commuting and activity centers, public parking areas for commuters, etc. Please contact Mr. Christopher A. Militscher of my staff at 404-562-9512 or 919-856-4206 or by e-mail at militscher.chris@epa.gov should you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "H. Mueller", with a long horizontal flourish extending to the right.

Heinz J. Mueller, Chief
NEPA Program Office

w/ATTACHMENT A

cc: H. Wicker, Acting Chief, USACE-Wilmington District
E. Alsmeyer, USACE-Raleigh Field Office
B. Wrenn, NCDWQ
G. Hoops, FHWA

ATTACHMENT A

NEPA Technical Assistance Comments

Draft Alternatives Development and Analysis Report for

An Environmental Impact Statement

Triangle Expressway Southeast Extension (Raleigh Southern Outer Loop/I-540)

Wake and Johnston Counties, N.C.

TIP Nos.: R-2721, R-2828, and R-2929

Purpose and Need

Section 1.2.1 of the report summarizes the need for the proposed project, including '*goal for region's overall transportation system is to provide a cost-effective system that, among other things maintains long-term mobility for people and the movement of goods*'. This section refers the reader to Section 3.4.1 of the report. Neither this stated goal nor the subsequent section identifies an actual need or existing problem with the current transportation system. The second need statement in Section 1.2.1 refers to '*limited transportation options to provide sufficient capacity for efficient, high-speed local and through travel between rapidly growing communities south and east of Raleigh and major employment and activity centers along the 540 Outer Loop and along highways connecting to the Outer Loop, such as I-40, NC 147 and US 1/64*'. This is statement of need is not supported by data. The rationale for a 'parallel', high-speed corridor to existing I-40 is not documented in the report. This section also refers to '*limited transit options in the area*' and refers the reader to Section 3.2. Section 3.2 discusses the project study area traffic conditions. There are no details or any analysis of current or future transit in this section of the report under Purpose and Need. The third need statement in Section 1.2.1 includes poor levels of service (LOS). The LOS need was established using 2008 traffic data along I-40 between NC 147 and Lake Wheeler Road, and most segments of I-40 between White Oak Road and NC 42, most of NC 42, and NC 50 between NC 42 and US 70. The transportation agency predictions are that substantial portions of the roadway network in and near the project study area will deteriorate to LOS E or F by 2035. Figure 1-4 includes many multi-lane facilities outside of the project study area depicted on Figure 3-1. Many of the roadway segments identified in Figure 1-4 appear to have little to do with traffic conditions in the project study area and would be influenced by other network deficiencies and traffic patterns.

Traffic congestion as expressed by current (2008) LOS is depicted on Figure 1-3 of the report. Most of the roadway segments in the project study area are LOS A-C and LOS D. The potential causes of the LOS E along NC 42 have not been fully detailed. NC 42 is primarily a 2-lane rural route with no control of access. There were previously planned NCDOT Transportation Improvement Program (TIP) projects that were one time being considered to addresses the current deficiencies along NC 42 between US 401 and I-40. Spot transportation improvements along NC 50 could also address the sections which have 2008 LOS E.

The primary need of the proposed Outer Loop project appears to be future congestion in the 2035. The details of the traffic models and forecasts are not specifically identified in the report but appear to be generally based upon past development and population growth. Since 2009, the project study area's growth rate has substantially decreased from the two previous decades. In the last 3 years, the growth in southern Wake County has been well below previous years and new development is reported to have stagnated. There is no current demographic information in the report that would identify this significant socio-economic change in the project study area or when the current trend in development might be reversed.

The purposes of the proposed project are identified in Section 1.2.2 of the report. The first purpose is to *improve mobility during the peak travel period* and the second purpose is to *reduce forecast congestion*. Another desirable outcome that is stated in Section 1.2.2 includes, *'improve system linkage'*. This section refers to the *'final link in the 540 Outer Loop envisioned more than 40 years ago'*. The same 'line on the map for the 540 Outer Loop' from 40 years ago appears to the location of the Orange Corridor. The report does not have any specific measures as to how mobility will be improved during the peak travel period. Removing a signalized intersection can potentially improve mobility. It is difficult to understand a purpose of reducing forecasted congestion when the traffic modeling, growth projections and other assumptions are not identified in the report.

The 'system linkage' issue as part of a purpose and need statement is recognized by FHWA as being very problematic. EPA recommends that the transportation agencies refer to the FHWA's *Purpose and Need Guidance for FHWA-funded Projects in North Carolina (Version 2, February 2009)*. EPA and other Merger Team representatives attended this very valuable training sponsored by FHWA. From this Guidance (Page 17): *"It will be a rare situation where system linkage will be the primary purpose. We don't typically decide to link something just because we can"*. From the statements in the report, however, it appears that system linkage is a primary purpose for the project. The report did not provide the supporting data required to identify any actual need concerning mobility (high-speed) or capacity issues along the existing roadways consistent with current guidance and policies.

For some additional information on Purpose and Need, please see the technical assistance information below and the website link:

Using Purpose and Need in Decision-making

As noted above, the purpose and need define what can be considered reasonable, prudent, and practicable alternatives. The decision-making process should first consider those alternatives which meet the purpose and need for the project at an acceptable cost and level of environmental impact relative to the benefits which will be derived from the project.

At times, it is possible that no alternative meets all aspects of the project's purpose and need. In such a case, it must be determined if the alternatives are acceptable and worthwhile pursuing in light of the cost, environmental impact and less than optimal transportation solution. To properly assess this, it is important to determine the elements of the purpose and need which are critical to the project, as opposed to those which may be desirable or simply support it, the critical elements are those which if not met, at least to some minimal level, would lead to a "no-build" decision. Determining critical needs could include policy decisions as well as technical considerations.

Other times, the cost or level of environmental impact are not acceptable and an alternative that only partially meets the purpose and need or the no-build alternative must be considered. If the costs are justified in relation to the transportation benefits, then a less than full-build alternative may be acceptable. <http://www.environment.fhwa.dot.gov/projdev/tdmneed.asp>

In addition to the aforementioned general guidance, an equally important component of the NEPA decision-making and public disclosure processes includes the evaluation of reasonable alternatives not within the lead transportation agency's area of expertise, such as mass transit options. One very important socio-economic benefit from Mass Transit options is the creation of numerous permanent jobs without the disproportionate requirement for infrastructure maintenance. Most highway construction projects provide only temporary employment during construction and very minimal permanent employment opportunities. Another obvious benefit of transportation agencies studying Mass Transit options and performing a reasonable comparison (40 CFR Section 1502.14) is that there are potentially fewer and less substantial indirect and cumulative impacts associated with most Mass Transit options compared to new location, multi-lane toll road alternatives. According to the FHWA, the maintenance of the existing 46,726 plus mile Interstate system and other multi-lane roadways is of a National interest and concern. Transportation agencies and policy-makers have been searching for the means to fund all of these "Every Day Count" priorities including thousands of bridge replacement projects. Conventional highway funding sources such as Federal and State sales taxes on fuels, highway trust fund taxes on vehicle inspections and emissions testing, and general revenue tax sources are not believed to be adequate to meet the demand for all of the new location, multi-lane highways and Interstates.

First Tier Screening of Alternatives Concepts

In Section 2 of the report, alternative concepts were considered as listed on Page 2-1, including TDM, TSM, Mass-Transit or Multi-modal Alternative Concepts and Build Alternatives. It is stated that "*those concepts that cannot be developed to meet the purpose of the project will be removed from further consideration*". The purposes of the project were narrowly defined in the previous section of the report. The highway 'threshold criteria' as further defined and as alluded to in the report to meet purpose and need were 'pre-disposed' to eliminate all but new location, multi-lane toll road alternatives. These potential issues were identified by resource and permitting agencies at previous TEAC meetings.

Section 2.2.1 discusses the ability to improve transportation mobility for trips within or traveling through the Southeast Extension project study area during the peak travel period. Two 'measures of effectiveness' (MOE) were identified in the report and used average speed and travel times. For average speed, the project study area does not include the main segment of I-40 (Figure 5-7). For travel times, the project study area does not include the main segment of I-40 (Figure 5-7). For average speed, "*Alternative concepts that that would result in the comparatively largest increase in average speed over current forecast conditions for 2035 would meet this MOE*". For travel times, "*The largest comparatively reduction in travel times for the typical user of the transportation system traveling through the project study area over current forecast conditions for 2035 would meet this condition*". Because mass-transit and multi-modal options in the project study area is either non-existent or severely limited to a few isolated locations within the project study area (Page 2-3), these MOE's are believed to be biased towards personal vehicle use and alternative concepts that promote new location, high-speed highways.

Section 2.2.2 discusses the ability to reduce forecast traffic congestion on the existing roadway network within the project study area. The poor LOS multi-lane sections of I-40 are not located in the defined project study area. Projected increases in traffic volumes are not quantified in this section. Three MOE's are identified in this section, including total vehicle hours traveled on average daily period, congested vehicle miles traveled on peak travel period, and congested vehicle hours traveled on peak travel period. These MOEs are for the major roadway network which includes congested areas outside of the defined project study area. Most of the MOEs relate to improving travel times and increasing vehicle speeds throughout the existing roadway network. The transportation agencies are promoting high-speed facilities in the project study area that is primarily rural and suburban between the two project termini. FHWA has conducted numerous safety studies concern high speed facilities: "*In 2008, there were 37,261 fatalities on our Nation's roadways. Of these; 11,674 (31 percent) were speeding-related!*". Source: <http://safety.fhwa.dot.gov/speedmgt/>

Also included on this FHWA website is a 2007 chart depicting fatality rates per road type: Interstate facilities in rural areas had a rate almost double that of Interstates in urban areas. This FHWA report also includes the following potentially relevant information:

Speeding—traveling too fast for conditions or in excess of the posted speed limits—is a factor in almost one-third of all fatal crashes and costs America approximately **\$27.7 billion dollars** in economic costs each year. Speeding is a safety concern on all roads, regardless of their speed limits. Much of the public concern about speeding has been focused on high-speed Interstates.

Considering the extremely significant costs of fatalities associated with high-speed Interstate facilities, especially in rural areas, the proposed purpose of the project "*to provide sufficient (additional) capacity for efficient, high speed local and through travel*" (Page 1-2) the transportation agencies may wish to consider and evaluate this relevant safety issue in the DEIS.

Section 2.2.3 discusses the ability to improve system linkage in the roadway network in the project study area. The discussion includes the statement: "*the project would provide the key remaining link in the Outer Loop system*". None of the no-build alternative concepts can meet this narrowly defined criterion. Please refer to the following: "*Care should be taken that the purpose and need statement is not so narrowly drafted that it unreasonably points to a single solution*" (FHWA Administrator: 7/23/03 Memorandum on Guidance on "Purpose and Need"). <http://www.environment.fhwa.dot.gov/guidebook/Gjoint.asp>

The report notes that the traffic study area used for analysis of MOEs was different than the project study area (Page 2-9; "*to create the traffic study area*"). This two different study area approach is believed by EPA to be unprecedented in North Carolian. The rationale provided in this section of the report is potentially very biased towards new location highways. Under Section 2.1.4, there is future transit improvements cited that are substantially out of the project study area. Most of these future projects are included in 2025 and 2035 horizon years and do not specifically address any of the limited current congestion or future projected congestion in southern Wake County.

The report identifies several MOEs, including average speed, travel times, average daily VHT, congested VMT, and congested VHT. All of these measures and the undefined Triangle Regional Model (TRM) are biased towards eliminating TDM, TSM and Mass Transit/Multi-modal Alternative Concepts ("*Travel times could not be determined for TDM, TSM, and Mass*

Transit/Multi-Modal Alternative Concepts using TRM).. An example can be found in Table 2-1 where the average daily speeds in the 'traffic study area', PM Peak Period, shows a 3.5 percent change for Hybrid #3 and a 5.7% change for a New location highway. Hybrid #3 was also subsequently 'screened out' by the transportation agencies. As identified on Page 2-14, only 50 area buses enter the 'traffic study area'. There is no connecting mass transit to most of the project study area. Commuters in the project study area (and beyond) have little to no choice but to take privately owned vehicles ("*There would need to be a twelve-fold increase in the number of buses serving the area to achieve the required threshold*", Page 2-15). Section 2.4.4 of the report provides the rationale for eliminating the Mass Transit/Multi-modal Alternative Concept, including the inability to improve mobility, reduce forecast traffic congestion, and improve system linkage. The report only identified buses as the potential means to accommodate commuters in the project study area. Light rail was not considered for the mobility analysis nor was a full comparative combination of alternatives, such as some TSM, some modest increases in express bus services from significant commuting areas and a light rail project connecting major commuting centers and destinations. The highway transportation agencies, including the North Carolina Turnpike Authority, might wish to further consult with other transportation officials (e.g., CATS and FTA) on the potential benefits of Mass Transit options for urban and suburban areas.

Forecasted congestion based upon out of date growth projections is not an existing transportation problem. A combination of light rail and some local roadway improvements would also potentially meet the purpose of improving 'system linkage' and potentially eliminate 'future congestion'. However, this concept was not fully evaluated in the report. Page 2-2 cites that "*The TSM Alternative will neither complete the Outer Loop system nor provide faster access to the I-40/I-540 network for residents in the project study area*". TSM was eliminated in the previous section of the report (i.e., Section 2.4.3). Most of the east-west section of I-40 is outside of the project study area. Most of I-540 is not included in the project study area. The report concludes that, "*the Mass Transit/Multi-modal Alternative Concept would fail to meet the two primary elements of [the] project purpose: improving mobility and reducing congestion*". As previously identified in the report, there is minimal existing congestion within the project study area and the purpose is based on future 'forecasted' congestion. There are other transportation alternatives that can improve mobility, including light rail

Table 2-7 of the report provides a summary of quartile rankings of MOEs for Build Alternative Concepts. As anticipated from the previous TRM analyses, the New Location Freeway ranks 4 out of 4 for the six (6) total MOEs. However, the TRM analysis was evaluated as 'Freeway'. The proposed project is being proposed as solely as a toll facility. According to FHWA and NCTA team representatives; there is no other means of potentially funding the I-540/Raleigh Southern Outer Loop without tolling.

The Hybrid Alternatives Concepts (Hybrids 1, 2 and 3) were also developed using improve existing and new location segments to meet future capacity that is not supported by current traffic numbers (i.e., AADT). For example, Hybrid 1 is proposed to be improving existing roadways to 10-lane, controlled access facilities. Hybrid 2 and 3 are proposed as 6-lane, controlled access facilities. Capacity issues within the project study area were not fully identified or evaluated in the report. The traffic study area does not correspond to the project study area and the rationale included in the report is not substantiated by either facts or precedent. Hybrid 3 was

retained for the next level of screening but was never seriously considered by the transportation agencies (See section below).

It is also noted that the transportation agencies have mixed regulatory terminology regarding the development of alternatives and the first tier screening of alternative concepts (Page 1-3). The Council on Environmental Quality (CEQ) regulations on NEPA refer to reasonable alternatives (40 CFR Section 1502.14(a) and (c)). A 'practicable' alternative is essentially a Clean Water Act Section 404(b)(1) Guideline term utilized under the U.S. Army Corps of Engineers' determination of the 'Least Environmentally Damaging Practicable Alternative' (LEDPA). The NCTA and FHWA are not utilizing the NEPA/Section 404 Merger process and the issue of practicability does not generally become a consideration until after the draft environmental document and the USACE's selection of the LEDPA. Without specific information on jurisdictional impacts, funding, etc., none of the current build Alternative Concepts in this report may truly be 'practicable'.

Development of Preliminary Corridor Segments

FHWA and NCTA should consider the proposed project in light of the requirements at 40 CFR Section 1506.1(a)(2). Page 3-2 includes the statement that several alternative corridors were developed and analyzed in the mid-1990's and public hearings were held to present the corridor proposed for protection ('Hard-ship' purchases totaling 36 parcels). The report does not fully address the early acquisition needs or what environmental features were identified during this development of a protected corridor. The report does not include the specifics or the relevant documentation for these pre-Notice of Intent (NOI) public hearings. Approximately 464 acres of right of way representing 32% of the needed protected corridor has already been purchased. Most of the purchased properties were reported in previous TEAC meetings to include undeveloped land along the Phase I portion of the proposed project (The 'Orange' corridor). The Orange Corridor represents approximately 17 miles of the total project length of approximately 22 miles. However, other reports, including the NCDOT website indicate that the proposed I-540/Raleigh Southern Outer Loop (Triangle Expressway Southeast Extension) is approximately 33 miles. An accurate length of the different Phases (i.e., I and II) of the proposed project should be included in a Draft Environmental Impact Statement.

The statement on Page 3-3 is noted regarding NCDOT's compliance with 23 CFR 710.501(b). EPA suggests that the transportation agencies may wish to provide a copy of the concurrence letter concerning 23 CFR 710.501(c)(2) compliance in the Draft EIS.

On page 3-5 of the report, it is stated that: "*Agency representatives, local governments and the public have not proposed many potential corridor segments beyond those currently under consideration*". It is most likely the responsibility of the transportation agencies to develop new corridors and alignments and not the parties cited above as they would be unfamiliar with Interstate design requirements, innovate funding solutions, etc. The transportation agencies potentially screened out Hybrid 3 Alternative Concept Segment by the statements made in Section 3.5.3 on Tolling.

This section of the report again differentiates between the project study area and the traffic area conditions beyond the boundaries of the project study area. The rationale provided on Pages 3-1 and 3-2 is not a reasonable approach. Several agencies during TEAC meetings

requested that the transportation agencies consider the inclusion of the project study area to the north side of I-40 between I-440 in the east and to US 1/US 64 to the west. Using traffic data for these areas outside of the project study area is not consistent with other N.C. Outer Loop projects studied under NEPA. The transportation agencies declined this recommendation and maintained that the reasoning for the differences of a project study area and a traffic study area would be fully addressed in the DEIS.

It is very important to note that the Preliminary Study Corridors are 1,000 feet wide as is noted in the first sentence in Section 3 of the report. Some other key issues identified in this report are the local planning organization requests to construct a 6-lane, new location toll facility and the recommendations for interchanges at Holly Springs Road, Bells Lake Road, US 401, Old Stage Road, NC 50, I-40, White Oak Road, US 70, Old Baucom Road, Auburn Knightdale Road, and Poole Road. In addition, there are also interchanges proposed at the termini at NC 55/I-540 and I-540. In total, 13 interchanges are proposed. There is no actual traffic data or public surveys demonstrating why commuters would leave local free roadways where there is little to no congestion and utilize a 6-lane toll facility. The relevant studies on building multi-lane, toll facilities in rural/suburban areas that have very few existing traffic problems are not referenced in this report. The local planning organizational 'need' for a 6-lane facility is not supportable when portions of I-40 between the RDU airport exit and the Lake Wheeler Road exit had been 4-lanes for decades and only recently a widening project to 6-lanes was completed on the most significant east-west corridor in N.C. Much of the transportation planning relies on the TRM. The assumptions and specific parameters used in these types of models are not disclosed in this report. The NCDOT webpage indicates there is no funding for the proposed project. From the NCDOT website, it appears that some of the statements provided in the report may conflict with the information being provided to the resource agencies. Please see: <http://www.ncdot.gov/projects/southeastextension/>

Transportation demands, social and economic demands and mobility considerations are the basis for additional transportation infrastructure in southeastern Wake County. The proposed Southeast Extension would link the towns of Clayton, Garner, Fuquay Varina, Holly Springs, Apex, Cary and Raleigh. The project would increase the capacity of the existing roadway network and divert traffic from secondary roads in areas experiencing substantial growth.

The Southeast Extension project has been officially on hold following enactment of North Carolina Session Law 2011-7 (N.C. S.L. 2011-7) in March 2011. This law restricts the Turnpike Authority from considering alternatives for the Triangle Expressway Southeast Extension that are north of the protected "Orange" corridor. Since March 2011, our project work has been limited while we evaluate the implications of this law and how it impacts our ability to progress the project in accordance with the federal National Environmental Policy Act as well as the federal Clean Water Act.

Target dates for project milestones including publication of the Draft Environmental Impact Statement (EIS) will remain uncertain until ways can be identified to address agency concerns while meeting the requirements of N.C. S.L. 2011-7 and the National Environmental Policy Act. The

previously anticipated Draft EIS date of February 2012 is uncertain at this time due to the project having been delayed since March 2011.

The Southeast Extension study will consider various solutions for addressing area transportation needs. **These studies will consider several options, including improving existing roads and building a new roadway, along with non-roadway options such as mass transit.**

A protected corridor preserves the location of a new road from encroaching development. In the mid-1990s, the North Carolina Department of Transportation (NCDOT), under the Transportation Corridor Official Map Act, established a protected corridor for Phase I of the Southeast Extension between NC 55 in Apex and I-40 near the Johnston/Wake County line. The Turnpike Authority will evaluate the protected corridor, as well as other possible routes, as part of this study.

The report does not identify the social and economic demands for the proposed Raleigh Southern Outer Loop. The report does not demonstrate how a multi-lane toll facility will divert traffic from (free) secondary roads. The report does not address the Project Financial Feasibility Study for tolling. The NCDOT webpage information is potentially not consistent with the report as mass transit and other options were screened out by the FHWA and NCTA in the first tier because it did not meet the primary purposes of the project (e.g., “*Complete the I-540/Outer Loop as was envisioned 40 years ago*”). The statement concerning the consideration of other options being studied appears to be somewhat confusing based upon the narrow statements of the project’s purposes and the very strict screening criteria to eliminate all other alternative concepts that are not a new location, multi-lane, toll road. FHWA and NCDOT officials have previously expressed their concerns at other project meetings with maintaining North Carolina’s current 1,014.78 mile Interstate system¹. The DEIS may also wish to include the NCDOT TIP No. I-5111, I-40 Widening and Improvements in Wake and Johnston County, that is meant to add additional capacity to I-40 within the project study area.

Second Tier Screening of Preliminary Corridor Segments

As with several other turnpike projects, the transportation agencies presented a matrix of ‘impacts’ for over 40 different new location segments based upon 1,000-foot corridor information. None of the actual impacts from the 300-350 feet of needed right of way was studied or ‘ground-truthed’. Some of the segments were as short as 0.35 miles (#35) while other segments were more than 11 miles (#26). For the Phase I area, there were realistically 5 corridors studied in the second tier, including Orange, Red, Blue, Pink and Purple as a ‘cross-over’ (Figure 4-3). The transportation agencies requested that all of the segments comprising Blue, Purple, Red and Pink be eliminated. The permit and resource agencies agreed to eliminate the Blue and the Purple. Some of the permitting and resource agencies requested that Red and Pink be retained with Orange as Detailed Study Alternatives for comparative purposes under NEPA, 40 CFR Section 1502.14(a).

Beyond the potential screening of some very ‘unreasonable’ alternatives under the Second Tier Screening process utilized by the transportation agencies, there is a very real

concern expressed by certain resource agencies at past TEAC meetings that reasonable alternatives are being eliminated at this pre-DEIS stage based upon unverified GIS level maps and data using 1,000-foot corridor impact information. Table 4-3 of the report presents the segment composition of the new location Preliminary Study Corridors. The transportation agencies eliminated 12 corridor segments at the Second Tier evaluation. Preliminary Study Alternatives are identified in Table 4-4 with information on the Orange to Red to Green segments left blank in the table (“The Red Alignment”).

Third Tier Screening of Preliminary Corridor Alternatives

Table 5-1 represents screening criteria using both potential right of way impacts for certain resources (e.g., Residential and business relocations) and 1,000-foot corridors for other resources (e.g., Section 4(f) applicable resources). The transportation agencies efforts in this Third Tier screening exercise were identified as being problematic by several agencies. Impacts and estimates are being based upon ‘potential’ right of way locations within a 1,000-foot corridor. From a statistically analysis perspective, a ‘typical 300-foot right of way’ within 1,000 feet creates enormous potential errors in the impact data. Efforts to shift potential right of way alignments for various resources were potentially made for some Preliminary Corridor Alternatives and not for others.

A primary case to this point is identified on Page 5-6 of the report concerning the Critical Water Supply Area to Swift Creek. This section of the report stresses the impact (Calculated to 10.6 acres) to this environmental feature and impacts to 303(d) listed streams. For an objective analysis, the transportation agencies should evaluate other TIP projects with similar resource impact issues (e.g., TIP No.: U-3109; Critical Water Supply Area impacted; TIP No.: U-3321; several miles of 303(d) listed streams potentially impacted).

EPA notes the comments in the report concerning third tier screening results, impact comparison, public and agency input, third tier screening conclusions, justifications for eliminating the Pink and Red alternatives based upon various criteria, petitions received from different stakeholder groups, etc. EPA notes the DSAs identified in Figure 5-7 which shows the primary DSAs (Orange – Phase I; and Green or Brown – Phase II, with the minor corridor adjustments for using Mint Green, Teal and Tan Alternatives). The transportation agencies should also provide an explanation of the control of access differences between a ‘freeway’ type design and an ‘expressway’ design in the DEIS.

An Additional Reference:

¹ North Carolina Projects: One of the first Interstate 40 relocation projects was the construction of a southern bypass for Interstate 40 around Winston-Salem. Built and opened to traffic in 1993, Interstate 40 now bypasses downtown Winston-Salem. The former freeway alignment is now part of Business Loop I-40. A future Winston-Salem Northern Beltway is planned for construction starting in 2010 or later; this belt route would be designated as Interstate 74 and Interstate 274 once it opens to traffic. The Greensboro Urban Loop, which is partially constructed, currently carries Interstate 40 around downtown Greensboro. The portion of the loop that carries Interstate 40 was constructed south of downtown through the early to mid-2000s. The southeastern section opened on February 21, 2004, and the southwestern portion opened on February 21, 2008. With the opening of this bypass, Interstate 40 was relocated onto the bypass, and the old freeway alignment was re-designated as Business Loop I-40. Portions of the Greensboro Urban Loop are designated as part of Interstate 73, and the future northern half of the loop is tentatively designated Future Interstate 840. In North Carolina, a recent widening between the Durham

Freeway (Exit 279) and Interstate 540 (Exit 283) brings Interstate 40 up to seven lanes. This stretch receives 147,000 vehicles per day, so the widening is generally a welcomed sight. Expansion to eight lanes, which entails adding a fourth westbound lane, was completed on October 1, 2003. The \$12 million project began in 2001. Even with these additional lanes other sections of Interstate 40 are planned for improvements as the area continues to gain population. Source: <http://www.interstate-guide.com/i-040.html>

Maseman, Kristin

From: Riffey, Deanna
Sent: Thursday, February 09, 2012 11:06 AM
To: Bass, Kiersten R
Subject: RE: Southeast Extension Alternatives Development and Analysis Report

Hello Kiersten.

I only have a couple of comments on the report:

- 1) Section 5.2.2.4 on page 5-17 - In the first paragraph, first sentence one important advantage is mentioned, but yet none are listed in this paragraph. If you skip on down to the 3rd paragraph then two advantages are mentioned and explained. A little confusing.
- 2) On figures I was looking for Bass Lake. It seems that Bass Lake was not colored blue like the other water bodies. The shape is there just not color.
- 3) Also on Figure 4-2, according to Table 4-1, I believe that segment 39 is not supposed to be shown on this figure like the other eliminated segments.

Deanna

From: Bass, Kiersten R
Sent: Thursday, February 02, 2012 9:57 AM
To: Roberts, Tracy; agamber@ncdot.gov; Johnson, Benjetta L; Wrenn, Brian; Ellis, Bruce O; Dagnino, Carla S; Chris.Lukasina@campo-nc.us; militscher.chris@epa.gov; Shumate, Christy; Chang, David S; Riffey, Deanna; Sykes, Dewayne L; Hall, Dolores; Keener, Donna; Ed.Johnson@ci.raleigh.nc.us; Lusk, Elizabeth L; Simes, Amy; eric.c.alsmeyer@usace.army.mil; Midkiff, Eric; gary_jordan@fws.gov; george.hoops@dot.gov; hwatkins@garnernc.gov; Harris, Jennifer; joe@letsgetmoving.org; samuel.k.jolly@usace.army.mil; kmarkham@esinc.cc; Kristin Maseman; Brooks, Lonnie I; Clawson, Marshall W; Pair, Missy; Beauregard, Rachele; Gledhill-earley, Renee; Roach, Renee B; Ridings, Rob; Roy Bruce; scott.c.mclendon@usace.army.mil; Franklin, Spencer T; Gurganus, Stephen J (Steve) - HEU; Dewitt, Steve; tsavidge@thecatenagroup.com; Wilson, Travis W.; Ford, Tris B; Bowman, John W; wsmith@mulkeyinc.com; Barrett, William A; Lipscomb, Sharon M
Subject: RE: Southeast Extension Alternatives Development and Analysis Report

All, to date the NC Turnpike Authority has received one comment letter on the Draft Alternatives Development and Analysis Report for the Triangle Expressway Southeast Extension project. Comments received are from the US Fish and Wildlife Service and are attached for your use.

We look forward to receiving your comments over the next two weeks (comment deadline is February 16th). If you have questions or concerns, please do not hesitate to contact me.

Thank you,

Kiersten R. Bass
Senior Transportation Planner
NCTA General Engineering Consultant
1 South Wilmington St, Raleigh, NC 27601
1578 MS Center, Raleigh, NC 27699-1578
919.707.2725

From: Bass, Kiersten R
Sent: Friday, January 13, 2012 2:54 PM
To: Roberts, Tracy; Emptage, Aketa A; amy.simes@ncmail.net; agamber@ncdot.gov; Johnson, Benjetta L; Wrenn, Brian;

Ellis, Bruce O; Dagnino, Carla S; Chris.Lukasina@campo-nc.us; militscher.chris@epa.gov; Shumate, Christy; Chang, David S; Riffey, Deanna; Sykes, Dewayne L; Hall, Dolores; Keener, Donna; Ed.Johnson@ci.raleigh.nc.us; Lusk, Elizabeth L; eric.c.alsmeyer@usace.army.mil; Midkiff, Eric; gary_jordan@fws.gov; george.hoops@dot.gov; hwatkins@garnernc.gov; Harris, Jennifer; joe@letsgetmoving.org; samuel.k.jolly@usace.army.mil; kmarkham@esinc.cc; Kristin Maseman; Brooks, Lonnie I; Clawson, Marshall W; Pair, Missy; Beauregard, Rachelle; Gledhill-earley, Renee; Roach, Renee B; Ridings, Rob; Roy Bruce; scott.c.mclendon@usace.army.mil; Franklin, Spencer T; Gurganus, Stephen J (Steve) - HEU; Dewitt, Steve; tsavidge@thecatenagroup.com; Wilson, Travis W.; Ford, Tris B; Bowman, John W; wsmith@mulkeyinc.com; Barrett, William A

Cc: Johnson, Kristen M

Subject: RE: Southeast Extension Alternatives Development and Analysis Report

All, due to the file size of the Draft Alternatives Development and Analysis Report for the Southeast Extension project (recently sent on my behalf by Tracy Roberts) you will need to log on to Constructware to download the report: <http://secure.constructware.com/>

For those of you not familiar with how to locate the document in Constructware, please see the attachment for instructions or feel free to contact me for assistance. Similarly if you need assistance with logging into Constructware (username and/or password) please contact Kristen Johnson (kmjohnson4@ncdot.gov).

Thank you,

Kiersten R. Bass

Senior Transportation Planner

NCTA General Engineering Consultant

1 South Wilmington St, Raleigh, NC 27601

1578 MS Center, Raleigh, NC 27699-1578

919.707.2725

-----Original Message-----

From: Tracy Roberts [<mailto:system@constructware.com>]

Sent: Friday, January 13, 2012 2:43 PM

To: Emptage, Aketa A; amy.simes@ncmail.net; agamber@ncdot.gov; Johnson, Benjetta L; Wrenn, Brian; Ellis, Bruce O; Dagnino, Carla S; Chris.Lukasina@campo-nc.us; militscher.chris@epa.gov; Shumate, Christy; Chang, David S; Riffey, Deanna; Sykes, Dewayne L; Hall, Dolores; Keener, Donna; Ed.Johnson@ci.raleigh.nc.us; Lusk, Elizabeth L; eric.c.alsmeyer@usace.army.mil; Midkiff, Eric; gary_jordan@fws.gov; george.hoops@dot.gov; hwatkins@garnernc.gov; Harris, Jennifer; joe@letsgetmoving.org; samuel.k.jolly@usace.army.mil; kmarkham@esinc.cc; Bass, Kiersten R; Kristin Maseman; Brooks, Lonnie I; Clawson, Marshall W; Pair, Missy; Beauregard, Rachelle; Gledhill-earley, Renee; Roach, Renee B; Ridings, Rob; Roy Bruce; scott.c.mclendon@usace.army.mil; Franklin, Spencer T; Gurganus, Stephen J (Steve) - HEU; Dewitt, Steve; tsavidge@thecatenagroup.com; Wilson, Travis W.; Ford, Tris B; Bowman, John W; wsmith@mulkeyinc.com; Barrett, William A

Subject: Southeast Extension Alternatives Development and Analysis Report

The North Carolina Turnpike Authority (NCTA) has prepared a Draft Alternatives Development and Analysis Report for the Triangle Expressway Southeast Extension project. This report documents the alternatives development and screening process and presents NCTA's recommendations for detailed study alternatives. Environmental and resource and regulatory agency coordination regarding project alternatives has included Turnpike Environmental Agency Coordination (TEAC) meetings held in August, September, November 2010, and January 20, 2011. At the January meeting we discussed recommended alternatives to be studied in detail in the project's Draft Environmental Impact Statement.

A copy of the Draft Alternatives Development and Analysis Report is available for download for your review and comment. NCTA requests written comments from your agency on the report and specifically on the recommendations for detailed study alternatives as presented in the report. In addition, please specify, as applicable, any comments your

agency considers to be issues of concern that would result in the denial or significant delay in the issuance of any environmental permits.

NCTA plans to discuss this project on March 21, 2012. In order to maintain our project schedule, please provide comments on the draft report by February 16, 2012 so that we can assess your comments, make any necessary revisions to the draft report and distribute it prior to the March meeting.

Thank you for your continued participation in the study for this project. If you have any questions or comments, please do not hesitate to contact me at jhharris1@ncdot.gov or 919.707.2704 or Kiersten Bass at krbass@ncdot.gov or 919.707.2725.

Maseman, Kristin

From: Bass, Kiersten R <krbass@ncdot.gov>
Sent: Wednesday, February 08, 2012 11:31 AM
To: Maseman, Kristin
Cc: Bruce, Roy
Subject: FW: Project: R-2721, R-2828, R-2829: (Triangle Expressway Southeast Ext. Project, Wake and Johnston Counties)

-----Original message-----

From: "Memory, John R" <rmemory@ncdot.gov>
To: "Harris, Jennifer" <jhharris1@ncdot.gov>
Sent: Wed, Feb 8, 2012 16:20:45 GMT+00:00
Subject: Project: R-2721, R-2828, R-2829: (Triangle Expressway Southeast Ext. Project, Wake and Johnston Counties)

Ms. Harris,

I have reviewed the Draft Alternatives Development and Analysis Report for the above subject project. At this time, I have no comments due to information within the report reflects no information on potential utility conflicts. However, a major utility relocation is subject to impact areas outside the future project limits.

R. Memory

J. Robert Memory, CPM

State Utility Agent

[NCDOT - Utilities Unit](#)

1555 Mail Service Center

Raleigh, NC 27699-1555

Direct: 919.707.7191

General Office: 919.707.6690

Fax: 919.250.4151

Email correspondence to and from this sender is subject to the N.C. Public Records Law and may be disclosed to third parties.

Maseman, Kristin

From: Bass, Kiersten R <krbass@ncdot.gov>
Sent: Friday, February 17, 2012 4:18 PM
To: Maseman, Kristin
Subject: Fw: SE Ext. Alts Development and Analysis Report
Attachments: SE Ext Draft Alternatives Report_with HES-PICS comments_02-17-12.docx

Connected by DROID on Verizon Wireless

-----Original message-----

From: "Ford, Tris B" <tbford@ncdot.gov>
To: "Bass, Kiersten R" <krbass@ncdot.gov>
Cc: "Harris, Jennifer" <jhharris1@ncdot.gov>, "Roberts, Tracy" <teroberts1@ncdot.gov>
Sent: Fri, Feb 17, 2012 21:02:55 GMT+00:00
Subject: SE Ext. Alts Development and Analysis Report

Kiersten,

Please see attached HES-PICS' comments on the SE Extension Alternatives Analysis Report in track changes format. We apologize for missing the deadline by one day in delivering these comments and hope that they will be able to be incorporated as you all are inclined. Thanks for the opportunity to provide comment. If you have any questions feel free to contact me.

Hope things are going well for you and the family.

Thanks,

Tris

Tristram Burke Ford
Community Planner III
Public Involvement and Community Studies

NCDOT-Human Environment Section

phone- (919) 707-6066
fax- (919) 212-5785

1598 Mail Service Center (mailing address)
Raleigh, NC 27699-1598

NCDOT Century Center Bldg. B (physical address)
1020 Birch Ridge Drive
Raleigh, NC 27610

Views expressed are my own and may not reflect any official policies of the North Carolina Department of Transportation.



February 15, 2012

Ms. Jennifer Harris, PE
Director of Planning & Environmental Studies
North Carolina Turnpike Authority
5400 Glenwood Avenue
Raleigh, NC 27612

Re: Triangle Expressway Southeast Extension Project, Wake and Johnston Counties (TIP Projects R-2721, R-2828, R-2829) Draft Alternatives Development and Analysis Report

Dear Ms Harris,

In reference to the draft Alternatives Development and Analysis Report released on January 13, 2012, this letter is to inform the North Carolina Turnpike Authority (NCTA) that the Capital Area Metropolitan Planning Organization (MPO) is supportive of the report's findings. The report includes recommendations to advance five alternatives for detailed study in the draft EIS. The MPO supports four of the five alternatives identified in Section 5.8 (p. 5-38).

At this time the MPO cannot support advancing the "Orange to Brown to Tan to Green" alternative for detailed study in the draft EIS. The MPO has previously submitted resolutions regarding the removal of the "Red" and "Tan" alternatives from further study. The draft Alternatives Development and Analysis Report prepared by NCTA further documents the adverse impacts to the cultural and human environment anticipated by these alternatives.

We feel it is critical that the North Carolina Department of Transportation continues to use the original protected corridor alignment illustrated on North Carolina Turnpike Authority maps adopted in 1996 and 1997 as the preferred choice for development and construction of the proposed NC 540 Turnpike in southern and southeastern Wake County.

We strongly urge the North Carolina Department of Transportation to construct the entire remaining portion of the outer loop as one project, rather than two. Wake County is the first and only County in the state of North Carolina to have parts of its urban loop constructed as a toll road because the aforementioned segments are region's urgently needed top priority projects that should not be delayed.

Planning and design of this major transportation facility should be in harmony with the adopted regional Long Range Transportation Plan as well as the natural and cultural environments. This new facility should minimize negative impacts to the Swift Creek Watershed and water supply area. To accomplish this, the ultimate facility design should include a toolbox of sustainable design elements such as use of BMPs throughout the project and consideration of onsite storm water treatment such as sustainable landscaping elements that are compatible with local soil type and drainage capability that are native to the region.

The MPO would also ask that the report be updated with copies of the previously submitted resolutions (attached).

The staff at the MPO looks forward to working with NCTA to develop this vital transportation facility for the future. If you need any further assistance or have questions please contact my office at (919) 996-4400.

Sincerely,

A handwritten signature in black ink, appearing to read "Edison H. Johnson, Jr.", with a stylized flourish at the end.

Edison H. Johnson, Jr., PE, FITE
Executive Director, N.C. Capital Area MPO

cc: George Hoops, P.E. – Federal Highway Administration

**RESOLUTION expressing THE NC CAPITAL AREA MPO'S POSITION REGARDING THE
ALIGNMENT OF THE FUTURE NC 540 TURNPIKE**

On motion made by **Mayor Sears** and seconded by **Mayor Byrne** , and having been put to a vote, was duly adopted, the following resolution;

WHEREAS, the proposed southern and southeastern segments of the NC 540 Turnpike are an adopted element of the Capital Area Metropolitan Planning Organization's (CAMPO) 2035 Long Range Transportation Plan; and

WHEREAS, official corridor maps show a specific alignment, adopted by the North Carolina Board of Transportation, to block new development in the preferred path of the southern segment from N.C. 55 in Holly Springs to US 401 south of Garner on August 2, 1996 and the southern segment from US 401 south of Garner to Interstate 40 south of Garner on March 7, 1997; and

WHEREAS, the proposed freeway alignment has been a fundamental transportation facility underpinning for more than 20 years of local land use and transportation decisions for the towns of Fuquay-Varina, Garner, and Holly Springs; and

WHEREAS, Wake County is the first and only County in North Carolina to have its urban loop constructed as a toll road; and

WHEREAS, the southeastern segment is likely to be much more expensive on a per mile basis than the southern segment and as such will need the revenue coming from the southern segment to help pay for it; and

WHEREAS, the southeastern segment is the Capital Area MPO's urgently needed top regional priority and therefore should not be delayed until the northern segment of the loop is converted to a turnpike to help pay for it's construction

WHEREAS, the North Carolina Turnpike Authority is looking at new alternatives (defined as "red", "blue", and "purple")that would possibly have an adverse impact upon these towns, causing disruptions to existing homes and businesses; and

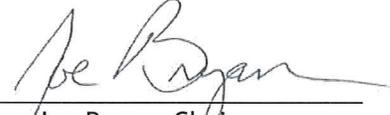
WHEREAS, the alternatives may be shorter and possibly cut construction cost; at the possible expense of environmentally sensitive areas as well as mar residential and commercial activities vital to the economic well being of the towns being impacted;

NOW, THEREFORE BE IT RESOLVED, the Capital Area MPO Transportation Advisory Committee supports the use of the original protected corridor alignment illustrated on North Carolina Turnpike Authority maps adopted in 1996 and 1997 as the preferred choice for the development and construction of the proposed NC 540 Turnpike in southern and southeastern Wake County; and

BE IT FURTHER RESOLVED, that the Capital Area MPO Transportation Advisory Committee requests that the North Carolina Turnpike Authority include the Capital Area MPO as an active stakeholder in the alternatives analysis process; and

BE IT FURTHER RESOLVED, that the Capital Area MPO Transportation Advisory Committee strongly urges the North Carolina Department of Transportation to construct the entire remaining portion of the outer loop as a turnpike in one phase rather than as two separate phases.

Adopted on this the 20th day of October, 2010



Joe Bryan, Chair
Director
Transportation Advisory Committee



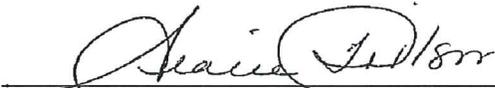
Ed Johnson, Capital Area MPO
Transportation Advisory Committee Clerk

County of Wake
State of North Carolina

I, Diane Wilson, a Notary Public for said County and State, do hereby certify that on this, the 20th day of October, 2010, personally appeared before me, Joe Bryan, known to me by his presence, and acknowledged the due execution of the foregoing RESOLUTION STATING THE CAPITAL AREA MPO'S POSITION REGARDING THE ALIGNMENT OF THE FUTURE NC 540 TURNPIKE.

Witness my hand and official seal, this the 20th day of October, 2010.





Diane Wilson, Notary Public

My commission expires January 26, 2011

Comment from Regional Transportation Alliance

Summary

The Regional Transportation Alliance (RTA) supports the set of recommended Detailed Study Alternatives (DSAs) for the Triangle Expressway Southeast Extension as listed on Page 5-38 and shown on Figure 5-7 of the Draft Alternatives Development and Analysis Report. A primary reason for our support of the set of new location alternatives is that each of the recommended DSAs provide a direct interchange with Interstate 40 at the US 70/Clayton Bypass. Providing a direct interchange at that location is essential since:

- The US 70 Clayton Bypass is one of only two statewide tier freeways in the path of the proposed turnpike, the other being Interstate 40
- The design and ramp configurations for the existing I-40 / US 70 interchange specifically allow for a direct interchange with 540 at that location
- The provision of a direct interchange with three freeways (i.e., I-40, future NC 540, US 70) at a single point maximizes system connectivity by definition
- The provision of a direct interchange between three freeways minimizes the travel on existing roadways that would otherwise be required – primarily on I-40 – which enhances the fulfillment of the purpose and need for 540 to reduce congestion on the existing roadway network
- The inclusion of a direct interchange with I-40 and the US 70 Clayton Bypass will serve to maximize the independent utility of the Southern and Eastern Wake freeway segments, since either one, if built by itself, would result in a fourth freeway leg of the currently three-leg interchange

To highlight the importance of the direct interchange of the proposed turnpike with I-40 at the existing US 70/Clayton Bypass junction, the RTA requests that all future maps that show proposed or potential elements of the proposed Triangle Expressway Southeast Extension include the completed US 70/Clayton Bypass freeway.

Note:

Additional detail on the rationale for our comments and support can be found on the following pages.

Note:

Please note that we do not take a position of preference among the various combinations of potential Phase II, Eastern Wake Freeway section alignments east of I-40. Each of the remaining alternatives or combinations thereof east of I-40 will connect directly with the US 70 Clayton Bypass and continue to an interchange with I-540 and the US 64/264 Knightdale Bypass, so each of them provide comparable system connectivity.

Rationale for comments follows

Overview

The Triangle Expressway Southeast Extension is a proposed turnpike freeway in the Research Triangle region of North Carolina. The freeway will serve the areas south and east of the state capital city of Raleigh. The roadway would commence at the interchange (opening in December 2012) of Toll 540 at NC 55/Holly Springs bypass in southwestern Wake County. The freeway would continue in an easterly then northerly direction, terminating at the existing interchange of I-540 at the US 64-264/Knightdale Bypass in eastern Wake County.

System context

There are only two freeways in the [statewide tier](#) (the highest class of facilities along the entire North Carolina state highway system, see **Exhibit 1**) in the path of the proposed Southeast Extension: Interstate 40 – the most traveled freeway in the region and the only primary Interstate serving Wake County – and the US 70/Clayton Bypass. The freeways meet today at the western terminus of the US 70/Clayton Bypass near the Wake-Johnston county line at a completed interchange that opened in 2008. See **Exhibit 2**.

Both I-40 and the US 70/Clayton Bypass are posted at 70 MPH at that location. The I-40 interchange with the US 70/Clayton Bypass specifically assumed a direct connection with the future 540 freeway, and the designs, traffic forecasts, and ramp locations of that completed interchange specifically allow for such a connection. See **Exhibits 3 and 4**.

Existing corridor protection

The “Southeast Extension” is a convenience term used by the NC Turnpike Authority to describe the proposed Southern Wake and Eastern Wake freeways. The Southern Wake freeway currently has corridor protection between NC 55 in southwestern Wake County and the now-existing interchange between I-40 and the US 70/Clayton bypass near the Wake/Johnston County line. The Eastern Wake freeway currently has limited corridor protection for about one mile north of the interchange of I-40 and the US 70/Clayton bypass. The corridor protection approved in 1997 for the eastern terminus of the Southern Wake freeway, and the corridor protection for the southern terminus area of the Eastern Wake freeway (resulting from the Southern Wake freeway 1997 corridor protection), specifically assumes and allows for a direct interchange between 540 and I-40 at the then-proposed US 70/Clayton bypass. See **Exhibit 5**.

System connectivity and relief to existing roadways

Our understanding is that the purpose and need of 540 is to improve transportation mobility in the project area and to reduce congestion on the existing roadway network. Having future 540 converge at the same location with I-40 and the US 70/Clayton Bypass via free-flow ramps would clearly be superior from a system connectivity standpoint since it enables a direct interchange. As an example, westbound travelers from US 70/Clayton Bypass would be able to continue west on 540 without ever entering I-40 – thus allowing a direct connection between two statewide tier freeways without requiring travel on a third statewide tier freeway. The direct connection will reduce volumes and delays on I-40 and relieve the merging and weaving maneuvers that would otherwise ensue without such a robust linkage.

The corollary is that any new location corridor alternative that did not include a direct interchange with I-40 at the US 70/Clayton Bypass would necessarily create a scenario that would require the use of an intervening freeway (I-40) to connect from an existing statewide tier freeway (US 70/Clayton bypass) to a proposed one (the future 540 “Southeast Extension” freeway). Our understanding is that not providing a direct connection between 540 with I-40 at US 70/Clayton Bypass would have a substantial adverse impact on the roadway network, with volumes on portions of I-40 south of I-440 more than 25% higher than would occur with a direct interchange – again contrary to the purpose and need of 540 of reducing congestion on the existing roadway network.

Interdependent but distinct segments, with independent utility and a common convergence point

While the Southern Wake and Eastern Wake freeways are currently being studied as a single corridor by the NC Turnpike Authority, the “Southeast Extension” is a convenience term for two interdependent but distinct freeway segments, as noted above. The Southern Wake and Eastern Wake freeways could have been studied separately from each other, perhaps in sequence instead of concurrently – just as the Northern Wake and Western Wake freeways were analyzed and then constructed under separate timetables.

If the Southern Wake freeway – the section with corridor protection – would have been proposed to have been studied first, it is instructive to consider what the easternmost terminus point (project alternatives convergence point) would have been. Under that scenario, our expectation is that all proposed study corridors would have logically been required to converge at the existing I-40 interchange with the US 70/Clayton bypass. This is the location where the only two freeways on the statewide tier in the entire proposed 540 freeway path already converge – and this convergence point would be congruent with the existing configuration of the I-40/Clayton Bypass interchange that already allows for a future connection with 540 at that location, as noted above and as shown in Exhibits 3 and 4.

Further, if the Southern Wake freeway were then approved for construction and subsequently opened to traffic, with the Eastern Wake freeway delayed for a period of time, the Southern Wake freeway would clearly have independent utility. It would provide (in concert with the new Toll 540 and Toll 147 to the north and west) a direct freeway bypass of the I-40 exits serving Raleigh, Cary, and RTP. In addition, it would provide a direct, free-flow connection with the US 70/Clayton Bypass freeway. That independent utility would clearly be maximized with a direct connection with I-40 at the US 70/Clayton Bypass.

(Note: The above comment is not advocating that the Southern Wake and Eastern Wake freeways should have been studied or should be constructed separately, only that they could have been considered separately, just like the Northern and Western Wake freeways were, in order to highlight the importance of convergence at I-40 and the US 70/Clayton Bypass.)

(Note: The above comment is not advocating that 100% of the ultimate Southern Wake freeway alignment must remain within the corridor protection envelope, only that the eastern terminus point of the Southern Wake freeway, if studied as an independent project, would likely have been the I-40 interchange at the US 70/Clayton bypass which is the eastern end of corridor protection.)

Summary

The Regional Transportation Alliance (RTA) supports the set of recommended Detailed Study Alternatives (DSAs) for the Triangle Expressway Southeast Extension as listed on Page 5-38 and shown on Figure 5-7 of the Draft Alternatives Development and Analysis Report. A primary reason for our support of the set of new location alternatives is that each of the recommended DSAs provide a direct interchange with Interstate 40 at the US 70/Clayton Bypass. Providing a direct interchange at that location is essential since:

- The US 70 Clayton Bypass is one of only two statewide tier freeways in the path of the proposed turnpike, the other being Interstate 40
- The design and ramp configurations for the existing I-40 / US 70 interchange specifically allow for a direct interchange with 540 at that location
- The provision of a direct interchange with three freeways (i.e., I-40, future NC 540, US 70) at a single point maximizes system connectivity by definition
- The provision of a direct interchange between three freeways minimizes the travel on existing roadways that would otherwise be required – primarily on I-40 – which enhances the fulfillment of the purpose and need for 540 to reduce congestion on the existing roadway network
- The inclusion of a direct interchange with I-40 and the US 70 Clayton Bypass will serve to maximize the independent utility of the Southern and Eastern Wake freeway segments, since either one, if built by itself, would result in a fourth freeway leg of the currently three-leg interchange

Request to include existing US 70/Clayton Bypass freeway on all future project maps

An opportunity to further clarify the essential linkage of US 70/Clayton Bypass exists. See **Exhibit 6** for the current 540/Southeast Extension project map, dated March 2010, and still the current map available [via the NC Turnpike Authority web site](#) for the Southeast Extension project. Note that the map does not include the US 70/Clayton Bypass as either an existing or proposed freeway, even though the freeway was open to traffic in June 2008, prior to the commencement of the 540/Triangle Expressway Southeast Extension study work in 2010. Exhibit 2, described previously, shows a regional vicinity map showing the US 70/Clayton Bypass and other area freeways. It would greatly simplify the ability to emphasize the direct linkage between 540 and I-40 at the US 70/Clayton Bypass that each of the recommended Detailed Study Alternatives provide if the existing US 70/Clayton Bypass were shown on Southeast Extension project maps. Therefore, to highlight the importance of the direct interchange of the proposed turnpike with I-40 at the existing US 70/Clayton Bypass junction, the RTA requests that all future Southeast Extension project maps also include the completed US 70/Clayton Bypass freeway.

Exhibit 1 – Statewide Tier facilities in vicinity of proposed Southeast Extension; blue portions of US 70 southeast of Raleigh are existing freeway

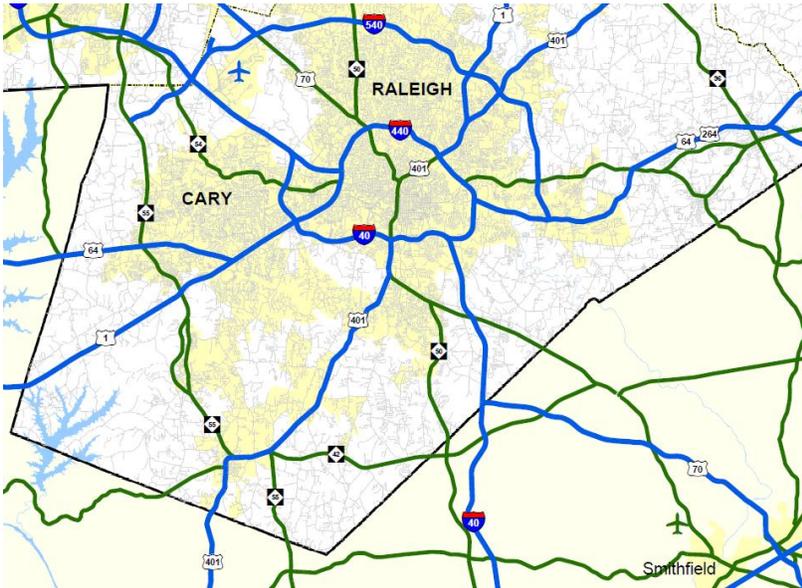


Exhibit 2 – Southeast Extension vicinity map, showing US 70/Clayton Bypass (courtesy Mapquest.com)

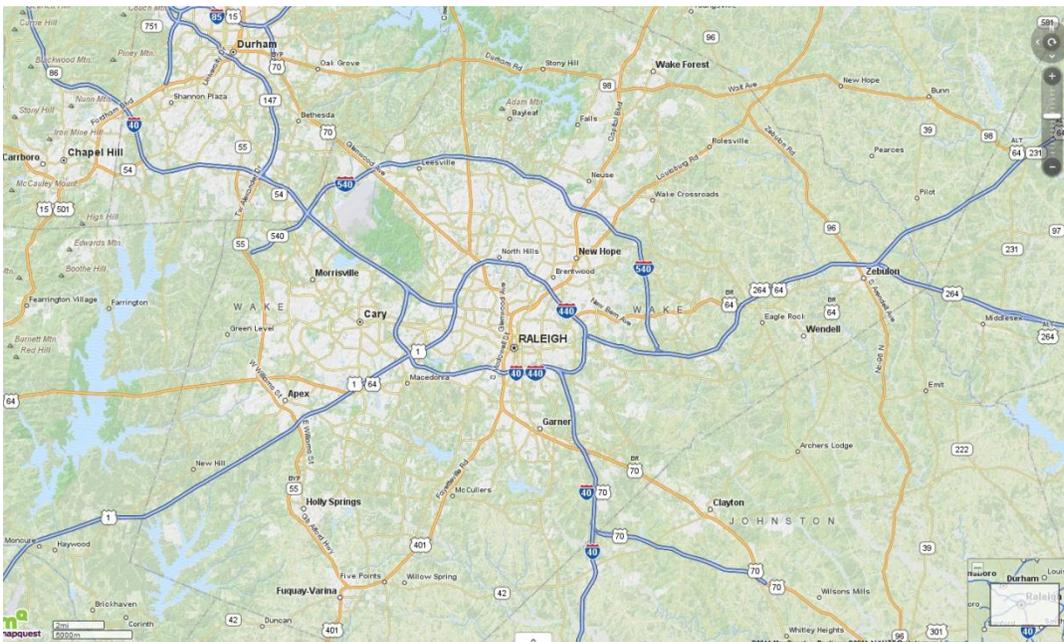


Exhibit 3 – Ultimate design of US 70/Clayton Bypass interchange with I-40 and future 540 freeway

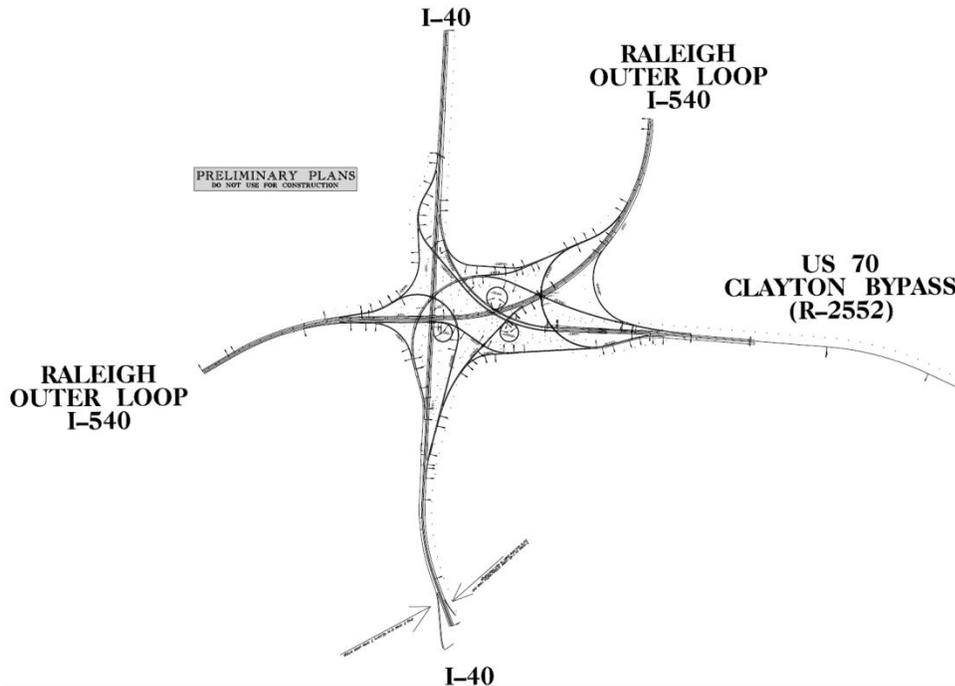


Exhibit 4 – Traffic volume projections used for design of US 70/Clayton Bypass interchange at I-40, showing connection with future 540 freeway as well as initial construction prior to 540 connection

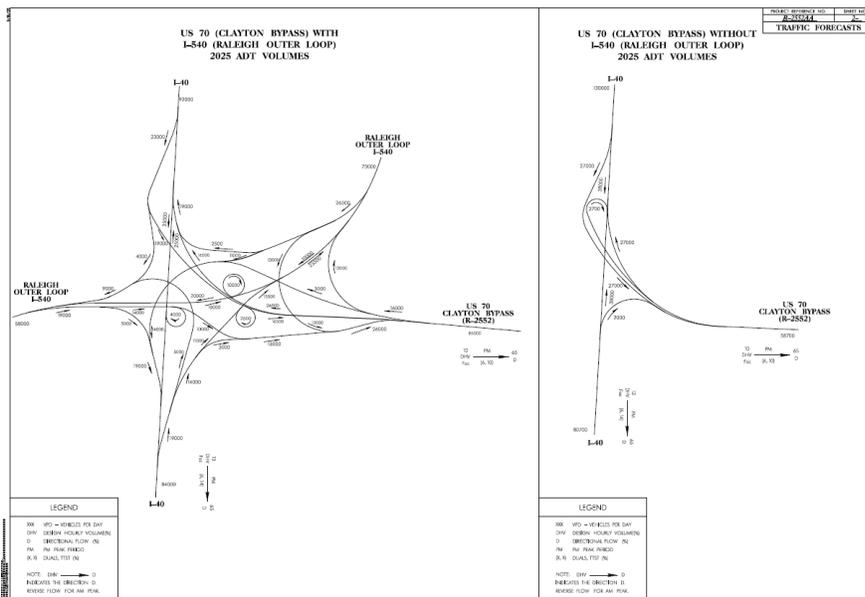


Exhibit 5 – Current 540 corridor protection envelope, showing area in vicinity of existing I-40 interchange with US 70/Clayton Bypass

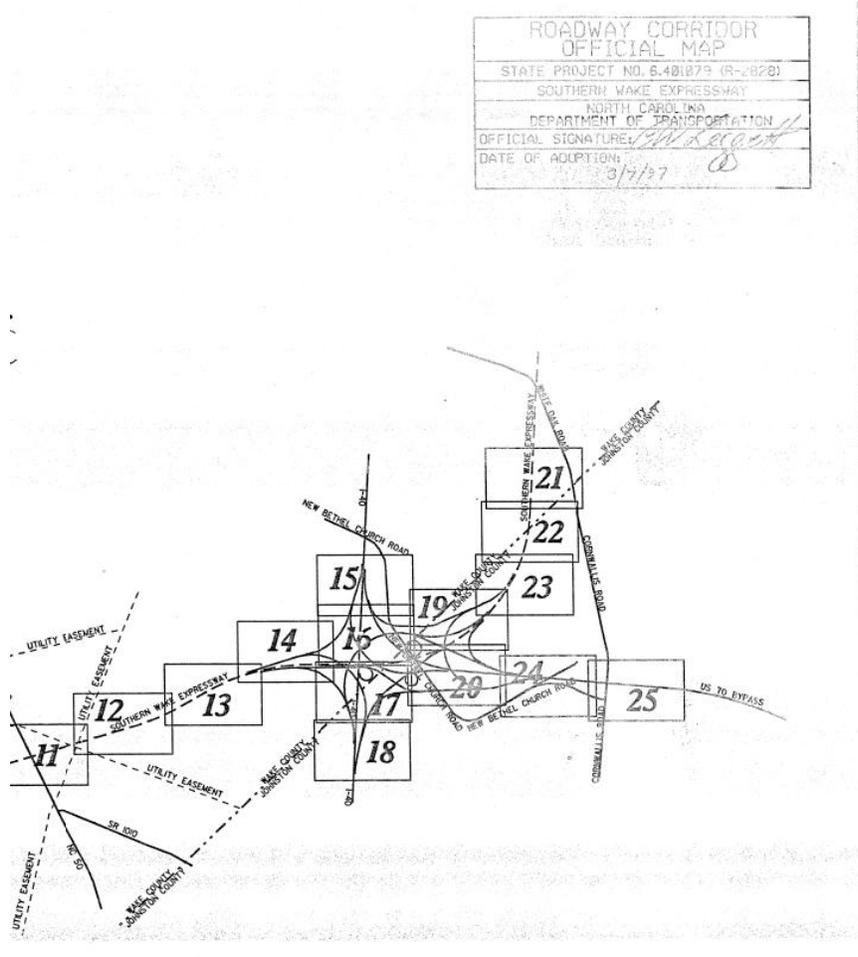
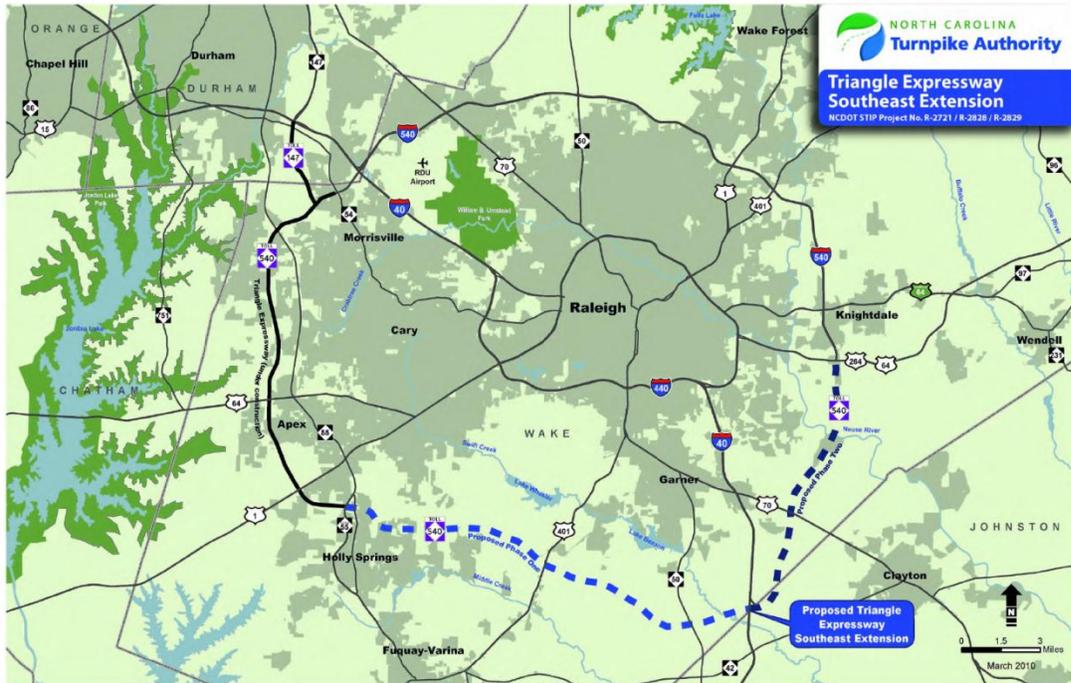


Exhibit 6 – Southeast Extension project map, dated March 2010

(Note: US 70/Clayton Bypass, opened to traffic in June 2008, is not shown on map. The existing US 70/Clayton Bypass freeway is located in the area currently occupied by the “Proposed Triangle Expressway Southeast Extension” bubble. See Exhibit 2 for more specific location information of US 70/Clayton Bypass).



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February 24, 2012

Ms. Jennifer Harris
NC Turnpike Authority
1 South Wilmington Street
Raleigh, NC 27601
jhharris1@ncdot.gov

Re: Southeast Extension - Alternatives Development and Analysis Report

Dear Ms. Harris:

This letter concerns the Draft Alternatives Development Report (the "Report") prepared for the Triangle Expressway, Southeast Extension project, presented to state and federal resource agencies on January 17, 2012. The letter follows our previous correspondence regarding this project of April 6, 2011, attached to this letter for your convenience. While the Report was only recently made available to us, making it impossible to comment as requested February 16, 2012, we are providing these comments as promptly as feasible.

As explained below, the Report does not serve to advance compliance with environmental study or permitting requirements, either procedurally or substantively. The North Carolina Turnpike Authority ("NCTA") remains constrained by the law enacted last session prohibiting the study of a reasonable range of alternatives, which has rendered progress on compliance with key federal requirements impossible. N.C. Gen Stat. 136-89.183(a)(2). We urge NCTA not to continue to expend taxpayer funds to plan for or study, the Southeast Extension, unless and until the legislation artificially constraining the study of alternatives is repealed.

As noted in our previous comments, both the National Environmental Policy Act ("NEPA") and the Clean Water Act ("CWA") require agencies to consider a reasonable range of alternatives to any proposed major federal action. Under NEPA, agencies are required to prepare an Environmental Impact Statement ("EIS") that rigorously explores and objectively evaluate *all* reasonable alternatives. 40 C.F.R. § 1502.14(a). Until FHWA has issued a Record of Decision ("ROD"), no action can be taken on the project that would "[l]imit the choice of reasonable alternatives." 40 C.F.R. § 1506.1(a)(2). Similarly, consideration of a reasonable range of alternatives is a fundamental prerequisite to obtaining either a 401 state water quality certification, or a 404 federal CWA permit. 15A N.C. Admin. Code 02H .0506(b)(1); 40 C.F.R. § 230.12(a)(3).

In the recently distributed Report, NCTA attempts to overcome the requirements imposed by NEPA and the CWA by eliminating the routes that the North Carolina legislature has

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forbidden from being studied, namely the “Red” and “Pink” routes, at a very early stage in the environmental review process. This is impermissible under federal law. First, the environmental analysis completed to date does nothing to substantiate the finding that the preferred “Orange” alternative is the Least Environmentally Damaging Practicable Alternative (“LEDPA”) as required by the CWA. Second, the limited analysis of the “Red” and “Pink” alternatives presented in the Report is insufficient under NEPA and fails to adequately document the environmental impacts associated with those alternatives. Further, the attempt to eliminate alternatives is made too early in the environmental review process to allow for public notice and comment, violating both NEPA and the CWA.

Selecting the LEDPA

As explained in our previous correspondence, we are concerned about the proposed elimination of all alternatives north of the “Orange” route because those alternatives would have substantially fewer environmental impacts. Rather than demonstrate a reasonable basis for eliminating these alternatives, however, the Report serves to illustrate why they should be kept for further study. For example, while the “Red” route would impact 43.7 acres of wetlands and 29,770 feet of streams, impacts from the “Orange” route will be far higher—88.1 acres of wetlands and 36,120 feet of streams. In addition, as the Report acknowledges, the “Red” route “appears to be the best option for avoiding impacts to important Dwarf wedgemussel habitat . . . and therefore has the most potential to avoid impacts to this [federally endangered] species.” Report at 5-22.

Further, by eliminating alternatives closer to the existing urbanized area, there is a greater potential for the highway to induce sprawling growth and increased traffic, leading to a range of added water quality, air quality and other environmental concerns. In the same vein, it is essential that any future study should not only analyze these less damaging new location highway routes, but also include robust consideration of functional alternatives involving upgrades to the existing highway network in the study area. The consideration of upgrade alternatives presented in the Report is insufficient to satisfy NEPA.

In response to concerns from the U.S. Army Corps of Engineers (the “Corps”) regarding its ultimate permitting responsibilities, NCTA has engaged in limited additional analysis of the “Red” and “Pink” routes. However, this additional analysis does nothing to temper the Corps’ concerns regarding the premature elimination of the less damaging alternatives. Indeed, the new, albeit limited, GIS analysis performed indicates that the preferred “Orange” route would impact almost twice as many “above average” quality wetlands than the “Red” route. Report at 5-36.

By contrast, NCTA has presented very little to support the elimination of the less damaging “Red” alternative and has certainly failed to establish that the “Orange” route is the LEDPA. The Report gives a number of justifications as to why the “Red” route should be eliminated. Some of these reasons, such as the state law mandate not to study the alternative, are irrelevant to the environmental review process. Others, such as the ability of the “Red” route to satisfy the transportation needs in the study area and the complex interplay between 4f, the CWA and the Endangered Species Act, raise issues which must be fully presented for detailed public and agency scrutiny, as envisaged by the NEPA and the CWA.

Insufficient Analysis

The additional analysis presented in the Report performed at the behest of the Corps is insufficient to satisfy NEPA and the CWA. For example, the Report illustrates that NCTA performed a GIS analysis of the *predicted* wetlands that the “Red” route would potentially impact. The analysis did not include any on-the-ground verification and has only 75-85% accuracy. Report at 5-36. This limited study is not sufficient for the purposes of NEPA and the CWA, which require a much more rigorous and accurate study of the affected environment and the potential environmental impacts of alternatives. 40 C.F.R. §§ 1502.15-16; 40 C.F.R. § 230.10.

NEPA provides that the analysis of the affected environment “shall be commensurate with the importance of the impact.” 40 C.F.R. § 1502.15. The proposed Southeast Extension is expected to impact a very large acreage of wetlands, many thousands of feet of streams, and the habitat of federally endangered species. These impacts are extremely significant, as demonstrated by the numerous concerns raised by resource agencies including the Corps and the U.S. Fish and Wildlife Service. Such significant impacts must be carefully studied with on-the-ground analysis; short-cut predictions based on GIS models with limited accuracy will not suffice, particularly when they do not even predict a lower level of impact for NCTA’s proposed LEDPA.

Public Review and Comment

A core purpose of NEPA is to provide resource agencies and the public with high quality, accurate information so they may be fully informed and engaged in the decisionmaking process. 40 C.F.R. § 1501. As part of this process, an agency pursuing a major federal action is required to fully document the impacts from a reasonable range of alternatives in a Draft EIS. 40 C.F.R. § 1502.14. These alternatives can then be reviewed and commented upon by resource agencies and the public. 40 C.F.R. § 1503.1. The lead agency is then required to consider these comments when crafting a Final EIS and when ultimately settling on a selected alternative in the final ROD. 40 C.F.R. § 1503.4. Similarly, the CWA requires that individual permit decisions be made “after notice and opportunity for public hearings.” 33 U.S.C. § 1344 (a).

In the Report, which thus far has only been made available to resource agencies and not the public, NCTA attempts to eliminate a number of alternatives before a DEIS has been published. Such early elimination renders any later public review and comment meaningless. Whatever resource agencies and the public have to say about the various alternatives will have no meaning if NCTA has already predetermined which alternative it will select. Comments concerning the “Red” and “Pink” alternatives are rendered irrelevant while NCTA is prohibited by state law from studying them further.

In sum, NCTA’s attempt to eliminate alternatives prior to comprehensive study via the Report is inconsistent with the requirements of both NEPA and the CWA. Rather than demonstrate why these alternatives should be eliminated, the Report underscores why, in fact, the less environmentally damaging alternatives must be kept for further study. Moreover, the Report contains insufficient analysis to make any decision regarding elimination at this early stage. Further, the attempt to eliminate alternatives at this stage hampers the public’s ability to

engage in scrutiny of the agency's process and conclusions. Until NCTA can provide the federally required analysis, it should refrain from expending any further resources to study this project as required under federal law, which has been rendered legally impossible by the legislation adopted last session.

Sincerely,



David Farren
Senior Attorney



Kym Hunter
Associate Attorney

Cc: (via e-mail and US Mail)

Eugene Conti, NCDOT
David Joyner, NCTA
Clarence Coleman, FHWA
John Sullivan, FHWA
S. Kenneth Jolly, USACE
Scott McLendon, USACE
Eric Alsmeyer, USACE
Brian Wrenn, NCDWQ
Gary Jordan, USFWS
Heinz Muller, USEPA
Chris Millitscher, USEPA
Jennifer Derby, USEPA
Travis Wilson, NCWRC
Delores Hall, OSA
Renee Gledhill-Early, HPO
Ed Johnson, CAMPO
Chris Lukasina, CAMPO

Enclosure

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April 6, 2011

Via Email and U.S. Mail

Mr. Eugene Conti,
North Carolina Secretary of Transportation
1550 Mail Service Center
Raleigh, NC 27699-1550

Re: Southeast Extension- Elimination of the Red Route

Dear Secretary Conti:

This letter concerns the recently passed Senate Bill S165 which was signed into law on March 18, 2011. The bill amends N.C. Gen Stat. 136-89.183(a)(2), to include language to prohibit any alternatives to the proposed Southeast Extension Toll road that lie to the North of the designated "Orange" route, including the previously considered "Red" and "Pink" routes. In light of the passage of this bill, the North Carolina Turnpike Authority ("NCTA") no longer has the ability to complete the legally required review of feasible alternatives for the project under the National Environmental Policy Act ("NEPA"), for submission to, and approval by, the Federal Highway Administration, as compliant with federal law. We urge, therefore, that NCTA cease to plan for, and expend funds to study the Southeast Extension, unless and until the legislation is repealed.

Under federal law, a reasonable range of alternatives must be considered with reference to the fundamental project purpose. NEPA requires agencies to specify the "underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." 40 C.F.R. § 1502.13. Agencies are required to prepare Environmental Impact Statements ("EIS") that rigorously explore and objectively evaluate *all* reasonable alternatives that could achieve the underlying project purpose and need. 40 C.F.R. § 1502.14(a). A recent articulation of the project purpose and need for the Southeast Extension states that the project is to:

improve transportation mobility both within the project study area and on the surrounding roadway network. The project would also enhance connectivity between rapidly growing communities south and east of Raleigh and major employment centers within the Triangle Region in order to provide additional high-speed, safe and efficient regional transportation infrastructure for both local commuter trips and regional interstate and intrastate travel. Other desirable outcomes of the project include providing system linkage by completing a controlled-access, high-speed circumferential facility around the

outskirts of Raleigh and decreasing commute times for project study area residents, enhancing the livability and sustainability of the Triangle Region.¹

It is clear that the alternatives under consideration by NCTA prior to the passage of the legislation constitute reasonable means of meeting this project purpose, and, thus, cannot legally be eliminated from study under NEPA. 40 C.F.R. § 1502.14(a). Indeed, until FHWA has issued a Record of Decision, no action can be taken on the project that would “[l]imit the choice of reasonable alternatives.” 40 C.F.R. § 1506.1(a)(2). The recent attempt under state law to eliminate study alternatives does nothing to alleviate FHWA’s responsibilities under federal law, the supreme law of the land. U.S. Const. art. VI, cl. 2.

These concerns are not limited solely to the NEPA process. In a letter dated January 26, 2011, the US Army Corps of Engineers (“Corps”), in accordance with SAFETEA-LU Section 6002, identified an “Issue of Concern” regarding the proposal to eliminate the “Red” and “Pink” routes as reasonable alternatives for further study. Among other concerns, the Corps noted that the Clean Water Act requires that individual permit decisions be made “after notice and opportunity for public hearings.” 33 U.S.C. § 1344 (a). Indeed, without considering a reasonable range of alternatives, it will be impossible for the NCTA to obtain either a 401 state water quality certification, or a 404 federal Clean Water Act permit. 15A N.C. Admin. Code 02H .0506(b)(1); 40 C.F.R. § 230.12(a)(3).

Our concerns about the elimination of all alternatives north of the “Orange” route are further heightened because those alternatives would have had substantially fewer environmental impacts. For example, while the “Red” route would impact 43.7 acres of wetlands and 29,770 feet of streams, impacts from the “Orange” route will be far higher—88.1 acres of wetlands and 36,120 feet of streams. Moreover, where the “Red” route would have greatly minimized, if not eliminated entirely, impacts to the federally endangered dwarf wedgemussel (*Alasmidonta heterodon*), the “Orange” route will have substantial impacts on that species. Furthermore, by eliminating alternatives closer to the existing urbanized area, there is a greater potential for the highway to induce sprawling growth and increased traffic, leading to a range of added water quality concerns, and potentially adversely impacting the region’s ability achieve compliance with federal air quality standards.

In fiscal terms, the eliminated routes would have greatly minimized the heavy costs of mitigation for the wetlands and stream impacts. Elimination of the shorter routes under consideration also will increase the construction and maintenance costs of the project. Indeed, it is essential that any future project study include robust consideration of functional alternatives to a new toll highway involving the existing highway network in the study area. Such alternatives would likely cost less far less than construction of a new location alternative.

Finally, we note a recent statement by a NCDOT spokesperson in the Garner News on March 29, 2011, copy attached, stating “We were never going to build the red route. It was only for study.” This characterization of the NEPA process as a study to justify foreordained decisions violates the core purpose of that statute. NEPA regulations require that an EIS be implemented to assure that it “will not be used to rationalize or justify decisions already made.” 40 C.F.R. § 1502.5. Moreover, regulations demand that EIS’s be prepared early enough to ensure that they “can serve practically as an important contribution to the decision making process.” *Id.* The clear inference of the statement to the Garner News, however, is that the agency is engaged in closed-door decision making prior to

¹ Draft Preliminary Purpose and Need for the Southeast Extension, October 2010.

the analysis of environmental and other impacts of different alternatives, similar to concerns we have raised in comment letters and litigation regarding other NCTA projects.

Sincerely,



David Farren
Senior Attorney



Kym Hunter
Associate Attorney

Cc: (via e-mail and US Mail)

David Joyner, NCTA
Clarence Coleman, FHWA
John Sullivan, FHWA
S. Kenneth Jolly, US Army Corps of Engineers
Brian Wrenn, NC Department of Natural Resources, Division of Water Quality
Pete Benjamin, US Fish and Wildlife Service
Heinz Muller, USEPA, Region, IV
Chris Millitscher, USEPA, Raleigh, NC
Travis Wilson, NCWRC
Ed Johnson, Capital Area Metropolitan Planning Organization (CAMPO)
Chris Lukasina, Capital Area Metropolitan Planning Organization (CAMPO)
Senator Dan Blue
Senator Richard Stevens
Representative Deborah K. Ross
Representative Darren G. Jackson
Representative Rosa Gill
Representative Jennifer Weiss



Town of Garner

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March 7, 2012

Mr. Steve DeWitt, P.E., Chief Engineer
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699-1578

Re: Triangle Expressway Southeast Extension Alternatives Development & Analysis Report

Dear Mr. DeWitt:

This letter is to advise you of the Town of Garner's position regarding the Triangle Expressway Southeast Extension Alternatives Development & Analysis Report dated January 13, 2012.

The Town of Garner would like to reiterate the statements and concerns noted in: a) our letter dated October 20, 2010 addressing our initial concerns with the devastating human impacts of the red route; b) our Resolution (2010) 2072 dated October 4, 2010 supporting use of the original protected corridor design illustrated as orange on NCTA maps; and c) our letter dated January 9, 2012 detailing the significant negative impacts on numerous public parks in the Town of Garner.

As you know, the Garner community cannot withstand the negative consequences of construction and/or study of the red route. It is destructive to our community and the prospect of study brought our growth and economic development progress to a standstill during 2010.

While a devastating transportation option such as the red route is being actively and publicly studied, no home buyer is interested in buying a house (new or resale) in the road's path and no industry, bank, or developer is willing to invest in any project in or near the route's study area.

Since the NC General Assembly passed legislation on March 18, 2011 disallowing the NCTA to study any route north of the orange corridor, the following positive economic impacts have occurred in the Town of Garner:

Residential

- Sales resumed at the Village of Aversboro, one of the hottest residential projects in Wake County.
- This community has seen 15 house closings since March 18, 2011. Value of these residential sales totals \$4,424,000.
- 7 additional home sales are currently pending (waiting to close or under construction).
- An additional 17 lots have been sold to builders by the developer for the next round of construction. This totals \$1,190,000 in value.

Commercial/Industrial

- Strategic Behavioral Health, LLC of Memphis, Tennessee announced they would build a brand new facility in Garner.
- Their investment will total approximately \$8 million. This project is currently under construction with a late 2012 opening date. The venture capital fund backing this project refused to allow the project to continue until the red route was removed.
- This new facility will employ 200 employees with an average wage of \$50,000.
- Penske Truck Leasing Service Center had broken ground just prior to announcement of the red route as a study alternative going through their brand new site. Their corporate management in Pennsylvania was devastated to learn of the possible destruction of their brand new investment in NC.
- Their facility investment totals \$3 million and 12 jobs.

Totals

The discontinuation of the study of the red route has resulted in **\$16,614,000** in **new investment** in Garner and adds tremendously to our tax base. **212 permanent jobs** and numerous short-term construction jobs are created for the Research Triangle region.

All persons that have engaged in conversation about the red route agree that the red route is horribly detrimental to the Town of Garner and is not worthwhile for construction. Therefore, it seems to be extremely foolish to continue studying it. It is a waste of public dollars and creates irreparable harm to the entire Garner community; current residents, active residential developers, and industrial tenants (current and future) are severely harmed.

It is notable that CAMPO, the Capital Area Metropolitan Planning Organization, representing 18 area municipalities and 5 counties, completely agrees with and supports the Town's position and beliefs on this matter.

The Town is pleased with the Triangle Expressway Southeast Extension Alternatives Development & Analysis Report and commends the NCTA for taking the Garner community concerns to heart in its recent work.

The notable remarks about the **red route that were pleasing to the Town include the following:**

From page 5-22: "Despite these advantages (mentioned in preceding paragraph) of the red corridor alternative, it is the opinion of NCTA that the numerous disadvantages of the Red Corridor Alternative are so extensive and significant that they outweigh this advantage."

6.5 pages of text follow outlining why the red corridor alternative is a bad idea. The headings are as follows: a) does not serve traffic needs; b) disproportionate community impacts; c) impacts to Swift Creek watershed area; d) impacts to Section 4-F applicable resources (town parks); e) negative impacts to local economic base; and f) opposed by local governments and local community.

The report also discusses the 6 alternate routes proposed by Town of Garner and the one route suggested by Joe Milazzo of Regional Transportation Alliance (RTA) that follows existing I-40 & US 64.

From the Town's perspective, the bottom line is on page 5-38. The NCTA report identifies five alternatives for additional detailed study in the next phase – Draft Environmental Impact Statement (EIS). These are the options that NCTA plans to move forward with:

1. Orange to Green
2. Orange to Green to Mint Green to Green
3. Orange to Brown to Tan to Green
4. Orange to Brown to Green
5. Orange to Green to Teal to Brown to Green

The Town is extremely pleased that none of these alternatives say red or pink.

We are hopeful that our colleagues at the various state and federal resource agencies will see this matter the same way the citizens of Garner do. The human impacts are too severe to continue with any further study of the red route.

The Town understands that the federal regulatory officials continue to be concerned about wetland impacts. Of course the red route has less wetland impacts – it traverses and obliterates 13 residential neighborhoods, 4 Town parks, and our primary industrial park – Greenfield South. By definition, residential communities, active parks, and industrial areas are located on high ground outside of low-lying, swampy areas. A route through Downtown Raleigh would produce lower wetland impacts, but that is also an unwise option. It is doubtful that the original intent of NEPA was for all new highway routes to go through densely developed suburban or urban areas. If the amount of wetlands is the driving force for route selection decisions, then very few new routes will be built in less populated areas.

For the good of the Research Triangle Region, a vital and important economic engine for the State of North Carolina and the Southeastern United States, Highway 540, Raleigh's Southern Loop, needs to be constructed. Our region does not need to replicate the gridlock, traffic congestion, and associated problems of our neighbors in Atlanta and Washington, DC. Continuing to delay progress on Highway 540's designated route (orange protected corridor) from 15+ years ago is unwise and detrimental.

Thank you for your time and effort involved in preparing the recent Triangle Expressway Southeast Extension Alternatives Development & Analysis Report. Please contact me at 919-773-4407 if you have any questions or need additional information.

Sincerely,



Hardin Watkins
Town Manager

Maseman, Kristin

From: Maseman, Kristin
Sent: Thursday, January 09, 2014 1:03 PM
To: Maseman, Kristin
Subject: FW: Complete 540 - Draft Alternatives Report Comments

From: Ridings, Rob [<mailto:rob.ridings@ncdenr.gov>]
Sent: Monday, October 21, 2013 1:34 PM
To: Kiersten Bass
Subject: RE: Complete 540 - Draft Alternatives Report Comments

Kiersten,

I have no comments on the Draft Report. I think when we narrow down the number of alternatives and do thorough reviews of the potential impacts of each, and then move to pick a LEDPA, DWR will have a good deal to say. But everything I saw on the Draft Alternatives Report looked pretty good to me so far.

Thanks,
Rob Ridings
DWR

e this communication, please delete this message and any attachments. Thank you.

This e-mail and any files transmitted with it are confidential and are intended solely for the use of the individual or entity to whom they are addressed. If you are NOT the intended recipient and receive this communication, please delete this message and any attachments. Thank you.



North Carolina Department of Cultural Resources
State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Pat McCrory
Secretary Susan Kluttz

Office of Archives and History
Deputy Secretary Kevin Cherry

October 10, 2013

Kristin Maseman
H. W. Lochner, Inc.
2840 Plaza Place, Suite 202
Raleigh, NC 27612

Re: Revised Draft Alternatives Development and Analysis Report, Triangle Expressway Southeast Extension, R-2721, R-2728, R-2729, Wake and Johnston Counties, CH 98-0457

Dear Ms. Maseman:

Thank you for your letter of September 5, 2013, transmitting the Revised Draft Alternatives Development and Analysis Report for the above cited project. We have reviewed the document and offer the following comments.

Page 5-3, under the section entitled "Historic Resources Criteria" discusses only historic architectural resources and states that an architectural survey will be conducted after selection of the Detailed Study Alternatives. This section should also include a discussion of archaeological resources and a commitment for an archaeological survey after selection of the project corridor.

Overall, the document is well-written and comprehensive. We concur with your selected alternatives for further study.

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-Earley, environmental review coordinator, at 919-807-6579 or renee.gledhill-earley@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Renee Gledhill-Earley

for Ramona M. Bartos

Maseman, Kristin

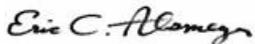
From: Alsmeyer, Eric C SAW <Eric.C.Alsmeyer@usace.army.mil>
Sent: Monday, November 04, 2013 4:01 PM
To: Kiersten Bass; 'militscher.chris@epamail.epa.gov'; Wicker, Henry M JR SAW; 'gary_jordan@fws.gov'; 'rob.ridings@ncdenr.gov'; 'travis.wilson@ncwildlife.org'; 'amy.simes@ncdenr.gov'; 'Gledhill-earley, Renee (renee.gledhill-earley@ncdcr.gov)'; 'ed.johnson@campo-nc.us'; 'thouser@ncdot.gov'; 'wbowman@ncdot.gov'; 'tbford@ncdot.gov'; 'driffey@ncdot.gov'; 'mfurr@ncdot.gov'; 'Mckee, James S (smckee@ncdot.gov)'; 'dproper@ncdot.gov'; 'gasmith@ncdot.gov'; 'Reams, Edwin D (ereams@ncdot.gov)'; 'Pleasant, Kyle A (kpleasant@ncdot.gov)'; 'Memory, John R (rmemory@ncdot.gov)'; 'joe@letsgetmoving.org' (joe@letsgetmoving.org)'; 'Johnson, Benjetta L (benjettajohnson@ncdot.gov)'; 'Lineberger, Nicholas C (nclineberger@ncdot.gov)'; 'Desai, Rupal P (rpdesai@ncdot.gov)'; 'Snipes, Adam J (ajsnipes@ncdot.gov)'; 'alyudmi@ncdot.gov'; 'ancozzarelli@ncdot.gov'; 'Staley, Mark K (mstaley@ncdot.gov)'
Cc: 'Clarence Coleman'; 'George Hoops'; 'Jennifer Harris'; 'emidkiff@ncdot.gov'; Bruce, Roy; Maseman, Kristin; Eason, Brian; Schlotter, Jeff; 'jstudt@dawsonassociates.com'; 'fskaer@dawsonassociates.com'
Subject: RE: Complete 540 - Draft Alternatives Report Comments (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Kiersten: The Corps has no comments on the latest Draft Alternatives Report at this time, and is satisfied that the alternatives proposed for further study meet the Corps' requirements under Section 404 and NEPA.

Please reply or call if you have any questions or if I may serve you in any other way.

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at our website at <http://per2.nwp.usace.army.mil/survey.html> to complete the survey online (Paper copies available upon request).



Eric Alsmeyer
Project Manager
Raleigh Regulatory Field Office
US Army Corps of Engineers, Wilmington District
3331 Heritage Trade Drive, Suite 105, Wake Forest, NC 27587
Tel: (919) 554-4884, x23
Fax: (919) 562-0421
Regulatory Homepage: <http://www.saw.usace.army.mil/Missions/RegulatoryPermitProgram.aspx>
(If you need information that is not yet available on our new website, please let me know)

From: Kiersten Bass [mailto:kbass@hntb.com]
Sent: Monday, November 04, 2013 1:31 PM
To: 'militscher.chris@epamail.epa.gov'; Alsmeyer, Eric C SAW; Wicker, Henry M JR SAW; 'gary_jordan@fws.gov'; 'rob.ridings@ncdenr.gov'; 'travis.wilson@ncwildlife.org'; 'amy.simes@ncdenr.gov'; 'Gledhill-earley, Renee (renee.gledhill-

APPENDIX E
Corridor Public Hearing Transcript

1 **OFFICIAL PUBLIC HEARING TRANSCRIPT**
2 **Public Hearing Transcript**

3
4 **Complete 540 – Triangle Expressway Southeast Extension Project**
5 **T.I.P. Nos. R-2721, R-2828, and R-2829**

6
7 **December 7-8, 2015**
8
9

10 Coy Batten: Hello my name is Coy Batten. I live at 1507...excuse me...1507
11 North Gleneagle Drive in Garner. And I'm here, of course to review the maps and I've
12 already reviewed the EIS at the Planning Department in Garner. And I am totally
13 opposed to the Red Route.

14
15 Now, I realize that the completion of 540 is necessary to provide the transportation needs
16 of this area and the people that are travelling. And I realize that the impact on the
17 wetlands and the habitat of the Dwarf Wedgemussel has to be given special emphasis, but
18 it's unbelievable the lives that this 540 Route is going to change. It's not just the 4 or 500
19 that's going to be moved, it's the thousands and thousands that is going to have to live
20 there with these sound barriers and the traffic noise and, and, all the stuff that's going.

21
22 I just hope that some other alternatives can be, can be evaluated, well the other alternative
23 will be evaluated and this Red Route eliminated, because if the Red Route is selected for
24 the completion of 540, I hope the outer loop will never be constructed. And this is Coy
25 Batten. Thank you very much. Bye, bye.

26
27 Nick Gervase: My name is Nick Gervase from 408 Settlecroft Lane in Holly
28 Springs. I'm also the President of the Brackenridge Pointe Homeowners Association. I
29 have three points tonight.

30
31 Number 1, it's clear from your data from the environmental study the Orange Route that
32 goes to...from Holly Springs 55 over to 401 and out further, there's at least 5 or 6 Orange
33 Routes that clearly are the least expensive of all the routes by hundreds of millions of
34 dollars. In addition, the Orange Routes take up the least parcels, for instance some at 141
35 for Alternative 1. Alternative 8 is 1,213 almost a 500 parcel difference.

36
37 So, on 2 fronts, you're taking up less people's homes, you're disrupting less people,
38 you're disrupting less subdivisions and on the financial side, the Orange Route is far less
39 expensive than any of the other routes.

40
41 Last, I'd like to say that for 21 years, the North Carolina Department of Transportation
42 has been telling people where to build and where not to build. You picked the Orange
43 Route years ago, people did not build for the most part where the Orange Route was, we
44 built elsewhere. It would not be ethical to change the highway location from orange to
45 something else after telling people where they should be building their homes. That
46 would be wrong. And we certainly expect the North Carolina DOT, as an ethical

47 organization and they'll stay where the original plan, the lowest cost plan, and the plan
48 that causes least disruption in all of the towns of southern Wake County. Thank you very
49 much.

50

51 Matt Murphy: My name is Matt Murphy, 600 Redhill Road, Holly Springs,
52 27540. I attended the meeting on Tuesday evening, December 8th.

53

54 I am in favor of Alternative Number 1, orange to green, on the basis that it's the
55 alternative to which land use has been restricted for 20+ years. Developers and home
56 purchasers and businesses have made decisions for many, many years on the basis of that
57 route being protected. To my understanding, it's the option that disrupts the least number
58 of businesses, impacts the least number of homes, and provides cost effectiveness as well.

59

60 Any version of the purple and blue combination is not a viable alternative on the basis of
61 the number of homes that are disrupted, businesses that are disrupted. It seems to have an
62 extraordinarily high impact. It also, in my estimation, opens the state to potential lawsuits
63 on the basis of so many neighborhoods and developments having been located in a way
64 that was seemed to have been clear after the Purple Route was taken back off the table, I
65 think around 2010.

66

67 So, I'm strongly in favor of Alternative Number 1, strongly opposed to anything having
68 to do with purple or blue. In fact, would like to see purple and blue removed from
69 consideration on the basis that it is such an inferior choice to other options.

70

71 John Lydon: Hello, my name is John Lydon. I reside at 7516 Orchard Crest
72 Court, Apex, 27539. I'm commenting in regards to the Bells Lake Expansion and the 540
73 Exit to Bells Lake. The Bells Pointe community will be impacted significantly.

74

75 Bells Pointe community consists of Bells Pointe Court and Orchard Crest Court and it
76 comes off of Bells Lake Road. The widening of the road would basically destroy half of
77 the neighborhood. Each house is on septic and the proposed land acquired by the county
78 will take away any room for septic and the repair barrier; thus forcing the acquisition of
79 every house on that side of Bells Lake. Therefore, the result will basically be destroying
80 the entire neighborhood which consists of 26 homes, friends and family, everyone great
81 friends with each other, great neighborhood, kids playing...just a beautiful, beautiful
82 area.

83

84 And to be destroyed, by a simple road, the amount of lives that would be impacted is
85 numerous. It's ridiculous, the amount of lives that would be impacted, the whole
86 neighborhood being destroyed. Now, each house on the opposite side of the street
87 that's...that does not back up to Bells Lake Road would then be forced to be open to
88 Bells Lake Road and no (*inaudible*). There will be no children playing. There will be no
89 walking in the street. The neighborhood would be open to anyone who wants to come and
90 go. Crime would probably increase. It's just a horrible, horrible proposal.

91

92 I hope you take my comments seriously. I moved here from New York for a better life.
93 I'm a retired police sergeant. I found Bells Pointe. It took me a year to find it and I fell in
94 love with it. My wife and I, we truly, truly love it and our kids love it. We've made so
95 many friends and it would just be devastating. I've already experienced 911, the 2nd tower
96 almost fell on me. I survived that and I really don't need to go through this again. I
97 appreciate you taking the time and listening to my comments and I hope that, that the
98 expansion will not affect my neighborhood at all. Thank you.

99

100 William Debrauwer: My name William Debrauwer. I live at 2609 Thurrock
101 Drive, Apex, North Carolina 27539. My comment is my preference would be for the
102 Orange Route to Highway 401. East of that I have personally no opinion of other than I
103 would prefer it impact, have the least impact on individual homeowners, in other words,
104 people living in houses. But for the Orange Route, that would have the least impact on us.

105

106 I definitely do not endorse the Red Route. I used to live in Garner. I have a lot of friends
107 there. I think that Red Route is just atrocious and I hopefully that it never comes to
108 fruition. Also, I'd like to say that this needs to be moved ahead. I'm not very happy with
109 the way the state is handling, how we're basically holding people's property hostage. The
110 Map Act, back, I think that's wrong. You either buy the property and if you don't use it,
111 sell it or let those folks do, you know, what they want with their property. I mean you
112 can't...it's wrong. It's wrong for the state to hold those people hostage, basically with
113 regards to their property rights.

114

115 So, hopefully that gets fixed too. Anyway, you know, Orange Route all the way to 401
116 and then what happens east of 401 the least impact to nobody. Thank you.

117

118

Hearing Adjourned.

119

120

Jamille Robbins, Moderator

121

Public Involvement Unit

122

December 7-8, 2015

123

124

Typed by Neighborhood Solutions

1 **OFFICIAL PUBLIC HEARING TRANSCRIPT**
2 **Public Hearing Transcript**

3
4 **Complete 540 – Triangle Expressway Southeast Extension Project**
5 **T.I.P. Nos. R-2721, R-2828, and R-2829**

6
7 **December 9, 2015**
8

9 Alright, good evening ladies and gentlemen. Can everyone take their seats? Can you hear
10 me. (*Audience states no.*) Can you hear me now? How's that? Is that better? (*Audience*
11 *states yes.*) Can you hear me in the back? Just one second. How's that now? A lot better?
12 (*Audience states yes.*)

13
14 Alright. Well, good evening ladies and gentlemen. I would like to welcome you all that
15 are here and those joining us via the live webcast to the North Carolina Department
16 Transportation's Formal Corridor Public Hearing for the Complete 540 Project, also
17 known as Transportation Improvement Program project numbers R-2721, R-2828, and R-
18 2829. My name is Jamille Robbins. I am a Public Involvement Officer with the
19 Department of Transportation and I will be your moderator for tonight's public hearing.

20
21 Real quick some housekeeping, restrooms are out the door to the left and just past the
22 sign-in table there's a hallway, there are restrooms there. There are also restrooms just
23 outside to the right in that hallway. If you have a cell phone on, please turn to silent.
24 These are formal proceedings. We are recording and you don't want to interrupt that with
25 a ringtone.

26
27 As far as ground rules go, I used to have a long laundry list of rules for public hearings
28 and I realized they all can be condensed into just one main rule and that is the "golden
29 rule". That is to treat others as you would like to be treated and that is very appropriate in
30 a public forum such as this, especially when we get to the public comment period;
31 because there are different opinions on this project. If someone gets up to speak and their
32 comments are different from your opinions, don't boo them or heckle them from the
33 crowd. Please provide them the same respect that you would like if you got up to speak.

34
35 Alright real quick, I do want to recognize the staff that are here tonight. It's too many to
36 go name by name in the interest of time. But all of the people in green shirts have done a
37 lot of work. A lot of hard work went into the preparation of these public meetings and
38 public hearings. So, I just wanted to recognize them.

39
40 I do want to recognize a few people in particular. Our Division Engineer, Mr. Joey
41 Hopkins and our Division Construction Engineer, Mr. Dennis Jernigan. I also would like
42 to recognized our NCDOT Project Planning Manager, Mr. Eric Midkiff and our NCDOT
43 Roadway Project Manager, Mr. Tony Houser. And I would also like to recognize our
44 Director of the Turnpike Authority, Mr. Beau Memory.

46 And I would be remiss if I didn't recognize all the hard work by our consultant team,
47 H.W. Lochner and HNTB; Mr. Roy Bruce, Jeff Schlotter, and Kristie Maseman and Mrs.
48 Kiersten Bass and Jennifer Harris with HNTB.

49
50 We also have several local officials, elected officials here tonight. Our State
51 Representative, Nelson Dollar is here and State Senator Chad Barefoot and I know we
52 have several Mayors from Holly Springs, Fuquay, and the Town of Garner here tonight
53 and their town councils and town staff. So, I would like to thank them all for coming out
54 tonight as well.

55
56 So, let's go ahead and get started. And I will do a brief overview of what to expect from
57 tonight's hearing. We'll start with the purpose of tonight's hearing and your role in that
58 process. We'll do a project overview. We'll talk about the project alternatives. We'll talk
59 about the cost and impacts of those alternatives, the right-of-way acquisition process, and
60 the next steps in the project development process, and then we get to the most important
61 part of tonight and that's the public comment portion. Again, this is a public hearing and
62 we've come out to hear what you have to say.

63
64 The ***purpose of tonight's hearing*** is simply to make you, the public, a part of the project
65 development process. This is an important step in our continuing efforts to make you a
66 part of this process. So, specifically tonight we want to get your input on the Draft
67 Environmental Impact Statement that was prepared and is the environmental document
68 that is prepared for this project.

69
70 We'll talk a little bit about the "why" of the project. In transportation terms that is known
71 as the ***purpose and need***. We'll present the detail study alternatives to you and get your
72 input on those alternatives. Now, the main focus of this round of public hearings is to
73 select the location for this project, so selecting an alternative. Currently, we have 17. We
74 want to get that down to one alternative. And so your input is vital in that aspect.

75
76 We really don't want to get into any design questions tonight because that's really not the
77 focus of this public hearing. I know you've seen the ***public hearing maps*** and you've
78 seen functional designs in those corridors. A lot can change when we actually get into the
79 next phase of this project.

80
81 Now copies of the Draft Environmental Impact Statement or DEIS and the maps that
82 you've seen here tonight have been available at the following locations and all of this is
83 in your handout. Now, does everyone have a handout? Okay. And copies of the DEIS
84 only have been available at the following locations.

85
86 Now, I can't stress enough the importance of ***public participation*** in this process. And
87 you participate by making your voices heard. You do that several ways. We've provided
88 a lot of different options for you to provide input. You can submit written comments here
89 tonight. In each packet, there was a ***comment form***. You can fill that out and leave it here
90 tonight. You have until January 8th to submit comments. You can go home, take time to
91 formulate your ideas, and send those in to us. You can submit comments via email. You

92 can fax your comments to us. You could also submit your comments via the on-line
93 public engagement software tool we're using, known as MySidewalk. You can also
94 engage with your fellow citizens on that site. And also on our project website, we have an
95 interactive comment form that you could fill out. And you can also have your comments
96 recorded here tonight during this formal preceding. And also, we had oral comment
97 station at the public meetings this week. So, if you didn't want to write your comments,
98 you were able to just speak into the mic at the oral comment station and we'll have those
99 transcribed as well.

100
101 In an effort to broaden the outreach and participation for citizens we are streaming the
102 presentation live via the web. And for those of you that are attending via the webcast, you
103 can submit your comments in the question box. And we will take those in as public
104 comments.

105
106 Some maybe asking *what is done with my input?* Well in about six to eight weeks from
107 now NCDOT staff from various branches, all of which play a role in the development of
108 this project, will convene to discuss each and every comment that have been received
109 through the public comment period. Again, that is January 8th. So, we'll go through each
110 and every one of those comments and prepare a response to those comments. And we will
111 incorporate public comment into our decision on recommending an alternative.

112
113 Now, I want to be clear that the Department cannot just take public comment into
114 consideration when making these decisions. We have to balance that against good, sound,
115 engineering criteria. We have to balance that with safety, which is our number one goal,
116 impacts to the natural and human environment. We have to look at cost and traffic service
117 as well. So, it's a very complex balancing act. But we do have a lot of practice in it. But
118 what that allows us to do is put the best product we can on the ground for the citizens of
119 North Carolina.

120
121 Now, as I stated earlier, we do hope to come out of this *post hearing* meeting with a
122 recommended alternative. Following the post hearing meeting, we will meet with our
123 agency partners. Those are various state and federal regulatory and resource agencies,
124 such as U.S. Army Corp of Engineers, the U.S. EPA, U.S. Fish and Wildlife Service, the
125 State Historic Preservation Office, the Capital Area Metropolitan Planning Organization,
126 CAMPO, just to name a few. But we will meet with them to discuss all the public and
127 agency comments. And we hope to come out of that meeting with a preferred alternative.

128
129 Following the selection of the *preferred alternative*, we will do a major media blitz to
130 announce that selection and the reasons for that selection. We'll send a newsletter out to
131 everyone on the mailing list. It will also be announced on the website. We'll work with
132 the local municipalities as well to get the word out. It is not lost on us that a lot of people
133 have been in convert by this project; living with the shadow of this project coming for
134 quite a while. So, we do hope to make that decision in the spring. We hope to reach a
135 selected alternative in the Spring of 2016.

137 Now, this is a Federal-Aid Highway Project. Traditionally, under that program, the feds
138 pay 80% of the cost of the project and the state pays 20%. But CAMPO or Capital Area
139 Metropolitan Planning Organization identified the Complete 540 Project as a toll facility.
140 So, tolling is an additional funding source for this project. And by committing to tolling,
141 we will be able to deliver this project many years ahead of traditional funding sources.
142

143 Now, let's get back to the "why" of the project. Again, in transportation terms that is the
144 ***purpose and need*** for the project. Now, this area, the Raleigh-Cary area has grown by
145 52% since 2000 and it is continuing to grow. North Carolina is a great place to live. This
146 is a great area. So, people are coming. We are seeing a lot of development in the area.
147 And with all that growth it puts a strain on our existing transportation structure. And so,
148 with that we need more route choices. We also need to reduce the congestion on our
149 existing roadway network. So with the said, the purpose of this project is twofold.

- 150 (1) to improve the mobility within and through the project study area during peak
151 travel periods and
- 152 (2) reduce forecast congestion on the existing roadway network within the project
153 study area.

154 Now, a secondary benefit is the improved system linkage or system connectivity within
155 the exiting roadway network.
156

157 Now, the proposed improvements are consistent with the Long-Range Transportation
158 Plans for the local municipalities within the study area, local governments within the
159 Capital Area Metropolitan Planning Organization or CAMPO, again, as well as NCDOT
160 have included this project in their adopted plans.
161

162 Again, the project is the completion of the 540 Outer Loop around the greater Raleigh
163 area. This will extend the project from its western terminus or endpoint at NC 55 eastward
164 to its current eastern endpoint at U.S. 264. It is proposed as a six lane median divided
165 freeway with full control of access. That means access to and from the new roadway will
166 be via interchange only. That means no private driveways will be allowed to connect to
167 the roadway. And as I said before, it is identified as a toll facility just like you have on
168 NC 540 now. The tolling will be captured electronically as it is today.
169

170 Let's talk about the ***detail study alternatives***. You'll see they're 10 color coded segments
171 that can be combined in various ways to assemble 17 detail study alternatives. There are
172 four western routes and there are five eastern routes. And so, we'll go through each detail
173 study alternative and I will just kind of point out some of the major advantages and
174 disadvantages for each one. And instead of using "detail study alternative", I'll use the
175 acronym DSA, okay.
176

177 So, detailed study alternative 1 consists of the combination of the Orange and the Green
178 Routes. Now an advantage that all of the Orange Routes have is that it follows a
179 protected corridor that has been protected since 1995. So development within that
180 corridor has been limited. And as a result, the Orange Routes have the fewest relocations
181 compared to other routes.
182

183 One of the disadvantages of the Orange Route is that it has higher wetlands impacts. It
184 also crosses a portion of Swift Creek adjacent to or through a livable habitat for a
185 federally protected species, which is the Dwarf Wedgemussel.
186
187 And the Green Route avoids any use of any public lands. However, it would impact a
188 small communications tower and it may impact one of a group of large communication
189 towers. It also bisects the Randleigh Farm property. It is a plan mixed use community. It
190 goes right through the middle of that.
191
192 Now, DSA 2 is the orange, green and mint combination. The mint impacts the
193 communication towers as well. But it shifts the impacts to the Randleigh Farm property
194 further to the east, more to the eastern edge of that property.
195
196 DSA 3, which is the orange, brown, tan, green combination. The tan corridor shifts
197 impacts to the Randleigh Farm property to the east as well. It also avoids the
198 communications tower...communication towers. (*Ooh, I keep saying communications*
199 *tower.*)
200
201 The disadvantage of the tan corridor is that it could cause more disruption to more
202 homeowners. It also impacts eligible and historic property, known as the Baucom-
203 Stallings House. And it also impacts the northwest corner of the Clemmons Educational
204 State Forest.
205
206 DSA 4 is the orange, brown, green combination. The Brown Route avoids the
207 communication towers and avoids the Randleigh Farm property. The disadvantages of the
208 Brown Route is that it impacts several municipal properties, the Raleigh Police
209 Department's Training Facility, the Sprayfield and Neuse River Water Treatment Plant.
210 Those are the two main impacts there.
211
212 DSA 5, the orange, green, teal, and brown combination. The teal avoids the Randleigh
213 Farm property as well but it will still impact those communication towers. And it would
214 impact the Sprayfield and the Neuse River Waste Water Treatment Plant as well, and the
215 RPD (*Raleigh Police Department*) training facility.
216
217 DSA 6 is the orange, red, green combination. The benefits to the Red Route is that it has
218 the least amount of wetland impacts. It also crosses upstream of the Dwarf Wedgemussel
219 habitat. However, it does impact two watersheds. And those Red Routes also have 69%
220 more residential relocations as compared to the Orange Route. It also impacts two
221 eligible historic resources, Dr. L. J. Faulhaber (*I hope I'm saying that correctly.*) Farm
222 and the Bryan Farms Historic District. And it also has serious negative impacts on land
223 use and planning objectives and desired development patterns.
224
225 DSA 7 is the orange, red, mint, and green combination. (*Lets go back. I skipped one.*)
226
227 Alright, Detailed Study Alternative 8, actually 8-12 have the purple blue combination.
228 The benefits of the purple blue combination in combination with the lilac have fewer

229 wetland impacts. The purple blue combination also provides better access to the growing
230 areas near Fuquay. The disadvantages of the purple blue combination, again, detailed
231 study alternatives 8-12 is that it results in 108% increase in residential relocations over
232 the Orange Routes. It also affects some planned parks in Sunset Oaks Park in the
233 southeast regional park. It also has negative impacts to the Town of Holly Springs and
234 Wake County Land Use Plans. And the lilac corridor directly impacts the Dempsey E.
235 Benton Water Treatment Plant.

236

237 So, DSA 9, again, is the orange, purple, blue, lilac, green, and mint combination. DSA 10
238 is the orange, purple, blue, lilac, brown, tan, green combination. DSA 11 is the orange,
239 purple, blue, lilac, brown, green combination. Twelve is the orange, purple, blue, lilac,
240 green, teal, brown combination. (*Oops, I went too far.*)

241

242 Now, DSA 13 is the orange, actually 13-17 all use the full lilac corridor. As a result, it
243 has 76% more relocations over the Orange Routes. So, DSA 13 is the orange, lilac, green.
244 DSA 14 is the orange, lilac, green, mint. DSA 15 is orange, lilac, brown, tan, green
245 Sixteen is orange, lilac, brown, green and DSA 17, finally is the orange, lilac, green, teal,
246 brown.

247

248 Now, for more information...more detailed information on those impacts, feel free to
249 pick... You can view this online. This is the Draft Environmental Impact Statement and
250 all the different impacts are listed in here.

251

252 So, let's talk a little bit about the ***project costs and impacts***. This evaluation matrix is in
253 your handout. I'm not going to take the time and go through that entire matrix, but I will
254 touch on two important factors in that. That is the cost. The costs estimate for the various
255 alternatives range anywhere from roughly \$2.2 billion to \$2.6 billion. The lowest is
256 Alternative 2, nearing \$2.2 billion and the highest is Alternative 12 nearing \$2.6 billion.
257 Relocations range anywhere from 243 to 569 relocations. The lowest being Alternative 4
258 and the highest being Alternative 9.

259

260 Now, Section 4(f) is a federal law that offers protection to publically owned parks,
261 recreation facilities, wildlife refuges, and historic sites. There is a provision in Section
262 4(f) that states that if you have a minor impact to a Section 4(f) property that an
263 avoidance alternative is not needed as long as you can prove that it is a minor impact,
264 also known as a "de minimis" impact. And we have three of those properties. One is the
265 Middle Creek School Park. The other is the Watershed Extension Loop Trail in
266 Clemmons Educational State Forest and the Neuse River Trail.

267

268 A little bit about the ***right-of-way acquisition phase or process***. Again, it's still a little
269 early to be talking about right-of-way acquisition. We first want to begin to pick the
270 location of this project. Those corridors that I just went through are all 1000-feet in
271 width. The actual project would only be about a 1/3 of that size, so around 300-feet.
272 Again, wider at interchange locations.

273

274 So, when we study that 1000-foot area so that we know those environmental constraints
275 within those corridors. So, when we start moving towards more detailed designs, we
276 know what's out there. And in essence the actual roadway design could snake anywhere
277 in-between that 1000-foot corridor.

278
279 But, I still want to let you know about our right-of-way acquisition phase. We will be
280 back out with a design public hearing. And we will be looking at the particular impacts of
281 design on properties at that time and that'll be a more appropriate time to be concerned
282 about the right-of-way acquisition.

283
284 But once decisions are made regarding final design, the limits of the project will be
285 staked in the ground. And if you are an affected property owner, a Right-of-Way Agent
286 will arrange a meeting with you to discuss the project with you, how it affects you and
287 your rights as a property owner. If permanent right-of-way is required from you, then an
288 appraisal will be done on your property. And the current market value of that property at
289 its highest and best use will be offered as monetary compensation.

290
291 Now, during this process, the Department must:
292 treat all tenants and owners equally;
293 we must fully explain the owner's rights;
294 we must pay just compensation in exchange for property rights; and
295 we must provide relocation advisory assistance.

296
297 That is if you are a relocatee, if you are going to be displaced as a result of this project,
298 additional assistance in the form of advice and monetary compensation is available. Now,
299 we do have our Right-of-Way Agents here. They are the experts on that subject. So, if
300 you have any detailed right-of-way questions, feel free to meet with them after the public
301 hearing. Or if you have any right-of-way questions, just send those again with your
302 comments.

303
304 *Next steps*, the Draft EIS review and public comment ends on January the 8th. Again, we
305 hope to have had a preferred alternative selected in the Spring of 2016. The final EIS,
306 which is the next environmental document and the Record of Decision, which is the final
307 environmental document in this process. The dates have yet to be determined. But we do
308 know that those documents have to be and will be completed in time for us to meet the
309 anticipated LET date or construction contract award date in 2018.

310
311 Now, the project will be awarded as a *Design-Build* project. The Design-Build process is
312 still a fairly new project delivery method for the Department of Transportation. It differs
313 from our traditional project delivery method, which is we go through planning and
314 design. We complete the final design plans and right-of-way plans for the project. Then
315 we allot 18-24 months to purchase all of the right-of-way needed to construct that project.
316 And then we begin construction.

317
318 Well, the industry realizes there are a lot of efficiencies that could be made up in that
319 timeframe. So, what the Design-Build process allows us to do is contract with a team of

320 designers and contractors to be responsible not only for the final design of the project but
321 the right-of-way acquisition of the project as well as the construction of the project. So, in
322 essence a Design-Build Team could be constructing in one portion of the project, buying
323 right-of-way in another, and finishing the final design in yet another portion of the
324 project.

325
326 And we've seen that lead to faster completion dates. We've also seen a lot of innovative
327 designs come out of the Design-Build process that further reduce costs and impacts. And
328 we've also seen quick resolutions to issues that arise during to the construction phase.
329 And anyone that has been involved with construction whether it be a home improvement
330 project or some major construction project, it's not a question of "if" an issue will arise,
331 it's when. So, the Design-Build process is a very efficient and a very good process for us.

332
333 Alright, enough of me talking. We have reached the most important part of the public
334 hearing and that is the *public comment* phase. We're asking everyone to come up to the
335 mic that is in the middle of the room here. When you come up, please state your name
336 and address. And I will call everyone up in the order in which we received these sign-ups.

337
338 And one other thing I failed to mention, minutes of that post hearing meeting where we
339 go through each and every comment and prepare a response, a summary of those minutes
340 will be prepared. So, if you want to see what was discussed at that meeting and the
341 responses to the various comments, put a note on your comment that you would like a
342 copy of those post hearing meeting minutes, alright.

343
344 Moderator: Alright, our first speaker is Mr. Joe Milazzo.

345
346 **TRACKING ID – O-06**

347 Joe Milazzo: Good evening. I'm Joe Milazzo. I'm Executive Director of the
348 Regional Transportation Alliance Business Coalition. RTA is a regional program of the
349 Greater Raleigh and Chamber of Commerce. We support the complete 540 initiative and
350 the completion of all remaining sections of the proposed 540 Freeway in southern and
351 eastern Wake County.

352
353 540 southeast extension turnpike will help create a resilient transportation network in the
354 southern part of our county with commuting, freight, transit, and more. I'd like
355 improvements to secondary roadways with traffic signals. This new stop light free
356 roadway will provide free flow rapid mobility across Wake County; both during peak
357 periods and throughout the day.

358
359 Since the extension of 540 is proposed to be constructed as a toll road, the Turnpike
360 Authority will be able to manage the (*inaudible*) throughout the day as traffic grows in
361 the future. For example, they could consider providing off-peak discounts or other
362 measures to optimize traffic flow.

363
364 Extending 540 into southern Wake County would also create an opportunity to support
365 future express car service in the area. Even today, the Triangle or Regional Transit

366 Agency frequently uses portions of the existing 540 Triangle Expressway Turnpike
367 during peak periods to avoid congestion on I-40 and keep transit schedules on time.

368

369 While our organization has not endorsed any of the specific corridor alternatives, we urge
370 North Carolina DOT, Federal Highway Administration, and the many partner resources
371 agencies to select a corridor and the appropriate mitigation that will protect the
372 environment while maintain broad support from the community.

373

374 RTA would like to thank NCDOT and the many federal state partners for their leadership
375 on this project and for the opportunity to speak with you this evening. Thank you.

376

377 Moderator: Thank you Joe. Next we have State Representative, Nelson Dollar.
378 Also, I forgot to mention, we're asking everyone to keep their comments to three
379 minutes. If you're going to run over, once we've exhausted the list of speakers, you can
380 come back up and speak if you like.

381

382 **TRACKING ID – O-07**

383 State Representative Nelson Dollar: Thank you. I'm Nelson Dollar. I live at 125
384 Long Shadow Lane in Cary. I'm a member of North Carolina House serving in District
385 36, which covers a large segment of the study area.

386

387 I want to personally thank DOT and their consultants for their engagement, their
388 professionalism, and how they've been reaching out to the public. It's very much
389 appreciate it.

390

391 I've had the opportunity to review the Draft Environmental Impact Statement and more
392 than ever I support completion of 540 along the Orange Route. Senator Barringer, who
393 also represents a good portion of this area was unable to be here this evening, but she
394 wanted me also express her strong support for 540 along the Orange Route.

395

396 Completing 540 is important. It's vital. It's been on the books for decades. It is important
397 to note that all of the decisions have been made by the state, by the county, by local
398 municipalities, by cities, by businesses, by individuals, families, with the expectation that
399 this critical transportation artery would be built along the Orange Route. That's been the
400 expectation for 20 years. And there are a host of landowners who really have limited use
401 of their property over this period of time because this was a protected corridor. They
402 certainly paid a substantial price in many ways for protection of the project already. So,
403 we need to follow that.

404

405 The entire concept of planning ahead for transportation infrastructure needs and demands,
406 we need to keep faith with the people to build this highway where we've told them where
407 it was going to be built. Nevertheless, an environmental process does require examining
408 the alternatives as has been discussed tonight. That having been done, I believe again, the
409 Environmental Impact Statement supports building along the Orange Route.

410

411 The General Assembly has long opposed, for example, the Red Route. I commend Mayor
412 Williams and the Town of Garner and their advocacy on this issue. And they certainly
413 have my continued commitment to ensure that the legislative action to stop any use of the
414 Red Route in what I believe would be the highly unlikely event that that alternative
415 would actually be chosen.

416

417 As it has been mentioned to the danger of the Dwarf Wedgemussel is a prime reason why
418 the Red Route was being evaluated. But the impacts on the citizens in Garner would be
419 enormous and far outweigh the marginal environmental benefits of not crossing Swift
420 Creek closer to the mussel terrain. The Red Route, I'm sure, will be discussed by a
421 number of many other citizens here tonight in terms of the details of that.

422

423 Then the question becomes the alternate route to the south and that's the Purple Blue
424 Route. In 2011, this route was removed from consideration by DOT. It should be rejected
425 again. That should be removed. The Purple Blue Route would cost hundreds of millions
426 of dollars more to construct. It would require the purchase of approximately 70% more
427 parcels and has been mentioned in the discussion already tonight, double the number of
428 relocations of homes and businesses. More relocations of homes and businesses than any
429 of the other alternatives. I can say with confidence that the purple blue alternative would
430 also find very strong opposition in the General Assembly.

431

432 Every potential route does have impacts. Nevertheless, let's keep faith with the citizens
433 with you here in this room, let's keep the plan that was laid out 20 years ago. We need to
434 complete 540 on the Orange Route. I certainly believe that the Draft Environmental
435 Impact Statement supports the Orange Route as the best alternative for the health and
436 benefit of our citizens and our community. Thank you.

437

438 Moderator: Thank you. Next we have State Senator Chad Barefoot. Following
439 Mr. Barefoot, we have Mark Helwig.

440

441 **TRACKING ID – O-08**

442 State Senator Chad Barefoot: My name is Chad Barefoot. I live at 8513 Battery
443 Crest Lane, Wake Forest, North Carolina and I represent Garner, Willow Springs,
444 Fuquay-Varina, and most of southeastern southern Wake County in the North Carolina
445 State Senate.

446

447 I'm here tonight to speak in favor of the original protected corridor, which was
448 commonly referred to as the "Orange Route" designated by DSAs 1-5. The Orange Route
449 has been the preferred route for over 20 years in southeastern Wake County and I believe
450 the Department of Transportation should recommend this preferred alternative route to be
451 built. 540 is extremely important and critical to our economic future in this area of Wake
452 County and we must build it.

453

454 But I know the reason we are here tonight and going through this process is due in part to
455 the discovery of the Dwarf Wedgemussel. And that some of the proposed routes are still
456 under consideration because of their environmental impact scores. But as the Department

457 makes its decision, I beg you to take into consideration the human impact of some of the
458 proposed alternatives, especially alternatives that include the Red Route.

459

460 The Red Route does not make common sense and any of the other routes don't either.
461 The fact that we are here considering a route that would bulldoze a dozen neighborhoods
462 is senseless. Destroying nationally registered historic places is not progress. The reason
463 the Red Route impacts less wetlands than the alternatives is because its full of people. So,
464 I encourage the Department to think of our citizens, to think of our people, consider the
465 lives of businesses that would be impacted by this decision, as I know you will. And I
466 hope that the engineers will place a high priority on the human impacts of these
467 alternatives. And I ask you tonight to recommend the Orange Route.

468

469 Moderator: Thank you, sir. Next is Mark Helwig followed by Jerald Morton.

470

471 **TRACKING ID – O-09**

472 Mark Helwig: Good evening. My name is Mark Helwig and I serve as Vice Chair
473 of Freeways for the Regional Transportation Alliance Business Coalition. The RTA
474 represents the regional business community on transportation issues, policies, and
475 priorities that are vital to the continued success of our market.

476

477 The RTA's top priority is the new freeway, the completion of 540 between Holly Springs
478 and I-40/U.S. 70 Clayton Bypass and we support the completion of all remaining portions
479 of the Raleigh Outer Loop between Holly Springs Bypass and the I-495 and U.S. 264
480 Knightdale Bypass.

481

482 By completing the 540 in southern Wake County, will be an essential part of our future
483 transportation backbone from the moment it opens to traffic creating vital linkages to
484 major freeways and other roadways in the Triangle. The extension of 540 will relieve
485 overburden secondary roads from congestion including North Carolina 42, 55, Ten-Ten
486 Road, and reduce the traffic local travelers have to compete with on their local roadways.

487

488 The Triangle Expressway Turnpike is already providing travelers with a mobility option
489 that they may not have had otherwise seen for decades. As a result, it is helping preserve
490 our areas economic vitality and quality of life. The completion of 540 will continue that
491 success and serve us well both now and as we continue to grow.

492

493 I would like to thank the North Carolina Department of Transportation and the various
494 federal and state partners for their leadership on this project and for the opportunity to
495 speak this evening. Thank you.

496

497 Moderator: Thank you, Mr. Helwig. Jerald Morton followed by Matthew Starr.

498

499 **TRACKING ID – O-10**

500 Jerald Morton: Good evening. I live at 5423 Brushy Meadows Drive, Fuquay-
501 Varina over here on the old Crooked Creek Golf Course. My position is I'm Chairperson

502 for North Carolina Citizens Against Toll Roads. We are not against the roads. We are
503 against the tolls and that's what I'm speaking from tonight.

504

505 We had 14 different taxes in some form or another that goes to the Highway Trust Fund,
506 the Highway Fund, *Power Bill*), and the roadwork that you see today around North
507 Carolina. Every driving citizen pays that. So, that's where I'm coming from. My sources
508 are the Legislative Toll Road Binder from February 24, 2014. I have a Turnpike
509 Authority report from 2014. I have the North Carolina State Constitution, Section 5, Page
510 17, paragraphs 1, 2, 3, and 5. And that's where I'm coming from tonight.

511

512 I would like to say that the current toll road of the Triangle Expressway, the Triangle
513 Parkway are 12.6-miles and the Western Wake Expressway of 14-miles has lost in the
514 last 4 years, \$177,562,000...\$177,562,000. People are not driving the road. In 2011, the
515 road lost \$3.2 million dollars of operating costs and we paid \$35,600,000 of interest. In
516 2011, excuse me, in 2012, the road lost \$11,531,000 and we paid \$35,600,000 of interest.
517 In 2013, the road lost \$11,232,000 and we paid \$35,600,000 in interest. In 2014, the road
518 lost \$9,199,000 and we paid \$35,600,000 in interest. Over four years on the Triangle
519 Expressway, the road has lost \$35,162,000 and we have paid \$142,400,000 in interest for
520 a total net loss of \$177,562,000.

521

522 You're going on to build more toll roads is inexcusable. To build three sections of toll
523 roads borders insanity. To allow nine unelected officials, known as the Turnpike
524 Authority, to levy a toll road tax on you violates the North Carolina State Constitution,
525 Section 5, under finance, paragraphs 1, 2, 3, and 5. That has to be done by voting of the
526 public. That has not been done, okay.

527

528 Also, only the General Assembly is allowed to levy a tax and it cannot be delegated. And
529 all taxing has to be uniform. That means that if the Turnpike Authority or the General
530 Assembly tolls one road they have to toll every road in the state. It's just like sales tax.
531 It's like state income tax and purchasing tax. Any tax has to be uniformed across the
532 state. It says so in the state constitution, okay.

533

534 I would like to say this...this double taxation to drive a road amounts to extortion. Pay
535 this again or we won't let you drive the road. It's government extortion at its worst. We
536 ask that all toll roads be changed to open roads. That all tolling be stopped. That the
537 Quick Pass Office be closed, employees furloughed, and all the money returned to the
538 Highway Trust Fund to work on our roads like Old Stage, Lake Wheeler, Sunset Lake,
539 and so forth, instead of paying for double (*Moderator: Sir?*) government services.

540

541 And in closing, I would like to say that we have a current surplus of \$440,000,000 in the
542 General Fund, \$337,000,000 was allocated for roads in northern Wake by Senator
543 Barefoot, which I applaud, and there's a \$1 billion surplus in the Commerce Department.
544 With that much money, we need roads, but we don't need tolls as a surplus. Thank you.

545

546

547

548 **TRACKING ID – O-11**

549 Matthew Starr: I'm Matthew Starr, 2308 Florida Court, Raleigh 27615.
550 Good evening. I'm Matthew Starr. I'm your Upper Neuse Riverkeeper based out of
551 Raleigh. I'm going to tell you a little bit about myself before I get into the water quality
552 impacts of this proposed project.

553
554 As a riverkeeper, my job is to protect the water quality of the Upper Neuse River Basin. I
555 do not work for the government nor do I work for a private company. I work for clean
556 water. I'm a native North Carolinian, I spent my early years in Garner. My mother was a
557 math teacher at Garner Senior and I fondly remember Coach Stewart taking me into the
558 locker room when I was a kid to meet great players of the (*inaudible*), so really fond
559 memories.

560
561 So, believe me when I say I want to see a vibrant North Carolina and Garner. But I don't
562 want to see it done at the great cost of destroying our water quality. We're looking at
563 potential impacts of the streams, creeks, river, and wetlands that are within the proposed
564 project. You seem to realize that this project will have a huge negative impact on our
565 water quality. But the information laid out in the Draft Environmental Impact Statement,
566 the supporting documents, building an Orange Route is not legally possible due to the
567 impact on water resources.

568
569 The Orange Route would be detrimental to the Swift Creek Watershed. Continued
570 protection of this watershed is important on a few different levels and because of this
571 local government have taken great steps to ensure that we have as little impacts as
572 possible. Building the Orange Route will undermine those protections. In fact, 250 acres
573 of the watershed already has exceptional under significant heritage area, which is the
574 highest ranking.

575
576 Another important designation for Swift Creek Watershed is that it is one of 25 areas in
577 North Carolina that is essential to the continuous survival of our endangered species. In
578 fact, the watershed supports 13 rare species. Not only is it important to keep exceptional
579 parts of the watershed exceptional, but steps need to be taken so that already polluted or
580 impacted areas are not further degraded.

581
582 Portions of Swift Creek itself are listed on the state's 303(d) List, which is a list of
583 impaired or polluted bodies of water. And it's listed for its **biological** integrity. This
584 means that conditions in the stream are putting stress on small creatures that form the
585 basis of the aquatic food chain that's important to those 13 rare species. Building the
586 Orange Route will exasperate this problem.

587
588 Let me be clear, I'm not in favor of the Red Route either. All of the options are very
589 destructive and have extremely high cost and for (*inaudible*) low benefit. I would like to
590 see the DOT take a harder look at upgrading the existing roads. Thank you.

591
592 Moderator: Thank you Mr. Starr. Next we have Joyce Exton or Ecstein.
593 Alright, next Tim Sarpolus. Following Tim Sarpolus is Frann Sarpolus.

594

595 **TRACKING ID – O-12**

596 Tim Sarpolus: I'm Tim Sarpolus. I live at 3709 James Land Drive. It's a Clayton
597 mailing address, but I'm inside of the County. I just wanted to mention something from
598 our heart. I've been living there, we started building 10 years ago and on our side of the
599 picture, we don't have as much representation. You've heard a lot about the Orange
600 Route already from high level people.

601

602 But I live on the side that matters to me about the Green Route. And we do have
603 representation, but they're not all speaking up. But I just want to mention that the green
604 route has also been on the map for 20 years. When we decided about building 10 years
605 ago, we took that into consideration and a lot of other people did too. So, they built
606 thinking, well if the routes going to go on that Green Route and that's where it's going to
607 be so I can build my house.

608

609 Now, they want to come and plow through my Avalon Subdivision and you know we've
610 got to decide if we're going to relocate or not. And I think well, "it's really not going to
611 come through your yard, but it's going to be just over there". Well, in addition to having
612 a negative impact on Avalon Subdivision, it's already been mentioned that it will have a
613 negative impact if they put the Brown or Tan Route in on the Clemmons Educational
614 State Forest. And it will also have a negative impact on Pine Hollow Golf Course and
615 that hasn't been mentioned. And they may not think, well, tit for tat, it would affect them
616 that much, but it will affect Pine Hollow Golf Course.

617

618 Also, one of those houses right there on the edge of Avalon Subdivision is 150 years old.
619 So, it should be considered as an historic thing too. At any rate...

620

621 Moderator: Speak into the mic.

622

623 Tim Sarpolus: So, along the way we started this fight five years ago when you all
624 were having these meetings. And the Wake County Commissioners, Mr. Matthews is
625 here tonight can affirm, they affirm support for the original Green Route. And stated so
626 and wrote a letter concerning that.

627

628 And I do want to thank Ronnie Williams for wearing his orange tie tonight because that
629 helps affirm that he wants the Orange Route. I also want to thank all of you all. I didn't
630 think about this ahead of time, but I want to thank all of you all green shirt wearers
631 because you want to remind us that it's the Green Route or no route at all. Thank you.

632

633 Moderator: Frann Sarpolus followed by Mayor Ronnie Williams.

634

635 **TRACKING ID – O-13**

636 Frann Sarpolus: I'm Frann Sarpolus at 3709 James Land Drive. I'm Tim's
637 wife. Thank you for letting all of us speak tonight here and thank you for all of the work
638 you all have put into this effort.

639

640 One of the things I really want to address is that it's not been 20 years since that thing
641 was put on the map. In 1990, there was a dotted line put around the Raleigh area maps.
642 It's been there since 1990 and all of us who have those maps can see it. So, it's 25 years
643 now that that's been on there. And people are taking that into consideration as my
644 husband said moving here.

645

646 But I will address the two negative impacts that were mentioned for the Green Route a
647 little earlier by our speaker here. He said the two negative impacts of the Green Route
648 were two communication towers and the other was the fact that it bisects the Randleigh
649 Farm properties. Well, for number one for the communication towers...that is a hard
650 thing to say, sir.

651

652 NCDOT purchased property from Capital Area Broadcasting Company back when I was
653 working at Broadcasting Company and that was for property for the Green Route on the
654 dotted line, which you can see on the map where they owe that property by going to
655 wakecounty.gov. And you can see who owes that property, which is NCDOT right next
656 door where the guidelines are. Now, if they let those guidelines come in and encroach on
657 their property where NCDOT has property, they really made that decision knowing that
658 that dotted line was already there. So, we can't really help that now. If that's going to
659 encroach on those towers, somebody should have thought about that when they were
660 putting that tower up the second time it fell. They let those lines go over there on the
661 NCDOT property.

662

663 The second thing about that Randleigh properties, was when we went to the
664 Commissioners back in 2010, Phil Matthews was on the board back then. They were
665 already aware of the fact that the Randleigh Farm division or properties was going to be
666 on that route where that green line is. And they weren't concerned about that even though
667 there was some to do about the fact that they have maybe gone and asked the NCDOT for
668 alternate routes. That's when all the other routes, which ones, the brown...not the brown,
669 but the mint, tan, teal, and yes the brown.

670

671 That's not exactly when they came on. They came on when the Commissioners wrote a
672 letter and the Raleigh City wrote a letter to NCDOT to say, the Commissioners said, like
673 my husband said, "we affirm the Green Route; we oppose the Tan Route". Raleigh City
674 said, "we oppose the Tan Route" as it is now. So, what did they do? They changed the
675 color. They changed it to brown.

676

677 The Brown Route is still right on top of the Tan Route, which goes over our house.
678 Whether it's tan or whether it's brown, it should still be green. And so I'm making the
679 point that if the two concerns are for the Green Route are these towers and Randleigh,
680 they all knew it when they put the properties there. Thank you.

681

682 Moderator: Thank you Mrs. Sarpolus. Next we have Ronnie Williams
683 followed by Mayor John Byrne.

684

685

686 **TRACKING ID – O-14**

687 Mayor Ronnie Williams: You know what I feel like? I feel like I'm in a box
688 of Crayola Crayons. But let me do something while I can since you all are assembled and
689 I got your attention. Let me wish all of you all a Merry Christmas. Celebrate for the right
690 reason.

691

692 In the Book of Proverbs, we read where there is no vision, the people perish. Those that
693 have decided to build this road have vision. And their vision should be acknowledged and
694 complimented. I looked at my email this morning on my computer and back in 2009,
695 since that time my computer is full of Red Route, Red Route, Red Route. I'm darn tired
696 of it.

697

698 The 400 and some odd houses that are going to be taken down, the four parks in the town,
699 none of it is worth it. We've been here before. We're here again. I'll be brief. It's late.
700 God bless you. Go Orange Route.

701

702 Moderator: Thank you Mayor Williams. Following Mayor Byrne, we have
703 Buck Kennedy.

704

705 **TRACKING ID – O-15**

706 Mayor Byrne: I wish I knew that.

707

708 Moderator: Make sure that you speak into the mic. I heard that you can't make
709 out...they can't hear as well.

710

711 Audience Members: Can you take the mic off the stand?

712

713 Moderator: Yeah, it's a wireless mic so you can take it off.

714

715 Audience Member: Can you take it off the stand?

716

717 Moderator: That will work.

718

719 Mayor Byrne: Yeah, I'm not going to take but a moment. Fuquay-Varina is for
720 the Orange Route. We've been through the Orange Route for 20 some years. We have
721 sent resolutions. We've endorsed it. The Mayor of Fuquay endorsed it. We've done
722 everything we can to keep our eyes on the true target, you know, the Orange Route.

723

724 And you know, I think this, when we talk about costs, there are a lot of people in this
725 room that have already got money invested in the Orange Route. Those number don't
726 show up anywhere. They've had it for many, many years, an investment for all of us, you
727 know, in the Orange Route.

728

729 You know, just in closing, I'd like to thank the Mayor of Garner and the Mayor of Holly
730 Springs for their leadership on this. The Town of Holly Springs have endorsed the

731 Orange Route. The Mayor of Holly Springs has endorsed the Orange Route. We're all
732 together on this and I feel very comfortable that this is the very best thing for us.

733

734 We are a protected species. We're human beings and we should be recognized. We
735 should be recognized for being here tonight and this process that we go through. Even
736 though it's taken a very long time, it's a steady process. And I appreciate NCDOT's
737 effort and keeping us focused on the target. Thank you very much.

738

739 Moderator: Thank you Mayor. We have Buck Kennedy followed by Douglas
740 Ball.

741

742 **TRACKING ID – O-16**

743 Buck Kennedy: My name is Buck Kennedy. My wife and I live at 121
744 Monabreeze Way in Garner. Just so happens that my wife and I live in a residence in a
745 subdivision that would be negatively impacted by the Red Route. I'm a retired
746 professional engineer and I'm currently serving as a Council Member for the Town of
747 Garner.

748

749 With respect to the events tonight, all of the former speakers have been very polite. I will
750 try to be polite. You will quickly understand a very deep sense of frustration with this
751 whole process. But speaking on behalf of the town, Garner supports the completion of the
752 540 Expressway. We urge construction to be along the original protected corridor known
753 as the Orange Route.

754

755 We'd like to think that the town's commitment has been demonstrated in the past to be
756 responsible and sensible as it relates to conservation. You seem to be forward looking as
757 stewards of the environment by setting aside hundreds of acres of open space, including
758 Lake Benson Park and White Deer Park. The latter featuring a LEED Gold certified
759 nature center, which are a habitat for a wide variety of species. In fact, a wildlife rescue
760 rehabilitation group uses White Deer Park as a site to release owls and raptors back into
761 the wild.

762

763 A couple of comments on the facts on the situation, it never bare repeating too many
764 times. Just within the corporate limits of the Town of Garner along the Red Route, it will
765 disrupt 14 neighborhoods involving at least 435 residents where people live. I don't think
766 there are any mussels there; as well as 12 businesses, two non-profits, four current or
767 future parks plus our YMCA that's about to go under construction.

768

769 I've got to stop and tell you too, think we you disrupt 435 families. How many hundreds
770 of students are going to be displaced? And what do you think it does to their educational
771 environment? The Red Route blasts right through our industrial park or one of our
772 industrial parks and through the most desirable future growth area. It'll set Garner back
773 decades just like when they rerouted Highway 70 and split Garner into in the '50s. I
774 cannot imagine that you would allow this...that DOT can allow this or the environmental
775 community in general can allow this to happen again.

776

777 But the remainder of my comments will be based on past experiences and they'll show
778 you...offer a little bit of my frustration. During my 40-year career as a professional
779 engineer, I was successful in improving Wake Water Treatment facilities and protected
780 streams, rivers, and public water supplies with verifiable results.

781
782 I was introduced to the EIS or the environmental review process in 1976. I'll tell you and
783 I have to admit that my naivety about good and bad and right and wrong was exposed and
784 blasted out of the water at that early age. In the last few years though, Garner has suffered
785 the shadow of the Red Route that's been cast over our citizens who are very afraid of and
786 they've been frustrated by the recommendation that has been made.

787
788 We've feel like we've already be held hostage as much as the Orange Route folks have
789 felt that for two decades particularly as our development community has been stymied by
790 this shadow that's been held over us. We've already suffered. I'll say this, the
791 environmental review process, while well intended is a prisoner of our own making.
792 Reviews are far too time consuming and are fraught with numerous unintended
793 consequences. The results which are damaging to the human environment.

794
795 I cannot imagine the frustration and yes even the agony of property owners along the
796 Orange Route corridor who for decades has been held hostage on their own land waiting
797 for some decision to take place so that they can move on with their lives. And I've
798 personally have heard the anguish of many of you who have a target on your back if you
799 live in a corridor that proposed Red Route, an unconscionable recommendation. I cannot
800 imagine why it was done.

801
802 I could ask the question and I could get a positive response on how many of you feel
803 negatively impacted already. How many of you have lost sleep over the process? Who
804 among you have had your confidence shaken in the regulatory review process? All
805 unintended consequences.

806
807 But putting aside the skepticism, I also have confidence. I've got confidence that
808 someone or some few in authority will determine that human life shall prevail over the
809 mussels. I am confident that the DOT will recommend the appropriate route. And I'm
810 also confident that the Red Route will never be constructed.

811
812 Moderator: Thank you. Mr. Ball.

813
814 **TRACKING ID – O-17**

815 Douglas Ball: My name is Douglas Ball. I'm at 10229 Ten-Ten Road, Raleigh.
816 I'm here on behalf of the business community and the Garner Chamber of Commerce to
817 support the Orange Route that have been on the books for over 25 years. We've built
818 neighborhoods, lives, communities around this route and we need this roadway built to
819 support our businesses around the Garner area.

820

821 It's been significant damage that has been caused to our citizens by the delay of
822 construction of this Orange Route. We find unacceptable. And certainly we find
823 unacceptable the continued human impacts of this proposed Red Route.

824

825 Moderator: Thank you Mr. Ball. Up next we have Jeff Swain followed by
826 Hardin Watkins.

827

828 **TRACKING ID – O-18**

829 Jeff Swain: Good evening all. I'm Jeff Swain, residing at 263 Shady Hollow
830 Lane in the Village of Aversboro, which will be entirely decimated by the Red Route
831 should such ever occur. And I'm here this evening representing our homeowners'
832 association. I'm also a member of the Garner Planning Commission and spent about 35
833 years in community and economic development work in state and local government.

834

835 It's about five years that we've been involved or at least in Garner and the Red Route.
836 We woke up one morning shocked and surprised to see that there was a line on the maps,
837 knowing that the protective corridor for at that point virtually 20 years. We had a meeting
838 at our clubhouse where we were told by our transportation planner they did not know that
839 the Village in Aversboro was there; in real time...in real life. A pretty incredible
840 statement.

841

842 Nevertheless, feeling threatened, we survived. We got the prohibition for building the
843 Red Route from the State Legislature. I thank Nelson Dollar and Chad Barefoot for their
844 remarks this evening. But due to the need for the DEIS that prohibition had to be repealed
845 and so here we are tonight.

846

847 Let me tell you a little bit about the Village at Aversboro. We are a 55+ community that
848 was constructed. Our developer, incidentally, was Douglas Ball. It was developed under
849 the Federal Housing and Older Persons Act. Now, we don't think 55+ is particularly old
850 these days, but nevertheless that was the provision under which we were able to develop
851 the Village at Aversboro. And so, for a number of us at that village we believe this may
852 well be our last(0032) home. Although, we never want to acknowledge that or perhaps
853 that may be another move, but in particular there's a number of people there who perhaps
854 it is their final home that they will own and live in.

855

856 We have 250 or so residents; 147 homeowners and it's a wonderful friendly group of
857 active people. It's one of the most convenient locations in Wake County. A few minutes
858 from downtown, close to shopping, close to healthcare facilities, close to entertainment
859 venues, we all really love and treasure being in the Village at Aversboro.

860

861 At the same time, we who live there are contributing, we believe, significantly to the
862 quality of life environment. Many of us are involved in community activities, giving back
863 to the community of Garner, giving back and contributing to Garner's quality of life.
864 Active in the Garner Senior Center, involved with the Relay for Life, involved with the
865 Community of Hope, I could go on and on in terms of the organizations that many of our
866 community residents are involved in.

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And just imagine the Red Route, as I said, we would be disseminated. What a remarkably high cost in human terms and in economic terms? For us the choice and our focus is red versus orange west of I-40. And we do understand the need for the DEIS, even though it should have been done 20 years ago, which others in this room have heard me saying for the last five years. But now that we have the DEIS, we believe even looking at the technical information presented therein and some of it has been mentioned tonight, the choice is clear. And we do fully expect those who are responsible for the planning and we already know that the folks at CAMPO, the Capital Area Transportation Organization have endorsed the Orange Route.

So, we expect that all of those who in the past have supported the Orange Route, whether they be elected officials or transportation planners, are going to honor their commitment to build the Orange Route. And within the next what 120 days, we're going to expect to see that preferred alternative be the Orange Route and get the Red Route finally out of the mayor's computer.

Moderator: Thank you Mr. Swain. Mr. Watkins. Following Mr. Watkins is Lou Beaman.

TRACKING ID – O-19

Hardin Watkins: Hi, my name is Hardin Watkins, Town Manager for the Town of Garner. I live at 134 White Deer Trail in Garner not too far from the path of the Red Route. You've already heard a wide array of perspectives from the Garner community. You've heard from Mayor Williams, Council Member Kennedy, Mr. Douglas Ball, who is the developer and active chamber participant in our community, Mr. Jeff Swain, representing one of our homeowner's associations, and many others in the community. We also appreciate Senator Barefoot, our Senator expressing his comments this evening as well.

There's a common message here. We support the Orange Route wholeheartedly. We're opposed to the Red Route 100%. The Town of Garner has worked for years, Mayor Williams shared, to keep the Red Route from being built. Our efforts are well documented. We urge all the DOT Officials as they review the records, as you forward those records to others that need to see those, to review the previous record as well as what's gathered in this most recent process. To see the large volume of opinions and information that provide value data about why the Red Route is a bad idea. It's well documented, please make sure they get passed on for our sake.

Just to recite the numbers one more time, we're talking about 14 neighborhoods in Garner, four town parks, industrial park opportunities that are lost in our most marketable and most active industrial parks, 435 residential relocations, 12 business relocations, 2 non-profits have to be relocated; that's a total of 451 relocations. And again, as compared to the orange, you'll see it's 243 relocations. The Red Route impacts are devastating to Garner. I think that point has been made many times.

913 I want to reiterate a point Mr. Kennedy made as well. We are environmental stewards in
914 Garner. There are numerous programs. We are happy to share those to all that are
915 interested. We have demonstrated a commitment to responsible and sensitive
916 conservation in trying to do our part to protect the environment in our community.

917
918 So, let me begin to close. Thanks to all of the DOT and Federal Officials for your hard
919 work, (00033) especially I want to thank my colleague, Eric Midkiff, at the DOT. Eric
920 has been our contact for several years and we appreciate the great work that he has done
921 to keep us informed about the process. Thanks to our community partners. As Mayor
922 Williams mentioned, this has been an exercise in relationship building. We want to thank
923 Mayor Byrne of Fuquay, Mayor Sears of Holly Springs and their colleagues of those
924 towns for standing with us through this process. Also, I want to thank our friend, Mr. Joe
925 Molazzo, from the Regional Transportation Alliance for his support and understanding of
926 the Garner prospective years ago as well.

927
928 Our growth plans in Garner are contingent on the development of 540 along the Orange
929 Route. Wise planning is the way to go and it's what everyone thinks this is the right thing
930 to do. This region decided that 20 years ago and was very smart to lay out a route for our
931 future outer perimeter. It's the right way to do things. And as others have said, people
932 have made business and personal decisions based on the path shown. We have been
933 doing that for decades.

934
935 The orange corridor makes sense, so I'm going to borrow a slogan from my friends at the
936 Regional Transportation Alliance and say, "let's get moving" with the Orange Route. So,
937 our message for our friends at DOT and Federal Highway is please select the Orange
938 Route as the preferred alternative. Thank you for listening.

939
940 Moderator: Thank you Mr. Watkins. Lou Beaman. Mr. Lou Beaman. Okay,
941 George Lipscomb. I don't know if I said it before written comments...however you
942 submit your comments, they all carry the same weight.

943
944 **TRACKING ID – O-20**

945 George Lipscomb: I'm George Lipscomb. I live at 3708 Foxstone Drive in
946 Raleigh, Zip Code 27603. I'm here today to offer my strong opposition to the extension
947 of 540. And I would urge the Department...

948
949 Moderator: Could you speak into the mic a little bit more? We can't hear you.

950
951 George Lipscomb: I would urge the Department of Transportation to revisit
952 the alternatives that we offered when we first came into the room and looked at their
953 presentation and that they dismissed so easily.

954
955 Green Route, Red Route, Purple Route that are listed up here. All of those routes have
956 tremendous problems with them. They displace people. They cause damage to the
957 environment. So, what are we doing? Whatever route is determined for connecting this
958 highway, communities, homeowners, businesses, and the environment will suffer the

959 effects. This highway will result in the destruction or relocation of homes, increase noise
960 and other pollutants, property infringement by government, and reduce development
961 patterns. And for what?

962
963 As some of you probably know, replicable studies show that large highway projects
964 designed to reduce traffic congestion actually beget more congestion. Don't believe me.
965 Lived in Los Angeles been to Washington, DC. They peruse all of the literature produced
966 by researchers without vested interest in road and highway construction. Provide support
967 for that claim. The most recent article I found is from a publication city plan dated
968 November 11, 2015 entitled "California DOT admits that more roads mean more traffic".
969 The article puts forth the concept of induced demand. That in short indicates that more
970 roads mean more traffic in the both the short and long term. And most of that traffic is
971 new to what existed on the old roads prior to the construction of a new highway.

972
973 There are a number of reasons why induced demand occurs, but the one that concerns me
974 most is that of shifting development patterns. The idea of pattern shifted to residential
975 and agricultural to industrial use that is influenced by the easy access to a high speed road
976 has citizens worried about their property values. I simply don't want to live in close
977 proximity to a 24/7 warehouse trucking operation and I doubt others do either.

978
979 550 will be a toll road. Like a growing number of citizens, I'm against toll roads in North
980 Carolina. Aside from being an additional tax, toll roads in North Carolina maybe
981 financed through a P3 or Private Public Partnership contracts, which appeared to be the
982 poster child, when you read the information...when you read the literature, for crony
983 capitalism. These long term contracts, 50 years or more, that have caused scrutiny by
984 with N&O and citizens watchdog groups.

985
986 Finally, since you have decided, DOT, to build this ill-advised road through the space
987 that we live in, you're spoiling the environment, and causing the displacement of citizens,
988 I urge you to select a route that will do as little harm to our lives as possible. And I urge
989 you to eliminate the Red Route from consideration.

990
991 Moderator: Thank you, sir. Next we have Scott Manning followed by Andy
992 Wittman.

993
994 **TRACKING ID – O-21**

995 Scott Manning: Thank Jamille. Good evening. My name is Scott Manning
996 and I'm the Executive Director of Holly Springs Chamber of Commerce. We
997 enthusiastically support the completion of 540 for our southern and eastern Wake
998 County.

999
1000 Having recently being recognized as a leader in Wake County for job growth, Holly
1001 Springs and our businesses have benefited from the existing Triangle Expressway and we
1002 look forward to the completion of the 540 Loop, as it will enable expanded and
1003 sustainable growth for years to come.

1004

1005 It is no surprise that site selectors consider freeway access as one of the major factors
1006 when making decisions on the location of new businesses and proactive efforts to
1007 enhance our transportation network will certainly add to the allure of southern and
1008 eastern Wake County to those groups and others considering our area for expansion.

1009
1010 Additionally, the Chamber supports the Orange Route as it's been a long preserved
1011 corridor and believe it to be the path that causes the less disruption for our member
1012 businesses, as well as one of the most cost effective options.

1013
1014 The Holly Springs Chamber of Commerce would like to thank the NCDOT and the
1015 various federal and state partners for their leadership on this project and for the
1016 opportunity to speak this evening. Thank you.

1017
1018 Moderator: Thank you, sir. Next we have Andy Wittman followed by Bruce
1019 Wittman.

1020

1021 **TRACKING ID – O-22**

1022 Andy Wittman: Hello everyone. I wanted to first thank the DOT for what
1023 they've done so far putting together the Draft Environmental Impact Statement. I think
1024 they've done a very good job of showing how everything works.

1025

1026 As a little bit of background, my parents' house is on the Red Route and I've been
1027 looking at this project for the last five years. And I think DOT has made big progress
1028 over these last five years taking a more data driven approach to how a route is selected
1029 and what factors are used in route selection.

1030

1031 If you guys take a look at the comparative evaluation matrix, there are some pretty
1032 important numbers on there. The biggest difference between wetland impacts and people
1033 displacements, you see a difference between 19.6 and 24.2 acres of wetlands on the
1034 Orange Route versus the Red, Blue, or Purple Routes. You also see a difference between
1035 326 and 208 additional relocations. That's the difference between the Orange Route and
1036 the Red, Blue, and Purple Routes. I think it's pretty obvious that this huge number of
1037 relocations outweighs the environmental benefits of the Red Route, Blue Route, and the
1038 Purple Route.

1039

1040 I believe that most importantly with all of these relocations is the impact to the
1041 community, the community cohesion, putting a road right through the middle of the
1042 Town of Garner is going to do massive amount of damage. So, if you look at the data and
1043 you look at the options, if one of the routes has to be built, then I believe that the Orange
1044 Route should be built with proper protections for the environment. Thank you.

1045

1046 Moderator: Thank you, Mr. Wittman.

1047

1048 Andy Wittman: I'm sorry. The name is Andy Wittman. The address is 2201
1049 Woodnell Drive. Thanks.

1050

1051 Moderator: Thank you. Mr. Bruce Wittman followed by Tom Guy.

1052

1053 **TRACKING ID – O-23**

1054 Bruce Wittman: Hello there. My name is Bruce Wittman, 2201 Woodnell
1055 Drive, Raleigh, NC 27603. We've been dealing with the Red Route for five years. The
1056 Red Route will bisect our neighborhoods just like Garner. I feel like a Garner junior.

1057

1058 You know, you think about quality of life when you talk about the wetlands. And what
1059 concerns me about the Red Route is how close the 540 would be to Lake Benson and if
1060 there was a chemical spill, it would be detrimental not only to Garner but to the Town of
1061 Raleigh, which uses Lake Benson as a water supply. So, when you talk about quality of
1062 water and quality of life, I think you should not consider the Red Route. You should
1063 consider the Orange Route. And I'm very proud of my son. Thank you.

1064

1065 Moderator: Thank you, Mr. Wittman. Next we have Tom Guy followed by
1066 Stephanie Hairr.

1067

1068 **TRACKING ID – O-24**

1069 Tom Guy: Good evening. I'm Tom Guy, 5321 Fantasy Moth Drive, Garner,
1070 North Carolina. I'm probably the only one who spoke tonight that lives on the Orange
1071 Route. The one thing I wanted to ask...

1072

1073 Audience Member: Speak into the mic.

1074

1075 Tom Guy: The one thing I wanted to ask and we live in Turner Farms. I'm
1076 also on the Board of the HOA there. No matter which way they go whether it's orange or
1077 lilac, it's going to affect our neighborhood. It will greatly effect on the lilac side. It will
1078 affect probably 50 homes. On the orange side, originally, we were told that the route was
1079 going to go further to the southeast, which borders the Swift Creek.

1080

1081 I would ask that the Orange Route be moved or looked at east of 50. That the engineers
1082 look at moving it approximately 200 to 300-yards to the southeast, which will not impact
1083 Turner Farms at all other than the fact that we need to add a noise barrier. I spoke with a
1084 gentleman earlier about the noise barrier and he said it's very doable. That the engineers
1085 could look at the plan.

1086

1087 I appreciate Senator's Barefoot input. I would have to say though from an HOA Board
1088 Member that we've had no contact with the County Commissioners, our representatives
1089 and we've had no one approach us from the State House or Senate. It would have been
1090 nice in the last three to five years if someone from local government, since we do not live
1091 in a municipality, would've come and approached our HOA. We are a large
1092 neighborhood affected by the Orange Route and the Lilac Route.

1093

1094 The other thing I would like to say is that several years ago I thought I was building my
1095 final home as others had. We love the neighborhood and moved out into Garner for the
1096 simply reason it was a wonderful place to live, thriving community, and had great room

1097 for growth; only to find out at closing after 18 months that we would potentially be in the
1098 Orange Route.

1099

1100 Once the final proposal was put out this past year, we found out that the right-of-way
1101 goes across my new home, my wife and I hopefully final home. Those of us over 49 can
1102 appreciate that last home. So, I would also echo the fact that the environmental impact is
1103 a worthy cause. We all want to do that. We all want to protect our environment. But the
1104 simple fact that if 540 is moved a little bit further towards the Johnston County, southeast
1105 line, then come around on the green side like Tim was talking about earlier, it would
1106 impact less folks. It will impact a little more wetland, but it will impact less human folks.
1107 I appreciate it. Thanks for letting me speak.

1108

1109 Moderator: Thank you, sir. Next we have Stephanie Hairr. Alright, Linda
1110 Raynor.

1111

1112 **TRACKING ID – O-25**

1113 Linda Raynor: Hi, I'm Linda Raynor. I live in the Avalon Subdivision at 3804 La-
1114 Varra Drive and I'm neighbor of Tim and Frann, who spoke earlier. We've been...our
1115 house is located in six of the 17 DSAs. Either on the Tan Route (3, 10, and 15) or the
1116 Brown Route (4, 11, and 16).

1117

1118 My husband and I started building our home in 1990. So, we were the actually second
1119 house there in the Avalon Subdivision. And so our lot was on a quiet cul-de-sac with very
1120 little traffic. We have woodlands and wetlands behind us and farmlands behind that. And
1121 then we have the homes across the street back up to the Pine Howell Subdivision and the
1122 Pine Howell Golf Course. So, when we're sitting on our back deck, we can hear the
1123 trickling of the stream. And when we're sitting on our front porch, we can hear the ping
1124 of the golf balls. And my sons and granddaughters have always enjoyed playing on the
1125 cul-de-sac because there's not a lot of traffic.

1126

1127 Okay, so when we went to build and select our house, we were aware of the proposed
1128 Green Route. And we thought, well hey that's pretty far away from where we want to
1129 build and it would probably increase the value of our home plus Highway 70 was right
1130 there too. So, we understand that the other alternatives were developed because of the
1131 Randleigh property plus it was planned development. So, they wanted to move
1132 potential routes further to the east. So, they came up with the brown and the tan, which
1133 like I said would go right over our neighborhood.

1134

1135 So, because this development of the Randleigh property is only planned, I believe that
1136 concerns of impacting the existing topography and the current land use should take
1137 higher precedence in the selection of the preferred alternative. Not just a planned
1138 neighborhood for mixed use.

1139

1140 So, both the brown and the tan segments also contain many (inaudible) streams that
1141 will be impacted, acres of wetlands and farmlands, and they will need to be disturbed and
1142 they also contain several of those Section 4(f) resources that were mentioned earlier. So,

1143 we carefully planned and tried to select a good location to build our home. But the
1144 preliminary drawings also show that our cul-de-sac is going to be demolished and the
1145 road is going to be extended to the back property.

1146

1147 So, where there was no traffic through there, there's going to be more traffic. There will
1148 be a road on the front of my property and the side of my property and then the highway
1149 behind my lot. So, we're kind of wedged in and it looks like a bad situation. So, the
1150 proposed layout of the Tan and Brown Segments negatively impact our home, the
1151 streams, the wetlands, the farmlands behind my house, the amount of traffic on my street,
1152 and the peacefulness of my neighborhood.

1153

1154 So, on the eastern portion of 540, I'm for the original green location. There's another
1155 route called the mint color, so either one of those Alternatives 1 and 2 and as Jamille also
1156 said earlier, Alternative 2 is actually the least expensive. Thank you.

1157

1158 Moderator: Thank you. Next we have Scott Taylor followed by Walter
1159 Simpkins.

1160

1161 **TRACKING ID – O-26**

1162 Scott Taylor: Sorry, I'm a little bit taller here. My name is Scott Taylor. I live at
1163 150 Gussett Drive in Garner, North Carolina. And like a lot of you, five years ago I woke
1164 up and read the paper and said "oh my gosh, this thing right in my front yard" practically.
1165 We bought that house 10 years ago. I actually moved here from southern California, so I
1166 know a little bit about what this is like.

1167

1168 Hey, we thought we were getting away from the hustle and bustle and everything else and
1169 here we are a few minutes from the country. We're a few minutes from downtown. And
1170 now it's right in our front lap. And the worst part is that when they do this, they won't
1171 take my house. They're going to take the house next door. What's that going to do for my
1172 property value?

1173

1174 Audience Member: It's going to go down.

1175

1176 Scott Taylor: It's going to kill it. And I'm not getting compensated for that. And
1177 nowhere in this study does it take that into consideration. That is a huge hassle.

1178

1179 And I understand that it has to happen. I understand that Wake County is growing. It's
1180 growing very fast. And like I said I grew up in Orange County, California, which grew
1181 like this 30 years ago...40 years ago. They built toll roads there too. But they built them
1182 in areas that were undeveloped. That was broad and where the growth was going to
1183 happen. The growth is not going to happen in the middle of Garner. It's already
1184 happened. It's going to happen south of Garner.

1185

1186 We need to stop the Red Route and we need to bring the Orange Route. Thank you.

1187

1188 Moderator: Thank you, sir. Walter Simpkins followed by David Ennis.

1189 **TRACKING ID – O-27**

1190 Walter Simpkins: I'm Walter Simpkins, 10172 Joe Leach Road, Raleigh, NC.
1191 I am a human. I'm not a mussel. I live right in the middle of the Orange Route. I have
1192 lived there since 1942. My family had been there since 1933. I am in favor of the Orange
1193 Route but I'm in favor of them getting on with the project.

1194

1195 Audience Member: Amen.

1196

1197 Walter Simpkins: I have been held prisoner since 1990, December 1990,
1198 when I attended the first hearing right here in Wake Tech. And that's 25 years ago this
1199 month.

1200

1201 Audience Member: Jesus.

1202

1203 Walter Simpkins: Since 1997, they've had my hands tied where I couldn't do
1204 nothing. I run off and built another house to try to get into it to be held prisoner to where
1205 I couldn't do anything. Just stand there and stay home. My question to DOT is why is it
1206 taken 18 or 19 years to get to this point with the environmental study? Why wasn't the
1207 environmental study started in 1997?

1208

1209 Audience Member: Right?

1210

1211 Walter Simpkins: Now, what will DOT do with the property it now owns in
1212 the Orange Route if it don't take the Orange Route? Is it just going to devalue my
1213 property that much more if they don't take it? My point is to go ahead with the Orange
1214 Route and not wait 10 more years or 5 more years. Do it and let me get on with this
1215 before you go to another route.

1216

1217 And the one that I want to oppose the most is the Blue Route. It goes right through the
1218 church and the cemetery where I'll probably be buried in before this ever happens. And
1219 where a lot of my neighbors have already been buried in before this could happen.
1220 They're already there. They've waited in line and they didn't make it. I want to know if
1221 the time table is firm. I want to know if you could confirm this and move right on with it.

1222

1223 Are there any detailed right-of-way plans around and how do I get a hold to them? I'm all
1224 for the Orange Route but I'm all for getting it behind me and getting on with the program.
1225 And don't go where I'm going to be buried.

1226

1227 Moderator: Thank you, sir. Next we have David Ennis followed by Lindy
1228 Brown.

1229

1230 **TRACKING ID – O-28**

1231 David Ennis: My name is David Ennis. I live at 1298 Greenleaf Road in Angier,
1232 which is part of Johnston County. Seventeen years ago, I purchased some property in
1233 Wake County and was informed by DOT that I had to have a buffer for the expressway

1234 that was coming around. So, 4.5 acres or 5.4 acres was left out. And I've been sitting on
1235 that property since 1999, paying taxes on it.

1236

1237 And when the subdivision was completed and the streets were approved and DOT took
1238 over the streets then the land became landlocked. I cannot get on my own property now
1239 because I don't have access to it. So, my question is this if the Orange Route is not the
1240 route that is chosen, what happens to the property that has already been purchased in the
1241 Orange Route? What would happen to that? Because it has been property purchased on
1242 both sides of my property.

1243

1244 And in turn to what would happen to my property that I don't have access to, it's not
1245 worth a hill of beans to anybody. When it comes to the expressway being moved, the land
1246 itself was potential 3 lots to 4 lots, which could bring a substantial amount of money. But
1247 that money has been left aside. I don't have as much invested in it as most of you people
1248 do because you live in that area. But it still affects us financially. And I'm in favor of the
1249 Orange Route for that purpose. And there are some questions that need to be answered
1250 about land that was already purchased and why it was purchased and what going to
1251 happen to it. And the land that hasn't been purchased, what's going to happen to it.

1252 Thank you.

1253

1254 Moderator: Thank you, sir. Next we have Darlene Kinsey.

1255

1256 **TRACKING ID – O-29**

1257 Lindy Brown: Good evening. My name is Lindy Brown and I come before you
1258 wearing two hats. I'm your former Wake County Commissioner from 2006 to 2010. I
1259 also come as a resident of Upchurch Place, which is off Jordan Road. I live at 1512
1260 Upchurch Woods Drive.

1261

1262 I have to say that the Town of Holly Springs, Fuquay-Varina, Garner, during my time as
1263 County Commissioner supported the resolution for the Orange Route. I would ask the
1264 residents of Upchurch Place, please stand and at this time. These are just a few of our
1265 residents that are here. We are in total support of the Orange Route.

1266

1267 However, after close study of the 540 Southeastern Expressway, we have found several
1268 concerns that I will list as below. First, regarding water quality, I ask DOT is there
1269 evidence of increased sediment in the water supply following similar construction project
1270 like this one? Our residents need to understand what the plan is to prevent or the
1271 likelihood of this reoccurring. Or if it does occur, even after necessary precautions are
1272 taken, where are the plan of action?

1273

1274 In reference to traffic and logistics, I ask DOT how would the Orange Route affect the
1275 traffic in the immediate area of our subdivision? Will there be a traffic feasibility study
1276 done? What type of interruption in traffic can be expected as a result of the additional
1277 construction? How will our community access the new 540 Extension? Is there a
1278 possibility of an exit ramp? What changes will occur to the existing Jordan and Ten-Ten
1279 Road? According to your Corridor Public Hearing Map, Sheet 5 A & B of 8, it shows that

1280 Jordan Road will be expanded 300-feet. If that occurs, please explain how the right-of-
1281 way impact our property owners in Upchurch Place. Also, will this impact the current
1282 entrance of subdivision? I ask that question because we do have a school turnaround bus
1283 route and that is going to be a major problem.

1284
1285 And lastly, in reference to traffic noise, will a noise impact study be provided to our
1286 community by DOT? And if so, please explain to the extent that you will get input from
1287 the citizens or the residents of Upchurch Place. I ask that you continue to support the
1288 Orange Route. However, please be careful DOT. Please come to the citizens and talk to
1289 them.

1290
1291 And lastly, as a County Commissioner, this same public hearing came up and to my
1292 surprise I saved 42 letters from residents that are dated October 2010 that I would like
1293 DOT to put in the record. And they supported the Orange Route. Thank you.

1294
1295 Moderator: Thank you Mrs. Brown. Next we have Darlene Kinsey followed by
1296 Ramona McGee.

1297
1298 **TRACKING ID – O-30**

1299 Darlene Kinsey: Hi everyone. I was worried about speaking in front of a
1300 crowd, but there's not that many people left here.

1301
1302 Moderator: Can you speak into the mic?

1303
1304 Darlene Kinsey: Can you hear me?

1305
1306 Audience Members: Yes.

1307
1308 Darlene Kinsey: Okay, so I'm Darlene Kinsey at 1412 Upchurch Woods
1309 Drive. And I live in the Upchurch Place Subdivision off of Jordan Road. And I would be
1310 negatively impacted should the Blue Route be approved.

1311
1312 While I understand and appreciate the difficult decision that you need to make, I ask that
1313 you continue to pursue the approval of the Orange Route and not the Blue Route. I know
1314 that this was a personal request but I'm sure that you can appreciate that this is a very
1315 personal issue for all of us in this room.

1316
1317 When I moved into my home 10 years ago, I was informed about the proposed Orange
1318 Route and I accepted that it would be built in the not so distant future. But then when the
1319 Blue Route was announced, you know, I was very surprised. It ran straight through our
1320 living room and I was faced with the possibility of losing my home.

1321
1322 Now, with the revised Blue Route proposal, the houses across the street from me will be
1323 demolished. And honestly, I don't know which is the worst of those two options. I really
1324 don't want to have the beautiful homes across the street be replaced by a six lane
1325 highway or a stone wall. I don't want my friends and neighbors to be replaced with

1326 traffic, debris, and trash from careless drivers. I don't want the sweet sound of my
1327 neighbors' kids laughing and playing in our cul-de-sac to be replaced by 18 wheelers and
1328 dump trucks all hours of the day and night.

1329

1330 But most of all, I don't want to watch the value of my property plummet because my
1331 front door will be about 4 to 500-feet away from 540. So, again I ask that you consider
1332 the homes that will be demolished, the families that will be uprooted, and the tranquility
1333 and peaceful living at Upchurch Place, which would be destroyed should the Orange
1334 Route not be approved. Thank you.

1335

1336 Moderator: Thank you, Mrs. Kinsey. Next is Ramona McGee followed by
1337 Kym Hunter.

1338

1339 **TRACKING ID – O-31**

1340 Ramona McGee: Hello, my name is...can you hear me? Hello, my name is
1341 Ramona McGee. I am here with the Southern Environmental Law Center representing the
1342 Clean Air Carolina, non-profit; address PO Box 5311, Charlotte, North Carolina 28299.

1343

1344 Clean Air Carolina is a non-profit organization working to ensure clean air quality for all
1345 North Carolinians through education and advocacy. And by working with our partners to
1346 reduce sources of pollution. A large part of Clean Air Carolina's work is focused on how
1347 transportation resources are spent all over our state, which impacts the air quality and
1348 health of our communities.

1349

1350 As to the complete 540 project under consideration, we are mindful of a need for a
1351 solution. But we do not believe this project is the answer. A costly and environmentally
1352 damaging and neighborhood disrupting toll road will not solve the transportation
1353 problems of Wake and Johnston Counties.

1354

1355 To be clear, we're not in favor of the Red Route. We're not in favor of the project as it is
1356 presented in the DEIS. Instead, we would like to see a solution that we could all use and
1357 appreciate like, excuse me, upgrades to the existing roadway network. Right now the
1358 project is estimated to cost at least \$2 billion and as much as \$2.5 billion. Where that
1359 money will come from is unclear. The DEIS does not tell us how much the toll will be or
1360 how much of this price tag will be shouldered by taxpayers. And it is not at all clear that
1361 all costs are even accounted for in the DEIS estimates.

1362

1363 Even setting aside the troubling funding questions, the costs outweigh the benefits. The
1364 majority of the people who will use the toll road will save less than 10 minutes in travel
1365 time. In other words, NCDOT wants taxpayers to fork over \$250,000,000 for each minute
1366 of travel time saved. And then charge users a toll to use the road.

1367

1368 Additionally, it is not clear how much time, if any, will be saved by drivers who cannot
1369 afford to take the toll road. Of course, these dollar figures also don't get the devastating
1370 relocation impacts we've been hearing about that are associated with this road. And any
1371 and all of the currently study alternatives will cause hundreds of residential relocations. A

1372 travel time savings of less than 10 minutes cannot justify the environmental, community,
1373 and dollar costs associated with this proposed road.

1374

1375 Again, we agree that something must be done. But a costly toll road is not the answer.
1376 We reject the toll road and we urge NCDOT to consider other options. Thank you.

1377

1378 Moderator: Thank you. Next we have Kym Hunter followed by Albert
1379 DiMillio.

1380

1381 **TRACKING ID – O-32**

1382 Kym Hunter: Hi, good evening. My name is Kym Hunter and I'm with the
1383 Southern Environmental Law Center at 601 West Rosemary Street in Chapel Hill and I
1384 represent the Neuse Riverkeeper with Sound Rivers who you've heard from tonight and
1385 also Clean Air Carolina.

1386

1387 And as Ramona just mentioned, we're very sincere in our desire to do something for this
1388 community. We want to see transportation improvements in this community and we often
1389 and frequently advocate for more resources to come to Wake County and to our state's
1390 urban areas.

1391

1392 However, we'd like to see a solution that doesn't have the devastating environmental and
1393 human impacts that every single one of these 17 alternatives presented tonight will have.
1394 We believe NCDOT is providing you with a false choice. We've heard a lot today about
1395 people versus mussels. Either you have to devastate a community or destroy the natural
1396 environment.

1397

1398 Well, we urge you to reject this false choice and look for other better solutions. I
1399 represent a lot of environmental groups on transportation and that is all over the state and
1400 think that if anyone here is qualified to speak for the environmental community. We've
1401 heard today, you know, how the environmental community doesn't care about people
1402 living in Garner or people living on the Blue and Lilac Routes. We do. We don't want to
1403 see the Red Route built. We were not the ones who put the Red Route on the map.

1404

1405 We've never been in favor of this toll highway. And at \$2.5 billion this would be I think
1406 the most expensive road in the state. It would have very minimal benefits. And you'd
1407 have to pay a toll for the pleasure of using that road. We would like to see DOT take a
1408 fresh look at alternative solutions that could better benefit everybody in the community.

1409

1410 We've been asked to think about the human impacts here tonight. We agree. Every single
1411 one of these options has hundreds of relocations. It is interesting to me to hear so much
1412 concern about the relocations in Garner, but completely ignore that 279 relocations
1413 *(inaudible)* with the Orange Route.

1414

1415 In short, nobody it appears wants the Red Route. But this isn't a public vote. There are
1416 important state and federal environmental laws in play and we do not believe that the

1417 Orange Route can legally get permits to be built. So, where does that leave us? The
1418 Orange Route is illegal. Nobody wants the Red Route. Let's look for a better solution.
1419

1420 Moderator: Thank you, Mrs. Hunter. Albert DiMillio followed by Barney
1421 Oakes. No Albert DiMillio? Barney Oakes.

1422

1423 **TRACKING ID – O-33**

1424 Barney Oakes: My name is Barney Oakes. I live at 7813 St. Annes Way in
1425 Fuquay-Varina. I am not as articulate as any of these speakers that have been up here
1426 tonight by far. And they have given you probably all of the reasons that I would have
1427 stated as well.

1428

1429 I am in favor of the Orange Route. That's with due respect to those that are on the Orange
1430 Route. I think there've been some mention of the impacts of those folks and you need to
1431 keep that in consideration I believe.

1432

1433 However, there are a couple of things here. I've not heard anyone talk about a solution if
1434 we have to build this thing and the driving thing is this mussel or whatever they are, the
1435 Dwarf Wedgemussels. Somebody said we could take a few of those things and put them
1436 in an aquarium environment and you could propagate them. And they propagate well in
1437 there. But they don't do it because in a natural environment because the streams are
1438 polluted.

1439

1440 Then why do we really have to do this? It looks like with the federal direction and
1441 impacts, we're going to have to do something. Take them out of there, propagate them
1442 and then use some money to clean up the streams. You know, so that we don't end up in
1443 a situation where we have to make a choice of mussels or people. Try finding a way...a
1444 solution that mitigates them. I think that's part of what we don't do a good job of is
1445 mitigating.

1446

1447 I live on the Purple Route. If this thing comes through there, I'm going to be like the
1448 gentleman, I'm going to be right on the edge. They'll take my property and I'm going to
1449 have a berm or a wall or something. But my question is, I'm on a well system. My well
1450 probably isn't going to be any good. So, you know, the pollution...the pollution in the air
1451 from the traffic going up and down the roads. And they're going to build an access road.
1452 And that's how I'm probably going to have to leave the community out on that access
1453 road. Well that's going to make where I live like a cut through like the young lady said
1454 with a lot of traffic on the road.

1455

1456 So, there's not any good solutions to anything. We've got to find some that mitigate some
1457 of these bad things. We all know that those Dwarf Wedgemussels have been classified as
1458 an endangered species. I'm cautiously optimistic that my community and myself will not
1459 become an endangered species like them. Thank you.

1460

1461 Moderator: Thank you, sir. We have Steve Munie followed by Phil Matthews.
1462 Steve Munie. Phil Matthews. Phil Matthews.

1463

1464 **TRACKING ID – O-34**

1465 Phil Matthews: Good evening. I know we're winding down here. We've
1466 had some great speakers and...

1467

1468 Moderator: Please state your name and address.

1469

1470 Phil Matthews: Yes sir. Phil Matthews, 1901 Navan Lane, Garner, North
1471 Carolina and I'm very glad to be here. I appreciate you guys putting this on. Briefly,
1472 everybody has talked about some many different things.

1473

1474 But I'm just talking about let's get this project going. I know that some of you people
1475 they're lives have been on hold for 20 and 25 years, which has been corrected tonight and
1476 it's a good thing to know. But around the Garner southern area, homes, people have been
1477 trying to sale homes. They can't sell their homes. People are wanting to buy homes, but
1478 they're scared to buy homes because they don't know what's going to be in their
1479 backyard, as been mentioned some many times tonight.

1480

1481 Potential businesses coming into our area providing jobs, they're not quite sure where
1482 they should build their businesses at because it might go away in a short period of time.
1483 And coming over here tonight I came down Old Stage Road. I would encourage the DOT
1484 to come through Old Stage Road between 7 and 8 o'clock in the morning, Highway 401,
1485 Highway 50 if you can get on it and Ten-Ten, you're taking your live in your own hands.
1486 These are the issues and that's why we need this thing going quick.

1487

1488 Wake County, I know because serving as a County Commissioner for many years, we're
1489 growing Wake County 60 people a day, 60 people a day. And we've exceeded a million
1490 people a year ago. Things are happening fast here. We can't keep putting it off. As
1491 mentioned earlier, as County Commissioners were voted to support the Orange and
1492 Green Route as initially was put out there. I know the state and some other municipalities
1493 have done the same thing.

1494

1495 All I want to say is let's get this project going. People have been waiting for 25 years and
1496 the people are still moving in. The longer we wait the harder it's going to get. The people
1497 have a right to get on with their lives and not wait to get into the graveyard as the
1498 gentleman said a little bit earlier.

1499

1500 So, thanks for having this. Thanks for hearing us out. As one of the song's "let's get this
1501 party started". Let's get this thing happening. So, thank you very much.

1502

1503 Moderator: Thank you Mr. Matthews. Next Lawrence Zettelmaier followed by
1504 Chris Olszak.

1505

1506 **TRACKING ID – O-35**

1507 Lawrence Zettelmaier: My name is Larry Zettelmaier and I was actually
1508 born and raised here a long time ago when this was a small town, no beltline and it was
1509 W. W. Technical Institute. That's a long time ago.
1510
1511 The first thing we've got to do is get this show on the road, now. It's causing too much
1512 delay. We also need to start working on I-40 West. Like the man said about Ten-Ten and
1513 401 and Highway 50, you're taking your life in your hands. They're not going to improve
1514 those roads and we cannot wait another six years before we start on the Orange Route in
1515 this sector over here between 401 and I-40.
1516
1517 The Orange Route has been studied to death. Time to move on. Time to make decisions.
1518 People want to file lawsuits, let get them filed and let's get them out of here and move on.
1519 We're all are going to be dead before it's all over with and no one seems to care.
1520
1521 The Legislature in their mishandling of everything has for years designated 25% of the
1522 governor's highway tax fund taxes out of your fuel pumps at the gas station to go into the
1523 general slush fund and that's why there's no money. And they did it again this summer,
1524 25% of fuel taxes goes to the general slush fund. That money needs to be put back to the
1525 highways and get something done.
1526
1527 The Orange Route, obviously, everybody here best bet, they want it. Let's do it let's
1528 move on. Sir, I thank you. Take care
1529 Moderator: State your name. I mean your address.
1530
1531 Lawrence Zettlemaier: I'm sorry. I'm Larry Zettlemaier, 1401 Upchurch
1532 Woods Drive, Raleigh, North Carolina 27603. And again, I was born and raised here and
1533 a lot of people can't say that.
1534
1535 Moderator: Thank you, sir. Chris Olszak followed by Mary Alice Arvin.
1536
1537 **TRACKING ID – O-36**
1538 Chris Olszak: Good evening. My name is Chris Olszak. I live at 301
1539 Wonderview Lane, Holly Springs, North Carolina 27540. I'm the President of the HOA
1540 from Sunset Oaks.
1541
1542 And as a resident representative of Sunset Oaks, I'd like to...and a neighborhood of 633
1543 homes in the Town of Holly Springs and the largest as well as the most densely populated
1544 sub-division along the proposed Purple Route. We would respectfully like that the NC
1545 DOT and the partner agencies go ahead and move forward with this project as many have
1546 said tonight, to go ahead and move forward with the Orange Route and be opposed to the
1547 Purple Route and all DSAs and those being 8, 3,12 that include the Purple Route.
1548
1549 Just briefly, I know there's a lot of data that's been shared. You shared at the beginning.
1550 There's multiple reasons of why we should not select the Purple Route and the DSAs that
1551 encompasses that. It's the highest overall cost, the largest use of land and most

1552 relocations, as you said by more than double and again, the most linear feet of impacted
1553 stream.

1554

1555 But overall to our community and specific, again, we were developed by more than 10
1556 years ago in accordance with the Town of Holly Springs Long Term Planning
1557 Development Plans and had this been studied back then, I'm sure our neighborhood
1558 would not have perhaps been built or had it been, we would have a more acceptable
1559 buffer between us and the proposed purple corridor. As such we don't, so therefore many
1560 of our neighbors our friends and families and children in our neighborhood will be
1561 impacted if the Purple Route or any of the DSAs that encompass it are selected.

1562

1563 So, we would again ask that you remove that from selection and do so as you did in
1564 November of 2010 when we first found out that we were in the way of this new proposal
1565 corridor. There again, as you stated back in that time in November 2010, there were no
1566 key advantages over the orange corridor at that time. As your most recent study has done
1567 and as we've been through this I'm sure as you have heard everybody is kind of come
1568 over fatigued of studies and comment periods, so again, we're here for the 3rd time in 5
1569 years to state, again, as you stated in your DEIS, there is no key advantage over the
1570 orange corridor that's been proposed and protected for the last 20 years.

1571

1572 Again, had we, what was I going to say...if again, the Town of Holly Springs I would
1573 talk to all of my fellow residents of the Town of Holly Springs as well. We have already,
1574 as a town acquired right-of-way dedications for the protected corridor along the orange
1575 path, which is a great benefit to our town. It comes out of cost savings to us if we were to
1576 have to move those to the Purple Route. Again, that would come at a detriment for throw
1577 away costs requiring right-of-way dedications for the purple corridor and then doing that,
1578 we again would have the planning and investment of the water, the sewer, the
1579 transportation infrastructures for the town that would have to be mitigated, re-planned
1580 and re-developed, at an expense to modify these that again, we had not planned for.

1581

1582 So, I would say to our town and our residents to cover these new investments and
1583 expense what would take place? Would it be the increase of taxes, the mitigation or the
1584 loss of services that are already provided by the town, as well as the ability for us to see
1585 the city growth and the tax base in our community.

1586

1587 And finally, I would say that as we talk about the financial impacts to the community, the
1588 community distrust that is being impacted, so that as we look at this path right out our
1589 front door or the back door, the elimination of our homes, the environmental nuisances,
1590 present during highway construction, the close proximity to the completed highway and
1591 the noise barriers, would be a devaluation of our properties of those that remain. Again
1592 something that was not necessarily taken into consideration into the impact study.

1593

1594 And then finally, I'll just kind of wrap-up because I know I'm being asked to, I would
1595 say that again, we understand that the reason that we're in consideration was given to the
1596 mitigation of the wetlands impacts and as we see it. We'd ask you to think logically. To
1597 act rationally when it comes to the preservation of wetlands, but most importantly, the

1598 preservation of communities that have already been properly developed and the
1599 preservation of the livelihoods of residents of the Town of Holly Springs and specifically
1600 that of the Sunset Oaks Neighborhood. Thank you very much for your time.

1601
1602 Moderator: Thank you, sir. Mary Alice Arvin followed by Matt McGinnis.

1603
1604 Audience Member: Armin? You said Armin.

1605
1606 Moderator: Arvin. I'm sorry.

1607
1608 Audience Member: Okay.

1609
1610 **TRACKING ID – O-37**

1611 JoAnn Hunter: I'm JoAnn Hunter at 9104 Fanny Brown Road and I'm speaking
1612 for Mary Alice Arvin at 7600 Lake Wheeler Road. On the behalf of Mary Alice and
1613 myself, I entered this room tonight with very little knowledge on toll roads, but I got an
1614 education from the gentleman earlier and I'm sure you did too.

1615
1616 Our question is, why is the south 540 having to pay tolls when the north 540 pays no
1617 tolls? We helped pay for 540 North, then I find out tonight, we shouldn't even have a toll.
1618 So, I've changed my mind since I been here. I don't want a toll. So, we are wanting that
1619 questioned answered. Why do we have a toll when we don't need it? And if this study
1620 proves that we've lost money with the toll, common sense tells you what to do.

1621
1622 I mean, you have...but another thing I wanted to point out too, I moved from Ten-Ten
1623 Highway and I promise you 10,15 minutes some mornings trying to get out of the
1624 driveway. I moved from Ten-Ten to Fanny Brown Road thinking, oh well, this is going to
1625 be short road, you know at least I'll be able to the highway, get somewhere, quick. No
1626 way.

1627
1628 This idea of fixing the secondary roads like Ten-Ten, that's one of your major, major.
1629 Major...if you don't believe it, go over there and look every day. You're not going to do
1630 anything to Ten-Ten without a big, big backup and think about big, big backup to traffic
1631 trying to get to work and back home.

1632
1633 Now, the next point that I want to make about 540. The Orange Route of Walter, he's
1634 been a family friend and everything. We all know that we have been made prisoners of
1635 the 540 project and we accepted the Orange Route whether we wanted to or not because
1636 we've had to live with it so long as prisoners, like staying in a prison, you know you got
1637 to get acclimated to it, don't you. So, you live with it.

1638
1639 Alright, I got one more comment to say to you at the Department of Transportation North
1640 Carolina. The federal government is educated far beyond their intelligence. Y'all got
1641 more sense than they got so do what you need to do. Get on with it.

1642

1643 Moderator: Thank you. Next we have Matt McGinnis followed by our last
1644 speaker Peter Hochstaetter.

1645

1646 **TRACKING ID – O-38**

1647 Matt McGinnis: Hello, good evening. Just a few brief comments. Most
1648 everyone that is still left has probably heard many of these, but I just wanted to be on the
1649 record. I myself have been in 408 Edgepine Drive, Holly Springs, North Carolina. I'm in
1650 Sunset Oaks.

1651

1652 Moved into that home in 2006 and then realized shortly thereafter, yeah hey the purple
1653 line and it's going to go straight through your neighborhood. And like many of you, take
1654 homes away, impacts to the local environment, impacts the neighborhood that I bought.
1655 And for me, I've been dealing with this too, five, six years and feel like yes, it's time to
1656 get on with it.

1657

1658 So, I want to echo many of the sentiments I heard here tonight. If you force me to choose,
1659 I'm choosing the Orange Route. This is where I bought my home and was planning on
1660 was the Orange Route, so Orange Route.

1661

1662 The other thing I wanted to mention too was some of the legal challenges that may or
1663 may not come up with the Orange Route. If there are those legal challenges, what
1664 happened to the upgrade 440 plan that I saw years ago, where was that one? I don't see it
1665 anymore. That's something worth considering.

1666

1667 So speaking specifically to the Purple Route, it's the costliest to the taxpayers. It's the
1668 costliest to human life, and families, specifically as regards relocation and local area
1669 schools, during the construction and after the construction. Middle Creek is just five
1670 minutes away. Some folks who have families and have children that live in this
1671 neighborhood, that 5-minute drive will turn into a 20 or 25-minute drive just to get to that
1672 school during the construction period at least, at minimum.

1673

1674 Impacts the Holly Springs Park, I believe that's a 4(f) de minimis impact. That park is
1675 planned. That park is not in-place, but that park was moving in. That's why I bought in
1676 that neighborhood. They were going to put a park in the bottom of that neighborhood. It
1677 impacts the Holly Springs long term vision plan. It's an impact to Wake County traffic
1678 and county growth planning.

1679

1680 Outside of that I mention some of the personal impacts to me. This has been a yoke
1681 around my neck, 5 or 6 years. I had 2 opportunities to sell my home. I backed off twice
1682 because I know I wasn't getting market value for that house. Why? Because no one knew
1683 where the road was going. So, let's do the Orange Route and move on.

1684

1685 The last thing I want to mention to you as several of you have mentioned, tolls. I live in
1686 the south man, what's up? I don't live up north. There's not supposed to be any tolls
1687 down here. So let's not have toll roads. I specifically do not drive the toll road so I will
1688 drive north on 540. I live, I'm sorry, I work, practically live in the northern part of the

1689 County right on Six Forks Road. I drive 540 until Exit 1 and I take it and I pick up 40 and
1690 I head south or I take Six Forks all the way down to 440 and I suffer the traffic. Why? I
1691 drove 540 one time, 10 minutes faster, 10 miles out of the way, \$5 one-way. That doesn't
1692 make any sense. So, I drive that daily, not only is that a tax on me, it's a tax on my
1693 income. So, no tolls. Thanks. That's where I leave it. Thanks everyone.

1694

1695 Moderator: Thank you, sir. Last but not least Peter Hochstaetter. Peter
1696 Hochstaetter? Alright. Is there anyone else that would like to speak at this point? Going
1697 once...State your name.

1698

1699 **TRACKING ID – O-39**

1700 Tim Sarpolus: I'm Tim Sarpolus, 3709 James Lane Drive. I forgot one thing. I cut
1701 myself short. When we were going through this five years ago, there was just a Tan
1702 Route and the Tan Route just all of a sudden appeared. But then we got involved with
1703 some other folks and trying to get some attention to this and one of them was from the
1704 Good Samaritan Baptist Church and he must have talked to somebody good enough that
1705 they said they couldn't change things. They had to keep all this on the table but they
1706 came up with the Brown Route and down at the bottom end, the Tan Route turned and
1707 made a big sharp turn and so we're aware of that. We just want you all to know we
1708 realize that somebody talked to somebody that got them to change the route to avoid
1709 Good Samaritan Baptist Church and I'm all in favor of that. You know it's an old historic
1710 Baptist church, been there a long, long time. But my neighborhood has a value too just as
1711 much as that church.

1712

1713 Moderator: Thank you Mr. Sarpolus. Anyone else?

1714

1715 Rebecca Patterson: Can everyone hear me?

1716

1717 Audience Member: Turn it up a little bit.

1718

1719 Rebecca Patterson: Is that better?

1720

1721 Audience Member: Yes.

1722

1723 **TRACKING ID – O-40**

1724 Rebecca Patterson: Hi my name is Rebecca Patterson. I live at 1200 Golden
1725 Horseshoe Circle in Morrisville. I came here tonight to learn more about this process
1726 about the roads. I'm a prospective home buyer so I wanted to attend this really important
1727 meeting to help me decide the best options, moving forward next year.

1728

1729 Just a couple of things, I do support from what I learned, the first three routes, the orange.
1730 One minor point just want to bring out looking at the Red Routes, it doesn't make sense
1731 from a visual perspective on the map because it's so close to 440. Why would you have a
1732 super, you know, 540 toll road right next to 440? Isn't it the whole purpose is to have a
1733 highway or infrastructure to include outer line communities like Fuquay or similar
1734 somewhere in that vicinity? Sorry, about that I'm a little nervous. So, I just wanted to

1735 make that little point of include the outline areas, perhaps the first three routes would be
1736 the best for the Orange Route. So, thank you.

1737

1738 Moderator: Thank you, ma'am. Anyone else? Alright. Going
1739 once...twice...alright, well with that I thank you all for coming out tonight and all of you
1740 that attending via the live webcast. Please drive home safely.

1741

1742

1743

1744

Hearing Adjourned.

1745

1746

Jamille Robbins, Moderator

1747

Public Involvement Unit

1748

December 9, 2015

1749

1750 Typed by Neighborhood Solutions

APPENDIX F
Design Public Hearing Transcript
and Comment Summary

1 **OFFICIAL PUBLIC HEARING TRANSCRIPT**
2 **Complete 540 Formal Design Public Hearing**
3 **Raleigh, Wake County**
4 **February 22, 2018**
5 **R-2721, R-2828, R-2829**
6

7 3:59

8 Good evening ladies and gentlemen. I would like to welcome you all to the North Carolina
9 Department of Transportation Formal Design Public Hearing for the Complete 540 project, also
10 known as State Transportation Improvement Program Project numbers R-2721, R-2828 and R-
11 2829 and a little bit later in the presentation I'll explain what those numbers mean. My name is
12 Jamille Robbins. I am the Public Involvement and Community Studies Group Leader with the
13 North Carolina Department of Transportation and I'll be your moderator for tonight's public
14 hearing.
15

16 Um. first, I always like to start with some housekeeping and ground rules. Restrooms are just
17 outside the door, you make a left and just past the sign-in station, there's a hallway and
18 restrooms are right there. There's also restrooms in this hallway. The second thing is these are
19 formal proceedings and they are being recorded. So, we ask that if you have a cell phone on,
20 please turn them to silent. You may have a cool ring tone, but I don't want to hear it right now.
21 And last but not least, probably the most important thing is the ground rules. Basically, I have
22 one rule and I'm sure some of you were at the public hearing three years ago and your probably
23 heard me say this. I have one rule and that's the golden rule. To me that is so appropriate for a
24 forum such as this and we treat others as we would like to be treated. It's important during the
25 public comment portion because you have people with different views on this project. Some
26 may be against the project, some may be for the project, but I just ask that if someone gets up
27 to speak that has a different viewpoint than yourself, that you show them the same respect
28 that you would like if you got up to speak. So, if we do that we will have a nice orderly and civil
29 meeting. Now what I want to do now, real quick, before I get started on the presentation is just
30 acknowledge all the hard work by the staff that are here tonight. The majority of them are in
31 the blue shirts with the NCDOT logo on them. There's a lot of work that went into putting these
32 public meetings and public hearings on this week. So, I want to thank them all for all their hard
33 work. But there's a few people I want to pay particular recognition to. One I want to
34 acknowledge our Division Staff that are here, our Division Engineer Mr. Joey Hopkins, he's in
35 the back there. Our Deputy Division Engineer, Mr. Richard Hancock and is Boyd here? Our
36 Division Construction Engineer, thank you and their staff are here. From our turnpike NC
37 Turnpike Authority, we have our Director Mr. Beau Memory, I believe he is here. And is Rodger
38 Rochelle here? He's the Chief Engineer. Alright. We also have some, we have Chris Lukasina,
39 one of our partners with the Capital Area MPO Metropolitan Planning Organization here
40 tonight, as well, and his staff. And we have Mr. Donnie Brew from the Federal Highway
41 Administration, he's here. And for the sake of time I'm going to stop it there. We do have some
42 Local Elected Officials that I would like to acknowledge. We have Mr. Dick Sears, the Mayor of
43 Holly Springs. We have Mr. John Burn, Mayor of Fuquay-Varina. And we have Mayor Ronnie

44 Williams of Garner here tonight as well. I hope I didn't miss anyone, if there are any elected
45 officials here that would like to be.

46 (Bill Harris) Yes, I'm Commissioner Bill Harris, I'm speaking for in the place of Mayor John Dunn
47 Okay thank you. Can everyone hear me? Okay I'll move the mike a little bit closer.

48

49 So, with that we'll get started. Tonight, we'll start with the purpose of tonight's public hearing.
50 And we'll get a quick overview of the project. We'll talk a little bit about project impact cost and
51 funding. And then, we'll go over the next steps and the process, what to expect over the next
52 few months and years. And then finally, get to the most important part of tonight and that is
53 the public comment period. Again, this is a public hearing - we've come out to hear what you
54 have to say. Now the purpose of tonight's hearing, simply put, is to make you, the public, a part
55 of project development process. It's just another important step in our continual efforts to
56 make you a part of the process. Specifically, tonight, we want to get your input on the design of
57 the project. Now the map, the maps that you saw here tonight, and the Final Environmental
58 Impact Statement are available, have been available at the following locations. They are
59 available on our website, as well. Now I can't encourage you enough and talk up the
60 importance of public participation. But your input in this process is extremely important. And
61 we provided you multiple ways to participate in this process. And you participate by making
62 your voices heard and you can do that by ↕, one, having your comments recorded here tonight
63 during the public comment portion. You can send an email, you can go to our website, we have
64 a public engagement portal, publicinput.com and you can provide input there. You could email
65 us, just multiple ways for you, if you have a carrier pigeon, you can send that in too. But
66 anyway, I really cannot stress the importance of you getting that feedback to us. And one
67 special note, I do want to thank the City of Raleigh, the Raleigh television network they are here
68 tonight recording these proceedings. It will air, I believe, beginning Saturday and they will run it
69 continuously through the comment period, which is March 23rd. So, we will put the airtimes on
70 our website or you can go to the City of Raleigh's website. It will air on channel 18 on Spectrum
71 cable which is public access television, which is county wide. But for Raleigh residents it will air
72 on cable channels 10, 11 and 22 as well. Again, thank you to the City of Raleigh. So, you may
73 be asking yourself, what are you going to do with this input. Well, in about 6-8 weeks the
74 project study team will convene at what is known as a Post Hearing Meeting to discuss all the
75 comments that we have received through that March 23 deadline. And we will take that
76 comment into consideration as the design progresses. But I want to be clear that the
77 Department cannot just take public comments into consideration in making these decisions.
78 We have to balance that against good sound engineering criteria, such as safety, which is our
79 number one goal. We have to look at impacts to the natural and human environments. We
80 have to look at operations as well as cost. So it's a balancing act there but we but what that
81 ensures is that at the end of the day, we put the best product on the ground for the citizens of
82 North Carolina. So, as I said before the public comment period ends March 23rd, now I want it
83 to be clear that we accept comments all the time but to make sure your comments are a part of
84 the public record for this hearing phase of the project, we need those comments in to us by
85 again March 23rd.

86 So real quick, everyone knows the Triangle is a great place to live, we are one of the fastest
87 growing areas in the country. And as a result, with all this growth comes more cars and more

88 congestion, and which actually requires us to the need for more route choices, is what I'm
89 trying to say. And so, based on that, the project purposes are two-fold. One is, improve
90 mobility within or through the study area during peak travel periods and two, to reduce
91 forecasted congestion on existing roadway network within the study area. And an additional
92 benefit of this project is improved system linkage, or in other words improved system
93 connectivity on our existing roadway network.

94 This project is consistent with the long-range transportation plans for the local municipalities
95 within the study area. This project is included in the Capital Area Metropolitan Planning
96 Organization and NCDOT's adopted plans.

97 Alright, so let's get to the project, again this project calls for the completion of the 540-outer
98 loop around the greater Raleigh area. Project will begin at the western terminus or end point of
99 the project which is the 55 bypass eastward to the eastern endpoint of the project which is the
100 US 264/64/I-495/I-87 freeway. Now, the preferred alternative, if you remember, at the last
101 public hearing which was about three years ago, December 2015. We, that public hearing- the
102 purpose of that public hearing was to choose the location or the route for this project. And
103 based on the public comment that we received during that process we evaluated and reviewed
104 all those comments, we made that information available to our local, I mean our federal and
105 state regulatory and resource agency partners and got their feedback on that as well, and
106 based on that input, DOT and the Federal Highway Administration chose what was known as
107 Detail Study Alternative 2 as the preferred alternative, which was the green, orange-green, mint
108 green alternative. Now the project we are proposing - six lane highway, three lanes in each
109 direction separated by a 70-foot median. This highway, this roadway is a controlled access
110 facility, that means access to and from the new roadway will be via interchange only and no
111 private driveways will be allowed to connect to this roadway. And this project is identified as a
112 toll facility or roadway, again this is the continuation of NC 540 from the west. So, I'm not going
113 to go through the project inch by inch, but I do want to go through the interchange locations.
114 And I hope most of you have had a chance to review the maps tonight, and I think we will leave
115 a copy in the lobby so after the hearings if you want to look back at the maps, feel free to do so
116 and ask questions. So, to me a picture is worth a thousand words, this is you have been looking
117 at 2-D plan sheets, this is a 3-D visualization of those interchanges, which I think will be a little
118 more helpful for you. [presentation playing] So, this is the NC 55 bypass, this is the existing NC
119 540 and this is heading eastward, alright. Apex is in this direction, Holly Springs in this
120 direction. Alright, heading eastward, the next interchange is the Holly Springs Road
121 interchange, and this is what is known as Divergent Diamond Interchange or DDI. Fairly new
122 concept to North Carolina, we have a few on the ground that are operating fairly well and we
123 are proposing it here. Now I have a visualization that or video that goes through the operation
124 of a Divergent Diamond Interchange that I can play at the end of my presentation, if you so
125 choose so before I get to the public comment period, I'll ask you then if you want to watch it,
126 it's about 2 minutes but that will explain the operation of the Divergent Diamond Interchange.
127 But one thing I want to point out in addition to the interchange in this area, because of the
128 interchange in 540, several roads adjacent to the interchange will have to be realigned. The
129 main one being Kildaire Farms Road will be realigned to the north to tie in with, to create a new
130 four leg intersection with Sandcroft Drive. And then on the south side, the Lockley Road and
131 Suncliff Court will have a full movement four-leg intersection here. And Fairview Street will be

132 realigned to tie into Holly Springs Road at this point. Alright, next is Bells Lake Road. Next is the
133 interchange at US 401 -you may recognize that we are right here. One thing I want to point out
134 here this is 401 and this is Raleigh in this direction, Fuquay-Varina in this direction. As a result of
135 this new interchange 401 will be bridged over 540, but in this area Donny Brook will be
136 realigned to tie in here just across from the entrance of this campus. Next is Old Stage Road
137 interchange, you'll see Roland Farm Road will have to be realigned to the north to tie in, at this
138 location. Next is NC 50 interchange Benson Road. And wow, this is a huge interchange. The
139 reason why this is a confluence of three major freeways. You have the Clayton Bypass, you have
140 I-40 and then you have 540 coming through here. Next is White Oak Road heading east, and
141 then you'll see the adjacent roadways that have to be realigned in the areas of these
142 interchanges. Heading east Rock Quarry Road. Next is US 70 Business. You'll see one of the
143 things I want to point out here, up here you'll see that 540 will go over US 70 Business. It will
144 also go over the Norfolk-Southern Railroad and Garner Road. There will be no direct access to
145 Garner Road. Next is Auburn Knightdale. Next is Poole Road - 540 will be bridged over Poole
146 Road. And finally, the last interchange, this is again a freeway to freeway interchange, so you
147 see flyovers and loops. Those flyovers are high speed directional ramps.

148
149 Alright, so let's talk a little bit about project impact and some costs. Now during the
150 environmental process, we look at a variety of environmental factors. But not going to go
151 through this entire list, if you want, please look at the, review the Final Environmental Impact
152 Statement. But one I think is most important are the number of relocations that are required
153 for this project. When I talk about relocations, those are the number of people, homes and
154 business that have to be displaced as a result of this project, the construction of this project.
155 There's a total of 217 relocations. 5 of those are business relocations. Now, we'll talk a little bit
156 about the right-of-way acquisition process, that once the limits of the final design of the
157 project, actually once the decisions are made regarding the final design of the projects, the
158 limits of the project will be staked in the ground. If you are an affected property owner our
159 right-of-way agents will arrange a meeting with you to not only explain your rights as a property
160 owner, but they will explain how the project affects you, and if you are an affected property
161 owner where permanent right-of-way is required then an appraisal will be completed and
162 highest current market value of that property as highest and best use will be offered as
163 monetary compensation. Now during this process, the Department must treat all owners and
164 tenants equally. We must fully explain an owners' rights. We must provide fair market value in
165 exchange for those property rights. And we must provide you relocation advisory assistance.
166 Again, if you are a relocatee, someone that will be displaced as a result of this project, then
167 additional assistance in the form of advice and monetary compensation is available. Now our
168 Right-of-Way experts are here, Ms. Kathy Smith is in the back, she has her hand up. She and her
169 staff are here. So, at the conclusion of the public hearing if you have any questions, please feel
170 free to speak to them. And we also have a brochure about that, explains the right-of-way
171 process available at the sign-in table.

172
173 A little bit about traffic noise. A traffic noise study was done, completed on this preliminary
174 design. Of those, so along this entire project, there are 42 locations or noise impact areas that
175 were evaluated. Of those 42, 22 met the preliminary justification for a noise barrier. Let me

176 talk a little bit about our traffic noise policy. It basically states that the state and federal
177 governments are no longer responsible for noise abatement measures for development that
178 occurs after the date of public knowledge. That means any development or any buildings that
179 do not have a building permit issued on or before that date of public knowledge will not be, will
180 not get a noise wall paid for by the Department. Now the date of public knowledge is the
181 approval date of the final environmental document. In this case, for this project that is the
182 Record of Decision, also known as the ROD. We anticipate that in the summer of this year. Now
183 once the decisions are made regarding the final design of the project, the locations of those
184 noise barriers will be determined. And residents that are expected to receive at least a five-
185 decibel noise reduction from the recommended noise barrier will be able to vote for their
186 preference for or against the construction of a noise wall in their area. Now future outreach will
187 be forthcoming. We have our noise team here tonight, our noise group, which is headed by
188 Missy Pair, so I know they are very popular tonight and over the past two nights. So, if you
189 didn't get a chance to talk to them, make sure you catch them on the way out.

190
191 And finally, the cost of the project. The cost is estimated just over \$2.2 billion dollars for the
192 entire project. A little bit about funding, again I told you this is a tolled facility, a tolled
193 roadway. But I want to talk about funding for a toll road versus a traditional funding, real quick.
194 Traditional funding for a federal aid project is an 80/20 split, federal and state contributions
195 respectively. Now for a toll funded project, the state and federal contributions are less and they
196 vary. The revenue from the tolls are responsible for not only paying back the cost of financing
197 but also the cost of operation, construction and maintenance. And current legislation says that
198 once the debt is repaid, then the tolls are removed. [inaudible from crowd] So, that's true, it's
199 legislation. So, the next steps, again I just talked about the Record of Decision is again is
200 expected this summer. And the construction contracts will be awarded in pieces. So again,
201 remember when I talked about those numbers the R-2721, R-2828 and R-2829, this is where
202 those numbers come into play. That's how we fund the projects. So, R-2828 which is the US
203 401 to I-40 section, it is slated to be awarded the fall of this year, the fall/winter of this year.
204 The R-2721 project, which should be closely behind that project, which is in the limits of the R-
205 2721 project, NC 55 bypass to US 401 is slated to go, be awarded to construction in Spring or
206 Summer of 2019. And the eastern portion of the project, I-40 to US 64/264/I-95/I-495/I-87
207 endpoint is not funded at this point. So right now, it is schedule has it fiscal year 2027. Now all
208 of these dates are preliminary and subject to change. So basically, in your handout, basically the
209 orange piece of the project is funded, okay.

210
211 The project will be awarded as a design-build project, the design-build process allows the
212 department to hire a team of contractors and designers that are responsible not only for the
213 final design of the project but also the right-of-way acquisition, as well as the construction of
214 the project. Now this process is a lot is more efficient than our traditional process which results
215 in faster completion dates. The design-build process that design-build team in in essence could
216 be purchasing right-of way in one section of the project, finishing the design in another while
217 constructing in another portion of the project. But through this process, we see a lot of
218 innovative designs that further reduce impacts and costs come out of this. We've also seen
219 quick resolution to issues that arise during construction. And if you've had any construction,

220 been a part of any type of construction on your home, or anything, you know it's not a question
221 of if there is a problem arises, it's just when, so. But again, very innovative process for the
222 department and looking forward to getting this project on the ground, it's been a long time
223 coming. But with that, that is the end of my presentation and we'll get ready to go into the
224 public comment portion, which is the most important part of tonight.

225
226 Now real quick, did anyone want to see the video I talked about? If not, you can go onto our
227 YouTube channel and watch it, you want to watch it? You want to watch it? (Sure) Okay, one
228 second. (Do we get ask you any questions?) You can, remember when I talked about the
229 process, we are going to meet in about 6-8 weeks to discuss all the comments that have been
230 received? That is the official response, but you can ask me questions, If I don't have an answer,
231 we'll get back to you. Real quick, let me play this. Will the sound play? Wait a second, let me
232 see if I can get the sound. Okay. Okay here we go. [video playing] That is on our YouTube
233 channel, I didn't know that it was that funny. But, anyway it's an informative video, we have
234 several on the ground in Charlotte area.

235
236 Now at this point before we, just before we go to the get started on the public comments
237 portion, I want to thank everyone that will be joining or watching the future broadcast of this
238 hearing. Please, I just want to emphasize the importance of getting comments into us for all the
239 methods we provided earlier that I went through. Please encourage your neighbors to if they
240 weren't able to be here tonight, watch the broadcast. Again, go to our website or the City of
241 Raleigh's website to get the air times. Again, thank you. And that's for the people that, we are
242 ending the broadcast, that's the end of the broadcast session.

243
244 Alright with that, we will now open up the public comment period, I have I believe around 20
245 people that have signed up to speak. Keep in mind, all comments no matter how they come in
246 carry the same weight, we do not want to limit anyone's participation. If you don't like speaking
247 in front of crowds that's okay, written comments all carry the same weight. Now if you didn't
248 sign up to speak and you get an idea after I have exhausted this list, I'll open it up to anyone
249 that would like to speak at that point. Now I will ask, given the number of people signed up that
250 you limit your comments to three minutes. Now, Dianne up front here, will hold up the sign and
251 you have one-minute remaining and then she will hold up the stop sign. Alright, now if you
252 didn't get through your thought, if you sit back down, once we have gone through the list you
253 will have the opportunity to come back up and speak. Alright, so with that said, I ask that you
254 come to the mike in the center aisle here and state your name and address before giving us
255 your comment. Now the first person signed up to speak is Mr. Nick Jimenez, did I say that
256 right? [inaudible], You thought that what? [inaudible], I can only go by the order that I have
257 them.

258
259
260 (Nick Jimenez) I'm Nick Jimenez. I'm here from the Southern Environmental Law Center. (Sir, do
261 you mind speaking into the mike). I wanted to just take a minute to talk about some of the
262 inequitable impacts that the project is likely to have. By that I mean the sort of, unfair impacts
263 that could have on low income communities and communities of color. The analysis so far

264 hasn't looked at these impacts sufficiently and I want to point out a couple of ways[inaudible].
265 One is we've heard this is an incredible expensive project and as we just seen the large majority
266 will be paid for with toll revenue. Tolls function sort of like regressive tax, if you have to take a
267 road you have to pay that extra amount every day. That's one option, that's one thing that
268 could happen to people who that need to commute to Raleigh or to RTP. Another effect could
269 be that people decide not to take the road. This could divert traffic onto some of the existing
270 roads, some of the arterial slow roads. If you see if you look into some of the supporting
271 documents underlying the most recent, the Final Environmental Impact Statement, they show
272 that on a good number of local roads traffic could actually increase. So tolls themselves, the
273 Federal Highway Administration is very familiar with this. They have a 2011 Guidance
274 Document, going back that far saying look, if you are going to build a toll road, you have to look
275 at what it is going to do to their communities, to low income and minority communities. You
276 kind of have to get the lay of the land, see what effects it is really going to have. Wow that was
277 fast. There is also a recent analysis by the Natural Academy of Sciences that lays out a very clear
278 process for this. Federal highways has done it before, they have done this in Texas. They
279 commended the Dallas planning effort for looking, for doing exactly this analysis, figuring out
280 where the traffic is going, who is making these trips, you know, what effect is going to have on
281 them. There are a number of other disproportionate impacts that it could have when you build
282 a large construction projects. The people who tend to live near those are often lower income or
283 people of color. Those have these sort of proximity impacts there's more air pollution, there's
284 more noise, there could be water contamination, [Inaudible] Thank you.

285
286 (Moderator) Thank you sir. Next, we have Mr. Chris Johnson.

287
288 (Chris Johnson) Good evening, my name is Chris Johnson, I'm the Economic Development for
289 Johnston County. I'm here on behalf of the county leadership that is in support for the project.
290 With the county growth that we have seen over the past twenty years, plus over the next 15
291 years anticipating another 100,000 citizens, so we are going to reach over 300,000. There is just
292 not enough capacity on the existing roadways and this is going to do a lot for our existing
293 citizens as well as the industries looking at the area. So, thank you very much.

294
295 (Moderator) Thank you sir. Next, we have Mr. Alfred Leach

296
297 (Alfred Leach) Hi my name is Al Leach, I am a Raleigh business professional and I am here just to
298 speak on behalf some of the other business representatives who are very interested in
299 economic development of Wake and the Triangle region at large. Mobility is an important issue
300 and a need for the community. Congestion, we all face it wherever we come from. But we all
301 want to minimize it as much as we can. Accelerating 540, I think, is a very good opportunity
302 for us, both as commuters and drivers. But also, in terms of our appeal to other businesses and
303 companies that want to call our region home, which is important to our continued economic
304 growth and prosperity, from education to business [inaudible] So, I hope we can give this
305 consideration and keep it moving along.

306
307 (Moderator) Thank you sir. Next, we have Shaun McGrath.

308

309 (Shaun McGrath) Good evening ladies and gentlemen, Shaun McGrath, president of 101
310 Winterview Place, Apex, NC. This address is physically located inside of Holly Springs Township
311 just south of Sunset Lake Road and Woodcreek. The Atrium Neighborhood, to be specific. The
312 concern I want to address tonight on behalf of those residents of the Atrium, is the ability for us
313 to preserve our continued access to neighborhood amenities. They are all built in the southern
314 section of Woodcreek Development. With the construction on NC 540, effectively this large
315 plan development we'll be split in half. Currently there is a Town of Holly Springs publicly
316 accessible and designated greenway that facilitates the only safe walkable or bike able access
317 to the club house pool, gym, tennis courts, etc. for our children and residents. As noted on the
318 Complete 540 map 1, you can see this greenway is annotated in the low lying area, it also
319 contains a creek bed. This area is designed to be filled by the depiction of Map 1 as annotated
320 by area 1393 on that map, Our hope tonight is by continuing to voice this concern, an
321 agreement between NCDOT, the Town of Holly Springs, The Holly Springs Residential properties
322 better known as Preston development will be reached to preserve the pedestrian connectivity
323 of the north side of Holly Springs in Woodcreek to the south side of the same map. After
324 discussing this ongoing issue of concern with your representatives on Tuesday night at the Holly
325 Springs High School, it was noted a large culvert will be needed for the creek, that is adjacent by
326 about 50 feet to that greenway. It was suggested that a viable solution will be a culvert,
327 pedestrian tunnel under 540 in this low-lying area where greenway path that currently exists
328 today. This greenway path is also directly adjacent to the Town of Holly Springs 20-foot wide
329 sanitary sewer line easement granted and documented in the Wake County book of maps of
330 2007 page 2789. Without that pedestrian solution this will greatly impact the lives of the 75%
331 of land owners of Atrium and Woodcreek, both physically and financially. Bringing access to
332 the amenities provided by our neighborhood was obviously amendable to home pricing and
333 individual buying decisions to each lot owner. Most importantly however, is the safety and
334 security of the pedestrian travel throughout our neighborhood and Holly Springs. We certainly
335 hope our children and residents may continue to benefit from the healthy livings options that
336 the developments in Holly Springs and the Wake County are now known for. The State of North
337 Carolina has benefitted greatly from accessing of new residents for our growing area. Thanks
338 for your time, we look forward to hearing about plans that directly address these concerns, as
339 well as how NCDOT will address the phasing of construction along Sunset Lake Road.

340

341 (Moderator) Thank you sir. Next, we have Thomas Tomczak and on deck we have Betsy
342 Walton.

343

344 (Thomas Tomczak) Hello, my name is Thomas Tomczak. I live at 308 Restonwood Dr., I'm the
345 actually a neighbor of Mr. McGrath in the Woodcreek Subdivision in the Holly Springs
346 Township. My concern has to do with three of the points you brought up, safety, impacts and
347 traffic. As 540 bisects our neighborhood they are going to actually build a bridge over east and
348 west side of Sunset Lake Road. That basically, depending on how that is done, could really cut
349 off our access to one road, Stevenson Road, from coming in and out of our neighborhood,
350 which could curtail EMS, fire, police response. And we want to implore that NCDOT works with
351 the township of Holly Springs because there's a Stevenson Road project and the widening of

352 Sunset Lake Road that the township of Holly Springs is doing, that is going on potentially at the
353 same time that is also going to be the impact of all this. So, we just hope that all that works in
354 conjunction of each other so that we are not orphaned. And not only does it impact the
355 Woodcreek and Atrium area there are four other neighborhoods that could potentially be
356 orphaned by these construction projects. Thank you.

357
358 (Moderator) Thank you sir. Following Mrs. Walton, we have Bill Harris.

359
360 (Betsy Walton) My name is Betsy Walton, I'm a private property owner. My address is 1001
361 Horse Creek Rd., Raleigh, North Carolina. My comment has really nothing to do with my
362 properties. Specific has nothing to do with for or against 540. Has nothing to do with whether
363 or not this road she be tolled or not. My comment is around how the project is being managed.
364 Okay. I think this project really lacks 3 points for me and I've experienced it and I hope that I
365 have time to tell my story and that is DOT has no faith in this project. There's no customer
366 service perspective. And there's no communication. And as a certified project manager, myself
367 I really think the communication for this project could be enhanced and they have a real
368 opportunity to start it now. And it ties back perhaps to your golden rule. And I would like DOT
369 to begin to ask themselves this simple question, if this was your property how would you feel?
370 [applause] So, my story is this, as of last week, February 14th I had surveyors on my property.
371 When you look at the current design map, it's supposed to be on the corner of my property for
372 right-of-way okay. But they are actually out there, they're laying out utilities, power and what-
373 not. So, I had to go to a sub-contractor to ask what are you doing on my property. And I think
374 it's a shame and that it illustrates a point of lack of communication and a real lack of customer
375 face of DOT. I'm really concerned if this is going to be a design project we are going to continue
376 down the road of where DOT does not have that face. So, I appreciate the opportunity and I do
377 understand that DOT is doing their job and I get that and I certainly appreciate that. However
378 again, you do have the opportunity to do some improvement and do it today. So, for all of you
379 guys that are directly or indirectly, I hope you support what I say. Thank you.

380
381 (Moderator) Thank you Ms. Walton. Ms. Walton if you could stay around, I'd like to talk with
382 you afterwards.

383
384 (Bill Harris) I'm Bill Harris, Commissioner from the Town of Fuquay-Varina. I'd like to go on
385 record in representation of our governing board that we full support the project. And
386 acknowledge the preferred corridor and support that. There are three things that have really
387 have impressed us. And that is the opportunity for our board to widely plan for the future, to
388 manage the traffic congestion, as well as to match the growth of the future. We strongly
389 support the project because its very important to Fuquay-Varina from the standpoint it would
390 help us to relieve traffic congestion, it will open up commercial development, it will increase
391 mobility for our citizens who work in various parts of the region, as well as we have already
392 incorporated and planned in our land-use plan future development based on the approval of
393 this project. Thank you very much.

394

395 (Moderator) Thank you sir. Next, we have Mayor Ronnie Williams and on deck we have David
396 Shouse.

397
398 (Ronnie Williams) That's a long walk. I bring you greetings from the Town of Garner (Greetings)
399 The thing that I wanted to say, comment on, you have done a good job moderating today, you
400 got everything covered. But last time there was a meeting here three years ago I was on this
401 side of the fence. Like I said you covered everything, so I'm not going take up nobody's time. I
402 will say I factored in the number of people, that's a long meeting. Anyway, Town of Garner is
403 supportive of the road. Keep up the good work, God bless you.

404
405 (Moderator) Thank you Ronnie. Mr. Shouse, next on deck will be Hayes Finley

406
407 (David Shouse) Thank you, my name is David Shouse. I live at 1203 Haddington Drive, Cary.
408 Even though I have been a property owner in Apex for 17 years and Cary for almost that many
409 years. I have been in Wake County for almost all of the last 45 years. Originally from Winston-
410 Salem. But a lot of my interest in this project is shaped from the influence that I had learning to
411 hunt and fish and lessons of life on my grandparent's property off Old Stage Road. Before I go
412 any further, I would like to thank the professional staff at NCDOT for the opportunity for this
413 public hearing, the graphics has been clear and the explanations have been fully engaging.
414 Having said that it's clear from the amount of resources put forward in this public hearing, that
415 the assumption is toll road is a done deal. In fact, even the name of the project, Complete 540
416 assumes it is a done deal. You may not be aware but there are a number of other alternatives
417 out there, many local road improvement projects, intersections improvement projects that are
418 on the books and in planning. You heard a reference to one in one the subdivision earlier from
419 one of the speakers. Next week for instance, there's a public meeting on road improvements to
420 Hwy Ten-Ten coming out of Apex, excuse me, yes, Apex. I think that we should all be
421 considering the full menu of road improvements that might allow for a more detailed road
422 consideration including mass transit. This would provide more detailed local scale for future
423 generations. Let's think beyond our property and ourselves right now. Let's think about our
424 children and development decades down the road. Having grown-up in the western part of
425 Wake County the last 45, nearly 45 years, I can tell you from seeing 540 and Wade Avenue that
426 if you build it they will come. If you think a road that you pay to drive on is going to solve traffic
427 problems for future generations, I have some neighbors in Morrisville and Western Cary that
428 you need to talk to. I would like to request that we all ask professional staff of NCDOT to
429 explore and publicize all the alternatives available and bring these alternatives forward in a
430 public forum in the context of full regional long-term benefits. Please let's pump the brakes on
431 Complete 540.

432
433 (Moderator) Following Ms. Finley is we'll have Lynn Patton.

434
435 (Hayes Finley) My name is Hayes Finley with the law firm of Smith, Moore, Leatherwood at 434
436 Fayetteville Street, Raleigh, North Carolina. I'm here tonight in behalf of Edge of Auburn, which
437 is an LLC who owns approximately 400 acres at intersection of Rock Quarry and Old Baucom
438 Road. As currently, they currently have design development plans for this 400 acres. And as

439 currently designed this road will completely dissect, bisect the property. Rendering
440 approximately 100 acres of the development plans totally useless. So, Edge of Auburn does not
441 oppose the project in it's entirety but just request that the design plans be moved as much as
442 possible to avoid completely bisecting this parcel. Further this angle here makes this whole
443 parcel completely undevelopable. And, also, likes to know that the cost estimates for this
444 portion of the project vastly underestimates how much the relocation costs will be with
445 development plans have been implemented. Thank you.

446

447 (Moderator) Thank you. Next, Lynn Patton, following Mrs. Patton we will have Clay Warf.

448

449 (Lynn Patton) Hi, I'm Lynn Patton and I'm here really to talk about the cost. (Would you please
450 state your name and address). Lynn Patton, 8817 Juaquin Lane, very close to here. And I'm
451 here to talk about the cost of this project. I want to reiterate what the gentleman said a few
452 minutes ago about alternative projects that are in the works for widening existing roads that
453 would only cost 10 times less than this \$2.2 billion project. I think we need to think about our
454 budgets, it might be reimbursed by tolls but that could be, well I certainly won't be around for
455 it. But also, the tolls again, as one gentleman said, will have a really bad effect on a lot of
456 people that might have to go on that toll road day in and day out. So, I think we need to money
457 and people impacted.

458

459 (Moderator) Thank you. Following Mr. Warf, did I say that right? Okay, Mike Burriss.

460

461 (Clay Warf) My name is Clayton Warf, and I live at 3105 Floresta Drive at Apex. Let me preface
462 my remarks by saying I haven't been concerned about the road coming right behind my house.
463 Now, it's certainly a liability, because nobody knows what is going look like or how it's really
464 going to impact us. I think eventually it will be an asset because it will give some direct route
465 into the Research Triangle. But my concern is this, I came home several weeks ago, and I had
466 blue tapes in my yard. In fact, I drove in and I saw one right on the side, about two feet from
467 my driveway and I thought it was well it's trash there, so I went to pick it up, but no it was
468 survey tape and it was nailed down. And on the back of my yard there was another one and it
469 was nailed down. My wife called and asked about it and she was told that someone would get
470 in touch her, which they never did. So, communication is an issue. Also, I came home recently
471 and I had survey stakes all in my back yard. I mean, 50-75 feet up into my yard. I had no idea
472 what they were about. I ran it down and found out that was from Columbia Pipeline and
473 because the pipeline runs behind my house. And they told me that NCDOT was going to require
474 them to move that pipeline for the highway. They weren't sure whether it would be in my yard
475 or not. But they were surveying in my yard and that as I looked at the map that's a very real
476 possibility for us. Well if you are going to take half of my back yard to run the pipeline, that's
477 going to devalue my house considerably. I mean I know that you will pay for the right-of-way
478 and I get that. But how can I determine how much it is going to devalue the value of my house.
479 And I have a considerable investment there, my biggest investment, in that house. So, my
480 preference is, if the pipeline is going to have to be moved into my yard, give me fair value for
481 my house, do what you are going to do and sell it to somebody else after you are done with it.
482 Thank you.

483

484 (Moderator) Thank you sir. Following Mr. Burriss, we'll have Mayor Dick Sears

485

486 (Mike Burriss) Good evening, my name is Mike Burriss, I live at 2005 Bull Run Drive just north of
487 here off Blaney Franks and Ten-Ten Road. I've been in the Raleigh area since 1977, grew up in
488 Charlotte. Saw the impacts there and saw the impact that is happening here. One of the things
489 that I like about change is that, if you plan for it long enough in advance, you can make plans
490 yourself for that. We've know about this road and its route for a long time. The individual
491 impacts are obviously personal to your situation that you have and have to be respected. I
492 applaud the DOT for their efforts in trying to be public and moving forward with this project. I
493 applaud mayors and everyone else that supporting this project moving forward. The cost of
494 construction and the cost of building substitute roads for any other type of development is only
495 going to continue to increase. And I appreciate a toll road being able to help pay for some of
496 that, so our state and local taxes don't have to go be more than they have to. I'm in favor of the
497 road moving ahead, I'm in favor celebrating the project because I think through all the long
498 range regional planning that has taken place on this, it's something we all expected. And
499 something we all need to have. And something we need to move forward with all continued
500 growth and growth for our children. So, I support the road. Thank you.

501

502 (Moderator) Thank you sir. Following Mayor Sears will have Thomas Brown.

503

504 (Dick Sears) Why is the microphone so high all the time? I'm Dick Sears, Mayor of Holly Springs,
505 I live at 413 Sky Grove Drive, Holly Springs. I bring a little different perspective than many of
506 you. I have heard the concerns and I'll share those, but I would say at the same time let me tell
507 you what happened to Holly Springs and we have a toll road, we have a toll road on one side.
508 First of all, it took me an hour and a half, I was going through all this but I'm not, took me an
509 hour and a half to get to the airport, typical. It's on 540 or 40, I mean highway 40, now that our
510 toll road goes right down to 55. Is the sheriff here? I have actual made the toll road from my
511 house in less than 30 minutes. Now it was early morning, but I love the toll road. I love from the
512 stand point that I don't mind paying for it. For those who originally and we took a lot of heat in
513 the beginning, before this ever happened. We don't want a toll road, we don't want to have to
514 pay for it. And I always said you have an alternative that its call Highway 55. Some of the other
515 advantages for the town, for the town population is we can get places faster than we ever did
516 before, we like that. It goes right up to RTP, it goes, as I said, to the airport and there has been
517 significant commercial and economic development in Holly Springs because we have this toll
518 road on the side. So, it's not all black and white, I know there's issues that have to be resolved,
519 I'm totally aware of that, I understand we've talked even earlier, didn't we, about some of the
520 things that were a problem, some of our friends. But at the same time, it's a good project. We
521 support it. I think those who have questions I hope they get answered and I hope you answer,
522 but at the same time I think once this toll road which I do support, we do support, is done I
523 think you'll see the value of having that option for you, in your back yard and that's pretty much
524 my story and I'm sticking with it. Thank you.

525

526 (Moderator) Thank you Mayor Sears. Following Thomas Brown, we have Mr. Jeff Smith,

527

528 (Thomas Brown) It's okay for me, Mayor Sears. My name is Thomas Brown, I live in South Lake
529 Subdivision which in section R-2721. It's basically between Holly Springs Road and West Lake
530 Road. Our house is about 150 feet from the roadway. I basically have one request, and that is
531 that the neighborhood in which we live is going to be affected very much by the noise. It's a
532 very quiet neighborhood, it's at least one mile from any major roadway, Ten-Ten Road, Holly
533 Springs Road, Optimist Farm Road, and so forth, fully residential. I read the NCDOT traffic noise
534 policy, they define an impacted receptor as somebody who's going to be, whose noise level will
535 be impacted greater than 10 decibels by traffic noise after such a project. And if a barrier wall is
536 built that could hopefully reduce, as the gentleman from NCDOT mentioned reduced by 5
537 decibels or more. I would ask respectfully that such a wall is built to preserve the quality of life
538 in these neighborhoods. But I also have a secondary concern, and that is of safety. I am also a
539 Captain of the Fairview Fire Department, I've been there for 14 years, during that time in this
540 whole response area of ours, we responded to number major impacts from the deer
541 populations, striking cars. We are talking about roadways that are 35, at most 45 mph it's not a
542 pretty thing when a deer flies through your windshield. They are very active and abundant in
543 this area. It's not something you would see during the day during the survey. NC 540 at I don't
544 know what the speed limit is, 65 mph let's say, will certainly amplify such damage. A barrier
545 wall would also serve to limit wildlife traffic across that roadway from very animal populated
546 areas. So, it is something, I would encourage construction of a sound barrier wall, at minimum
547 at least fence that is high enough to prevent wildlife from crossing. Thank you for your
548 consideration and for during a great job in trying to listen to public comment on this matter.

549

550 (Moderator) Thank you sir. Mr. Jeff Smith. Okay. Next, we have, are you Mr. Smith? Okay.

551

552 (Jeff Smith) I'm Jeff Smith, I live at 5547 Umstead Park which in the northwest corridor. So I'm
553 not directly affected by this project, however I am concerned, which I'm mainly concerned
554 about the wetlands, in that if DOT insists on building this road, which I would prefer that they
555 not even build this road, especially if they don't have the money, in which they are going to
556 charge a toll on it. And we already have a part 540, the northern part, that don't even have to
557 pay a toll on. And the City of Charlotte, where I grew up, has 485 which is completed. And it's
558 not a toll road at all. So why can't Raleigh get a road that doesn't have toll fares in a City of
559 Charlotte, which is the largest city in the state, has an outer loop and doesn't even have tolls on
560 it. But getting back to the environment, I've been interested in environment all my life. And I
561 definitely don't want our wetlands to be drained. Which I read an article concerning the mussel
562 but the North Carolina DOT is considering by breeding at this laboratory with NC State has,
563 which I think it's a good idea but at the same time I think our wetlands should remain intact.
564 Cause they control flooding and reduce pollution and so if this highway going if DOT insists on
565 building this highway I would suggest that a high bridge be built. A bridge similar to bridge on
566 540 where it crosses the Glenwood Avenue, which I live close to. And like a bridge such as the
567 Herbert Bonner bridge which goes right through Albemarle sound or Pamlico Sound whichever,
568 so if DOT could build a high bridge and not drain our wetlands that would that would definitely
569 be a positive thing for climate and the environment. And also, people not having to worry about
570 flooding when we get heavy rains, as well as pollution and I thank the DOT for giving me and us

571 an opportunity to make these comments. And I'll make more comments in writing. Okay,
572 Thank you.

573
574 (Moderator) Thank you sir. Next, we have Joe Micazzo, but while he's coming up one thing I
575 forgot to mention in the presentation. When I talked about that post-hearing meeting where
576 we are going to convene to discuss all the comments that have been received. Minutes of that
577 meeting will be prepared and made available to the public. So, when you send in your
578 comments or you contact us let us know if you desire a copy of those and how so. If you want
579 us to email them or mail them to you. I will try to get them up on the web as well, so you can
580 see the responses to the questions and the input that we received through the comment
581 period. Alright.

582
583 (Joe Micazzo) Joe Micazzo, Executive Director of the Regional Transportation Alliance, which is
584 the voice of the regional business community on transportation, we are located in Raleigh. My
585 address is 307 Tibetts Rock Drive in Cary. I want to thank DOT and the Turnpike Authority for
586 all the work they have done on this project and to continue to move the project forward. A few
587 thoughts on it, number one, 540 connecting to I-40 in Wake County, continues to be regional
588 business top priority for transportation for a number of reasons. One thing is in terms of
589 emergency, you have already heard from some of the mayors and the county commissioner
590 and the town counselors as well. Towns have been planning for this road for many years. They
591 have been planning for its land-use. We will have, the growth is coming, the growth is already
592 here - we already know that. One of the concerns is that if we build the roads will come, that's
593 a reasonable concern. The challenge is, if we don't build this road it's going to come anyway
594 and then we are going to have utter chaos. So, we do need to have resources in place so we
595 know things can work. 540 will create an effective high-speed conduit from the southern part of
596 the county, we also heard from folks in Johnston County as well. Folks from Eastern North
597 Carolina they are looking at this and trying to access jobs and employment throughout the area
598 and this is a way for them to do that. A road like 540, which is a freeway which means it's free
599 of stoplights. That allows you to go through it, that's the reason why you heard from Mayor
600 Sears earlier, why travel times is so much better and it's been that way, 540 has been open for
601 over 5 years now. To just outside of Cary and that's worked very, very nicely too. You can
602 widen existing roads and we probably needs to do some of that, but no matter how many lanes
603 you widen the road there is still stop lights on it. Stop light goes red you are going zero miles
604 per hour at that point. And so, even if Ten-Ten Road were widened to 12 lanes you are still
605 going from zero at the stoplight. 540 is going to go forward that will allow you to save your
606 time all the way through it. Again, I want to thank the mayors and thank the community for
607 coming together on this. And we want to keep 540 moving forward so let's Accelerate 540.

608
609 (Moderator) Thank you, Joe. Next, we have Sarah Gaskill followed by Denise Nowell. I don't
610 know if I said that correctly.

611
612 (Sarah Gaskill) Good evening, my name is Sarah Gaskill and I serve as the president of the
613 Morrisville Chamber of Commerce, located at 260 Town Hall Drive in Morrisville, North
614 Carolina. Founded in 1990 the Morrisville Chamber of Commerce is a membership-based

615 organization that is active force in bringing new business and development into Morrisville.
616 Our mission is to promote business, enhance economic and community development while
617 serving as a champion for improving the overall quality of life in the region. I'm here this
618 evening to encourage our community leaders to support the acceleration of I-540 also known
619 as NC 540. Morrisville's geographic location at the heart of the Research Triangle, it's
620 business-friendly climate and enviable work force that not only attracts fortune 500 businesses
621 and technology, healthcare and pharmaceuticals and provides ample support for start-ups in a
622 range of industries. Located in Wake County, Morrisville is one of the fastest growing areas in
623 region. As a community we have seen unprecedented population growth - over 232% since
624 2000. As this growth continues, infrastructure to support our region will need to grow as well.
625 The regional business community has been a proponent of enhancement ability for many years
626 and the Morrisville Chamber has supported Complete 540 and Accelerate 540 efforts numerous
627 times over the years through ~~for~~ resolutions and speaking opportunities such as this. The
628 reason for this support includes the following: more travel options both now and as we
629 continue to grow. Competitive advantage in attracting and retaining talent, alternative routes
630 in a means to avoid congestion and access to jobs, healthcare, education and social and cultural
631 events. Morrisville supports the acceleration of 540 as does the regional business community.
632 Our region is growing, and we need alternative and enhanced route options around the
633 Triangle area. Lastly thank you to our businesses, Wake County and North Carolina leadership
634 for the bipartisan process that has led to the advancement of this important network that will
635 serve now and as we continue to grow.

636

637 (Moderator) Thank you. Following Ms. Nowell, we have Bruce Sargent, Cornwallis Drive, RTP

638

639 (Denise Nowell) Good evening my name is Denise Nowell. I serve the Zebulon community as
640 the Zebulon Chamber of Commerce and we are in partnership with the town for economic
641 development. We're located at 815 N. Arendell Avenue in Zebulon. Thank you to NCDOT and
642 Turnpike Authority for the work you are doing for accelerating 540. We continue to see robust
643 growth for this region and Accelerate 540 will just continue to support that growth. While
644 improving travel and free flow mobility for both Wake and Johnson County will directly impact
645 the Zebulon community. It will also impact industries like GSK, Nomaco, US Foods and North
646 Carolina Mudcats, just to name a few. I want to echo the comments from Mr. Leach earlier and
647 the gentleman from Johnson County Economic Development. I think there are a lot of folks in
648 your region that travel to our area. So, I just feel like it's important for us to know that as our
649 region grows, we want that connectivity, we want to be able to stay connected to each other
650 and make it easier for people to get around. I also want to thank my fellow colleagues who
651 have shared their support tonight. We do support the efforts for improving transportation for
652 all of our communities because of the ways that improves economic development. We believe
653 that we are wanting to say we support Accelerate 540 and we appreciate the opportunity to
654 move forward.

655

656 (Moderator) Thank you. Following Mr. Sargent, we'll have Will Letchworth

657

658 (Bruce Sargent) Good evening, Bruce Sargent, I am the current Chair of Regional Transportation
659 Alliance of 2018. We want to, first of all, to thank the DOT for accelerating 540. We wanted to
660 make sure people understand that this an important project for increasing mobility within our
661 region. As everyone knows use the term War for Talent. The War for Talent can only be met
662 when we have the mobility that can work for supporting the region and this must be done in
663 order to be able to make sure we stay as vibrant and as critical as we are to the success of
664 North Carolina and the United States. And I want to thank DOT for accelerating. Appreciate it.

665
666 (Moderator) Thank you. Following Mr. Letchworth, we have Steve Brechbiel.

667
668 (Will Letchworth) My name is Will Letchworth, I'm a resident of Johnston County. And I would
669 first of all, like to thank the NCDOT for holding this forum tonight. And to Turnpike Authority
670 and for all various very, very hard work in accelerating 540. As a resident of Johnston County, I
671 really believe it is impossible to overstate the importance of this project to the economic vitality
672 and the mobility of Johnston County and the eastern North Carolina. And as a member of
673 Regional Transportation Alliance, I just want to say it has been amazing to see the local business
674 community come together and unanimously support this project and to really make this the
675 regional business community's highest transportation priority in the region again thank you for
676 all your hard work, we appreciate it.

677
678 (Moderator) Thank you. Following Mr. Brechbiel, we'll have Anne Runyon,

679
680 (Steve Brechbiel) Good evening my name's Steve Brechbiel, I'm the past chair for the Regional
681 Transportation Alliance and I also want to thank DOT and the Turnpike Authority for
682 accelerating this project. This is an important project, it's something that has been literally in
683 development for decades and it really has come time that we need to move forward. The one
684 thing that's really important I think that I've seen in other projects and we've seen because we
685 look at these different projects is that even people that don't use these roads, benefit because
686 it takes traffic off other roads and it also gives them a chance to expand as well. So, there is,
687 what this represents is a regional solution to a regional issue, which is how do we meet the
688 continued demand for growth. And it's true, more and more people want to live here and work
689 here. And by working together with this regional solution, we feel we can move forward and
690 that this is going to provide the vital connection we need all the way to Johnston, into Wake
691 and the surrounding areas. So, thank you very much and we hope this continues.

692
693 (Moderator) Thank you sir. Ms. Anne Runyon and finally following her is Ramona McGee.

694
695 (Anne Runyon) Thank you, I sort of short, so if you can't hear me. Maybe I can get this go
696 down, can you hear better (step a little closer) My name is Anne Runyon and I'm a natural
697 science illustrator and a longtime resident of Wake County. I'm a little shy, so I'm going to read
698 my letter to you. I have completed many illustrations used throughout North Carolina in our
699 county and state parks. In museum exhibits and in publications like Our Life North Carolina
700 magazine. Through this work, I've learned how important it is to protect the integrity of natural
701 resources especially our streams. I appreciate your work to complete 540. The planning for

702 mussel propagation as a mitigation effort, may prove very useful. As we continue to build
703 structures where we will damage streams throughout North Carolina, but we do not need to
704 add this 6-lane toll road 540 to improve transportation here in southern Wake County. We
705 should stop, reconsider, and study the access to 20/40 plan improving the roads that we
706 already have in place, with some new connections added. Seems a much better plan than
707 building this 540-outer loop. I also want to see better mass transportation developed for our
708 region - that is extremely important. I appreciate the work you do to maintain and improve our
709 roads, bridges, ferries here in North Carolina. Please seriously consider the access to 20/40
710 plan, find the time and the courage to make wise decisions for our present and our future
711 transportation needs. Respectfully Ann Runyon.

712

713 (Moderator) Thank you Ms. Runyon. Next is Ramona McGee.

714

715 (Ramona McGee) My name is Ramona McGee. I am an attorney for the Southern
716 Environmental Law Center. Our address is 601 W. Rosemary Street in Chapel Hill. Tonight, I
717 offer these comments on behalf of SELC, as well our clients, Sound Rivers and Cleaner Carolina.
718 We urge NCDOT to take a time out, to re-analyze the need for this project. And to more
719 thoroughly review the severe impacts to the humans and to the environment. We also ask
720 NCDOT to seriously consider cheaper, better solutions. Like the access 20/40 plan that Anne
721 just mentioned. The unproven, unlikely benefits of this proposed toll road do not outweigh the
722 financial \$2.3 billion costs for the environment costs of this project. With the advent of
723 autonomous vehicles, ride sharing and even delivery drones, we're on the edge of
724 transportation revolution. Advances in technology are going to radically change. Commuter
725 behavior, transportation, traffic patterns get congested right here in the Triangle. And yet,
726 NCDOT did not study this. NCDOT did not look to the future, that's right around the corner.
727 NCDOT also did not consider the Wake County Transit Plan that was just passed a couple years
728 ago. In the consequent mass transit expansion that will be happening in future years. Similarly,
729 as we have already alluded to, NCDOT did not seriously consider an alternative that would rely
730 on upgrading existing roads. But we did, we commissioned an expert transportation planner to
731 take a look at how we could rely on upgrading existing roads and other innovative
732 transportation improvements, to address the transportation needs of southern Wake County.
733 In the face of all of these unstudied, unproven benefits, there are myriad of environmental
734 impacts. Anne and others have spoken to this tonight. In particular, water quality would be
735 severely impacted from increased roadway runoff. There would be devastated wetlands, clear
736 cut forests, air quality impacts that again remain unstudied by NCDOT. But we know that the
737 road will be located right near schools, daycare centers and other community resources. Areas
738 with sensitive populations to changes in air quality. Because of the unproven benefits and the
739 undemonstrated ability to supposedly meet the needs of this project, we are again urging
740 NCDOT to take a time out to reconsider this. To reevaluate the best way to spend \$2.3 billion
741 dollars of tax payer money. Just because this was put on the map in 1968 does mean it is a
742 good idea for the future of North Carolina. Thank you.

743

744 (Moderator) Thank you Ms. McGee. That concludes those that signed up to speak. At this point
745 I'll open it up to anyone that would like to speak. Again, remember come up state your name
746 and address. Keep in mind all comments carry the same weight.

747
748 (Dena Rutherford) My name is Dena Rutherford, I live at 2801 Gilchrist Lane right off Grove
749 Road and Ten-Ten. All I've seen is business in here telling us what they want. [applause] I want
750 to know what we want. No one has asked us, they just assumed that we are just going to go
751 along with this. I have not seen one citizen come up that wasn't a business except for four
752 people. What is wrong with that? There is people that live here. (Moderator: Ma'am they have
753 the opportunity to come and speak) All of these cards every single person up here was a
754 business. Almost every single person, I don't get that. There's people that live in this
755 neighborhood. They should have a say. (Moderator: They do have a say ma'am) You only have
756 21 cards. (Moderator: Ma'am I can't make people speak. But again, people can send in
757 comments via email or via comment form) It's rigged, it's always been rigged.

758
759 (Moderator) Thank you ma'am for your comments.

760
761 My name Courtney Bargo I live at 8231 Bells Lake Road. I'm just little bit south where the
762 interchange is going to be on our road. Unlike many who have spoken, and I've only been in
763 Wake County since 2010 only been around since 1992, so sorry for that. But I think that the
764 noise considerations, there's something that are not really being taken into account. There's an
765 issue with, firstly, they are saying 10 decibels are the threshold. Decibels are not linear when
766 they go up, it's a logarithmic scale, which means for every 3 decibel you are doubling how loud
767 it sounds. Which means by the time you get to 10 decibels of change you have tripled what it
768 sounds like standing out in your yard. So, I think NCDOT needs to consider more closely and
769 have a lower threshold for noise abatement for people. There have been a lot of great
770 comments from people about other plans and other ways to solve transportation issues. Like I
771 said I live on Bells Lake, I work off Wake Forest Road, so every single morning and every single
772 evening I have that 440 cluster. I was actually in an accident last month because someone
773 wasn't paying attention on 440 and they ran into the back of me - totaled my car. So, I know
774 that we have transportation problems. I think some of the other proposals are really great and
775 I think we should continue to look at upgrading existing infrastructures, but the issue is, you can
776 only do so much upgrading and if we are only barely keeping up, we're not ever excelling.
777 When I was in high school, they built a new high school for what they thought we needed then,
778 by the time it was finished, and we moved into it, we had already out-grown it. If we don't look
779 at 540 as well as these other updates and in addition to some of the mass transportation and
780 public transportation upgrades that we need, I don't think we are going to keep up with the
781 incredible rate growth that we have. I have friends in Morrisville and friends in Wendell takes
782 me 40 minutes to get to either of those places. With 540, that won't be a thing anymore. I
783 don't necessarily think there needs to be a toll I agree that Charlotte has been able to have 485
784 and they don't have a toll. I think if we don't continue to look at not only 540 and the other
785 options, we are going to be like Atlanta. Now, raise your hand if you want to be like Atlanta
786 because I don't think anybody wants to be like Atlanta because if you did you'd live there.
787 Thank you, guys, tonight for your time.

788 1:36:22

789 (Jerry Morton) Jerry Morton I live 5423 Brushy Meadows Drive at Crooked Creek Subdivision on
790 Hilltop Needmore. I represent a group called North Carolina Citizens Against Toll Roads, we are
791 against toll roads for 4 years. Here are some hard facts, the 26 miles toll roads 540 has lost
792 more than \$65 million so far. More than \$153 million has been extorted by DOT on that toll
793 road that should have gone in to local businesses. Apex, Cary, Holly Springs and Fuquay-Varina
794 have lost more than \$27 million of business revenue in local community because of that toll
795 road. The toll road does not pay for itself. You heard about 85% of the speakers tonight will tell
796 you great the toll road is, it is a financial loser and has never paid for itself. And if you look at
797 the Turnpike Authority reports you can read it for yourself. They have to transfer in more than
798 \$100 million a year to balance the book for the toll road. Another thing you need to know,
799 Quick-Pass office, where you pay the toll road bill, have 35 people a year and half ago. Today
800 they have 80 and there is no more toll roads. Why do we need 55 more people when there
801 aren't any more toll roads? So, we have a division within DOT that is not even making its way,
802 it's costing more money. So, the toll road is a huge financial loser. Local business should all be
803 against it. The mayors and Chamber of Commerce should be ashamed of themselves for taking
804 money out of the local businesses. And when they say they are in favor of the road, they are
805 incorrect, the road goes east/west anybody that commutes to downtown Raleigh in the
806 morning on Old Stage Road from Lake Wheeler or Holly Springs know it's backed up 11.4 miles
807 every day bumper to bumper, going to work and coming back home from work. And the 4-lane
808 road alternative is the correct answer. Ramona McGee, Southern Environmental Law Center,
809 the alternative plan is the correct answer. And if you want to see a real mess, go watch I-77 in
810 Charlotte. They have had wrecks every day, the people are against it, NCDOT now is even
811 changing times for public meetings without telling the people. They did it last week and they
812 did this week again. And they are dishonest with the public like they are with you. There is an
813 alternative, it's alternative 540 by Southern Environment Law Firm. So, just let me give you a
814 couple that are never talked about. Budgets we pay for that are never talked about are
815 personal service, advertising, utilities, subscription fees, other services, capital outlay, rental
816 expenses, depreciation and stuff that you pay for with highway trust fund money. That should
817 go to building roads and not to profits of Quick-Pass. The Turnpike Authority gets \$49 million a
818 year and in 16 years with \$800 million they built 26 miles of road. You should all be fired it's a
819 disgrace and insult to the taxpayers of the county. [Applause]

820

821 (Moderator) Thank you sir for your comments. Next.

822 1:39:43 (01:41:15)

823 I'm Judith [inaudible], I live 8505 Pedal Road, which has 4 houses on the right, north of Wake
824 Tech. Terrible traffic, congestion at Ten-Ten and 401. The main thing I want to know and am
825 concerned about, I would like to know why I got a letter that I had to sign for it. Saying that
826 someone would be up to talk to me within that week or the next week and that was last year,
827 middle. I haven't seen anybody yet. I would like to know if I am sitting on this electric fence if I
828 can fall right or left where I'm going to go. If we are still going to have a home. Don't wait until
829 the last minute to tell me I have to get out I would like to know. I don't like this living in limbo.
830 (Right) The traffic is terrible, something needs to be done. Whatever, I just want to know what's
831 going to happen to me (Okay) and why I had to sign for that letter and I haven't seen anybody.

832 (Moderator: Was the letter from the State) It was most certainly was, Department of
833 Transportation. (Moderator: Well is Kathy still here? Okay, are you going to stay around for a
834 few) Yes, if I'll get an answer (Moderator: We'll talk with you we need to find out where that
835 letter came from) Thank you.

836

837 (Moderator) Sir.

838

839 My name is Joseph Hayes, I live at 116 Traders Lane in Garner. I want to start by saying I know
840 good roads or lack of it. If anyone has ever tried to get on Route 50 at 7oclock in the morning
841 you know it takes you about an hour to go just about 4 miles. If we think we can use alternative
842 roads to get around south Wake County, that ship has already sailed, those days are over. It's
843 not, we have already painted ourselves into a corner, on this we have no choice at this point, I
844 think that's kind of a poor way of making decisions. But at this point, we have no choice. If you
845 think we are going to be able to upgrade all those roads in the next two or three years, that's
846 not going to happen. We are going to be stuck with what we got, unless we go forward with the
847 plan of 540. I also see all these Accelerate 540 and everyone patting themselves on the back in
848 terms of we are going to get this done. Why are we still talking about this? We haven't laid a
849 square inch of pavement in 5 years, when 540 got finished to Apex, I thought great this will be
850 coming soon. Sooner or later we will be able to catch this pipe dream of finally getting around
851 Wake County. But we don't, we are still talking about this. Let's stop talking about this and start
852 putting pavement on the ground. That's all my comments.

853

854 (Moderator) Thank you sir. Alright.

855

856 I'm Nancy Ferrell-Unwin and I live at 4705 Linaria Lane in Fuquay. And I'm opposed to the 540
857 project. I was excited recently to find out about the plan access 20/40. It's a much better
858 solution for many reasons. I don't know if that has been communicated a lot, but I hadn't really
859 heard about it until recently and I was very excited. It's better at relieving congestion at a
860 fraction of the cost. And also access 20/40 will be free to everyone, in contrast to the tolls. And
861 one thing that has always bugged me is, okay, if I go toward Durham and use 540, I pay a toll.
862 And the other way, if you're going to do 540 and I'm going to go toward Raleigh, I'm going to
863 pay a toll. The north pays no tolls, I've always thought that's fair, someone needs to explain to
864 me how that's fair, I don't think that is. And so, I would like you to please look at all the
865 alternatives and please consider the access 20/40 for many reasons. Thank you.

866

867 (Moderator) Thank you ma'am.

868

869 I wasn't going to say anything, but I guess I'll close it out. My name is Ralph Strickland. I live on
870 8109 Bells Lake Road for the last 40 years. I only have two comments. One, I'm really
871 disappointed in DOT, I came to the meeting a couple years ago, I asked what the impact would
872 be on my property. I've talked to every surveyor that has gone down my street. Tonight's the
873 first time that I saw that I'm going to lose my house. Nobody from DOT has called me, there's
874 been no letters, there's been nothing on tape on Bell's Lake Road that show other than when it
875 crosses Bells Lake Road, but not impact to the side of the roads or how the loops are going to

876 work. And I think ashamed, I'm a retired City employee and I can't believe that the State of
877 North Carolina couldn't take 5 minutes to come by my house and tell me personally that they
878 are going to do this. Until I get here tonight, and I've been to every meeting that you all have
879 had. And the other I'll say about DOT which I think is disappointing, is east and west, I was in
880 favor of the toll road, I'm not against it as far as the road itself, I'm not thrilled about the toll
881 because there's not a toll in north Raleigh. I think the biggest thing is, I went to Wake Tech in
882 1971, it's the same 401, it's the same Ten-Ten, every road is the same, except when you go
883 Kildaire Farm Road and you get near the municipalities. DOT has done a horrible job in
884 southeast Raleigh or southwest Wake County. With Ten-Ten and 401 you go to Fuquay or
885 anyway around here. This will solve the problem of moving traffic from 40 around Raleigh
886 south. It will not address anything on 401, 50, Old Stage, anything going into Raleigh. North and
887 south, that's the only problem with this and you will create the same bottleneck, you all
888 created when you dumped I-40 on College and Wilmington. You are going to make the same
889 mistake and you are going to cause all these subdivisions that come in around here to hit that
890 road but there's not going to be any traffic north and south. You are not solving any of the
891 problems around Fuquay. You're not solving any of the problems on 401 and you're not doing
892 the service to citizens of North Carolina. And you are really doing a horrible job on public
893 information when I know these people on my road, none of them have been told they are
894 facing moving. Which I can figure out right now I have about a year left and nobody comes by
895 and tells me? (Moderator: Sir) A horrible thing for the State of North Carolina horrible and I was
896 in the City of Raleigh for 31 years dealing with police stuff and we went out of our way to
897 communicate with people. This is the sorriest thing I've ever seen (Moderator: Sir this is part of
898 the process, we have the design team tonight so that you are aware. This is part of the process,
899 the previous public hearing, I'll give some more seconds) My point of it is, I live at 8109 Bells
900 Lake Road, I've talked with every surveyor that has come down my property. They have never
901 one time told me how it's going to be widened on Bells Lake Road. I got it in my hand right now
902 where it's at the front door of my house. Nobody bothered to tell me, nothing, absolutely zero,
903 and it effected a lot of people on my road. My argument was, why you couldn't go across the
904 street where there's three vacant lots across the street from me. Use them 3 vacant lots
905 instead you are going to impact me. You could take 1 house across the street instead of 3, 5, 6
906 houses on my side. I understand you went down the street it's an engineering thing. I'm not
907 against roads, I'm 100% in favor of growth. But DOT has done a horrible job. You know this is a
908 done deal. I've been in the city government for 30 some years. I know it's a done deal. I know
909 this is over with. I know that all the politicians are in favor, I was in favor of it. I'm just upset
910 that nobody come out and told the truth. That's the bottom line.

911 (Moderator: Sir, that's what I'm trying to say, that's why we are here, we are presenting the
912 primary design, this is not the final design) I know enough engineering to know that you aren't
913 going to move hardly anything here. You're going to tie it up in a red bow and we are going to
914 be done. My argument is I think it's a real shame that I've been to every meeting. I've been on
915 your websites and nobody has come to me until I get one piece of paper from over here that
916 says the right-of-way is through my front and my house is gone. And I think that's a horrible,
917 horrible way to do business (Moderator: Sir this is the first time we are presenting the
918 preliminary design) As contracts go, this year, in the summer, (Moderator: That's correct, we
919 are just presenting the design tonight, that's why we are here, to get your feedback on the

920 preliminary design of the project) I know it well enough that you aren't going to move anything
921 (Moderator: Sir, I'm not arguing with you, if you want to speak sir, you have to come up to the
922 mic.) I'm not arguing with you, I'm saying I have been in the same house for 40 years, I've been
923 to every one of your meetings and nobody bothered to tell me that you are going to take my
924 house. I think that's a horrible insult, I turned down talking to lawyers, I turned down
925 everything because I worked for the City of Raleigh for 31 years, I've always supported local
926 government. I understand about all this stuff all the communities wanting the money and stuff,
927 but I think it's a horrible way for DOT to do their business and that's just the way I feel about it.

928

929 (Moderator)Sir if you could stay around I would like to talk with you about it, if you could just
930 stay. Sir will you stay around for a second? (Sure)

931

932 My name is John Hodge I live in Garner 1101 Golden Grain Road off of Benson. And I would just
933 like to comment on the assumption I think that the project will be awarded as a design-build
934 format. I think there should be more explanation, justification. Sometime with design build you
935 put your eggs in one basket instead of going out and bid for designer or engineer for the best
936 price and also a separate construction manager at the best price working off the design and
937 making sure everybody is behind it. I just don't think you should just consider that and make
938 sure that is the best approach. The other thing is, it was mentioned of the Right-of-Way
939 acquisition after the design-build firm is selected, is that the Right-of-Way process would be
940 managed by the design-build firm. I'm not sure if that's correct or if I misunderstood that, but if
941 that's correct, I'm concerned, I think any of the Right-of-Way acquisition should be managed
942 through the DOT not by the firm that is awarded the construction contract (Moderator: It is
943 managed by DOT) It is? Then why was it mentioned (Moderator: They will have a team of Right-
944 of-Way agents, but ultimately DOT has to review all those offers and appraisals) I think we need
945 more clarity, it doesn't sound right and it really should be something. Once the scope of the
946 work geographical area are determined by the engineers and everyone approves then I don't
947 feel like the firm that is selected for construction should be the one going out there dealing
948 with homeowners and businesses as far as requiring land and stuff like that, that's my opinion.
949 Thank you.

950

951 (Moderator) Thank you

952

953 Sorry to jump in (Moderator: That's fine, that's what we are here for) 109 [inaudible] Place in
954 Apex in the Atrium at Woodcreek. Just for that gentleman's sake you drew up these maps and
955 these plans and everything weeks ago, it didn't happen last night. So, you should have as soon
956 as somebody realized that property was impacted, somebody should have gone out and talked
957 with that gentleman. I was 98% behind this project until I started hearing the voices of my
958 fellow constituents here. I hear a lot of business people come out and say how great it's going
959 to be for local business and fortune 500 companies, whatever. But we're going to have to bear
960 the impact. It's our burden. It's all on us, it's impacting our properties, our lives. Yes, we are
961 going to benefit from it, but we are paying for it every time we use it. It's going put more strain
962 on the other infrastructure because my wife doesn't want to pay tolls so she takes only 55
963 every day. Okay, I'm very, very lucky because my company pays for my toll tag, so I use it every

964 time to get out to the airport. It's great I really do love it, but the environmental impact and the
965 burden of the local people is something that we shouldn't be bearing. It's something that the
966 government, it's basically every time you pay a toll you are paying a tax to the government.
967 Okay if they are going to raise your taxes to build it or if they are going to take it every time you
968 use it. It's both. It's still a tax, we pay taxes for our roads we shouldn't be burdened by having
969 to pay every time we use a road. An infrastructure is built for the local constituents, North 540
970 is free. Some bureaucrat came and wrote something saying, oh now the rest of it's going to be a
971 toll road. Okay I know how politics works. That's my say, I'm sorry I got very emotional, (That's
972 okay) I was kind of okay with it, but now I'm kind of pissed off, alright.

973

974 Moderator: Thank you sir.

975

976 My name is Walter [inaudible], I live at 10172 [inaudible] Road, I have lived there for the last 75
977 years within a few hundred yards from where I was born. It's a family farm that we are about to
978 lose to 540 totally. Between my sisters and myself, what the road is not taken is land locked.
979 I'm really not opposed to the road, but I have really been opposed to the time it's taken to. I
980 attended the first meeting right here at Wake Tech in December of 1990. That was 21 years ago
981 or somewhere there about. And I've just, it comes right through my house, my house sits in the
982 median. That I've been in since 1970s somewhere along there. And, I'm not opposed to it and I
983 think we need it. These mussels and environmentalists, I've been a fisher and hunter all my life,
984 and I really respect that. But I want to note, which is the most important in life, my life or the
985 mussel's life. That mussel can be relocated. And do the same job its doing where it's at, there's
986 no problem there. But it's a big problem with DOT dragging its feet as long as it has, and I still
987 don't know how long I'm going to have to live where I'm at. If I knew, it would make a
988 tremendous difference. We have a hearing with Judge Collins, Monday at the Wake County
989 Courthouse on Road 10, if everybody can be there, be there. If you are affected by this, they are
990 supposed to give us a schedule, we'll see. I have never had anybody to give me a date yet. They
991 have done some exemptions, they are waiting, for what I've seen, every time I have ever spoke.
992 And my oldest sister did pass away this past December and she told me when we came to the
993 first meeting she said she would never live long enough to see this done, and I think she's right.
994 They are waiting for the rest of us to die and then go on to the next generation. That's what I,
995 my two cents worth.

996

997 (Moderator) Thank you sir. Anyone else? Okay.

998

999 My name is Dennis Hilton. I am a property owner on Oxford Green Drive, 5916. Like the
1000 gentleman who just preceded me, my first hearing for this was 1996. And at that point and
1001 time their preliminary core that they reserved, barely missed my property line so we kind of
1002 figured we'll wait this thing out and see what happens. Couple years ago, they changed it,
1003 property lines then engulfed about 80% of our property. So, what are we going to do? I find it
1004 real interesting that our municipal guys have plenty of time to plan their stuff. We're are in real
1005 estate purgatory, because we have no idea what's going to happen to our property or when.
1006 Now, the most recent map that came out showed that line creeping back to about half of my
1007 property. What am I going to do if they take half my property but don't take my house, we have

1008 some serious negotiations to do. My point is, again, we are in real estate purgatory. What are
1009 we going to do if we live there, we don't know when we are going to get bought out or if they
1010 are going to give us an equitable solution settlement for our property? It's very difficult for us
1011 and for you guys that were in the corridor that was reserved 25 years ago, what have you been
1012 doing? You were told you couldn't develop your property? What is fair about that? And now, if
1013 they take half, all of, my property whatever and what do we get we get a road we have to pay
1014 to drive on. It just doesn't seem very fair to me that they are putting us through all of this. I
1015 heard the word accelerate used I don't know how many times tonight, guys, but 1996? Two
1016 years ago, you said you were going to do this thing now, you were supposed in construction
1017 now. And then we get another notification that it has been spread out once again. Are you
1018 really going to do it in the time frame you're talking about? And one other thing I would like to
1019 know, I've seen nothing as far as estimated time of construction. How long are our lives going
1020 to be disrupted by the construction of this road? 3 years, 5 years, 10 years?

1021
1022 (Moderator) I would estimate it at a 3 to 4-year construction period, is that correct, George?
1023 About 3 to 4-year construction period. Alright, anyone else?

1024
1025 Well, with that I want to thank you all for coming out tonight. Again, if you have neighbors that
1026 didn't make it out please take them a handout and encourage them to submit comments.
1027 Thank you all for coming out. Again, thank you so much to the Raleigh Television Network for
1028 their assistance tonight. Thank you.

1029
1030

1031 Jamille Robbins, Moderator
1032 Public Involvement and Community Studies
1033 February 22, 2018

1034

1035 Typed by Denise Thomas, Planning Communities, LLC



Complete 540 – Triangle Expressway Southeast Extension

Wake and Johnston Counties

STIP Nos. R-2721, R-2828, R-2829

Design Public Hearing and Public Meeting Summary

NCDOT held three public meetings and a formal Design Public Hearing in February 2018 to present the preliminary design plans for the Complete 540 project’s Preferred Alternative. Displays included maps showing the preliminary designs for the Preferred Alternative, information summarizing its potential environmental impacts, an illustration of the proposed typical section, and information about the proposed project schedule. A brief informational video providing an overview of the study process and the Preferred Alternative and a video showing a 3D visualization of the project were shown on a continuous loop at each meeting. The project’s Final Environmental Impact Statement (EIS) was released in late December 2017, and while the meetings did not focus on the Final EIS, copies of the document and its supporting technical reports were also available for review at the meetings. A handout brochure with information about the Preferred Alternative, the study process, the traffic noise study, and the project schedule, was distributed. All displays, meeting materials, and project documentation were also available on the project website.

Public Meetings and Hearing Locations and Times:

Date:	February 20, 2018	February 21, 2018	February 22, 2018
Time:	Public Meeting: 6:00 – 8:00 p.m.	Public Meeting: 6:00 – 8:00 p.m.	Public Meeting: 4:00 – 6:30 p.m. Public Hearing – 7:00 p.m.
Location:	Holly Springs High School 5329 Cass Holt Road Holly Springs, NC 27540	Barwell Road Community Center 3925 Barwell Road Raleigh, NC 27610	Wake Technical Community College 9101 Fayetteville Road Raleigh, NC 27603

Advertisement

A project newsletter advertising the meetings and the Design Public Hearing was mailed to all of the roughly 60,000 property owners in the project study area. NCDOT prepared a press release and a public notice, publishing the public notice in local newspapers. The press release was distributed to local media. Additionally, the meetings and hearing were advertised on project website, the NCDOT public meeting website, and the NCDOT PublicInput.com site.

Attendance

The following numbers of attendees signed in at each of the three meetings:

- Holly Springs High School 262
- Barwell Road Community Center 179
- Wake Tech Community College 539

The total number of attendees who registered at the meetings was 980.

Public Comments Received

The comment period for the public meetings and the Design Public Hearing ended on March 23, 2018. During that time, 86 written comments addressing the Preferred Alternative, other substantive project design issues, or general project issues were received. There were also 34 people who gave oral comments during the Public Hearing. In addition, 30 comments were submitted via the NCDOT PublicInput site.

At the Public Hearing, there were 13 speakers that specifically spoke in support of the project and 8 speakers that indicated opposition to the project. Each of these speakers provided reasons why they support or oppose the project. Supporters of the project cited increased mobility, reduced congestion, higher travel speeds, time savings, and alignment with long-range planning and planned growth for the area. Opponents of the project cited environmental concerns (wetlands, water quality, air quality, noise, deforestation, wildlife, and protected species), impacts to low-income and minority populations, tolls, and the need to look at other alternatives (mass transit and improvements to existing roadways). Four of the speakers opposed to the project recommended that NCDOT consider the Access2040 proposal from the Southern Environmental Law Center as an alternative to the project. The remaining 13 speakers were more focused on specific issues or concerns. The specific issues raised by speakers are reflected also in the written comments on the project design. A few speakers expressed unhappiness about how long the study has taken.

Slightly more than half of the written and PublicInput comments expressed general opinions and concerns about the project, while the remainder included specific comments about the proposed project designs (some comments included both general concerns and specific requests). The more general comments included:

- 21 indicating explicit support for the project
- 14 expressing concern about potential highway noise effects or requests for reconsidering noise walls in specific locations
- 11 expressing opposition to the project, a preference for other project alternatives, or general concern about the project's potential effects
- 10 expressing concern about potential physical effects of the proposed designs on individual property
- 5 indicating unhappiness with a tolled highway project
- 4 expressing concerns about the project's potential to negatively affect traffic on nearby roads
- 3 indicating a desire to see, as part of the Complete 540 project, improvements to the existing Ten Ten Road and Bells Lake Road intersection due to current perceived safety concerns
- 3 expressing apprehension or frustration about the right-of-way acquisition process

- 2 expressing concern about the proposed diverging diamond concept at the Holly Springs Road interchange due to driver unfamiliarity and traffic volumes at the signalized intersections

The topics addressed in the written and spoken comments about the proposed project designs included:

R-2721

- concern that, under the current proposed designs, westbound traffic exiting Complete 540 to access Old Smithfield Road would need to cross over 3 lanes of traffic on NC 55 Bypass and make a U-turn (2 written comments)
- a request to incorporate an existing pedestrian and bicycle path in the Woodcreek neighborhood with a box culvert under Complete 540 to retain access to neighborhood recreational facilities and connectivity between the larger and smaller parts of the development (13 written comments and 2 spoken comments)
- concern about the lack of a noise wall for the South Lake subdivision and potential wildlife roadkill on 540 as a safety concern (1 spoken comment)
- a request to reconsider realigning West Lake Road due to individual property impacts (1 written comment)
- a comment about the Colonial Pipeline relocation between Floresta Drive and 540 at West Lake Road (1 spoken comment)
- concern about homes being taken along Bells Lake Road south of the interchange with 540 because of controlled access (1 spoken comment)
- a request from Woods of Ashbury residents to consider terminating Donny Brook Road at Reigate Lane so that traffic between Lake Wheeler Road and US 401 would have to use Ten Ten Road or Ransdell Road instead of Donny Brook Road (2 written comments)
- skepticism about proposed configuration of interchange at US 401, with suggestion that it may not be sufficient to accommodate likely traffic volumes

R-2828

- a request for improvements on Holland Church Road to be shifted to the west along the on-site detour alignment to minimize impacts to 5101 Holland Church Road and allow for use of the existing road as the detour route thereby eliminating a service road (1 written comment)
- concern about the effect of proposed retaining walls along Sauls Road on the National Register-listed Panther Branch School and the associated Juniper Level Missionary Baptist Church across Sauls Road, and concern about noise effects in this area (3 written comments)
- concern about the proposal to elevate 540 over Jordan Road, rather than elevating Jordan Road over 540, due to the perceived greater potential for noise and visual effects (5 written comments)

- a request for a traffic light at the intersection of Golden Grain Road and NC 50 due to concerns about increased traffic on NC 50 and potential difficulty exiting the neighborhood (2 written comments)

R-2829

- a request to modify the proposed designs to minimize impacts to the anticipated Edge of Auburn development near the intersection of Rock Quarry Road and Old Baucom Road (1 written comment and 1 spoken comment)
- a request for improvements on Poole Road to be shifted to the south to minimize impacts to 7317 and 7325 Poole Road, citing the presence of undeveloped land on the south side of Poole Road (2 written comments)

APPENDIX G
Newsletters



Triangle Expressway
**SOUTHEAST
 EXTENSION**



PLANNING STUDY *and* ENVIRONMENTAL IMPACT STATEMENT

MARCH 2010

SOUTHEAST EXTENSION: FINDING A SOLUTION ■

The North Carolina Turnpike Authority has embarked on a study to explore options for addressing transportation needs with the proposed Triangle Expressway Southeast Extension project. Rapid population growth in Wake and Johnston counties is forecast to increase strain on existing roads. As part of this study, the Turnpike Authority will investigate potential solutions for meeting current and future transportation needs in this area.

The Triangle Expressway, from Interstate 40 at NC 147 in Durham County south to NC 55 Bypass near Apex, is currently under construction and is scheduled to open to traffic in late 2012. The Southeast Extension would

extend the Triangle Expressway and complete the 540 Outer Loop. It will be studied as a toll facility and likely would be constructed in phases. Phase I is between NC 55 in Apex and Interstate 40 near the Johnston/Wake County line. Phase II continues the project at Interstate 40, ending at US 64/US 264 Bypass in Knightdale. The entire project is nearly 30 miles long.

The Southeast Extension study will consider various solutions for addressing area transportation needs. These studies will consider several options, including improving existing roads and building a new roadway, along with non-roadway options such as mass transit. With extensive community participation, the Turnpike Authority expects to identify and finalize a route for the Southeast Extension and begin construction of Phase I in 2014.

What is an EIS?

The National Environmental Policy Act (NEPA) requires federal agencies to prepare an Environmental Impact Statement (EIS) for major federal actions that are expected to significantly impact the environment.

(For more information go to <http://environment.fhwa.dot.gov/index.asp>.)

An EIS is a detailed report that defines the transportation problem, discusses the range of possible solutions considered, discloses the impacts possible solutions would have on the human and natural environments, summarizes involvement with the public and other stakeholders, and aids in making decisions about the project.

The EIS process includes the following four major milestones:

- 1 **Notice of Intent (NOI):** The NOI is published in the Federal Register, signaling the initiation of the EIS process (Nov. 2009 for this project).
- 2 **Draft EIS:** After publication of the Draft EIS, there are public hearings and a formal comment period.
- 3 **Final EIS:** The Final EIS addresses comments received on the Draft EIS and identifies the preferred route for the project.
- 4 **Record of Decision (ROD):** The ROD identifies the selected route for the project, explains why it was chosen, and provides information on ways to minimize and compensate for project impacts.



COMMUNITY PARTICIPATION: THE KEY TO A SUCCESSFUL OUTCOME ■

Community participation is a core element of the transportation planning process. A successful Southeast Extension study will depend on engaging community members and stakeholders to identify area transportation needs, quality of life concerns, community values and potential project solutions.

We encourage you to participate actively in the Southeast Extension study. There are several different ways you can participate and stay informed:

- **Participate in public workshops and events.** The Turnpike Authority will hold public workshops and events throughout the study process to provide information and receive your input about the project. We plan to hold the first series of workshops this summer.
- **Request a small group meeting.** The Turnpike Authority is available to meet with interested community organizations, neighborhood associations and others throughout the project's development. Please contact the Turnpike Authority to arrange a small group meeting.
- **Contact us with questions and comments.** You can contact the Turnpike Authority by phone, e-mail or traditional mail. You are also welcome to discuss the project with us via our project blog. *(Please see back page for contact information.)*

WHERE IS THE PROJECT STUDY AREA? ■

The map (below/above) shows the study area for the Southeast Extension project. The Turnpike Authority will consider a range of project routes within this study area. The complete study area includes parts of southern and eastern Wake County and northern Johnston County, as well as parts of eight municipalities—Apex, Holly Springs, Cary, Fuquay-Varina, Garner, Raleigh, Knightdale and Clayton—along with several rural communities, such as Willow Spring and McCullers Crossroads.

The route shown for Phase I is the protected corridor for this part of the project. Phase II does not have a protected corridor; the route shown for Phase II is one potential route and is shown for reference.

PROTECTED CORRIDOR: ONE OF SEVERAL POSSIBLE ROUTES ■

A protected corridor preserves the location of a new road from encroaching development. In the mid-1990s, the North Carolina Department of Transportation (NCDOT), under the Transportation Corridor Official Map Act, established a protected corridor for Phase I of the Southeast Extension between NC 55 in Apex and Interstate 40 near the Johnston/Wake County line. The Turnpike Authority will evaluate the protected corridor, as well as other possible routes, as part of this study. The study area map on the opposite page shows the location of the protected corridor for Phase I.

WHAT'S NEXT? ■

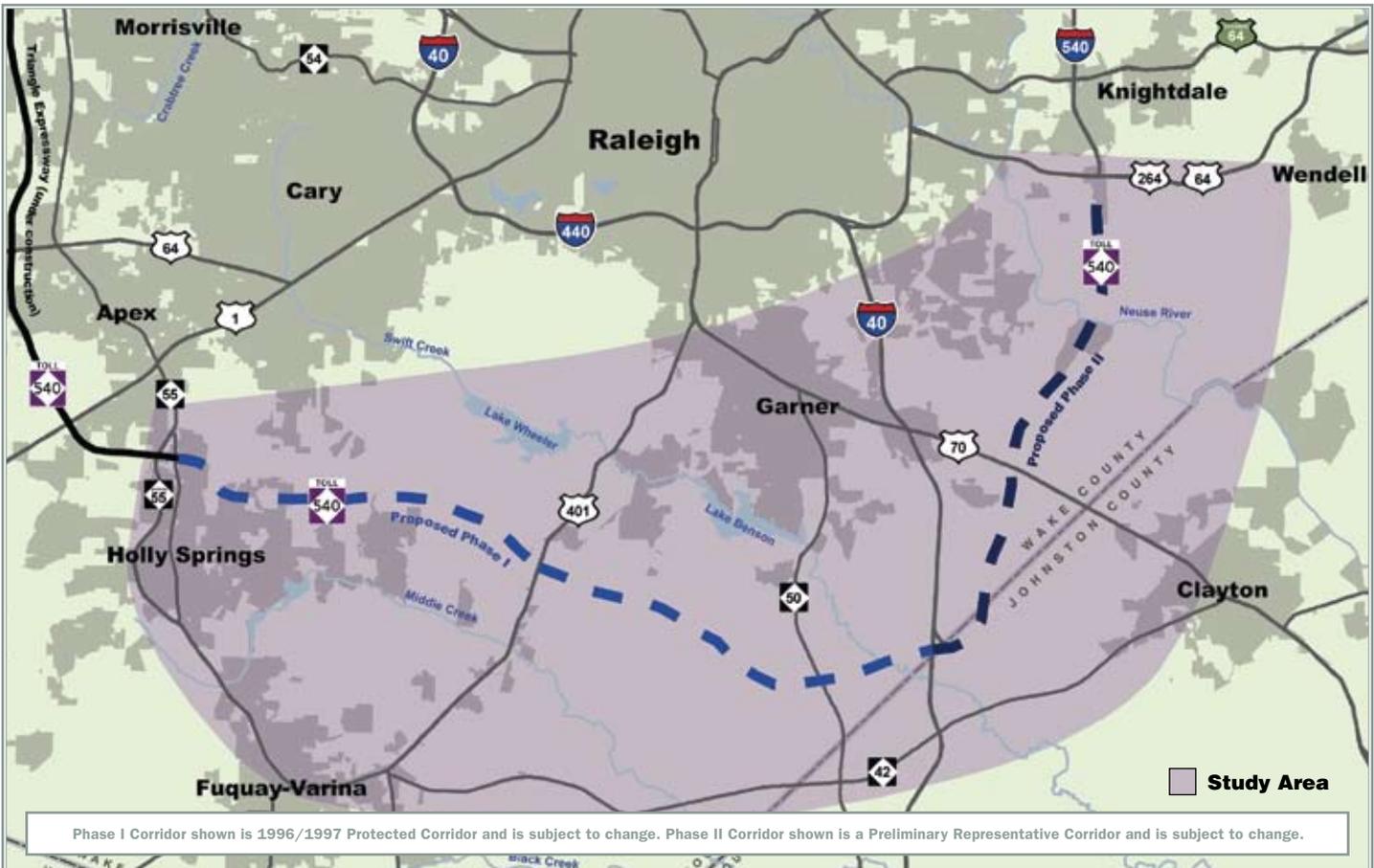
The Turnpike Authority is currently collecting project area data, identifying local needs and beginning to develop concepts shaping the project's purpose. The study team will soon begin identifying possible routes, conducting environmental field studies and documenting community characteristics. The Turnpike Authority will hold public input events throughout this study and plans to hold the first series of public workshops this summer.

The Turnpike Authority expects to identify the most reasonable routes for the project later this year and will document the potential impacts of these routes in a Draft Environmental Impact Statement (EIS). The publication of the Draft EIS and the remaining project milestones are tentatively scheduled as follows:

• Draft Environmental Impact Statement	2012
• Final Environmental Impact Statement	2013
• Final Approval of Project Route (Record of Decision)	2013
• Phase I Construction Begins*	2014
• Phase II Corridor Protection	2014
• Phase I of Southeast Extension Open to Traffic	2019

* Contingent upon availability of funding.

Study Area Map





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Triangle Expressway Southeast Extension

P. O. Box 30923
Raleigh, NC 27622



Let Us Know What You Think!

Your thoughts and questions are important to us. We encourage your input and there are many ways you can reach us:

Web | Visit our website at www.ncturnpike.org/projects/southeast/ and our project blog at southeastextension.blogspot.com.

E-mail | Send us a comment via e-mail to southeast@ncturnpike.org.

Telephone | Call our toll-free hotline at **1-800-554-7849**.

Letter | Send your letter to: **Ms. Jennifer Harris, P.E.**
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699-1578



PLANNING STUDY *and* ENVIRONMENTAL IMPACT STATEMENT

ISSUE 2 ■ SEPTEMBER 2010

JOIN US FOR INFORMATIONAL MEETINGS ON THE SOUTHEAST EXTENSION! *N.C. Turnpike Authority schedules three meetings to update residents*

IN JANUARY, the N.C. Turnpike Authority (NCTA) began studying the possibility of a new toll road called the “Southeast Extension” that would connect to the Triangle Expressway, another toll road currently under construction in Wake and Durham counties. This new road would span nearly 30 miles through southeastern Wake County and connect the NC 55 Bypass near Apex to the US 64/264 Bypass in Knightdale.

NCTA engineers and other representatives would like to update you on this proposed new road, answer your questions, and hear what you think. Please plan to attend one of the meetings.

These meetings will be in an open-house format, so you can arrive at your convenience. The same information will be presented at each of the three workshops, which are being held in different parts of the project study area.

Tuesday, Sept. 21, 2010, 4pm–7pm

Wake Technical Community College

Student Services Building, Rooms 213/214

Raleigh, NC 27603

Wednesday, Sept. 22, 2010, 6pm–9pm

Holly Springs High School

5329 Cass Holt Road

Holly Springs, NC 27540

Thursday, Sept. 23, 2010, 4:30pm–7:30pm

Barwell Road Community Center

3935 Barwell Road

Raleigh, NC 27610

Project Schedule

• Draft Environmental Impact Statement	2012
• Final Environmental Impact Statement	2013
• Final Approval of Project Route (Record of Decision)	2013
• Phase I Construction Begins	Contingent on funding
• Phase II Corridor Protection	Contingent on funding
• Phase I of Southeast Extension Open to Traffic	To be determined

In compliance with the Americans with Disabilities Act (ADA), NCTA will provide auxiliary aids and services for disabled persons who wish to participate in these workshops. To receive special services, please contact the project team by phone (800) 554-7849 or email southeast@ncturnpike.org. Please provide adequate notice prior to the date of the meeting so that arrangements can be made.



WHAT IS BEING STUDIED? ■

Three different plans that involve building or expanding roads to address growing traffic in southern Wake County are under consideration by NCTA at this time. There is also the fourth option of not building a new road or expanding existing roads, which is under consideration as well.

OPTIONS

1 Build a New Roadway

Construct a new roadway between NC 55 near Apex to the US 64/US 264 Bypass in Knightdale. Several possible routes are under consideration as new location build alternatives (see map, opposite page).

2 Improve Existing Roadways

Widen Interstate 40 from west of Raleigh to the Clayton area, Interstate 440 from Interstate 40 to the US 64/US 264 Bypass, and the US 64/US 264 Bypass from Interstate 440 to the eastern study area boundary.

3 New Road Construction/Improve Existing Road Option

Construct a new roadway between NC 55 near Apex to Interstate 40 near the Wake/Johnston County line; and widen Interstate 40 from Interstate 440 to the Clayton area, Interstate 440 from Interstate 40 to the US 64/US 264 Bypass, and the US 64/US 264 Bypass from Interstate 440 to the eastern study area boundary.

NEXT STEPS ■

Each of these options is being studied. Some of the study criteria include:

- *What is the potential impact to existing homes, businesses, parks and other places people live, work, learn or play?*
- *How will building or expanding roads impact the natural environment?*
- *Will these options help reduce traffic congestion?*
- *What do residents, elected officials, government agencies and others think?*

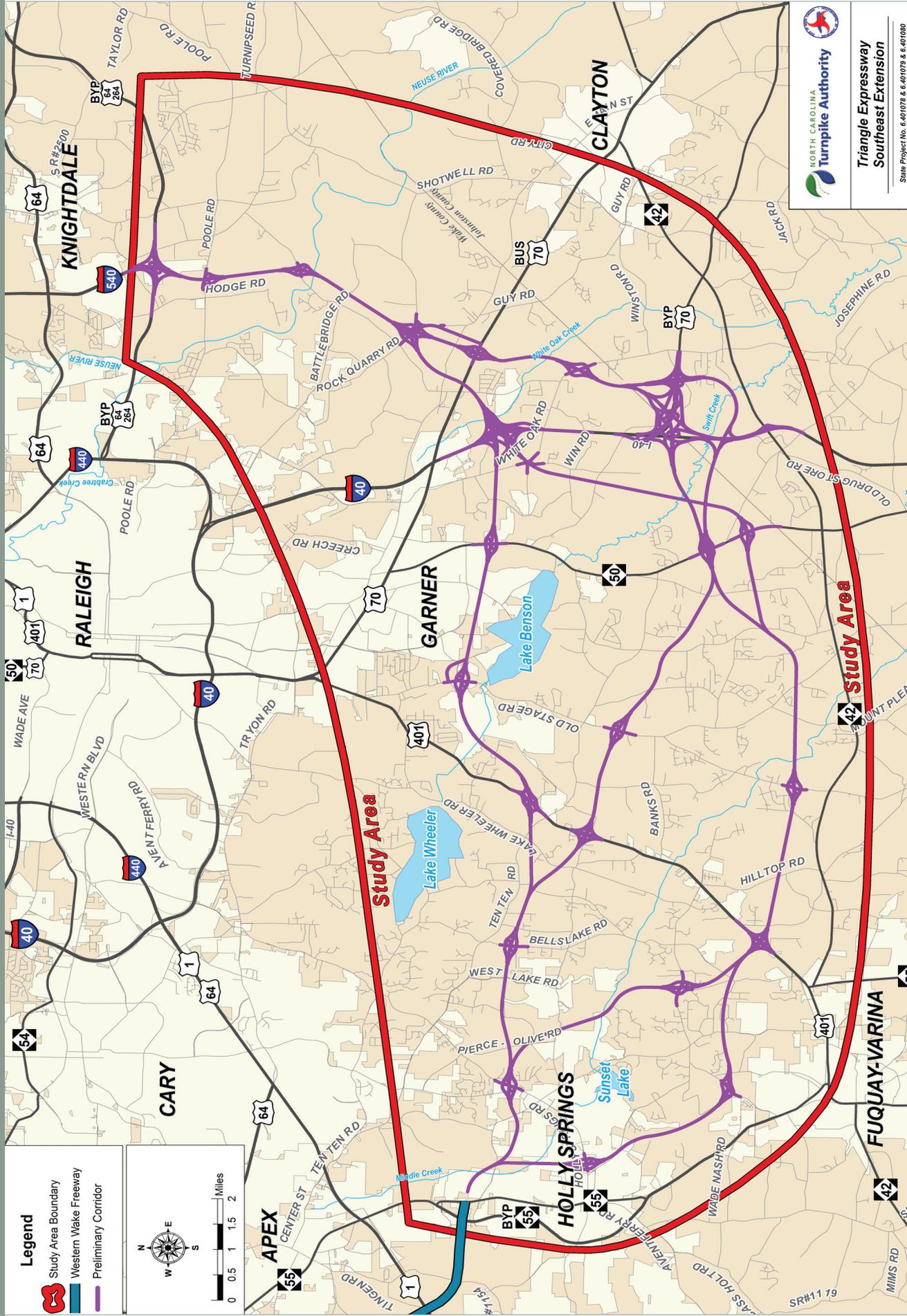
Your input is important in this step!
Join us for the informational meetings to offer your thoughts and opinions.

After this initial study, a smaller number of options will be studied in greater depth. More information about which options were selected, and the reasons why they were selected, will be available after November 1 on the NCTA website www.ncturnpike.org/projects/southeast/documents.asp.

In-depth studies of each option will begin in early 2011. Once all the research is done, a recommendation of which option best meets the needs of the community will be made. This information will be described in the Draft Environmental Impact Statement (EIS), which should be released in 2012. During this process, and even after the Draft EIS is released, public input will be accepted.

Potential New Location Build Alternatives

(As of September 2010)



Legend

- Study Area Boundary
- Western Wake Freeway
- Preliminary Corridor

Scale

0 0.5 1 1.5 2 Miles

Compass

N
W E
S



**Triangle Expressway
Southeast Extension**

State Project No. 6-401078 & 6-401079 & 6-401080
S.T.I.P. No. R-2774 & R-2825 & R-2829

Preliminary New Location Corridors

NOTE: If a build option is selected, only one of the potential build alternatives would be constructed.



Triangle Expressway Southeast Extension

P. O. Box 30923
Raleigh, NC 27622



Let Us Know What You Think!

Your thoughts and questions are important to us. We encourage your input and there are many ways you can reach us:

Web | Visit our website at www.ncturnpike.org/projects/southeast/ and our project blog at southeastextension.blogspot.com.

E-mail | Send us a comment via e-mail to southeast@ncturnpike.org.

Telephone | Call our toll-free hotline at **1-800-554-7849**.

Letter | Send your letter to: **Ms. Jennifer Harris, P.E.**
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699-1578



Complete 540

Triangle Expressway Southeast Extension
PO Box 30923
Raleigh, NC 27622



PLANNING STUDY *and* ENVIRONMENTAL IMPACT STATEMENT

ISSUE 3 ■ SEPTEMBER 2013

STUDY RESUMES TO COMPLETE 540

The Complete 540 study for the Southeast Extension of the Triangle Expressway has resumed following a delay of more than two years.

The N.C. General Assembly recently enacted new legislation (NCSL 2013-94 and 2013-183) that reversed NCSL 2011-7, which placed the study on hold, limiting the ability of the North Carolina Department of Transportation (NCDOT) to comply with certain federal requirements.

The Complete 540 project would provide a more direct route and quicker access to Research Triangle Park, the Raleigh-Durham International Airport, and major employment and activity centers along 540 for rapidly growing communities south and east of Raleigh.

In early August, the NCDOT study team resumed work

on the project to collect information about how the various route locations proposed for completing 540 would affect the area environment. Information about future traffic volumes, development patterns, community features, natural resources, possible noise impacts, and other features is being collected and studied. NCDOT will also collect information from area residents and other local stakeholders to get local perspectives on the project.

The overall goal of the study is to understand how the project would benefit the region, and how the various routes proposed for it would impact the area and those who live and work there. With this information at hand, the best possible route location for completing 540 can be determined.



Let Us Know What You Think!

Your thoughts and questions are important to us. We encourage your input and there are many ways you can reach us:

Web | Visit our website at www.ncdot.gov/complete540

and our project blog at complete540.blogspot.com

E-mail | Send us a comment via e-mail to complete540@ncdot.gov

Telephone | Call our toll-free hotline at **1-800-554-7849**

Letter | Send your letter to: **Mr. Eric Midkiff, P.E.**
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

Fall 2013 Public Meetings

Mon., Oct. 14, 2013, 4:00 pm–7:00 pm
Wake Tech Community College
9101 Fayetteville Road
Raleigh, NC 27603

Tues., Oct. 15, 2013, 4:00 pm–7:00 pm
Barwell Road Community Center
3935 Barwell Road
Raleigh, NC 27610

Wed., Oct. 16, 2013, 6:00 pm–9:00 pm
Holly Springs High School
5329 Cass Holt Road
Holly Springs, NC 27540

Share Your Thoughts!

Three separate public meetings are being held in the project study area. The purpose of these meetings is to provide the latest information about the Complete 540 study. NCDOT staff and consultants will be there to receive your comments and answer your questions. These meetings will be in an open-house format, meaning you may attend at any time during the posted hours. Formal presentations will not be made at the meetings. The same information will be available at each of the three meetings, which are being held in different parts of the project study area for the convenience of all who would like to attend.

In compliance with the Americans with Disabilities Act (ADA), NCDOT will provide auxiliary aids and services for disabled persons who wish to participate in these meetings. To receive special services, please contact the study team by phone 1-800-554-7849 or email complete540@ncdot.gov. Please provide adequate notice prior to the date of the meeting so that arrangements can be made.

Si desea recibir una copia de este boletín en Español, por favor llame al número de teléfono 1-800-481-6494, o envíe un correo electrónico a complete540@ncdot.gov. Servicios de intérprete estarán disponibles en la junta para las personas que hablan Español y no hablan Inglés o si tienen una capacidad limitada para leer, hablar o entender el Inglés. Para obtener más información sobre estos servicios, por favor llame al número de teléfono 1-800-481-6494.



ROUTE ALTERNATIVES CURRENTLY UNDER CONSIDERATION

At public meetings held in September and December of 2010, several color-coded route location alternatives were presented for review and comment. Following those meetings, some of those alternatives were dropped from further consideration. Since that time, four new alternatives have been developed, and a portion of two that were dropped in 2010 have been reintroduced.

The map on the facing page shows the route alternatives that are currently recommended by NCDOT for further study. The paragraphs below explain the new routes that have been added since 2010. They also explain why the two previous routes needed to be reintroduced.

Lilac Corridor — NCDOT worked with the Capital Area Metropolitan Planning Organization and other local and agency stakeholders to see if they could identify any other route locations that could minimize wetland impacts similar to the Red Corridor. A new corridor—designated as the Lilac Corridor—showed the potential to accomplish this.

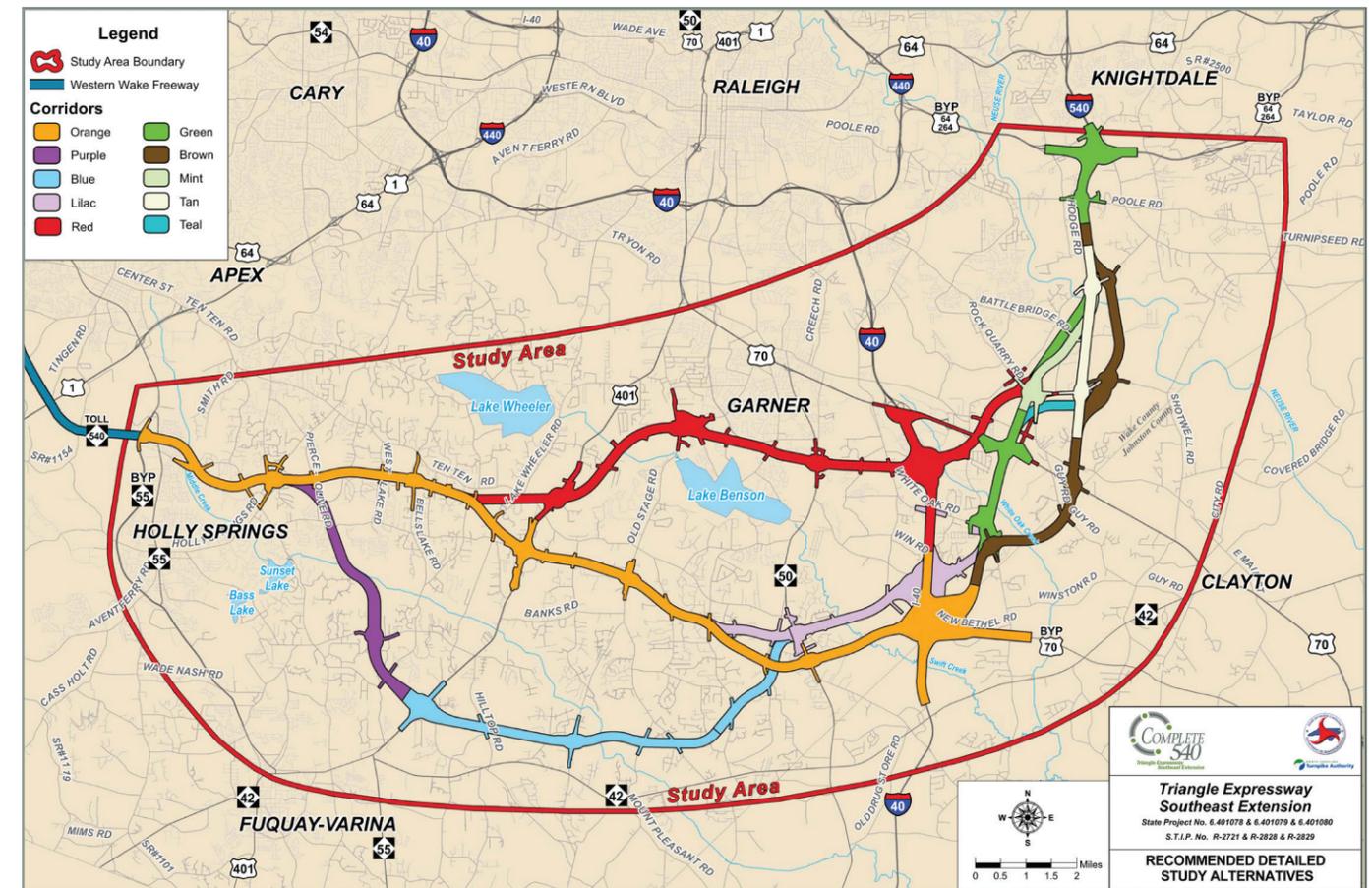
Mint Green Corridor — Compared to the Green Corridor, this option reduces impacts to a proposed development known as Randleigh Farm and would displace fewer homes and businesses than the nearby Tan Corridor.

Brown Corridor — This option completely avoids the Randleigh Farm property, but would impact a public wastewater treatment facility and a police training center.

Teal Corridor — This is a short connector between the Green corridor and the Brown corridor, creating another route for 540 between I-40 and US 64/US 264 Bypass.

Purple-Blue-Lilac Corridor — The Blue and Purple Corridors were removed from consideration in November 2010 because the original connection did not provide enough benefit over other options under consideration at that time. With the development of the Lilac Corridor, however, it was found that connecting the Purple Corridor to the Blue Corridor, and then to the new Lilac Corridor, created an option that minimizes wetland impacts similar to the Red Corridor. For this reason, the combination known as the Purple-Blue-Lilac Corridor is under consideration.

Red Corridor — After NCSL 2011-7 was enacted, preventing full evaluation of the Red Corridor, NCDOT worked extensively with environmental agencies and local stakeholders to find a way to move the study forward without the Red Corridor. Despite that effort, the US Army Corps of Engineers determined that the federal laws they administer require the Red Corridor be studied at the same level of detail as the other route locations, and that the State law enacted in 2011 does not supersede federal law.



NOTE: If the project is approved for construction, only one of the potential routes would be built.

WHAT HAPPENS NEXT?

After consideration of all public and agency comments received on these recommended alternatives, NCDOT and the Federal Highway Administration will decide on the final set of “Detailed Study Alternatives.” Once this decision is made, the study team will proceed with the required in-depth evaluations and comparisons. The results of these studies will be documented in the project’s Draft Environmental Impact Statement, along with a possible recommendation of which alternative best meets the project purpose. The current schedule calls for this document to be published in the spring of 2015.

Once this document is published, public hearings will be scheduled at several locations in the project study area. Following the public hearings, NCDOT will again review all public and agency comments and then make a final decision about the best route, or “Preferred Alternative” for the project.

Anticipated Project Time Frame

Hold Public Meetings on Alternatives	Fall 2013
Finalize Detailed Study Alternatives	Winter 2013
Complete Required Technical Studies	Fall 2014
Receive Approval of the Draft EIS*	Spring 2015
Draft EIS Review Period and Public Hearings ..	Summer 2015
Selection of the Preferred Alternative	Fall 2015
Approval of the Final EIS*	Spring 2016
Publication of the Record of Decision	Summer 2016
Complete Environmental Study Process	Fall 2016

*Environmental Impact Statement

If the Study results in project approval, the following is expected, subject to availability of funding:

Complete Financial Feasibility.....	Spring 2017
Begin Right-of-Way Acquisition	Summer 2017
Begin Construction	Spring 2018
Open to Traffic	Spring 2022



Detailed Study Alternatives Selected

We want to update you on the progress of the North Carolina Department of Transportation's (NCDOT) Complete 540 study for the Southeast Extension of the Triangle Expressway. The study aims to find the best possible route for completing 540 while minimizing impacts to people, businesses, and natural features within the area.

We understand how important it is to complete the process of identifying the final route for the project as quickly as possible for those who live and work in the project area. Rest assured that we share that same goal.

NCDOT is studying several possible routes to complete 540 from Holly Springs to Knightdale. These routes are shown on the map on the other side of this newsletter. Over the next few months, NCDOT will be conducting studies to determine the route that best meets the purpose of the project while also considering impacts to the human and natural environment. NCDOT expects to complete these studies and recommend the preferred alternative by the fall of 2015.

Studying these routes in detail now will greatly reduce the possibility of having to reconsider any of these routes in the future. Having to go back and consider additional routes after the study is complete would significantly delay selection of the final alternative. In other words, studying all of the potential Detailed Study Alternatives (DSAs) currently under consideration with the same level of detail now is the most effective approach for reaching a final decision as quickly as possible.

In October 2013, NCDOT held three public meetings to present the DSAs recommended by the Federal Highway Administration and NCDOT. We also presented the recommended DSAs to the various state and federal agencies with a stake in the project, and collected feedback from the Capital Area Metropolitan Planning Organization (CAMPO), which includes representatives from local

governments within the study area.

Approximately 1,700 individuals attended the public meetings and NCDOT received more than 1,100 comments. The majority of the comments from citizens supported the Orange Corridor and opposed the Purple, Blue, Lilac, or Red Corridors, although there was some level of support and opposition expressed relative to each of the color-coded corridor segments. The most common concerns expressed were about potential impacts to homes and neighborhoods, natural resources, and increased noise and visual impacts. The information that was received from the public did not provide sufficient new information to change the basis for the recommended DSAs. NCDOT will document the public comments in the project's Draft Environmental Impact Statement (EIS), where it will be used in conjunction with information about the potential effects of each option under consideration to identify one preferred route for the project.

CAMPO expressed support for the Orange Corridor. Neither CAMPO nor the environmental resource and regulatory agencies requested dropping any of the corridors prior to a detailed study. NCDOT used this feedback, along with information about the benefits and potential effects of each option under consideration, to determine that more detailed information should be collected for each option before eliminating any of the recommended DSAs from further consideration.

Based on the feedback from citizens, local governments, and state and federal agencies, NCDOT is moving forward to complete the detailed study as quickly as possible, and will include all of the comments in any final decision making process.

NCDOT appreciates your patience and all of the community involvement in this process. We will continue working closely with the communities in the project area to select the best option for the project as quickly as possible.

Next Steps and Comment Process

With the Detailed Study Alternatives (DSAs) now selected, there is much work to be done to complete the next step in the process, which is the preparation and distribution of the project's Draft Environmental Impact Statement (EIS). This work will include an analysis of impacts based on more detailed engineering drawings and impact data collected through fieldwork.

NCDOT has established an aggressive schedule for all the study's remaining steps so that the final route location decision can be made as quickly as possible. In order to meet each step in the schedule, the study team

will now be devoting its full attention to the technical studies and Draft EIS preparation.

While your comments and questions are always welcome, the best opportunity to provide your views on the DSAs will be after the detailed studies have been completed and documented in the Draft EIS.

The Draft EIS will be widely available to the public for review and will contain important new information on the DSAs. Official comments on this information can be made during the Draft EIS review period, which will include formal public hearings. Once the review period is over, the preferred route location will be selected.

FOR MORE INFORMATION

Email

complete540@ncdot.gov

Hotline

1-800-554-7849

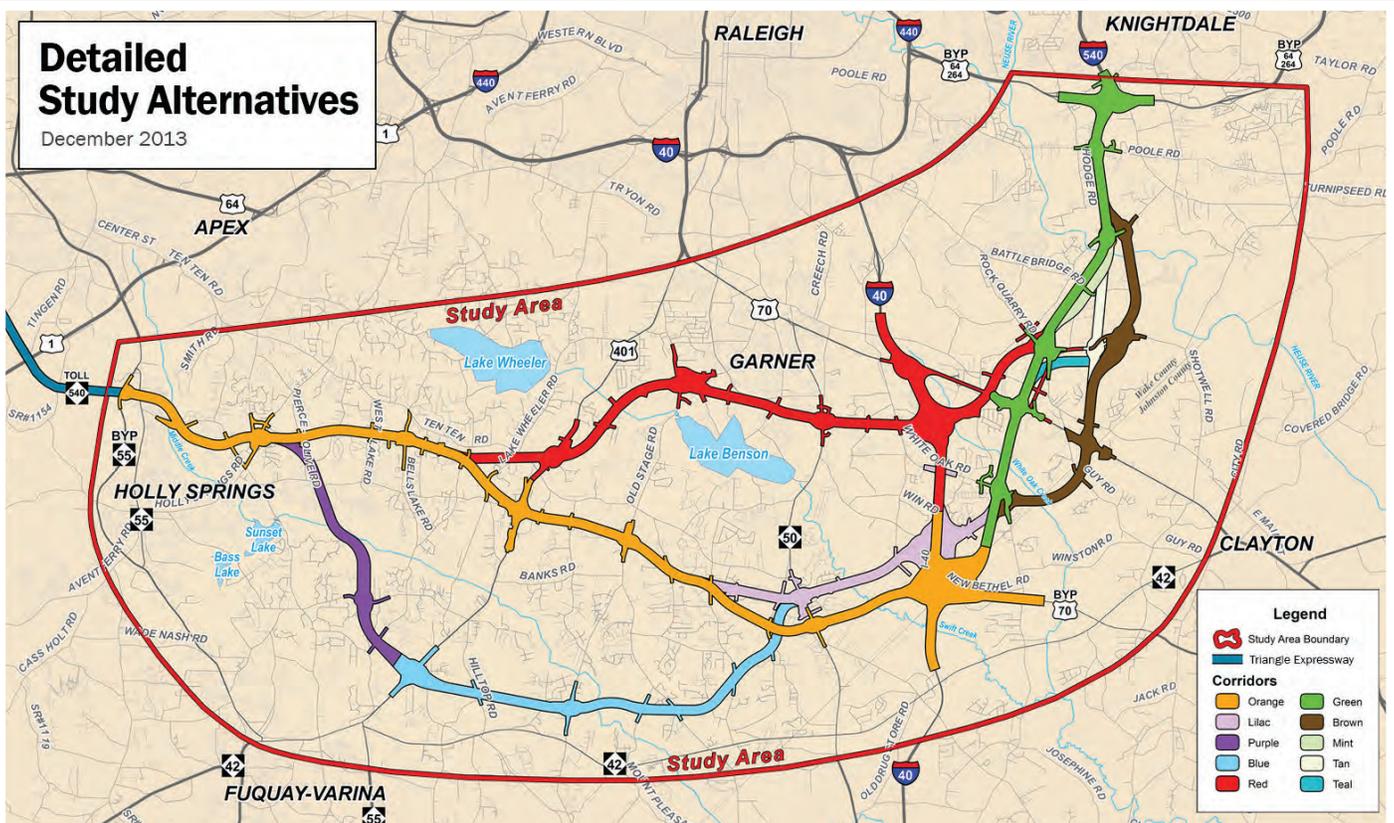
Mailing Address

Mr. Eric Midkiff, P.E.
North Carolina Department of
Transportation
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Raleigh, NC 27699-1548



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 Raleigh, NC 27622



Note: A larger version of the DSA map is available on the project's website, at www.ncdot.gov/complete540.



Complete 540

Triangle Expressway Southeast Extension
PO Box 30923
Raleigh, NC 27622



PLANNING STUDY & ENVIRONMENTAL IMPACT STATEMENT

NEWSLETTER 5 ■ SEPT. 2015

Draft Environmental Impact Statement Now Available for Review

The Complete 540 Draft Environmental Impact Statement (EIS) has been published by the North Carolina Department of Transportation and the Federal Highway Administration. The Draft EIS, associated technical reports, and preliminary designs of the alternative routes being considered, are available for review at the planning departments of the following communities: Holly Springs, Fuquay-Varina, Garner, Clayton, and Knightdale. They are also available at the Capital Area Metropolitan Planning Organization offices in downtown Raleigh, at the NCDOT District Offices at 4009 District Drive, in Raleigh, and on the project website at www.ncdot.gov/complete540.

Copies of the Draft EIS and its associated technical reports only, without the preliminary design drawings, are available for review at the following area libraries:

- Holly Springs Community Library, 300 W. Ballentine Street, in Holly Springs
- Fuquay-Varina Community Library, 133 S. Fuquay Avenue, in Fuquay-Varina
- Southeast Regional Library, 908 7th Avenue, in Garner
- Hocutt-Ellington Memorial Library, 100 S. Church Street, in Clayton

Please note that the staff members at these locations are not able to answer questions about the materials. Questions should be sent to NCDOT, as shown on the back page of this newsletter.

Si desea recibir una copia de este boletín en Español, por favor llame al número de teléfono 1-800-481-6494, o envíe un correo electrónico a complete540@ncdot.gov. Servicios de intérprete estarán disponibles en la junta para las personas que hablan Español y no hablan Inglés o si tienen una capacidad limitada para leer, hablar o entender el Inglés. Para obtener más información sobre estos servicios, por favor llame al número de teléfono 1-800-481-6494.

Public Hearings Scheduled

NCDOT has scheduled two formal public hearings and three informal open house events to accept public comments on the findings of the Draft Environmental Impact Statement. The open house events provide an opportunity to ask questions and discuss the project with NCDOT representatives. The hearings allow individuals to make formal oral or written comments regarding the proposed project.

The formal comment period for the Draft EIS will begin on Monday, October 5, 2015 and will end on Monday, November 23, 2015. All comments received during the formal comment period will become part of the official record of the project.

Open House & Hearing Locations

The open houses will be held from 3:30 pm to 6:30 pm. The hearings will start at 7:00 pm.

Tuesday, October XX, 2015
Barwell Road Community Center
3935 Barwell Road, Raleigh

Wednesday, October XX, 2015
Wake Tech Community College
9101 Fayetteville Road, Raleigh
Note: Open House only, no hearing on this date

Thursday, October XX, 2015
Holly Springs High School
5329 Cass Holt Road
Holly Springs, NC 27540

In compliance with the Americans with Disabilities Act (ADA), NCDOT will provide auxiliary aids and services for disabled persons who wish to participate in these events. To receive special services, please contact the study team by phone at 1-800-554-7849 or email complete540@ncdot.gov. Please provide adequate notice prior to the date of the meeting so that arrangements can be made.

CONTACT INFORMATION

Your thoughts and questions are important to us. We encourage you to attend one of the public hearings or open houses described in the newsletter. Questions about these events, or the study in general, can be made as follows:

E-mail | Send us a comment via e-mail to complete540@ncdot.gov

Telephone | Call our toll-free hotline at **1-800-554-7849**

US Mail | Send your letter to: **Mr. Eric Midkiff, P.E.**
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

The Complete 540 study is being developed in accordance with the National Environmental Policy Act (NEPA), and includes the preparation of an environmental impact statement (EIS).

The study includes the following steps:

Step 1

- Collect data and identify local needs
- Define purpose and need of project
- Hold public input events

Step 2

- Identify possible routes
- Gather community concerns
- Conduct field studies
- Hold public input events
- Select potential routes for detailed study

Step 3

- Study potential routes in detail
- Conduct engineering studies
- Conduct field surveys
- Conduct environmental analysis

Step 4

- Prepare and distribute Draft EIS

Step 5

- Hold formal public hearings

Step 6 – Fall/Winter, 2015*

- Review all comments made on the Draft EIS
- Select preferred route

Step 7 – Fall/Winter, 2016*

- Develop preliminary engineering designs
- Conduct additional field studies
- Prepare and distribute Final EIS
- Receive final federal approval of project route (Record of Decision)

Step 8 – 2017/2018*

- Begin right-of-way acquisition and construction activities**

* Estimated time frame.

** Assuming project approval and availability of funding.

WE ARE HERE

What is a Draft EIS and why is it important?

An Environmental Impact Statement, or EIS, is a document that summarizes the many specific analyses and technical reports prepared as part of the overall study. Preparation of an EIS is a requirement of the National Environmental Policy Act (NEPA). One of the main purposes of NEPA is to provide decision-makers with the facts needed to ensure that the effects of a proposed project are understood before irreversible actions are taken.

Another requirement of NEPA is public disclosure of the study's findings. In order to accomplish this requirement, the EIS needs to be made available for review by government agencies and the public. There also needs to be a way to update, modify, or, if needed, to correct the information contained in the document. To do this, a distinction is made between a Draft EIS and a Final EIS.

A Draft EIS is a formal document, meaning it has been reviewed and approved for public distribution by the Federal Highway Administration. A Draft EIS contains a summary of the benefits and impacts of the proposed project. Once this document has been approved for public distribution, a formal announcement is made and copies of the document are distributed to regulatory agencies, local governmental officials, and others who need to make an official review. Printed copies of the Draft EIS and any other documents included by reference are made available for public review at public libraries, other public locations, and through Internet access.

Once the Draft EIS has been published, the document's formal review period begins. This period lasts several weeks and is intended to allow all who have an interest in the proposed project to thoroughly review the document and formulate questions and comments.

A key aspect of the review period is for the sponsoring agencies—in this case the FHWA and the NCDOT—to conduct one or more formal public hearings. Public hearings are intended to provide an opportunity to review and discuss the proposed project and the Draft EIS findings with the project sponsors and to submit formal comments about those findings. All comments submitted during the designated comment period, whether submitted before, during, or after the public hearing, become part of the official record of the project.

Once the formal comment period has ended, work begins on preparing the Final EIS, which includes a summary of all the comments received and their responses. The Final EIS also contains a detailed explanation of the alternative designated as the preferred "build" option and the reasons it was selected. Once the Final EIS is approved by the FHWA, its conclusions become official and a formal "Record of Decision" is published.

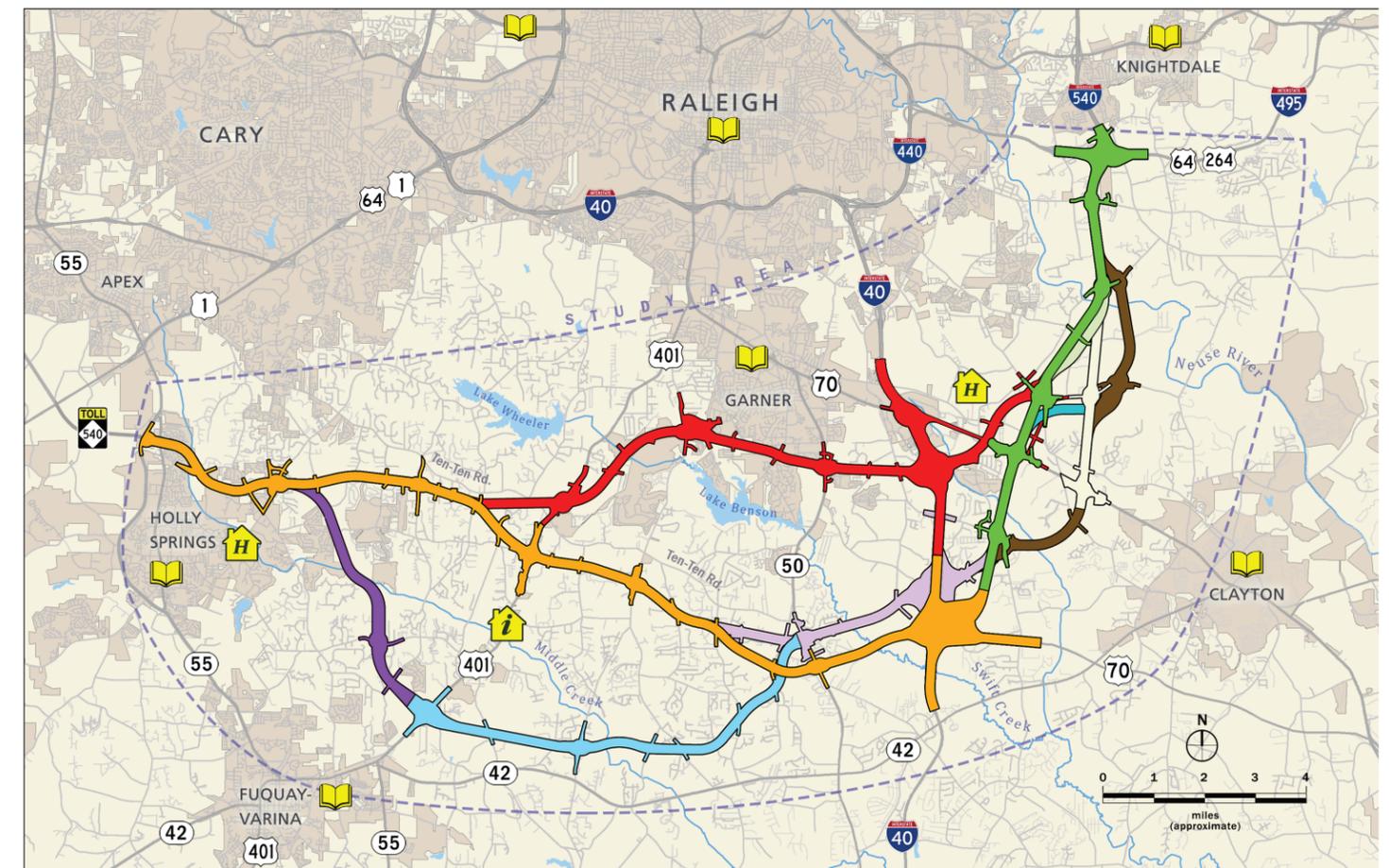
Statement On "De Minimis" Impact To Parklands

Several of the potential routes under consideration for the Complete 540 project would affect public park resources in the project's study area. Section 4(f) of the Department of Transportation Act of 1966 affords special protections to public parks and recreational resources. Under Section 4(f), these resources cannot, in most cases, be disrupted by highway projects unless it can be shown that there are no feasible and prudent alternatives to doing so. However, an exemption known as a "de minimis impact finding" is provided in cases where the official with jurisdiction over the park or recreational resource agrees with a determination that the effects of the highway would not adversely affect the protected resources.

In this newsletter, the Federal Highway Administration (FHWA) and NCDOT provide public notice of intended de minimis impact findings under Section 4(f) for the Complete 540 project's potential effects on three recreational resources

in the project area. These three resources are the Town of Cary's Middle Creek School Park, the Watershed Extension Loop Trail in the Clemmons Educational State Forest (managed by the North Carolina Forest Service), and the Neuse River Trail (managed by the City of Raleigh.) As documented in the project's Draft Environmental Impact Statement, NCDOT's evaluation showed that the potential effects on each of these resources would not adversely affect their recreational characteristics. The proposed de minimis finding is based on coordination with the officials with jurisdiction over each resource.

Comments on the proposed de minimis finding may be submitted to: Federal Highway Administration, Attn. Mr. Donnie Brew, 310 New Bern Avenue Suite 410, Raleigh, NC 27601. Comments can also be sent to the NCDOT (see back page). The comment period extends from October 5, 2015 to November 23, 2015.



CORRIDOR SEGMENTS STUDIED IN DETAIL

Ten individual corridor segments have been studied in detail. These segments have each been given a different color. These segments can be combined to form seventeen different end-to-end route alternatives, connecting US 55 in Apex to US 64/264 Bypass in Knightdale. Detailed maps showing each of these alternatives will be on display at the upcoming open house events, as described on page 1.

- Open House/Hearing Location
- Open House Location
- Draft EIS Review Location



Complete 540

Triangle Expressway Southeast Extension
PO Box 30923
Raleigh, NC 27622



PLANNING STUDY & ENVIRONMENTAL IMPACT STATEMENT

NEWSLETTER 6 ■ APRIL 2016

Preferred Route Location Selected

The North Carolina Department of Transportation (NCDOT) in cooperation with the Federal Highway Administration (FHWA), has selected Detailed Study Alternative 2 as the Preferred Alternative for the proposed Complete 540 project. Alternative 2 consists of the Orange Corridor segment, a portion of the Green segment, all of the Mint segment, and another portion of the Green segment. This route is shown on the map on the inside of this newsletter.

The NCDOT and FHWA reached this decision after a thorough review of the results of the impact assessment conducted for the 17 Detailed Study Alternatives (DSAs), as documented in the study's Draft Environmental Impact Statement (EIS). The decision was also based on an assessment of the comments made on the Draft EIS by local governments, governmental agencies, non-governmental organizations and the public.

Some of the key reasons Alternative 2 was selected as the Preferred Alternative are as follows:

- It is formally supported by all local governments;
- It minimizes the number of relocations of homes and

businesses, compared to other alternatives;

- It avoids impacts to the Swift Creek watershed critical area (a source for Raleigh's drinking water);
- It avoids the Clemmons Educational State Forest;
- It avoids impacts to historic resources; and
- It minimally affects only one local park.

The selection of the Preferred Alternative was based on data from the Draft Environmental Impact Statement (including topics such as impacts on the environment, homes and businesses, parks, community facilities and historic sites, and cost), past public comments on the proposed alternatives, as well as public comments made during the public comment period that ran from Nov. 9, 2015 through Jan. 8, 2016.

Details about the selection of the Preferred Alternative and the decision-making process can be found in the study's "Preferred Alternative Report," which is available on the study's website at www.ncdot.gov/projects/complete540/.



Get Involved, Stay Informed

Your thoughts and questions are important to us. We encourage your input, and there are many ways you can reach us:

Web | Visit our website at www.ncdot.gov/projects/complete540

E-mail | Send us a comment via e-mail to complete540@ncdot.gov

Telephone | Call our toll-free hotline at 1-800-554-7849

Letter | Send your letter to:
Ms. Nora McCann
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

mySidewalk



NCDOT is using an online public engagement tool called **mySidewalk** to provide the public and our stakeholders another way to learn more about the process and provide feedback. This forum can be accessed at:

engageNCDOT.mysidewalk.com

Public Outreach Summary

The NCDOT, in cooperation with the FHWA, held three public meetings and a formal public hearing in December 2015 to present information about the 17 DSAs and the findings of the Draft EIS and to receive comments on those findings. In total, these events were attended by more than a thousand individuals.

During the comment period for the Draft EIS (from early November 2015 to January 8, 2016), written comments addressing the DSAs, the Draft EIS, or other substantive project issues were received from about 1,500 people. During the comment portion of the formal public hearing, 34 people made oral statements. At the public meetings, 5 individuals

(continued on page 2)



More than 1,000 individuals attended the three public meetings and one public hearing held this past December.

Si desea recibir una copia de este boletín en Español, por favor llame al número de teléfono 1-800-481-6494, o envíe un correo electrónico a complete540@ncdot.gov.

The Complete 540 study is being developed in accordance with the National Environmental Policy Act, and includes the preparation of an EIS.

The study includes the following steps:

STEP 1

- Collect data; identify local needs
- Define purpose and need of project
- Hold public input events

STEP 2

- Identify possible routes
- Gather community concerns
- Conduct field studies
- Hold public input events
- Select potential routes for detailed study

STEP 3

- Study potential routes in detail; prepare roadway designs of alternative routes
- Conduct engineering studies
- Conduct field surveys
- Conduct environmental analysis

STEP 4

- Prepare and distribute Draft EIS

STEP 5

- Hold formal public hearing

STEP 6

- Review all comments made on the Draft EIS
- Select preferred route

STEP 7

- Develop preliminary engineering designs
- Conduct additional field studies
- Prepare and distribute Final EIS
- Receive final Federal Highway Administration (FHWA) approval of project route (Record of Decision)

STEP 8

- Begin final design; conduct Design Public Hearing*
- Begin permit acquisition, financing, right-of-way acquisition, and construction activities*

* Assuming project approval and availability of funding.



(“Public Outreach Summary,” continued from page 1)

recorded oral comments electronically. There were also 23 people who submitted comments via NCDOT’s mySidewalk site. Key conclusions that emerged once all the comments were reviewed include the following:

- Strong support for the Orange Corridor west of I-40. About 93 percent of submitted comments (those stating support for a color corridor west of I-40) expressed a clear preference for the Orange Corridor.
- Support for the Red, Purple/Blue, and Lilac Corridors was at 2 percent, 4 percent, and 2 percent, respectively.
- Widespread opposition to the Red (58 percent of those stating opposition to a color corridor west of I-40) and Purple/Blue Corridors (34 percent of those stating opposition to a color corridor west of I-40).
- Notable opposition to the Lilac Corridor, with 7 percent of those stating opposition to a color corridor west of I-40.
- Only one percent of those stating opposition to a color corridor west of I-40 are opposed to the Orange Corridor.

As can be seen from this summary, the most consistent pattern of comments concerned segments west of I-40. There was not such a discernible pattern of support and opposition for the corridors east of I-40. Comments that did specifically address those corridors most often expressed support for the Green Corridor. The Brown Corridor and the Tan Corridor were those with the greatest level of opposition.

More detail about the content of the public comments can be found in the study’s “Preferred Alternative Report,” which is available on the study’s website at www.ncdot.gov/projects/complete540/.

What are the next steps in the study?

Various additional studies need to be undertaken or completed for the preferred alternative before the Final EIS can be prepared. These include:

- an updated traffic forecast and related analysis for the preferred alternative;
- detailed archaeological field surveys;
- additional viability studies and related research for the endangered dwarf wedgemussel;
- design refinements and associated changes in right-of-way and impacts in response to comments on the Draft EIS; and,
- a quantitative study of the indirect and cumulative effects of the preferred alternative on land use and water quality.

In addition to summarizing these findings in the Final EIS, they must be presented to local governments and agencies before the Final EIS can be approved. Currently, approval of the Final EIS is expected in mid-2017, depending on the outcome of these remaining tasks.

SUMMARY EVALUATION MATRIX (Key Evaluation Factors)

Detailed Study Alternative	Length	Total Estimated Costs	Land Acquisition	Parcels	Relocations	Streams	Wetlands	Swift Creek Critical Watershed Area	Historic Sites
	miles	\$ million	acres	number	number	linear feet	acres	acres	acres
Alternative 1	28.3	\$2,195	1,830	741	278	67,967	75.6	0	0
Preferred Alternative 2	28.4	\$2,178	1,823	744	281	65,810	74.3	0	0
Alternative 3	29.1	\$2,188	1,802	754	265	68,130	73.5	0	5.9
Alternative 4	29.4	\$2,189	1,818	719	243	61,322	71.6	0	0
Alternative 5	29.3	\$2,191	1,843	737	272	65,180	74.2	0	0
Alternative 6	25.2	\$2,317	1,753	993	449	53,014	52.0	6.7	32.7
Alternative 7	25.3	\$2,315	1,752	995	451	51,582	51.4	6.7	32.7
Alternative 8	30.9	\$2,566	2,135	1,213	566	77,724	57.5	0	0
Alternative 9	31.0	\$2,547	2,128	1,216	569	75,566	56.2	0	0
Alternative 10	31.6	\$2,550	2,092	1,230	556	78,087	63.0	0	5.9
Alternative 11	32.0	\$2,549	2,108	1,195	534	71,278	61.1	0	0
Alternative 12	31.9	\$2,559	2,148	1,209	560	74,936	56.1	0	0
Alternative 13	27.6	\$2,362	1,960	984	481	68,604	66.7	0	0
Alternative 14	27.7	\$2,344	1,953	987	484	66,447	65.5	0	0
Alternative 15	28.3	\$2,346	1,917	1,001	471	68,967	72.3	0	5.9
Alternative 16	28.7	\$2,346	1,933	966	449	62,159	70.4	0	0
Alternative 17	28.6	\$2,356	1,973	980	475	65,817	65.3	0	0

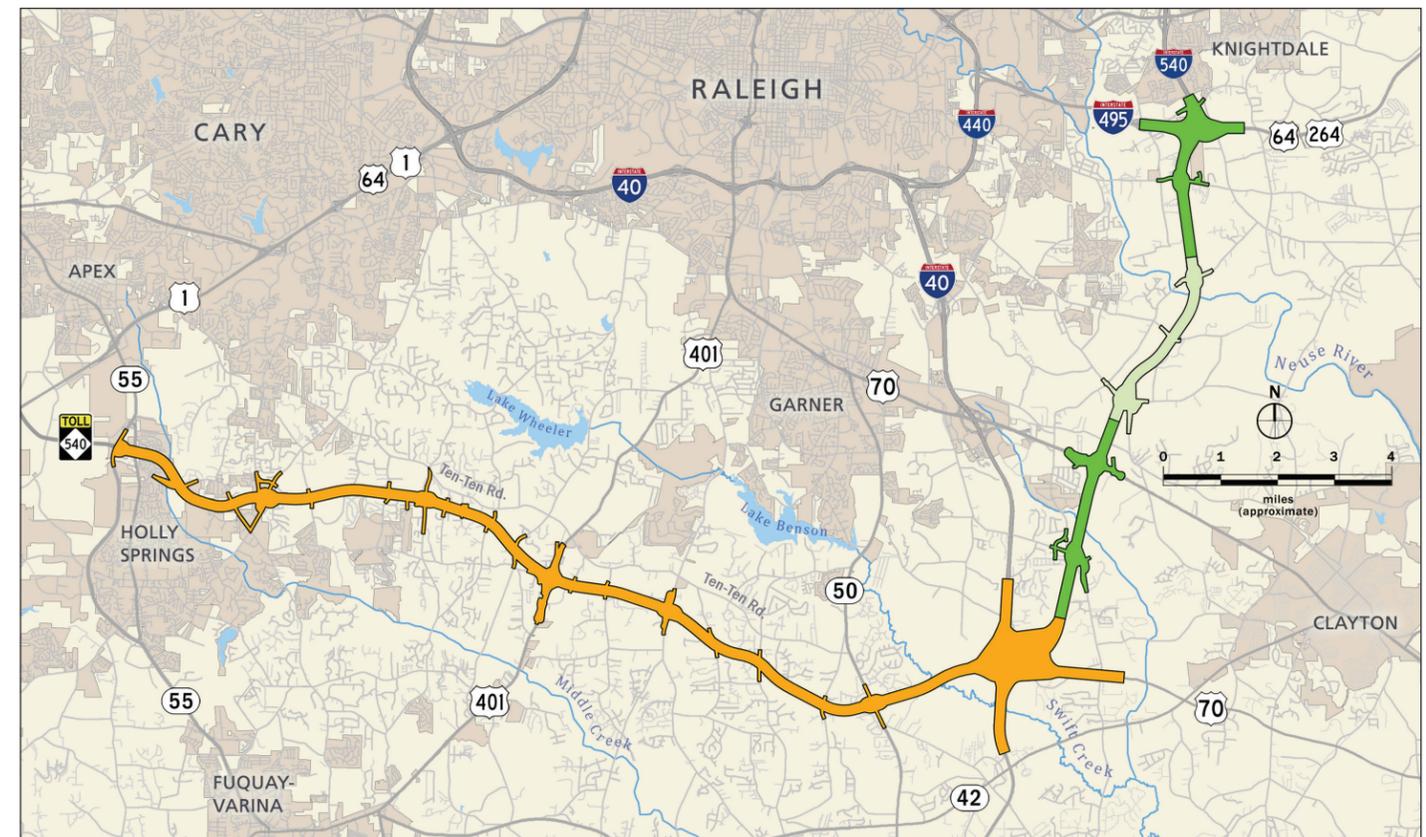
Color Coded Segments

- O G
- Preferred O G M G**
- O B T G
- O B G
- O G T L B G
- O R G
- O R M G
- O Pu Bl L G
- O Pu Bl L G M G
- O Pu Bl L B T G
- O Pu Bl L B G
- O Pu Bl L G T L B G
- O L G
- O L G M G
- O L B T G
- O L B G
- O L G T L B G

Key to Color Coded Segments O Orange R Red Pu Purple Bl Blue L Lilac G Green M Mint T Tan B Brown TL Teal

* The categories shown here are some of the more important ones for differentiating the DSAs. The complete matrix, with each category shown, can be found in the Draft Environmental Impact Statement

PREFERRED ALTERNATIVE (Orange, Green, Mint Segments)





Final Environmental Impact Statement now available for public review

The N.C. Department of Transportation and the Federal Highway Administration have published the Final Environmental Impact Statement (EIS) for the Complete 540 project. This document includes several topics, including information about the project's Preferred Alternative and the effects it is expected to have on the human, natural, and physical environments. It also contains a summary of the material contained in the Draft EIS, and a summary of the comments received.

The Final EIS is available for public review and comment. This document and its associated technical reports can be accessed on the project website, at www.ncdot.gov/projects/complete540. Printed copies of the Final EIS are available for review at several locations in the project area and elsewhere, as shown

on the back of this newsletter. NCDOT must receive comments on the Final EIS no later than February 1, 2018 to be included as part of the public record for the Final EIS comment period.

Public meetings

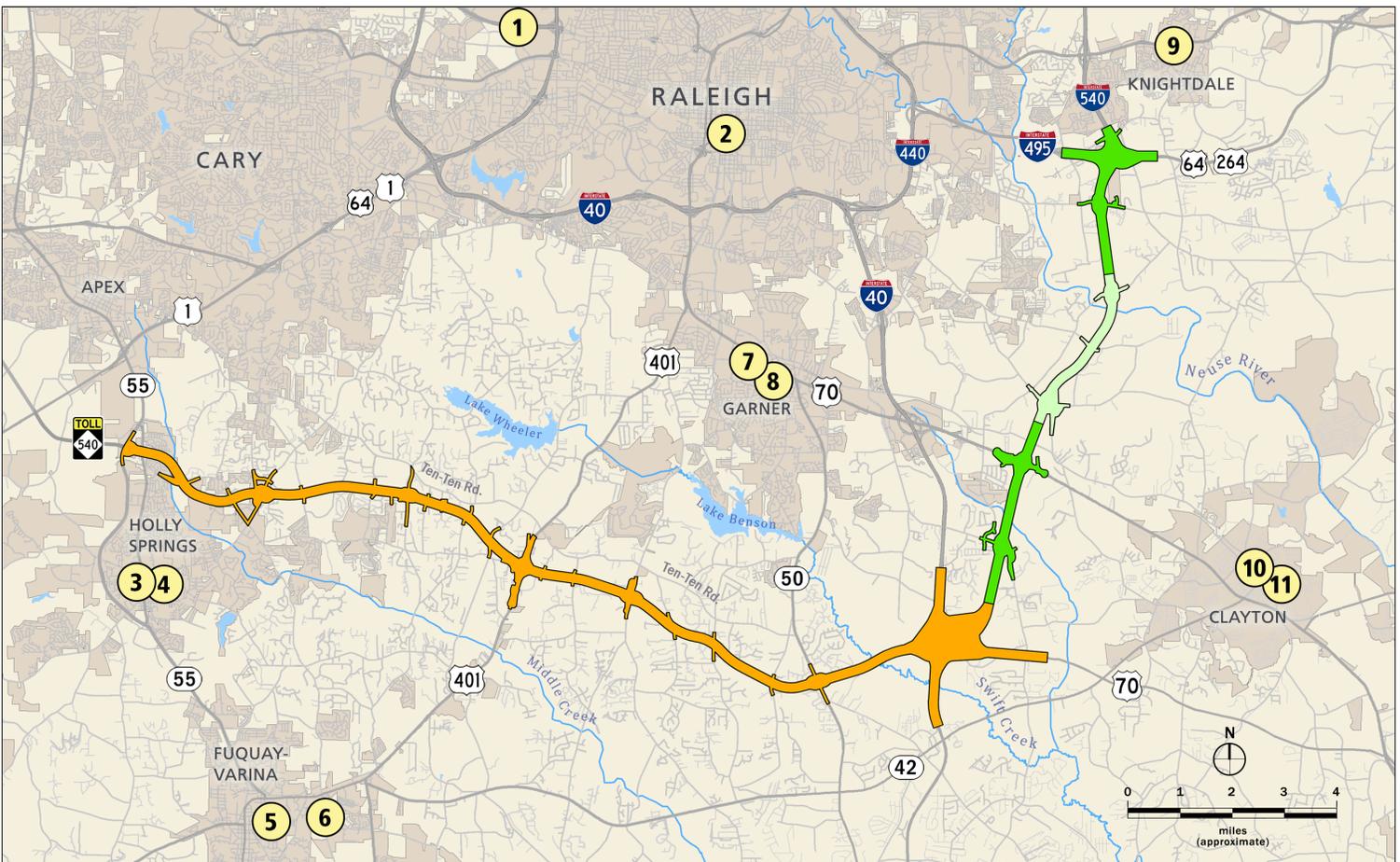
The NCDOT will hold open house-style meetings and one formal public hearing concerning the project's design plans. Announcements concerning the dates, times, and locations of these events will be made within the next several weeks. A printed announcement will be mailed to all individuals on the study mailing list. If you received a copy of this newsletter, you will also receive a copy of that announcement.

Si desea recibir una copia de este boletín en Español, por favor llame al número de teléfono 1-800-481-6494, o envíe un correo electrónico a complete540@ncdot.gov. Para obtener más información sobre estos servicios, por favor llame al número de teléfono 1-800-481-6494.



Complete 540

Triangle Expressway Southeast Extension
PO Box 30923
Raleigh, NC 27622



PREFERRED ALTERNATIVE

and Review Locations for the Final Environmental Impact Statement

The Preferred Alternative consists of the Orange Corridor segment and the Green/Mint/Green Corridor segments. The project's Final EIS is available for review at the locations shown here, until February 1, 2018.

Review Locations for the Final Environmental Impact Statement

Printed copies of the Final EIS are available for public review at these area libraries and government offices. An electronic version is available on the project website at www.ncdot.gov/projects/complete540/.

- 1 **NCDOT District Office–Wake County**
4009 District Drive
Raleigh, NC 27607
919-733-9499
- 2 **Capital Area Metropolitan Planning Organization**
421 Fayetteville Street, Suite 203
Raleigh, NC 27601
919-996-4400
- 3 **Holly Springs Community Library**
300 W. Ballentine Street
Holly Springs, NC 27540
919-577-1660
- 4 **Holly Springs Dept. of Planning & Zoning**
128 South Main Street
Holly Springs, NC 27540
919-557-3908
- 5 **Fuquay-Varina Community Library**
133 S. Fuquay Avenue
Fuquay-Varina, NC 27526
919-557-2788

- 6 **Fuquay-Varina Planning Department**
401 Old Honeycutt Road
Fuquay-Varina, NC 27526
919-552-1429
- 7 **Garner Planning Department**
900 7th Avenue
Garner, NC 27529
919-773-4449
- 8 **Southeast Regional Library**
908 7th Avenue
Garner, NC 27529
919-662-2250
- 9 **Knightsdale Planning Department**
950 Steeple Square Court
Knightsdale, NC 27545
919-217-2241
- 10 **Clayton Planning Department**
111 East Second Street
Clayton, NC 27520
919-553-1545

- 11 **Hocutt-Ellington Library**
100 S. Church Street
Clayton, NC 27520
919-553-5542

Please Note:

While representatives from each of these locations have agreed to make the Final EIS available for public review, the staff at these locations are not prepared to answer questions about this project. Questions may be sent to NCDOT using email, or Individuals with questions may call the project's toll-free hotline.

Email: complete540@ncdot.gov
Toll-free hotline: (800) 554-7849

Complete 540

Triangle Expressway Southeast Extension
PO Box 30923
Raleigh, NC 27622

Public Meetings Scheduled

Feb. 20 – Holly Springs High School
Feb. 21 – Barwell Road Community Center
Feb. 22 – Wake Tech Community College,
Southern Wake Campus

Please plan to attend!



Connecting people, products and places safely and efficiently with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina.



PLANNING STUDY & ENVIRONMENTAL IMPACT STATEMENT

NEWSLETTER 8 ■ FEBRUARY 2018

Public Meetings Scheduled for Complete 540 Project's Design Plans

The N.C. Department of Transportation will hold three open house public meetings and one formal public hearing concerning the design plans for the Complete 540 project's selected route (the study's Preferred Alternative). The design plans are more detailed than the mapping displayed at previous public meetings.

The three meetings will be held on consecutive nights, at the locations shown on the right. A formal public hearing will be held at the Wake Tech event on February 22. All who are interested are welcome to attend any of these events. NCDOT staff will be present at each of these meetings to discuss the design plans and receive comments on them.

The Complete 540 project would extend the Triangle Expressway from the N.C. 55 Bypass in Apex to U.S. 64/U.S. 264 (I-495) in Knightdale, completing the 540 Outer Loop around the greater Raleigh area.

Si desea recibir una copia de este boletín en Español, por favor llame al número de teléfono 1-800-481-6494, o envíe un correo electrónico a complete540@ncdot.gov. Para obtener más información sobre estos servicios, por favor llame al número de teléfono 1-800-481-6494.

Tuesday, February 20, 2018

Holly Springs High School
5329 Cass Holt Rd, Holly Springs 27540
Public Meeting: 6 PM to 8 PM
– No formal hearing on this date –

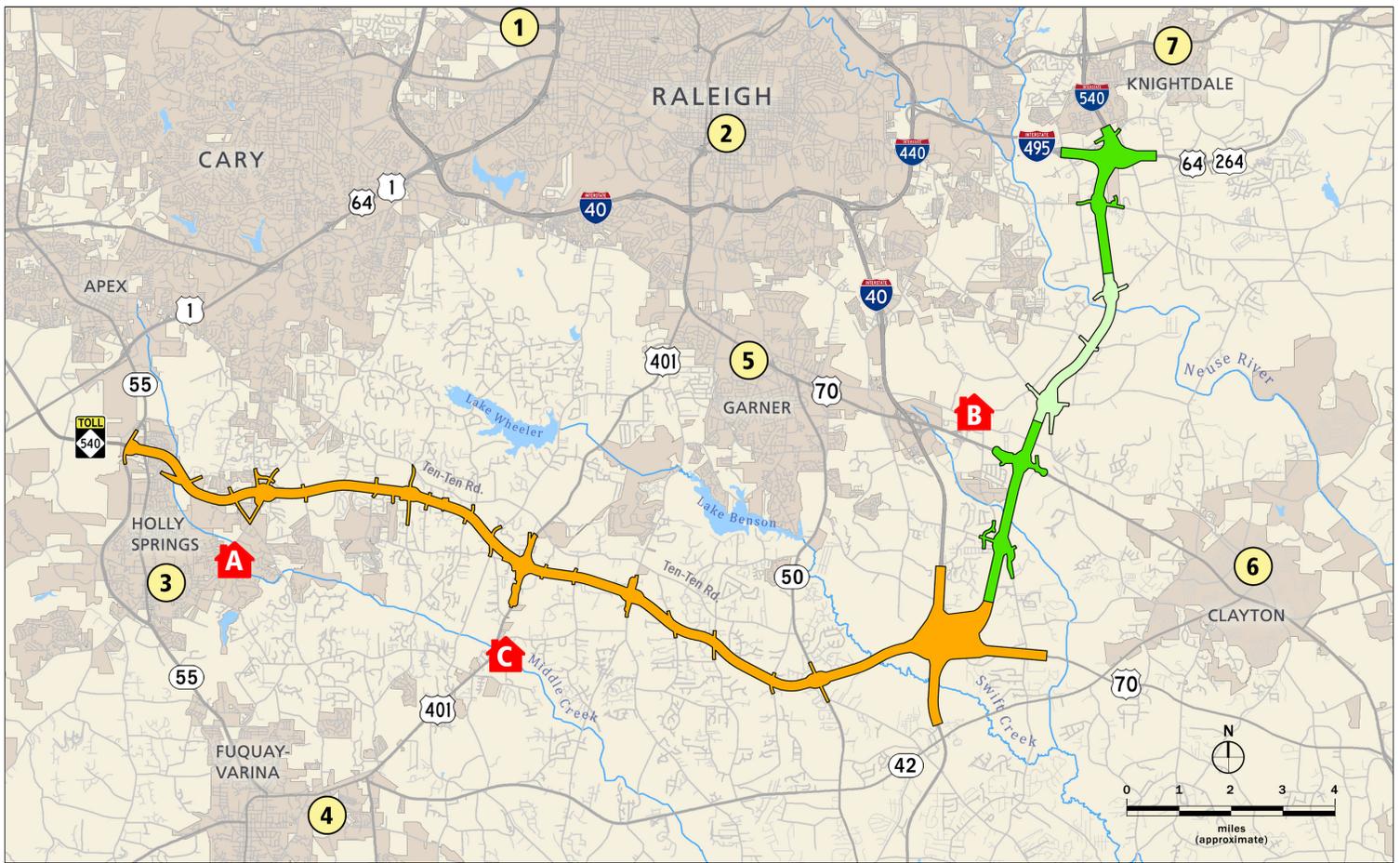
Wednesday, February 21, 2018

Barwell Road Community Center
5857 Barwell Park Drive, Raleigh 27610
Public Meeting: 6 PM to 8 PM
– No formal hearing on this date –

Thursday, February 22, 2018

Wake Tech Comm. College, Student Services, Bldg (L)
9101 Fayetteville Rd, Raleigh 27603
Public Meeting: 4 PM to 6:30 PM
– Formal Hearing: 7 PM

This hearing's presentation will be streamed live. For details, visit www.ncdot.gov/projects/complete540/ or www.ncdot.publicinput.com/complete540.



Preferred Alternative Map with plan review and public meeting locations

Copies of the design plans are available for public review at the locations listed below. These plans are smaller in size than the versions that will be on display at the upcoming public meetings.

- 1 **NCDOT District Office–Wake County**
4009 District Drive
Raleigh, NC 27607
919-733-9499
- 2 **Capital Area Metropolitan Planning Organization**
421 Fayetteville Street, Suite 203
Raleigh, NC 27601
919-996-4400
- 3 **Holly Springs Planning Department**
128 South Main Street
Holly Springs, NC 27540
919-557-3908
- 4 **Fuquay-Varina Planning Department**
401 Old Honeycutt Road
Fuquay-Varina, NC 27526
919-552-1429
- 5 **Garner Planning Department**
900 7th Avenue
Garner, NC 27529
919-773-4449
- 6 **Clayton Planning Department**
111 East Second Street
Clayton, NC 27520
919-553-1545

- 7 **Knightsdale Planning Department**
950 Steeple Square Court
Knightsdale, NC 27545
919-217-2241

Meeting Information

- A** **Tue., February 20, 2018, 6 to 8 PM**
Open House Only (no public hearing)
Holly Springs High School
5329 Cass Holt Road
Holly Springs, NC 27540
- B** **Wed., February 21, 2018, 6 to 8 PM**
Open House Only (no public hearing)
Barwell Road Community Center
5857 Barwell Park Drive
Raleigh, NC 27610
- G** **Thursday, February 22, 2018**
Open House – 4 to 6:30 PM
Formal Public Hearing – 7 PM
Wake Tech Community College
Student Services Building (Bldg. L)
9101 Fayetteville Road
Raleigh, NC 27603

Please Note

The staff members at the numbered locations are not prepared to answer questions about this project. Questions may be sent to NCDOT using email, or Individuals with questions may call the project's toll-free hotline.

Email: complete540@ncdot.gov

Toll-free hotline: (800) 554-7849

Formal Comments

Individuals can make oral statements about the preliminary design plans in a group setting during the Wake Tech public hearing. Formal oral statements can also be made using a tape recorder at each of the three public open house events. Written comments can be submitted at the meetings, at the hearing, or immediately following these meetings. All comments carry the same weight, regardless of how they are submitted.

The due date for written comments is:
March 23, 2018

In compliance with the Americans with Disabilities Act (ADA), NCDOT will provide auxiliary aids and services for disabled persons who wish to participate in these events. To receive special services, please contact the NCDOT by phone at 919-707-6085 or email complete540@ncdot.gov. Please provide adequate notice prior to the date of the meeting so that arrangements can be made.

APPENDIX H
Summaries of CAMPO Working Group Meetings



Complete 540 – Triangle Expressway Southeast Extension

Wake and Johnston Counties

STIP Nos. R-2721, R-2828, R-2829

MEETING SUMMARY

Date: September 5, 2013

Time: 2:00 p.m.

Place: Walnut Creek Wetland Center

Purpose: CAMPO Working Group Meeting

Attendees:

Name	Organization	Email Address
Ed Johnson	CAMPO	ed.johnson@campo-nc.us
Chris Lukasina	CAMPO	chris.lukasina@campo-nc.us
Shelby Powell	CAMPO	shelby.powell@campo-nc.us
Alex Rickard	CAMPO	alex.rickard@campo-nc.us
Diane Wilson	CAMPO	diane.wilson@campo-nc.us
John Byrne	Fuquay-Varina	jbyrne@fuquay-varina.org
Mike Sorensen	Fuquay-Varina	msorensen@fuquay-varina.org
Dick Sears	Holly Springs	dick.sears@hollyspringsnc.us
Stephanie Sudano	Holly Springs	stephanie.sudano@hollyspringsnc.us
Ronnie Williams	Town of Garner	rwilliams@garnernc.gov
Hardin Watkins	Town of Garner	hwatkins@garnernc.gov
Brad Bass	Town of Garner	bbass@garnernc.gov
Nancy McFarlane	City of Raleigh	nancy.mcfarlane@raleighnc.gov
Reed Huegerich	Town of Apex	reed.huegerich@apexnc.org
Jeff Triezenberg	Town of Knightdale	jeff.triezenberg@knightdalenc.gov
Tim Gardiner	Wake County	tim.gardiner@wakegov.com
R. H. Ellington	Town of Angier	cprice@angier.com
Durwood Stephenson	U.S. 70 Corridor Commission	durwood@sgcdesignbuild.com
Joe Milazzo	Regional Transportation Alliance	joe@letsgetmoving.org
John Studt *	Dawson & Associates	jstudt@dawsonassociates.com
Fred Skaer*	Dawson & Associates	fskaer@dawsonassociates.com
Cris Mulder	NCDOT Communications	cgmulder@ncdot.gov
Hollie Allen	NCDOT Communications	hgallen@ncdot.gov
Steve Abbott	NCDOT Communications	swabbott@ncdot.gov
Wally Bowman	NCDOT Division 5	wbowman@ncdot.gov

Name	Organization	Email Address
Eric Midkiff	NCDOT-PDEA	emidkiff@ncdot.gov
Mike Fendrick	Parsons Brinckerhoff	fendrick@pbworld.com
Kiersten Bass	HNTB	kbass@hntb.com
Roy Bruce	H.W. Lochner, Inc.	rbruce@hwlochner.com
Kristin Maseman	H.W. Lochner, Inc.	kmaseman@hwlochner.com

* - participated by telephone conference call

Summary

The purpose of this meeting was to convene the CAMPO 540 Working Group to discuss the status of the project, present the project schedule, and present the recommended Detailed Study Alternatives. Meeting discussions were led by Chris Lukasina, Eric Midkiff, and Roy Bruce. All meeting participants were provided a handout of project related materials prior to the meeting and at the meeting. The following summarizes the meeting.

- NCDOT has restarted the project and is developing recommendations for the Detailed Study Alternatives (DSAs). The recommended DSAs will be presented to the resource and regulatory agencies at a meeting on September 19, 2013 and to the public at workshops in October 2013. NCDOT will then use agency and public comments to finalize the recommended DSAs by the end of this year.
- The recommended DSAs include the following color-coded corridors: Orange, Red, Lilac (east of Sauls Road only), Purple-Blue-Lilac, Green, Mint Green, Brown, Tan and Teal.
- The Lilac Corridor arose during attempts to find other routes that could minimize wetland impacts similar to the Red Corridor.
- The Purple-Blue-Lilac Corridor includes portions of the previously-eliminated Purple and Blue Corridors. With the development of the Lilac Corridor, it was found that connecting the Purple Corridor to the Blue Corridor, and then to the new Lilac Corridor, created an option that minimizes wetland impacts similar to the Red Corridor. For this reason, these portions of the Purple and Blue Corridors were reintroduced into consideration.
- The next Working Group meeting is tentatively scheduled for October 3. The next meeting after that will likely be in January 2014, to discuss the outcomes of the public meetings and agency meetings and the finalization of the DSAs. After that, the Working Group meetings will be held on an as-needed basis.

The following are questions asked and comments made by meeting attendees, followed by the project team's responses.

- Did the concept for the Plum Corridor include elevation over the wetlands surrounding Swift Creek?
Response: The evaluation of the Plum Corridor was done in the same manner as all other preliminary corridor concepts. Bridging of streams and wetlands was not considered in detail at this stage of evaluation of corridor concepts. This will be considered in more detail during development of functional designs for the DSAs.
- Are the various types of impacts weighted when evaluating alternatives?
Response: No weights are assigned to particular impact categories. Various types of impacts are considered on a project by project basis.

- If the Red Modified Corridor is not part of the DSAs, does that mean there will be no Section 4(f) avoidance alternatives?

Response: Other corridors under consideration that would not impact Section 4(f) properties would be avoidance alternatives compared to the Red Corridor.

- Will the impact numbers change for the project alternatives during the study?

Response: As more detailed and more accurate data are gathered, the impact numbers will also be refined.

- Fuquay-Varina still does not support the Purple and Blue Corridors due to their impacts on the community.

Response: Comment noted.

- Holly Spring remains in strong support of the Orange Corridor and would like to see the project built there.

Response: Comment noted.

- Why isn't a connection between Purple/Blue and Orange part of the DSAs?

Response: The rationale behind reconsidering Purple/Blue was that, by connecting to the Lilac Corridor, they create an alignment that minimizes wetland impacts similar to the Red Corridor. The alignment connecting Purple/Blue to Orange does not provide this advantage and therefore still doesn't provide any relative advantages over other options under consideration. The rationale used to eliminate the Purple to Blue to Orange Corridors remains valid.

- Is it possible that the agencies will want to add new alternatives into consideration?

Response: While possible, this is very unlikely.

- The project FAQ will be helpful in explaining to each community's residents the rationale behind the new and reintroduced corridors.

Response: NCDOT has provided this information to the local governments and is also preparing project videos that could also help respond to residents' questions.

- The local governments would like to have electronic files for each of the mapped recommended DSAs (shapefiles).

Response: The project team will provide this.

- Garner remains steadfast in their opposition to the Red Corridor due to impacts on the community.

Response: Comment noted.

- Will comments provided by the public earlier in the study continue to be considered, or do residents need to resubmit their comments?

Response: All comments provided since the beginning of the project study in 2009 will be considered and are part of the project record.

Action Items

- Project team to provide shapefiles of recommended DSAs to CAMPO for providing to local governments.
- Next Working Group meeting tentatively scheduled for October 3, 2013 at 2:00 PM.



Complete 540 – Triangle Expressway Southeast Extension

Wake and Johnston Counties

STIP Nos. R-2721, R-2828, R-2829

MEETING SUMMARY

Date: October 3, 2013

Time: 2:00 p.m.

Place: Capital Area Transit Operations Facility

Purpose: CAMPO Working Group Meeting

Attendees:

Name	Organization	Email Address
Ed Johnson	CAMPO	ed.johnson@campo-nc.us
Chris Lukasina	CAMPO	chris.lukasina@campo-nc.us
Shelby Powell	CAMPO	shelby.powell@campo-nc.us
Kenneth Withrow	CAMPO	kenneth.withrow@campo-nc.us
Alex Rickard	CAMPO	alex.rickard@campo-nc.us
Diane Wilson	CAMPO	diane.wilson@campo-nc.us
Darren Jackson	NC House of Representatives	darren.jackson@ncleg.net
John Byrne	Fuquay-Varina	jbyrne@fuquay-varina.org
Mike Sorensen	Fuquay-Varina	msorensen@fuquay-varina.org
Dick Sears	Holly Springs	dick.sears@hollyspringsnc.us
Stephanie Sudano	Holly Springs	stephanie.sudano@hollyspringsnc.us
Ronnie Williams	Town of Garner	rwilliams@garnernc.gov
Hardin Watkins	Town of Garner	hwatkins@garnernc.gov
Brad Bass	Town of Garner	bbass@garnernc.gov
Eric Lamb	City of Raleigh	eric.lamb@raleighnc.gov
Gerald Daniel	City of Raleigh	gerald.daniel@raleighnc.gov
Jason Myers	City of Raleigh	jason.myers@raleighnc.gov
Reed Huegerich	Town of Apex	reed.huegerich@apexnc.org
Tim Bailey	Town of Cary	tim.bailey@townofcary.org
Russ Killen	Town of Knightdale	russellkillen@parkerpoe.com
Jeff Triezenberg	Town of Knightdale	jeff.triezenberg@knightdalenc.gov
Tim Gardiner	Wake County	tim.gardiner@wakegov.com
R. H. Ellington	Town of Angier	cprice@angier.com

Name	Organization	Email Address
Joe Milazzo	Regional Transportation Alliance	joe@letsgetmoving.org
Fred Skaer*	Dawson & Associates	fskaer@dawsonassociates.com
Rupal Desai	NCDOT	rpdesai@ncdot.gov
Andie Cozzarelli	NCDOT	acozzarelli@ncdot.gov
Steve Abbott	NCDOT Communications	swabbott@ncdot.gov
Wally Bowman	NCDOT Division 5	wbowman@ncdot.gov
Jennifer Harris	NCDOT-PDEA	jhharris1@ncdot.gov
Mike Fendrick	Parsons Brinckerhoff	fendrick@pbworld.com
Roy Bruce	H.W. Lochner, Inc.	rbruce@hwlochner.com
Kristin Maseman	H.W. Lochner, Inc.	kmaseman@hwlochner.com

* - participated by telephone conference call

Summary

The purpose of this meeting was to convene the CAMPO 540 Working Group to discuss the status of the project, review the September 2013 Interagency Meeting, and discuss the upcoming public meetings. All meeting participants were provided a handout of project related materials prior to the meeting and at the meeting. The following summarizes the meeting:

- The recommended Detailed Study Alternatives (DSAs) were presented to the resource and regulatory agencies at an Interagency Meeting held on September 19, 2013. Agency representatives made few comments at the meeting. The agencies have been asked to submit written comments on the Draft Alternatives Development and Analysis Report by October 21.
- Following the distribution of the September 2013 project newsletter to property owners in the study area, numerous residents have registered comments via hotline telephone calls and emails. Most of the comments express concern about the introduction of the Lilac Corridor and the reintroduction of the Purple/Blue Corridor. In response to a question, Ms. Maseman stated that the distribution of the comments thus far was approximately 50% against the Purple Corridor and 50% in opposition to the Red Corridor. *Post meeting clarification - 57% oppose Purple/Blue, 22% oppose Lilac, 13% oppose Red, and the remaining 8% oppose other aspects of the project.*
- The public meetings will be held on October 14, 15, and 16 at three locations in the project area. They will use an open house format, with no formal presentation or public hearing testimony.
- The project team showed a draft video presentation that explains the current status of the project and the recommended DSAs. The final version of the video will be shown at the public meetings.
- After the public meetings and after the agencies submit written comments on the recommended DSAs, the project team will review and summarize the comments. The project team will present a summary of this information at an Interagency Meeting to be held later this year. Following this meeting, the DSAs should be finalized. The project team can then conduct the required technical studies and then prepare the Draft Environmental Impact Statement.
- The next CAMPO Working Group meeting likely will be scheduled for January 2014, after the DSAs have been finalized.

The following are questions asked and comments made by meeting attendees, followed by the project team's responses.

Video Presentation

- Consider replacing the current footage of traffic congestion on US 64 with footage of traffic congestion on a roadway segment closer to the recommended DSAs, such as Ten Ten Road east of US 1.

Response: The project team will try to shoot additional footage and incorporate it into the video prior to the public meetings.

- Consider taking out the word “recommended” when discussing recommended DSAs.

Response: In each case, the video narration says that the particular corridor is recommended to be studied in detail. This reflects the most accurate status of these corridors. In addition, this description has been used consistently throughout all project materials (newsletter, FAQ, website, press releases, meeting handout, etc.). For consistency, this description will remain in the video.

- Omit specific references to Randleigh Farm. Consider mentioning that there are two school sites there.

Response: The project team will replace the specific references with “planned public development.” The video does not discuss potential impacts of other corridors, so specific references to the school sites will not be added.

- More transition information between what happened in late 2010 and now might be helpful.

Response: The project was on hold from March 2011 until August 2013. Project representatives will be available at the public meetings to discuss project efforts during the time the project was paused.

- More information about the project schedule between recommending DSAs and selection of the Preferred Alternative might be helpful.

Response: More information about the schedule is provided in the meeting handout.

- Correct the project email address and make sure the Western Wake Freeway is noted as NC 540 rather than I-540.

Response: These corrections will be made.

General

- Does NCDOT also want comments from the project area municipalities before November 15?

Response: NCDOT encourages municipalities to submit comments by November 15 but previous comments/resolutions remain part of the project record and additional comments can be submitted at any time. If the municipalities would like additional time to submit comments before NCDOT holds the next agency meeting, they can let NCDOT know. Given the current recommended DSAs, some municipalities may wish to send in revised or new resolutions and comments.

- Why isn't a connection between Purple/Blue and Orange part of the recommended DSAs?

Response: The rationale behind reconsidering Purple/Blue was that, by connecting to the Lilac Corridor, they create an alignment that minimizes wetland impacts similar to the Red Corridor. The alignment connecting Purple/Blue to Orange does not provide this advantage and therefore still doesn't provide any relative advantages over other options under consideration—it requires many more relocations than the alignment following the entire Orange Corridor. The rationale used to previously eliminate the Purple to Blue to Orange Corridors remains valid.

- Will the current federal government shutdown affect the project schedule by delaying jurisdictional field review meetings with USACE?

Response: This work is not currently on the project's critical path, so it is unlikely to affect the schedule right now.

- Once a decision about the preferred alternative is final, what happens if there is no funding for right of way acquisition and construction?

Response: The Record of Decision (ROD), which concludes the environmental study and finalizes selection of the Preferred Alternative, is valid for three years after it is signed. If subsequent phases have not yet started after those three years have passed, NCDOT would need to complete a reevaluation of the Environmental Impact Statement to determine if a Supplemental Environmental Impact Statement is needed before proceeding with acquisition and construction. Current FHWA policy discourages approval of RODs if there is no funding designated for subsequent phases.

Action Items

- Project team to edit video presentation according to comments described above.



Interagency Project Meeting

MEETING MINUTES FINAL

Date: December 12, 2013
11:45 a.m. – 12:45 p.m.
NCDOT Century Center – Structure Design Conference Room C

Project: STIP R-2721, R-2828, and R-2829 – Complete 540, Triangle Expressway Southeast Extension

Attendees:

George Hoops, FHWA	Wally Bowman, NCDOT – Division 5
Clarence Coleman, FHWA	Nick Lineberger, NCDOT – TMSD
Christopher Militscher, USEPA (via telephone)	Tris Ford, NCDOT – HES
Eric Alsmeyer, USACE	Deanna Riffey, NCDOT – NES
Jean Gibby, USACE	Matt Lauffer, NCDOT - Hydraulics
Thomas Brown, USACE	Kyle Pleasant, NCDOT – Utilities
Gary Jordan, USFWS	Donald Proper, NCDOT – Utilities
Rob Ridings, NCDWR	Mark Staley, NCDOT – REU
Travis Wilson, NCWRC	Kiersten Bass, HNTB
Amy Simes, NCDENR	Fred Skaer, Dawson & Associates (via telephone)
Renee Gledhill-Early, SHPO (via telephone)	John Studt, Dawson & Associates (via telephone)
Dolores Hall, NCOSA (via telephone)	Roy Bruce, Lochner
Ed Johnson, CAMPO (via telephone)	Kristin Maseman, Lochner
Eric Midkiff, NCDOT – PDEA	Jeff Schlotter, Lochner
Jennifer Harris, NCDOT – PDEA	Michael Wood, Catena Group
Richard Hancock, NCDOT - PDEA	Tim Savidge, Catena Group
Tony Houser, NCDOT – Roadway Design Unit	Nancy Scott, Catena Group
Tim Little, NCDOT – Division 4	

Presentation Materials:

- Agenda
- Final Interagency Project Meeting Minutes – September 19, 2013
- Handout 16 – Public Meetings - Summary and Comment Analysis
- Handout 17 – Revised Draft Alternatives Development and Analysis Report
- Handout 18 – Detailed Study Alternatives
- Handout 19 – Section 6002 Coordination Plan Update
- Presentation

Purpose:

Present project status update and summary of public comments; discuss revised Draft Alternatives Development and Analysis Report; discuss recommended Detailed Study Alternatives.

General Discussion:

The following information was discussed at the meeting:

- **Project Status Update:** Lochner provided an update on project activities that have occurred since the Interagency Meeting in September 2013, when the revised Draft Alternatives Development Analysis and Report and the recommended Detailed Study Alternatives (DSAs) for

the project were discussed. Agencies were then asked to submit comments about the revised report and the recommended DSAs. The CAMPO Working Group met on October 3 to discuss the recommended DSAs. Three public meetings were held on October 14, 15, and 16 to present the recommended DSAs and to solicit public comments. To the extent possible, work including some field investigations and preliminary design, has continued on the project during this period in order to expedite the overall project schedule.

- **Public Meetings – Summary and Comment Analysis (Handout 16):** The three public meetings in October were very well attended and there has been extensive public comment about the recommended DSAs. The input from these meetings was combined with input received from the public in late 2010 and early 2011 on preliminary alternatives. To date, public comments about project alternatives reveal strong support for the project and the Orange Corridor, and strong opposition to the Red, Purple, Blue, and Lilac Corridors. Several local governments have also passed resolutions supporting the Orange Corridor and opposing others.
- **Revised Draft Alternatives Development and Analysis Report (Handout 17):** Four agencies responded to NCDOT's request for comments on the revised Draft Alternatives Development and Analysis Report; three agencies did not submit responses. The agency comments either explicitly or implicitly support proceeding with the recommended DSAs. None of the comments request eliminating, adding, or modifying any alternatives.
- **Detailed Study Alternatives (Handout 18):** Lochner reviewed the ten color-coded corridors that are the building blocks for the DSAs. These ten color-coded corridors can be combined to form 17 unique end-to-end routes that make up the DSAs. Based on the preliminary data available for the project, the previously recommended DSAs remain as viable feasible alternatives that appear to have sufficient merit to warrant further evaluation and study as part of the Draft Environmental Impact Statement. Therefore, all 17 of the previously recommended DSAs will be carried forward in the environmental study. Should additional project information become available as studies are completed that substantially alters the merits of any alternative, this decision could be reevaluated at that time.
- **Section 6002 Coordination Plan Update (Handout 19):** Lochner reviewed changes that have been made to the Section 6002 Coordination Plan for this project since its previous January 2011 version. Changes include an update to the project schedule and primary agency contacts.
- **Update on Dwarf Wedgemussel Studies:** The Catena Group reviewed the work that has been completed to date on the Dwarf Wedgemussel (DWM) studies requested by USFWS. This work is being documented in a technical report that will be submitted to NCDOT in February or March of 2014. The studies have included a review of existing conservation measures established for DWM as part of other projects in the Swift Creek watershed, characterization of the Swift Creek watershed with respect to DWM habitat, and an assessment of historical trends and current viability of the species in Swift Creek.
- **Discussion:**
HPO reminded the group that their response letter to the revised Draft Alternatives Development and Analysis Report stated that the report did not include any mention of archaeological studies for the DSAs. NCDOT will indicate in the final report that the required archaeological studies will be completed and documented in the Draft Environmental Impact Statement.

USEPA asked for clarification on why the “bulbouts” at different interchanges on the map of DSAs are different sizes. NCDOT explained that the bulbout areas correspond to the wider study corridor around the interchange areas and vary depending on the roadway geometry, existing facilities, and other constraints at each interchange area. The bulbout areas do reflect the relative magnitude of each interchange area. In particular, the size of the interchange areas at 540, I-40, and the US 70 Bypass were questioned since they are substantially larger than other

interchanges. The geometry of ramp movements in a freeway to freeway high speed interchange require more land area than a typical interchange. At 540, I-40, and US 70 Bypass there are three freeways converging at a single interchange.

NCDOT Utilities inquired about the basis of the preliminary wetland impacts along the Purple and Blue Corridors. These impacts are based on National Wetlands Inventory mapping data and the 300 foot preliminary right of way within the larger study corridor.

The NCDOT suggested that the agencies would not require any additional time (as described in Section 8.5 of the Section 6002 Coordination Plan) to review the Draft Alternatives Development and Analysis Report and the recommended DSAs in light of the public and local government comments made since the October public meetings. The reason provided by NCDOT included that the public comments remain consistent with those previously provided and therefore would not cause the need to make additional adjustments to the DADAR. USACE noted agreement that no additional review would be necessary based on the information presented during this meeting and no other agencies objected.

No agencies raised any objections to proceeding with the 17 end-to-end alternatives as DSAs, and no agencies asked for any additional alternatives to be considered.

Based on today's discussion, past Issues of Concern (per the Section 6002 Coordination Plan) have been resolved and that there are no outstanding issues regarding the project purpose and need, range of alternatives, alternatives screening, or DSAs. Additionally, no Issues of Concern relative to these four areas of the study were raised at the meeting.

USEPA informed the group that there is a new Executive Order (EO) pertaining to the impact of federal projects on children's health, and suggested that NCDOT seek guidance from FHWA regarding the need to address the EO in the Draft Environmental Impact Statement (EIS).

Previous Action Items:

- Agency review comments on the September 2013 Draft Alternatives Development and Analysis Report due to NCDOT by October 21, 2013 (revised to November 4, 2013). (*Completed*)
- NCDOT will provide a status update on mussel surveys at a future interagency meeting. (*Completed*)
- Impact tables to be adjusted to reflect no historic resource impacts and note that Section 4(f) impacts that are listed are for parks/recreational areas. (*Completed*)
- Add impacts to ORW and HQW to tables, if appropriate. There are none of these resources in the study area. (*Completed*)

New Action Items:

- NCDOT will indicate in the final Alternatives Development Analysis and Report that the required archaeological studies will be completed and documented in the Draft Environmental Impact Statement.
- Lochner will investigate the requirements of the new EO pertaining to the impact of federal projects on children's health and work with NCDOT and FHWA regarding the appropriate method for addressing it.

Next Steps:

- Public announcement of Detailed Study Alternatives
- CAMPO Working Group meeting – January 9, 2014
- Complete technical base studies on DSAs
- Prepare Draft Environmental Impact Statement



Complete 540 – Triangle Expressway Southeast Extension

Wake and Johnston Counties

STIP Nos. R-2721, R-2828, R-2829

MEETING SUMMARY FINAL

Date: November 19, 2014

Time: 2:00 p.m.

Place: CAMPO Office (One Bank of America Plaza)

Purpose: CAMPO Complete 540 Working Group Meeting

Attendees:

Name	Organization	Email Address
Chris Lukasina	CAMPO	chris.lukasina@campo-nc.us
Shelby Powell	CAMPO	shelby.powell@campo-nc.us
Kenneth Withrow	CAMPO	kenneth.withrow@campo-nc.us
Alex Rickard	CAMPO	alex.rickard@campo-nc.us
Ronnie Williams	Town of Garner	rwilliams@garnernc.gov
Hardin Watkins	Town of Garner	hwatkins@garnernc.gov
Reed Huegerich	Town of Apex	reed.huegerich@apexnc.org
Chris Hills	Town of Knightdale	chris.hills@knightdalenc.gov
John Byrne	Town of Fuquay-Varina	jbyrne@fuquay-varina.org
Adam Mitchell	Town of Fuquay-Varina	amitchell@fuquay-varina.org
Danny Johnson	Town of Fuquay-Varina	djohnson@fuquay-varina.org
Todd Delk	City of Raleigh	todd.delk@raleighnc.gov
Tim Gardiner	Wake County	tim.gardiner@wakegov.com
Joe Milazzo	Regional Transportation Alliance	joe@letsgetmoving.org
Donnie Brew	FHWA	donnie.brew@dot.gov
Clarence Coleman	FHWA	clarence.coleman@dot.gov
Jennifer Harris	NCDOT-PDEA	jhharris1@ncdot.gov
Eric Midkiff	NCDOT-PDEA	emidkiff@ncdot.gov
Steve Abbott*	NCDOT Communications	swabbott@ncdot.gov
Rupal Desai	NCDOT - TPB	rpdesai@ncdot.gov
Fred Skaer*	Dawson & Associates	fskaer@dawsonassociates.com
John Studt*	Dawson & Associates	jstudt@dawsonassociates.com
Roy Bruce	H.W. Lochner, Inc.	rbruce@hwlochner.com
Kristin Maseman	H.W. Lochner, Inc.	kmaseman@hwlochner.com
Kiersten Bass	HNTB	kbass@hntb.com

*participated by telephone conference call

Summary

The purpose of this meeting was to convene the CAMPO Complete 540 Working Group to discuss the status of the project, review draft results of the project's completed technical studies, and to discuss the project schedule. Each meeting participant was provided a handout of project-related materials. The following summarizes the meeting:

- The last CAMPO Complete 540 Working Group meeting was held on January 9, 2014. At that meeting, the study team presented the project's Detailed Study Alternatives (DSAs).
- Since then, the study team has completed preliminary functional designs for the project's DSAs and has completed several technical studies and accompanying summary reports. The remaining technical studies are nearing completion. NCDOT anticipates having a published Draft Environmental Impact Statement (EIS) in the spring of 2015, holding the public hearings in the summer of 2015, with the Final EIS in the spring 2016, and the Record of Decision in the summer of 2016.
- Completion of the project's jurisdictional verification for natural resources has allowed the study team to prepare draft updated impact numbers for wetlands and streams. These numbers will change, however, after completion of the avoidance and minimization strategies that are being incorporated into the preliminary functional designs as a result of current interagency coordination on bridging decisions.
- The study team met with the environmental resource and regulatory agencies on November 13, 2014, to discuss NCDOT's suggestions about bridging of hydraulic sites along the DSAs. The agency team came to an agreement on the hydraulic conveyance to be used at most of the sites. This is being followed by a field review meeting scheduled for December 2nd to come to an agreement on the remaining four sites.
- After an iterative review process with NCDOT, the Draft EIS will be reviewed by FHWA, both at the local level, for technical review, and at the regional level, for legal review. FHWA has agreed to review the document in sections to help expedite the document review process.
- If the results of the project's technical studies support a DSA that provides a clear option for reducing the project's overall impacts, NCDOT may be able to recommend a Preferred Alternative in the Draft EIS. However, the Preferred Alternative will not be finalized until after the Draft EIS is published, NCDOT holds Public Hearings, the study team reviews all public and agency comments, and the agency team meets to consider all the impact data and comments.
- The next CAMPO Complete 540 Working Group meeting likely will be scheduled for the spring of 2015, after completed impact data are available for all technical studies and before publication of the Draft EIS.

Action Items

- There were no action items from this meeting.

APPENDIX I
Local Resolutions and State Legislation

RESOLUTION TO SUPPORT A STUDY OF TOLL FUNDING TO ACCELERATE THE CONSTRUCTION OF I-540 IN SOUTHWESTERN WAKE COUNTY

WHEREAS the growth in western and southern Wake County and surrounding areas has already overwhelmed the existing highway system in the southern Triangle; and

WHEREAS the proposed western and southern sections of the I-540 Wake freeway loop will provide a high speed, signal-free travel option that will save time, money, and lives throughout the region and preserve economic competitiveness in western and southern Wake County; and

WHEREAS increasing demands on scarce transportation funds is an unfortunate reality that has delayed the western section of I-540 by years and the southern section of I-540 indefinitely; and

WHEREAS the North Carolina General Assembly created the NC Turnpike Authority in October 2002 in order to speed the implementation of needed transportation improvements and to help meet more transportation needs than NCDOT could otherwise afford; and

WHEREAS the potential may exist to accelerate the opening of the entire western Wake freeway – to the US 1 freeway and the Holly Springs bypass – by several years, even with the additional \$8 million devoted to the project in the recent federal highway legislation; and

WHEREAS the potential may also exist to accelerate the opening of the southern Wake freeway – to I-40 and the Clayton freeway bypass – by 15 or more years, perhaps a generation faster; and

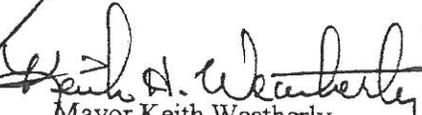
WHEREAS there needs to be consideration and study of the potential for toll user fees to leverage our existing Highway Trust Fund loop funding authorizations to gain more control over our mobility future by reducing uncertainties in funding timetables for I-540;

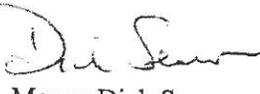
BE IT THEREFORE RESOLVED that the undersigned members of the elected and business community request that the NC Turnpike Authority conduct a detailed feasibility study to determine the true viability of, and expected timesavings associated with, accelerating the construction of both the western and southern portions of the I-540 Wake freeway loop as two phases of a single potential Turnpike project in southwestern Wake County.

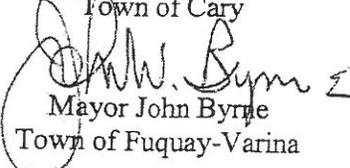
BE IT FURTHER RESOLVED that the undersigned members of the elected and business community will require assurances that this feasibility study include the following considerations: that the provisions of General Statute § 136-89.196 – which require the removal of tolls upon fulfillment of the Turnpike's revenue bonds – are adhered to, and that toll revenue generated by this toll road be used exclusively for pay down of the Turnpike's revenue bonds associated with this Turnpike project.

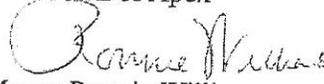
Signed,


Mayor Ernie McAlister
Town of Cary


Mayor Keith Weatherly
Town of Apex


Mayor Dick Sears
Town of Holly Springs


Mayor John Byrne
Town of Fuquay-Varina


Mayor Ronnie Williams
Town of Garner


Joe Freddoso, 2005-06 Chair
Regional Transportation Alliance



TOWN OF

Holly Springs

Resolution No.: 10-27

Date Adopted: Sept. 21, 2010

RESOLUTION STATING THE TOWN OF HOLLY SPRINGS TOWN COUNCIL'S POSITION REGARDING THE ALIGNMENT OF THE SOUTHERN PHASE OF I-540

WHEREAS, on May 6, 2008, the Holly Springs Town Council adopted Resolution 08-26 expressing its fervent support for the construction of the I-540 Western Wake Expressway; and

WHEREAS, the proposed I-540 Western Wake Expressway has been a fundamental transportation facility underpinning for more than 20 years of local land use and transportation decisions of the Town of Holly Springs and other local governments of southwestern Wake County; and

WHEREAS, the Town of Holly Springs historically has utilized the protected I-540 corridor proposed in earlier designs to plan for both existing and future development in Town; and

WHEREAS, the change to relocate the corridor south to connect to Bass Lake Road would have an adverse impact on our community, due to access issues and the cost of relocating both residential and commercial properties from said corridor; and

WHEREAS, additional traffic generated on Holly Springs Road would negatively impact the area around a proposed interchange and Holly Springs Road would not be adequate to handle the increased traffic volume; and

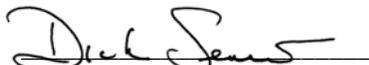
WHEREAS, the delay of the construction of the I-540 Western Wake Expressway is particularly injurious to the Town of Holly Springs when weighed against the much-needed NC 55 improvements that have not been constructed in anticipation of a 2008 start of I-540 Western Wake Expressway construction;

NOW THEREFORE BE IT RESOLVED that the Town Council of the Town of Holly Springs hereby expresses its adamant opposition to any option for the construction of the I-540 Southern Wake Expressway that utilizes Bass Lake Road as a potential alternative for the southern phase of I-540; and

BE IT FURTHER RESOLVED that the Town Council supports use of the original protected corridor design as illustrated in orange on N.C. Transit Authority maps as the preferred choice for the development and construction of the I-540 Southern Wake Expressway.

Adopted this, the 21st day of September, 2010.

ATTEST:


Dick Sears, Mayor


[X] Joni Powell, CMC, Town Clerk
[] Linda R. Harper, CMC Deputy Town Clerk

Office of the Mayor

RESOLUTION NO. (2010) 2072

**A RESOLUTION STATING THE TOWN OF GARNER TOWN COUNCIL'S POSITION
REGARDING THE ALIGNMENT OF THE SOUTHERN PHASE OF I-540**

WHEREAS, the proposed I-540 Expressway has been a fundamental transportation facility underpinning for more than 20 years of local land use and transportation decisions of the Town of Garner and other local governments of Wake County;

WHEREAS, the Town of Garner historically has utilized the protected I-540 corridor proposed in earlier designs to make key planning decisions for both existing and future development in Garner; and

WHEREAS, the proposed change in plans to relocate the corridor away from its previously designated route will have an adverse impact on the Garner communities; and

WHEREAS, the "red" route shown on Turnpike Authority maps with a course north of Lake Benson is a very poor land use decision that will cause tremendous disruption to existing homes and businesses; and

WHEREAS, numerous Garner homeowners and landowners have relied upon the protected corridor route (orange) for many years as they have made investment decisions. A change to the planned route will be burdensome, chaotic, and unfair; and

NOW THEREFORE, BE IT RESOLVED, the Town of Garner would like to see the Southeast Extension of Triangle Expressway constructed, however, the Town cannot support a route north of Lake Benson; and

BE IT FURTHER RESOLVED that the Town Council supports use of the original protected corridor design as illustrated in orange on the N.C. Transit Authority maps as the preferred choice for the development and construction of the I-540 Triangle Expressway Southeast Extension.

Adopted this 4th day of October 2010.



Mayor

ATTEST:



Town Clerk

A RESOLUTION BY THE COUNTY OF WAKE REGARDING THE TRIANGLE EXPRESSWAY SOUTHEAST EXTENSION

WHEREAS, the proposed Triangle Expressway Southeast Extension has been a fundamental transportation facility underpinning for more than 20 years of local land use and transportation decisions for Wake County and other local governments of Wake County;

WHEREAS, Wake County historically has utilized the protected corridor proposed in earlier designs to make key planning decisions for both existing and future development in Wake County; and

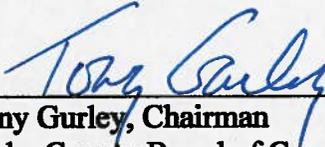
WHEREAS, the proposed alternative alignments to relocate the corridor away from its previously designated and protected route will have an adverse impact on communities in Wake County; and

WHEREAS, the proposed alternative alignments illustrated as "blue", "purple", and "red" on N.C. Turnpike Authority maps will have a greater impact on Wake County's designated priority stream corridors and proposed Southeast Wake County Park than the previously designated and protected route; and

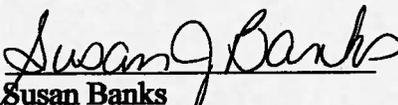
WHEREAS, numerous Wake County homeowners and landowners have relied upon the protected corridor route (orange) for many years as they have made investment decisions.

NOW THEREFORE, BE IT RESOLVED that Wake County supports use of the original protected corridor design as illustrated in "orange" on the N.C. Turnpike Authority maps as the preferred choice for the development and construction of the Triangle Expressway Southeast Extension.

Adopted this 18th day of October 2010.



Tony Gurley, Chairman
Wake County Board of Commissioners

ATTEST: 
Susan Banks
Clerk to the Board





TOWN OF FUQUAY-VARINA
401 Old Honeycuff Road
Fuquay-Varina, North Carolina 27526

**A RESOLUTION BY THE TOWN OF FUQUAY-VARINA REGARDING
THE TRIANGLE EXPRESSWAY SOUTHEAST EXTENSION (I-540)**

WHEREAS, the proposed Triangle Expressway Southeast Extension has been a fundamental transportation facility underpinning for more than 20 years of local land use and transportation decisions for Town of Fuquay-Varina, Wake County and other local governments of Wake County; and,

WHEREAS, the alternates routes have been only recently proposed and would have a much more significant negative impact on residents of Fuquay-Varina who purchased homes and businesses based on the original proposed route; and,

WHEREAS, the Town of Fuquay-Varina historically has utilized the protected corridor proposed in earlier designs to make key planning decisions for both existing and future development in the Town of Fuquay-Varina; and,

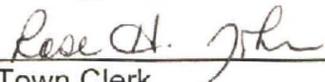
WHEREAS, the proposed alternative alignments to relocate the corridor away from its previously designated and protected route will have an adverse impact on the Town of Fuquay-Varina; and

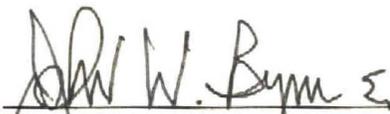
NOW THEREFORE, BE IT RESOLVED that the Town of Fuquay-Varina supports use of the original protected corridor design as illustrated in "orange" on the North Carolina Turnpike Authority maps as the preferred choice for the development and construction of the Triangle Expressway Southeast Extension (I-540).

Adopted this 19th day of October 2010.



ATTEST:


Town Clerk


Mayor John W. Byrre
Town of Fuquay-Varina

STAFF REPORT
Town of Knightdale

To:	Mayor and Town Council	Budget Amendment - #BA
From:	Chris Hills, Planning Director	Planning Director Signature - SL
Subject:	NC Turnpike Authority Resolution of Support for Preferred I-540 Alignment RES# 10-10-20-001	Town Manager Signature -
Date:	October 20, 2010	

REPORT

The North Carolina Turnpike Authority is currently proceeding through its Environmental Impact Statement (EIS) process which includes an Alternatives Analysis to determine the best possible route for the I-540/Triangle Expressway Southeast Extension. Part of this process is to solicit input from citizens and public officials on the preferred route. The project is envisioned in two phases, with phase I being between Apex and I-40 in Clayton and phase II being between I-40 in Clayton and US 64/264 Bypass in Knightdale.

The three potential options under consideration are briefly described below:

1. Build a new roadway between NC 55 near Apex and the US 64/264 Bypass in Knightdale.
2. Improve existing roadways by widening I-40 from west of Raleigh to the Clayton area, I-440 from I-40 to the US 64/264 Bypass, and US 64/264 Bypass from I-440 to the eastern study area boundary.
3. Hybrid new roadway construction/improve existing roadway option. This option consists of a new roadway option for Phase I and improving I-40, I-440 and US 64/264 in the Phase II area.

The Planning and Engineering Committee discussed this item at its October 11 meeting. At that meeting, the Committee unanimously recommended that the Town Council support Option 1 above for a new build roadway for both phases of the Southeast Extension project.

Attached to this staff report and proposed resolution is the most recent newsletter from the Turnpike Authority detailing the EIS process, the study area, and potential routes under consideration. A brief video will be shown at the Council meeting to elaborate on the proposed alternatives, after which the Council will be asked to pass a Resolution of Support for its preferred option.

REPORT RECOMMENDED ACTION

Motion to adopt RES # 10-10-20-001



TOWN OF KNIGHTDALE

PLANNING DEPARTMENT

www.ci.knightdale.nc.us

950 Steeple Square Court
Knightdale, NC 27545
(v) 919.217.2245
(f) 919.217.2249

RESOLUTION # 10-10-20-001

RESOLUTION OF THE KNIGHTDALE TOWN COUNCIL SUPPORTING THE NEW ROADWAY OPTION FOR BOTH PHASES OF THE TRIANGLE EXPRESSWAY SOUTHEAST EXTENSION

WHEREAS, the study area defined by the Environmental Impact Statement (EIS) study includes parcels within the Knightdale City Limits and ETJ boundaries; and

WHEREAS, the Town of Knightdale has demonstrated a commitment to comprehensive planning through its participation in with the Capital Area Metropolitan Planning Organization (CAMPO); and

WHEREAS, current and future development within this area will be at urban and suburban densities and is anticipated to generate significant transportation impacts that will require the completion of the outer loop referred to as the Triangle Expressway Southeast Extension; and

WHEREAS, the Town of Knightdale staff and Town Council has studied the proposed options presented by the North Carolina Turnpike Authority and determined that a new build roadway will be critical in mitigating the impacts of the future growth of eastern and southern Wake County and western Johnston County;

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Knightdale, North Carolina:

Section 1. That the Knightdale Town Council hereby requests that the North Carolina Turnpike Authority choose Option 1, being a new-build roadway for both phases, as the preferred alternative for the construction of the Triangle Expressway Southeast Extension.

Adopted this, the 20th day of October, 2010.

James M. Chalk, Mayor Pro-Tem

ATTEST & SEAL:

Suzanne M. Yeatts, Town Clerk



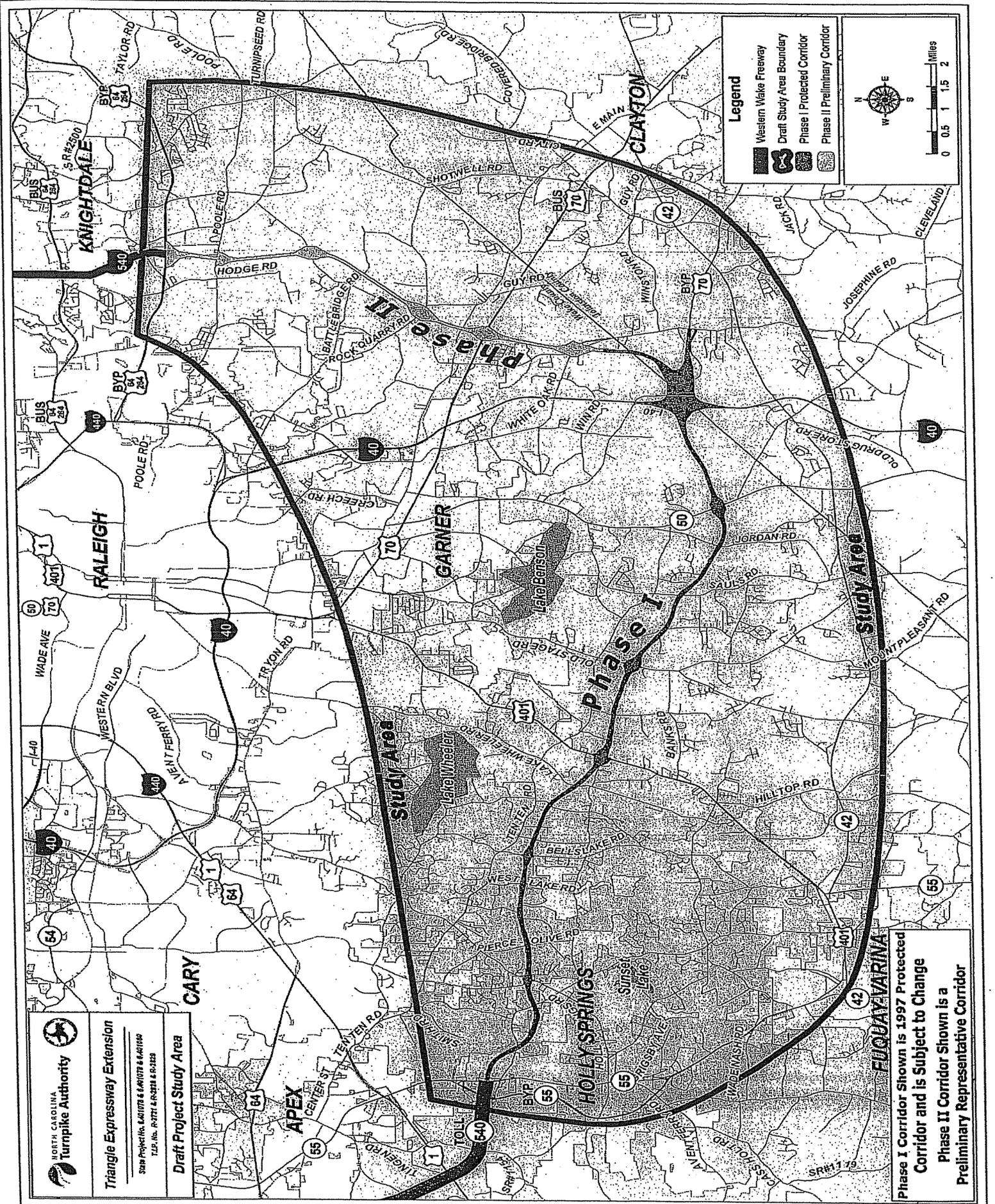
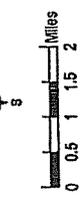
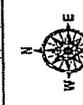
Triangle Expressway Extension

State Project No. 441076 & 441078 & 441080
TDP No. R-3771 & R-3772 & R-3783

Draft Project Study Area

Legend

- Western Wake Freeway
- Draft Study Area Boundary
- Phase I Protected Corridor
- Phase II Preliminary Corridor



Phase I Corridor Shown is 1997 Protected Corridor and is Subject to Change
Phase II Corridor Shown is a Preliminary Representative Corridor

**RESOLUTION EXPRESSING THE NC CAPITAL AREA MPO'S POSITION REGARDING THE
ALIGNMENT OF THE FUTURE NC 540 TURNPIKE**

On motion made by Mayor Sears and seconded by Mayor Byrne , and having been put to a vote, was duly adopted, the following resolution;

WHEREAS, the proposed southern and southeastern segments of the NC 540 Turnpike are an adopted element of the Capital Area Metropolitan Planning Organization's (CAMPO) 2035 Long Range Transportation Plan; and

WHEREAS, official corridor maps show a specific alignment, adopted by the North Carolina Board of Transportation, to block new development in the preferred path of the southern segment from N.C. 55 in Holly Springs to US 401 south of Garner on August 2, 1996 and the southern segment from US 401 south of Garner to Interstate 40 south of Garner on March 7, 1997; and

WHEREAS, the proposed freeway alignment has been a fundamental transportation facility underpinning for more than 20 years of local land use and transportation decisions for the towns of Fuquay-Varina, Garner, and Holly Springs; and

WHEREAS, Wake County is the first and only County in North Carolina to have its urban loop constructed as a toll road; and

WHEREAS, the southeastern segment is likely to be much more expensive on a per mile basis than the southern segment and as such will need the revenue coming from the southern segment to help pay for it; and

WHEREAS, the southeastern segment is the Capital Area MPO's urgently needed top regional priority and therefore should not be delayed until the northern segment of the loop is converted to a turnpike to help pay for it's construction

WHEREAS, the North Carolina Turnpike Authority is looking at new alternatives (defined as "red", "blue", and "purple") that would possibly have an adverse impact upon these towns, causing disruptions to existing homes and businesses; and

WHEREAS, the alternatives may be shorter and possibly cut construction cost; at the possible expense of environmentally sensitive areas as well as mar residential and commercial activities vital to the economic well being of the towns being impacted;

NOW, THEREFORE BE IT RESOLVED, the Capital Area MPO Transportation Advisory Committee supports the use of the original protected corridor alignment illustrated on North Carolina Turnpike Authority maps adopted in 1996 and 1997 as the preferred choice for the development and construction of the proposed NC 540 Turnpike in southern and southeastern Wake County; and

BE IT FURTHER RESOLVED, that the Capital Area MPO Transportation Advisory Committee requests that the North Carolina Turnpike Authority include the Capital Area MPO as an active stakeholder in the alternatives analysis process; and

BE IT FURTHER RESOLVED, that the Capital Area MPO Transportation Advisory Committee strongly urges the North Carolina Department of Transportation to construct the entire remaining portion of the outer loop as a turnpike in one phase rather than as two separate phases.

Adopted on this the 20th day of October, 2010



Joe Bryan, Chair
Director
Transportation Advisory Committee

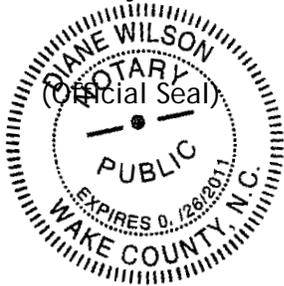


Ed Johnson, Capital Area MPO
Transportation Advisory Committee Clerk

County of Wake
State of North Carolina

I, Diane Wilson, a Notary Public for said County and State, do hereby certify that on this, the 20th day of October, 2010, personally appeared before me, Joe Bryan, known to me by his presence, and acknowledged the due execution of the foregoing RESOLUTION STATING THE CAPITAL AREA MPO'S POSITION REGARDING THE ALIGNMENT OF THE FUTURE NC 540 TURNPIKE.

Witness my hand and official seal, this the 20th day of October, 2010.





Diane Wilson, Notary Public

My commission expires January 26, 2011

**RESOLUTION
REGARDING THE TAN AND RED CORRIDORS AS
ALTERNATIVE ALIGNMENTS FOR
THE TRIANGLE EXPRESSWAY SOUTHEAST EXTENSION**

On motion made by Commssioner Bryan and seconded by Mayor Sears and having being duly put to a vote of the N.C. Capital Area Metropolitan Planning Organization's Transportation Advisory Committee was adopted the following resolution;

WHEREAS, the proposed Southeast Extension of the Triangle Expressway will extend the eastern leg of the Triangle Expressway toll road from Interstate 40 near Garner north to the eastern tip of the 540 Outer Loop on U.S. 64 / 264 in Knightdale; and

WHEREAS, the North Carolina Turnpike Authority has been examining various alternate routes for the Southeast Extension of the Triangle Expressway in accordance with federal highway and environmental laws and as of March 2010 announced the introduction of new alternate corridors (aka the Red and Tan Corridors) on the eastern side of the Triangle Expressway Southeast Extension as "equivalent" alternates to the 20 year old prospected "Green" and "Orange" corridors and,

WHEREAS, Wake County has indicated a lack of support for the recent addition of the "Tan" corridor and has requested that the North Carolina Turnpike Authority remove the corridor from consideration, as well as request that the selection of the final corridor be expedited as soon as possible; and,

WHEREAS, while the Raleigh City Council voted unanimously to oppose the Tan Corridor as it is currently proposed, has requested that staff continue to work with the North Carolina Turnpike Authority project team to develop viable alternatives for consideration in the Environmental Impact Statement (EIS), and states that while the EIS process is technical in nature, the North Carolina Turnpike Authority is urged to continue to take the concerns of area residents into account as they proceed with the study.

NOW THEREFORE, be it resolved that the N.C. Capital Area Metropolitan Planning Organization opposes the Red and Tan Corridors in their currently proposed alignment and supports the original alignment shown on the adopted 2035 Long-Range Transportation Plan, and will continue to be receptive to new and better information regarding alternative alignments as they become available during the EIS process. The organization also encourages the North Carolina Turnpike Authority to work with local government staff from Garner, Raleigh, Johnston County, and Wake County on the technical data for the EIS process.

Adopted this the 16th day of March, 2011



Vivian Jones, Chair
Transportation Advisory Committee

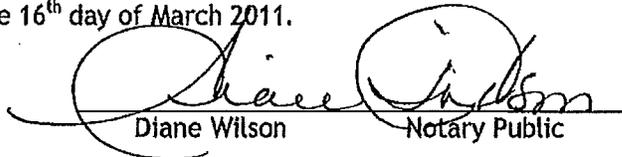


Ed Johnson, Capital Area MPO Director
Transportation Advisory Committee Clerk

County of Wake
State of North Carolina

I, Diane Wilson, a Notary Public for said County and State, do hereby certify that Vivian Jones personally known to me by her presence appeared before me this day and acknowledged the due execution of the foregoing RESOLUTION REGARDING THE TAN CORRIDOR AS AN ALTERNATIVE ALIGNMENT FOR THE TRIANGLE EXPRESSWAY SOUTHEAST EXTENSION

Witness my hand and official seal, the 16th day of March 2011.



Diane Wilson
Notary Public

My commission expires January 26, 2016.

**GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2011**

**SESSION LAW 2011-7
SENATE BILL 165**

AN ACT TO RESTRICT THE NORTH CAROLINA TURNPIKE AUTHORITY'S
SELECTION OF TRANSPORTATION CORRIDORS TO EXISTING PROTECTED
CORRIDORS OR CORRIDORS SOUTH OF AN EXISTING PROTECTED CORRIDOR
EXCEPT IN THE AREA OF INTERSTATE 40 EAST.

The General Assembly of North Carolina enacts:

SECTION 1. G.S. 136-89.183(a)(2) reads as rewritten:

"(2) To study, plan, develop, and undertake preliminary design work on up to nine Turnpike Projects. At the conclusion of these activities, the Turnpike Authority is authorized to design, establish, purchase, construct, operate, and maintain the following projects:

- a. Triangle Expressway, including segments also known as N.C. 540, Triangle Parkway, and Western Wake Freeway in Wake and Durham ~~Counties.~~ Counties, except that segment known as the Triangle Expressway Southeast Extension which shall not be located north of an existing protected corridor established by the Department of Transportation circa 1995, except in the area of Interstate 40 East.
- b. Gaston East-West Connector, also known as the Garden Parkway.
- c. Monroe Connector/Bypass.
- d. Cape Fear Skyway.
- e. A bridge of more than two miles in length going from the mainland to a peninsula bordering the State of Virginia, pursuant to G.S. 136-89.183A.
- f. Repealed by Session Laws 2008-225, s. 4, effective August 17, 2008. Any other project proposed by the Authority in addition to the projects listed in this subdivision must be approved by the General Assembly prior to construction.

A Turnpike Project selected for construction by the Turnpike Authority shall be included in any applicable locally adopted comprehensive transportation plans and shall be shown in the current State Transportation Improvement Plan prior to the letting of a contract for the Turnpike Project."



SECTION 2. This act is effective when it becomes law.

In the General Assembly read three times and ratified this the 17th day of March,
2011.

s/ Philip E. Berger
President Pro Tempore of the Senate

s/ Thom Tillis
Speaker of the House of Representatives

s/ Beverly E. Perdue
Governor

Approved 3:09 p.m. this 18th day of March, 2011

**RESOLUTION
EXPRESSING THE NC CAPITAL AREA MPO'S
UNWAVERING SUPPORT
FOR THE CONSTRUCTION OF THE WAKE OUTER LOOP**

On motion made by Mayor Sears and seconded by Mayor Williams, and having been put to a vote, was duly adopted, the following resolution;

WHEREAS, the Wake Outer Loop has been an adopted element of the Capital Area Metropolitan Planning Organization's (MPO) Comprehensive and Long Range Transportation Plans of 2025, 2030, and 2035; and

WHEREAS, the Wake Outer Loop will continue to be an essential highway corridor for the MPO's 2040 Long Range Transportation Plan; and

WHEREAS, the Wake Outer Loop has historically been one of the highest priority projects in both the MPO's Transportation Improvement Plan and the State Transportation Improvement Program, and has received numerous resolutions and letters of support over many years; and

WHEREAS, completion of the Wake Outer Loop is vital to continued high-quality mobility, and thus the economic health and well-being of the Triangle region and the state of North Carolina;

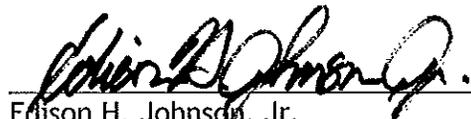
NOW THEREFORE BE IT RESOLVED, that the Capital Area MPO expresses its unwavering support for construction of the Wake Outer Loop, as quickly as possible, in a location that meets the needs of area citizens and requirements of federal law; and

BE IT FURTHER RESOLVED, that the Capital Area MPO requests that the North Carolina Turnpike Authority, in cooperation with state and federal agencies work to fulfill all essential requirements to satisfy legal review and obtain financial support for the Wake Outer Loop; and to ensure that the construction and completion of the Wake Outer Loop remain a high priority.

Adopted on this the 16th day of May, 2012



Vivian Jones, Chair
Transportation Advisory Committee

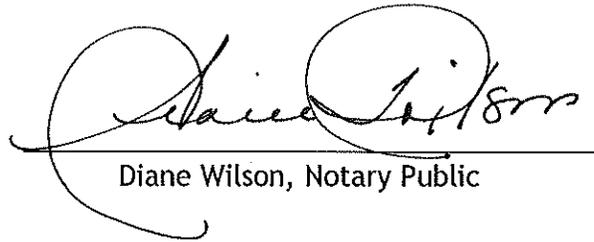
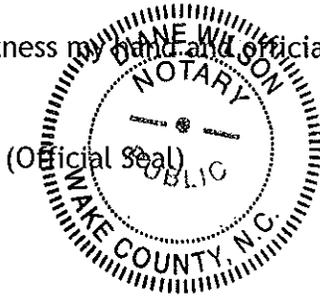


Edison H. Johnson, Jr.
Director, Capital Area MPO

County of Wake
State of North Carolina

I, Diane Wilson, a Notary Public for said County and State, do hereby certify that on this, the 16th day of May, 2012, personally appeared before me, Vivian Jones, known to me by her presence, and acknowledged the due execution of the foregoing RESOLUTION EXPRESSING THE NC CAPITAL AREA MPO'S UNWAVERING SUPPORT FOR THE CONSTRUCTION OF THE WAKE OUTER LOOP.

Witness my hand and official seal, this the 16th day of May, 2012.



Diane Wilson, Notary Public

My commission expires January 26, 2016

**NC CAPITAL AREA METROPOLITAN PLANNING ORGANIZATION
REQUEST TO REPEAL NORTH CAROLINA SESSION LAW 2011-7**

On a motion made by Mayor Dick Sears and seconded by Mayor John Byrne, and having been put to a vote, was duly adopted, the following resolution;

WHEREAS, the Wake County Outer Loop (also known as the Triangle Expressway) has been an adopted element of the Capital Area Metropolitan Planning Organization's (MPO) Long Range Transportation Plans (LRTPs) adopted for 2025, 2030, and 2035; and

WHEREAS, the Wake Outer Loop will continue to be an essential highway corridor for the MPO's 2040 Comprehensive Metropolitan Transportation Plan (CMTP); and

WHEREAS, the Wake Outer Loop has historically been one of the highest priority projects in both the MPO's Transportation Improvement Plan and the State Transportation Improvement Program, and has received numerous resolutions and letters of support over many years; and

WHEREAS, completion of the Wake Outer Loop is vital to continued high-quality mobility, and thus the economic health and well-being of the Triangle region and the state of North Carolina; and

WHEREAS, NC Session Law 2011-7 prohibits the construction of the Southeast Extension of the Wake Outer Loop on any location north of the existing protected corridor established by the North Carolina Department of Transportation in 1995 (now referred to as the Orange route in the currently ongoing environmental study; and

WHEREAS, the National Environmental Policy Act (NEPA) and other Federal laws require study of alternative corridors some of which have been proposed for study north of the protected corridor; and

WHEREAS, the Army Corps of Engineers and the Federal Highway Administration have expressed concern that the ability to analyze and objectively compare alternatives for this project as required by the Clean Water Act will be hampered; and

WHEREAS, the Army Corps of Engineers and the Federal Highway Administration, by letter (Appendix A attached hereto) indicate it is their belief that this project can no longer move forward with the Project Advancement Plan and satisfy all Federal environmental requirements;

NOW THEREFORE BE IT RESOLVED, that the Capital Area Metropolitan Planning Organization respectfully requests that North Carolina Session Law 2011-7 be repealed to allow study of alternative routes for the Southeast Extension of the Wake Outer Loop in accordance with the National Environmental Policy Act and other Federal laws and allow construction of the Wake Outer Loop, as quickly as possible, in a location that meets the needs of area citizens and requirements of federal law.

Adopted on this the 12th day of December 2012



Vivian Jones, Chair
Transportation Advisory Committee



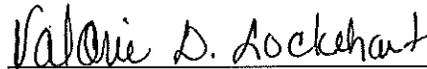
Edison H. Johnson, Jr.
Director, Capital Area MPO

County of Wake
State of North Carolina

I, Valorie D. Lockhart, a Notary Public for said County and State, do hereby certify that on this, the 12th day of December, personally appeared before me, Vivian Jones and Edison Johnson, known to me by their presence, and acknowledged the due execution of the foregoing NC CAPITAL AREA METROPOLITAN PLANNING ORGANIZATION, REQUEST TO REPEAL NORTH CAROLINA SESSION LAW 2011-7

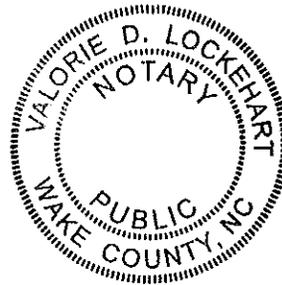
Witness my hand and official seal, this the 12th day of December 2012.

(Official Seal)



Valorie D. Lockhart, Notary Public

My commission expires January 31 2016





December 20, 2012

Members of the North Carolina General Assembly

Subject: NC Session Law 2011-7

Dear Sirs/Madams:

Transmitted with this letter is a Resolution from the North Carolina Capital Area Metropolitan Planning Organization's Executive Policy Board, approved at its meeting on December 12, 2012, requesting the repeal of NC Session Law 2011-7 pertaining to the construction of the Southeast Extension of the Wake County Outer Loop (also known as the Triangle Expressway).

The Wake Outer Loop has been an adopted element of the Capital Area Metropolitan Planning Organization's (MPO) Long-Range Transportation Plans for 2025, 2030, and 2035 and is an essential highway corridor included in the MPO's 2040 Comprehensive Metropolitan Transportation Plan (CMTP). This project has historically been one of the highest priority projects in both the MPO's Transportation Improvement Plan and the State Transportation Improvement Program.

NC Session Law 2011-7 prohibits construction of the Southeast Extension of the Loop on location north of an existing protected corridor established by the North Carolina Department of Transportation in 1995 (known as the Orange route in the currently ongoing environmental study). Although well intentioned, this prohibition is contrary to the National Environmental Policy Act (NEPA) and other Federal laws that require study of alternative corridors, which would include those north of the protected corridor. The Army Corps of Engineers and the Federal Highway Administration have expressed concern that the ability to analyze and objectively compare alternatives for this project as required by the Clean Water Act will be hampered. They further indicate that it is their belief that this project can no longer move forward with the Project Advancement Plan and satisfy all Federal environmental requirements.

The Capital Area Metropolitan Planning Organization is therefore requesting that North Carolina Session Law 2011-7 be repealed as soon as practicable to allow study of a full range of alternative routes for the Southeast Extension of the Wake Outer Loop in accordance with the National Environmental Policy Act and other Federal laws to allow the preferred route to be approved and constructed for the completion of the Wake Outer Loop.

Sincerely,

Vivian Jones, Chair
Transportation Advisory Committee
Capital Area MPO

cc: Representative Thom Tillis, North Carolina House Speaker
Senator Phil Berger, North Carolina Senate President Pro Tem
Wake County Legislative Delegation
TAC Members



Town of Garner

900 7th Avenue · Garner, North Carolina 27529
Phone (919) 772-4688 · Fax (919) 662-8874 · www.GarnerNC.gov

January 23, 2013

North Carolina General Assembly
Wake County Representation
16 West Jones Street
Raleigh, NC 27601

Dear Honorable Member:

North Carolina Session Law 2011-7 (NCSL 2011-7) was approved by the North Carolina General Assembly in and signed into law by Governor Bev Perdue in March 2011. This law restricts the NC Turnpike Authority's selection of future Triangle Expressway Southeast (540) corridors to existing protected corridors, except in the area of I-40 East.

The Town of Garner and the Metropolitan Raleigh Region agree that 540 is vital to our region's future and we all support the construction of 540 to connect the outer loop. Over the past two years, the Town of Garner has utilized herculean efforts to find solutions and alternatives to this horribly bothersome problem, including hiring nationally recognized consultants, engaging in cooperative conversations with Southern Wake County Mayors, NC Department of Transportation (NCDOT) Capital Area Metropolitan Planning Organization (CAMPO) and the Regional Transportation Alliance.

In spite of these efforts, the Federal Highway Administration (FHWA) and US Army Corps of Engineers (Corps) have indicated via letter to NCDOT officials that NCSL 2011-7 is contrary to the National Environmental Policy Act (NEPA) and the Clean Water Act, thereby hampering their ability to analyze and objectively compare alternatives as required by these and other federal laws. These agencies have indicated that they believe the 540 project can no longer move forward in a manner satisfactory to all federal environmental requirements unless NCSL 2011-7 is repealed.

Subsequently, CAMPO adopted a Resolution on December 12, 2012 requesting that the NC General Assembly repeal Session Law 2011-7 to allow study of alternative routes for the Triangle Expressway Southeast as quickly as possible. That action is leading us to where we are today.

Positive economic impacts can be documented in the Town of Garner since Session Law 2011-7 was adopted on March 18, 2011. The most notable was the construction of the \$12.5 million Strategic Behavioral Center in Greenfield South Business Park and dozens of new houses in the Village of Aversboro. As a reminder, the red route tramples 13 neighborhoods, 4 town parks, and our primary industrial park. The Town is completely opposed to the red route and insists that it not be studied or advanced in any way.

The Town of Garner is opposed to the repeal of Session Law 2011-7.

If NCSL 2011-7 is repealed or amended, then the Town requests that the General Assembly also mandate the following:

- A. Ensure that NCDOT, CAMPO, and all involved federal agencies, especially FHWA and Corps, expedite all steps of the refinement and development of the necessary Environmental Impact Statement process for the Triangle Expressway Southeast, and to include the Town of Garner and the Garner Chamber of Commerce as key stakeholders in the EIS development process.
- B. Ensure that NCDOT fully considers all reasonable alternatives, other than red, as suggested via adopted motion by the CAMPO Board of Directors at their December 12, 2012 meeting. This includes orange, blue, purple, lilac, and plum.
- C. Assign a General Assembly Oversight Committee to monitor this issue on behalf of the citizens of Garner and Southern Wake County to ensure that all involved agencies move this process along as fast as possible.

This is a very important issue to the Garner community and has tremendous economic development implications. Thank you for your consideration of our request.

Sincerely,


Ronnie S. Williams
Mayor


Jackie Johns
Mayor Pro Tem

Kathy Behringer
Council Member


Buck Kennedy
Council Member


Ken Marshburn
Council Member


Gra Singleton
Council Member



- c:
- Thom Tillis, Speaker, North Carolina House of Representatives
 - Phil Berger, President Pro Tempore, North Carolina Senate
 - Rep. William Brawler, Chairman, House Transportation Committee
 - Rep. Frank Iler, Chairman, House Transportation Committee
 - Sen. Warren Daniel, Co-Chairman, Senate Transportation Committee
 - Sen. Kathy Harrington, Co-Chairman, Senate Transportation Committee

**GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2013**

**SESSION LAW 2013-94
HOUSE BILL 10**

AN ACT TO REMOVE THE RESTRICTION ON THE TURNPIKE AUTHORITY'S
SELECTION OF A CORRIDOR LOCATION FOR THE SOUTHEAST EXTENSION
PROJECT OF N.C. 540.

The General Assembly of North Carolina enacts:

SECTION 1. G.S. 136-89.183(a)(2)a. reads as rewritten:

"(2) To study, plan, develop, and undertake preliminary design work on up to eight Turnpike Projects. At the conclusion of these activities, the Turnpike Authority is authorized to design, establish, purchase, construct, operate, and maintain the following projects:

- a. Triangle Expressway, including segments also known as N.C. 540, Triangle Parkway, and the Western Wake Freeway in Wake and Durham Counties, and Southeast Extension in Wake and Johnston Counties, except that no portion of the Southeast Extension shall be located north of an existing protected corridor established by the Department of Transportation circa 1995, except in the area of Interstate 40 East. Counties. The described segments constitute three projects."

SECTION 2. The Department of Transportation shall strive to expedite the federal environmental impact statement process to define the route for the Southeast Extension of the Triangle Expressway Turnpike Project by promptly garnering input from local officials and other stakeholders, accelerating any required State studies, promptly submitting permit applications to the federal government, working closely with the federal government during the permitting process, and taking any other appropriate actions to accelerate the environmental permitting process.

SECTION 3. As part of its oversight of the Department of Transportation, the Joint Legislative Transportation Oversight Committee shall closely monitor the progress of the Southeast Extension of the Triangle Expressway Turnpike Project.

SECTION 3.1. This act is effective only if House Bill 817, 2013 Regular Session, becomes law.



SECTION 4. This act is effective when it becomes law.
In the General Assembly read three times and ratified this the 4th day of June, 2013.

s/ Daniel J. Forest
President of the Senate

s/ Thom Tillis
Speaker of the House of Representatives

s/ Pat McCrory
Governor

Approved 4:29 p.m. this 12th day of June, 2013

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2013

SESSION LAW 2013-183
HOUSE BILL 817

AN ACT TO STRENGTHEN THE ECONOMY THROUGH STRATEGIC
TRANSPORTATION INVESTMENTS.

The General Assembly of North Carolina enacts:

STRATEGIC TRANSPORTATION INVESTMENTS

SECTION 1.1.(a) Chapter 136 of the General Statutes is amended by adding a new Article to read:

"Article 14B.

"Strategic Prioritization Funding Plan for Transportation Investments.

"§ 136-189.10. Definitions.

The following definitions apply in this Article:

- (1) Statewide strategic mobility projects. – Includes only the following:
 - a. Interstate highways and future interstate highways approved by the federal government.
 - b. Routes on the National Highway System as of July 1, 2012, excluding intermodal connectors.
 - c. Highway routes on the United States Department of Defense Strategic Highway Network (STRAHNET).
 - d. Highway toll routes designated by State law or by the Department of Transportation, pursuant to its authority under State law.
 - e. Highway projects listed in G.S. 136-179, as it existed on July 1, 2012, that are not authorized for construction as of July 1, 2015.
 - f. Appalachian Development Highway System.
 - g. Commercial service airports included in the Federal Aviation Administration's National Plan of Integrated Airport Systems (NPIAS) that provide international passenger service or 375,000 or more enplanements annually, provided that the State's annual financial participation in any single airport project included in this subdivision may not exceed five hundred thousand dollars (\$500,000).
 - h. Freight capacity and safety improvements to Class I freight rail corridors.
- (2) Regional impact projects. – Includes only the following:
 - a. Projects listed in subdivision (1) of this section, subject to the limitations noted in that subdivision.
 - b. U.S. highway routes not included in subdivision (1) of this section.
 - c. N.C. highway routes not included in subdivision (1) of this section.
 - d. Commercial service airports included in the NPIAS that are not included in subdivision (1) of this section, provided that the State's annual financial participation in any single airport project included in this subdivision may not exceed three hundred thousand dollars (\$300,000).
 - e. The State-maintained ferry system, excluding passenger vessel replacement.
 - f. Rail lines that span two or more counties not included in subdivision (1) of this section.



- g. Public transportation service that spans two or more counties and that serves more than one municipality. Expenditures pursuant to this sub-subdivision shall not exceed ten percent (10%) of any distribution region allocation.
- (3) Division needs projects. – Includes only the following:
- a. Projects listed in subdivision (1) or (2) of this section, subject to the limitations noted in those subsections.
 - b. State highway routes not included in subdivision (1) or (2) of this section.
 - c. Airports included in the NPIAS that are not included in subdivision (1) or (2) of this section, provided that the State's total annual financial participation under this sub-subdivision shall not exceed eighteen million five hundred thousand dollars (\$18,500,000).
 - d. Rail lines not included in subdivision (1) or (2) of this section.
 - e. Public transportation service not included in subdivision (1) or (2) of this section.
 - f. Multimodal terminals and stations serving passenger transit systems.
 - g. Federally funded independent bicycle and pedestrian improvements.
 - h. Replacement of State-maintained ferry vessels.
 - i. Federally funded municipal road projects.
- (4) Distribution Regions. – The following Distribution Regions apply to this Article:
- a. Distribution Region A consists of the following counties: Bertie, Camden, Chowan, Currituck, Dare, Edgecombe, Gates, Halifax, Hertford, Hyde, Johnston, Martin, Nash, Northampton, Pasquotank, Perquimans, Tyrrell, Washington, Wayne, and Wilson.
 - b. Distribution Region B consists of the following counties: Beaufort, Brunswick, Carteret, Craven, Duplin, Greene, Jones, Lenoir, New Hanover, Onslow, Pamlico, Pender, Pitt, and Sampson.
 - c. Distribution Region C consists of the following counties: Bladen, Columbus, Cumberland, Durham, Franklin, Granville, Harnett, Person, Robeson, Vance, Wake, and Warren.
 - d. Distribution Region D consists of the following counties: Alamance, Caswell, Davidson, Davie, Forsyth, Guilford, Orange, Rockingham, Rowan, and Stokes.
 - e. Distribution Region E consists of the following counties: Anson, Cabarrus, Chatham, Hoke, Lee, Mecklenburg, Montgomery, Moore, Randolph, Richmond, Scotland, Stanly, and Union.
 - f. Distribution Region F consists of the following counties: Alexander, Alleghany, Ashe, Avery, Caldwell, Catawba, Cleveland, Gaston, Iredell, Lincoln, Surry, Watauga, Wilkes, and Yadkin.
 - g. Distribution Region G consists of the following counties: Buncombe, Burke, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Swain, Transylvania, and Yancey.

"§ 136-189.11. Transportation Investment Strategy Formula.

(a) Funds Subject to Formula. – The following sources of funds are subject to this section:

- (1) Highway Trust Fund funds, in accordance with G.S. 136-176.
- (2) Federal aid funds.

(b) Funds Excluded From Formula. – The following funds are not subject to this section:

- (1) Federal congestion mitigation and air quality improvement program funds appropriated to the State by the United States pursuant to 23 U.S.C. § 104(b)(2) and 23 U.S.C. § 149.
- (2) Funds received through competitive awards or discretionary grants through federal appropriations either for local governments, transportation authorities, transit authorities, or the Department.

- (3) Funds received from the federal government that under federal law may only be used for Appalachian Development Highway System projects.
- (4) Funds used in repayment of "GARVEE" bonds related to Phase I of the Yadkin River Veterans Memorial Bridge project.
- (5) Funds committed to gap funding for toll roads funded with bonds issued pursuant to G.S. 136-176.
- (6) Funds obligated for projects in the State Transportation Improvement Program that are scheduled for construction as of April 1, 2013, in State fiscal year 2012-2013, 2013-2014, or 2014-2015.
- (7) Toll collections from a turnpike project under Article 6H of this Chapter and other revenue from the sale of the Authority's bonds or notes or project loans, in accordance with G.S. 136-89.192.
- (8) Toll collections from the State-maintained ferry system collected under the authority of G.S. 136-82.
- (9) Federal State Planning and Research Program funds.
- (b1) Funds Excluded From Regional Impact Project Category. – Federal Surface Transportation Program-Direct Attributable funds expended on eligible projects in the Regional Impact Project category are excluded from that category.
- (c) Funds With Alternate Criteria. – The following federal program activities shall be included in the applicable category of the Transportation Investment Strategy Formula set forth in subsection (d) of this section but shall not be subject to the prioritization criteria set forth in that subsection:
 - (1) Bridge replacement.
 - (2) Interstate maintenance.
 - (3) Highway safety improvement.
- (d) Transportation Investment Strategy Formula. – Funds subject to the Formula shall be distributed as follows:
 - (1) Statewide Strategic Mobility Projects. – Forty percent (40%) of the funds subject to this section shall be used for Statewide Strategic Mobility Projects.
 - a. Criteria. – Transportation-related quantitative criteria shall be used by the Department to rank highway projects that address cost-effective Statewide Strategic Mobility needs and promote economic and employment growth. The criteria for selection of Statewide Strategic Mobility Projects shall utilize a numeric scale of 100 points, based on consideration of the following quantitative criteria:
 - 1. Benefit cost.
 - 2. Congestion.
 - 3. Safety.
 - 4. Economic competitiveness.
 - 5. Freight.
 - 6. Multimodal.
 - 7. Pavement condition.
 - 8. Lane width.
 - 9. Shoulder width.
 - b. Project cap. – No more than ten percent (10%) of the funds projected to be allocated to the Statewide Strategic Mobility category over any five-year period may be assigned to any contiguous project or group of projects in the same corridor within a Highway Division or within adjoining Highway Divisions.
 - (2) Regional Impact Projects. – Thirty percent (30%) of the funds subject to this section shall be used for Regional Impact Projects and allocated by population of Distribution Regions based on the most recent estimates certified by the Office of State Budget and Management.
 - a. Criteria. – A combination of transportation-related quantitative criteria, qualitative criteria, and local input shall be used to rank Regional Impact Projects involving highways that address cost-effective needs from a region-wide perspective and promote

economic growth. Local input is defined as the rankings identified by the Department's Transportation Division Engineers, Metropolitan Planning Organizations, and Rural Transportation Planning Organizations. The criteria utilized for selection of Regional Impact Projects shall be based thirty percent (30%) on local input and seventy percent (70%) on consideration of a numeric scale of 100 points based on the following quantitative criteria:

1. Benefit cost.
2. Congestion.
3. Safety.
4. Freight.
5. Multimodal.
6. Pavement condition.
7. Lane width.
8. Shoulder width.
9. Accessibility and connectivity to employment centers, tourist destinations, or military installations.

(3) Division Need Projects. – Thirty percent (30%) of the funds subject to this section shall be allocated in equal share to each of the Department divisions, as defined in G.S. 136-14.1, and used for Division Need Projects.

a. Criteria. – A combination of transportation-related quantitative criteria, qualitative criteria, and local input shall be used to rank Division Need Projects involving highways that address cost-effective needs from a Division-wide perspective, provide access, and address safety-related needs of local communities. Local input is defined as the rankings identified by the Department's Transportation Division Engineers, Metropolitan Planning Organizations, and Rural Transportation Planning Organizations. The criteria utilized for selection of Division Need Projects shall be based fifty percent (50%) on local input and fifty percent (50%) on consideration of a numeric scale of 100 points based on the following quantitative criteria, except as provided in sub-subdivision b. of this subdivision:

1. Benefit cost.
2. Congestion.
3. Safety.
4. Freight.
5. Multimodal.
6. Pavement condition.
7. Lane width.
8. Shoulder width.
9. Accessibility and connectivity to employment centers, tourist destinations, or military installations.

b. Alternate criteria. – Funding from the following programs shall be included in the computation of each of the Department division equal shares but shall be subject to alternate quantitative criteria:

1. Federal Surface Transportation Program-Direct Attributable funds expended on eligible projects in the Division Need Projects category.
2. Federal Transportation Alternatives funds appropriated to the State.
3. Federal Railway-Highway Crossings Program funds appropriated to the State.
4. Projects requested from the Department in support of a time-critical job creation opportunity, when the opportunity would be classified as transformational under the Job Development Investment Grant program established pursuant to G.S. 143B-437.52, provided that the total State investment in each fiscal year for all projects funded under this

sub-subdivision shall not exceed ten million dollars (\$10,000,000) in the aggregate or two million dollars (\$2,000,000) per project.

5. Federal funds for municipal road projects.

c. Bicycle and pedestrian limitation. – The Department shall not provide financial support for independent bicycle and pedestrian improvement projects, except for federal funds administered by the Department for that purpose. This sub-subdivision shall not apply to funds allocated to a municipality pursuant to G.S. 136-41.1 that are committed by the municipality as matching funds for federal funds administered by the Department and used for bicycle and pedestrian improvement projects. This limitation shall not apply to funds authorized for projects in the State Transportation Improvement Program that are scheduled for construction as of October 1, 2013, in State fiscal year 2012-2013, 2013-2014, or 2014-2015.

(4) Criteria for nonhighway projects. – Nonhighway projects subject to this subsection shall be evaluated through a separate prioritization process established by the Department that complies with all of the following:

a. The criteria used for selection of projects for a particular transportation mode shall be based on a minimum of four quantitative criteria.

b. Local input shall include rankings of projects identified by the Department's Transportation Division Engineers, Metropolitan Planning Organizations, and Rural Transportation Planning Organizations.

c. The criteria shall be based on a scale not to exceed 100 points that includes no bonus points or other alterations favoring any particular mode of transportation.

(e) Authorized Formula Variance. – The Department may vary from the Formula set forth in this section if it complies with the following:

(1) Limitation on variance. – The Department, in obligating funds in accordance with this section, shall ensure that the percentage amount obligated to Statewide Strategic Mobility Projects, Regional Impact Projects, and Division Need Projects does not vary by more than five percent (5%) over any five-year period from the percentage required to be allocated to each of those categories by this section. Funds obligated among distribution regions or divisions pursuant to this section may vary up to ten percent (10%) over any five-year period.

(2) Calculation of variance. – Each year the Secretary shall calculate the amount of Regional Impact and Division Need funds allocated in that year to each division and region, the amount of funds obligated, and the amount the obligations exceeded or were below the allocation. In the first variance calculation under this subdivision following the end of fiscal year 2015-2016, the target amounts obtained according to the Formula set forth in this section shall be adjusted to account for any differences between allocations and obligations reported for the previous year. In the first variance calculation under this subdivision following the end of fiscal year 2016-2017, the target amounts obtained according to the Formula set forth in this section shall be adjusted to account for any differences between allocations and obligations reported for the previous two fiscal years. In the first variance calculation under this subdivision following the end of fiscal year 2017-2018, the target amounts obtained according to the Formula set forth in this section shall be adjusted to account for any differences between allocations and obligations reported for the previous three fiscal years. In the first variance calculation under this subdivision following the end of fiscal year 2018-2019, the target amounts obtained according to the Formula set forth in this section shall be adjusted to account for any differences between allocations and obligations reported for the previous four fiscal years. The new target amounts shall be used to fulfill the requirements of subdivision

(1) of this subsection for the next update of the Transportation Improvement Program. The adjustment to the target amount shall be allocated by Distribution Region or Division, as applicable.

(f) Incentives for Local Funding and Highway Tolling. – The Department may revise highway project selection ratings based on local government funding initiatives and capital construction funding directly attributable to highway toll revenue. Projects authorized for construction after November 1, 2013, and contained in the 10-year Department of Transportation work program are eligible for a bonus allocation under this subsection.

- (1) Definitions. – The following definitions apply in this subsection:
 - a. Bonus allocation. – The allocation obtained as a result of local government funding participation or highway tolling.
 - b. Local funding participation. – Non-State or nonfederal funds committed by local officials to leverage the commitment of State or federal transportation funds towards construction.
- (2) Funds obtained from local government funding participation. – Upon authorization to construct a project with funds obtained by local government funding participation, the Department shall make available for allocation as set forth in subdivision (4) of this section an amount equal to one-half of the local funding commitment for other eligible highway projects that serve the local entity or entities that provided the local funding.
- (3) Funds obtained through highway tolling. – Upon authorization to construct a project with funding from toll revenue, the Department shall make available for allocation an amount equal to one-half of the project construction cost derived from toll revenue bonds. The amount made available for allocation to other eligible highway projects shall not exceed two hundred million dollars (\$200,000,000) of the capital construction funding directly attributable to the highway toll revenues committed in the Investment Grade Traffic and Revenue Study, for a project for which funds have been committed on or before July 1, 2015. The amount made available for allocation to other eligible highway projects shall not exceed one hundred million dollars (\$100,000,000) of the capital construction funding directly attributable to the highway toll revenues committed in the Investment Grade Traffic and Revenue Study, for a project for which funds are committed after July 1, 2015. If the toll project is located in one or more Metropolitan Planning Organization or Rural Transportation Planning Organization boundaries, based on the boundaries in existence at the time of letting of the project construction contract, the bonus allocation shall be distributed proportionately to lane miles of new capacity within the Organization's boundaries. The Organization shall apply the bonus allocation only within those counties in which the toll project is located.
- (4) Use of bonus allocation. – The Metropolitan Planning Organization, Rural Transportation Planning Organization, or the local government may choose to apply its bonus allocation in one of the three categories or in a combination of the three categories as provided in this subdivision.
 - a. Statewide Strategic Mobility Projects category. – The bonus allocation shall apply over the five-year period in the State Transportation Improvement Program in the cycle following the contractual obligation.
 - b. Regional Impact Projects category. – The bonus allocation is capped at ten percent (10%) of the regional allocation, or allocation to multiple regions, made over a five-year period and shall be applied over the five-year period in the State Transportation Improvement Program in the cycle following the contractual obligation.
 - c. Division Needs Projects category. – The bonus allocation is capped at ten percent (10%) of the division allocation, or allocation to multiple divisions, made over a five-year period and shall be applied over the five-year period in the State Transportation Improvement Program in the cycle following the contractual obligation.

(g) Reporting. – The Department shall publish on its Web site, in a link to the "Strategic Transportation Investments" Web site linked directly from the Department's home page, the following information in an accessible format as promptly as possible:

- (1) The quantitative criteria used in each highway and nonhighway project scoring, including the methodology used to define each criteria, the criteria presented to the Board of Transportation for approval, and any adjustments made to finalize the criteria.
- (2) The quantitative and qualitative criteria in each highway or nonhighway project scoring that is used in each region or division to finalize the local input score and shall include distinctions between Metropolitan Planning Organization and Rural Transportation Planning Organization scoring and methodologies.
- (3) Notification of changes to the methodologies used to calculate quantitative criteria.
- (4) The final quantitative formulas, including the number of points assigned to each criteria, used in each highway and nonhighway project scoring used to obtain project rankings in the Statewide, Regional, and Division categories. If the Department approves different formulas or point assignments regionally or by division, the final scoring for each area shall be noted.
- (5) The project scorings associated with the release of the draft and final State Transportation Improvement Program."

SECTION 1.1.(b) Effective July 1, 2019, G.S. 136-189.11(e)(2), as enacted by subsection (a) of this section, reads as rewritten:

"(e) Authorized Formula Variance. – The Department may vary from the Formula set forth in this section if it complies with the following:

- ...
- (2) Calculation of Variance. – Each year, the Secretary shall calculate the amount of Regional Impact and Division Need funds allocated in that year to each ~~division, division and region,~~ the amount of funds obligated, and the amount the obligations exceeded or were below the allocation. ~~In the first variance calculation under this subdivision following the end of fiscal year 2015-16, the target amounts obtained according to the Formula set forth in this section shall be adjusted to account for any differences between allocations and obligations reported for the previous year. In the first variance calculation under this subdivision following the end of fiscal year 2016-17, the target amounts obtained according to the Formula set forth in this section shall be adjusted to account for any differences between allocations and obligations reported for the previous two fiscal years. In the first variance calculation under this subdivision following the end of fiscal year 2017-18, the target amounts obtained according to the Formula set forth in this section shall be adjusted to account for any differences between allocations and obligations reported for the previous three fiscal years. In the first variance calculation under this subdivision following the end of fiscal year 2018-19, the~~ The target amounts obtained according to the Formula set forth in this section shall be adjusted to account for any differences between allocations and obligations reported for the previous ~~four~~ five fiscal years. The new target amounts shall be used to fulfill the requirements of subdivision (1) of this subsection for the next update of the Transportation Improvement Program. The adjustment to the target amount shall be allocated by Distribution Region or Division, as applicable."

SECTION 1.2. Strategic Prioritization Process Reporting. – The Department shall issue a draft revision to the State Transportation Improvement Program required by G.S. 143B-350(f)(4) no later than January 1, 2015. The Board of Transportation shall approve the revised State Transportation Improvement Program no later than July 1, 2015.

SECONDARY ROADS CHANGES

SECTION 2.1. G.S. 20-85 reads as rewritten:
"§ 20-85. **Schedule of fees.**

...

(a1) One dollar (\$1.00) of the fee imposed for any transaction assessed a fee under subdivision (a)(1), (a)(2), (a)(3), (a)(7), (a)(8), or (a)(9) of this section shall be credited to the North Carolina Highway Fund. The Division shall use the fees derived from transactions with the Division for technology improvements. The Division shall use the fees derived from transactions with commission contract agents for the payment of compensation to commission contract agents. An additional fifty cents (50¢) of the fee imposed for any transaction assessed a fee under subdivision (a)(1) of this section shall be credited to the Mercury Switch Removal Account in the Department of Environment and Natural Resources. ~~An additional fifty cents (50¢) of the fee imposed for any transaction assessed a fee under subdivision (a)(1) of this section shall be credited as follows:~~

- ~~(1) The first four hundred thousand dollars (\$400,000) collected shall be credited to the Reserve for Visitor Centers in the Highway Fund.~~
- ~~(2) Any additional funds collected shall be credited to the Highway Trust Fund and, notwithstanding G.S. 136-176(b), shall be allocated and used for urban loop projects.~~

(a2) From the fees collected under subdivisions (a)(1) through (a)(9) of this section, the Department shall annually credit the sum of four hundred thousand dollars (\$400,000) to the Reserve for Visitor Centers in the Highway Fund.

(b) Except as otherwise provided in ~~subsection (a1)~~subsections (a1) and (a2) of this section, the fees collected under subdivisions (a)(1) through (a)(9) of this section shall be credited to the North Carolina Highway Trust Fund. The fees collected under subdivision (a)(10) of this section shall be credited to the Highway Fund. ~~Fifteen dollars (\$15.00) of each title fee credited to the Trust Fund under subdivision (a)(1) shall be added to the amount allocated for secondary roads under G.S. 136-176 and used in accordance with G.S. 136-44.5.~~

...."

SECTION 2.2.(a) G.S. 136-44.2 reads as rewritten:

"§ 136-44.2. Budget and appropriations.

(a) The Director of the Budget shall include in the "Current Operations Appropriations Act" an enumeration of the purposes or objects of the proposed expenditures for each of the ~~construction and maintenance~~construction, maintenance, and improvement programs for that budget period for the State primary, secondary, State parks road systems, and other transportation systems. The State primary system shall include all portions of the State highway system located both inside and outside municipal corporate limits that are designated by N.C., U.S. or Interstate numbers. The State secondary system shall include all of the State highway system located both inside and outside municipal corporate limits that is not a part of the State primary system. The State parks system shall include all State parks roads and parking lots that are not also part of the State highway system. The transportation systems shall also include State-maintained, nonhighway modes of ~~transportation as well as transportation.~~

(b) All ~~construction and maintenance~~construction, maintenance, and improvement programs for which appropriations are requested shall be enumerated separately in the budget. Programs that are entirely State funded shall be listed separately from those programs involving the use of federal-aid funds. Proposed appropriations of State matching funds for each of the federal-aid construction programs shall be enumerated separately as well as the federal-aid funds anticipated for each program in order that the total construction requirements for each program may be provided for in the budget. Also, proposed State matching funds for the highway planning and research program shall be included separately along with the anticipated federal-aid funds for that purpose.

(c) Other program categories for which appropriations are requested, such as, but not limited to, maintenance, channelization and traffic control, bridge maintenance, public service and access road construction, transportation projects and systems, and ferry operations shall be enumerated in the budget.

(d) The Department of Transportation shall have all powers necessary to comply fully with provisions of present and future federal-aid acts. For purposes of this section, "federally eligible construction project" means any construction project except secondary road projects developed pursuant to G.S. 136-44.7 and 136-44.8 eligible for federal funds under any federal-aid act, whether or not federal funds are actually available.

(e) The "Current Operations Appropriations Act" shall also contain the proposed appropriations of State funds for use in each county for ~~maintenance and construction~~construction, maintenance, and improvement of secondary roads, to be allocated in

accordance with G.S. 136-44.5 and 136-44.6. State funds appropriated for secondary roads shall not be transferred nor used except for the ~~construction and maintenance~~construction, maintenance, and improvement of secondary roads in the county for which they are allocated pursuant to G.S. 136-44.5 and 136-44.6.

...."

SECTION 2.2.(b) Effective July 1, 2014, G.S. 136-44.2, as rewritten by subsection

(a) of this section, reads as rewritten:

"§ 136-44.2. Budget and appropriations.

(a) The Director of the Budget shall include in the "Current Operations Appropriations Act" an enumeration of the purposes or objects of the proposed expenditures for each of the ~~construction, maintenance, maintenance~~ and improvement programs for that budget period for the State primary, secondary, State parks road systems, and other transportation systems. The State primary system shall include all portions of the State highway system located both inside and outside municipal corporate limits that are designated by N.C., U.S. or Interstate numbers. The State secondary system shall include all of the State highway system located both inside and outside municipal corporate limits that is not a part of the State primary system. The State parks system shall include all State parks roads and parking lots that are not also part of the State highway system. The transportation systems shall also include State-maintained, nonhighway modes of transportation.

(b) All ~~construction, maintenance, maintenance~~ and improvement programs for which appropriations are requested shall be enumerated separately in the budget. Programs that are entirely State funded shall be listed separately from those programs involving the use of federal-aid funds. ~~Proposed appropriations of State matching funds for each of the federal aid construction programs shall be enumerated separately as well as the federal aid funds anticipated for each program in order that the total construction requirements for each program may be provided for in the budget. Also, proposed~~ Proposed State matching funds for the highway planning and research program shall be included separately along with the anticipated federal-aid funds for that purpose.

(c) Other program categories for which appropriations are requested, such as, but not limited to, maintenance, channelization and traffic control, bridge maintenance, public service and access road construction, transportation projects and systems, and ferry operations shall be enumerated in the budget.

(d) The Department of Transportation shall have all powers necessary to comply fully with provisions of present and future federal-aid acts. For purposes of this section, "federally eligible construction project" means any construction project except secondary road projects developed pursuant to ~~G.S. 136-44.7 and 136-44.8~~G.S. 136-44.8 eligible for federal funds under any federal-aid act, whether or not federal funds are actually available.

(e) The "Current Operations Appropriations Act" shall also contain the proposed appropriations of State funds for use in each county for ~~construction, maintenance, maintenance~~ and improvement of secondary roads, to be allocated in accordance with ~~G.S. 136-44.5 and 136-44.6~~G.S. 136-44.6. State funds appropriated for secondary roads shall not be transferred nor used except for the ~~construction, maintenance, maintenance~~ and improvement of secondary roads in the county for which they are allocated pursuant to ~~G.S. 136-44.5 and 136-44.6~~G.S. 136-44.6.

...

(g) The Department of Transportation may provide for costs incurred or accrued for traffic control measures to be taken by the Department at major events which involve a high degree of traffic concentration on State highways, and which cannot be funded from regular budgeted items. This authorization applies only to events which are expected to generate 30,000 vehicles or more per day. The Department of Transportation shall provide for this funding by allocating and reserving up to one hundred thousand dollars (\$100,000) before any other allocations from the appropriations for State maintenance for ~~primary, secondary, and urban~~primary and secondary road systems are made, based upon the same proportion as is appropriated to each system."

SECTION 2.3.(a) G.S. 136-44.2A reads as rewritten:

"§ 136-44.2A. Secondary road ~~improvement~~improvement construction program.

There shall be annually allocated from the Highway Fund to the Department of Transportation for secondary road ~~improvement construction~~ programs developed pursuant to ~~G.S. 136-44.7 and 136-44.8~~, a sum provided by law. ~~equal to that allocation made from the~~

~~Highway Fund under G.S. 136-41.1(a). In addition, as provided in G.S. 136-176(b)(4) and G.S. 20-85(b), revenue is annually allocated from the Highway Trust Fund for secondary road construction. Of the funds allocated from the Highway Fund, the sum of sixty-eight million six hundred seventy thousand dollars (\$68,670,000) shall be allocated among the counties in accordance with G.S. 136-44.5(b). All funds allocated from the Highway Fund for secondary road improvements in excess of that amount shall be allocated among the counties in accordance with G.S. 136-44.5(c). All funds allocated from the Highway Trust Fund for secondary road improvement programs shall be allocated in accordance with G.S. 136-182."~~

~~SECTION 2.3.(b) Effective July 1, 2014, G.S. 136-44.2A is repealed.~~

~~SECTION 2.4. G.S. 136-44.2C is repealed.~~

~~SECTION 2.5. Article 2A of Chapter 136 is amended by adding a new section to~~

~~read:~~

~~"§ 136-44.2D. Secondary unpaved road paving program.~~

~~(a) The Department of Transportation shall expend funds allocated to the paving of unpaved secondary roads for the paving of unpaved secondary roads based on a statewide prioritization. The Department shall pave the eligible unpaved secondary roads that receive the highest priority ranking within this statewide prioritization. Nothing in this subsection shall be interpreted to require the Department to pave any unpaved secondary roads that do not meet secondary road system addition standards as set forth in G.S. 136-44.10 and G.S. 136-102.6. The Highway Trust Fund shall not be used to fund the paving of unpaved secondary roads."~~

~~SECTION 2.6.(a) G.S. 136-44.5 reads as rewritten:~~

~~"§ 136-44.5. Secondary roads; mileage study; allocation of funds.~~

~~(a) Before July 1, in each calendar year, the Department of Transportation shall make a study of all State-maintained unpaved and paved secondary roads in the State. The study shall determine:~~

- ~~(1) The number of miles of unpaved State-maintained roads in each county eligible for paving and the total number of miles that are ineligible;~~
- ~~(2) The total number of miles of unpaved State-maintained roads in the State eligible for paving and the total number of miles that are ineligible; and~~
- ~~(3) The total number of paved State-maintained roads in each county, and the total number of miles of paved State-maintained roads in the State.~~

~~In this subsection, (i) ineligible unpaved mileage is defined as the number of miles of unpaved roads that have unavailable rights-of-way or for which environmental permits cannot be approved to allow for paving, and (ii) eligible unpaved mileage is defined as the number of miles of unpaved roads that have not been previously approved for paving by any funding source or has the potential to be programmed for paving when rights-of-way or environmental permits are secured. Except for federal-aid programs, the Department shall allocate all secondary road improvement funds on the basis of a formula using the study figures.~~

~~(b) The first sixty-eight million six hundred seventy thousand dollars (\$68,670,000) shall be allocated as follows: Each county shall receive a percentage of these funds, the percentage to be determined as a factor of the number of miles of paved and unpaved State-maintained secondary roads in the county divided by the total number of miles of paved and unpaved State-maintained secondary roads in the State, excluding those unpaved secondary roads that have been determined to be eligible for paving as defined in subsection (a) of this section. Beginning in fiscal year 2010-2011, allocations pursuant to this subsection shall be The amounts appropriated by law for secondary road construction, excluding unpaved secondary road funds, shall be allocated among counties based on the total number of secondary miles in a county in proportion to the total State-maintained secondary road mileage.~~

~~(c) Funds allocated for secondary road construction in excess of sixty-eight million six hundred seventy thousand dollars (\$68,670,000) shall be allocated to each county based on the percentage proportion that the number of miles in the county of State-maintained unpaved secondary roads bears to the total number of miles in the State of State-maintained unpaved secondary roads. In a county that has roads with eligible miles, these funds shall only be used for paving unpaved secondary road miles in that county. In a county where there are no roads eligible to be paved as defined in subsection (a) of this section, the funds may be used for improvements on the paved and unpaved secondary roads in that county. Beginning in fiscal year 2010-2011, allocations pursuant to this subsection shall be based on the total number of secondary miles in a county in proportion to the total State-maintained secondary road mileage.~~

~~(d) Copies of the Department study of unpaved and paved State-maintained secondary roads and copies of the individual county allocations shall be made available to newspapers having general circulation in each county."~~

~~SECTION 2.6.(b) Effective July 1, 2014, G.S. 136-44.5 is repealed.~~

~~SECTION 2.6.(c) G.S. 136-44.6 reads as rewritten:~~

~~"§ 136-44.6. **Uniformly applicable formula for the allocation of secondary roads maintenance and improvement funds.**~~

~~The Department of Transportation shall develop a uniformly applicable formula for the allocation of secondary roads maintenance and improvement funds for use in each county. The formula shall take into consideration the number of paved and unpaved miles of state-maintained secondary roads in each county and such other factors as experience may dictate. This section shall not apply to projects to pave unpaved roads under G.S. 136-44.2D."~~

~~SECTION 2.6.(d) Secondary Road Funding. – The sum of fifteen million dollars (\$15,000,000) in nonrecurring funds for the 2013-2014 fiscal year is allocated from the Highway Fund for the secondary road construction program under G.S. 136-44.2A, as enacted by Section 2.3 of this act, and the sum of twelve million dollars (\$12,000,000) in recurring funds for the 2013-2014 fiscal year is allocated from the Highway Fund for the paving of unpaved roads pursuant to G.S. 136-44.2D, as enacted by Section 2.5 of this act.~~

~~SECTION 2.7. G.S. 136-44.7 reads as rewritten:~~

~~"§ 136-44.7. **Secondary roads; annual work program; right-of-way acquisition.**~~

~~(a) The Department of Transportation shall be responsible for developing criteria for improvements and maintenance of secondary roads. The criteria shall be adopted by the Board of Transportation before it shall become effective. The Department of Transportation shall be responsible for developing annual work programs for both construction and maintenance of secondary roads in each county in accordance with criteria developed. It shall reflect the long-range and immediate goals of the Department of Transportation. Projects on the annual construction program for each county shall be rated according to their priority based upon the secondary road criteria and standards which shall be uniform throughout the State. Tentative construction projects and estimated funding shall also be listed in accordance to priority. The annual construction program shall be adopted by the Board of Transportation before it shall become effective.~~

~~(b) When a secondary road in a county is listed in the first 10 secondary roads to be paved during a year on a priority list issued by the Department of Transportation under this section, the secondary road cannot be removed from the top 10 of that list or any subsequent list until it is paved. All secondary roads in a county shall be paved, insofar as possible, in the priority order of the list. When a secondary road in the top 10 of that list is removed from the list because it has been paved, the next secondary road on the priority list shall be moved up to the top 10 of that list and shall remain there until it is paved.~~

~~(c) When it is necessary for the Department of Transportation to acquire a right-of-way in accordance with (a) and (b) of this section in order to pave a secondary road or undertake a maintenance project, the Department shall negotiate the acquisition of the right-of-way for a period of up to six months. At the end of that period, if one or more property owners have not dedicated the necessary right-of-way and at least seventy-five percent (75%) of the property owners adjacent to the project and the owners of the majority of the road frontage adjacent to the project have dedicated the necessary property for the right-of-way and have provided funds required by Department rule to the Department to cover the costs of condemning the remaining property, the Department shall initiate condemnation proceedings pursuant to Article 9 of this Chapter to acquire the remaining property necessary for the project.~~

~~(d) The Division Engineer is authorized to reduce the width of a right-of-way to less than 60 feet to pave an unpaved secondary road with the allocated funds, provided that in all circumstances the safety of the public is not compromised and the minimum accepted design practice is satisfied."~~

~~SECTION 2.8.(a) G.S. 136-44.8 reads as rewritten:~~

~~"§ 136-44.8. **Submission of secondary roads construction and unpaved roads paving programs to the Boards of County Commissioners.**~~

~~(a) The Department of Transportation shall post in the county courthouse a county map showing tentative secondary road paving projects rated according to the priority of each project in accordance with the criteria and standards adopted by the Board of Transportation. The map shall be posted at least two weeks prior to the public meeting of the county commissioners at~~

~~which the Department of Transportation representatives are to meet and discuss the proposed secondary road construction program for the county as provided in subsection (c).~~

~~(a1) Representatives of the Department of Transportation shall provide to the board of county commissioners in each county the proposed secondary road construction program and, if applicable to that county, a list of roads proposed for the annual paving program approved by the Board of Transportation. If a paving priority list is presented, it shall include the priority rating of each secondary road paving project included in the proposed paving program according to the criteria and standards adopted by the Board of Transportation.~~

~~(b) The Department of Transportation shall provide a notice to the public of the public meeting of the board of county commissioners at which the annual secondary road construction program for the county proposed by the Department is to be presented to the board and other citizens of the county as provided in subsection (c). The notice shall be published in a newspaper published in the county or having a general circulation in the county once a week for two succeeding weeks prior to the meeting. The notice shall also advise that a county map is posted in the courthouse showing tentative secondary road paving projects rated according to the priority of each project.~~

~~(c) Representatives of the Department of Transportation shall meet with the board of county commissioners at a regular or special public meeting of the board of county commissioners for each county and present to and discuss with the board of county commissioners and other citizens present, the proposed secondary road construction program for the county. The presentation and discussion shall specifically include the priority rating of each tentative secondary road paving project included in the proposed construction program, according to the criteria and standards adopted by the Board of Transportation.~~

~~At the same meeting after the presentation and discussion of the annual secondary road construction program for the county or at a later meeting, the board of county commissioners may (i) concur in the construction program as proposed, or (ii) take no action, or (iii) make recommendations for deviations in the proposed construction program, except as to paving projects and the priority of paving projects for which the board in order to make recommendations for deviations, must vote to consider the matter at a later public meeting as provided in subsection (d).~~

~~(d) The board of county commissioners may recommend deviations in the paving projects and the priority of paving projects included in the proposed secondary road construction program only at a public meeting after notice to the public that the board will consider making recommendations for deviations in paving projects and the priority of paving projects included in the proposed annual secondary road construction program. Notice of the public meeting shall be published by the board of county commissioners in a newspaper published in the county or having a general circulation in the county. After discussion by the members of the board of county commissioners and comments and information presented by other citizens of the county, the board of county commissioners may recommend deviations in the paving projects and in the paving priority of secondary road projects included in the proposed secondary road construction program. Any recommendation made by the board of county commissioners for a deviation in the paving projects or in the priority for paving projects in the proposed secondary road construction program shall state the specific reason for each such deviation recommended.~~

~~(e) The Board of Transportation shall adopt the annual secondary construction program for each county after having given the board of county commissioners of each county an opportunity to review the proposed construction program and to make recommendations as provided in this section. The Board of Transportation shall consider such recommendations insofar as they are compatible with its general plans, standards, criteria and available funds, but having due regard to development plans of the county and to the maintenance and improvement needs of all existing roads in the county. However, no consideration shall be given to any recommendation by the board of county commissioners for a deviation in the paving projects or in the priority for paving secondary road projects in the proposed construction program that is not made in accordance with subsection (d).~~

~~(f) The secondary road construction program and unpaved roads paving programs adopted by the Board of Transportation shall be followed by the Department of Transportation unless changes are approved by the Board of Transportation and notice of any changes is given to the board of county commissioners. The Department of Transportation shall post a copy of the adopted program, including a map showing the secondary road paving projects rated~~

according to the approved priority of each project, at the courthouse, within 10 days of its adoption by the Board of Transportation. The board of county commissioners may petition the Board of Transportation for review of any changes to which it does not consent and the determination of the Board of Transportation shall be final. Upon request, the most recent secondary road construction and unpaved roads paving programs adopted shall be submitted to any member of the General Assembly. The Department of Transportation shall make the annual construction program for each county available to the newspapers having a general circulation in the county."

SECTION 2.8.(b) Effective July 1, 2014, G.S. 136-44.8, as rewritten by subsection (a) of this section, reads as rewritten:

"§ 136-44.8. **Submission of unpaved secondary roads construction and unpaved roads paving programs to the Boards of County Commissioners.**

(a) ~~Representatives~~ In each county having unpaved roads programmed for paving, representatives of the Department of Transportation shall annually provide to the board of county commissioners in ~~each county~~ those counties the proposed secondary road construction program and, if applicable to that county, a list of roads proposed for the annual paving program approved by the Board of Transportation. ~~If a~~ The paving priority list is presented, it shall include the priority rating of each secondary road paving project included in the proposed paving program according to the criteria and standards adopted by the Board of Transportation.

...
(e) ~~The Board of Transportation shall adopt the annual secondary construction program for each county after having given the board of county commissioners of each county an opportunity to review the proposed construction program and to make recommendations as provided in this section. The Board of Transportation shall consider such recommendations insofar as they are compatible with its general plans, standards, criteria and available funds, but having due regard to development plans of the county and to the maintenance and improvement needs of all existing roads in the county.~~

(f) ~~The secondary road construction and unpaved secondary roads paving programs adopted by the Board of Transportation shall be followed by the Department of Transportation unless changes are approved by the Board of Transportation and notice of any changes is given to the board of county commissioners. Upon request, the most recent unpaved secondary road construction and unpaved roads paving programs adopted shall be submitted to any member of the General Assembly. The Department of Transportation shall make the annual construction program for each affected county available to the newspapers having a general circulation in the county."~~

SECTION 2.9. G.S. 136-182 is repealed.

STATE AID TO MUNICIPALITIES/POWELL BILL CHANGES

SECTION 3.1. G.S. 136-41.1 reads as rewritten:

"§ 136-41.1. **Appropriation to municipalities; allocation of funds generally; allocation to Butner.**

(a) There is annually appropriated out of the State Highway Fund a sum equal to ten and four-tenths percent (10.4%) of the net amount after refunds that was produced during the fiscal year by ~~a one and three-fourths cents (1 3/4¢)~~ tax on each gallon of motor fuel ~~taxed the tax imposed~~ under Article 36C of Chapter 105 of the General Statutes and on the equivalent amount of alternative fuel taxed under Article 36D of that Chapter. One-half of the amount appropriated shall be allocated in cash on or before October 1 of each year to the cities and towns of the State in accordance with this section. The second one-half of the amount appropriated shall be allocated in cash on or before January 1 of each year to the cities and towns of the State in accordance with this section. ~~In addition, as provided in G.S. 136-176(b)(3), revenue is allocated and appropriated from the Highway Trust Fund to the cities and towns of this State to be used for the same purposes and distributed in the same manner as the revenue appropriated to them under this section from the Highway Fund. Like the appropriation from the Highway Fund, the appropriation from the Highway Trust Fund shall be based on revenue collected during the fiscal year preceding the date the distribution is made.~~

Seventy-five percent (75%) of the funds appropriated for cities and towns shall be distributed among the several eligible municipalities of the State in the percentage proportion that the population of each eligible municipality bears to the total population of all eligible

municipalities according to the most recent annual estimates of population as certified to the Secretary of Revenue by the State Budget Officer. This annual estimation of population shall include increases in the population within the municipalities caused by annexations accomplished through July 1 of the calendar year in which these funds are distributed. Twenty-five percent (25%) of said fund shall be distributed among the several eligible municipalities of the State in the percentage proportion that the mileage of public streets in each eligible municipality which does not form a part of the State highway system bears to the total mileage of the public streets in all eligible municipalities which do not constitute a part of the State highway system.

It shall be the duty of the mayor of each municipality to report to the Department of Transportation such information as it may request for its guidance in determining the eligibility of each municipality to receive funds under this section and in determining the amount of allocation to which each is entitled. Upon failure of any municipality to make such report within the time prescribed by the Department of Transportation, the Department of Transportation may disregard such defaulting unit in making said allotment.

The funds to be allocated under this section shall be paid in cash to the various eligible municipalities on or before October 1 and January 1 of each ~~year~~ as provided in this section. Provided that eligible municipalities are authorized within the discretion of their governing bodies to enter into contracts for the purpose of maintenance, repair, construction, reconstruction, widening, or improving streets of such municipalities at any time after January 1 of any calendar year in total amounts not to exceed ninety percent (90%) of the amount received by such municipality during the preceding fiscal year, in anticipation of the receipt of funds under this section during the next fiscal year, to be paid for out of such funds when received.

The Department of Transportation may withhold each year an amount not to exceed one percent (1%) of the total amount appropriated for distribution under this section for the purpose of correcting errors in allocations: Provided, that the amount so withheld and not used for correcting errors will be carried over and added to the amount to be allocated for the following year.

The word "street" as used in this section is hereby defined as any public road maintained by a municipality and open to use by the general public, and having an average width of not less than 16 feet. In order to obtain the necessary information to distribute the funds herein allocated, the Department of Transportation may require that each municipality eligible to receive funds under this section submit to it a statement, certified by a registered engineer or surveyor of the total number of miles of streets in such municipality. The Department of Transportation may in its discretion require the certification of mileage on a biennial basis.

...."

SECTION 3.2. G.S. 136-181 is repealed.

SECTION 3.3. G.S. 136-41.3 reads as rewritten:

"§ 136-41.3. Use of funds; records and annual statement; excess accumulation of funds; contracts for maintenance, etc., of streets.

(a) Uses of Funds. – The funds allocated to cities and towns under the provisions of G.S. 136-41.2 shall be expended by said cities and towns only for the purpose of maintaining, repairing, constructing, reconstructing or widening of any street or public thoroughfare including bridges, drainage, curb and gutter, and other necessary appurtenances within the corporate limits of the municipality or for meeting the municipality's proportionate share of assessments levied for such purposes, or for the planning, construction and maintenance of ~~bikeways located within the rights of way of public streets and highways, bikeways, greenways,~~ or for the planning, construction, and maintenance of ~~sidewalks along public streets and highways, sidewalks.~~

(b) Records and Annual Statement. – Each municipality receiving funds by virtue of G.S. 136-41.1 and 136-41.2 shall maintain a separate record of accounts indicating in detail all receipts and expenditures of such funds. It shall be unlawful for any municipal employee or member of any governing body to authorize, direct, or permit the expenditure of any funds accruing to any municipality by virtue of G.S. 136-41.1 and 136-41.2 for any purpose not herein authorized. Any member of any governing body or municipal employee shall be personally liable for any unauthorized expenditures. On or before the first day of August each year, the treasurer, auditor, or other responsible official of each municipality receiving funds by virtue of G.S. 136-41.1 and 136-41.2 shall file a statement under oath with the Secretary of

Transportation showing in detail the expenditure of funds received by virtue of G.S. 136-41.1 and 136-41.2 during the preceding year and the balance on hand.

(c) Excess Accumulation of Funds Prohibited. – No funds allocated to municipalities pursuant to G.S. 136-41.1 and 136-41.2 shall be permitted to accumulate for a period greater than permitted by this section. Interest on accumulated funds shall be used only for the purposes permitted by the provisions of G.S. 136-41.3. Except as otherwise provided in this section, any municipality having accumulated an amount greater than the sum of the past 10 allocations made, shall have an amount equal to such excess deducted from the next allocation after receipt of the report required by this section. Such deductions shall be carried over and added to the amount to be allocated to municipalities for the following year. Notwithstanding the other provisions of this section, the Department shall adopt a policy to allow small municipalities to apply to the Department to be allowed to accumulate up to the sum of the past 20 allocations if a municipality's allocations are so small that the sum of the past 10 allocations would not be sufficient to accomplish the purposes of this section.

(d) Contracts for Maintenance and Construction. – In the discretion of the local governing body of each municipality receiving funds by virtue of G.S. 136-41.1 and 136-41.2 it may contract with the Department of Transportation to do the work of maintenance, repair, construction, reconstruction, widening or improving the streets in such municipality; or it may let contracts in the usual manner as prescribed by the General Statutes to private contractors for the performance of said street work; or may undertake the work by force account. The Department of Transportation within its discretion is hereby authorized to enter into contracts with municipalities for the purpose of maintenance, repair, construction, reconstruction, widening or improving streets of municipalities. And the Department of Transportation in its discretion may contract with any city or town which it deems qualified and equipped so to do that the city or town shall do the work of maintaining, repairing, improving, constructing, reconstructing, or widening such of its streets as form a part of the State highway system.

In the case of each eligible municipality, as defined in G.S. 136-41.2, having a population of less than 5,000, the Department of Transportation shall upon the request of such municipality made by official action of its governing body, on or prior to June 1, 1953, or June 1 in any year thereafter, for the fiscal year beginning July 1, 1953, and for the years thereafter do such street construction, maintenance, or improvement on nonsystem streets as the municipality may request within the limits of the current or accrued payments made to the municipality under the provisions of G.S. 136-41.1.

In computing the costs, the Department of Transportation may use the same rates for equipment, rental, labor, materials, supervision, engineering and other items, which the Department of Transportation uses in making charges to one of its own department or against its own department, or the Department of Transportation may employ a contractor to do the work, in which case the charges will be the contract cost plus engineering and inspection. The municipality is to specify the location, extent, and type of the work to be done, and shall provide the necessary rights-of-way, authorization for the removal of such items as poles, trees, water and sewer lines as may be necessary, holding the Department of Transportation free from any claim by virtue of such items of cost and from such damage or claims as may arise therefrom except from negligence on the part of the Department of Transportation, its agents, or employees.

If a municipality elects to bring itself under the provisions of the two preceding paragraphs, it shall enter into a two-year contract with the Department of Transportation and if it desires to dissolve the contract at the end of any two-year period it shall notify the Department of Transportation of its desire to terminate said contract on or before April 1 of the year in which such contract shall expire; otherwise, said contract shall continue for an additional two-year period, and if the municipality elects to bring itself under the provisions of the two preceding paragraphs and thereafter fails to pay its account to the Department of Transportation for the fiscal year ending June 30, by August 1 following the fiscal year, then the Department of Transportation shall apply the said municipality's allocation under G.S. 136-41.1 to this account until said account is paid and the Department of Transportation shall not be obligated to do any further work provided for in the two preceding paragraphs until such account is paid.

Section 143-129 of the General Statutes relating to the procedure for letting of public contracts shall not be applicable to contracts undertaken by any municipality with the Department of Transportation in accordance with the provisions of the three preceding paragraphs.

(e) Permitted Offsets to Funding. – The Department of Transportation is authorized to apply a municipality's share of funds allocated to a municipality under the provisions of G.S. 136-41.1 to any of the following accounts of the municipality with the said Department of Transportation, which the municipality fails to pay:

- (1) Cost sharing agreements for right-of-way entered into pursuant to G.S. 136-66.3, but not to exceed ten percent (10%) of any one year's allocation until the debt is repaid,
- (2) The cost of relocating municipally owned waterlines and other municipally owned utilities on a State highway project which is the responsibility of the municipality,
- (3) For any other work performed for the municipality by the Department of Transportation or its contractor by agreement between the Department of Transportation and the municipality, and
- (4) For any other work performed that was made necessary by the construction, reconstruction or paving of a highway on the State highway system for which the municipality is legally responsible."

SECTION 3.4. G.S. 136-41.4 reads as rewritten:

"§ 136-41.4. Municipal use of allocated funds; election.

(a) A municipality that qualifies for an allocation of funds pursuant to G.S. 136-41.1 shall have the ~~option~~ following options:

- (1) ~~to accept~~ Accept all or a portion of funds allocated to the municipality, under that section, for the repair, maintenance, construction, reconstruction, widening, or improving of the municipality's streets, municipality for use as authorized by G.S. 136-41.3(a).
- (2) Use some or all of its allocation to match federal funds administered by the Department for independent bicycle and pedestrian improvement projects within the municipality's limits, or within the area of any metropolitan planning organization or rural transportation planning organization.
- (3) ~~or the municipality may elect~~ Elect to have some or all of the allocation reprogrammed for any Transportation Improvement Project currently on the approved project list within the municipality's limits or within the area of any metropolitan planning organization or rural transportation planning organization.

(b) If a municipality chooses to have its allocation reprogrammed, the ~~minimum~~ amount that may be reprogrammed is an amount equal to that amount necessary to complete one full phase of the project selected by the municipality or an amount that, when added to the amount already programmed for the Transportation Improvement Project selected, would permit the completion of at least one full phase of the project. The restriction set forth in this subsection shall not apply to any bicycle or pedestrian projects."

SECTION 3.5. DOT Municipal Lane Mile Study. – The Department of Transportation shall collect lane mile data from each municipality eligible to receive funds under this section no later than December 1, 2013. The Department shall report to the Joint Legislative Transportation Oversight Committee no later than March 1, 2014, on at least three options to shift the distribution formula to include lane mile data. The report shall include advantages and disadvantages, fiscal impacts to each municipality, and any other technical considerations in making such a change. The Joint Legislative Transportation Oversight Committee and the Fiscal Research Division shall include in its recommendations to the 2014 Session of the 2013 General Assembly a new distribution formula, if the Committee finds that a new formula is beneficial and practical.

CONFORMING CHANGES

SECTION 4.1. G.S. 105-187.9 reads as rewritten:

"§ 105-187.9. Disposition of tax proceeds.

...
(b) ~~(Repealed effective July 1, 2013) General Fund Transfer.~~ – In each fiscal year, the State Treasurer shall transfer the amounts provided below from the taxes deposited in the Trust Fund to the General Fund. The transfer of funds authorized by this section may be made by transferring one fourth of the amount at the end of each quarter in the fiscal year or by

transferring the full amount annually on July 1 of each fiscal year, subject to the availability of revenue.

- (1) ~~The sum of twenty six million dollars (\$26,000,000).~~
- (2) ~~In addition to the amount transferred under subdivision (1) of this subsection, the sum of one million seven hundred thousand dollars (\$1,700,000) shall be transferred in the 2001-2002 fiscal year. The amount distributed under this subdivision shall increase in the 2002-2003 fiscal year to the sum of two million four hundred thousand dollars (\$2,400,000). In each fiscal year thereafter, the sum transferred under this subdivision shall be the amount distributed in the previous fiscal year plus or minus a percentage of this sum equal to the percentage by which tax collections under this Article increased or decreased for the most recent 12-month period for which data are available.~~

(e) ~~(Effective July 1, 2013) Mobility Fund Transfer. In each fiscal year, the State Treasurer shall transfer fifty eight million dollars (\$58,000,000) from the taxes deposited in the Trust Fund to the Mobility Fund. The transfer of funds authorized by this section may be made by transferring one fourth of the amount at the end of each quarter in the fiscal year or by transferring the full amount annually on July 1 of each fiscal year, subject to the availability of revenue.~~"

SECTION 4.2. G.S. 136-18 reads as rewritten:

"§ 136-18. Powers of Department of Transportation.

The said Department of Transportation is vested with the following powers:

- ...
- (12a) The Department of Transportation shall have such powers as are necessary to establish, administer, and receive federal funds for a transportation infrastructure banking program as authorized by the Intermodal Surface Transportation Efficiency Act of 1991, Pub. L. 102-240, as amended, and the National Highway System Designation Act of 1995, Pub. L. 104-59, as amended. The Department of Transportation is authorized to apply for, receive, administer, and comply with all conditions and requirements related to federal financial assistance necessary to fund the infrastructure banking program. The infrastructure banking program established by the Department of Transportation may utilize federal and available State funds for the purpose of providing loans or other financial assistance to governmental units, including toll authorities, to finance the costs of transportation projects authorized by the above federal aid acts. Such loans or other financial assistance shall be subject to repayment and conditioned upon the establishment of such security and the payment of such fees and interest rates as the Department of Transportation may deem necessary. The Department of Transportation is authorized to apply a municipality's share of funds allocated under G.S. 136-41.1 or G.S. 136-44.20 as necessary to ensure repayment of funds advanced under the infrastructure banking program. The Department of Transportation shall establish jointly, with the State Treasurer, a separate infrastructure banking account with necessary fiscal controls and accounting procedures. Funds credited to this account shall not revert, and interest and other investment income shall accrue to the account and may be used to provide loans and other financial assistance as provided under this subdivision. The Department of Transportation may establish such rules and policies as are necessary to establish and administer the infrastructure banking program. The infrastructure banking program authorized under this subdivision shall not modify the regional distribution formula for the distribution of funds established by ~~G.S. 136-17.2A, G.S. 136-189.11.~~ Governmental units may apply for loans and execute debt instruments payable to the State in order to obtain loans or other financial assistance provided for in this subdivision. The Department of Transportation shall require that applicants shall pledge as security for such obligations revenues derived from operation of the benefited facilities or systems, other sources of revenue, or their faith and credit, or any combination thereof. The faith and credit of such governmental units shall

not be pledged or be deemed to have been pledged unless the requirements of Article 4, Chapter 159 of the General Statutes have been met. The State Treasurer, with the assistance of the Local Government Commission, shall develop and adopt appropriate debt instruments for use under this subdivision. The Local Government Commission shall develop and adopt appropriate procedures for the delivery of debt instruments to the State without any public bidding therefor. The Local Government Commission shall review and approve proposed loans to applicants pursuant to this subdivision under the provisions of Articles 4 and 5, Chapter 159 of the General Statutes, as if the issuance of bonds was proposed, so far as those provisions are applicable. Loans authorized by this subdivision shall be outstanding debt for the purpose of Article 10, Chapter 159 of the General Statutes.

...."

SECTION 4.3. G.S. 136-17.2A is repealed.

SECTION 4.4. G.S. 136-44.50(a) reads as rewritten:

"(a) A transportation corridor official map may be adopted or amended by any of the following:

- (1) The governing board of any local government for any thoroughfare included as part of a comprehensive plan for streets and highways adopted pursuant to G.S. 136-66.2 or for any proposed public transportation corridor included in the adopted long-range transportation plan.
- (2) The Board of Transportation, or the governing board of any county, for any portion of the existing or proposed State highway system or for any public transportation corridor, to include rail, that is in the Transportation Improvement Program.
- (3) Regional public transportation authorities created pursuant to Article 26 of Chapter 160A of the General Statutes or regional transportation authorities created pursuant to Article 27 of Chapter 160A of the General Statutes for any portion of the existing or proposed State highway system, or for any proposed public transportation corridor, or adjacent station or parking lot, included in the adopted long-range transportation plan.
- (4) The North Carolina Turnpike Authority for any project being studied pursuant to G.S. 136-89.183.
- (5) The Wilmington Urban Area Metropolitan Planning Organization for ~~any project that is within its urbanized boundary and identified in G.S. 136-179.~~ Department projects R-3300 and U-4751.

Before a city adopts a transportation corridor official map that extends beyond the extraterritorial jurisdiction of its building permit issuance and subdivision control ordinances, or adopts an amendment to a transportation corridor official map outside the extraterritorial jurisdiction of its building permit issuance and subdivision control ordinances, the city shall obtain approval from the Board of County Commissioners."

SECTION 4.5. G.S. 136-66.3 reads as rewritten:

"§ 136-66.3. Local government participation in improvements to the State transportation system.

...
(c1) ~~No TIP Disadvantage for Participation.~~ — If a county or municipality participates in a State transportation system improvement project, as authorized by this section, or by G.S. 136-51 and G.S. 136-98, the Department shall ensure that the local government's participation does not cause any disadvantage to any other project in the Transportation Improvement Program under G.S. 143B-350(f)(4).

(c2) ~~Distribution of State Funds Made Available by County or Municipal Participation.~~ — Any State or federal funds allocated to a project that are made available by county or municipal participation in a project contained in the Transportation Improvement Program under G.S. 143B-350(f)(4) shall ~~remain in the same funding region that the funding was allocated to under the distribution formula contained in G.S. 136-17.2A.~~ be subject to G.S. 136-189.11.

(c3) ~~Limitation on Agreements.~~ — The Department shall not enter into any agreement with a county or municipality to provide additional total funding for highway construction in

~~the county or municipality in exchange for county or municipal participation in any project contained in the Transportation Improvement Program under G.S. 143B-350(f)(4).~~

...
(e1) Reimbursement Procedure. – Upon request of the county or municipality, the Department of Transportation shall allow the local government a period of not less than three years from the date construction of ~~the projects~~ a project undertaken under subsection (e) of this section is initiated to reimburse the Department their agreed upon share of the costs necessary for the project. The Department of Transportation shall not charge a local government any interest during the initial three years.

...."
SECTION 4.6. G.S. 136-89.192 reads as rewritten:
"§ 136-89.192. ~~Equity distribution~~ Applicability of formula.

Only those funds applied to a Turnpike Project from the State Highway Fund, State Highway Trust Fund, or federal-aid funds that might otherwise be used for other roadway projects within the State, and are otherwise already subject to the ~~distribution~~ formula under ~~G.S. 136-17.2A, G.S. 136-189.11~~ shall be included in the ~~distribution~~ formula.

Other revenue from the sale of the Authority's bonds or notes, project loans, or toll collections shall not be included in the ~~distribution~~ formula."

SECTION 4.7. G.S. 136-175 reads as rewritten:
"§ 136-175. Definitions.

The following definitions apply in this Article:

- (1) ~~Intrastate System. The network of major, multilane arterial highways composed of those routes, segments, or corridors listed in G.S. 136-178, and any other route added by the Department of Transportation under G.S. 136-178.~~
- (2) Transportation Improvement Program. The schedule of major transportation improvement projects required by G.S. 143B-350(f)(4).
- (3) Trust Fund. The North Carolina Highway Trust Fund."

SECTION 4.8. G.S. 136-176 reads as rewritten:
"§ 136-176. Creation, revenue sources, and purpose of North Carolina Highway Trust Fund.

(a) A special account, designated the North Carolina Highway Trust Fund, is created within the State treasury. The Trust Fund consists of the following revenue:

- (1) Motor fuel, alternative fuel, and road tax revenue deposited in the Fund under G.S. 105-449.125, 105-449.134, and 105-449.43, respectively.
- (2) Motor vehicle use tax deposited in the Fund under G.S. 105-187.9.
- (3) Revenue from the certificate of title fee and other fees payable under G.S. 20-85.
- (4) Repealed by Session Laws 2001-424, s. 27.1.
- (5) Interest and income earned by the Fund.

(a1) ~~The Department shall use two hundred twenty million dollars (\$220,000,000) in fiscal year 2001-2002, two hundred twelve million dollars (\$212,000,000) in fiscal year 2002-2003, and two hundred fifty five million dollars (\$255,000,000) in fiscal year 2003-2004 of the cash balance of the Highway Trust Fund for the following purposes:~~

- (1) ~~For primary route pavement preservation. One hundred seventy million dollars (\$170,000,000) in fiscal year 2001-2002, and one hundred fifty million dollars (\$150,000,000) in each of the fiscal years 2002-2003 and 2003-2004. Up to ten percent (10%) of the amount for each of the fiscal years 2001-2002, 2002-2003, and 2003-2004 is available in that fiscal year, at the discretion of the Secretary of Transportation, for:~~
 - a. ~~Highway improvement projects that further economic growth and development in small urban and rural areas, that are in the Transportation Improvement Program, and that are individually approved by the Board of Transportation; or~~
 - b. ~~Highway improvements that further economic development in the State and that are individually approved by the Board of Transportation.~~
- (2) ~~For preliminary engineering costs not included in the current year Transportation Improvement Program. Fifteen million dollars~~

~~(\$15,000,000) in each of the fiscal years 2001-2002, 2002-2003, and 2003-2004. If any funds allocated by this subdivision, in the cash balance of the Highway Trust Fund, remain unspent on June 30, 2008, the Department may transfer within the Department up to twenty nine million dollars (\$29,000,000) of available funds to contract for freight transportation system improvements for the Global TransPark.~~

- ~~(3) For computerized traffic signal systems and signal optimization projects.— Fifteen million dollars (\$15,000,000) in each of the fiscal years 2001-2002, 2002-2003, and 2003-2004.~~
- ~~(4) For public transportation twenty million dollars (\$20,000,000) in fiscal year 2001-2002, twenty five million dollars (\$25,000,000) in fiscal year 2002-2003, and seventy five million dollars (\$75,000,000) in fiscal year 2003-2004.~~
- ~~(5) For small urban construction projects.— Seven million dollars (\$7,000,000) in fiscal year 2002-2003.~~

~~Funds authorized for use by the Department pursuant to this subsection shall remain available to the Department until expended.~~

~~(a2) Repealed by Session Laws 2002-126, s. 26.4(b), effective July 1, 2002.~~

~~(a3) The Department may obligate three hundred million dollars (\$300,000,000) in fiscal year 2003-2004 and four hundred million dollars (\$400,000,000) in fiscal year 2004-2005 of the cash balance of the Highway Trust Fund for the following purposes:~~

- ~~(1) Six hundred thirty million dollars (\$630,000,000) for highway system preservation, modernization, and maintenance, including projects to enhance safety, reduce congestion, improve traffic flow, reduce accidents, upgrade pavement widths and shoulders, extend pavement life, improve pavement smoothness, and rehabilitate or replace deficient bridges; and for economic development transportation projects recommended by local officials and approved by the Board of Transportation.~~
- ~~(2) Seventy million dollars (\$70,000,000) for regional public transit systems, rural and urban public transportation system facilities, regional transportation and air quality initiatives, rail system track improvements and equipment, and other ferry, bicycle, and pedestrian improvements. For any project or program listed in this subdivision for which the Department receives federal funds, use of funds pursuant to this subdivision shall be limited to matching those funds.~~

~~Funds authorized for obligation and use by the Department pursuant to this subsection shall remain available to the Department until expended.~~

~~(a4) Project selection pursuant to subsection (a3) of this section shall be based on identified and documented need. Funds expended pursuant to subdivision (1) of subsection (a3) of this section shall be distributed in accordance with the distribution formula in G.S. 136-17.2A. No funds shall be expended pursuant to subsection (a3)(1) of this section on any project that does not meet Department of Transportation standards for road design, materials, construction, and traffic flow.~~

~~(a5) The Department shall report to the Joint Legislative Transportation Oversight Committee, on or before September 1, 2003, on its intended use of funds pursuant to subsection (a3) of this section. The Department shall report to the Joint Transportation Appropriations Subcommittee, on or before May 1, 2004, on its actual current and intended future use of funds pursuant to subsection (a3) of this section. The Department shall certify to the Joint Legislative Transportation Oversight Committee each year, on or before November 1, that use of the Highway Trust Fund cash balances for the purposes listed in subsection (a3) of this section will not adversely affect the delivery schedule of any Highway Trust Fund projects. If the Department cannot certify that the full amounts authorized in subsection (a3) of this section are available, then the Department may determine the amount that can be used without adversely affecting the delivery schedule and may proportionately apply that amount to the purposes set forth in subsection (a3) of this section.~~

~~(b) Funds in the Trust Fund are annually appropriated to the Department of Transportation to be allocated and used as provided in this subsection. A sum, not to exceed four and eight tenths percent (4.8%) of the amount of revenue deposited in the Trust Fund under subdivisions (a)(1), (2), and (3) of this section sum, in the amount appropriated by law,~~

may be used each fiscal year by the Department for expenses to administer the Trust Fund. Operation and project development costs of the North Carolina Turnpike Authority are eligible administrative expenses under this subsection. Any funds allocated to the Authority pursuant to this subsection shall be repaid by the Authority from its toll revenue as soon as possible, subject to any restrictions included in the agreements entered into by the Authority in connection with the issuance of the Authority's revenue bonds. Beginning one year after the Authority begins collecting tolls on a completed Turnpike Project, interest shall accrue on any unpaid balance owed to the Highway Trust Fund at a rate equal to the State Treasurer's average annual yield on its investment of Highway Trust Fund funds pursuant to G.S. 147-6.1. Interest earned on the unpaid balance shall be deposited in the Highway Trust Fund upon repayment. The sum up to the amount anticipated to be necessary to meet the State matching funds requirements to receive federal-aid highway trust funds for the next fiscal year may be set aside for that purpose. The rest of the funds in the Trust Fund shall be allocated and used as follows:specified in G.S. 136-189.11.

- ~~(1) Sixty one and ninety five hundredths percent (61.95%) to plan, design, and construct projects on segments or corridors of the Intrastate System as described in G.S. 136-178 and to pay debt service on highway bonds and notes that are issued under the State Highway Bond Act of 1996 and whose proceeds are applied to these projects.~~
- ~~(2) Twenty five and five hundredths percent (25.05%) to plan, design, and construct the urban loops described in G.S. 136-180 and to pay debt service on highway bonds and notes that are issued under the State Highway Bond Act of 1996 and whose proceeds are applied to these urban loops.~~
- ~~(3) Six and one half percent (6.5%) to supplement the appropriation to cities for city streets under G.S. 136-181.~~
- ~~(4) Six and one half percent (6.5%) for secondary road construction as provided in G.S. 136-182 and to pay debt service on highway bonds and notes that are issued under the State Highway Bond Act of 1996 and whose proceeds are applied to secondary road construction.~~

The Department must administer funds allocated under subdivisions (1), (2), and (4) of this ~~subsection~~this section in a manner that ensures that sufficient funds are available to make the debt service payments on bonds issued under the State Highway Bond Act of 1996 as they become due.

~~(b1) The Secretary may authorize the transfer of funds allocated under subdivisions (1) through (4) of subsection (b) of this section to other projects that are ready to be let and were to be funded from allocations to those subdivisions. The Secretary shall ensure that any funds transferred pursuant to this subsection are repaid promptly and in any event in no more than four years. The Secretary shall certify, prior to making any transfer pursuant to this subsection, that the transfer will not affect the delivery schedule of Highway Trust Fund projects in the current Transportation Improvement Program. No transfers shall be allowed that do not conform to the applicable provisions of the equity formula for distribution of funds, G.S. 136-17.2A. If the Secretary authorizes a transfer pursuant to this subsection, the Secretary shall report that decision to the next regularly scheduled meetings of the Joint Legislative Commission on Governmental Operations, the Joint Legislative Transportation Oversight Committee, and to the Fiscal Research Division.~~

~~(b2) (Effective July 1, 2013) There is annually appropriated to the North Carolina Turnpike Authority from the Highway Trust Fund the sum of one hundred twelve million dollars (\$112,000,000).forty-nine million dollars (\$49,000,000). Of the amount allocated by this subsection, twenty-five million dollars (\$25,000,000) shall be used to pay debt service or related financing costs and expenses on revenue bonds or notes issued for the construction of the Triangle Expressway, and twenty-four million dollars (\$24,000,000) shall be used to pay debt service or related financing expenses on revenue bonds or notes issued for the construction of the Monroe Connector/Bypass, twenty eight million dollars (\$28,000,000) shall be used to pay debt service or related financing expenses on revenue bonds or notes issued for the construction of the Mid Currituck Bridge, and thirty five million dollars (\$35,000,000) shall be used to pay debt service or related financing expenses on revenue bonds or notes issued for the construction of the Garden Parkway. Monroe Connector/Bypass. The amounts appropriated to the Authority pursuant to this subsection shall be used by the Authority to pay debt service or related financing costs and expenses on revenue bonds or notes issued by the Authority to~~

finance the costs of one or more Turnpike Projects, to refund such bonds or notes, or to fund debt service reserves, operating reserves, and similar reserves in connection therewith. The appropriations established by this subsection constitute an agreement by the State to pay the funds appropriated hereby to the Authority within the meaning of G.S. 159-81(4). Notwithstanding the foregoing, it is the intention of the General Assembly that the enactment of this provision and the issuance of bonds or notes by the Authority in reliance thereon shall not in any manner constitute a pledge of the faith and credit and taxing power of the State, and nothing contained herein shall prohibit the General Assembly from amending the appropriations made in this subsection at any time to decrease or eliminate the amount annually appropriated to the Authority. Funds transferred from the Highway Trust Fund to the Authority pursuant to this subsection are not subject to the ~~equity~~—formula in ~~G.S. 136-17.2A~~. G.S. 136-189.11.

~~(c) If funds are received under 23 U.S.C. Chapter 1, Federal Aid Highways, for a project for which funds in the Trust Fund may be used, the amount of federal funds received plus the amount of any funds from the Highway Fund that were used to match the federal funds may be transferred by the Secretary of Transportation from the Trust Fund to the Highway Fund and used for projects in the Transportation Improvement Program.~~

(d) A contract may be let for projects funded from the Trust Fund in anticipation of revenues pursuant to the cash-flow provisions of G.S. 143C-6-11 only for the two bienniums following the year in which the contract is let.

(e) **(Effective July 1, 2013)** ~~Subject to G.S. 136-17.2A and other funding distribution formulas, funds allocated under subdivisions (1), (3), and (4) of subsection (b) of this section may also G.S. 136-189.11, funds may~~ be used for fixed guideway projects, including providing matching funds for federal grants for fixed guideway projects."

SECTION 4.9. The following statutes are repealed:

- (1) G.S. 136-177.
- (2) G.S. 136-177.1.
- (3) G.S. 136-178.
- (4) G.S. 136-179.
- (5) G.S. 136-180.
- (6) G.S. 136-184.
- (7) G.S. 136-185.
- (8) G.S. 136-187.
- (9) G.S. 136-188.
- (10) G.S. 136-189.

TURNPIKE AUTHORITY CHANGES

SECTION 5.1. G.S. 136-89.183(a)(2) reads as rewritten:

"§ 136-89.183. Powers of the Authority.

(a) The Authority shall have all of the powers necessary to execute the provisions of this Article, including the following:

- ...
- (2) To study, plan, develop, and undertake preliminary design work on up to ~~eight~~ nine Turnpike Projects. At the conclusion of these activities, the Turnpike Authority is authorized to design, establish, purchase, construct, operate, and maintain the following projects:
 - a. ~~Triangle Expressway, including segments also known as N.C. 540, Triangle Parkway, and the Western Wake Freeway in Wake and Durham Counties, and Southeast Extension in Wake and Johnston Counties, except that no portion of the Southeast Extension shall be located north of an existing protected corridor established by the Department of Transportation circa 1995, except in the area of Interstate 40 East.~~ Counties. The described segments constitute three projects.
 - b. ~~Gaston East West Connector, also known as the Garden Parkway.~~
 - c. ~~Monroe Connector/Bypass.~~
 - d. ~~Cape Fear Skyway.~~

- e. ~~A bridge of more than two miles in length going from the mainland to a peninsula bordering the State of Virginia, pursuant to G.S. 136-89.183A.~~

~~Any other project proposed by the Authority in addition to the projects listed in this subdivision must be approved by the General Assembly prior to construction. This subdivision requires prior consultation with the Joint Legislative Commission on Governmental Operations pursuant to G.S. 120-76.1 no less than 180 days prior to initiating the process required by Article 7 of Chapter 159 of the General Statutes.~~

~~A- With the exception of the four projects set forth in sub-subdivisions a. and c. of this subdivision, the Turnpike Project projects selected for construction by the Turnpike Authority, prior to the letting of a contract for the project, shall meet the following conditions: (i) two of the projects must be ranked in the top 35 based on total score on the Department-produced list entitled "Mobility Fund Project Scores" dated June 6, 2012, and, in addition, may be subject to G.S. 136-18(39a); (ii) of the projects not ranked as provided in (i), one may be subject to G.S. 136-18(39a); (iii) the projects shall be included in any applicable locally adopted comprehensive transportation plans and plans; (iv) the projects shall be shown in the current State Transportation Improvement Plan prior to the letting of a contract for the Turnpike Project Program; and (v) toll projects must be approved by all affected Metropolitan Planning Organizations and Rural Transportation Planning Organizations for tolling."~~

SECTION 5.2. G.S. 136-18 reads as rewritten:

"§ 136-18. Powers of Department of Transportation.

The said Department of Transportation is vested with the following powers:

- ...
(39a) a. ~~The Department of Transportation or Turnpike Authority, as applicable, may enter into a partnership agreement up to three agreements with a private entity as provided under subdivision (39) of this section for which the provisions of this section apply. The pilot project allowed under this subdivision must be one that is a candidate for funding under the Mobility Fund, that is planned for construction through a public private partnership, and for which a Request for Qualifications has been issued by the Department no later than June 30, 2012.~~
- b. A private entity or its contractors must provide performance and payment security in the form and in the amount determined by the Department of Transportation. The form of the performance and payment security may consist of bonds, letters of credit, parent guaranties, or other instruments acceptable to the Department of Transportation.
- c. Notwithstanding the provisions of G.S. 143B-426.40A, an agreement entered into under this subdivision may allow the private entity to assign, transfer, sell, hypothecate, and otherwise convey some or all of its right, title, and interest in and to such agreement, and any rights and remedies thereunder, to a lender, bondholder, or any other party. However, in no event shall any such assignment create additional debt or debt-like obligations of the State of North Carolina, the Department, or any other agency, authority, commission, or similar subdivision of the State to any lender, bondholder, entity purchasing a participation in the right to receive the payment, trustee, trust, or any other party providing financing or funding of projects described in this section. The foregoing shall not preclude the Department from making any payments due and owing pursuant to an agreement entered into under this section.
- d. ~~The Department of Transportation may fix, revise, charge, and collect tolls and fees to the same extent allowed under Article 6H of Chapter 136 of the General Statutes. Statutes shall apply to the~~

Department of Transportation and to projects undertaken by the Department of Transportation under subdivision (39) of this section. The Department may assign its authority under that Article to fix, revise, charge, retain, enforce, and collect tolls and fees to the private entity.

e. Any contract under this subdivision or under Article 6H of this Chapter for the development, construction, maintenance, or operation of a project shall provide for revenue sharing, if applicable, between the private party and the Department, and revenues derived from such project may be used as set forth in G.S. 136-89.188(a), notwithstanding the provisions of G.S. 136-89.188(d). Excess toll revenues from a Turnpike project shall be used for the funding or financing of transportation projects within the corridor where the Turnpike Project is located. For purposes of this subdivision, the term "excess toll revenues" means those toll revenues derived from a Turnpike Project that are not otherwise used or allocated to the Authority or a private entity pursuant to this subdivision, notwithstanding the provisions of G.S. 136-89.188(d). For purposes of this subdivision, the term "corridor" means (i) the right-of-way limits of the Turnpike Project and any facilities related to the Turnpike Project or any facility or improvement necessary for the use, design, construction, operation, maintenance, repair, rehabilitation, reconstruction, or financing of a Turnpike Project; (ii) the right-of-way limits of any subsequent improvements, additions, or extension to the Turnpike Project and facilities related to the Turnpike projects, including any improvements necessary for the use, design, construction, operation, maintenance, repair, rehabilitation, reconstruction, or financing of those subsequent improvements, additions, or extensions to the Turnpike Project; and (iii) roads used for ingress or egress to the toll facility or roads that intersect with the toll facility, whether by ramps or separated grade facility, and located within one mile in any direction.

f. Agreements entered into under this subdivision shall comply with the following additional provisions:

1. The Department shall solicit proposals for agreements.
2. Agreement shall be limited to no more than 50 years from the date of the beginning of operations on the toll facility.
3. Notwithstanding the provisions of G.S. 136-89.183(a)(5), all initial tolls or fees to be charged by a private entity shall be reviewed by the Turnpike Authority Board. Prior to setting toll rates, either a set rate or a minimum and maximum rate set by the private entity, the private entity shall hold a public hearing on the toll rates, including an explanation of the toll setting methodology, in accordance with guidelines for the hearing developed by the Department. After tolls go into effect, the private entity shall report to the Turnpike Authority Board 30 days prior to any increase in toll rates or change in the toll setting methodology by the private entity from the previous toll rates or toll setting methodology last reported to the Turnpike Authority Board.
4. Financial advisors and attorneys retained by the Department on contract to work on projects pursuant to this subsection shall be subject to State law governing conflicts of interest.
5. 60 days prior to the signing of a concession agreement subject to this subdivision, the Department shall report to the Joint Legislative Transportation Oversight Committee on the following for the presumptive concessionaire:
 - I. Project description.
 - II. Number of years that tolls will be in place.

- III. Name and location of firms and parent companies, if applicable, including firm responsibility and stake, and assessment of audited financial statements.
- IV. Analysis of firm selection criteria.
- V. Name of any firm or individual under contract to provide counsel or financial analysis to the Department or Authority. The Department shall disclose payments to these contractors related to completing the agreement under this subdivision.
- VI. Demonstrated ability of the project team to deliver the project, by evidence of the project team's prior experience in delivering a project on schedule and budget, and disclosure of any unfavorable outcomes on prior projects.
- VII. Detailed description of method of finance, including sources of funds, State contribution amounts, including schedule of availability payments and terms of debt payments.
- VIII. Information on assignment of risk shared or assigned to State and private partner.
- IX. Information on the feasibility of finance as obtained in traffic and revenue studies.
- 6. The Turnpike Authority annual report under G.S. 136-89.193 shall include reporting on all revenue collections associated with projects subject to this subdivision under the Turnpike Authority.
- 7. The Department shall develop standards for entering into comprehensive agreements with private entities under the authority of this subdivision and report those standards to the Joint Legislative Transportation Oversight Committee on or before October 1, 2013.

...
 (43) For the purposes of financing an agreement under subdivision (39a) of this section, the Department of Transportation may act as a conduit issuer for private activity bonds to the extent the bonds do not constitute a debt obligation of the State. The issuance of private activity bonds under this subdivision and any related actions shall be governed by The State and Local Government Revenue Bond Act, Article 5 of Chapter 159 of the General Statutes, with G.S. 159-88 satisfied by adherence to the requirements of ~~subdivisions (39) and subdivision (39a)~~ of this section."

SECTION 5.3. G.S. 136-89.183(a)(5) reads as rewritten:

"§ 136-89.183. Powers of the Authority.

(a) The Authority shall have all of the powers necessary to execute the provisions of this Article, including the following:

- (5) To fix, revise, charge, retain, enforce, and collect tolls and fees for the use of the Turnpike Projects. Prior to the effective date of any toll or fee for use of a Turnpike Facility, the Authority shall submit a description of the proposed toll or fee to the Board of Transportation, the Joint Legislative Transportation Oversight Committee and the Joint Legislative Commission on Governmental Operations for review.

...
 SECTION 5.4. G.S. 136-89.188 reads as rewritten:

"§ 136-89.188. Use of revenues.

(a) Revenues derived from Turnpike Projects authorized under this Article shall be used only for the following:

- (1) Authority administration ~~costs~~; costs.

- (2) Turnpike Project development, right-of-way acquisition, design, construction, operation, and maintenance; maintenance, reconstruction, rehabilitation, and replacement.
- (3) ~~debt~~ Debt service on the Authority's revenue bonds or related purposes such as the establishment of debt service reserve ~~funds~~ funds.
- (4) Debt service, debt service reserve funds, and other financing costs related to any of the following:
 - a. A financing undertaken by a private entity under a partnership agreement with the entity for a Turnpike Project.
 - b. Private activity bonds issued under law related to a Turnpike Project.
 - c. Any federal or State loan, line of credit, or loan guarantee relating to a Turnpike Project.
- (5) A return on investment of any private entity under a partnership agreement with the entity for a Turnpike Project.
- (6) Any other uses granted to a private entity under a partnership agreement with the entity for a Turnpike Project.

(b) The Authority may use up to one hundred percent (100%) of the revenue derived from a Turnpike Project for debt service on the Authority's revenue bonds or for a combination of debt service and operation and maintenance expenses of the Turnpike Projects.

(c) The Authority shall use not more than five percent (5%) of total revenue derived from all Turnpike Projects for Authority administration costs.

(d) Notwithstanding the provisions of subsections (a) and (b) of this section, toll revenues generated from a converted segment of the State highway system previously planned for operation as a nontoll facility shall only be used for the funding or financing of the right of way acquisition, construction, expansion, operations, maintenance, and Authority administration costs associated with the converted segment or a contiguous toll facility."

SECTION 5.5. Part 1 of Article 6H of Chapter 136 of the General Statutes is amended by adding a new section to read:

"§ 136-89.199. Designation of high-occupancy toll and managed lanes.

Notwithstanding any other provision of this Article, the Authority may designate one or more lanes of any highway, or portion thereof, within the State, including lanes that may previously have been designated as HOV lanes under G.S. 20-146.2, as high-occupancy toll (HOT) or other type of managed lanes; provided, however, that such designation shall not reduce the number of existing general purpose lanes. In making such designations, the Authority shall specify the high-occupancy requirement or other conditions for use of such lanes, which may include restricting vehicle types, access controls, or the payment of tolls for vehicles that do not meet the high-occupancy requirements or conditions for use."

SECTION 5.6. Part 2 of Article 6H of Chapter 136 of the General Statutes reads as rewritten:

"Part 2. Collection of Tolls on Turnpike Projects.

...
"§ 136-89.212. Payment of toll required for use of Turnpike project.

(a) A motor vehicle that is driven on a Turnpike project is subject to a toll imposed by the Authority for the use of the project. If the toll is an open road toll, the person who is the registered owner of the motor vehicle is liable for payment of the toll unless the registered owner establishes that the motor vehicle was in the care, custody, and control of another person when it was driven on the Turnpike project.

(b) A person establishes that a motor vehicle was in the care, custody, and control of another person when it was driven on a Turnpike project by submitting to the Authority a sworn affidavit stating one of the following:

- (1) The name and address of the person who had the care, custody, and control of the motor vehicle when it was driven. If the motor vehicle was leased or rented under a long-term lease or rental, as defined in G.S. 105-187.1, the affidavit must be supported by a copy of the lease or rental agreement or other written evidence of the agreement.
- (2) The motor vehicle was stolen. The affidavit must be supported by an insurance or police report concerning the theft or other written evidence of the theft.

- (3) The person transferred the motor vehicle to another person by sale or otherwise before it was driven on the Turnpike project. The affidavit must be supported by insurance information, a copy of the certificate of title, or other evidence of the transfer.

(c) If a person establishes that a motor vehicle was in the care, custody, and control of another person under subsection (b) of this section, the other person shall be liable for the payment of the toll, and the Authority may send a bill to collect and enforce the toll in accordance with this Article; provided, however, that such other person may contest such toll in accordance with this Article.

"§ 136-89.213. Administration of tolls and requirements for open road tolls.

(a) Administration. – The Authority is responsible for collecting tolls on Turnpike projects. In exercising its authority under G.S. 136-89.183 to perform or procure services required by the Authority, the Authority may contract with one or more providers to perform part or all of the collection functions and may enter into agreements to exchange information, including confidential information under subsection (a1) of this section, that identifies motor vehicles and their owners with one or more of the following entities: the Division of Motor Vehicles of the Department of Transportation, another state, another toll operator, ~~or a toll collection-related organization-organization,~~ or a private entity that has entered into a partnership agreement with the Authority pursuant to G.S. 136-89.183(a)(17). Further, the Authority may assign its authority to fix, revise, charge, retain, enforce, and collect tolls and fees under this Article to a private entity that has entered into a partnership agreement with the Authority pursuant to G.S. 136-89.183(a)(17).

...
(b) Open Road Tolls. – If a Turnpike project uses an open road tolling system, the Authority must operate a facility that is in the immediate vicinity of the Turnpike project ~~and that accepts or provide an alternate means to accept~~ cash payment of the toll and must place signs on the Turnpike project that give drivers the following information:

- (1) Notice that the driver is approaching a highway for which a toll is required. Signs providing this information must be placed before the toll is incurred.
- (2) The methods by which the toll may be paid.
- (3) ~~Directions~~ If applicable, directions to the nearby facility that accepts cash payment of the toll.

"§ 136-89.214. Bill for unpaid open road toll.

(a) Bill. – If a motor vehicle travels on a Turnpike project that uses an open road tolling system and a toll for traveling on the project is not paid prior to travel or at the time of travel, the Authority must send a bill by first-class mail to the registered owner of the motor vehicle or the person who had care, custody, and control of the vehicle as established under G.S. 136-89.212(b) for the amount of the unpaid toll. The Authority must send the bill within 90 days after the travel ~~occurs-occurs,~~ or within 90 days of receipt of a sworn affidavit submitted under G.S. 136-89.212(b) identifying the person who had care, custody, and control of the motor vehicle. If a bill is not sent within the required time, the Authority waives collection of the toll. The Authority must establish a billing period for unpaid open road tolls that is no shorter than 15 days. A bill for a billing period must include all unpaid tolls incurred by the same person during the billing period.

(b) Information on Bill. – A bill sent under this section must include all of the following information:

- (1) The name and address of the registered owner of the motor vehicle that traveled on the Turnpike ~~project-project~~ or of the person identified under G.S. 136-89.212(b).
- (2) The date the travel occurred, the approximate time the travel occurred, and each segment of the Turnpike project on which the travel occurred.
- (3) An image of the registration plate of the motor vehicle, if the Authority captured an electronic image of the motor vehicle when it traveled on the Turnpike project.
- (4) The amount of the toll due and an explanation of how payment may be made.
- (5) The date by which the toll must be paid to avoid the imposition of a processing fee under G.S. 136-89.215 and the amount of the processing fee.

- (6) A statement that a vehicle owner who has unpaid tolls is subject to a civil penalty and may not renew the vehicle's registration until the tolls and civil penalties are paid.
- (7) A clear and concise explanation of how to contest liability for the toll.
- (8) If applicable, a copy of the affidavit submitted under G.S. 136-89.212(b) identifying the person with care, custody, and control of the motor vehicle.

"§ 136-89.215. Required action upon receiving bill for open road toll and processing fee for unpaid toll.

(a) Action Required. – A person who receives a bill from the Authority for an unpaid open road toll must take one of the following actions within 30 days of the date of the bill:

- (1) Pay the bill.
- (2) Send a written request to the Authority for a review of the toll.

(b) Fee. – If a person does not take one of the actions required under subsection (a) of this section within the required time, the Authority may add a processing fee to the amount the person owes. The processing fee may not exceed six dollars (\$6.00). A person may not be charged more than forty-eight dollars (\$48.00) in processing fees in a 12-month period.

~~The Authority must set the processing fee at an amount that does not exceed the costs of collecting the unpaid toll, identifying the owner of a motor vehicle that is subject to an unpaid toll and billing the owner for the unpaid toll. The fee is a receipt of the Authority and must be applied to these costs.~~

...."

SECTION 5.7. DOT/Southeast Extension-Triangle Expressway. – The Department of Transportation shall strive to expedite the federal environmental impact statement process to define the route for the Southeast Extension of the Triangle Expressway Turnpike Project by promptly garnering input from local officials and other stakeholders, accelerating any required State studies, promptly submitting permit applications to the federal government, working closely with the federal government during the permitting process, and taking any other appropriate actions to accelerate the environmental permitting process.

SECTION 5.8. Monitoring. – As part of its oversight of the Department of Transportation, the Joint Legislative Transportation Oversight Committee shall closely monitor the progress of the Southeast Extension of the Triangle Expressway Turnpike Project.

TRANSITION STUDY AND REPORTING REQUIREMENTS

SECTION 6.1. Formula Implementation Report. – The Department of Transportation shall report to the Joint Legislative Transportation Oversight Committee and the Fiscal Research Division no later than August 15, 2013, on the Department's recommended formulas that will be used in the prioritization process to rank highway and nonhighway projects. The Department of Transportation's Prioritization Office shall develop the prioritization processes and formulas for all modes of transportation. The report will include a statement on the process used by the Department to develop the formulas, include a listing of external partners consulted during this process, and include feedback from its 3.0 workgroup partners on the Department's proposed recommendations. The Department shall not finalize the formula without consulting with the Joint Legislative Transportation Oversight Committee. The Joint Legislative Transportation Oversight Committee has 30 days after the report is received to meet and consult on the Department's recommendations. If no meeting occurs within 30 days after the report is received, the consultation requirement will be met. If consultation occurs and a majority of members serving on the Committee request changes to the Department's recommended formulas for highway and nonhighway modes, the Department shall review the requests and provide to the Committee its response to the requested changes no later than October 1, 2013. A final report on the highway and intermodal formulas shall be submitted to the Joint Legislative Transportation Oversight Committee by January 1, 2014.

SECTION 6.2. State Transportation Improvement Program Transition Report. – The Department of Transportation shall submit transition reports to members of the Joint Legislative Transportation Oversight Committee, House of Representatives Appropriations Subcommittee on Transportation and the Senate Appropriations Committee on Department of Transportation, and the Fiscal Research Division on March 1, 2014, and November 1, 2014. The reports shall include information on the Department's transition to Strategic Prioritization, overview changes to the State Transportation Improvement Program (STIP) and other internal and external processes that feed into the STIP, and offer statutory and policy recommendations

or items for consideration to the General Assembly that will enhance the prioritization process. The March 1, 2014, report shall also include an analysis of the distribution of tax and fee revenues between the Highway Fund and Highway Trust Fund and an analysis to determine if maintenance, construction, operations, administration, and capital expenditures are properly budgeted within the two funds and existing revenues are most effectively distributed between the two funds.

EFFECTIVE DATE

SECTION 7.1.(a) Except as provided herein, this act becomes effective July 1, 2013.

SECTION 7.1.(b) This act is effective only if the General Assembly appropriates funds in the Current Operations and Capital Improvements Appropriations Act of 2013 to implement this act.

In the General Assembly read three times and ratified this the 19th day of June, 2013.

s/ Philip E. Berger
President Pro Tempore of the Senate

s/ Thom Tillis
Speaker of the House of Representatives

s/ Pat McCrory
Governor

Approved 11:20 a.m. this 26th day of June, 2013



TOWN OF

Holly Springs

Resolution No.: 13-42

Date Adopted: Oct. 1, 2013

RESOLUTION STATING THE TOWN OF HOLLY SPRINGS TOWN COUNCIL'S SUPPORT REGARDING THE ALIGNMENT OF THE SOUTH EAST EXTENSION OF I-540

WHEREAS, the Holly Springs Town Council is expressing its fervent support for the construction of the I-540 Triangle Expressway Southeast Extension; and

WHEREAS, the proposed I-540 Triangle Expressway Southeast Extension has been a fundamental transportation facility underpinning for more than 20 years of local land use and transportation decisions of the Town of Holly Springs and other local governments of southwestern Wake County; and

WHEREAS, the Town of Holly Springs historically has utilized the protected I-540 corridor proposed in earlier designs to plan for both existing and future development in Town; and

NOW THEREFORE BE IT RESOLVED that the Town Council of the Town of Holly Springs hereby expresses its support of the original protected corridor design as illustrated in orange on N.C. Transit Authority maps for the construction of the I-540 Triangle Expressway Southeast Extension; and

Adopted this, the 1st day of October, 2013.

ATTEST:




Dick Sears, Mayor


 Joni Powell, MMC, NCCMC Town Clerk
 Linda R. Harper, MMC, NCCMC Deputy Town Clerk

Office of the Mayor

128 S. Main Street • P.O. Box 8 • Holly Springs, NC 27540 • (919) 557-3901 • (919) 552-0654 fax
dick.sears@hollyspringsnc.us • www.hollyspringsnc.us



TOWN OF FUQUAY-VARINA
401 Old Honeycutt Road
Fuquay-Varina, North Carolina 27048

**A RESOLUTION BY THE TOWN OF FUQUAY-VARINA REGARDING
THE TRIANGLE EXPRESSWAY SOUTHEAST EXTENSION (I-540)**

WHEREAS, the proposed Triangle Expressway Southeast Extension has been a fundamental transportation facility underpinning for more than 20 years of local land use and transportation decisions for Town of Fuquay-Varina, Wake County and other local governments of Wake County; and,

WHEREAS, the alternate routes have been only recently proposed and would have a much more significant negative impact on residents of Fuquay-Varina who purchased homes and businesses based on the original proposed route; and,

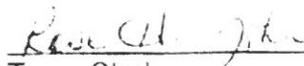
WHEREAS, the Town of Fuquay-Varina historically has utilized the protected corridor proposed in earlier designs to make key planning decisions for both existing and future development in the Town of Fuquay-Varina; and,

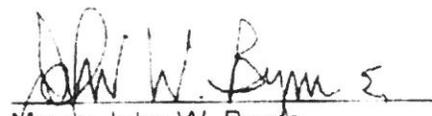
WHEREAS, the proposed alternative alignments to relocate the corridor away from its previously designated and protected route will have an adverse impact on the Town of Fuquay-Varina; and

NOW THEREFORE, BE IT RESOLVED that the Town of Fuquay-Varina supports use of the original protected corridor design as illustrated in "orange" on the North Carolina Turnpike Authority maps as the preferred choice for the development and construction of the Triangle Expressway Southeast Extension (I-540).

Adopted this 19th day of October 2010.




Town Clerk


Mayor John W. Byrrie
Town of Fuquay-Varina

**A RESOLUTION BY THE COUNTY OF WAKE REGARDING THE
TRIANGLE EXPRESSWAY SOUTHEAST EXTENSION**

WHEREAS, the proposed Triangle Expressway Southeast Extension from NC 55 in Apex to US 64 in Knightdale has been a fundamental transportation facility underpinning, for more than 20 years, local land use and transportation decisions for Wake County and other local governments of Wake County;

WHEREAS, Wake County historically has utilized the protected corridor west of Interstate 40 developed in earlier efforts (orange) to make key planning decisions for both existing and future development in Wake County; and

WHEREAS, Wake County historically has utilized the planned corridor east of Interstate 40 developed in earlier efforts (green) to make key planning decisions for both existing and future development in Wake County; and

WHEREAS, numerous Wake County homeowners and landowners have relied upon the protected corridor route (orange) and the planned corridor route (green) for many years as they have made investment decisions; and

WHEREAS, the proposed alternative alignments that would relocate the roadway away from the protected route and planned route will have an adverse impact on communities in Wake County; and

WHEREAS, the proposed alternative alignments illustrated as "blue", "purple", and "red" on North Carolina Department of Transportation maps will have a greater impact on Wake County's designated priority stream corridors and proposed Southeast Wake County Park than the previously protected route.

NOW THEREFORE, BE IT RESOLVED that Wake County supports use of the protected corridor as illustrated in "orange" on the North Carolina Department of Transportation maps and supports use of the planned corridor as illustrated in "green" on the North Carolina Department of Transportation maps as the preferred choice for the development and construction of the Triangle Expressway Southeast Extension.

Adopted this 21st day of October 2013.

ATTEST:

Susan J. Banks
Susan Banks
Clerk to the Board



[Signature]
Joe Bryan, Chairman
Board of Commissioners

RESOLUTION (2013) 2171

RESOLUTION STATING THE TOWN OF GARNER'S TOWN COUNCIL'S SUPPORT
REGARDING ALIGNMENT OF THE SOUTHEAST EXTENSION OF I-540

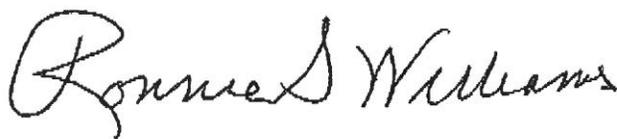
WHEREAS, the Garner Town Council is expressing its avid support for the construction of the I-540 Triangle Expressway Southeast Extension; and

WHEREAS, the proposed I-540 Triangle Expressway Southeast Extension has been a fundamental transportation facility foundation for more than 20 years of local land use and transportation decisions of the Town of Garner and other local governments of southeastern Wake County; and

WHEREAS, the Town of Garner has historically utilized the protected I-540 corridor proposed in earlier designs to plan for both existing and future development in the Town; and

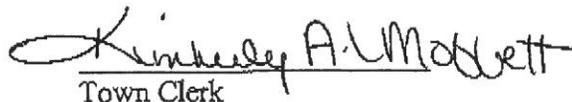
NOW THEREFORE BE IT RESOLVED that the Town Council of the Town of Garner hereby expresses its support of the original protected corridor design as illustrated in orange on the N.C. Transit Authority maps for the construction of the I-540 Triangle Expressway Southeast Extension.

Adopted this, the 22nd day of October, 2013.



Ronnie S. Williams, Mayor

ATTEST:



Kimberly A. Maggett
Town Clerk

**RESOLUTION expressing THE NC CAPITAL AREA MPO'S POSITION REGARDING THE
ALIGNMENT OF THE FUTURE NC 540 TURNPIKE**

On motion made by Mayor Sears and seconded by Mayor Eagles, and having been put to a vote, was duly adopted by unanimous vote, the following resolution;

WHEREAS, the proposed southern and southeastern segments of the NC 540 Turnpike are an adopted element of the Capital Area Metropolitan Planning Organization's (CAMPO) 2040 Metropolitan Transportation Plan; and

WHEREAS, official corridor maps show a specific alignment, adopted by the North Carolina Board of Transportation, to block new development in the preferred path of the southern segment from N.C. 55 in Holly Springs to US 401 south of Garner on August 2, 1996 and the southern segment from US 401 south of Garner to Interstate 40 south of Garner on March 7, 1997; and

WHEREAS, the proposed freeway alignment has been a fundamental transportation facility underpinning for more than 20 years of local land use and transportation decisions for the towns of Fuquay-Varina, Garner, and Holly Springs; and

WHEREAS, Wake County is the first and only County in North Carolina to have its urban loop constructed as a toll road; and

WHEREAS, the southeastern segment is likely to be much more expensive on a per mile basis than the southern segment and as such will need the revenue coming from the southern segment to help pay for it; and

WHEREAS, the southeastern segment is the Capital Area MPO's urgently needed top regional priority and therefore should not be delayed until the northern segment of the loop is converted to a turnpike to help pay for it's construction

WHEREAS, the North Carolina Turnpike Authority is looking at other alternatives that would possibly have an adverse impact upon these towns, causing disruptions to existing homes and businesses; and

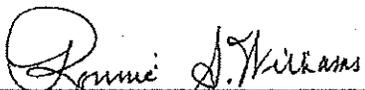
WHEREAS, other alternatives may be shorter and possibly cut construction costs; at the possible expense of environmentally sensitive areas, residential and commercial activities vital to the economic well being of the towns being impacted;

NOW, THEREFORE BE IT RESOLVED, based on the currently available information, the Capital Area MPO Transportation Advisory Committee supports the use of the original protected corridor alignment illustrated on North Carolina Turnpike Authority maps adopted in 1996 and 1997 as the locally preferred choice for the development and construction of the proposed NC 540 Turnpike in southern and southeastern Wake County; and

BE IT FURTHER RESOLVED, that the Capital Area MPO Transportation Advisory Committee requests that the North Carolina Turnpike Authority continue to include the Capital Area MPO as an active stakeholder in the alternatives analysis process; and

BE IT FURTHER RESOLVED, that the Capital Area MPO Transportation Advisory Committee strongly urges the North Carolina Department of Transportation to construct the entire remaining portion of the outer loop as a turnpike in one phase rather than as two separate phases.

Adopted on this the 20th day of November, 2013



Ronnie Williams, Chair
Transportation Advisory Committee

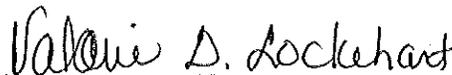


Ed Johnson, Capital Area MPO
Transportation Advisory Committee Clerk

County of Wake
State of North Carolina

I, Valorie D. Lockhart, a Notary Public for said County and State, do hereby certify that on this, the 20th day of November, 2013, personally appeared before me, Ronnie Williams, known to me by his presence, and acknowledged the due execution of the foregoing RESOLUTION STATING THE CAPITAL AREA MPO'S POSITION REGARDING THE LOCALLY PREFERRED ALTERNATIVE ALIGNMENT OF THE FUTURE NC 540 TURNPIKE.

Witness my hand and official seal, this the 20th day of November, 2013.



Valorie D. Lockhart, Notary Public

My commission expires: January 31, 2016

MAYOR
JERRY M. MEDLIN

MAYOR PRO-TEM
CASANDRA P. STACK

COMMISSIONER
MAXINE HOLLEY
JAMES D. JOHNSON JR.
DEAN MCLAMB
WILLIAM NEIGHBORS
DR. R. MAX RAYNOR



TOWN OF BENSON
P.O. BOX 69
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FAX (919) 894-1283
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TOWN MANAGER
MATTHEW ZAPP

ASSISTANT TOWN MANAGER
BRASTON A. NEWTON

TOWN CLERK
TERRY HOBGOOD

FINANCE DIRECTOR
KIMBERLY T. PICKETT

TOWN ATTORNEY
R. ISAAC PARKER

**RESOLUTION 189-2018
IN SUPPORT OF THE IMMEDIATE FUNDING AND CONSTRUCTION
OF THE I-540 SOUTHERN LOOP**

WHEREAS, economic development, travel, employment and highway safety are matters that are extremely important for the leadership, residents and citizens of the Town of Benson, North Carolina; and

WHEREAS, infrastructure is critical to the economic vitality of our Town and the surrounding communities; and

WHEREAS, adequate road access is an essential part of the infrastructure necessary to support new development, new investment, and expansion of the employment base; and

WHEREAS, the Town of Benson Board of Commissioners seeks to foster economic development and promote safe and efficient travel for all motorists along the I-540 corridor; and

WHEREAS, these matters could be better served and enhanced by immediate construction of I-540; and

WHEREAS, the completion of I-540 will aid in the reduction of traffic on existing highways and support the continuing growth of Benson, and all communities within Johnston County.

WHEREAS, the Town of Benson Board of Commissioners believes it will have a positive impact on reducing traffic and improving safety on I-40, I-95, US 301, NC Highway 50, NC Highway 27, NC Highway 242, and other internal roads in our area.

NOW, THEREFORE, BE IT RESOLVED, by the Town of Benson Board of Commissioners hereby give its full and complete support for the immediate funding and construction of I-540 as soon as possible for the economic growth and safety for all citizens of North Carolina.

DULY ADOPTED as an ACT and POLICY of and by the TOWN OF BENSON BOARD OF COMMISSIONERS this the 10th day of April, 2018.

Jerry M. Medlin

Mayor

Town of Benson

Terry A. Hobgood, Jr.

Town Clerk

Town of Benson





Resolution in Support of the immediate funding and construction of I-540 (Southern Loop)

Whereas, economic development, travel, employment and highway safety are matters that are extremely important for the leadership, residents and citizens of Johnston County, North Carolina; and

Whereas, infrastructure is critical to the economic vitality of our County and communities; and

Whereas, adequate road access is an essential part of the infrastructure necessary to support new development, new investment, and expansion of the employment base; and

Whereas, the Benson Area Chamber of Commerce Board seeks to foster economic development and promote safe and efficient travel for all motorists along the I-540 corridor; and

Whereas, these matters could be better served and enhanced by immediate construction of I-540; and

Whereas, the completion of I-540 will aid in the reduction of traffic on existing highways and support the continuing growth of all communities within Johnston County.

Whereas, the Benson Area Chamber of Commerce Board feels it will have a positive impact on reducing traffic and improving safety on Highway 42, I-40, US70, Highway 50, Ten-Ten Road, and other internal roads in our area.

Now, Therefore Be It Resolved, that the Benson Area Chamber of Commerce Board hereby gives its full and complete support for the immediate funding and construction of I-540 as soon as possible for the economic growth and safety for all citizens of North Carolina.

This Resolution was unanimously adopted by the Benson Area Chamber of Commerce Board this the 17th day of April 2018, Johnston County, North Carolina.

Signature of David B. Cook, Benson Area Chamber of Commerce

ATTEST: Loretta Byrd, President/CEO

(Seal)

APPENDIX J
Local Government and Interest Group Letters



Parks, Recreation & Open Space

TEL 919 664 7967
FAX 919 856 6181

Wake County Office Building 10th Floor
337 S. Salisbury Street
PO Box 550, Suite 1000
Raleigh, NC 27602

<http://www.wakegov.com/county/parks/default.htm>

October 6, 2010

Christy Shumate
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, North Carolina 27699-1578

Dear Mrs. Shumate:

I am writing on behalf of the Wake County Open Space and Parks Advisory Committee to provide input on the proposed routes for the Triangle Expressway's Southeast Extension, specifically to support the original protected corridor (Orange route) and oppose the Purple, Blue and Red alternative routes.

On September 27, 2010 our Committee met to review the proposed routes under consideration for the Southeast Extension of the Triangle Expressway. We understand and appreciate the fact that all of these routes have an impact on the communities that they pass through. However our focus is on the environmental and programmatic impact that the alternatives would have on our long term need to protect our environment.

In 2003, the Wake County Board of Commissioners formally identified priority stream corridors to protect valuable water resources. In 2008, the Board of Commissioners revisited this issue and at that time reaffirmed the County's intent to protect 11 priority stream corridors. Two of these corridors would be negatively impacted by the Purple, Blue and Red alternatives.

- Middle Creek would be impacted twice if a route is selected using a combination of the Purple and Blue alternatives.
- Middle Creek would be impacted once if a route is selected using only the Blue alternative.
- The priority stream corridor section of Swift Creek (between Lake Wheeler and Lake Benson) would be impacted by the Red alternative.
- The currently protected corridor (Orange route) does not cross Swift Creek in an area identified by Wake County as priority stream corridor, nor does the Orange route impact Middle Creek.

Wake County Government and the citizens of Wake County have consistently demonstrated their concern for the protection of these priority stream corridors through the preservation of land through the passage of three bond referendums since 2000 totaling \$91,000,000. Each of these referendums has received more than 70% voter approval.

An additional significant concern that the Open Space and Parks Advisory Committee would like to express is the impact the Blue alternative will have on the County's Southeast Wake County Park. The County has been working to develop this park for the past decade and it is one of the three planned parks (in combination with the six existing parks) that the County is creating to meet the long term needs of the community.

Within the Southeast County Park lie the Middle Creek Aquatic Habitat and the scenic bluffs along Middle Creek that rise 90 feet above the creek, a Natural Heritage site of local significance. The County has already acquired 258 acres for this park and has spent over \$2,000,000 in land acquisition costs. In addition the County has also placed Clean Water Management Trust Fund easements over portions of this land. The proposed Blue alternative would impact the proposed park site and possibly result in the County abandoning its plans to develop this park.

It is our sincere desire that the Triangle Expressway Southeast Extension remain in the protected corridor (Orange route.) It is what the community has planned for over the past 15 years and unlike the Purple, Blue and Red alternatives it does not impact priority stream corridors or the Southeast Wake County Park.

If you would like to have additional information or if you have any questions about our position, please feel free to contact Chris Snow, Director Wake County Parks, Recreation and Open Space at 856-6677.

Thank you.

Sincerely,



Sig Hutchison
Chairman, Wake County Open Space and Parks Advisory Committee

cc: Eugene A. Conti Jr., Chairman, North Carolina Turnpike Authority
Perry R. Safran, Vice-Chairman, North Carolina Turnpike Authority
Robert D. Teer Jr., North Carolina Turnpike Authority
Robert C. Clay, North Carolina Turnpike Authority
John Collett, North Carolina Turnpike Authority
James H. Ferebee, Jr., North Carolina Turnpike Authority
Anthony Fox, North Carolina Turnpike Authority
E. David Redwine, North Carolina Turnpike Authority
Alan F. Swanstrom, North Carolina Turnpike Authority
Tony Gurley, Chairman, Wake County Board of Commissioners
David Cooke, County Manager, Wake County



THE TOWN OF
**Holly
Springs**

October 21, 2010

Jennifer Harris, PE
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699-1578

Re: Triangle Expressway Southeast Extension (I540)
Town of Holly Springs Comments

Dear Jennifer,

Thank you for meeting with us on October 4th about this project. We have attached a spreadsheet of Holly Springs' comments for the alternative alignments that are presently out for public comment. These comments support the position that we expressed in our meeting with you – that Holly Springs supports the orange (originally protected) corridor.

At our meeting you also indicated that we could meet with you in a separate forum – along with our transportation consultants and yours – to discuss the orange alignments' proposed intersection with both Kildaire Farm Road and Holly Springs Road (one intersection). We would like to go ahead and set that meeting up at your earliest convenience. Thank you.

Sincerely,

Stephanie L. Sudano, PE
Director of Engineering

SLS/dra

cc: Mayor Sears
Carl G. Dean, Town Manager
Chuck Simmons, Assistant Town Manager
Gina Clapp, AICP, Director of Planning & Zoning
Correspondence 13394

P.O. Box 8
128 S. Main Street
Holly Springs, N.C. 27540
www.hollyspringsnc.us

(919) 552-6221

Fax: (919) 552-5569

Mayor's Office Fax:
(919) 552-0654



TOWN OF

Holly Springs

Resolution No.: 10-27

Date Adopted: Sept. 21, 2010

RESOLUTION STATING THE TOWN OF HOLLY SPRINGS TOWN COUNCIL'S POSITION REGARDING THE ALIGNMENT OF THE SOUTHERN PHASE OF I-540

WHEREAS, on May 6, 2008, the Holly Springs Town Council adopted Resolution 08-26 expressing its fervent support for the construction of the I-540 Western Wake Expressway; and

WHEREAS, the proposed I-540 Western Wake Expressway has been a fundamental transportation facility underpinning for more than 20 years of local land use and transportation decisions of the Town of Holly Springs and other local governments of southwestern Wake County; and

WHEREAS, the Town of Holly Springs historically has utilized the protected I-540 corridor proposed in earlier designs to plan for both existing and future development in Town; and

WHEREAS, the change to relocate the corridor south to connect to Bass Lake Road would have an adverse impact on our community, due to access issues and the cost of relocating both residential and commercial properties from said corridor; and

WHEREAS, additional traffic generated on Holly Springs Road would negatively impact the area around a proposed interchange and Holly Springs Road would not be adequate to handle the increased traffic volume; and

WHEREAS, the delay of the construction of the I-540 Western Wake Expressway is particularly injurious to the Town of Holly Springs when weighed against the much-needed NC 55 improvements that have not been constructed in anticipation of a 2008 start of I-540 Western Wake Expressway construction;

NOW THEREFORE BE IT RESOLVED that the Town Council of the Town of Holly Springs hereby expresses its adamant opposition to any option for the construction of the I-540 Southern Wake Expressway that utilizes Bass Lake Road as a potential alternative for the southern phase of I-540; and

BE IT FURTHER RESOLVED that the Town Council supports use of the original protected corridor design as illustrated in orange on N.C. Transit Authority maps as the preferred choice for the development and construction of the I-540 Southern Wake Expressway.

Adopted this, the 21st day of September, 2010.

ATTEST:


Dick Sears, Mayor


Joni Powell, CMC, Town Clerk
Linda R. Harper, CMC Deputy Town Clerk

Office of the Mayor

128 S. Main Street • P.O. Box 8 • Holly Springs, NC 27540 • (919) 557-3901 • (919) 552-0654 fax
dick.sears@hollyspringsnc.us • www.hollyspringsnc.us

1540 Comments

Comment	
BLUE CORRIDOR	
1.	Conflicts with all of the Town's long range plans developed over the past 15 years (since corridor protection began), including: Comprehensive Plan Vision 2010, Long Range Water Master Plan, Long Range Sewer Master Plan, Long Range Reclaimed Master Plan, Holly Springs Pedestrian Transportation Plan, Long Range Greenway Plan, Long Range Bicycle Plan
2.	The Town has significant existing (and proposed too) investment in this corridor in major water, sewer, and reclaimed utility lines that will have to be relocated and replaced with great expense - both initial capital expense and perpetual operating expenses (as relocation and replacement would require new pumping stations)
3.	Town's Fire Department and Wake County EMS Headquarters would have to be relocated
4.	This alignment would severely impact both vehicular (including bus) and pedestrian transportation to 3 of the town's 6 public schools (Holly Ridge Elementary, Holly Ridge Middle, Holly Springs Elementary); this doesn't even include preschools and/or daycares. There are at least two of these directly in the alignment that would have to be relocated. (Note: the maps prepared by NCTA only indicate 2 of these public schools: there are 2 schools located to the east of the proposed interchange (Holly Ridge Elementary and Holly Ridge Middle) and 1 school to the west (Holly Springs Elementary). Holly Springs Road is a vital auto and pedestrian access route for all of these schools. Locating the interchange at this location would be very dangerous to students, parents, and caregivers accessing the schools daily.
5.	There are 2 minority churches significantly impacted (to extent of relocation probably) - one at Earp and Bass Lake Road intersection and one further south off of Bass Lake Road; there is also another future church site (Moravian Church) that would be impacted/eliminated near the Fire Department and EMS headquarters.
6.	Corridor passes through one of the very few remaining minority areas in the town and would completely divide and likely eliminate the population/area; The proposed corridor would bisect this long established neighborhood. In addition, the Town of Holly Springs has provided CDBG Scattered Site Single-Family Rehab assistance to many homes located along Bass Lake Road within the proposed corridor. This is an expenditure of federal and state funds to assist residents with housing. There has also been the expenditure of federal Farmers Home funding for utilities to serve the homes.
7.	Town's only funeral home would be eliminated
8.	Wipes out a 50 acre tract of land at the headwaters of Bass Lake; this land was set aside for preservation 2009 by Triangle Land and Conservation easements located within this area (Jeff Suggs)
9.	Passes over the headwaters of Bass Lake, a historical landmark and a valued park. The dam for this lake was rebuilt within the past 10 years by the Town with a Cleanwater Management Trust Fund grant; portions are subject to a Nature Conservancy easement; the Town has put into place special 100' buffers for all land tributary to this lake; this is a very valuable environmental resource for the region.
10	Town has worked hard to created connectivity between neighborhoods - vehicular, bicycle, and pedestrian - through planning and infrastructure construction; this corridor creates a division through this area negates those efforts
11	Parallels Middle Creek which is a very important protected stream/water feature with a large watershed; paralleling streams has very negative environmental consequences and may be impossible to permit.

1540 Comments

	Comment
BLUE CORRIDOR	
12	This corridor would require relocation/elimination of many homes and the division of many neighborhoods; some are Sunset Oaks North, Sunset Oaks South, Brackenridge various phases; Sunset Ridge North, Sunset Forest, Holly Park, Remington, Westview, Brook Manor, Sunset Ridge South, Spring Meadow, Dogwood, and Old Mills Lake. All but two of these have developed over the past 18 years, so are relatively new. In addition, many of the older "non-subdivision" homes that comprised the original Holly Springs minority population will be relocated/eliminated as well.
14	There is a Montessori school on HS Road near its intersection with Bass Lake Road that is not shown, but will be impacted and possibly eliminated.
15	In addition to the above referenced impact to Bass Lake, the greenway system around Bass Lake would also be impacted. Town recently received federal funding to complete one section of the greenway loop.
16	The long range transportation plans - developed carefully and collaboratively by the Town, the county, the MPO, NCDOT, and other municipalities over the past 15 years - have guided development and road dedication of roads to support the orange corridor - not at all this corridor
17	This corridor is not under corridor protection and development approvals and building permits continue to be processed, increasing the undesirability of this corridor as well as the resulting impact of construction in this corridor
19	This corridor, while on the books, delays development of properties (this is problematic especially in this economic climate) AND the ability of individuals who happen to own homes in the corridor and need to sell their homes; we would like to encourage quick and expeditious elimination of alternatives in order to alleviate these two scenarios.
20	Corridor would introduce a second major physical barrier/division in our small Town. The 55 Bypass currently divides the western part of town from center and east portions. It is a hurdle that is difficult and expensive to cross with utilities. It has proven impossible because of expense to cross for pedestrians and bicycles, which is of extreme detriment to the Town's efforts at encouraging a healthy, multi-modal community.
21	There are 2 private daycare centers that are located within the actual corridor/interchange boundaries at Holly Springs Road that would have been relocated.
22	The Town has planned pedestrian, bicycle and auto connectivity between neighborhoods since development began in the early 90s. The proposed corridor impacts an existing greenway along Middle Creek that connects Windcrest and Bridgewater and provided connection to the northeast side of Middle Creek for future development. The corridor would impact the construction of a major roadway connection between Sunset Ridge North and Woodcreek over Middle Creek. The corridor also impacts land that has been dedicated to the Town on the north side of Middle Creek for a park and community center.
23	The maps prepared by the NCTA do not show the new Wake County Public School- Herbert Akins Elementary School located at the corner of Herbert Akins Road and James Slaughter Road. The proposed corridor impacts the school campus.
24	Maple Ridge Apartments (federally subsidized housing project) and also Timber Springs Apartments (same) would be impacted/eliminated by this corridor.
25	The corridor alignment impacts/eliminates a large portion of the Westview Neighborhood. This neighborhood was developed in partnership with the Town of Holly Springs who received a \$250,000 CDBG Infrastructure Grant to construct roads and utilities for the neighborhood. Many homeowners in Westview have received a portion of a \$150,000 down payment assistance grant from the NCHFA.

1540 Comments

	Comment
BLUE CORRIDOR	
26	Concern that the proposed blue corridor and interchange at Holly Springs Road would have a tremendous impact to the quality of life of residents by bisecting the Town and directing a tremendous volume of traffic onto Holly Springs Road at a location that has not been planned for this level of volume. This location is very near to the center Village Town District, which the Town has been working for years to develop as the heart of our town.
27	This corridor, while on the books, delays development of properties (this is problematic especially in this economic climate) AND the ability of individuals who happen to own homes in the corridor and need to sell their homes; we would like to encourage quick and expeditious elimination of alternatives in order to alleviate these two scenarios.

Comment

ORANGE CORRIDOR

1.	Minority church at Lockley Road does not look like it is impacted; this is a good thing.
2.	Corridor has been preserved by the Town since 1997 NCDOT request for Corridor Protection...the corridor protection guidelines have been carefully and stringently followed by the Town to make expense and impact of acquisition and construction less expensive.
3.	Some of the ROW has already been acquired, and we believe this is of great benefit.
4.	This corridor is consistent with all of the Town's long range plans developed over the past 15 years (since corridor protection began), including: Comprehensive Plan Vision 2010, Long Range Water Master Plan, Long Range Sewer Master Plan, Long Range Reclaimed Master Plan, Holly Springs Pedestrian Transportation Plan, Long Range Greenway Plan, Long Range Bicycle Plan
5.	Town wants to insure that Kildaire Farm Road, which is a major access road, ties into interchange or nearby to preserve full access northward
6.	Town has carefully planned and minimized the needed greenway/pedestrian/bike and vehicular connections through this corridor by carefully guiding development of adjacent lands. All of the infrastructure (transportation and other) that has been planned and installed to support these minimal number of crossings would no longer function as designed and infill of the preserved corridor would likely be awkward to develop. This careful planning will reduce construction costs and environmental impacts along this corridor.
7.	This corridor and the proposed interchange at Kildaire Farm Road is consistent with the Town's long range planning efforts and locations for activity nodes, development densities, roadway design, and infrastructure to meet the demands of a highway interchange and location. Because Holly Springs is a relatively small town with limited growth potential due to the limiting feature of Progress Energy Lands to the west, the impact of the other corridors on the Town as a whole is proportionally very great. The impact of the orange corridor has been well planned to complement the Town as a whole.
8.	Development of the roadway in this corridor complements the past planning and investment (and proposed too) by the Town in this area of water , sewer, and transportation infrastructures
9.	The Town believes this corridor alignment has the least environmental impact, based upon our knowledge of the Town; the crossing of Middle Creek is essentially perpendicular which is desired as this is a major stream with a very large drainage basin.
10.	This corridor would not impact or require the removal and/or displacement of many homes (maybe none) in Holly Springs
11.	Town plans have long centered around this corridor, and the Town has directed development in a manner to make the construction of this through Town minimally invasive to our community. This has been achieved by planning transportation connections to complement I540 at this location and to link property on both sides with connections.
12.	This corridor essential runs between Apex and Holly Springs - almost along the municipal boundaries - we see this as a plus as it does not divide a community like at least one of the other proposed corridors.
13.	The long range transportation plans - developed carefully and collaboratively by the Town, the county, the MPO, NCDOT, and other municipalities over the past 15 years - have guided development and row dedication of roads to support the orange corridor.
14.	This corridor is under corridor protection and development approvals and building permit requests continue to be handled under the corridor protection act, increasing the desirability of this corridor as it is protected

Comment

PURPLE CORRIDOR

1	Will impact/eliminate Town parkland south of Sunset Oaks south and planned walking trails and other passive recreation along Middle Creek - a major water feature and environmental treasure in south Wake County.
2	The long range transportation plans for the municipality and the county have guided development and row dedication of roads to support the current orange alignment - not needed intersection improvements for this route.
3	Conflicts with all of the Town's long range plans developed over the past 15 years (since corridor protection began), including: Comprehensive Plan Vision 2010, Long Range Water Master Plan, Long Range Sewer Master Plan, Long Range Reclaimed Master Plan, Holly Springs Pedestrian Transportation Plan, Long Range Greenway Plan, Long Range Bicycle Plan
4	This corridor would require relocation/elimination of many homes and the possible division of many neighborhoods; some in Holly Springs' jurisdiction only are Sunset Oaks North, Sunset Oaks South, Brackenridge various phases; In addition, there are many other homes not in subdivisions that would be impacted
5	The long range transportation plans - developed carefully and collaboratively by the Town, the county, the MPO, NCDOT, and other municipalities over the past 15 years - have guided development and row dedication of roads to support the orange corridor - not at all this corridor
6	This corridor, while on the books, delays development of properties (this is problematic especially in this economic climate) AND the ability of individuals who happen to own homes in the corridor and need to sell their homes; we would like to encourage quick and expeditious elimination of alternatives in order to alleviate these two scenarios.
7	This alignment would severely impact both vehicular (including bus) and pedestrian transportation to 3 public schools that some Holly Springs children attend in south Cary. The main transportation route to these schools is down Optimist Farm Road which is being bisected by this route.
6	Town has worked hard to created connectivity between neighborhoods - vehicular, bicycle, and pedestrian - through planning and infrastructure construction; this corridor negatively impacts one of the significant neighborhoods (only 8 years old) that has been planned and developed carefully to create the neighborhood atmosphere that is the Town's goal.
9	Parallels Middle Creek which is a very important protected stream/water feature with a large watershed; paralleling streams has very negative environmental consequences and may be impossible to permit.
10	This corridor would require relocation/elimination of many homes and the division of several neighborhoods such as Sunset Oaks North, Sunset Oaks South, Brackenridge, Talicud Trail within Holly Springs' jurisdiction only. This is a very negative consequence of this alignment especially when both corridors (and buffers on adjacent developments) have been protected for the orange alignment. This alignment is brand new and there has been no preservation or buffer protection for the neighborhoods that have been developed in the area of the corridor.
11	This corridor is not under corridor protection and development approvals and building permits continue to be processed, increasing the undesirability of this corridor as well as the resulting impact of construction in this corridor

	Comment
--	---------

PURPLE CORRIDOR	
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12	Plan as shown does not provide transportation connectivity along Optimist Farm Road which is a major transportation route in an area of SW Wake county that is limited in its primary route connectivity.
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	Comment
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OTHER GENERAL COMMENTS	
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1	All communities impacted by this project have carefully and diligently planned for the orange protected corridor, and protected the corridor. There would be tremendous negative impact to each of them in many areas such as utility infrastructure, socio-economic, community, transportation, development, quality of life, and environment. We believe that the detrimental effect of switching from this corridor is great.
2	We support the orange corridor as a more direct east/west route that complements the east/west transportation system of those individuals travelling across the state.
3	Towns likes (from west to east) want to find the most direct route; like the least circuitous\ route from Asheville to Wilmington
4	Thank you for meeting with us and opportunity to submit comments on the corridors.



October 19, 2010

Ms. Jennifer Harris, PE
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699-1578

Dear Ms. Harris:

I am writing on behalf of the Board of Directors of the Garner Chamber of Commerce to express our concerns about the proposed plan to change the location of the southern phase of I-540. We encourage you to remove the alternate route that runs north of Lake Benson.

The "red" route shown on Turnpike Authority maps with the corridor north of Lake Benson will disrupt our business community as well as our residents. The newly proposed route will displace residents of several subdivisions and totally destroy one subdivision. It will run through and displace a portion of a prime commercial property.

For more than twenty years our landowners and developers have made investment decisions based on the protected corridor route. To change that plan now will be unfair.

The Board of Directors of the Garner Chamber of Commerce request that you remove the proposed "red" route as an option for the southern phase of I-540 and continue with the original plan.

Sincerely,

A handwritten signature in black ink, appearing to read "JK Strickland", is written over a horizontal line.

Jay Strickland
Board Chair, Garner Chamber of Commerce



Town of Garner

Post Office Box 446 • Garner, North Carolina 27529

Phone 919-772-4688 • FAX 919-662-8874

October 20, 2010

Ms. Jennifer Harris, P.E.
North Carolina Turnpike Authority
1578 Mail Center
Raleigh, NC 27699-1578

Re: Triangle Expressway Southeast Extension Study
Town of Garner Comments

Ms. Harris:

This letter presents an official list of the Town of Garner concerns regarding the above referenced matter. The following points are major reasons why the Town of Garner believes NCTA should remove the red and pink corridors that go through Garner from further study. For your convenience, I have attached a map to illustrate the various impacts associated with each of the corridors discussed in this letter.

1. The red corridor is extremely detrimental to current and future parks and recreation facilities in the Town of Garner.

The red corridor impedes on the northern edge of the recently opened **White Deer Nature Park**, the Town's first LEED Gold certified facility. This is a passive park facility with an environmental education center, trails, picnic shelters, and playgrounds.

The red route obliterates and eliminates **George W. Bryan Nature Park**. Bryan Nature Park is a 20-acre nature park facility located east of Highway 50 near the South Creek neighborhood.

The red corridor will also obstruct and wipe out a portion of the **South Garner Greenway** leading from Timber Drive to **White Deer Park**. This fully designed and funded greenway (slated for construction in 2011) will connect 4.2 miles of a neighborhood loop sidewalk in central Garner with a 2.8 mile greenway trail through **White Deer and Lake Benson Parks**.

The red corridor will also impede and negatively impact the Town's 35-acre **Timber Drive Park property**, designated as a future site of an aquatics facility and/or community center.

The **Triangle Area YMCA** also owns a tract of property on Aversboro Road that has been seriously considered as the location of a future Garner YMCA facility. The red corridor will prevent this property's availability for use as a community recreation facility such as a YMCA.

2. The red corridor will disrupt long-range and orderly growth in areas designated for future development by the Town's Comprehensive Growth Plan.

The Town's major future growth area is generally referred to as the White Oak area. It lies south of US 70, west of I-40, east of Highway 50, and north of Clifford Road. Significant infrastructure investment and planning decisions have been made to promote future growth and development in this area. Capital investments of over 3 million dollars have been made in roads, major water lines, and sewer trunk lines in this portion of the community to support future development. Tremendous uncertainty exists if the red corridor effectively bisects this future growth district.

The Town's Comprehensive Growth Plan and the recently adopted 2010 Garner Transportation Plan both recommend a new interchange at I-40 and White Oak Road to serve an emerging Regional White Oak Mixed Use Center. The red corridor would likely prevent this future interchange from ever occurring while creating some challenges for future growth in this important section of Town that will require additional study if the red corridor is selected.

3. The red corridor severely damages Town's primary industrial recruitment area.

The red corridor obliterates **Greenfield South Business Park**, one of Garner's premiere locations for jobs and industry. As a result, the red corridor will create a loss of significant tax base and the community will witness the demise of an area that has been programmed for non-residential growth that is vital to the Town.

There are 26 commercial/industrial lots (developed & vacant) impacted by the red corridor with a total Wake County tax value of over 30 million dollars.

4. The red corridor splits and disconnects the Town of Garner again.

US Highway 70 split the Town of Garner and literally divided the town into two sections in the 1950's. The community has been striving to recover from this poor planning decision since that time. Garner cannot afford to be divided again by a road as large as the Triangle Expressway. If the orange protected corridor is selected as the preferred route, the Town can naturally grow towards the new expressway in a managed fashion over the next 25-35 years. Deference should be given to wise long-range planning as exemplified in the protected orange corridor route.

5. The red corridor will have negative water quality impacts to Lake Benson.

The red corridor crosses into portions of the critical areas of **Lake Benson** and **Swift Creek**. The corridor is located immediately upstream of Lake Benson and crosses the majority of the tributaries feeding the lake. This location and proximity would increase the likelihood of potential drinking water contamination. Any spill from a roadway disaster would drain directly into Lake Benson. With the recent completion of the \$90 million **Dempsey Benton Water Treatment Plant**, this lake serves as a substantial potable water supply for the Metro Raleigh area.

Correspondingly, the road construction impact on **Lake Benson** is an area of concern with the red corridor. The aforementioned proximity and drainage flow direction could lead to lake contamination and/or potential reduction in the safe yield of the lake due to potential sedimentation as a result of the construction process.

In addition to the lake itself the red corridor will negatively impact the existing water transmission and distribution infrastructure associated with the new water treatment plant. This is also a concern for the existing wastewater collection infrastructure located in the red corridor.

6. The red corridor fails to provide adequate access to the Clayton Bypass facility.

The red corridor fails to provide efficient and effective transportation by not directly servicing traffic generation from the Clayton, Smithfield, Selma and the eastern Johnston County region.

Pushing traffic via a more northern route as depicted by the red corridor does not accomplish needed goals of accommodating travelers from areas south of Garner that need to travel westward towards Holly Springs, Morrisville and Research Triangle Park.

The red corridor also puts an interchange that would be just over one mile from the existing I-40/US 70 interchange. This would appear to create difficulty for proper traffic circulation and flow for the traveling public.

7. The red corridor will have significant and direct impacts on thirteen (13) Garner neighborhoods.

The following neighborhoods are directly impacted by the red corridor: Lakewood; Heather Hills; Breezeway; Vandora Pines; Camelot; Breezeway West; Breezeway East; Summer's Walk; Van Story Hills; Heather Ridge; Heather Woods, Forest Landing; and the Village at Aversboro.

We estimate approximately 510 residential lots in Garner could be impacted by the red corridor representing a tax value of over \$106,500,000. This represents a significant cost to the Garner community in terms displacement and relocation of numerous families but also a significant impact to our tax base.

8. The following points summarize the Town's concerns regarding the pink corridor, especially the portions nearest the Garner Town Limits:

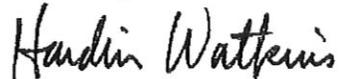
- It would remove significant portions of the Town's industrial tax base;
- It traverses directly through a City of Raleigh Wastewater Biosolids facility located just south of the Garner Town Limits;
- It eliminates a future high school site (H-8) that was purchased by Wake County Public Schools after much community outcry and discussion about other unacceptable locations. This location has been agreed upon by residents and community leaders;
- It changes land use for a large segment of our Town's future growth area and;
- It fails to connect directly with the Clayton Bypass.

The Town of Garner is fundamentally opposed to both the red and pink corridors illustrated on N.C. Turnpike Authority's maps. Therefore, we request that both corridors be removed from further study at this time. The Town of Garner strongly supports the original protected corridor as illustrated by the Orange Corridor on the N.C. Turnpike

Authority's maps as the preferred choice for the development and construction of the I-540 Triangle Expressway Southeast Extension. The community expected growth along this protected corridor and has planned for it appropriately.

Many land use decisions have been made based upon citizens and community leaders assumptions about the protected corridor and its future use. We respectfully request the NC Turnpike Authority's formal and serious consideration of our concerns regarding this matter.

Sincerely,

A handwritten signature in black ink that reads "Hardin Watkins". The signature is written in a cursive style with a large initial 'H'.

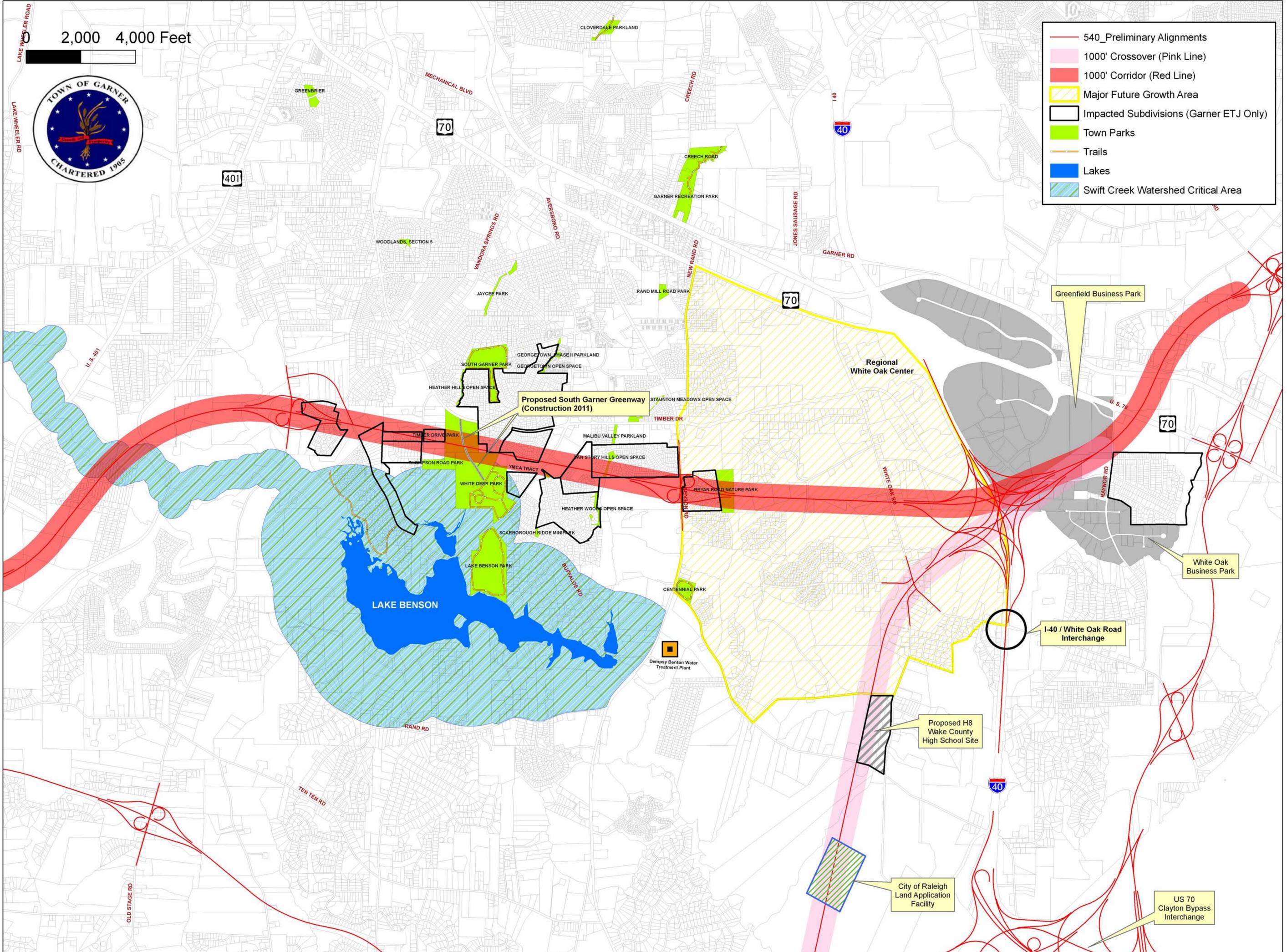
Hardin Watkins,
Town Manager

c: Mayor and Town Council
Steve DeWitt, P.E., Chief Engineer, NCTA
Brad Bass, AICP, Garner Planning Director
Frank Powell, P.E., Garner Town Engineer

0 2,000 4,000 Feet



- 540_Preliminary Alignments
- 1000' Crossover (Pink Line)
- 1000' Corridor (Red Line)
- Major Future Growth Area
- Impacted Subdivisions (Garner ETJ Only)
- Town Parks
- Trails
- Lakes
- Swift Creek Watershed Critical Area



Proposed South Garner Greenway (Construction 2011)

Greenfield Business Park

Regional White Oak Center

White Oak Business Park

I-40 / White Oak Road Interchange

Proposed H8 Wake County High School Site

City of Raleigh Land Application Facility

US 70 Clayton Bypass Interchange

LAKE BENSON

70

401

70

70

40

CLOVERDALE PARKLAND

GREENBRIER

MECHANICAL BLVD

CREECH RD

CREECH ROAD

GARNER RECREATION PARK

JONES SAUSAGE RD

GARNER RD

WOODLANDS SECTION 5

VANDORA SPRINGS RD

AINSBOROUGH RD

NEW RAND RD

JAYCEE PARK

RAND MILL ROAD PARK

SOUTH GARNER PARK

GEORGE OWEN PHASE II PARKLAND

GEORGETOWN OPEN SPACE

HEATHER HILLS OPEN SPACE

STAUNTON MEADOWS OPEN SPACE

TIMBER DR

TIMBER DRIVE PARK

MALIBU VALLEY PARKLAND

PAN STORY HILLS OPEN SPACE

THOMPSON ROAD PARK

WHITE DEER PARK

YMCA TRACT

HEATHER WOODS OPEN SPACE

SCARBOROUGH RIDGE MINIPARK

LAKE BENSON PARK

BRYAN ROAD NATURE PARK

HEATHER WOODS OPEN SPACE

SCARBOROUGH RIDGE MINIPARK

LAKE BENSON PARK

CENTENNIAL PARK

Dempsy Benton Water Treatment Plant

RAND RD

TEN TEN RD

OLD STAGE RD

U.S. 401

U.S. 70

WHITE OAK RD

RAYNOR RD

Proposed South Garner Greenway (Construction 2011)

Proposed H8 Wake County High School Site

City of Raleigh Land Application Facility

US 70 Clayton Bypass Interchange

Todd Delk



OFFICE OF THE MAYOR

October 20, 2010

Ms. Jennifer Harris, P.E.
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699

Subject: Comments on the Study of the NC 540 Triangle Expressway Southeast Extension,
Purpose & Need Statement and Preliminary Alternatives

Dear Ms. Harris:

On behalf of the Cary Town Council, I respectfully submit the following comments in response to your September 2010 request for comments on the environmental impact study (EIS) process for the NC 540 Triangle Expressway Southeast Extension from NC 55 in Apex to the US 64/264 Bypass in Knightdale. The comments are listed below in respect to the Purpose & Need Statement and Preliminary Alternatives presented at your second round of public workshops held September 21-23, 2010.

- The NCTA should develop a more concise and specific Purpose & Need Statement outlining the specific elements that the alternatives will be designed to meet.
- The alternatives and new location corridors presented at the workshops seem reasonable and feasible for additional study and refinement.

The Town of Cary also reiterates our previous comment, submitted as part of the US 64 Study that we support NC 540 being designated as a bypass for the US 64 Corridor from Apex to Knightdale.

The Town would appreciate a response from the Turnpike Authority to both these comments and those submitted in my previous letter addressed March 17, 2010 as verification of your receipt and consideration of the presented issues.

The Town appreciates your consideration of our comments on this important matter. We would appreciate advance notification of any opportunities for additional public input on the EIS, including public workshops and hearings so that we may alert our citizens.

Please feel free to contact Todd B. Delk in our Engineering Department at (919) 462-3834 or via email at todd.delk@townofcary.org should you have any further questions relating to this issue. The Town of Cary looks forward to working with the Turnpike Authority on this important study process.

Best regards,

Harold Weinbrecht, Jr.
Harold Weinbrecht, Jr.
Mayor

TOWN OF CARY

316 N. Academy Street • Cary, NC 27513 • PO Box 8005 • Cary, NC 27512-8005
tel 919-469-4011 • fax 919-460-4910 • www.townofcary.org

October 22, 2010

Dear North Carolina Turnpike Authority,

Please consider this letter a formal request on behalf of the YMCA of Garner and the YMCA of the Triangle for the state to follow the originally planned route for the final stretch of Interstate 540.

For years the Garner community has supported plans for the YMCA of the Triangle to build a full facility YMCA on property on Aversboro Road in Garner. Historically, YMCAs are community hubs for adults, families and children. For more than 150 years, the YMCA of the Triangle has strengthened the foundations of community through youth development, healthy living and social responsibility.

In addition, YMCAs make a positive economic impact the communities they serve. Changes to the original route would result in a negative impact on the future plans of the YMCA in Garner and the community at large.

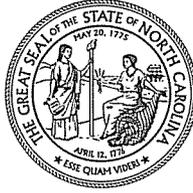
The new proposed route would divide family properties and ultimately damage our business community. We hope that you take our concerns into consideration as you make your decision.

Sincerely,



Brent Gore
Advisory Board Chair
YMCA of Garner





**NORTH CAROLINA GENERAL ASSEMBLY
STATE LEGISLATIVE BUILDING
RALEIGH, NORTH CAROLINA 27603**

November 30, 2010

Mr. Steve DeWitt, PE
Chief Engineer, NC Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699-1578

Dear Mr. DeWitt:

As members of the North Carolina General Assembly who represent the Town of Garner, we write to express our concern over the proposals known as the "Red and Pink Routes" as possible extensions to N. C. 540 Southeast to connect and complete the Triangle Expressway.

The "Orange Route" had been the preferred and most logical route in the 1990s. Relying on the Orange Route's location, the Town of Garner has invested over \$3 million in infrastructure to support future growth based on its Comprehensive Growth Plan, last updated and adopted in 2006. Businesses, investors, and homeowners have also spent millions of dollars based on that growth plan. The Red corridor will disrupt that long-range and orderly growth.

In Greenfield South Business Park alone, the Town's primary industrial recruitment area, 26 commercial/industrial lots would be obliterated by the Red Route. Those lots have a total Wake County tax value of over \$30 million, and the demise of the park would have serious consequences for non-residential growth that is vital to the Town of Garner.

We have been told that the Orange Route path could threaten the habitat of a few endangered mussels; however, the Red Route would be extremely detrimental to current and future parks and recreation facilities and designated open space in the Town of

Mr. Steve DeWitt, PE
November 30, 2010
Page Two

Garner. It would completely obliterate and eliminate the 20-acre George W. Bryan Nature Park, and it would impede on the northern edge of the recently opened White Deer Nature Park, Garner's first LEED Gold certified facility. In addition, the Red Corridor would obstruct and wipe out a portion of the South Garner Greenway leading from Timber Drive to White Deer Park.

The Red Route would have negative water quality impacts to Lake Benson with the likelihood of contaminating its drinking water supply. With the recent completion of the \$90 million Dempsey Benton Water treatment Plant, this lake serves as a substantial potable water supply for the Metro Raleigh area.

The "Red Corridor" fails to provide adequate access to the Clayton Bypass facility and would, therefore, not accomplish needed goals of accommodating travelers from areas south of Garner that need to travel westward toward Holly Springs, Morrisville, and the Research Triangle Park.

The Red Route would have significant and direct impacts on 13 Garner neighborhoods affecting approximately 510 residential lots with a value over \$106.5 million. This represents a significant cost to the Garner community in terms of displacement and relocation of families as well as a significant impact to Garner's tax base.

In the 1950's the Town of Garner was split by the construction of Highway 70. They are still striving to recover from that unfortunate planning decision, and they cannot afford to be divided again by a road as large as the Triangle Expressway. If the protected Orange Corridor is selected as the preferred route, Garner can naturally grow towards the new expressway in a managed fashion over the next 25-35 years.

The Town of Garner has concerns about the Pink Corridor as well. The Pink Route would remove significant portions of the Town's industrial tax base, and it would traverse directly through a City of Raleigh Wastewater Biosolids facility located just south of the Garner town limits. It would eliminate a future high school site that was purchased by Wake County Public Schools after much outcry and discussion about other unacceptable locations. The Pink Route would change land use for a large segment of the Town's future growth area, and it would also fail to connect directly with the Clayton Bypass.

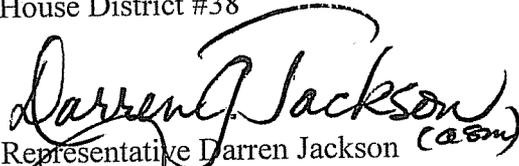
Over one thousand concerned Garner residents turned out for a meeting on November 17, 2010, in protest of the Red Route. We respectfully join with our constituents in asking that you eliminate both the Red and Pink Routes from your alternatives and select the Orange Route for the Triangle Expressway.

Mr. Steve DeWitt, PE
November 30, 2010
Page Three

Very truly yours,



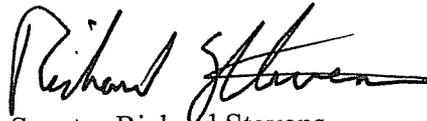
Representative Deborah Ross
House District #38



Representative Darren Jackson (a son)
House District #39



Senator Dan Blue
Senate District #14



Senator Richard Stevens
Senate District #17

cc: Mr. John Sullivan, PE
Federal Highway Administration

Mr. Gary Jordan
US Fish and Wildlife Service

Mr. Pete Benjamin
US Fish and Wildlife Service

Mr. Eric Alsmeyer
US Army Corps of Engineers

Mr. Scott McLendon
US Army Corps of Engineers

Mr. Chris Militscher
US Environmental Protection Agency

Mr. Brian Wrenn
NC Department of Environment and Natural Resources Div. of Water Quality

Mr. Travis Wilson
NC Wildlife Resources Commission

November 30, 2010

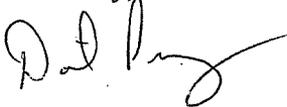
North Carolina Turnpike Authority
Christy Shumate, AICP
1578 Mail Service Center
Raleigh, NC 27699-1578

Dear NC Turnpike Authority,

I am writing you in regards to the new proposed Tan Corridor for the Southeast Extension of I-540. I am opposed to this new corridor as it would affect my neighborhood. My family bought a new home during the summer, June. Before we purchased this home, we researched the area to make sure that it would not be directly affected by the I-540 project. At the time it would be further along White Oak Rd, and would not directly affect our home.

The new Tan Corridor, from the maps available on-line, will either take out my home entirely or I will be able to throw a rock onto the highway. The originally proposed corridor has been planned for years, with limits on development to minimize future impact on housing. I find it ironic that Wake County and the City of Raleigh want to now change the original plan, to minimize the impact on the planned Randleigh Farm Property. It is like they wrote the rules, and now want to change them to suit their own needs. What about the people that followed the rules from the beginning?

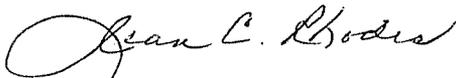
Sincerely,



Daniel Penny
110 Galloway Dr
Garner, NC 27529
dbpenny@sbcglobal.net
919-585-2687

As a concerned and distressed citizen of Garner, N.C., about the proposed route of the Triangle Expressway, I feel that I must take a stand. The Red route will directly impact the lives of so many people, many of them elderly, like myself. I am not an ecological nut, but I do care about any wildlife on the endangered species list. However, I must ask this question, Are we, as citizens of Garner, and Wake County, so demoralized by the ecological battle that we place the lives of mud mussels (*Alasmidonta heterodon*) before the comforts of our elderly citizens? Many, lives will not withstand another disruption such as a move, just when we have found the place of our dreams in Aversboro Retirement Village. There are several other communities that will be adversely affected if the road proceeds as planned. Landmarks listed in our local paper include Vandora Pines, Breezeway, Timber Drive Park, White Deer Park, Heather Ridge, Van Story Hills, Forest Landing, Bryan Nature Park, and Greenfield Business Park. I have not yet mentioned the deer that will be left homeless without the protection of our woods. Much of which will be destroyed by an expressway passing through it. We have deer that feed in our back yard. My next question for the planning boards consideration: Why not place a bridge over the Little River and Swift Creek, and any other tributaries in question? It seems to me that this is a more humane gesture than destroying the homes and perhaps lives of so many people. I am just one voice in many that oppose this, and I, as a citizen will be heard. I thank you for listening to an elderly lady....wisdom comes with years. I remain,

Respectively Yours,



Jean C, Rhodes
275 Shady Hollow Lane
Garner, N.C. 27529

**GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2011**

**SESSION LAW 2011-7
SENATE BILL 165**

AN ACT TO RESTRICT THE NORTH CAROLINA TURNPIKE AUTHORITY'S
SELECTION OF TRANSPORTATION CORRIDORS TO EXISTING PROTECTED
CORRIDORS OR CORRIDORS SOUTH OF AN EXISTING PROTECTED CORRIDOR
EXCEPT IN THE AREA OF INTERSTATE 40 EAST.

The General Assembly of North Carolina enacts:

SECTION 1. G.S. 136-89.183(a)(2) reads as rewritten:

"(2) To study, plan, develop, and undertake preliminary design work on up to nine Turnpike Projects. At the conclusion of these activities, the Turnpike Authority is authorized to design, establish, purchase, construct, operate, and maintain the following projects:

- a. Triangle Expressway, including segments also known as N.C. 540, Triangle Parkway, and Western Wake Freeway in Wake and Durham ~~Counties.~~ Counties, except that segment known as the Triangle Expressway Southeast Extension which shall not be located north of an existing protected corridor established by the Department of Transportation circa 1995, except in the area of Interstate 40 East.
- b. Gaston East-West Connector, also known as the Garden Parkway.
- c. Monroe Connector/Bypass.
- d. Cape Fear Skyway.
- e. A bridge of more than two miles in length going from the mainland to a peninsula bordering the State of Virginia, pursuant to G.S. 136-89.183A.
- f. Repealed by Session Laws 2008-225, s. 4, effective August 17, 2008. Any other project proposed by the Authority in addition to the projects listed in this subdivision must be approved by the General Assembly prior to construction.

A Turnpike Project selected for construction by the Turnpike Authority shall be included in any applicable locally adopted comprehensive transportation plans and shall be shown in the current State Transportation Improvement Plan prior to the letting of a contract for the Turnpike Project."



SECTION 2. This act is effective when it becomes law.

In the General Assembly read three times and ratified this the 17th day of March,
2011.

s/ Philip E. Berger
President Pro Tempore of the Senate

s/ Thom Tillis
Speaker of the House of Representatives

s/ Beverly E. Perdue
Governor

Approved 3:09 p.m. this 18th day of March, 2011



Board of Commissioners
P.O. Box 550 • Raleigh, NC 27602

TEL 919 856 6160
FAX 919 856 5699

PAUL COBLE, CHAIRMAN
PHIL MATTHEWS, VICE-CHAIR
JOE BRYAN
TONY GURLEY
STAN NORWALK
BETTY LOU WARD
JAMES WEST

December 8, 2010

David W. Joyner, Executive Director
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, North Carolina 27699-1578

RE: Triangle Expressway Southeast Extension – Tan Corridor

Dear Mr. Joyner,

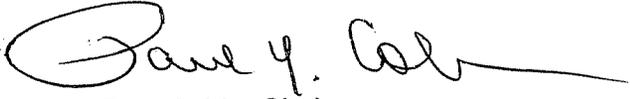
On November 4, 2010, the North Carolina Turnpike Authority (NCTA) announced the introduction of a new alternate corridor (Tan) on the eastern side of the Triangle Expressway Southeast Extension. Our understanding is that the Tan corridor was added as an alternative to the corridor shown at previous meetings (Green) in order to minimize impact on the planned development at Randleigh Farm. Wake County and the City of Raleigh jointly purchased the Randleigh Farm property for the development of various public facilities. However, the property has not been developed and the general alignment of the Triangle Expressway Southeast Extension corridor (Green) was known when the property was purchased. Wake County, therefore, does not support the recent addition of the new alternate corridor (Tan) and requests that it be removed from consideration.

Wake County supports the position that the Tan corridor's potential impact on established neighborhoods and residents is clearly more important than ensuring that the preliminary development plan of the Randleigh Farm property remain viable. Residents in the area have relied upon the general alignment corridor (Green) for many years when making investment decisions regarding their homes. As a result, residents have expressed their concern about the Tan corridor.

In addition to removing the Tan corridor from consideration, the County requests that the selection of the final corridor be expedited as much as possible. As long as alternatives remain under consideration, residents, business, and property owners must deal with the uncertainty that can create a financial burden and psychological stress.

If you need additional information or have any questions about the County's position, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul Y. Coble", with a long horizontal flourish extending to the right.

Paul Coble, Chairman
Wake County Board of Commissioners

cc: Eugene A. Conti Jr., Chairman, North Carolina Turnpike Authority
Perry R. Safran, Vice-Chairman, North Carolina Turnpike Authority
Robert D. Teer Jr., North Carolina Turnpike Authority
Robert C. Clay, North Carolina Turnpike Authority
John Collett, North Carolina Turnpike Authority
James H. Ferebee, Jr., North Carolina Turnpike Authority
Anthony Fox, North Carolina Turnpike Authority
E. David Redwine, North Carolina Turnpike Authority
Alan F. Swanstrom, North Carolina Turnpike Authority
David Cooke, County Manager, Wake County



City Of Raleigh
North Carolina

Charles Meeker
Mayor

January 11, 2011

David W. Joyner, Executive Director
NC Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699-1578

SUBJECT: Comments on TIP Project R-2829, Eastern Wake Expressway

Dear Mr. Joyner:

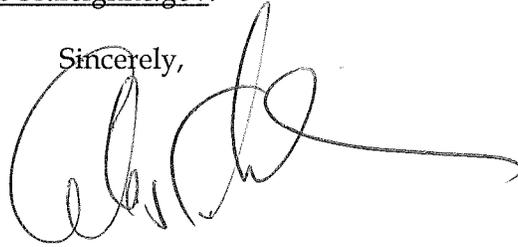
At our January 4, 2011 meeting, the Raleigh City Council received comments from the general public regarding alternatives under consideration for the Southeast Extension of the Triangle Expressway. The portion of your project within the City's jurisdiction falls under TIP Project R-2829 (Eastern Wake Expressway). These residents spoke out specifically in opposition to the Tan Corridor that has been developed by the NC Turnpike Authority for this segment of the project.

I understand that your project team has met with City staff from multiple departments on several occasions to discuss alignment issues along the Eastern Wake Expressway. Working out the details on a final alignment for this corridor has been a priority for the City for many years, especially with regards to getting out ahead of growth in this area and providing County residents with improved predictability.

The City Council voted unanimously to oppose the Tan Corridor as it is currently proposed, and we have requested that City staff continue to work with your project team to develop viable alternatives for consideration in your Environmental Impact Statement (EIS). We understand that the EIS process is technical in nature, but we urge you continue to take the concerns of area residents into account as you proceed with your study. The completion of the Eastern Wake Expressway as part of the larger Raleigh Outer Loop is important to the continued growth of the City and its neighboring communities. We appreciate the efforts of the Turnpike Authority to move this project forward.

If you have additional questions about our comments, please contact Eric Lamb
at (919) 516-2161 or by email at eric.lamb@raleighnc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. Meeker', with a long horizontal flourish extending to the right.

~~Charles C. Meeker~~
Mayor

CCM/ejl

Cc: City Councilors
J. Russell Allen - Raleigh City Manager
David Cooke - Wake County Manager
Mitchell Silver, AICP - Raleigh Planning Director
Carl R. Dawson, Jr., PE - Raleigh Public Works Director
Brad Bass, AICP - Garner Planning Director



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

JAN 27 2011

January 26, 2011

Regulatory Division/1145b

SUBJECT: Action ID 2009-02240; STIP Nos. R-2721, R-2828, and R-2829

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

Dear Mr. DeWitt:

Reference the proposed North Carolina Turnpike Authority project known as the Triangle Expressway Southeast Extension toll facility (STIP Nos. R-2721, R-2828, and R-2829), from NC 540 currently under construction at NC 55 in Holly Springs, to existing I-540 north of Poole Road and Clayton, in southern Wake and northeastern Johnston counties, North Carolina. Reference also the January 20, 2011 Turnpike Environmental Agency Coordination (TEAC) meeting for this project, at which Mr. Eric Alsmeyer of our staff informed you that the Corps of Engineers has identified an Issue of Concern regarding your proposal to eliminate the Red and Pink corridors as reasonable and feasible alternatives for further study. In accordance with Section 6002 of SAFETEA-LU Issues of Concern are those that "could result in denial of a permit or substantial delay in issuing a permit"

Our concern is based primarily on the Summary of Potential Impacts in Table 2 of Handout #8 for the January 20, 2011 TEAC meeting, which shows that the Orange Alternative, which, if the Red and Pink corridors were eliminated, would be the only remaining alternative for study in the eastern portion of the project study area, has substantially more wetland impacts (88.1 acres) than the Red and Pink Alternatives (43.7 acres and 57.4 acres, respectively), and has substantially more stream impacts (36,120 linear feet) than the Red Alternative (29,770 linear feet).

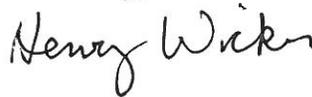
As you are aware, our permit program requires that we make a complete, thorough, and unbiased review of all factors associated with a proposed project within jurisdictional waters of the United States. A major component of the review is the consideration of reasonable and practicable alternatives, required by both the National Environmental Policy Act and the Clean Water Act 404 b (1) Guidelines (33 U.S.C. Section 1344 (b); 40 CFR Part 230). The Clean Water Act requires that individual permit decisions be made "after notice and opportunity for public hearings" (33 U.S.C. Section 1344(a)). Based on these requirements and the information we have available to us at this time, we believe it would be premature for the Wilmington District to agree to your proposal to eliminate from further consideration the "Red" and "Pink"

alternatives, as you have requested. It is our understanding that the impacts to both the natural and human environment that you have provided to us are based on 1,000 foot-wide corridors. It has been our experience that once a preliminary or functional design has been developed that these impacts may change substantially. Given the level of potential adverse impacts associated with all the corridors currently under consideration and our substantial requirements under the 404 (b) 1 Guidelines, we believe that a decision to eliminate one or more of these corridors should be based on impacts more closely associated with a typical 4-lane median divided facility that has been placed within each of the corridors in such a way as to avoid impacts to the maximum extent practicable.

If you elect to eliminate these alternatives from further consideration at this point, we may elect to prepare our own supplement to your EIS describing these alternatives, or prepare an entirely separate NEPA document that thoroughly describes alternatives to the proposed action. We note that this is specifically contrary to your draft "Section 6002 Coordination Plan for the Triangle Expressway Southeast Connector Project STIP Projects R-2721, R-2828, & R-2829" which states, in Section 1.2, Integration of NEPA and Section 404 Requirements, "(t)he process established in this plan is intended to ensure that ... the US Army Corps of Engineers (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...."

Should you have any questions, please call Mr. Alsmeyer at (919) 554-4884, extension 23.

Sincerely,



for

S. Kenneth Jolly
Chief, Regulatory Division
Wilmington District

Copies Furnished:

Mr. Brian Wrenn
Division of Water Quality
North Carolina Department of
Environment and Natural Resources
1650 Mail Service Center
Raleigh, NC 27699-1650

Mr. Clarence Coleman
Federal Highway Administration
310 New Bern Ave., Rm 410
Raleigh, North Carolina 27601-1442

Mr. Chris Lukasina
Capital Area Metropolitan Planning Organization (CAMPO)
127 West Hargett Street, Ste. 800
Raleigh NC 27601

Mr. Heinz Mueller
Chief, NEPA Program Office
Office of Policy and Management
US Environmental Protection Agency
61 Forsythe St., SW
Atlanta, GA 30303

Mr. Gary Jordan
US Fish and Wildlife Service
PO Box 33726
Raleigh, NC 27636

Mr. Travis Wilson
NC Wildlife Resources Commission
1142 I-85 Service Road
Creedmoor, NC 27522

Mr. Peter Sandbeck
NC State Historic Preservation Office
4619 Mail Service Center
Raleigh, NC 27699-4619

Office of
County Commissioners
(919) 989-5100
FAX (919) 989-5179

Paula G. Woodard, Clerk

Johnston County

POST OFFICE BOX 1049
SMITHFIELD, N.C. 27577

Allen L. Mims, Jr., Chairman
Jeffrey P. Carver, Vice Chairman
Cookie Pope
W. Ray Woodall
DeVan Barbour
Tony Braswell
Wade M. Stewart

February 8, 2011

Mr. David W. Joyner
Executive Director
N.C. Turnpike Authority
1578 Mail Service Center
Raleigh, N.C. 27699-1578

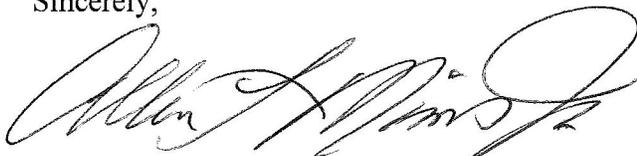
Re: Triangle Expressway Southeast Extension – Tan Corridor

Dear Mr. Joyner:

The Johnston County Board of Commissioners opposes the Tan Corridor option for the Triangle Expressway Southeast Extension. It was our understanding that there has been a selected corridor reserved for this project for several years. As you can imagine, recent discussions regarding alternate options (such as the Tan Corridor) have been upsetting for Johnston County landowners in the vicinity.

Johnston County appreciates the opportunity to voice our concerns, and we hope that the Tan Corridor option will be eliminated from consideration. If you need further information, please feel free to contact me.

Sincerely,



Allen L. Mims, Jr., Chairman
Johnston County Board of Commissioners

Cc: Johnston County Board of Commissioners
Mr. David Rouzer, North Carolina Senate
Mr. James H. Langdon, Jr., North Carolina House of Representatives
Mr. N. Leo Daughtry, North Carolina House of Representatives



United States Department of the Interior

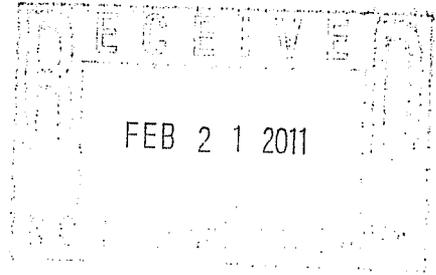
FISH AND WILDLIFE SERVICE

Raleigh Field Office

Post Office Box 33726

Raleigh, North Carolina 27636-3726

February 17, 2011



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

Dear Mr. Dewitt:

This letter is in regard to the Southern and Eastern Wake Expressway (TIP Nos. R-2721, R-2828, and R-2829). As you know, the U.S. Fish and Wildlife Service (Service) has been very involved in this project through the Turnpike Environmental Agency Coordination meetings. At these meetings, the Service has stated its concern regarding the likely adverse effects of the project on the federally endangered dwarf wedgemussel (*Alasmidonta heterodon*) within the Swift Creek watershed (Neuse River basin). Section 7(a)(2) of the Endangered Species Act (ESA) requires that all federal action agencies (or their designated non-federal representatives), in consultation with the Service, insure that any action federally authorized, funded, or carried out by such agencies is not likely to jeopardize the continued existence of any federally threatened or endangered species. We anticipate that a formal Section 7 consultation will be required. The Federal Highway Administration (FHWA), as the lead federal action agency, must initiate formal Section 7 consultation by submitting to the Service an initiation package which includes a Biological Assessment (BA). In return, the Service will conduct an analysis to determine if the project will jeopardize the continued existence of the dwarf wedgemussel and issue a Biological Opinion (BO). Given the fact that the 1993 Dwarf Wedgemussel Recovery Plan requires a viable population in Swift Creek in order to recover the species, maintenance of a sustainable dwarf wedgemussel population in the post-project Swift Creek watershed is vitally important. We cannot understate the significance of this issue.

In addition to the normal information needs in developing the BA and BO (e.g. fully describing and analyzing the direct, indirect and cumulative effects to the species), the Service must determine the Environmental Baseline of the species. This section of the BO is an analysis of the effects of past and ongoing human and natural factors leading to the current status of the species, its habitat, and ecosystem within the action area. The Service believes there is a significant lack of information for this critical component of the BO, which will likely hamper our analysis.

The ESA requires that the action agency provide the best scientific and commercial data available concerning the impact of the proposed project on the listed species. Although significant mussel survey data exists, the Service believes that more holistic data regarding historical trends and ongoing alterations of habitat, water quality, hydrograph, watershed, and

land use are either lacking or not readily available to the Service. We believe that if additional data and information were developed and/or acquired, the Section 7 consultation will be expedited, and the probability of arriving at sound and accurate conclusions increases. In lieu of filling these data gaps, the Service will develop the BO with available information, but giving the benefit of any doubts to the species.

In order to ensure that issues related to data gathering and information availability and analysis do not impede the consultation process, the Service is requesting that the North Carolina Turnpike Authority (NCTA) and/or the FHWA fund an additional study within the Swift Creek watershed. This additional information would greatly assist in the development of the environmental baseline, effects analysis, jeopardy analysis, incidental take statement (if a no jeopardy opinion) and reasonable and prudent measures (if a no jeopardy opinion). We envision a three part study which focuses on the Swift Creek watershed from the Lake Benson dam downstream to its confluence with the Neuse River, but may include relevant data from upstream of the Lake Benson dam if needed (e.g. to fully evaluate stressors).

The study components include:

1. Provide an accounting (compliance/success) of existing conservation measures in the lower Swift Creek watershed. This would primarily be a “desktop” evaluation which documents conservation/mitigation measures adopted for past projects and following up to see if the measures were implemented and enforced. It would also document all other environmental protections emplaced through legislation and local ordinances.
2. Evaluate the effectiveness of existing conservation measures and environmental protections, with regard to the dwarf wedgemussel and other rare aquatic species. This portion of the study could incorporate a modified version of an existing local watershed planning process developed by the North Carolina Ecosystem Enhancement Program. It includes the following phases:
 - a. Watershed characterization
 - i. Review existing watershed data
 - ii. Identify data gaps
 - iii. Identify preliminary stressors
 - b. Detailed assessment and modeling
 - i. Conduct water quality monitoring and field assessments based upon identified data gaps
 - ii. GIS data development
 - iii. Stakeholder outreach
 - c. Watershed management plan and project atlas
 - i. Develop watershed recommendations to address identified stressors (projects, planning and zoning recommendations, etc.)
 - ii. Develop project atlas that prioritizes projects based upon degree of functional improvement and project feasibility
3. Determine mussel population and habitat viability. This would determine if the dwarf wedgemussel population contains a sufficient number of reproducing adults to maintain genetic variability and annual recruitment adequate to maintain a stable population. This would also determine if aquatic habitat [both physical (e.g. substrate, hydrograph) and

chemical] is currently sufficient to support dwarf wedgemussels. It would determine whether the conditions are stable, declining, or improving by assessing historic habitat trends and projecting into the future what the habitat quality is likely to be (given future development pressures in the watershed).

The proposed study will require both qualitative and quantitative data collection, be part field-based and part academic in nature, involve multiple professional disciplines, and should lead to logically defensible conclusions. Although best professional judgment may be a component, emphasis should be placed on acquiring and analyzing empirical data. The information derived from this study can be used to enhance the quality of the BA and will be a critical component of the BO.

If the Service issues a "No Jeopardy" opinion, the action agency will be required to implement Reasonable and Prudent Measures (RPM) in order to minimize the level of take of the species. The information developed from the proposed study will help develop the RPM and the Terms and Conditions for implementing them. Depending upon the information and conclusions obtained, one possible RPM may involve captive propagation and augmentation/reintroduction of the species within the Swift Creek watershed. We will further address this issue if the study conclusions support it.

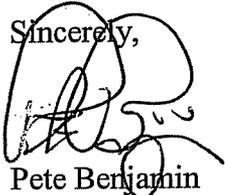
In addition to the aforementioned proposed study, the Service recommends that the NCTA and FHWA begin planning for the development of the BA, with special emphasis on the indirect and cumulative effects of the project. Please note that indirect effects and cumulative effects are defined differently in the ESA than from the National Environmental Policy Act. Under the ESA, indirect effects are defined as "those effects that are caused by or will result from the proposed action and are later in time, but are still reasonably certain to occur." Though indirect effects can take many forms, of greatest concern are road-induced secondary development and infrastructure with the accompanying degradation of water quality and increased sedimentation. Under the ESA, cumulative effects are defined as "those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation." Cumulative effects may be difficult to distinguish from indirect effects.

One additional consideration is that the Service has recently been petitioned to list several other aquatic species which occur within the Swift Creek watershed as threatened or endangered. Although the Service has not yet completed the process to determine whether the species warrant federal protection, it is a real possibility that one or more of these species could be listed prior to the construction of this project. If so, Section 7 consultation would be required for any newly listed species. This should be monitored closely and considered during the planning of this project.

Again, the Service is requesting that the NCTA and/or FHWA fund the aforementioned study. We understand that it is the action agency's prerogative to either provide for the additional study or not; however, the Service believes it is in the best interest of all parties to conduct the study and to initiate it as soon as possible in order to ensure timely completion of the consultation process. We believe that developing the BO without the additional information would be very

difficult and require us to give the benefit of a doubt to the conservation of the species. We would likely have to make several assumptions, which may not be favorable to the NCTA and FHWA.

We look forward to the scheduled March 14 meeting to discuss these issues. If you have any questions regarding this letter, please contact Mr. Gary Jordan at (919) 856-4520 (Ext. 32).

Sincerely,

Pete Benjamin
Field Supervisor

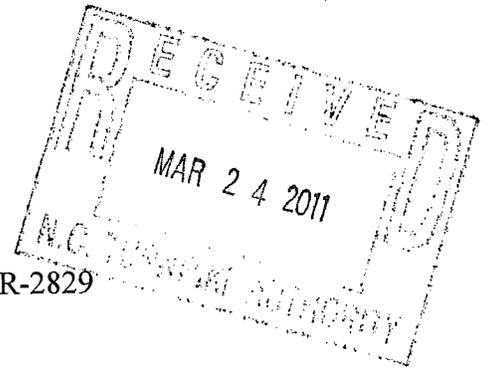
cc: George Hoops, FHWA, Raleigh, NC
Eric Alsmeyer, USACE, Wake Forest, NC
Brian Wrenn, NCDWQ, Raleigh, NC
Travis Wilson, NCWRC, Creedmoor, NC
Rob Nichols, NCWRC, Garner, NC
Chris Militscher, USEPA, Raleigh, NC
Judy Ratcliffe, NCNHP, Raleigh, NC



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

March 23, 2011



Regulatory Division/1145b

SUBJECT: Action ID 2009-02240; STIP Nos. R-2721, R-2828, and R-2829

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

Dear Mr. DeWitt:

Reference the proposed North Carolina Turnpike Authority project known as the Triangle Expressway Southeast Extension toll facility (STIP Nos. R-2721, R-2828, and R-2829), from NC 540 currently under construction at NC 55 in Holly Springs, to existing I-540 north of Poole Road and Clayton, in southern Wake and northeastern Johnston counties, North Carolina. Reference also my January 26, 2011 letter identifying an Issue of Concern regarding your proposal to eliminate the Red and Pink corridors as reasonable and feasible alternatives for further study. The Red and Pink Alternatives appear at this time to have significantly less impacts to the aquatic environment and to endangered species than the Orange Alternative; therefore, we believe eliminating these alternatives at this point, well before a draft NEPA document has been prepared, is premature and not warranted by the information we presently have.

After further review of the available information related to these alternatives, we have the following questions:

- 1) What is the relative quality of the wetlands and streams that may be impacted by the Red, Pink and Orange Alternatives? We do not believe it is necessary to provide a detailed functional analysis of each potential impact site but believe it is important to determine, on a qualitative basis, the relative difference, if any, that exists between the referenced alternatives.
- 2) What is the comparison between the wetland occurrences on the 1,000-foot Orange Alternative corridor, as predicted by the National Wetland Inventory (used in the current impact tables), and the delineated wetland occurrences on the same corridor that have been field-verified by the Corps of Engineers, to date?

- 3) Provide additional detail regarding the level of design that is associated with the "conceptual alternative alignment".
- 4) How was the "conceptual alternative alignment" for the 300-foot wide preliminary new location alternative corridors placed within the 1,000-foot study corridors (Reference the August 10, 2010 Turnpike Environmental Agency Coordination Meeting Handout #3, "Alternative Screening, Quantitative Second Tier Screening of Alternative Concepts", page 4, Section 2., SCREENING CRITERIA)? It is not clear to us whether the conceptual alternative alignment was placed in the center of the 1,000-foot corridor or if it was placed in such a manner that it avoided and/or minimized impacts to the human and natural environment.
- 5) What methodology did the NC TA employ to quantify the "Structures Relocated", as shown in the Summary of Potential Impacts in Table 2 of Handout #8 for the January 20, 2011 TEAC meeting (e.g., dates of aerial photography used, tax maps, windshield surveys, and assumptions made)?
- 6) We were recently made aware that an Alternatives Screening Report has been prepared but has not been provided to us for our review. We would appreciate receiving a copy of this report as soon as it is finalized as this may contain information we are not currently aware of.

We continue to support the development of the draft EIS for this project to allow for a fair and unbiased comparison of alternatives leading to a determination of the Least Environmentally Damaging Practicable Alternative for this project.

Should you have any questions, please call Mr. Alsmeyer at (919) 554-4884, extension 23.

Sincerely,



S. Kenneth Jolly
Chief, Regulatory Division

Copies Furnished:

Mr. Brian Wrenn
Division of Water Quality
North Carolina Department of
Environment and Natural Resources
1650 Mail Service Center
Raleigh, NC 27699-1650

Mr. Clarence Coleman
Federal Highway Administration
310 New Bern Ave., Rm 410
Raleigh, North Carolina 27601-1442

Mr. Chris Lukasina
Capital Area Metropolitan Planning Organization (CAMPO)
127 West Hargett Street, Ste. 800
Raleigh NC 27601

Mr. Heinz Mueller
Chief, NEPA Program Office
Office of Policy and Management
US Environmental Protection Agency
61 Forsythe St., SW
Atlanta, GA 30303

Mr. Gary Jordan
US Fish and Wildlife Service
PO Box 33726
Raleigh, NC 27636

Mr. Travis Wilson
NC Wildlife Resources Commission
1142 I-85 Service Road
Creedmoor, NC 27522

Mr. Peter Sandbeck
NC State Historic Preservation Office
4619 Mail Service Center
Raleigh, NC 27699-4619



Town of Garner

Post Office Box 446 · Garner, North Carolina 27529
Phone (919) 772-4688 · Fax (919) 662-8874 · www.GarnerNC.gov

Ronnie S. Williams
MAYOR

October 6, 2011

Mr. David Joyner
Executive Director
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699-1578

Dear David,

Thank you for the opportunity to discuss the proposed new 540/Triangle Expressway Southeast Extension turnpike with you and officials from CAMPO and NCDOT here at Garner Town Hall on August 31, 2011. It was an informative meeting.

As discussed in the meeting, the Town of Garner is not interested in the "red route" alignment of the proposed 540 roadway being studied, considered, or built. This is a well-documented position and viewpoint of the Town and we enjoy the support of the NC General Assembly in this viewpoint.

The Town believes that no further action on the part of NCDOT, NCTA, or CAMPO should be undertaken on the continuation of 540 in southern Wake County until an official response is received from the federal and state resource agencies that have jurisdiction in this matter. The Town believes that the alternatives report (with a summary of the work, research, and documentation completed so far) should be forwarded to the resource agencies and urges NCTA/NCDOT to complete that task if it has not yet been completed. We spoke briefly about this report via telephone call to NCTA Chief Engineer Steve DeWitt during the August 31, 2011 meeting and he indicated that the alternatives summary report was nearing completion.

The Town would also urge NCTA to formally reply to the six questions asked by Kenneth Jolly, Chief, Regulatory Division, US Army Corps of Engineers – Wilmington District in his letter dated March 23, 2011, if that has not already occurred. If it has occurred, we would be pleased to receive a copy of that reply and any response received from the USACE.

As you know, the Town is a proponent of the completion of the entire 540/Triangle Expressway for the good of the region and looks forward to the highway being constructed within the alignment of the orange route (i.e., the "protected corridor") in the near future. Indeed, the Town has been planning for the completion of 540 in the location of the protected corridor for more than a decade, and the zoning and land uses outlined in our approved land use plan are predicated on that location which was established in the 1990s. We cannot support or endorse any activity that involves study or construction of the "red route." That will destroy our community.

The Town will continue to monitor activities related to the proposed 540/Triangle Expressway Southeast Extension and we look forward to its successful advancement and completion within the protected corridor. Please send us a summary of recently-completed and expected activities related to the progress of the proposed 540 in southern Wake County at your earliest convenience, and please forward copies of the alternatives summary report and transmittal letter when they are completed and sent to the resource agencies. The Town would also be pleased to receive copies of response letters including those from FHWA, Corps of Engineers, EPA, and US Fish & Wildlife.

Thank you for your continued leadership of the NC Turnpike Authority and your ongoing willingness to hear the Town of Garner's views and concerns. I look forward to talking with you soon, and I offer you continued best wishes on the successful opening of the first segments of the Triangle Expressway Turnpike later this year and in 2012 in western Wake County.

Sincerely,

A handwritten signature in cursive script that reads "Ronnie S. Williams".

Ronnie S. Williams
Mayor

cc: Terry Gibson, NCDOT
Ed Johnson, CAMPO
Steve DeWitt, NCTA
Joe Milazzo, RTA
Hardin Watkins, Town Manager
Brad Bass, Planning Director



DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

REPLY TO
ATTENTION OF:

February 17, 2012

Regulatory Division/1145b

SUBJECT: Action ID 2009-02240; STIP Nos. R-2721, R-2828, and R-2829

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

Dear Mr. DeWitt:

Reference the proposed North Carolina Turnpike Authority (NCTA) project known as the Triangle Expressway Southeast Extension toll facility (TIP Nos. R-2721, R-2828, and R-2829), from NC 540 currently under construction at NC 55 in Holly Springs, to existing I-540 north of Poole Road and Clayton, in southern Wake and northeastern Johnston Counties, North Carolina. Reference also my March 23, 2011 letter asking for additional information regarding alternatives; my meeting on December 20, 2011, with representatives of the North Carolina Department of Transportation, including the NCTA and its consultants, and of the Federal Highway Administration; and NCTA's submittal on January 9, 2012, of the revised Draft Alternatives Development and Analysis Report (DADAR), for the subject project.

We understand that Governor Perdue signed legislation (Senate Bill 165) on March 18, 2011, that restricted the study, planning, and development of the Triangle Expressway Southeast Extension from the area north of the protected corridor and west of Interstate 40 (the area of the Red and Pink Corridors). We believe that state law which restricts the consideration of reasonable and practicable alternatives does not preclude our requirement under the 404 (b)(1) Guidelines (40 CFR Part 230) to analyze and objectively compare alternatives for this or any project that requires a Clean Water Act permit. While we are sensitive to the potential impacts to communities, public recreation facilities, and an industrial park in the Town of Garner, associated with the Red Corridor, we believe that its elimination from further consideration compromises our ability to satisfy our statutory requirements under the Guidelines.

The DADAR recommends that the Orange to Red to Green Corridor not be included as a reasonable and practicable alternative for detailed study in the Draft Environmental Impact Statement (DEIS) because it has significant and disproportionate impacts on the human environment, has limited ability to meet traffic needs, and is not a feasible and prudent Alternative under Section 4(f) of the Department of Transportation Act of 1966.

Our permit program requires that we make a complete, thorough, and unbiased review of all factors associated with a proposed project within jurisdictional waters of the United States.

NESAUC-RG/McLendon

A major component of the review is the consideration of reasonable and practicable alternatives, required by both the National Environmental Policy Act (NEPA) and the Clean Water Act 404 (b)(1) Guidelines (40 CFR Part 230). The 404 (b)(1) Guidelines require that the Corps can permit a project only if the applicant demonstrates that other alternatives are not practicable, available or less environmentally damaging. Practicable relates to cost, logistics or technology. As is FHWA, we are required to satisfy the provisions of NEPA which include the requirement to develop an EIS to examine all reasonable alternatives to the proposal, with reasonable alternatives including those that are practical or feasible from the technical and economic standpoint, rather than simply desirable from the standpoint of the applicant. Table 5-2 in the DADAR, Preliminary Alternatives – Summary of Potential Impacts, describes impacts to 43.7 acres of wetlands, and 29,770 linear feet of stream, for a 300- foot right-of-way for the end-to-end Orange to Red to Green Alternative that includes the Red Corridor, based on map data including the National Wetlands Inventory. This compares to impacts to 88.1 acre of wetlands and 36,110 linear feet of stream for the end-to-end Orange to Green Alternative. Furthermore, the US Fish and Wildlife Service has indicated that construction within the Orange Corridor would result in an adverse impact to the federally endangered dwarf wedge mussel (*Alasmidonta heterodon*) and that formal consultation will be required. Based on this information, the Orange to Red to Green Alternative appears to be a less environmentally damaging alternative and should be included as an alternative to be studied the Draft Environmental Impact Statement (DEIS). Nothing in our administrative record for this project indicates that the Orange to Red to Green Alternative is not practicable under the 404 (b) (1) Guidelines.

We are being asked to eliminate every alternative segment for a major portion of the corridor, with the exception of one, including the elimination of the least environmentally damaging alternative, prior to the release of a DEIS and before we, the agencies and the public have had an opportunity to conduct a side-by-side comparison of the one remaining segment alternative with the Red Corridor, with the usual level of data that is available after the DEIS, including detailed wetland delineation information, functional design, an analysis of the indirect and cumulative impacts, and additional data related to our twenty-one public interest review factors. Where we have previously elected to eliminate alternatives from further consideration prior to release of a DEIS, 1) the eliminated alternative clearly had unacceptable impacts to either the natural or human environment as compared to other alternatives under consideration, *and* 2) there was a sufficient number of remaining alternatives that encompassed a range of impacts to both the natural and human environment that the alternatives could be reasonably compared. Therefore, we believe it is premature to eliminate what we believe to be the environmentally preferable alternative from further consideration

We understand that FHWA has determined that several 4(f) properties may be impacted by the Red Corridor. Furthermore, we are also aware of the restriction that Section 4(f) of the Department of Transportation Act of 1966 places upon FHWA including a stipulation that FHWA cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless there is no feasible and prudent alternative to the use of land, or the action includes all possible planning to minimize harm to the property resulting from use. While this may be a consideration utilized by FHWA in determining a preferred alternative, we do not concur that the Department of Transportation Act should be used to define a reasonable range of alternatives under NEPA, and believe that it

cannot be used to eliminate alternatives that should otherwise be considered under the Clean Water Act 404(b)(1) Guidelines. We continue to believe that in order for the EIS to satisfy our respective agencies' responsibilities, it should rigorously explore and objectively evaluate the Red corridor. For the reasons discussed above, if the NCTA elects to complete its NEPA analysis and release a DEIS without including the Orange to Red to Green Alternative as an alternative for detailed study, and the NCTA intends to pursue Department of the Army authorization for this project, we may find it necessary to terminate our cooperating agency status with the FHWA and supplement the FHWA EIS with our own document.

Should you have any questions, please call Mr. Alsmeyer at (919) 554-4884, extension 23.

Sincerely,



S. Kenneth Jolly
Chief, Regulatory Division
Wilmington District

Copies Furnished:

Mr. Mitch Vakerics
Office of Congresswoman Renee Ellmers
1533 Longworth HOB
Washington, DC 20515

Mr. Clarence Coleman
Federal Highway Administration
310 New Bern Ave., Room 410
Raleigh, North Carolina 27601-1442

Mr. Brian Wrenn
Division of Water Quality
North Carolina Department of
Environment and Natural Resources
1650 Mail Service Center
Raleigh, NC 27699-1650

Mr. Chris Lukasina
Capital Area Metropolitan Planning Organization (CAMPO)
127 West Hargett Street, Ste. 800
Raleigh NC 27601

Mr. Heinz Mueller
Chief, NEPA Program Office
Office of Policy and Management
US Environmental Protection Agency
61 Forsythe St., SW
Atlanta, GA 30303

Mr. Gary Jordan
US Fish and Wildlife Service
PO Box 33726
Raleigh, NC 27636

Mr. Travis Wilson
NC Wildlife Resources Commission
1142 I-85 Service Road
Creedmoor, NC 27522

Mr. Peter Sandbeck
NC State Historic Preservation Office
4619 Mail Service Center
Raleigh, NC 27699-4619



Town of Garner

900 7th Avenue · Garner, North Carolina 27529
Phone (919) 772-4688 · Fax (919) 662-8874 · www.GarnerNC.gov

March 7, 2012

Mr. Steve DeWitt, P.E., Chief Engineer
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699-1578

Re: Triangle Expressway Southeast Extension Alternatives Development & Analysis Report

Dear Mr. DeWitt:

This letter is to advise you of the Town of Garner's position regarding the Triangle Expressway Southeast Extension Alternatives Development & Analysis Report dated January 13, 2012.

The Town of Garner would like to reiterate the statements and concerns noted in: a) our letter dated October 20, 2010 addressing our initial concerns with the devastating human impacts of the red route; b) our Resolution (2010) 2072 dated October 4, 2010 supporting use of the original protected corridor design illustrated as orange on NCTA maps; and c) our letter dated January 9, 2012 detailing the significant negative impacts on numerous public parks in the Town of Garner.

As you know, the Garner community cannot withstand the negative consequences of construction and/or study of the red route. It is destructive to our community and the prospect of study brought our growth and economic development progress to a standstill during 2010.

While a devastating transportation option such as the red route is being actively and publicly studied, no home buyer is interested in buying a house (new or resale) in the road's path and no industry, bank, or developer is willing to invest in any project in or near the route's study area.

Since the NC General Assembly passed legislation on March 18, 2011 disallowing the NCTA to study any route north of the orange corridor, the following positive economic impacts have occurred in the Town of Garner:

Residential

- Sales resumed at the Village of Aversboro, one of the hottest residential projects in Wake County.
- This community has seen 15 house closings since March 18, 2011. Value of these residential sales totals \$4,424,000.
- 7 additional home sales are currently pending (waiting to close or under construction).
- An additional 17 lots have been sold to builders by the developer for the next round of construction. This totals \$1,190,000 in value.

Commercial/Industrial

- Strategic Behavioral Health, LLC of Memphis, Tennessee announced they would build a brand new facility in Garner.
- Their investment will total approximately \$8 million. This project is currently under construction with a late 2012 opening date. The venture capital fund backing this project refused to allow the project to continue until the red route was removed.
- This new facility will employ 200 employees with an average wage of \$50,000.
- Penske Truck Leasing Service Center had broken ground just prior to announcement of the red route as a study alternative going through their brand new site. Their corporate management in Pennsylvania was devastated to learn of the possible destruction of their brand new investment in NC.
- Their facility investment totals \$3 million and 12 jobs.

Totals

The discontinuation of the study of the red route has resulted in **\$16,614,000** in **new investment** in Garner and adds tremendously to our tax base. **212 permanent jobs** and numerous short-term construction jobs are created for the Research Triangle region.

All persons that have engaged in conversation about the red route agree that the red route is horribly detrimental to the Town of Garner and is not worthwhile for construction. Therefore, it seems to be extremely foolish to continue studying it. It is a waste of public dollars and creates irreparable harm to the entire Garner community; current residents, active residential developers, and industrial tenants (current and future) are severely harmed.

It is notable that CAMPO, the Capital Area Metropolitan Planning Organization, representing 18 area municipalities and 5 counties, completely agrees with and supports the Town's position and beliefs on this matter.

The Town is pleased with the Triangle Expressway Southeast Extension Alternatives Development & Analysis Report and commends the NCTA for taking the Garner community concerns to heart in its recent work.

The notable remarks about the **red route that were pleasing to the Town include the following:**

From page 5-22: "Despite these advantages (mentioned in preceding paragraph) of the red corridor alternative, it is the opinion of NCTA that the numerous disadvantages of the Red Corridor Alternative are so extensive and significant that they outweigh this advantage."

6.5 pages of text follow outlining why the red corridor alternative is a bad idea. The headings are as follows: a) does not serve traffic needs; b) disproportionate community impacts; c) impacts to Swift Creek watershed area; d) impacts to Section 4-F applicable resources (town parks); e) negative impacts to local economic base; and f) opposed by local governments and local community.

The report also discusses the 6 alternate routes proposed by Town of Garner and the one route suggested by Joe Milazzo of Regional Transportation Alliance (RTA) that follows existing I-40 & US 64.

From the Town's perspective, the bottom line is on page 5-38. The NCTA report identifies five alternatives for additional detailed study in the next phase – Draft Environmental Impact Statement (EIS). These are the options that NCTA plans to move forward with:

1. Orange to Green
2. Orange to Green to Mint Green to Green
3. Orange to Brown to Tan to Green
4. Orange to Brown to Green
5. Orange to Green to Teal to Brown to Green

The Town is extremely pleased that none of these alternatives say red or pink.

We are hopeful that our colleagues at the various state and federal resource agencies will see this matter the same way the citizens of Garner do. The human impacts are too severe to continue with any further study of the red route.

The Town understands that the federal regulatory officials continue to be concerned about wetland impacts. Of course the red route has less wetland impacts – it traverses and obliterates 13 residential neighborhoods, 4 Town parks, and our primary industrial park – Greenfield South. By definition, residential communities, active parks, and industrial areas are located on high ground outside of low-lying, swampy areas. A route through Downtown Raleigh would produce lower wetland impacts, but that is also an unwise option. It is doubtful that the original intent of NEPA was for all new highway routes to go through densely developed suburban or urban areas. If the amount of wetlands is the driving force for route selection decisions, then very few new routes will be built in less populated areas.

For the good of the Research Triangle Region, a vital and important economic engine for the State of North Carolina and the Southeastern United States, Highway 540, Raleigh's Southern Loop, needs to be constructed. Our region does not need to replicate the gridlock, traffic congestion, and associated problems of our neighbors in Atlanta and Washington, DC. Continuing to delay progress on Highway 540's designated route (orange protected corridor) from 15+ years ago is unwise and detrimental.

Thank you for your time and effort involved in preparing the recent Triangle Expressway Southeast Extension Alternatives Development & Analysis Report. Please contact me at 919-773-4407 if you have any questions or need additional information.

Sincerely,



Hardin Watkins
Town Manager



Board of Commissioners

P.O. Box 550 • Raleigh, NC 27602

TEL 919 856 6160
FAX 919 856 5699

PAUL Y. COBLE, CHAIRMAN
PHIL MATTHEWS, VICE-CHAIR
JOE BRYAN
TONY GURLEY
ERVIN PORTMAN
BETTY LOU WARD
JAMES WEST

August 29, 2012

David W. Joyner, Executive Director
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, North Carolina 27699-1578

RE: Triangle Expressway Southeast Extension

Dear Mr. Joyner,

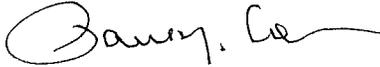
The Wake County Board of Commissioners received an update on the planning activities for the proposed Triangle Expressway Southeast Extension at their Board meeting on Monday August 20, 2012. This letter is to reaffirm the County's position on this project.

1. The County supports the original "orange" corridor in the area south of Garner as stated in the Board's resolution adopted on October 18, 2010.
2. The County supports the "green" corridor on the eastern side of the Triangle Expressway Southeast Extension as indicated in a letter from the Board of Commissioners to the Turnpike Authority on December 8, 2010.
3. The County requests that the selection of the final corridor be expedited as much as possible. As long as alternatives remain under consideration, residents, businesses, and property owners must deal with the uncertainty that can create a financial burden and psychological stress.
4. The County requests that all public input from past planning activities on this project, including comments, letters, petitions, emails or other, be entered into the record as the Turnpike Authority embarks on additional public workshops later this year.

If you need additional information or have any questions about the County's position, please feel free to contact me.

NCTA
August 29, 2012
Page 2

Sincerely,



Paul Y. Coble, Chairman
Wake County Board of Commissioners

cc: Richard Burr, United States Senator, North Carolina
Kay Hagan, United States Senator, North Carolina
Eugene A. Conti Jr., Chairman, North Carolina Turnpike Authority
Perry R. Safran, Vice-Chairman, North Carolina Turnpike Authority
Robert D. Teer Jr., North Carolina Turnpike Authority
Robert C. Clay, North Carolina Turnpike Authority
John Collett, North Carolina Turnpike Authority
James H. Ferebee, Jr., North Carolina Turnpike Authority
✓ Anthony Fox, North Carolina Turnpike Authority
Thomas A. Stith III, North Carolina Turnpike Authority
Alan F. Swanstrom, North Carolina Turnpike Authority
David Cooke, County Manager, Wake County



U.S. Department
of Transportation

**Federal Highway
Administration**

FEDERAL HIGHWAY ADMINISTRATION

North Carolina Division
310 New Bern Avenue, Suite 410
Raleigh, NC 27601
HDA-NC



DEPARTMENT OF THE ARMY

Wilmington District, Corps of Engineers
69 Darlington Avenue
Wilmington, NC 28403-1343
Regulatory Division/1145b

December 7, 2012

Mr. Terry R. Gibson, P.E.
Chief Engineer
North Carolina Department of Transportation (NCDOT)
1536 Mail Service Center
Raleigh, NC 27699-1536

SUBJECT: Action ID 2009-02240; STIP Nos. R-2721, R-2828, and R-2829

Dear Mr. Gibson:

This letter is in regards to the North Carolina Session Law 2011-7 (N.C.S.L. 2011-7) and its impact on the Triangle Expressway Southeast Extension project proposed by the North Carolina Turnpike Authority (NCTA). The law, which was passed on March 18, 2011, states that the Triangle Expressway Southeast Extension project shall not be located north of an existing protected corridor established by the North Carolina Department of Transportation (NCDOT) in 1995, except in the area of Interstate 40 East. Consequently, the law restricts the location of alternative corridors prior to the engineering and environmental analysis required by the National Environmental Policy Act (NEPA) and other Federal laws. Based on this restriction, Federal Highway Administration (FHWA) found it imperative that the process to advance the project be fully supported and concurred with by all Federal agencies. In an effort to do this, a series of meetings and discussions were held with multiple stakeholders to resolve issues and advance the project. Through these meetings, the following concerns have been identified by the Army Corps of Engineers (Corps) and FHWA regarding the approach and its ability to successfully advance the project under the requirements of NEPA and Section 404 (b)(1) Guidelines (40 CFR Part 230).

The NCDOT and NCTA, in consultation with Dawson and Associates, developed a Project Advancement Plan which included a proposal to evaluate refinements to the project purpose to reflect input from public involvement [possibly including local plan support and financial viability as elements of the NEPA project purpose] and an evaluation of additional potential alternatives. Both the Corps and FHWA have concerns that, for this project, including local plan support as a primary NEPA project purpose may inappropriately limit the study of a full range of Detailed Study Alternatives. The Corps believes that it would not support their requirement

under the 404 (b)(1) Guidelines (40 CFR Part 230) to analyze and objectively compare alternatives for this project that requires a Clean Water Act permit.

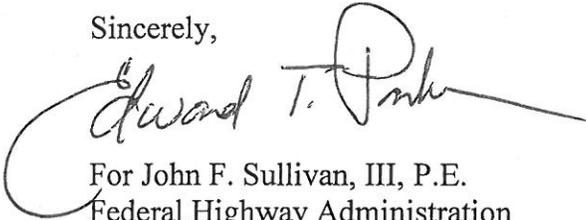
In the evaluation of alternatives, the Corps continues to believe that in regards to streams and wetlands, the Orange to Red to Green Alternative appears to be a less environmentally damaging alternative and should be included as an alternative to be analyzed in the Draft Environmental Impact Statement (DEIS). Please note that, at this time, the Corps is not able to make a decision on the practicability of any of the alternatives. That decision will not be made until after the Corps has issued a public notice (following publication of the DEIS) seeking comments from the public, Federal, State and local agencies, including any consolidated state viewpoint or written position of the Governor, on the Detailed Study Alternatives and the factors that the Corps considers in our public interest decision. The decision will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest, and will reflect the national concern for both protection and utilization of important resources. Factors, including the cumulative effects thereof, which may be relevant to the proposal that will be considered include, but are not necessarily limited to community cohesion, relocations, impacts to existing and proposed business centers, recreation, including parks, historic properties (Section 4(f) issues), water supply and conservation, ecological conservation, economics, aesthetics, general environmental concerns, wetlands, fish and wildlife values, flood hazards, flood plain values (in accordance with Executive Order 11988), land use, navigation, shoreline erosion and accretion, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. The Corps evaluation process for this project is consistent with the review for all other transportation projects in North Carolina, and with Section 404 of the Clean Water Act, including the 404 (b)(1) Guidelines (40 CFR Part 230).

Therefore, in consideration of the concerns above, the Corps and the FHWA believe the project can no longer move forward with the Project Advancement Plan and satisfy all Federal environmental requirements in a concurrent manner. As a result, the FHWA will withdraw the Notice of Intent (NOI), meaning we will no longer continue to develop the environmental impact statement and federally fund the project. Our withdrawal does not prevent the project from being reinitiated in the future. NCDOT or other applicant/sponsors may restart the project at any time by requesting a new NOI with sufficient support that all constraints have been relieved to allow compliance with NEPA.

Should you have any questions, please call George Hoops of the FHWA at (919) 747-7001 or Eric Alsmeyer of the Corps at (919) 554-4884, extension 23.

Sincerely,

Sincerely,



For John F. Sullivan, III, P.E.
Federal Highway Administration
Division Administrator



Steven A. Baker
Colonel, U. S. Army
District Commander

Copies Furnished:

Mr. David Joyner
Executive Director
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699-1578

Mr. Eric Midkiff
North Carolina Department of Transportation
Project Development and Environmental Analysis
1548 Mail Service Center
Raleigh, NC 27699-1548

Mr. Mitch Vakerics
Office of Congresswoman Renee Ellmers
1533 Longworth HOB
Washington, DC 20515

Mr. Rob Ridings
Division of Water Quality
Transportation Permitting Unit
North Carolina Department of
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1650 Mail Service Center
Raleigh, NC 27699-1650

Mr. Chris Lukasina
Capital Area Metropolitan Planning
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127 West Hargett Street, Ste. 800
Raleigh, NC 27601

Mr. Heinz Mueller
Chief, NEPA Program Office
Office of Policy and Management
US Environmental Protection Agency
61 Forsythe St., SW
Atlanta, GA 30303

Mr. Gary Jordan
US Fish and Wildlife Service
PO Box 33726
Raleigh, NC 27636

Mr. Travis W. Wilson
Eastern Region Highway Project Coordinator
Habitat Conservation Program
NC Wildlife Resources Commission
1718 Hwy 56 West
Creedmoor, NC 27522

Mr. Peter Sandbeck
NC State Historic Preservation Office
4619 Mail Service Center
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North Carolina General Assembly
House of Representatives

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SPEAKER PRO TEMPORE
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(919) 754-3175 FAX
EMAIL: paul.stam@ncleg.net
DISTRICT: SOUTHERN WAKE COUNTY (37)

COMMITTEES:

APPROPRIATIONS, SUB. EDUCATION
EDUCATION
ELECTION LAW
FINANCE
JUDICIARY, SUB. B
REGULATORY REFORM
RULES

October 23, 2013

Secretary Anthony Tata
NC Department of Transportation
1501 Mail Service Center
Raleigh, NC 27699-1501

Re: Southeast Extension/540/Orange Route/Purple Route

Dear Mr. Secretary:

This is to provide comments for the official record of the Southeast Extension project for the completion of the 540 Outer Loop. I understand there are seventeen alternative route alignments being considered to determine the appropriate corridor for the 540 segment between Holly Springs and Knightdale.

A number of these alternative routes continue to cause significant stress to residents and business owners who may be impacted. I realize that the study of some alternatives is required by federal law and that commitments to fund the completion of the Outer Loop will be withdrawn without a thorough environmental assessment of identified potential routes.

Based on my study of all of the potential routes it is my considered opinion that the only feasible corridor would be the "orange corridor". This route has been protected from development since the mid-1990s and would result in the fewest number of dislocations of residents and businesses with significantly lower cost.

In order for this process to have the least negative impact on the affected property owners, it is my strong request that the study of the purple route be completed immediately. Property owners are in limbo until a final corridor is selected and they are entitled to relief from this uncertainty as quickly as possible. I would appreciate your full attention to the need for this study to be completed rapidly.

Thank you for your attention to my concerns. Please include this in your public comments.

Sincerely,


Rep. Paul Stam





North Carolina General Assembly
House of Representatives
State Legislative Building
Raleigh 27601-1096

November 12, 2013

Mr. Eric Midkiff, P.E.
NC Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

Re: Complete 540 Project

Mr. Midkiff,

Please accept this letter as my official response in regards to the comment form due November 15, 2013 in regards to the proposed routes for the complete 540 project. Currently serving my third term in a district that includes parts of Garner and eastern Wake County, it is not an exaggeration to say that this project has been the single biggest source of constituent contact I have had in five years. I have literally received hundreds, if not a thousand emails and phone contacts in regard to this proposal. To the best of my recollection, not one person has been in favor of the Red Route proposal.

I have also been able to attend public meetings, both back in 2009, and again in October of this year. I thought the staff of DOT did an excellent job with the presentations and answering questions. At those meetings, I attempted to speak with citizens to find out which proposals they supported or opposed. It is clear to me that the full orange route (dropping purple, blue, and red) is the way most of the people that have contacted me have felt. On the eastern portion, I have gotten little feedback on the green vs. brown vs. tan alternatives. I also live near this area and want to be sure not to base my comments based only on my opinion. It appears to me that DOT should weigh the impact of the routes on the Sheriff's training center and the wastewater treatment much higher than the route that would impact the development planned by the County and City. After all, this route was on the map before the City and County purchased the site.

Finally, it is my understanding that the Red Route was originally proposed due to the potential environmental impact of the Orange Route. As I am sure you are aware, a similar environmental issue was present during the design and construction of the Clayton bypass. Since completion, I believe the environmental mitigation of that project has been deemed successful. It is my sincere hope, that similar mitigations will allow construction of the original Orange Route, so not to greatly impact the residents of this district. I hope the department will expend whatever resources are necessary in an expedited manner, so that we can get this dreaded Red Route removed from consideration once and for all.

With kindest personal regards, I am

Very truly yours,

A handwritten signature in black ink, appearing to read "Darren G. Jackson".

Representative Darren G. Jackson,
North Carolina House of Representatives, 39th District
Wake County Legislative Delegation

DGJ: asm



53091



RECEIVED

NOV 15 2013

N.C. DEPT. OF TRANSPORTATION
OFFICE OF THE SECRETARY

North Carolina General Assembly
House of Representatives

REPRESENTATIVE NELSON DOLLAR
36TH DISTRICT

OFFICE ADDRESS: SUITE 307B LEGISLATIVE OFFICE BUILDING
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- FINANCE, VICE-CHAIR
- HEALTH AND HUMAN SERVICES, VICE-CHAIR
- COMMERCE AND JOB DEVELOPMENT
- INSURANCE
- TRANSPORTATION
- PUBLIC UTILITIES
- REGULATORY REFORM
- UNC BOARD OF GOVERNORS NOMINATING COMMITTEE

November 12, 2013

Secretary Anthony Tata
NC Department of Transportation
1501 Mail Service Center
Raleigh, NC 27699-1501

Dear Secretary Tata:

As you know, NC 540 is the largest transportation project ever attempted by the State of North Carolina, with a price tag in excess of \$2 billion. Approximately half of the project has been completed as a toll road between the Research Triangle Park and Holly Springs; however, the other half of the project remains to be built linking I-40 east of Garner to the current terminus at NC 55. We support the "Orange route" as the only suitable corridor for completion of this project.

The corridor for the "southern expressway" has been protected for over twenty years with land owners and municipalities planning and building in coordination with the designated "Orange route." As a result, numerous subdivisions, schools, shopping areas, and parks have been built with the protected 540 corridor in mind. Our constituents in Southern Wake County are practically unanimous in their strong opposition to the construction of any route other than the Orange route.

Alternative routes including the Red, Blue, Purple and Lilac would each dramatically impact the lives of hundreds of families and homeowners. Many local businesses would be harmed or placed out of business, jobs would be lost, as well as, the loss of prime business development property. Some routes would also adversely affect parks and properties of historic significance. The tax bases of the Towns of Garner, Holly Spring and Fuquay Varina would be negatively impacted. In short, the human impacts would be considerable, long lasting, and for far too many of our residents, simply devastating.



Secretary Anthony Tata
Page 2

We believe any potential environmental concerns along the orange route can be mitigated as they have on similar projects across the State.

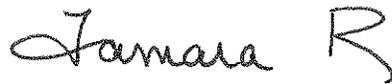
We appreciate the many events NCDOT has hosted to take in public input; having attended several events, we know your staff has heard loud and clear the voice of the people on this issue. It is our hope that this process can be concluded as rapidly as possible, given the significant impacts being experienced by home and business owners in the study area.

We thank you in advance for including these comments in the public record.

Sincerely,



Rep. Nelson Dollar



Sen. Tamara Barringer





November 12, 2013

THE TOWN OF
**Holly
Springs**

Eric Midkiff, PE
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699-1578

Re: Complete I540 Southeast Extension
Town of Holly Springs Comments

Dear Eric,

Thank you for meeting with us several times and for providing information that we have requested on this project. We have attached a spreadsheet of the Town of Holly Springs' comments for the alternative alignments that are presently out for public comment. These comments support the position that we have previously expressed in our meetings and conversations with you, and in our Town Council's recent resolution as well – that Holly Springs supports the orange (originally protected) corridor.

Regards,

Stephanie L. Sudano, PE
Director of Engineering

SLS/dra

cc: Mayor Sears
Chuck Simmons, Town Manager
Gina Clapp, AICP, Director of Planning & Zoning
Correspondence 13660

P.O. Box 8
128 S. Main Street
Holly Springs, N.C. 27540
www.hollyspringsnc.us

(919) 552-6221



TOWN OF

Holly Springs

Resolution No.: 13-42

Date Adopted: Oct. 1, 2013

RESOLUTION STATING THE TOWN OF HOLLY SPRINGS TOWN COUNCIL'S SUPPORT REGARDING THE ALIGNMENT OF THE SOUTH EAST EXTENSION OF I-540

WHEREAS, the Holly Springs Town Council is expressing its fervent support for the construction of the I-540 Triangle Expressway Southeast Extension; and

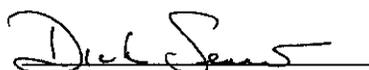
WHEREAS, the proposed I-540 Triangle Expressway Southeast Extension has been a fundamental transportation facility underpinning for more than 20 years of local land use and transportation decisions of the Town of Holly Springs and other local governments of southwestern Wake County; and

WHEREAS, the Town of Holly Springs historically has utilized the protected I-540 corridor proposed in earlier designs to plan for both existing and future development in Town; and

NOW THEREFORE BE IT RESOLVED that the Town Council of the Town of Holly Springs hereby expresses its support of the original protected corridor design as illustrated in orange on N.C. Transit Authority maps for the construction of the I-540 Triangle Expressway Southeast Extension; and

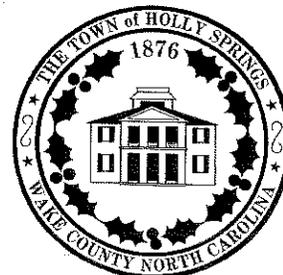
Adopted this, the 1st day of October, 2013.

ATTEST:


Dick Sears, Mayor



Joni Powell, MMC, NCCMC Town Clerk
 Linda R. Harper, MMC, NCCMC Deputy Town Clerk



Office of the Mayor

128 S. Main Street • P.O. Box 8 • Holly Springs, NC 27540 • (919) 557-3901 • (919) 552-0654 fax
dick.sears@hollyspringsnc.us • www.hollyspringsnc.us

	Comment
ORANGE CORRIDOR	
1	Orange corridor is a much more direct routh for commuters travelling across Wake County from west to east or visa versa.
2.	Corridor has been preserved by the Town since 1997 NCDOT request for Corridor Protection....the corridor protection guidelines have been carefully and stringently followed by the Town to make expense and impact of acquisition and construction less expensive.
3.	Some of the ROW for the facility has already been acquired, and we believe this is of great benefit.
4.	This corridor is consistent with all of the Town's long range plans developed over the past 15 years (since corridor protection began), including: Comprehensive Plan Vision 2010, Long Range Water Master Plan, Long Range Sewer Master Plan, Long Range Reclaimed Master Plan, Holly Springs Pedestrian Transportation Plan, Long Range Greenway Plan, Long Range Bicycle Plan
5.	Town wants to insure that Kildaire Farm Road, which is a major access road, ties into interchange or nearby to preserve full access northward
6	Town has carefully planned and minimized the needed greenway/pedestrian/bike and vehicular connections through this corridor by carefully guiding development of adjacent lands. All of the infrastructure (transportation and other) that has been planned and installed to support these minimal number of crossings would no longer function as designed and infill of the preserved corridor would likely be awkward to develop. This careful planning will reduce construction costs and environmental impacts along this corridor.
7	This corridor and the proposed interchange at Kildaire Farm Road is consistent with the Town's long range planning efforts and locations for activity nodes, development densities, roadway design, and infrastructure to meet the demands of a highway interchange and location. Because Holly Springs is a relatively small town with limited growth potential due to the limiting feature of Progress Energy Lands to the west, the impact of the other corridors on the Town as a whole is proportionally very great. The impact of the orange corridor has been well planned to complement the Town as a whole.
8	Development of the roadway in this corridor complements the past planning and investment (and proposed too) by the Town in this area of water , sewer, and transportation infrastructures
9	The Town believes this corridor alignment has the least environmental impact, based upon our knowledge of the Town; the crossing of Middle Creek is essentially perpendicular which is desired as this is a major stream with a very large drainage basin.
10	This corridor would not impact or require the removal and/or displacement of many homes (maybe none) in Holly Springs
11	Town plans have long centered around this corridor, and the Town has directed development in a manner to make the construction of this through Town minimally invasive to our community. This has been achieved by planning transportation connections to complement I540 at this location and to link property on both sides with connections.
12	This corridor essential runs between Apex and Holly Springs - almost along the municipal boundaries - we see this as a plus as it does not divide a community like at least one of the other proposed corridors.
13	The long range transportation plans - developed carefully and collaboratively by the Town, the county, the MPO, NCDOT, and other municipalities over the past 15 years - have guided development and row dedication of roads to support the orange corridor.
14	This corridor is under corridor protection and development approvals and building permit requests continue to be handled under the corridor protection act, increasing the desirability of this corridor as it is protected
15	This corridor has greater ridership projections

	Comment
ORANGE CORRIDOR	
16	This corridor does not bisect any parks
17	The orange corridor is more direct of a route for people traversing through Wake County from west to east.
18	The orange corridor provides for a much better and more direct interchange further east at I40.
18	Construction cost for this corridor is less than the purple corridor, as it is shorter.

	Comment
PURPLE CORRIDOR	
1	Will impact/eliminate Town parkland south of Sunset Oaks Subdivision, plus planned walking trails and other passive recreation along Middle Creek which is a major water feature and environmental treasure in south Wake County. The park will be eligible for partf funding/classification. The park and trails are covered in numerous Town master plans over the past 10 to 15 years.
2	The long range transportation plans for both the municipality and the county have guided development and row dedication of roads and at intersections to support the current orange alignment - NOT needed intersection road improvements for the orange route.
3	Conflicts with ALL of the Town's long range plans developed over the past 15 years (since corridor protection began), including: Comprehensive Plan Vision 2010, Long Range Water Master Plan, Long Range Sewer Master Plan, Long Range Reclaimed Master Plan, Holly Springs Pedestrian Transportation Plan, Long Range Greenway Plan, Long Range Bicycle Plan, Long Range Park Plans.
4	This corridor would require relocation/elimination of many homes and the possible division of many neighborhoods; in Holly Springs' jurisdiction only is Sunset Oaks ; In addition, there are many other homes not in subdivisions that would be impacted. This is a very negative consequence of this alignment especially when the orange corridor has been protected from development and impacts less homes.
5	The long range transportation plans and land use plans - developed carefully and collaboratively by the Town, the county, the MPO, NCDOT, and other municipalities over the past 15 years - have guided development that would be supported by orange corridor - not the purple corridor
6	This corridor, while on the books, both delays development of properties (this is problematic especially in the recent and continuing unsteady economic climate) AND delays the ability of individuals who happen to own homes in the corridor and need to sell their homes; we would like to encourage quick and expeditious elimination of alternatives in order to alleviate these two scenarios.
7	This alignment would severely impact both vehicular (including bus) and pedestrian transportation to 3 public schools that some Holly Springs children attend in south Cary. The main transportation route to these schools is down Optimist Farm Road which is being bisected by this route.
6	Town has worked hard to created connectivity between neighborhoods - vehicular, bicycle, and pedestrian - through planning and infrastructure construction; this corridor negatively impacts one of the significant neighborhoods that has been planned and developed carefully to create the neighborhood atmosphere that is the Town's goal.
9	Parallels Middle Creek closely, and crosses Middle Creek a total of 3 times. This is a very important protected stream/water feature with a large watershed; paralleling streams has very negative environmental consequences and may be impossible to get a permit.
10	This corridor is not under corridor protection and development approvals and building permits continue to be processed, increasing the undesirability of this corridor as well as the resulting impact of construction in this corridor
11	Plan as shown does not provide transportation connectivity along Optimist Farm Road which is a major transportation route in an area of SW Wake county that is limited in its primary route connectivity.
12	Divides the town and makes provision of trash, police, fire, medical, and other services more difficult and expensive.

	Comment
PURPLE CORRIDOR	
14	Purple Corridor has less ridership projected.
15	This alignment is brand new and there has been no preservation or buffer protection for the neighborhoods that have been developed in the area of the corridor. Neighborhoods nearby the orange corridor have been required to preserve buffers outside the corridor.

53094



**Planning, Development
& Inspections**

TEL (PLANNING) 919 856 6310
TEL (INSPECTIONS) 919 856 6222

A Division of Community Services
P.O. Box 550 • Raleigh, NC 27602
www.wakegov.com

November 12, 2013

Mr. Tony Tata, Secretary
NC Department of Transportation
1501 Mail Service Center
Raleigh, NC 27699-1501

RECEIVED

NOV 18 2013

N.C. DEPT. OF TRANSPORTATION
OFFICE OF THE SECRETARY

RE: I-540 Triangle Expressway Southeast Extension

Dear Secretary Tata,

On behalf of the Wake County Planning, Development and Inspections Division, I want to take this opportunity to express our position on the corridors being considered for the I-540 Triangle Expressway Southeast Extension. Our position mirrors the action taken by the Wake County Board of Commissioners in their October 21, 2013 Resolution whereby support is expressed for the protected "orange" corridor west of I-40 and the "green" corridor east of I-40.

For many years now, Wake County Planning, in collaboration with our municipal partners, has established short and long range urban service areas around the protected 'orange' corridor. These urban service areas are captured in the Wake County Land Use Plan that guides growth as it relates to residential and non-residential development. To be specific, the protected "orange" corridor has played a key role in identifying areas for non-residential development in what are called Activity Centers. These Activity Centers have been designated in key locations along the protected 'orange' corridor and in some instances are already developing according to plan.

The "green" corridor east of I-40, although not protected but on planning maps for some time now, has also been used by the County to make key planning decisions for both existing and future development.

Please take this information into consideration when evaluating the corridors for the new expressway. Should you have any questions, please don't hesitate to contact me. I can be reached at 919-856-6678 or tmaloney@wakegov.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Timothy W. Maloney".

Timothy W. Maloney, RLA, ASLA
Director

cc: Richard W. Hancock, NCDOT Project Development & Environmental Analysis



53010

**Parks, Recreation &
Open Space**

TEL 919 664 7967
FAX 919 856 6181

Wake County Office Building 10th Floor
337 S. Salisbury Street
PO Box 550, Suite 1000
Raleigh, NC 27602
<http://www.wakegov.com/county/parks/default.htm>

November 12, 2013

RECEIVED

NOV 19 2013

N.C. DEPT. OF TRANSPORTATION
OFFICE OF THE SECRETARY

Mr. Tony Tata
North Carolina Department of Transportation
1501 Mail Service Center
Raleigh, North Carolina 27699-1501

Dear Secretary Tata;

On behalf of the Wake County Division of Parks, Recreation and Open Space, I'd like to take this opportunity to provide input on the proposed routes for the Triangle Expressway's Southeast Extension, specifically to support the protected "orange" corridor west of I-40 and the "green" corridor east of I-40.

Since 2000, the citizens of Wake County have approved \$91 million on bond referenda that has gone to purchase property that is devoted to the 1. preservation of natural resources and habitat; 2. managed production of resources (forest and farm land); 3. outdoor recreation; 4. preservation of historic and cultural property; 5. protection of scenic landscapes; and 6. protection of public health, safety and welfare, including the protection of water quality.

In 2003, the Wake County Board of Commissioners formally identified priority stream corridors to protect valuable water resources. In 2008, the Board of Commissioners revisited this issue and at the time reaffirmed the County's intent to protect 11 priority stream corridors. More recently, on October 21, 2013, the Board of Commissioners unanimously passed a resolution endorsing the protected corridor (Orange route) and the planned corridor (Green route) as the preferred choice for the development and construction of the Triangle Expressway Southeast Extension.

Of Wake County's 11 priority stream corridors, two corridors would be negatively impacted by the Purple, Blue and Red alternative routes.

- Middle Creek would be impacted twice if a route is selected using a combination of the Purple and Blue alternatives.
- Middle Creek would be impacted once if a route is selected using only the Blue alternative.

- The priority stream corridor section of Swift Creek (between Lake Wheeler and Lake Benson) would be impacted by the Red alternative.
- The currently protected corridor (Orange route) does not cross Swift Creek in an area identified by Wake County as a priority stream corridor, nor does the Orange route impact Middle Creek.

An additional significant concern that Wake County would like to address is the impact the Blue alternative will have on the County's Southeast Wake County Park. The County has been working to develop this park for the past decade and it is one of three planned parks (in combination with the eight existing parks) that the County is creating to meet the long term needs of the community.

Within the Southeast County Park lie the Middle Creek Aquatic Habitat and the scenic bluffs along Middle Creek that rise 90 feet above the creek, a Natural Heritage site of local significance. Wake County has already invested over \$2 million to acquire 258 acres of land to support this park plan. Additionally, Wake County has also placed Clean Water Management Trust Fund easements over portions of this land. The proposed Blue alternative would impact the proposed park site and possibly result in Wake County abandoning its plans to develop this park.

It is our sincere desire that the Triangle Expressway Southeast Extension remain in the protected corridor (Orange route).

If you would like to receive additional information or if you have any questions, please feel free to contact me via telephone at (919) 856-6677 or via email at csnow@wakegov.com.

Many thanks for your consideration.

Sincerely,



Christopher Snow
Director,
Wake County Parks, Recreation, and Open Space

cc: Richard W. Hancock, NCDOT Project Development & Environmental Analysis

March 20, 2018

Jim Trogdon
Secretary
NC Department of Transportation

Beau Memory
Executive Director
NC Turnpike Authority

Chris Lukasina
Executive Director
Capital Area MPO

Dear Jim, Beau, and Chris,

As you know, the regional business community's top transportation priority is accelerating the extension of the 540 / Triangle Expressway from Holly Springs to I-40 in southeastern Wake County.

The project will provide free-flow mobility across southern Wake County, and create a resilient, multimodal transportation network for commuting, freight, transit, commerce and more:

Accelerating 540 provides a balanced approach for community development

- The proposed 540 corridor has maintained broad community support since it was identified as a future freeway connection more than two decades ago.
- The preferred 540 route appropriately mitigates impacts to the human and natural environment, reduces costs, and aligns with adopted local land use plans.
- The creation of the new 540 freeway will create an effective local and regional pathway that will reduce the need to expand local roadways.

Accelerating 540 enhances regional connectivity, mobility, and resiliency

- The extension of 540 will complete a primary backbone of our regional freeway system that includes interconnectivity with five existing freeways in Wake and Johnston counties.
- The new roadway will provide a 70 mph, stoplight-free, rapid mobility option during both peak commuting times and throughout the day to relieve congestion.
- The turnpike will maintain a reliable, free-flow travel choice that saves time for users and contributes to system resiliency for the entire regional highway network

Accelerating 540 creates a faster connection – for everyone

- Building 540 as a turnpike provides a dedicated, user fee-based funding source that accelerates construction by a decade or more.
- 540 will create time savings for all travelers across the network, even those who do not directly utilize the freeway, as turnpike users will free-up space on existing roadways.
- The new freeway will enhance public transit by providing a new facility option for buses that will improve travel time and reliability—like the Triangle Expressway does today.

We are pleased to support your collective efforts to accelerate this vital project to construction.

Sincerely,



Joe Milazzo II, PE
RTA Executive Director

Cc Bruce Sargent, IBM, RTA chair
Pete Marino, RTA freeways chair
Maeve Gardner, RTA policy chair

Wake County Mayors Association

March 20, 2018



Chris Lukasina
CAMPO Executive Director
421 Fayetteville Street, Suite 203
Raleigh, NC 27601



Mr. Lukasina:



As it relates to the issue of "Complete 540", the Mayors of Wake County all support the implementation and completion of this most important road project as soon as possible.



Not only is it an economic engine for southern Wake municipalities such as Fuquay-Varina, Garner, Holly Springs, Apex, and Cary – all of which have appropriately planned for the construction of 540 for decades – but also for many towns nearby including Knightdale, Wendell, Zebulon, and Clayton. We also feel it will have an impact on reducing traffic on Highway 1, I-40, 55 bypass, Highway 401, Highway 42, Ten Ten Road, and other internal roads in our area.



Existing I-540 in northern and western Wake has become an essential connector for Knightdale, Rolesville, Wake Forest, Raleigh, Morrisville, Cary, and Apex. Completing 540 will help our southern and eastern Wake communities – as well as nearby Johnston County – continue to prosper by providing a direct freeway connection to I-40 as well as to the Clayton and Knightdale bypasses.



Sincerely,



James A. Roberson, President
Mayor of Knightdale



APPENDIX K RESPONSE TO COMMENTS ON THE DRAFT EIS

ORGANIZATION OF APPENDIX K

- K1. Agency Comment Letters**
- K2. Local Government Comment Letters**
- K3. Interest Group Letters**
- K4. Public Comments Made During the Draft EIS Review Period / Public Hearings**

APPENDIX K1 AGENCY COMMENTS AND RESPONSES

Following publication of the Draft EIS, NCDOT received formal review comments from several federal and state agencies. Comments addressed a number of topics, including potential impacts to protected species, water quality impacts, and impacts to wetlands and streams. Copies of each of these comments are on the following pages of this Appendix. For tracking purposes, each comment letter was assigned a document number—this number has been placed in the upper right corner of each comment letter. The table below lists each agency that submitted comments, the document number assigned to that agency’s comments, and the date of the comments. On each comment letter, the individual comment topics are noted with numbered brackets. A comment response table follows each comment letter. The comment response table lists each bracketed topic number, along with a summary of the comment, and the project team’s response to the comment.

Document Number	Agency	Date
a001	US Department of the Interior Fish and Wildlife Service (USFWS)	11/25/15
a002	US Environmental Protection Agency Region 4 (EPA)	1/4/16
a003	US Department of Commerce NOAA - National Marine Fisheries Service (NMFS)	12/15/15
a004	US Department of Agriculture Natural Resources Conservation Service (NRCS)	12/17/15
a005	US Department of the Interior Office of Environmental Policy and Compliance	12/31/15
a006	NC Department of Environmental Quality (NCDEQ)	12/17/15
a007	NC Wildlife Resources Commission (NCWRC)	12/9/15
a008	NCDEQ – Division of Waste Management Solid Waste Section	12/10/15
a009	NCDEQ – Division of Waste Management Hazardous Waste Section	12/11/15
a010	NCDEQ – Division of Waste Management Superfund Section	12/7/15
a011	NCDEQ – Division of Water Resources (DWR)	12/7/15



United States Department of the Interior

FISH AND WILDLIFE SERVICE
 Raleigh Field Office
 Post Office Box 33726
 Raleigh, North Carolina 27636-3726

November 25, 2015

Richard W. Hancock, PE
 Project Development and Environmental Analysis
 North Carolina Department of Transportation
 1548 Mail Service Center
 Raleigh, North Carolina 27699-1548

Dear Mr. Hancock:

This letter is in response to your November 13, 2015 letter which requested comments from the U.S. Fish and Wildlife Service (Service) on the Federal Draft Environmental Impact Statement (DEIS) for the Complete 540 Triangle Expressway Southeast Extension in Wake and Johnston Counties, North Carolina (TIP Nos. R-2721, R-2828, R-2829). These comments are provided in accordance with provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

The North Carolina Department of Transportation (NCDOT) and Federal Highway Administration (FHWA) propose to build a new, limited-access highway from NC 55 in Apex to US 64/US 264 Bypass (I-495) in Knightdale – a distance of approximately 27 miles. The Complete 540 project would complete the I-540 outer loop that currently exists on the north and west sides of Raleigh.

General Comments

1 Overall, the project will have very substantial impacts on fish and wildlife resources, including impacts to streams, wetlands, upland forest and other habitat types. These impacts will be in the form of direct loss of habitat and habitat fragmentation effects on remaining habitat. Although these habitats are already fragmented by suburban development and other land uses in the project area, additional cumulative habitat fragmentation effects will occur. In addition, indirect habitat loss is expected due to secondary development induced by the new road facility.

Comments on the Dwarf Wedgemussel

2 In previous correspondence and during the Service's participation in interagency meetings, the Service has frequently stated its concern regarding the likely adverse effects of the project on the federally endangered dwarf wedgemussel (DWM, *Alasmidonta heterodon*) within the Swift Creek watershed (Neuse River basin). It is anticipated that the FHWA, as the lead federal action agency, will initiate formal Section 7 consultation by submitting to the Service an initiation package which includes a Biological Assessment (BA). In return, the Service will conduct an analysis to determine if the project will jeopardize the continued existence of the DWM and

issue a Biological Opinion (BO). Since there was a significant lack of information needed to develop the Environmental Baseline portions of the BA and BO, the NCDOT and FHWA agreed to fund additional studies within the Swift Creek watershed to fill in the information gaps.

The Service has reviewed the “Dwarf Wedgemussel Viability Study: Phase 1” report and found the information to be very helpful and well presented. The information provided addresses some of the critical information needs we have. However, we understand this information to be an interim report of tasks completed thus far, with subsequent tasks and analysis to be provided at a later date in Phase 2. Conclusive answers to questions regarding the viability of the DWM and its habitat in the Swift Creek watershed are yet forthcoming.

In order to avoid a Jeopardy BO, the action agency must not “engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.” In order for the Service to ultimately recover the DWM, the 1993 Dwarf Wedgemussel Recovery Plan requires, among other criteria, that a viable population (i.e. a population containing a sufficient number of reproducing adults to maintain genetic variability and annual recruitment adequate to maintain a stable population) occur in Swift Creek. Therefore, maintaining such a population in the post-project Swift Creek watershed is vitally important. We cannot understate the significance of this issue.

Since the DWM was first discovered in Swift Creek in 1991, rapid development within the watershed below the Lake Benson Dam has severely impacted the DWM. Mussel survey data from this timeframe shows a declining catch per unit effort (CPUE), implying a declining population. Although preliminary indicators of the long-term viability of the DWM in Swift Creek are mixed, one positive note is the evidence of recent reproduction. However, it is unclear whether this reproduction is sufficient to maintain population viability.

A North Carolina DWM work group has concluded that population augmentation through captive propagation is an essential component of management strategies to ensure DWM persistence in North Carolina (Smith et al. 2015). This is especially true with the population in Swift Creek where the Allee effect (high risk of demographic extirpation due to low population abundance and lack of dispersal) is one of the major limiting factors of population viability.

Though much of the technical and procedural knowledge for propagating DWM has previously been developed (Beck and Neves 2001), the Service and our partners lack a dedicated facility and staff to conduct DWM propagation on a large scale. As stated on page 95 of the DEIS, targeted efforts to propagate the DWM and augment the existing population in Swift Creek could improve the chances of maintaining the species’ viability in the watershed. As a project conservation measure, the Service recommends that the NCDOT and FHWA provide assistance in developing a dedicated captive propagation facility in order to produce DWMs for augmenting the declining population within Swift Creek. The ability, or the lack thereof, to propagate DWMs and augment the population in Swift Creek will factor significantly in our analysis to determine whether the Complete 540 project will jeopardize the continued existence of the species.

Comments on Alternatives

4 [Detailed study alternatives that include the Red Corridor segment clearly have the lowest impacts on wetlands and streams. The Red Corridor would have the least direct and indirect effects on the DWM and its habitat since it crosses Swift Creek upstream of Lake Benson – outside the known range of the species in the watershed. However, the Service acknowledges and understands the intense opposition to the Red Corridor segment due to its disproportionate impacts on the human environment.

Detailed study alternatives that include the Orange Corridor segment, being the protected corridor with right-of-way purchases made many years ago prior to any comprehensive environmental analysis, greatly minimize impacts to the human environment. However, the Orange Corridor segment has great potential to adversely affect the DWM since it crosses Swift Creek, tributaries to Swift Creek, and a significant portion of the watershed all downstream of Lake Benson – within the known occupied range of the species. The Orange Corridor segment connects to I-40 at a particularly unfavorable location for the DWM. This location puts the interchanges with I-40 and US 70 Bypass on top of several tributaries to Swift Creek and also is in close proximity to the Swift Creek main stem. The DWM is at risk from direct effects associated with construction of the project (e.g. erosion and siltation from construction) and from indirect effects associated with the degradation of water quality from secondary development induced by the new road. Increased impervious surface and storm water runoff from additional development would likely further degrade the water quality of Swift Creek and its tributaries. Also, other proposed projects within the study area such as the proposed widening of I-40 (TIP No. I-5111) and bridge replacements on Swift Creek could cumulatively contribute to a decline in habitat quality for the DWM. The Service finds the Orange Corridor very problematic.

Detailed study alternatives that include the Lilac Corridor segment would have very similar, albeit somewhat lesser adverse effects on the DWM. These somewhat lesser effects would be due to the fact that the interchange with I-40 would be farther removed from Swift Creek and its tributaries.

Other Species

5 [The DEIS renders a biological conclusion of “no effect” for the federally endangered red-cockaded woodpecker (*Picoides borealis*) and Michaux’s sumac (*Rhus michauxii*). Based on the survey results, the Service concurs with these “no effect” conclusions. The DEIS renders a “May Affect, Likely to Adversely Affect” conclusion for the northern long-eared bat (*Myotis septentrionalis*). As stated in the DEIS, formal Section 7 consultation has already been completed for this species through a Programmatic Biological Opinion adopted on May 4, 2015. As stated in the DEIS, Section 7 is yet unresolved for the DWM and Tar River spiny mussel (*Elliptio steinstansana*). However, the Service believes that the project is unlikely to have adverse effects on the Tar River spiny mussel.

7 [There is a possibility that up to three additional mussel species may be listed as federally endangered or threatened prior to the completion of the Complete 540 project – the Atlantic pigtoe (*Fusconaia masoni*), yellow lance (*Elliptio lanceolata*), and green floater (*Lasmigona subviridis*). Conclusions and recommendations for the dwarf wedgemussel may be relevant to these additional species. In addition, the Carolina madtom (*Noturus furiosus*, a fish species) and

the Neuse River waterdog (*Necturus lewisi*, an amphibian) may also be federally listed as threatened or endangered prior to the completion of the project.

Other Miscellaneous Comments

- 8 [Page 29 states "...the dwarf wedgemussel...could be directly affected by the proposed project." While true, the Service believes that indirect effects from road-induced development are the greater concern.
- 9 [Page 97 incorrectly states "An incidental take is when a non-federal activity will result in the loss, or "take" of a threatened or endangered animal." As per 50 CFR 17.3, an incidental take is "any taking otherwise prohibited, if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." For the purposes of Section 7, this would only include federal activities. For Section 10 of the ESA, incidental take would only include non-federal activities.
- 10 [The Clemmons Educational State Forest is referenced several times in the DEIS. The Service prefers that this forest not be impacted. At only 825 acres, this state forest is relatively small and already exists in a fragmented context. Even small impacts to this forest could substantially degrade the wildlife habitat value of this public land.

The Service believes that this DEIS and its accompanying technical reports adequately address the existing fish and wildlife resources, the waters and wetlands of the United States, and the potential impacts of this proposed project on these resources. The Service appreciates the opportunity to review this project. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520, ext. 32.

Sincerely,

for 
Pete Benjamin
Field Supervisor

Literature cited:

Beck, K.M. and R.J. Neves. 2001. Propagation studies of the endangered dwarf wedgemussel. Final Report to the North Carolina Department of Transportation, Raleigh, NC. 63 pp.

Smith, D.R., S.E. McRae, T. Augspurger, J.A. Ratcliffe, R.B. Nichols, C.B. Eads, T. Savidge, and A.E. Bogan. 2015. Developing a conservation strategy to maximize persistence of an endangered freshwater mussel species while considering management effectiveness and cost. *Freshwater Science* 34(4):000-000.

Electronic copy provided to:

Eric Alsmeyer, USACE, Wake Forest, NC
Cynthia Van Der Wiele, USEPA, Raleigh, NC
Travis Wilson, NCWRC, Creedmoor, NC
George Hoops, FHWA, Raleigh, NC
Donnie Brew, FHWA, Raleigh, NC
Neil Medlin, NCDOT, Raleigh, NC
Eric Midkiff, NCDOT, Raleigh, NC
Rob Ridings, NCDWR, Raleigh, NC

USFWS Letter – 11/25/15

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Habitat Loss/ Fragmentation	Project will result in direct, indirect, and cumulative habitat loss and fragmentation.	Continued coordination has been and will be held during the remainder of the NEPA process with NCWRC and USFWS concerning wildlife corridors. During past coordination meetings with these agencies prior to the Draft EIS, areas of wildlife connectivity concerns were identified and bridge limits were established to permit this connectivity. This coordination has continued during the development of the preferred alternative and the Final EIS. Quantitative studies of the indirect and cumulative effects of the project have been completed and are summarized in Chapter 4 of the Final EIS.
2	Dwarf Wedgemussel	USFWS is concerned about the project's potential effects on long-term viability of the Dwarf Wedgemussel (DWM) and needs to see additional study results to make an assessment of species viability.	A DWM viability study was completed after publication of the Draft EIS. The results of the study are documented in the <i>Dwarf Wedgemussel Viability Study</i> report released in May 2016 and summarized in Chapter 4 of the Final EIS. The study report was provided to USFWS.
3	Dwarf Wedgemussel	Ability to propagate DWM will factor into USFWS analysis of the project's effects on DWM.	Comment noted. NCDOT and FHWA have continued coordination with USFWS to address this issue. The Biological Assessment, summarized in Chapter 4 of the Final EIS, details several conservation measures NCDOT will use to help offset the effects of the project on the DWM, including development of a mussel propagation laboratory at Yates Mill Pond.
4	Alternatives	Detailed Study Alternatives (DSAs) including Red Corridor would have the lowest impacts on wetlands and streams and the least effects on DWM. USFWS is concerned about the potential of DSAs crossing Swift Creek downstream of Lake Benson to affect DWM. However, the Service Acknowledges and understands the intense opposition to the Red Corridor due to its disproportionate impacts on the human environment.	USFWS's preferences have been noted in the <i>Preferred Alternative Report</i> .
5	Effects on Other Species	USFWS concurs with Draft EIS "no effect" conclusions for red-cockaded woodpecker and Michaux's sumac.	Comment noted; more information about Michaux's Sumac is in the Biological Assessment and is summarized in Chapter 4 of the Final EIS.
6	Tar River Spiny mussel	USFWS believes that the project is unlikely to have adverse effects on the Tar River spiny mussel.	As noted in the Biological Assessment and summarized in Chapter 4 of the Final EIS, the Biological Conclusion for the Tar River spiny mussel is No Effect.
7	Other Aquatic Species	Conclusions and recommendations for the DWM may be relevant to Atlantic Pigtoe, Yellow Lance, and Green Floater mussel species, which may be listed prior to completion of the project. The Carolina Madtom and Neuse River Waterdog may also be listed prior to completion of the project.	The Yellow Lance has since been proposed for listing as threatened under the Endangered Species Act. This mussel species is addressed in the Biological Assessment and is summarized in Chapter 4 of the Final EIS. NCDOT and FHWA will continue to monitor the listing status of the other species and enter into consultation for them if and when it is appropriate.
8	Editorial	Page 29 of the Draft EIS states "...the Dwarf Wedgemussel...could be directly affected by the proposed project." USFWS believes that indirect effects from road-induced development are the greater concern.	This is noted in the Draft EIS errata as presented in the Final EIS.
9	Editorial	Page 97 incorrectly defines "incidental take."	This is noted in the Draft EIS errata as presented in the Final EIS.

Appendix K1 – Agency Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
10	Clemmons State Forest	USFWS would prefer that the project avoid the Clemmons Educational State Forest.	The preferred alternative for the project avoids the Clemmons Educational State Forest.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 REGION 4
 ATLANTA FEDERAL CENTER
 61 FORSYTH STREET
 ATLANTA, GEORGIA 30303-8960

JAN 04 2016

Mr. Richard W. Hancock, P.E., Manager
 Project Development and Environmental Analysis
 North Carolina Department of Transportation
 1548 Mail Service Center
 Raleigh, North Carolina 27699-1548

Re: Federal Draft Environmental Impact Statement (DEIS) and Draft §4(f) Evaluation for the Complete 540 [Triangle Expressway Southeast Extension] Project, Wake and Johnston Counties, North Carolina; ERP No.: FHW-E40852-NC; CEQ No.: 20150323; NC Department of Transportation (NCDOT) TIP Project Nos.: R-2721, R-2828, and R-2829

Dear Mr. Hancock:

The U.S. Environmental Protection Agency Region 4 Office has received and reviewed the subject document and is commenting in accordance with §309 of the Clean Air Act (CAA) and §102(2)(C) of the National Environmental Policy Act (NEPA). The NEPA process provides decision-makers the type and quality of information needed to make informed decisions about where and how to implement the subject project, or whether to proceed with the project at all. The Complete 540 Federal Draft Environmental Impact Statement (DEIS) proposes an approximately 27-mile, 4-lane divided, limited-access toll highway originating at NC 55 in Apex, North Carolina and connecting to US 64/US 264 Bypass (I-495) in Knightdale, North Carolina.

Although this project is not included in the NCDOT's NEPA/§404 Merger process, the EPA staff has been an active participant in the MAP-21 §6002 coordination plan for the proposed project, including purpose and need, detailed study alternatives to be carried forward and alignment review.

The Complete 540 DEIS represents a novel approach to creating a streamlined, reader-friendly document. The EPA welcomes innovative approaches to describe and discuss the proposed actions in a concise and straightforward manner. The primary function of a DEIS is to explain how decisions about the project were made and to convey the information that was used to inform those decisions. Numerous technical reports were cited and linked within the DEIS. However, the information from these reports such as the findings, conclusions, and/or recommendations, which are essential in conveying the basis for decision making, were not included. Thus, the EPA rated the DEIS as 'Environmental Concerns' (EC-2), indicating that our review identified environmental impacts within the project study area that should be avoided in order to fully protect the environment. The '2' rating indicates that the DEIS document does not

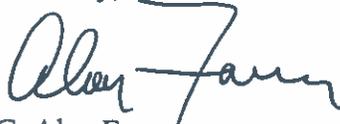
1 | contain adequate information in order to sufficiently assess all of the environmental impacts and allowing the EPA to be able to identify an environmentally-preferred alternative.

2 | Climate change could have potential effects on transportation infrastructure. We recommend that the NCDOT, in concert with the Federal Highway Administration (FHWA), incorporate scenarios from the National Climate Assessment (NCA), released by the U.S. Global Change Resource Program¹ as a prediction of how climate change may impact this particular transportation facility. Based on future scenarios, it may be appropriate to incorporate resiliency features to withstand more frequent and/or more intense storm events as well as the impact of temperature extremes on pavement and infrastructure.

Specific technical review comments on the DEIS are enclosed to this letter (See enclosure). The EPA recommends that all of the technical comments in the enclosure be addressed in the Final EIS (FEIS). Additionally, we also recommend that all impacts to the human and natural environment that have not been disclosed in the DEIS or covered in the FEIS be addressed in additional NEPA documentation prior to the issuance of a Record of Decision (ROD).

Dr. Cynthia F. Van Der Wiele, of my staff, will continue to work with you as part of the NCDOT Interagency Team in the identification of reasonable and feasible alternatives. Should you have any questions concerning these comments, please feel free to contact her at: vanderwiele.cynthia@epa.gov or (919) 450-6811. We appreciate the opportunity to comment on the proposed Complete 540 project.

Sincerely,



G. Alan Farmer
Director

Resource Conservation and Restoration Division

Enclosure

cc: John F. Sullivan, III, P.E, FHWA- NC
Eric Alsmeyer, USACE Raleigh Field Office
Gary Jordan, USFWS Raleigh Field Office
Rob Ridings, NCDEQ, DWR
Travis Wilson, NCWRC

¹ <http://nca2014.globalchange.gov/>

ENCLOSURE

Draft Environmental Impact Statement Complete 540 (Triangle Expressway Southeast Extension) Project Wake and Johnston County ERP No.: FHW- E40852-NC; CEQ No.: 20150323

Potential Impacts from the Proposed Project

3 [The Complete 540 Project assesses 17 Detailed Study Alternatives (DSAs), consisting of 1000-foot corridors on new location—ranging from 25.2 to 32.0 miles in length. Residential relocations range from 234 (DSA 4) to 550 (DSA 9) and business relocations range from 8 (DSA 3 & 4) to 16 (DSAs 8 – 12). Agri-businesses impacted by the project range from none (DSAs 1, 5-7, 13, and 17) to 3 (DSAs 9 – 11), with losses in prime farmland soils ranging from 1,949 acres (DSA 7) to 2,332 acres (DSA 12). The Clean Water Act Section 404 impacts range from 51,582 (DSA 7) to 78,087 linear feet (DSA 10) of streams; 51.4 acres (DSA 7) to 75.6 acres (DSA 1) of wetlands; and 49.0 to 103.4 acres of 100-year floodplains. Cultural resource impacts include up to 2 National Register of Historic Places (NHRP)-listed sites with adverse effects (DSAs 6 and 7) and up to 27.2 acres of impacts to Department of Transportation Act of 1966 §4(f) public parks and recreation facilities. The impacts of this project on floodways, the 500-year floodplain, terrestrial forests, unique farmlands, soils/minerals, greenhouse gases and climate change, community cohesion, future local and regional land use plans, and on Environmental Justice (EJ) communities is unclear. See Comparative Evaluation Matrix on pages 107-109 of the Draft Environmental Impact Statement (DEIS).

Summary

The DEIS did not include an ‘Executive Summary’ section.

4 [**USEPA Recommendation:** An Executive Summary section is used to succinctly and accurately summarize the EIS including the purpose and need, major conclusions—particularly the environmental impacts of all alternatives (e.g., a table of impacts), areas of controversy, issues raised by agencies and the public, issues to be resolved, and the choice among alternatives and identification of a preferred alternative (CEQ reference 40 CFR §1502.12). It is recommended that an executive summary and table of all key natural and human resource impacts be included in the Final Environmental Impact Statement (FEIS).

Study Overview

Chapter 1 provided an overview and history of the proposed project, including a useful graphic of the project location, and an overview of National Environmental Policy Act (NEPA).

USEPA Comment: The study overview chapter is useful for public outreach in explaining the project context.

Project Purpose and Need

Two primary purposes of the Complete 540 project were established: 1) *improve mobility* within or through the study area during peak travel periods, and 2) *reduce forecast[ed] congestion on the existing roadway network* within the project study area.

The needs for the proposed project include: 1) *more route choices* and 2) *congestion on the existing roadway network*.

The Capital Area Metropolitan Planning Organization (CAMPO) notes that the “*Triangle is one of the nation’s most sprawling regions...a key challenge is to match our vision for how our communities should grow with the transportation investments to support this growth*” (p. 14 emphasized in red bold). The USEPA supports the principles of sustainable community development².

5 [**USEPA Comment:** The transportation agencies might wish to consider the potential indirect and cumulative effects from the various alternatives in the identification of a preferred alternative and the potential negative environmental consequences of ‘sprawl’.

The Study Area and Its Features

This chapter aims to describe the information collected by the study team.

USEPA Recommendations: The DEIS chapter on the affected environment should concisely describe the human and natural environment of the area to be affected by the DSAs under consideration. This chapter should concentrate future planning and documentation effort and attention on important environmental issues, particularly the presence or absence of significant human and natural resources.

6 [The Land Use and Population Characteristics section of the DEIS provides a substantial narrative on suburban development and limited information on community characteristics. The findings, conclusions, and recommendations of the *Community Impact Assessment (CIA, June 2015)* technical report were not included in the DEIS. The CIA and the DEIS both do not provide sufficient information pertaining to the existing land use and demographics. Of primary concern to the USEPA regards not including the six (6) demographic indicators for identifying EJ communities³ (i.e., minority, low-income populations, over 65 years old, under 5 years old, less than a high school education, and linguistically-isolated populations). A summary and/or graphic of EJ populations within the detailed study area should be included in order to be able to fully understand the demographic characteristics within the study area. Additionally, the DEIS also did not include a description, findings, or summary of the study area population’s use and consumption of environmental resources, neighborhoods, or reference existing or future land use plans. The CIA report, however, substantiates the fact that while the project itself does not conflict with any local land use plans or with any of the jurisdictions’ desired development patterns, each particular DSA would have potentially negative effects on local land use plans and planning objectives (CIA, page E-5).

² See Guiding Principles, http://www.epa.gov/smartgrowth/hud-dot-epa-partnership-sustainable-communities#Livability_Principles.

³ See: <http://www.epa.gov/ejscreen/overview-demographic-indicators-ejscreen>

7 Tables listing park and recreation facilities, historic properties and districts, and other significant public or semi-public land uses/buildings located within the study area are a useful way of summarizing information in a succinct manner.

8 The Economic Characteristics section of the DEIS does not provide specificity with regards to median income levels within the study area (i.e., does not include percentages or figures but uses the terms “somewhat higher” or “smaller percentage” and does not identify specific block groups). Similarly, the Racial/Ethnic Percentages section does not provide sufficient information regarding census block groups or concentrations of communities of concern. It is unclear whether there are significant block groups of EJ communities of concern as there was no discussion of this in the chapter. As such, the USEPA is unable to make a determination at this time regarding which DSA would have the least impact to EJ communities. The USEPA suggests that the transportation agencies consider utilizing the ‘EJ Screening and Mapping’ tool at: <http://www.epa.gov/ejscreen> for the FEIS.

9 The project study area includes 445 jurisdictional streams and 543 jurisdictional wetlands. The DEIS Water Resources section did not include any tabular information summarizing stream or wetlands findings (e.g., NC Stream Assessment Method (NC SAM) and NC Wetland Assessment Method (NC WAM) ratings, water quality class, etc.), or other data regarding the quality and integrity of these systems. Some of this data, however, can be found in the *Waters Report* (September 2014). The USEPA recommends that detailed information on jurisdictional resources be included and presented in a comparative form based upon the DSAs in the FEIS.

10 The DEIS section on Protected Species describes several species that are located within central and/or eastern North Carolina. However, it was unclear as to whether or not there are species of concern present located within the project study area. The referenced *Natural Resources Technical Report* provides some additional detail. The USEPA requests that a summary of key protected species and the potential effects based upon the DSAs be included in the FEIS.

11 This chapter also lacked cross-cutting NEPA information regarding: floodplains (E.O. 11988; 10 CFR Part 1022); natural resources (e.g., timber, soils, minerals, fish, wildlife, etc.; Council on Environmental Quality regulations at 40 CFR §1508.8); prime/unique farmland (Farmland Protection Policy Act of 1981: 7 USC §4201); and migratory birds (Responsibilities of Federal Agencies to Protect Migratory Birds, E.O. 13186). The USEPA requests that the transportation agencies include this information in the FEIS and also make it available to resource and permitting agencies during the Interagency Coordination Team meetings.

Detailed Study Alternatives

12 The DEIS Selection of a Build Alternative was based on several key factors: logical termini/independent utility, roadway design criteria/typical sections, and study alternatives for each section. The range of build alternatives was reduced to seventeen (17) 1,000-foot wide DSA corridors which are comprised of various combinations of 10 discrete color-coded corridor segments. A substantial portion of the “Orange Corridor” segment was established through right-of-way acquisitions by the NCDOT as a protected corridor for the project in the mid-1990s, in order to protect it from large-scale development. This pre-NEPA action could be regarded as

being pre-decisional based upon the information provided in the DEIS. The Orange Corridor crosses a portion of the Swift Creek watershed that provides habitat for the federally-protected Dwarf wedgemussel (*Alasmidonta heterodon*) and has more wetland impacts than the other corridors under consideration.

13 [**USEPA Recommendations:** Color maps of each of the 17 DSAs were included in the DEIS but did not provide the length (mileage) of each alternative. A table of each DSA and how each one compares to the project's purpose and need would facilitate comparison of the alternatives (CEQ reference §1502.14). Although the DEIS describes the color-coded segments, information on each DSA is not provided. Consequently, this makes it difficult for the USEPA to fully assess each alternative in a comparable fashion.

14 [From the information provided, DSAs 6 and 7 appear to *most closely* meet the Complete 540's 'Purpose and Need' as these alternatives best facilitate the ability to provide other route choices due to their proximity to other major highways within the existing network (thus, alleviating congestion on existing roadways). DSAs 6 and 7 would be the most viable 'jumping on/off points' to the majority of commuters within the study area. The USEPA notes that these alternatives include the "Red Corridor" segment. NC General Assembly Session Laws 2013-94 and 2013-183 removed previous restrictions on considering this segment as reasonable and feasible alternatives that meet the Complete 540's 'Purpose and Need'.

14 [Additionally, the USEPA also finds that DSAs 8 – 17 as being very problematic as these alternatives are the most distant from existing road networks and would be less able to meet the 'Purpose and Need' as stated (i.e., increase mobility and reduce congestion on the existing roadway network as a commuter would have to drive substantially further to access the Interstate 540 toll facility). Furthermore, DSAs 8 – 17 would have the most potential induce low-density development in an area that is currently rural/agricultural and have the highest impacts on habitat connectivity, §404 jurisdictional streams and wetlands, threatened/endangered species, farmlands, and residential relocations.

15 [Because all of the 17 DSAs for the Complete 540 project are entirely on new location the USEPA advises that wildlife 'hotspot' areas be fully identified in the FEIS. Furthermore, the USEPA encourages additional collaboration with the NC Wildlife Resources Commission (NCWRC) and the U.S. Fish & Wildlife Service (USFWS) to design appropriate underpasses and/or overpasses to reduce large mammal mortality with vehicle collisions, and increase safety and reliability.

Expected Effects of Each Alternative

This chapter aims to describe the DSAs and the resulting direct and indirect impacts on the human and natural environment. The graphics provided facilitate understanding of relocation impacts and neighborhood effects.

16 [**USEPA Recommendations:** The DEIS describes the process for determining the effects and discusses impacts in a general sense, but does not explicitly discuss direct or indirect impacts on:

- future land use and transportation planning

- commercial corridors and nodes
- police, fire, and emergency services (e.g. response times)
- relocations in terms of securing affordable housing; mobility, and access
- community effects (i.e., high benefit from project versus high burden)

With the exception of some EJ issues, most of the impacts of the Complete 540 project can be located within the technical reports provided on a compact disc (CD). The main findings, conclusions, and recommendations from these technical reports would be beneficial to include in the FEIS.

17 [Cultural Resources and Public Facilities: The USEPA encourages the transportation agencies to continue coordination efforts to avoid and minimize impacts to parks and recreational facilities and historic properties.

18 [Noise: The USEPA understands that a more detailed review of specific noise barrier locations will be performed during the final design process. The USEPA encourages the transportation agencies to consider the design and implementation of evergreen roadside vegetation in locations that do not meet the threshold for noise barriers. The use of vegetative roadside screening ameliorates noise impact issues, visual quality impacts, as well as provides some potential beneficial effects for downwind vehicle emissions from near-roadway air pollutants.

19 [Jurisdictional Resources: Impacts to floodways or the 500-year floodplain were not included in the DEIS. Floodways and floodplains are vital to reducing the likelihood of localized flooding during storm events, particularly as the study area continues to urbanize. The USEPA environmentally prefers bridges to culverts at major hydraulic crossings. The USEPA encourages engineering designs that incorporates resiliency strategies into the Complete 540 project to mitigate the likelihood of flooding in low-lying, flood-prone areas in addition to the identified FEMA 100-year floodplain. Such a design will ensure that the project's 'Purpose and Need' is met with regard to a robust, reliable transportation system as well as potentially mitigate for extreme weather events that are anticipated to increase as a result of climate change.

20 [The USEPA environmentally prefers DSAs 6 and 7 as the alternatives as having the least impacts to jurisdictional streams and wetlands based upon the information from the DEIS. DSAs 1 – 4 and 8 – 17 have the highest stream impacts while DSAs 1 – 5 and 15 - 17 have the highest wetland impacts. Further avoidance and minimization during final design should be considered in order to reduce impacts to aquatic resources. The USEPA has environmental concerns about the potential impacts from some of the DSAs with respect to the Swift Creek Watershed critical area and streams and wetlands that have higher quality ratings using the NC SAM and the NC WAM methods, respectively.

21 [Protected Species: The USEPA encourages further collaboration with the USFWS and the NCWRC during final design to avoid and minimize impacts to threatened and endangered species. There is potential for adverse biological effects as a result of the proposed Complete 540 project. Several recent studies have examined the use of bridges and culverts as [day and night]

bat roosting habitat⁴. The structural design of bridges and culverts with regard to the Northern long-eared bat (*Myotis septentrionalis*) might be considered during final design as a way to benefit and/or promote recovery of the species within the project study area.

22

Climate Change Adaption: The DEIS did not address climate change/greenhouse gas emissions. We recommend considering climate adaption measures based on how future climate scenarios may impact the proposed project in the FEIS. The National Climate Assessment (NCA) contains scenarios for regions and sectors, including transportation. Using the NCA or other peer review-reviewed climate scenarios to inform alternatives analysis and possible changes to the proposal can improve resilience and preparedness for climate change. Changing climate conditions can affect a proposed project as well as the project's ability to meet the designated purpose and need. For additional information, the transportation agencies may wish to refer to:
https://www.whitehouse.gov/sites/default/files/docs/nepa_revised_draft_ghg_guidance_searchable.pdf

⁴ See: <http://www.icoet.net/downloads/99paper21.pdf>

US Environmental Protection Agency Region 4 – 1/4/16

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Draft EIS Format	Draft EIS does not have adequate information for EPA to sufficiently assess impacts.	As noted clearly in the Draft EIS, under the reader-friendly EIS format, the findings, conclusions, and recommendations from all of the supporting technical reports are summarized in the Draft EIS, not repeated in detail. The supporting technical reports should be consulted to review the detailed information. The findings, conclusions, and recommendations that EPA asserts are not included in the Draft EIS are documented in Chapter 5 of the Draft EIS. Coordination with the agencies under the Section 6002 Coordination Plan has continued following publication of the Draft EIS. No agency, including EPA raised any issues of concern relative to the selection of the preferred alternative.
2	Impacts Analysis	Draft EIS should assess how climate change could affect 540. Resiliency features to withstand more frequent or intense storm events and greater temperature extremes may be appropriate.	Comment noted. On April 5, 2017, the Council on Environmental Quality (CEQ) rescinded its guidance on greenhouse gas emissions and climate change. Consistent with FHWA policy, greenhouse gas emissions and climate change were not included in the Final EIS.
3	Impacts Analysis	Potential impacts of the project DSAs on several environmental resources (500-year floodplain, terrestrial forests, unique farmlands, soils/minerals, greenhouse gases and climate change, community cohesion, future land use plans, and Environmental Justice communities) is unclear.	As noted in the project's <i>Preferred Alternative Report</i> , issued after publication of the Draft EIS, potential impacts on these environmental resources are included and addressed in the Draft EIS. In addition, NCDOT technical staff have been available to provide clarification on these topics at subsequent interagency meetings. Neither "floodways" nor the "500-year floodplain" are included in any applicable Executive Order or regulation, and neither has been raised as an issue that will affect project decision making by any agency or the public. Other than farmland soils, no other soils/minerals are included in any applicable Executive Order or regulation, and these have not been raised as an issue that will affect project decision making by any agency or the public. For this reason, these are not included in the Draft EIS. Climate change is addressed in the response to comment #2 and environmental justice is addressed in the response to comments #6 and #8.
4	Draft EIS Format	Draft EIS should have included an Executive Summary.	Under the reader-friendly format, the Draft EIS itself is, in essence, an executive summary of the items EPA mentions in its comments. The Final EIS does include a summary at the beginning of the document and a table in Chapter 4 of the Final EIS summarizing the potential impacts of the preferred alternative.
5	Indirect and Cumulative Effects	Indirect and cumulative effects should be considered in selection of a preferred alternative.	As documented in the Draft EIS, a qualitative analysis of the potential indirect and cumulative effects of the DSAs was completed. The results of this analysis were considered in selection of the preferred alternative. Quantitative studies of the indirect and cumulative effects of the project have been completed and are summarized in Chapter 4 of the Final EIS. Results of the quantitative studies have been consistent with the results of the qualitative studies.
6	Human Environment	Insufficient information about existing land use, demographics, and environmental justice was presented in the Draft EIS.	Pages 74 and 75 in the Draft EIS report a summary of potential effects to communities meeting the criteria for environmental justice consideration. The <i>Community Impact Assessment</i> fully documents the community demographics within the project study area. FHWA and NCDOT consider the methods used to identify potential environmental justice communities to be sufficient for comparison between Detailed Study Alternatives.

Appendix K1 – Agency Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
7	Section 4(f)	Should include tables of impacts to parks, recreation sites, historic sites, etc.	Tables and narrative descriptions of this information are included in the Draft EIS on pages 75-80.
8	Human Environment	Insufficient information about income and race/ethnicity was presented in the Draft EIS.	Pages 74 and 75 in the Draft EIS include a summary of potential effects to communities meeting the criteria for environmental justice consideration. The <i>Community Impact Assessment</i> fully documents the community demographics within the project study area. FHWA and NCDOT consider the methods used to identify potential environmental justice communities to be sufficient for comparison between Detailed Study Alternatives.
9	Natural Environment	Insufficient information about jurisdictional resources was presented in the Draft EIS.	This information is included in sufficient detail for a reader-friendly Draft EIS. Details about all of the information mentioned in the comment are available in the <i>Natural Resources Technical Report</i> and/or <i>Waters Report</i> that were included on a DVD attached to the Draft EIS and available on the project website. The impact data included in the Final EIS is also included in sufficient detail for the reader-friendly format.
10	Protected Species	Insufficient information about presence of protected species was presented in the Draft EIS.	As described in the response to comment #9, this information is included in sufficient detail for a reader-friendly Draft EIS. The appropriate additional details are available in the <i>Natural Resources Technical Report</i> , incorporated by reference.
11	Natural Environment	Insufficient information about other natural and physical resources, including floodplains, timber, soils, minerals, fish, wildlife, prime/unique farmland, and migratory birds, was presented in the Draft EIS.	As described in the response to comment #9, this information is included in sufficient detail for a reader-friendly Draft EIS. Additional details about some of the topics mentioned in the comment are available in the associated technical reports, including the <i>Community Impact Assessment</i> and <i>Natural Resources Technical Report</i> .
12	Alternatives	Orange Corridor may appear to have been predetermined.	NCDOT followed the State's Transportation Corridor Official Map Act in establishing the protected corridor for the project. No Federal or State law was violated by establishment of the protected corridor. In developing, analyzing and evaluating the project alternatives, NCDOT considered a range of alternatives in addition to the Orange Corridor (protected corridor), subjecting the Orange Corridor to the same process as the other alternatives.
13	Alternatives	Insufficient information about DSAs was presented in the Draft EIS.	FHWA and NCDOT consider the information included about the DSAs in the Draft EIS to be sufficient for meaningful comparison of alternatives. The Comparative Evaluation Matrix beginning on page 107 lists the length of each alternative. Because all the DSAs are new location highway alternatives, they all meet the purpose of the project, as described in Chapter 2 of the Draft EIS.

Appendix K1 – Agency Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
14	Alternatives	EPA believes that DSAs 6 and 7 would best meet the project purpose and need and that DSAs 8-17 would least be able to meet the project purpose and need.	<p>EPA's opinion has been noted on page 16 of the <i>Preferred Alternative Report</i>, produced after the Draft EIS.</p> <p>While DSAs 6 and 7, which use the Red Corridor, would generally avoid DWM habitat and have the smallest impact on streams, they are the only alternatives that would directly affect the Swift Creek Critical Watershed Area, (regulated to protect drinking water). DSAs 6 and 7 would also affect four sites subject to Section 4(f) and two sites eligible for the National Register of Historic Places.</p> <p>Based on the Draft EIS and the comments on the Draft EIS, NCDOT and FHWA in collaboration with their agency partners identified the preferred alternative (DSA 2) for the project in accordance with the Section 6002 coordination plan for this project. This plan affords each agency the opportunity to raise issues of concern that would inhibit or delay the issuance of permits for the project. No agency, including EPA raised any issues of concern relative to the selection of the preferred alternative.</p>
15	Wildlife	EPA suggests wildlife hotspot areas be identified in the Final EIS and collaboration with USFWS/NCWRC to incorporate wildlife crossings into the project.	<p>Continued coordination has been and will be held during the remainder of the NEPA process with NCWRC and USFWS concerning wildlife corridors. During past coordination meetings with these agencies prior to the Draft EIS, areas of wildlife connectivity concerns were identified and bridge limits were established to permit this connectivity. This coordination has continued during the development of the preferred alternative and the Final EIS.</p> <p>The wildlife hotspot analysis referenced in EPA's comment was completed for R-2544/2545. That level of analysis is not applicable to the Complete 540 project because, unlike R-2544/2545, surrounding lands are not gamelands/wildlife refuges. Also, the protected species that the agencies have indicated have notable potential to be affected by the Complete 540 project are aquatic species, which are not able to use wildlife crossings on roadways.</p>
16	Human Environment	Insufficient information about direct or indirect impacts on various human environmental resources, including future land use and transportation planning, commercial areas, emergency services, relocations (in terms of securing affordable replacement housing, mobility and access), and other community effects, was presented in the Draft EIS.	As described in previous responses, this information is included in sufficient detail for a reader-friendly Draft EIS. Additional details about the information mentioned in the comment are available in the <i>Community Impact Assessment</i> .
17	Human Environment	EPA encourages continued efforts to avoid and minimize impacts to parks, recreational facilities, and historic properties.	NCDOT has sought and will continue to seek ways to minimize the project's effects on these resources. An Interagency Meeting was held on July 12, 2017, to summarize the minimization strategies that have been incorporated into the project.
18	Project Design	EPA encourages use of roadside vegetation in areas not warranting noise barriers.	Comment noted. Please note that vegetation is not an effective measure for reducing traffic noise and is not an allowable abatement measure by FHWA. Any installed vegetation would be for visual screening purposes only.

Appendix K1 – Agency Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
19	Natural Environment	Insufficient information regarding impacts to floodways and the 500-year floodplain were presented in the Draft EIS. EPA encourages incorporation of resiliency strategies to mitigate the likelihood of flooding.	See response to comment #3. Design-related comment to increase resiliency noted.
20	Alternatives	EPA environmentally prefers DSAs 6 and 7.	EPA's opinion has been noted in the <i>Preferred Alternative Report</i> . Otherwise see response to comment #14.
21	Natural Environment	EPA encourages further collaboration with USFWS and NCWRC to avoid/minimize impacts to threatened and endangered species.	NCDOT and FHWA have worked collaboratively with USFWS to minimize impacts to threatened and endangered species and satisfy the requirements of the Endangered Species Act. The Biological Assessment, summarized in Chapter 4 of the Final EIS, details several conservation measures NCDOT proposes to use to help offset the effects of the project on protected species.
22	Impacts Analysis	Draft EIS should assess how climate change could affect 540.	See response to comment #2.



UNITED STATES DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
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December 15, 2015

F/SER47: KH/pw

(Sent via Electronic Mail)

Col. Kevin P. Landers, Commander
U.S. Army Corps of Engineers, Wilmington District
69 Darlington Avenue
Wilmington, North Carolina 28403-1398

Attention: Eric Alsmeyer

Dear Colonel Landers:

NOAA's National Marine Fisheries Service (NMFS) reviewed the public notice for Action ID # SAW-2009-02240^1, dated November 16, 2015. The North Carolina Department of Transportation (NCDOT) is examining alternatives for the Triangle Expressway Southeast Extension - Complete 540 in Wake and Johnston Counties. The Wilmington District is soliciting comments on seventeen (17) alignment alternatives evaluated in a Draft Environmental Impact Statement (DEIS) prepared by the Federal Highway Administration (FHWA), dated November 2, 2015. The proposed expressway is not within areas designated essential fish habitat, and the NMFS offers no comments under the authorities of the Magnuson-Stevens Fishery Conservation and Management Act. As the nation's federal trustee for the conservation and management of marine, estuarine, and anadromous fishery resources, the NMFS provides the following comments and recommendations pursuant to authorities of the Fish and Wildlife Coordination Act.

The NCDOT proposes to complete the outer loop around the greater Raleigh area in Wake and Johnston Counties by connecting the existing NC 540 toll road at NC 55 in Apex to the existing I-540 at the US 64/US 264 Bypass (I-495) in Knightdale, a distance of approximately 27 miles. The proposed project, called the "Triangle Expressway Southeast Extension - Complete 540," would have six travel lanes divided by a 70-foot-wide median, which is consistent with the built portions of NC 540 and I-540. The Triangle Expressway Southeast Extension would be within the Neuse River Basin.

1 All of the expressway alternatives presented would cross the Neuse River and most would cross Swift Creek. The Neuse River and Swift Creek include spawning, foraging, or migration habitat for American shad (Alosa sapidissima), striped bass (Morone saxatilis), and American eel (Anguilla rostrata). Anthropogenic impacts, including noise disturbance, sediment and toxicant input into streams and rivers, and direct physical injury, are threats to these fish and their habitats. These impacts can directly affect individuals and spawning aggregations as well as permanently eliminate nursery, foraging, and spawning areas. At the ecosystem level, the loss of freshwater wetlands can adversely affect water quality as this habitat filters pollutants and facilitates transport of organic material and impacts to streams can permanently eliminate habitats used by aquatic organisms.

2 Within the 17 Detailed Study Alternative (DSA), the number of wetland impacts ranges from 111 to 161, the acreage of wetland impacts ranges from 51.4 to 75.6 acres, the number of stream crossings ranges from 106 to 142, and the length of the stream crossings ranges from 51,582 to 78,087 linear feet. All of

^1 The NCDOT 2016-2025 State Transportation Improvement Program (STIP) as project numbers for the work are R-2721, R-2828, and R-2829.



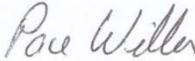
2 | the alternatives presented would require seasonal, in-water work moratoria and other restrictions to avoid and minimize potential impacts to diadromous fish and their habitat.

3 | The NMFS prefers DSA No. 6 or No. 7 because these alignments avoid impacts to shad and striped bass and their habitats in Swift Creek. DSAs No. 6 and No. 7 cross Swift Creek upstream of Lake Benson and the Lake Benson Dam, which represents the upstream limit of these fish in Swift Creek. The NMFS also prefers these alternatives because of the smaller impacts to the Neuse River compared to the other 15 DSAs. Additionally, DSAs No. 6 and No. 7 would impact the fewest wetlands (113 and 111, respectively), least wetland acres (52.0 and 51.4 acres, respectively), fewest streams (109 and 106 crossings, respectively), and fewest stream linear feet (53,014 and 51,582 linear feet, respectively).

In summary, all of the expressway alternatives presented would temporarily and permanently impact streams, wetlands, and open water ponds and would alter or eliminate the functions of these habitats. Selection of DSA No. 6 or No. 7 would avoid and minimize impacts diadromous fish habitat due to the comparatively small impacts to streams, wetlands, ponds, and the Neuse River and the potential avoidance of impacts to shad and striped bass and their habitat in Swift Creek. The NMFS recommends DSA No. 6 or No. 7 as the Least Environmentally Damaging Practicable Alternative (LEDPA).

The NMFS appreciates the opportunity to provide these comments. Please direct related questions or comments to the attention of Keith M. Hanson at our Charleston Area Office, 219 Fort Johnson Road, Charleston, South Carolina 29412-9110, Keith.Hanson@noaa.gov or by phone at (843)762-8622.

Sincerely,



/ for

Virginia M. Fay
Assistant Regional Administrator
Habitat Conservation Division

- cc: COE, Eric.C.Alsmeyer@usace.army.mil
- EPA, Vanderwiele.Cynthia@epa.gov
- FWS, Gary.Jordan@fws.gov
- NCWRC, Travis.Wilson@ncwildlife.org
- F/SER4, David.Dale@noaa.gov
- F/SER47, Fritz.Rhode@noaa.gov, Keith.Hanson@noaa.gov

NMFS Letter – 12/15/15

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Aquatic Species	All DSAs have the potential to affect aquatic species.	Comment noted. FHWA and NCDOT have selected DSA 2 as the preferred alternative and have continued design work to either avoid or minimize impacts to water bodies and freshwater wetlands
2	Aquatic Species	All DSAs would require seasonal, in-water work moratoria and other restrictions to avoid and minimize potential impacts to diadromous fish and their habitat.	Comment noted.
3	Alternatives	NMFS prefers DSAs 6 and 7 because they have the potential to avoid/minimize impacts fish species and impact the fewest wetlands, least wetland acres, fewest streams and fewest linear feet of streams.	NMFS's preferences have been noted in the <i>Preferred Alternative Report</i> . In accordance with the Section 6002 coordination process developed for this project, FHWA and NCDOT have identified DSA 2 as the preferred alternative and continue efforts to avoid and minimize impacts. No issues of concern have been raised by the interagency team with regard to selection of DSA 2 as the preferred alternative.



Natural Resources
Conservation Service

DEC 17 2015

North Carolina
State Office

4407 Bland Road
Suite 117
Raleigh, NC 27609
Voice 919-873-2100
Fax 844-325-6833

Mr. Eric Midiff, P.E.
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, NC 27601-1418

Dear Mr. Midkiff:

Thank you for providing the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS), an opportunity to review and comment on the Draft Environmental Impact Statement *Complete 540 - Triangle Expressway Southeast Extension* (the DEIS).

We have reviewed our records and determined, as of this date, that NRCS:

1. Holds no conservation easements inside the DEIS Study Area; and
2. Is not in the process of acquiring conservation easements inside the DEIS Study Area.

1 We encourage the Department of Transportation to use NRCS developed soils data to identify, avoid, and minimize conversion of Prime Farmland soils to non-agricultural uses to the greatest extent possible, as those soils represent an irreplaceable resource. Technical interpretations of soil properties, including Farmland Classification interpretations are provided on the NRCS Web Soil Survey at: <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>.

If you would like further assistance from NRCS please contact Matthew Flint, Assistant State Conservationist for Technology, at matt.flint@nc.usda.gov, or (919) 873-2124.

Sincerely,

Timothy A. Beard
State Conservationist

cc:

Matthew Flint, Assistant State Conservationist for Technology, NRCS, Raleigh,
NC

Kent Clary, State Soil Scientist, NRCS, Raleigh, NC

NRCS Letter – 12/17/15

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Farmland Soils	NRCS has no conservation easements in study area; encourages avoidance and minimization of conversion of farmland soils.	Comment noted.



United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Richard B. Russell Federal Building
75 Ted Turner Drive, S.W., Suite 1144
Atlanta, Georgia 30303



ER 15/0641
9043.1

December 31, 2015

Mr. Eric Midkiff
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Re: Comments and Recommendations on the Draft Environmental Impact Statement and Section 4(f) Evaluation for the Complete 540 Triangle Expressway Southeast Extension, Wake and Johnston Counties, NC

Dear Mr. Midkiff:

The U. S. Department of the Interior (Department) has reviewed the Complete 540 Triangle Expressway Southeast Extension in Wake and Johnston Counties, North Carolina. We offer the following comments:

The North Carolina Department of Transportation (NCDOT) and Federal Highway Administration (FHWA) propose to build a new, limited-access highway from NC 55 in Apex, to US 64/US 264 Bypass (I-495) in Knightdale for a distance of approximately 27 miles. The proposed highway, known as Complete 540–Triangle Expressway Southeast Extension, is being proposed as a toll facility.

Section 4(f) Evaluation

There is an extensive record of coordination with land owners and managers of 4(f) properties as well as the State Historic Preservation Office (SHPO) for this project. The potential uses of these resources were discussed, avoidance alternatives and other measures to minimize harm to the resources are identified and coordination with the public official having jurisdiction over each resource is documented. Section 4(f) resources that have the potential to be impacted are listed below:

Complete 540 Triangle Expressway Southeast Extension - ER 15-0641

Dr. L.J. Faulhaber Farm
 Bryan Farms Historic District
 Baucom-Stallings House, Middle Creek School Park, Planned Sunset Oaks Park,
 White Deer Park Expansion Area
 Planned Bryan Road Nature Park
 Watershed Extension Loop Trail (Clemmons)
 Neuse River Trail

Since a preferred alternative has not been identified at this time, we cannot concur that the Section 4(f) Evaluation includes all planning to avoid, minimize and mitigate all harm to 4(f) resources and that there is no other prudent or feasible alternative at this time.

1 [The Department has no objection to the deminimis determination provided that a MOA is developed identifying who is responsible for each avoidance, minimization and mitigation effort and the MOA is signed by the SHPO, land owners and managers.

Thank you for the opportunity to review and provide comments. If you have any questions concerning these comments please, contact Anita Barnett at (404) 507-5706. I can be reached on (404) 331-4524 or via email at joyce_stanley@ios.doi.gov.

Sincerely,



Joyce Stanley, MPA
 Regional Environmental Protection Specialist

cc: Christine Willis – FWS
 Gary LeGain - USGS
 Anita Barnett – NPS
 Chester McGhee – BIA
 Robin Ferguson – OSMRE
 OEPC – WASH

US Dept. of Interior - Office of Environmental Policy & Compliance Letter – 12/31/15

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Section 4(f)	Dept. of Interior has no objection to <i>de minimis</i> determinations provided that a MOA is developed to identify responsibilities for avoidance, minimization and mitigation and is signed by SHPO, land owners and managers.	Comment noted. The preferred alternative will not have any adverse effects on any National Register of Historic Places (NRHP) listed or eligible sites, so no Section 106 MOA is needed for historic properties.



Environmental Quality

PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

MEMORANDUM

To: Crystal Best
State Clearinghouse Coordinator
Department of Administration

FROM: Lyn Hardison *Lyn*
Division of Environmental Assistance and Customer Service
Permit Assistance & Project Review Coordinator

RE: 16-0134
Draft Environmental Impact Statement
Proposed project is for the Complete 540 Triangle Expressway Southeast Extension, TIP Projects – R-2721, R-2828 and R-2829
Wake and Johnston Counties

Date: December 17, 2015

1 [The Department of Environmental Quality has reviewed the proposal for the referenced project. Based on the information provided, several of our agencies have identified permits that may be required and offered some guidance to minimize impacts to the natural resources within the project area. The comments are attached for the applicant's consideration.

The Department encourages the applicant to continue to work with our agencies during the NEPA Merger Process and as this project moves forward.

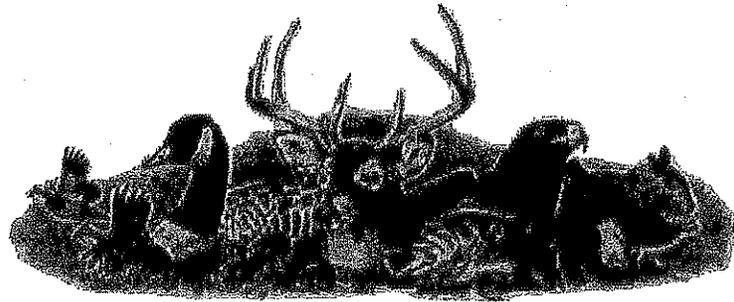
Thank you for the opportunity to respond.

Attachment



NCDEQ Letter – 12/17/15

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Permitting/Impacts	Several agencies within NCDEQ provided information about required permits and offered guidance to minimize impacts to natural resources. NCDEQ encourages continued coordination with the agencies as the project moves forward.	Comment noted. See subsequent response tables for responses to each agency's individual comments.



☒ North Carolina Wildlife Resources Commission ☒

Gordon Myers, Executive Director

MEMORANDUM

TO: Lyn Hardison, Environmental Assistance Coordinator
Division of Environmental Assistance and Outreach, DENR

FROM: Travis Wilson, Highway Project Coordinator
Habitat Conservation Program

DATE: December 9, 2015

SUBJECT: North Carolina Department of Transportation (NCDOT) Draft Environmental Impact Statement (DEIS) for the proposed Complete 540 Triangle Expressway Southeast Extension in Wake and Johnston Counties, North Carolina. TIP Nos. R-2721/R-2828/R-2829. SCH Project No. 16-0134

Staff biologists with the N. C. Wildlife Resources Commission have reviewed the subject DEIS and are familiar with habitat values in the project area. The purpose of this review was to assess project impacts to fish and wildlife resources. Our comments are provided in accordance with certain provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667d).

NCDOT is proposing the construction of a limited access facility on new location from NC 55 in Apex to US 64/US264 Bypass (I-495) in Knightdale. Known as the Complete 540-Triangle Expressway Southeast Extension, it is proposed as a toll facility. The approximate 27 mile long facility will have extensive direct impacts to the natural environment as well as secondary and cumulative impacts within the project area.

1 The DEIS identifies 17 detailed study alternatives (DSAs) with approximated impacts ranging from 51,582 to 78,087 linear feet of stream, wetland impacts of 51.4 to 75.6 acres, as well as substantial upland habitat removal. The DEIS references the value of maintaining habitat connectivity in this already fragmented landscape. As with any multi-lane new location highway facility this project will result in further fragmenting the habitat throughout the proposed 27 mile corridor.

Mailing Address: Division of Inland Fisheries • 1721 Mail Service Center • Raleigh, NC 27699-1721
Telephone: (919) 707-0220 • **Fax:** (919) 707-0028

As stated under the Indirect Effects and Cumulative Impacts section of this document. (p. 105)

2 *"...the build scenarios could lead to more rapid growth and more intense development in some areas near proposed interchanges. In this way, each of the DSAs would likely lead induced land development and higher concentrations of high-density and more intense land uses in the vicinity of the DSA, especially near interchange areas".*

This will be a key aspect in selecting the Least Environmentally Damaging Practicable Alternative.

Likewise (p. 106)

3 *"Continued development in the lower Swift Creek watershed, below the Lake Benson dam, may pose challenges for the long-term viability of dwarf wedgemussel habitat in this area.... The addition of the Complete 540 project to this area has the potential to add to the cumulative effects of other past and planned future projects on the long-term viability of the species in the lower Swift Creek watershed. Continued growth under either the build or no-build scenarios will have the potential to contribute to forest fragmentation and wildlife habitat disturbance. Combined with the effects of past and planned future projects, the Complete 540 project could shift these effects farther to the south and east."*

These are concerns shared by the NCWRC not only for dwarf wedgemussel (*Alasmidonta heterodon*) but also other sensitive aquatic species found in the Swift Creek watershed. WRC will assess potential minimization and conservation measures to address these concerns.

WRC has participated in stakeholder meetings as well as interagency coordination that has occurred during the planning of this project. That involvement has allowed us to express concerns involving the potential direct and indirect impacts associated with all the alternatives under consideration. As we continue through the coordination process and the alternative selection we will work with NCDOT to avoid and minimize impacts to natural resources in the project area. Thank you for the opportunity to comment. If we can be of any further assistance please contact me at (919) 707-0370.

cc: Gary Jordan, USFWS
 Rob Ridings, NCDWR
 Eric Alsmeyer, USACE
 Cynthia Van Der Wiele, USEPA

NCWRC Letter – 12/9/15

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Habitat Fragmentation	Project will result in further habitat fragmentation.	Continued coordination has been and will be held during the remainder of the NEPA process with NCWRC and USFWS concerning wildlife corridors. During past coordination meetings with these agencies prior to the Draft EIS, areas of wildlife connectivity concerns were identified and bridge limits were established to permit this connectivity. This coordination has continued during the development of the preferred alternative and the Final EIS.
2	Indirect and Cumulative Effects	Indirect and cumulative effects on land use will be important in selecting Least Environmentally Damaging Practicable Alternative (LEDPA).	The qualitative study of indirect and cumulative effects (ICE), summarized in the Draft EIS on pages 104-106, concluded that “each of the DSAs would likely lead to induced land development and higher concentrations of high-density and more intense land uses in the vicinity of the DSA.” The qualitative study also concluded that DSAs using the Orange Corridor segment would be less likely to induce development that would be in conflict with local plans. As noted in Chapter 4 of the Final EIS, this was a consideration in selecting DSA 2 as the preferred alternative. Quantitative studies of the indirect and cumulative effects of the project have been completed and are summarized in the Final EIS in Chapter 4 also. Results of the quantitative studies have been consistent with the results of the qualitative studies.
3	Protected Species	Concerns about cumulative effects on long-term viability of Dwarf Wedgemussel and other sensitive aquatic species. Assess avoidance and conservation measures to address these concerns.	These concerns have been noted in the <i>Preferred Alternative Report</i> . Additional studies of long-term viability of the DWM have been completed and are summarized in Chapter 4 of the Final EIS. Avoidance and minimization are also discussed in Chapter 4 of the Final EIS, and conservation measures are summarized in this section of the Final EIS. Quantitative studies of the indirect and cumulative effects of the project on water quality, which influences DWM viability, have been completed and are summarized in Chapter 4 of the Final EIS. Please also see USFWS comments 2, 3, and 7.

MEMORANDUM

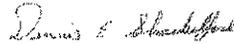
TO: Linda Culpepper, Division Director through Sharon Brinkley

FROM: Dennis Shackelford, Eastern District Supervisor
Solid Waste Section

DATE: December 10, 2015

SUBJECT: NEPA Review: Project # 16-0134 Wake/Johnston County
540 Triangle Expressway Southeast Extension

Digitally signed by Dennis
Shackelford
DN: cn=Dennis Shackelford,
o=Division of Waste Management
- Solid Waste Section, ou=DENR,
email=dennis.shackelford@ncden
r.gov, c=US
Date: 2015.12.10 15:20:50 -05'00'



The Division of Waste Management, Solid Waste Section (Division) has reviewed the Draft Environmental Impact Statement for the complete 540 Triangle Expressway Southeastern Extension, Transportation Improvement Projects R 2721, R 2828 and R 2829. The Division has seen no adverse impact on the surrounding community and likewise knows of no situations in the community, which would affect this project.

During construction the North Carolina Department of Transportation (NCDOT) should make every feasible effort to minimize the generation of waste, to recycle materials for which viable markets exist, and to use recycled products and materials in the development of this project where suitable. Any waste generated by this project that cannot be beneficially reused or recycled must be disposed of at a solid waste management facility permitted by the Division. The Division strongly recommends that the NCDOT require all Contractors to provide proof of proper disposal for all waste generated. Eight Permitted Facilities in Wake County are as follows: 9226-CDLF-2001, 9227-TRANSFER-2012, 9228-CDLF-2001, 9229T-TRANSFER-2009, 9230-CDLF-2000, 9231-CDLF-2012, 9234-TRANSFER-2012 and 9237T-TRANSFER-2010. Additional permitted facilities are listed on the Division of Waste Management, Solid Waste Section portal site at: <http://portal.ncdenr.org/web/wm/sw/facilitylist>.

Questions regarding solid waste management should be directed to Liz Patterson, Environmental Senior Specialist, Solid Waste Section, at (919-707-8286).

cc: Jason Watkins, Field Operations Branch Head
Liz Patterson, Environmental Senior Specialist
Jessica Montie, Compliance Officer

Fayetteville Regional Office

225 Green Street, Suite 714, Fayetteville, North Carolina 28301-5095
Main Phone: 910-433-3300 \ Internet: <http://www.ncdenr.gov>
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NCDEQ – Solid Waste Section Letter – 12/10/15

Comment Number	Primary Topic	Paraphrased Comment	Response
--	Solid Waste	The Division has seen no adverse impact on the surrounding community and likewise knows of no situations in the community, which would affect this project. Encourages NCDOT to minimize waste, recycle materials, and use recycled products to the extent possible in constructing the project.	Comments noted.



Waste Management
ENVIRONMENTAL QUALITY

PAT MCCRORY

Governor

DONALD R. VAN DER VAART

Secretary

LINDA CULPEPPER

Director

December 11, 2015

To: Linda Culpepper, Director
Division of Waste Management

From: Jenny Patterson, Environmental Senior Specialist, Compliance Branch *Jenny Patterson*
Hazardous Waste Section

Subject: Hazardous Waste Section Comments on the Complete 540 - Triangle Expressway Southeast
Extension (Wake and Johnston Counties)
Project Number: 16-0134

The Hazardous Waste Section (HWS) has reviewed the subject Environmental Assessment for the proposed project for the construction of the Complete 540 – Triangle Expressway Southeast Extension project which would extend the existing Triangle Expressway, from NC 55 Bypass in Apex to the US 64/US 264 Bypass in Knightdale, completing the 540 Outer Loop around the Raleigh metropolitan area.

Any hazardous waste generated from demolition, construction, operation, or maintenance and/or remediation (e.g. excavated soil) from the proposed project must be managed in accordance with the North Carolina Hazardous Waste Rules. The demolition, construction, operation, maintenance; and remediation activities conducted will most likely generate a solid waste, and a determination must be made whether it is a hazardous waste. If a project site generates more than 220 pounds of hazardous waste in a calendar month, the HWS must be notified, and the site must comply with the small quantity generator requirements. If a project site generates more than 2200 pounds of hazardous waste in a calendar month, the HWS must be notified, and the site must comply with the large quantity generator requirements.

Should any questions arise, please contact me at 336-767-0031.

Nothing Compares

State of North Carolina | Environmental Quality | Waste Management
1646 Mail Service Center | 217 West Jones Street | Raleigh, NC 27699-1646
919 707 8200 T

NCDEQ – Hazardous Waste Section Letter – 12/15/15

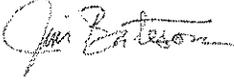
Comment Number	Primary Topic	Paraphrased Comment	Response
--	Hazardous Waste	Hazardous waste generated from implementing the project must be managed in accordance with NC Hazardous Waste Rules.	Comment noted.

North Carolina Department of Environmental Quality

Pat McCrory
GovernorDonald R. van der Vaart
Secretary

Date: December 7, 2015

To: Linda Culpepper, Director
Division of Waste Management

Through: Jim Bateson, Superfund Section Chief 

From: Adam Ulishney, Inactive Hazardous Sites Branch

Subject: SEPA Project Number #16-0134: Complete 540 Triangle Expressway
Southeast Extension-Wake and Johnston Counties, North Carolina

I have completed a database review of sites under the jurisdiction of the Superfund Section, and thirty (30) sites are located either within the study area or within a one mile search radius of the study area boundary. The identified sites are listed on the attached spreadsheet and shown on the attached map.

Files for the attached sites can be accessed by following the "Access Online Files" link on the Superfund Section website: <http://portal.ncdenr.org/web/wm/sf-file-records>. If you have any questions, please contact me at (919) 707-8210 or via email at adam.ulishney@ncdenr.gov.

Ec: Jim Bateson
Qu Qi
Pete Dorn

Site Name	Site ID	Program	Site Address	City	County
CARRIAGE HOUSE CLEANERS	DC920051	DSCA	537 Plaza CIR	Garner	Wake
JOY CLEANERS	DC920028	DSCA	4503 Fayetteville Rd	Raleigh	Wake
GREENBRIER CLEANERS	DC920032	DSCA	4207 Fayetteville Rd	Raleigh	Wake
Con-Agra	15036-11-92	BFA	4851 Jones Sausage Rd	Garner	Wake
Walmart – Garner	10066-06-92	BFA	4500 Fayetteville Rd	Garner	Wake
Purser Drive	10067-06-92	BFA	816 Purser Drive	Garner	Wake
Baker Property, Former	11018-07-92	BFA	Newspaper Way	Holly Springs	Wake
Clayton Ball Field	NCD980844732	PRLF	City Road	Clayton	Johnston
Elwood Pines Dump	NONCD0000729	PRLF	180 Newspaper Way	Holly Springs	Wake
Garner Trash Dump	NONCD0000604	PRLF	3175 Benson Rd	GARNER	Wake
Holly Springs Dump	NONCD0000605	PRLF	BASS LAKE RD	HOLLY SPRINGS	Wake
old holly springs dump/ Cary sanitary LF	NONCD0000665	PRLF	Holly Springs Rd	HOLLY SPRINGS	Wake
OLD RALEIGH LF #12	NONCD0000694	PRLF	SHIRLEY ST	RALEIGH	WAKE
WE Buffaloe, JR private dump	NONCD0000667	PRLF	US-70	GARNER	wake
CONAGRA FOODS, INC	NCD982116477	IHSB	4851 JONES SAUSAGE RD	GARNER	WAKE
CP&L NORTHERN DIVISION COMPLEX	NONCD0001061	IHSB	902 WITHERS RD; SR 1466	GARNER	WAKE
GUILFORD MILLS PLANT	NONCD0001064	IHSB	200 DICKENS ROAD	FUQUAY- VARINA	WAKE
BARWELL ROAD WELLS	NONCD0001322	IHSB	CHARLES ST & ANN AVE	RALEIGH	Wake
LAN-O-SHEEN, INC.	NONCD0001980	IHSB	201 DICKENS RD	FUQUAY- VARINA	Wake
MANGUM, MARY RESI./PRINCES GRO	NONCD0002029	IHSB	456 MAIN STREET	APEX	Wake
NAPA/LOCKAMY'S BODY SHOP (FORMER)	NONCD0002116	IHSB	1301 HIGHWAY 70 WEST	GARNER	Wake
NEWS & OBSERVER MECH BLV-SPILL	NONCD0002201	IHSB	1400 MECHANICAL BLVD.	GARNER	Wake
RALEIGH NEUSE RIVER WWTP METHANOL RELEAS	NONCD0002363	IHSB	NEUSE RIVER WWTP	RALEIGH	Wake
W.E. GARRISON COMPANY	NONCD0002683	IHSB	5820 FAYETTEVILLE ROAD	RALEIGH	Wake

Site Name	Site ID	Program	Site Address	City	County
WILLIAMS, E. W. FACILITY	NONCD0002728	IHSB	8200 FAYETTEVILLE ROAD	RALEIGH	Wake
NEEDMORE GENERAL STORE	NONCD0002882	IHSB	1921 BASS LAKE RD	FUQUAY-VARINA	WAKE
POOLE ROAD PCE	NONCD0002943	IHSB	POOLE RD	RALEIGH	WAKE
AMERICAN CONTRACT COATINGS	NONCD0001033	IHSB	HWY 55	APEX	WAKE
SBI FACILITY	NONCD0002448	IHSB	121 EAST TRYON STREET	RALEIGH	Wake
CASTLEBERRY PROPERTY	NONCD0001463	IHSB	451 EAST MAIN STREET	CLAYTON	Johnston

*DSCA-Dry-Cleaning Program

*BFA-Brownfields Program

*PRLF-Pre-Regulatory Landfill Program

*IHSB-Inactive Hazardous Sites Program

NCDEQ – Superfund Section Letter – 12/7/15

Comment Number	Primary Topic	Paraphrased Comment	Response
--	Hazardous Materials	Enclosed list of 30 Superfund sites in the vicinity of the project study area.	Comment noted. None of the sites listed will be affected by the preferred alternative.



Environmental Quality

PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

MEMORANDUM

To: Crystal Best
State Clearinghouse Coordinator
Department of Administration

FROM: Lyn Hardison *Lyn*
Division of Environmental Assistance and Customer Service
Permit Assistance & Project Review Coordinator

RE: 16-0134
Draft Environmental Impact Statement
Proposed project is for the Complete 540 Triangle Expressway Southeast Extension, TIP Projects – R-2721, R-2828 and R-2829
Wake and Johnston Counties

Date: December 17, 2015

1 [The Department of Environmental Quality has reviewed the proposal for the referenced project. Based on the information provided, several of our agencies have identified permits that may be required and offered some guidance to minimize impacts to the natural resources within the project area. The comments are attached for the applicant's consideration.

The Department encourages the applicant to continue to work with our agencies during the NEPA Merger Process and as this project moves forward.

Thank you for the opportunity to respond.

Attachment



NCDEQ – Division of Water Resources Letter – 12/7/15

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Water Resources	The project area includes nutrient sensitive waters, impaired 303(d) streams and Water Supply Critical Area; sediment and erosion control BMPs should be implemented to reduce the risk of nutrient runoff. To meet NCDOT's NPDES permit requirements, designs should include stormwater treatment.	NCDOT will implement sediment and erosion control Best Management Practices in accordance with <i>Design Standards in Sensitive Watersheds</i> , as appropriate. Additionally, NCDOT will adhere to the most recent version of the <i>North Carolina Department of Transportation Stormwater Best Management Practices Toolbox</i> manual. This is listed as a special project commitment in the Final EIS.
2	Water Resources	If project includes bridges within the Critical Area of a Water Supply, NCDOT may be required to include hazardous spill catch basins in the project area.	Comment noted. The preferred alternative does not cross the Water Supply Critical Area.
3	Water Resources	Riparian buffer mitigation may be required; NCDOT will need to provide a buffer mitigation plan prior to approval of the Water Quality Certification.	NCDOT will meet all riparian buffer mitigation requirements as necessary. See response to comment #1.
4	Water Resources	Documentation should include itemized impacts to wetlands and streams, with corresponding mapping. Mitigation plans required prior to issuance of 401 Water Quality Certification.	Comment noted. Itemized impacts to wetlands and streams are included in Chapter 4 of the Final EIS. For compensatory mitigation of R-2721, NCDOT currently proposes to use the NC DMS in-lieu fee program (on-site mitigation is being reviewed as an alternative approach). For R-2828, NCDOT currently proposes to use DMS for mitigation of impacts to wetland and riparian buffers along with private mitigation banks and DMS for impacts to streams (on-site mitigation is being reviewed as an alternative approach). For R-2829, no mitigation approach has been established since the anticipated construction date is more than five years in the future (2027).
5	Water Resources	Alternatives should consider design criteria that reduce stormwater impacts on streams and wetlands.	See response to comment #1.
6	Water Resources	Prior to issuance of 401 Water Quality Certification, NCDOT will need to demonstrate avoidance and minimization of impacts to wetlands and streams.	Avoidance and minimization measures for the preferred alternative were discussed with agencies throughout the NEPA process, including after publication of the Draft EIS. The coordination occurring after the Draft EIS is described in the <i>Stakeholder Involvement Report</i> and summarized in Chapter 3 of the Final EIS.
7	Water Resources	Mitigation will be required for impacts greater than 150 feet to any single perennial stream.	See response to comment #4.
8	Water Resources	Future documentation should include itemized impacts to wetlands and streams, with corresponding mapping.	Comment noted.
9	Water Resources	NCDOT should address potential impacts to aquatic environment and any mitigating factors.	NCDOT will meet all applicable requirements for obtaining 401 Water Quality Certification. See response to comment #1.
10	Water Resources	Analysis of cumulative and secondary impacts anticipated as a result of the project is required.	A quantitative water quality indirect and cumulative impacts analysis was completed after selection of the preferred alternative (after publication of the Draft EIS). This work is summarized in Chapter 4 of the Final EIS.

Appendix K1 – Interest Group Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
11	Water Resources	All impacts to jurisdictional wetlands, streams, and riparian buffers need to be included in final impact calculations, which need to be included in the 401 Water Quality Certification application.	NCDOT will submit all data required as part of the 401 Water Quality Certification.
12	Water Resources	Where streams must be crossed, the Division of Water Resources prefers bridges in lieu of culverts. When used, culverts should be countersunk.	Minimizing impacts through bridging has been discussed with the agencies during the NEPA process. Culverts will be buried in accordance with NCDOT Hydraulics Unit's 2004 "Pipe Burial Depths" reference.
13	Water Resources	Whenever possible, the Division of Water Resources prefers spanning structures.	Comment noted—this request will be considered during final design.
14	Water Resources	Bridge deck drains should not discharge directly into streams.	Comment noted. The design-build team(s) will be required to provide bridge drainage features that prevent direct discharge into surface waters.
15	Water Resources	Sediment and erosion control measures should not be placed in wetlands or streams.	See response to comment #1.
16	Water Resources	Borrow/waste areas should avoid wetlands as much as possible. Impacts to wetlands in borrow/waste area need to be disclosed in the 401 Water Quality Certification.	Comment noted. The design-build team(s) will be required to acquire applicable permits relative to borrow pits and comply with requirements for borrow pits, dewatering, and any temporary work in jurisdictional areas.
17	Water Resources	401 Water Quality Certification application will need to address proposed methods for stormwater management.	Comment noted. The application will propose methods for stormwater management.
18	Water Resources	Individual Permit application to USACE and corresponding 401 Water Quality Certification may be required due to magnitude of impacts to wetlands and streams. Approval will be contingent on appropriate avoidance, minimization, and mitigation.	NCDOT will obtain all applicable permits, including Section 404 Individual Permit and associated 401 Water Quality Certification. Avoidance, minimization and mitigation efforts to date are summarized in Chapter 4 of the Final EIS X . These efforts will continue as final design progresses.
19	Water Resources	If concrete is used during construction, dry work area should be maintained.	All currently approved NCDOT BMPs for the protection of surface waters will be implemented during project construction.
20	Water Resources	If temporary access roads or detours constructed, site should be graded to preconstruction contours and elevated. Disturbed areas should be seeded/mulched and planted with appropriate species.	Temporary access and haul roads other than public roads will be addressed in the Erosion and Sedimentation Control Plans. This commitment will be included in design-build team contracts.
21	Water Resources	Culverts and other structures in waters, streams, and wetlands should be placed below elevation of the streambed according to specified requirements.	Culverts will be buried in accordance with NCDOT Hydraulics Unit's 2004 "Pipe Burial Depths" reference.
22	Water Resources	If multiple pipes or barrels are required, they should mimic natural stream cross sections as closely as possible.	Final design for preferred alternative will be completed according to NCDOT's <i>Guidelines for Drainage Studies and Hydraulic Design</i> .
23	Water Resources	Any necessary foundation test borings should be noted in the document.	If additional geotechnical investigations are needed, subsurface investigations, including borings, will be conducted in accordance with current NCDOT Geotechnical Unit Guidelines and Procedures Manual. This commitment will be included in design-build team contracts.

Appendix K1 – Interest Group Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
24	Water Resources	Sediment and erosion control measures must be implemented and maintained in accordance with NC Sediment and Erosion Control Planning and Design Manual.	The final Design-Build Request for Proposals will require development of erosion control plan, to be implemented and maintained during construction. The plan will incorporate NPDES permit requirements. See response to comment #1.
25	Water Resources	All work in or adjacent to stream waters should be conducted in dry work area, incorporating approved BMP measures.	NCDOT will implement approved BMP measures from the most current version of NCDOT <i>Construction and Maintenance Activities Manual</i> .
26	Water Resources	Inherent inaccuracies in NWI wetland maps and soil survey maps require that qualified personnel perform onsite wetland delineations.	As discussed in the Natural Resources Technical Report, stream surveys and wetland delineations were performed by qualified personnel onsite for all project DSAs. Surveyed wetland and stream data were used to calculate impacts to jurisdictional resources as shown in the Draft and Final EIS.
27	Water Resources	Heavy equipment should be operated from the bank to minimize sedimentation.	See response to comment #25.
28	Water Resources	Riprap should not be placed in active channel or streambed.	All appropriate measures will be taken to protect streams and aquatic life based on NCDOT standard practices. Riprap is removed from streams where stream velocities are not erosive.
29	Water Resources	Riparian vegetation should be preserved to the maximum extent possible.	Appropriate measures will be taken to preserve and reestablish riparian vegetation to the maximum extent possible. NCDOT will require the NCDOT design-build team(s) to preserve trees along the project.

APPENDIX K2 LOCAL GOVERNMENT COMMENTS AND RESPONSES

Following publication of the Draft EIS, NCDOT received formal review comments from several local governments. Copies of each of these comments are on the following pages of this Appendix. For tracking purposes, each comment letter was assigned a document number—this number has been placed in the upper right corner of each comment letter. The table below lists each local government that submitted comments, the document number assigned to that local government’s comments, and the date of the comments. On each comment letter, the individual comment topics are noted with numbered brackets. A comment response table follows each comment letter. The comment response table lists each bracketed topic number, along with a summary of the comment, and the project team’s response to the comment.

Document Number	Agency	Date
b001	City of Raleigh – Mayor	1/5/16
b002	City of Raleigh – Office of Transportation Planning	1/8/16
b003	Town of Cary	1/7/16
b004	Town of Garner	12/16/15
b005	Town of Benson	1/7/16



City Of Raleigh
North Carolina

Nancy McFarlane
Mayor

January 5, 2016

Mr. Jamille Robbins
NC Department of Transportation
1598 Mail Service Center
Raleigh, NC 27699-1598

SUBJECT: Comments on Draft EIS, Complete 540 Triangle Expressway Southeast Extension

Mr. Robbins,

Transportation options are of utmost importance to the continued success and growth of the Triangle region. The City's Strategic Plan not only focuses on "Transportation & Transit" as one of six key focus areas, but highlights the need for resilient and sustainable public infrastructure in objectives under the "Growth & Natural Resources" and "Economic Development & Innovation" areas. It is with this strategic emphasis on mobility that the City of Raleigh continues to strongly support and encourage the Complete 540 effort by NCDOT and the future construction of the southern and eastern segments of the NC 540 Triangle Expressway. Our City Council reaffirmed the Eastern Wake Expressway (TIP Project R-2829) as its top priority request to NCDOT in your Transportation Improvement Program at our March 17, 2015 meeting.

City staff has reviewed the draft Environmental Impact Statement and its supporting technical reports to better understand the potential impacts associated with each study alternative. The City of Raleigh has concerns over potential impacts highlighted in the document and would like to submit comments on the following color-coded segments evaluated for the freeway corridor:

- **Red Route:** The City is concerned that the Red Route directly impacts the Swift Creek Watershed Area, a critical water source for Raleigh and Wake County residents, as well as the treatment and distribution infrastructure operated by the City in the Garner area. Based on these impacts, the City opposes all alternatives that utilize the Red Route.
- **Lilac Route:** The Lilac Route directly impacts 88.7 acres at our Public Utilities facility located off Wrenn Road, including water treatment sprayfields & at least one of two 25-acre holding ponds. The City opposes all alternatives that use the Lilac route.
- **Green Route:** The Randleigh Farm property represents a significant investment in the future by the City and Wake County as a site for proposed schools and potential development. The Green Route impacts those school sites and twice as much land area on the property,

Telephone: 919.996.3050

Office • 222 West Hargett Street • Post Office Box 590 • Raleigh, North Carolina 27602-0590

Recycled Paper

therefore the City opposes alternatives that use this route across the property, unless compelling evidence to the contrary is presented for this alignment.

- 1 ▪ **Brown Route:** The Brown Route represents significant impacts to the City's operations at the Neuse River Wastewater Treatment Plant (NRWWTP), including more than 80 acres of sprayfields and biosolids application fields and potentially the facility guardhouse. The route would also require the relocation of the City/County Law Enforcement Training Center shooting range where officers train to serve and protect the city's and county's residents. Based these impacts and potential impact to the City's solar array located near Brownfield Road, the City opposes alternatives that use the Brown Route north of Old Baucom Road.

2 The City would also like to express concern that the draft EIS and Utilities Impact technical report do not account for numerous water and sewer lines serving Garner, Wendell, and Raleigh that cross the corridor. These include a 30" force main along Raynor and Auburn-Knightdale Roads and two 72" mains along the Neuse River serving the NRWWTP, as well as a planned 96" line to the plant. The City will need to retain access in the project corridor to maintain and repair those lines in their current locations. The City requests NCDOT to update the Utility Impact Report and draft EIS to (a) identify impacts to water and sewer infrastructure on all routes and (b) revise or account for those impacts in future designs for the expressway.

3 The City also requests NCDOT consider alternative designs for the Auburn-Knightdale Road interchange. The existing designs do not account for the Hodge Road extension as shown in Raleigh and CAMPO transportation plans. The City requests NCDOT investigate interchange options that would facilitate the proposed Hodge Road extension to Auburn-Knightdale Road.

In light of these concerns, the City views the Orange Route as the least impactful to City interests and therefore recommends its endorsement as the preferred route for the portion of the Outer Loop west of I-40. East of I-40, the impacts to the City's wastewater treatment operations and the Law Enforcement Training Center (Brown Route) outweigh those impacts to the Randleigh Farm property (Green, Mint, and Tan segments). The Council has taken previous action in January 2011 opposing the Tan Route due to community impacts (see attached). The Mint Route minimizes the impacts to the Randleigh property and proposed school sites, and therefore is the City's preferred route for the Eastern Wake Expressway. Based on these preferred routes and segments, the City endorses Detail Study Alternative 2 as the preferred alternative for this project.

The City would like to thank NCDOT for the opportunity to submit our comments and endorsements based on review of the draft EIS. City staff will be providing additional technical comments on the document and the supporting reports. If you have questions about this letter or the City's comments, please contact Todd Delk at 919-996-2661 or todd.delk@raleighnc.gov.

Sincerely,



Nancy McFarlane
Mayor

Attachment
NM/td

Cc: Nick Tennyson, NC Secretary of Transportation
Beau Memory, NC Turnpike Authority Executive Director
Joey Hopkins, NCDOT Division 5 Engineer
Jim Hartmann, Wake County Manager
Chris Lukasina, CAMPO Executive Director



City Of Raleigh
North Carolina

Charles Meeker
Mayor

January 11, 2011

David W. Joyner, Executive Director
NC Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699-1578

SUBJECT: Comments on TIP Project R-2829, Eastern Wake Expressway

Dear Mr. Joyner:

At our January 4, 2011 meeting, the Raleigh City Council received comments from the general public regarding alternatives under consideration for the Southeast Extension of the Triangle Expressway. The portion of your project within the City's jurisdiction falls under TIP Project R-2829 (Eastern Wake Expressway). These residents spoke out specifically in opposition to the Tan Corridor that has been developed by the NC Turnpike Authority for this segment of the project.

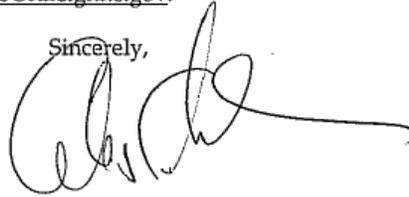
I understand that your project team has met with City staff from multiple departments on several occasions to discuss alignment issues along the Eastern Wake Expressway. Working out the details on a final alignment for this corridor has been a priority for the City for many years, especially with regards to getting out ahead of growth in this area and providing County residents with improved predictability.

The City Council voted unanimously to oppose the Tan Corridor as it is currently proposed, and we have requested that City staff continue to work with your project team to develop viable alternatives for consideration in your Environmental Impact Statement (EIS). We understand that the EIS process is technical in nature, but we urge you continue to take the concerns of area residents into account as you proceed with your study. The completion of the Eastern Wake Expressway as part of the larger Raleigh Outer Loop is important to the continued growth of the City and its neighboring communities. We appreciate the efforts of the Turnpike Authority to move this project forward.

Mr. David W. Joyner - Comments on TIP Project R-2829, Eastern Wake Expressway
January 11, 2011 - Page 2

If you have additional questions about our comments, please contact Eric Lamb
at (919) 516-2161 or by email at eric.lamb@raleighnc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. Meeker', with a long horizontal flourish extending to the right.

Charles C. Meeker
Mayor

CCM/ejl

Cc: City Councilors
J. Russell Allen - Raleigh City Manager
David Cooke - Wake County Manager
Mitchell Silver, AICP - Raleigh Planning Director
Carl R. Dawson, Jr., PE - Raleigh Public Works Director
Brad Bass, AICP - Garner Planning Director

City of Raleigh – Mayor Letter – 1/5/16

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Alternatives	City of Raleigh has concerns about Red, Lilac, Green, and Brown Corridors.	Comment noted. Preferred alternative (DSA 2) does not include the Red, Lilac, or Brown Corridors. Portions of the Green Corridor are part of the preferred alternative both south and north of the Mint Corridor, but the portions of the Green Corridor that are part of the preferred alternative are not the portions in the vicinity of Randleigh Farm.
2	Utilities	City is concerned that Draft EIS and Utility Impact Report don't fully address all potential impacts to water and sewer infrastructure.	NCDOT has coordinated with and will continue to coordinate with the City of Raleigh relative to water and sewer infrastructure along and crossing the preferred alternative. Additional project related utility information is included in the Utilities Analysis and Routing Report (preliminary) and has been incorporated into the design plans and the Final EIS.
3	Design	City would like design of Auburn-Knightdale Road interchange to account for planned Hodge Road extension.	NCDOT has coordinated with the City of Raleigh concerning the potential extension of Hodge Road to Auburn-Knightdale Road. Hodge Road can be extended to connect to Auburn Knightdale Road between the existing Neuse River Bridge on Auburn Knightdale Road and the new ramps associated with the 540 interchange at Auburn Knightdale Road. It is not practicable or operationally desirable to incorporate the Hodge Road extension into the 540 interchange at Auburn Knightdale Road.
4	Alternatives	Raleigh prefers the Orange corridor and the Mint Corridor because they minimize impacts to City interests relative to the other corridors.	The City's preferences have been noted in the <i>Preferred Alternative Report</i> , which identifies DSA 2 (Orange to Green to Mint to Green Corridors) as the preferred alternative.



City of Raleigh North Carolina

January 8, 2016

MEMORANDUM

TO: Mr. Jamille Robbins, PE, NCDOT

FROM: Todd Delk, PE, Senior Planning Engineer

RE: Comments on NC 540 Draft Environmental Impact Statement

Thank you for the opportunity to review the Draft Environmental Impact Statement (DEIS) for the Complete 540 project. As stated in the Mayor's letter to NCDOT, staff from multiple City departments have coordinated to review the document and its supporting technical reports in order to better understand the findings and potential impacts associated each study alternative.

City staff has concerns over the potentially major impacts to City facilities, operations, and other interests within our planning jurisdiction as outlined below.

PUBLIC UTILITIES

Water Supply Infrastructure: The Red Route (Alternatives 6, 7) directly impacts numerous City of Raleigh water transmission/distribution mains, particularly where the City provides service in the Garner area & near Dempsey Benton Treatment Plant. While some of these impacts may be below the \$250,000 relocation cost threshold to be reported in the Utility Impact report, discussion of the impacts are not acknowledged nor accounted for in DEIS or Utility Impact Report.

The Red Route also directly impacts 6.7 acres of critical watershed area for Swift Creek and Lake Benson, the primary water source for the City's Dempsey Benton Water Treatment Plant. As noted in the DEIS, the watershed is managed through a NCDEQ management plan adopted by General Assembly in 1998 to limit development and protect water quality. The City would request to be part of the "extensive coordination with NCDEQ & USEPA officials to reach agreement for protection" noted in the DEIS.

Sewer Infrastructure: The DEIS and Utility Impact Report fails to identify several major sewer pipelines that will be impacted by Triangle Expressway Southeast Extension:

- The Red Route crosses the NC Highway 50 sewer force main (30") adjacent to Raynor Road. Designs for the NC 540 overpass at this location will need to ensure future access to the line for operations and maintenance.
- The Green, Mint, Tan, and Brown Routes all cross two parallel 72" sewer interceptors located south of the Neuse River. The City is also planning for a future 96" interceptor

north of the Neuse River to serve the Neuse River Wastewater Treatment Plant (NRWWTP). The lines are not accounted for in DEIS or Utility Impact Report and the current roadway designs will require revisions to provide access for operation and maintenance of the lines. Due to the volume handled by the existing interceptors, relocations are not advised.

1

Water Treatment Sprayfields & Holding Ponds at Wrenn Road Facility: The DEIS and Utility Impact Report identify the Orange Route (Alts. 1-5) directly impacts 10.8 acres of water treatment sprayfields on the site, and the Lilac Route (Alts. 8-17) directly impacts 88.7 acres including water treatment sprayfields & at least one of two 25-acre holding ponds. Based on the designs shown in the public hearing maps, we request confirmation that the Lilac Route would avoid impacts to either holding pond.

Wastewater Sprayfields, Biosolids Fields, and facilities at NRWWTP: The DEIS and Utility Impact Report identify that the Teal and Brown routes (Alts. 4, 5, 11, 12, 16, 17) would directly impact 81.5 and 87.2 acres, respectively, of wastewater treatment sprayfields & permitted biosolids application fields, as well as agricultural activities on fields.

Not noted in the DEIS, the Brown Route may also impact the NRWWTP facility guardhouse located on Battle Bridge Road and a city-owned solar array southeast of the intersection of Brown Field and Battle Bridge Roads.

Based on the impacts above, the City of Raleigh Public Utilities Department requests a coordination meeting with NCDOT and its consultants to discuss utility impacts along the routes listed above. The City also requests that the Utility Impact Report, as well as the subsequent information and cost estimates reported in the DEIS, be updated to include the Public Utilities Department in the Utility Contact Lists and to include those water and sewer infrastructure impacts overlooked in the report’s analysis.

COMMUNITY IMPACTS

Randleigh Farm property: The DEIS identifies that the Green Route (Alts. 1, 6, 8, 13) impacts 62.1 of 415-acre site owned by the City and Wake County for future development. The route effectively bisects the property, and impacts two proposed Wake County Public School System school sites. The Tan and Mint Routes (Alts. 2, 3, 9, 10, 14, 15) reduce the impacts to Randleigh Farm by nearly half with little or no impact to proposed school sites.

2

City/County Law Enforcement Training Facility: The Brown Route (Alts. 4, 5, 11, 12, 16, 17) directly impacts the 9.14 acres of public safety training campus, including a 42-lane outdoor firing range and a live-fire shoot house facility. While the DEIS states that the facility “could likely still function in its current use,” the loss of the firing ranges would significantly impact training and certification activities that take place on the site, according to the Raleigh Police Department.

3

Neuse River Greenway Trail: The Mint, Tan, and Brown Routes (Alts. 2, 3, 7, 9, 10, 14, 15) all relocate the Neuse River Greenway Trail through a culvert under the proposed expressway. If one of these routes is chosen, the City requests that NCDOT investigate bridging options where the greenway and the sewer lines discussed earlier in the Public Utilities section could be co-located. With the Brown Route, staff from the Parks, Recreation, and Cultural Resources

3 [(PRCR) Department has no objection to the proposed relocation of the greenway to the east side of NC 540 from its current location adjacent to Brown Field Road.

4 [PRCR staff requests that the design plans account for all future greenway corridors in municipal plans crossing the NC 540 alignment and consider the provision of greenways or easements within the future rights-of-way to link these crossings.

5 [**Cemetery:** Please note there is a cemetery located on the east side of 2898 Brown Field Road. This is a potential impact that should be accounted for in the DEIS.

Residential relocations associated with Tan Route: City Council took action in January 2011 opposing the Tan Route due to community impacts. The letter to NCDOT is attached to the Mayor's letter.

TRANSPORTATION

6 [**Hodge Road Extension:** The DEIS fails to acknowledge the planned extension of Hodge Road, which is shown as a proposed major thoroughfare in the adopted CAMPO Comprehensive Transportation Plan and as a proposed four-lane avenue in the City of Raleigh's 2030 Comprehensive Plan. For all of the eastern routes except the Brown Route, the DEIS and designs should account for this proposed street extension. The interchange design plans at/near Auburn-Knightdale Road should be revised to better facilitate the proposed street connection, with consideration of moving the southbound ramps from the northwest quadrant to the southwest quadrant that could align opposite from the Hodge Road extension at Auburn-Knightdale Road.

INDIRECT AND CUMULATIVE IMPACTS

7 [The City's Long Range Planning staff concurs with the findings that the Red and Purple/Blue routes would encourage development patterns different from those envisioned in the local plans of our neighboring communities. The City has concerns that the Red Route would encourage and induce more development in the Swift Creek Watershed, potentially impacting water quality and increasing water treatment costs for the City. The City has concerns that the Purple/Blue Route will encourage more suburban growth patterns counter to area land use plans, increasing regional VMT and congestion.

OTHER DEIS COMMENTS

8 [One page 15, please note and describe what scenario the 2035 network figure represents (Existing Network, Existing Network + Committed Projects, MTP, or other scenario).

9 [On page 40, the discussion that the capital, operating, and maintenance costs of transit improvements not being fully funded by the fares is not valid when discussing the proposed tollway improvements where the construction, operations, and maintenance of the facility will not be covered by toll revenues and require gap funding.

Again, thank you for the opportunity to provide comments on the DEIS. If you have questions or need clarification on our comments, please contact me at 919-996-2661 or at todd.delk@raleighnc.gov.

Cc: Tansy Hayward – Assistant City Manager
Ken Bowers – City Planning Director
Eric Lamb – Transportation Planning Manager
Robert Massengill – Public Utilities Director
Diane Sauer – Parks, Recreation & Community Resources Director
Joseph Perry – Deputy Chief, Raleigh Police Department
Mike Kennon – Traffic Operations Manager, Public Works

City of Raleigh – Office of Transportation Letter – 1/8/16

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Utilities	City is concerned that the Draft EIS and Utility Impact Report do not fully address all potential impacts to water and sewer infrastructure.	NCDOT has coordinated with and will continue to coordinate with the City of Raleigh relative to water and sewer infrastructure along and crossing the preferred alternative (DSA 2/Orange to Green to Mint to Green Corridors). Additional project related utility information is included in the Utilities Analysis and Routing Report (preliminary) and has been incorporated into the design plans and the Final EIS.
2	Human Environment	Brown Corridor impacts to the firing ranges at the Raleigh police training facility would significantly affect the site's activities.	Comment noted. The preferred alternative will not affect this facility.
3	Human Environment	If Mint, Tan, or Brown Corridor is selected, City requests that NCDOT investigate bridging options to co-locate the Neuse River Greenway Trail and sewer lines.	The preliminary design of the preferred alternative (Mint Corridor) has been coordinated with the City of Raleigh to provide for crossing provision for the Neuse River Greenway and for existing and planned utilities. The greenway will be accommodated under the bridge that will cross the Neuse River.
4	Human Environment	City requests design plans account for all planned greenway crossing 540 alignment and consider greenways/easements within ROW to link.	The preliminary design of the preferred alternative accounts for all planned greenways and has been coordinated with the City of Raleigh. Greenways will be accommodated within the highway right of way in the manner normally used by NCDOT through coordination with the locality responsible for the greenway.
5	Cemetery	Draft EIS should account for cemetery on east side of 2898 Brown Field Road.	The cemetery on the east side of 2898 Brown Field Road is in the Brown Corridor and this was not selected as part of the preferred alternative.
6	Design	City would like design of Auburn-Knightdale Road interchange to account for planned Hodge Road extension.	NCDOT has coordinated with the City of Raleigh concerning the potential extension of Hodge Road to Auburn-Knightdale Road. Hodge Road can be extended to connect to Auburn Knightdale Road between the existing Neuse River Bridge on Auburn Knightdale Road and the new ramps associated with the 540 interchange at Auburn Knightdale Road. It is not practicable or operationally desirable to incorporate the Hodge Road extension into the 540 interchange at Auburn Knightdale Road.
7	Indirect and Cumulative Effects	City agrees that Red and Purple/Blue corridors would encourage development patterns in conflict with local plans.	Comment noted.
8	Editorial	On page 15 of the Draft EIS, indicate what scenario the 2035 network figure represents (existing network, existing network + committed projects, MTP, etc.)	This is noted in the Draft EIS errata as presented in the Final EIS.
9	Editorial	On page 40 of the Draft EIS, discussion of costs of transit not being fully funded by fares should consider that construction, operations, and maintenance of toll road will require gap funding in addition to toll revenues.	This is noted in the Draft EIS errata as presented in the Final EIS.

From: Tyler Bray <Tyler.Bray@townofcary.org> on behalf of Tyler Bray
Sent: Thursday, January 7, 2016 2:13 PM
To: complete540@ncdot.gov
Subject: DRAFT EIS Comments: Town of Cary

Greetings,

The following comments are submitted on the Complete540 DRAFT EIS to NCDOT from the Town of Cary. If you have any questions or need additional information, please do not hesitate to contact me.

Thank you,
Tyler Bray

- 1 —● Page 31: The heading at the bottom of the page should be moved to the top of the next page.
- 2 —● Page 32: The heading on the bottom left should be moved to the top right.
- 3 —● Page 73: There should be a dash '-' after the word Services instead of a period '.'.
- 4 —● Page 81: The word 'are' in the last paragraph should read 'area'.
- 5 —● Page 87: The heading is missing the word 'on'.
- 6 —● There are two greenways in the Town of Cary that are affected by the proposed Orange Route. They are the Optimist Farm Greenway and the Camp Branch Greenway. Please ensure that connections are shown and constructed so that these greenways will be accommodated with a grade separation across/under NC540 if it is designed/constructed in this location. The Town of Cary specifications calls for culverts with this recommendation to be a 12'x12' box culvert poured in place.

Tyler Bray, PE
Transportation Planning Engineer
Transportation & Facilities Department
P.O. Box 8005, Cary, NC 27512-8005
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Visit us on the Web @ www.townofcary.org

In keeping with the NC Public Records Act, e-mails, and all attachments, may be released to others upon request for inspection and copying without prior notification.

Town of Cary Email – 1/7/16

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Editorial	On page 31 of the Draft EIS, heading at bottom of page should be moved to top of next page.	All section headings in Final EIS have been placed on pages with their subsequent text.
2	Editorial	On page 32 of the Draft EIS, heading on bottom left should be moved to top right.	All section headings in Final EIS have been placed on pages with their subsequent text.
3	Editorial	On page 73 of the Draft EIS, use a dash instead of a period after the word "Services."	This is noted in the Draft EIS errata as presented in the Final EIS.
4	Editorial	On page 81 of the Draft EIS, the word "are" in the last paragraph should be "area."	This is noted in the Draft EIS errata as presented in the Final EIS.
5	Editorial	On page 87 of the Draft EIS, heading is missing the word "on."	This is noted in the Draft EIS errata as presented in the Final EIS.
6	Design	Plans should show connections to accommodate Optimist Farm Greenway and Camp Branch Greenways with grade separations across/under 540. Town specifications call for 12' x 12' box culverts.	Both the Optimist Farm Greenway and Camp Branch Greenway are located in areas where there are drainage culverts planned. These locations will easily facilitate an additional 12' x 12' greenway culvert.



Ronnie S. Williams
MAYOR

Town of Garner

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December 16, 2015

Eric Midkiff, P.E.
Project Development - Western Region
North Carolina Department of Transportation
1548 Mail Center
Raleigh, NC 27699-1548

Re: Draft Environmental Impact Statement
Complete 540 Triangle Expressway Southeast Extension Study
Town of Garner Comments

Dear Mr. Midkiff:

This letter presents an official list of the Town of Garner concerns regarding the above referenced matter. The following points are major reasons why the Town of Garner believes why the North Carolina Department of Transportation should remove the red and lilac corridors from further study.

1. **The red corridor is extremely detrimental to current and future parks and recreation facilities in the Town of Garner.**

The red corridor impacts the northern edge of the recently opened **White Deer Nature Park**, the Town's first LEED Gold certified facility. This is a passive park facility with an environmental education center, trails, picnic shelters, and playgrounds.

The red corridor will also obstruct and wipe out a portion of the **South Garner Greenway** leading from Timber Drive to **White Deer Park**. This greenway facility connects 4.2 miles of a neighborhood loop sidewalk in central Garner with a 2.8 mile greenway trail through **White Deer and Lake Benson Parks**. The red corridor completely severs the pedestrian connection between these parks and the 4.2 mile sidewalk loop serving hundreds of homes in central Garner.

The red route obliterates and eliminates **George W. Bryan Nature Park**. Bryan Nature Park is a 20-acre nature park facility located east of Highway 50 near the South Creek neighborhood.

The red corridor will also impede and negatively impact the Town's 35-acre **Timber Drive Park property**, designated as a future site of an aquatics facility and/or community center.

The Triangle Area YMCA owns a tract of land on Aversboro Road that will be the location of a new Poole Family YMCA. The plans have been submitted to the Town for review. Construction is planned to begin in 2016. The red corridor will impact this property's availability for use as a community recreation facility.

2. The red corridor will disrupt long-range and orderly growth in areas designated for future development by the Town's Comprehensive Growth Plan.

The Town's major future growth area is generally referred to as the White Oak area. It lies south of US 70, west of I-40, east of Highway 50, and north of Clifford Road. Significant infrastructure investment and planning decisions have been made to promote future growth and development in this area. Capital investments of over 3 million dollars have been made in roads, major water lines, and sewer trunk lines in this portion of the community to support future development. Tremendous uncertainty exists if the red corridor effectively bisects this future growth district.

The Town's Comprehensive Growth Plan and the 2010 Garner Transportation Plan both recommend a new interchange at I-40 and White Oak Road to serve an emerging Regional White Oak Mixed Use Center. The red corridor would likely prevent this future interchange from ever occurring while creating some challenges for future growth in this important section of Town that will require significant additional study if the red corridor is selected.

3. The red corridor severely damages the Town's primary industrial recruitment area.

The red corridor obliterates **Greenfield South Business Park**, one of Garner's premiere locations for jobs and industry. As a result, the red corridor will create a loss of significant tax base and the community will witness the demise of an area that has been programmed for non-residential growth that is vital to the Town.

In 2015, 151 acres of this park was inducted in to the Duke Site Readiness Program. This program helps communities, such as Garner, develop their economic development assets by providing professional assistance and counsel on how to make properties market ready for development. This site has potential to be one of Garner's largest employment centers and will play a key role to a brighter economic future for our community. The Red Route, if chosen, would have a tremendous negative impact on this site rendering the Town's and our partner's efforts in developing one of the largest contiguous sites in Wake County and make it unsuitable for large industrial and commercial development.

There are 26 commercial/industrial lots (developed & vacant) impacted by the red corridor with a total Wake County tax value of over 30 million dollars.

4. The red corridor splits and disconnects the Town of Garner again.

US Highway 70 split the Town of Garner and literally divided the town into two sections in the 1950's. The community has been striving to recover from this poor

planning decision since that time. Garner cannot afford to be divided again by a road as large as the Triangle Expressway. If the orange protected corridor is selected as the preferred route, the Town can naturally grow towards the new expressway in a managed fashion over the next 25-35 years. Deference should be given to wise long-range planning as exemplified in the protected orange corridor route.

5. The red corridor will have negative water quality impacts to Lake Benson.

The red corridor crosses into portions of the critical areas of **Lake Benson** and **Swift Creek**. The corridor is located immediately upstream of Lake Benson and crosses the majority of the tributaries feeding the lake. This location and proximity would increase the likelihood of potential drinking water contamination. Any spill from a roadway disaster would drain directly into Lake Benson. With the completion of the \$90 million **Dempsey Benton Water Treatment Plant**, this lake serves as a substantial potable water supply for the Metro Raleigh area.

Correspondingly, the road construction impact on **Lake Benson** is an area of concern with the red corridor. The aforementioned proximity and drainage flow direction could lead to lake contamination and/or potential reduction in the safe yield of the lake due to potential sedimentation as a result of the construction process.

In addition to the lake itself the red corridor will negatively impact the existing water transmission and distribution infrastructure associated with the new water treatment plant. This is also a concern for the existing wastewater collection infrastructure located in the red corridor.

6. The red corridor fails to provide adequate access to the Clayton Bypass facility.

The red corridor fails to provide efficient and effective transportation by not directly servicing traffic generation from the Clayton, Smithfield, Selma and the eastern Johnston County region.

Pushing traffic via a more northern route as depicted by the red corridor does not accomplish needed goals of accommodating travelers from areas south of Garner that need to travel westward towards Holly Springs, Morrisville and Research Triangle Park.

The red corridor also puts an interchange that would be just over one mile from the existing I-40/US 70 interchange. This would appear to create difficulty for proper traffic circulation and flow for the traveling public.

7. The red corridor will have significant and direct impacts on thirteen (13) Garner neighborhoods.

The following neighborhoods are directly impacted by the red corridor: Lakewood; Heather Hills; Breezeway; Vandora Pines; Camelot; Breezeway West; Breezeway East; Summer's Walk; Van Story Hills; Heather Ridge; Heather Woods, Forest Landing; and the Village at Aversboro.

We estimate approximately 510 residential lots in Garner could be impacted by the red corridor representing a tax value of over \$106,500,000. This represents a significant cost to the Garner community in terms displacement and relocation of numerous families but also a significant impact to our tax base.

8. The following points summarize the Town’s concerns regarding the lilac corridor, especially the portions nearest the Garner Town Limits:

- It would remove significant portions of the Town’s industrial tax base;
- It causes a large number of residential relocations for persons in the Greater Garner area;
- It traverses directly through a City of Raleigh Wastewater Biosolids facility located just south of the Garner Town Limits;
- It changes land use for a large segment of our Town’s future growth area and;
- It fails to connect directly with the Clayton Bypass.

1 [The Town of Garner is fundamentally opposed to both the red and lilac corridors illustrated on the 2015 Corridor Public Hearing Maps. Therefore, the Town strongly requests that both corridors be eliminated from further consideration at this time. The Town of Garner strongly supports the original protected corridor as illustrated by the Orange Corridor on the 2015 Corridor Public Hearing Maps as the preferred choice for the development and construction of the I-540 Triangle Expressway Southeast Extension. The community has long expected growth along this protected corridor and has planned for it appropriately.

Many land use decisions have been made based upon citizens and community leaders assumptions about the protected corridor and its future use. We respectfully request the North Carolina Department of Transportation’s formal and serious consideration of our concerns regarding this matter.

Sincerely,



Ronnie S. Williams
Mayor



Hardin Watkins
Town Manager

cc: Town Council Members

RESOLUTION NO. (2015) 2277

**A RESOLUTION STATING THE TOWN OF GARNER TOWN COUNCIL'S POSITION REGARDING
ALIGNMENT OF TRIANGLE EXPRESWAY SOUTHEAST EXTENSION**

WHEREAS, the proposed 540 Triangle Expressway has been a fundamental transportation facility underpinning for more than 20 years of local land use and transportation decisions of the Town of Garner and other local governments of Wake County;

WHEREAS, the Town of Garner historically has utilized the protected 540 corridor proposed in earlier designs to make key planning decisions for both existing and future development in Garner; and

WHEREAS, any change in plans to relocate this roadway away from its previously designated location (orange route) will have an adverse impact on the Garner community; and

WHEREAS, the "red" route shown on **2015 Corridor Public Hearing Maps** with a course north of Lake Benson is a very poor land use decision that will cause tremendous disruption to existing homes and businesses in Garner; and

WHEREAS, numerous Garner homeowners and landowners have relied upon the protected corridor route (orange) for many years as they have made investment decisions. A change to the planned route will be burdensome, chaotic, and unfair; and

NOW THEREFORE, BE IT RESOLVED, the Town of Garner would like to see the Triangle Expressway Southeast Extension constructed, however, the Town is fundamentally opposed to the "red route" north of Lake Benson; and

BE IT FURTHER RESOLVED that the Town Council supports use of the original protected corridor design as illustrated in orange on the 2015 Corridor Public Hearing Maps as the preferred choice for the development and construction of the I-540 Triangle Expressway Southeast Extension.

Adopted this 15th day of December 2015.



ATTEST:

Stella Gibson, Interim Town Clerk

Ronnie S. Williams, Mayor

Town of Garner Letter – 12/16/15

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Alternatives	Garner opposes the Red and Lilac Corridors due to their potential impacts on Garner interests. Garner supports the Orange Corridor.	The Town's preferences have been noted in the <i>Preferred Alternative Report</i> . FHWA and NCDOT have identified DSA 2 as the preferred alternative based on information gathered for the Draft EIS and on stakeholder comments received at hearings after release of the Draft EIS. FHWA will finalize its decision following the NEPA process.

MAYOR
WILLIAM W. MASSENGILL, JR.

MAYOR PRO-TEM
FREDERICK D. NELSON, JR.

COMMISSIONER
WILL T. CHANDLER
JOHN R. BONNER
CASANDRA P. STACK
JERRY MEDLIN
DR. R. MAX. RAYNOR



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TOWN MANAGER
MATTHEW R. ZAPP

TOWN CLERK
CONNIE M. SORRELL

FINANCE OFFICER
KIMBERLY T. PICKETT

TOWN ATTORNEY
R. ISAAC PARKER

Mr. Jamille Robbins
Complete 540 Project
NC Department of Transportation
1598 Mail Service Center
Raleigh, NC 27699-1598

January 7, 2016

Dear Mr. Robbins,

Thank you for your consideration of our support for the Complete 540 Project. The Town of Benson is committed to the vitality of its citizens and sustainable planning and development. The Complete 540 Project is an important component to the ease of access and quality of life for our citizens and businesses. While no one route is devoid of impacting the natural and human environments, construction of the route is necessary with increased growth and traffic congestion in the Triangle region.

1 [Benson supports the proposed "orange" corridor. This corridor would assist our citizens that work in Wake County and RTP by decreasing their commute time. Furthermore, truck traffic heading west from Benson will find the "orange" corridor less encumbering than traveling through I-40 during peak commute times.

We will continue to follow information related to Complete 540 as it becomes available. This project plays a critical role in our strategic planning efforts and we look forward to its construction. If you have any questions or comments, please do not hesitate to contact us.

Best Regards,

Karissa Bergene
Economic Development Director
Town of Benson
kbergene@townofbenson.com

Town of Benson Letter – 1/7/16

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Alternatives	Benson prefers the Orange Corridor because it would best serve traffic to and from Benson.	The Town's preferences have been noted in the <i>Preferred Alternative Report</i> . FHWA and NCDOT have identified DSA 2 as the preferred alternative based on information gathered for the Draft EIS and on stakeholder comments received at hearings after release of the Draft EIS. FHWA will finalize its decision following the NEPA process.

APPENDIX K3 INTEREST GROUP COMMENTS AND RESPONSES

Following publication of the Draft EIS, NCDOT received formal review comments from several area interest groups. Copies of each of these comments are on the following pages of this Appendix. For tracking purposes, each comment letter was assigned a document number—this number has been placed in the upper right corner of each comment letter. The table below lists each interest group that submitted comments, the document number assigned to that group’s comments, and the date of the comments. On each comment letter, the individual comment topics are noted with numbered brackets. A comment response table follows each comment letter. The comment response table lists each bracketed topic number, along with a summary of the comment, and the project team’s response to the comment.

Document Number	Agency	Date	Page Number
c001	Southern Environmental Law Center	1/8/16	
c002	Regional Transportation Alliance	12/10/15	
c003	Triangle Greenways Council	12/12/15	
c004	Morrisville Chamber of Commerce	1/8/16	

SOUTHERN ENVIRONMENTAL LAW CENTER

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601 WEST ROSEMARY STREET, SUITE 220
CHAPEL HILL, NC 27516-2356

Facsimile 919-929-9421

January 8, 2016

VIA E-MAIL AND FEDEX

Mr. Eric Midkiff, P.E.
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548
complete540@ncdot.gov

RE: Complete 540: Draft Environmental Impact Statement

Dear Mr. Midkiff:

On behalf of Sound Rivers and Clean Air Carolina, the Southern Environmental Law Center (“SELC”) submits the attached comments on the Draft Environmental Impact Statement (“DEIS”) for the Complete 540 project. The DEIS makes clear that this project cannot move forward in its current form. The extremely high cost of the project—over \$2 billion—coupled with the low expected travel time savings for most commuters renders the project an absurd waste of North Carolina’s transportation resources. Moreover, the DEIS makes clear that each of the toll road alternatives would do severe damage to the natural environment, including devastating massive areas of wetlands, polluting impaired water bodies and imperiling the existence of federally endangered species.

Of the 17 alternatives proposed by NCDOT, it is clear that Detailed Study Alternatives (“DSA”) 6 and 7 are the least environmentally damaging. While still tremendously destructive, they would impact significantly fewer acres of wetlands and fewer linear feet of streams than the other alternatives, and are the only alternatives that would avoid placing a federally endangered species in jeopardy. Further, while all 17 alternatives have no financial path forward, DSAs 6 and 7 are also among the most “practicable” of a range of impracticable alternatives; they rank among the lowest in terms of relocations and have one of the lowest price tags; indeed once all costs are accounted for (such as the cost of a mussel propagation facility) it is likely that DSAs 6 and 7 will be the least costly choice. Nonetheless, the community of Garner has made clear that DSAs 6 and 7 are not acceptable options, and it is imperative that NCDOT search for other alternative solutions to meet the transportation need in the study area.

The comments below call into question the advisability of proceeding further with the \$2.5 billion toll highway. The key shortcomings of the proposed toll highway and NCDOT’s review of the project include the following:

- 1 [• The high price tag—\$2.1 to 2.6 billion—represents \$1.2 billion more than NCDOT has allocated to the project for the next decade, rendering the road impracticable.

- 2 [• The toll highway proposal was scored in the NCDOT’s data-driven STI process using cost data that is significantly lower than current cost estimates. The project should be rescored and is unlikely to score high enough to obtain funding.
- 3 [• NCDOT’s failure to project who is likely to use the toll highway and how much revenue it is likely to generate leaves serious questions about the extent to which the cost of this exclusive toll highway will be shouldered by taxpayers.
- 4 [• NCDOT’s data suggest the overwhelming majority of commuters in the study area would not experience any meaningful travel time savings.
- 5 [• For the commuters who will experience time savings, those benefits are expected to average 10 minutes or less, meaning the project will cost over \$200 million for every minute of time saved.
- 6 [• NCDOT failed to look at a range of options that would be substantially less expensive and cause significantly less destruction to communities and the environment.
- 7 [• Each toll highway alternative will force hundreds of families to relocate and physically divide existing communities.
- 8 [• All toll highway alternatives would cause extensive damage to the natural environment, including direct impacts to dozens of acres of wetlands, several miles of streams, and hundreds of ponds.
- 9 [• The toll highway would jeopardize the continued existence of the endangered dwarf wedgemussel, and may affect several more soon-to-be federally listed species as well as other species of concern.
- 10 [• The toll highway would impact a variety of public parks and historic places—and every single highway alternative would cross the Neuse River Trail.
- 11 [• The DEIS relies on methodologies that have recently been declared illegal by a Federal Court in North Carolina.

I. INTRODUCTION

The National Environmental Policy Act (“NEPA”) is the nation’s keystone environmental law designed to ensure careful decision making and a rational consideration of impacts and alternatives. It is the foundation of “a national policy of protecting and promoting environmental quality.” *Hughes River Watershed Conservancy v. Glickman*, 81 F.3d 437, 443 (4th Cir. 1996). NEPA is intended to be “action-forcing,” and it should provide the public and decision-makers with the data they need to intelligently make a considered decision about the best path forward for their communities. *N.C. Wildlife Fed’n v. N.C. Dep’t of Transp.*, 677 F.3d 596, 601 (4th Cir. 2012) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989)). Accordingly, an Environmental Impact Statement (“EIS”) must “serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made.” 40 C.F.R. § 1502.2(g).

The Complete 540 DEIS fails to fulfill the purposes of NEPA in a variety of ways. The asserted purpose and need for the project lacks support and contains built-in bias in favor of a

toll highway alternative. The DEIS further fails to fairly assess a reasonable range of alternatives in violation of NEPA requirements. In turn, this failure has led to only toll highway alternatives progressing to the detailed study stages, and each of these toll highway alternatives correspond to enormous environmental and human impacts at an unprecedented and impracticable project cost. Indeed, the entire Complete 540 NEPA process has largely been an exercise in predetermined decision-making. These many shortcomings of the DEIS are discussed in turn below.

II. BIASED AND UNSUPPORTED STATEMENT OF PURPOSE AND NEED

The Statement of Purpose and Need is essential to the NEPA process, as it guides the agencies' scope of review. 40 C.F.R. § 1502.13. As noted by the United States Court of Appeals for the Fourth Circuit, “[o]nly alternatives that accomplish the purposes of the proposed action are considered reasonable, and only reasonable alternatives require detailed study. So how the agency defines the purpose of the proposed action sets the contours for its exploration of available alternatives.” *Webster v. U.S. Dep’t of Agric.*, 685 F.3d 411, 422 (4th Cir. 2012). Because the Statement of Purpose and Need forms the basis upon which to compare alternatives, an agency is not permitted “to contrive a purpose so slender as to define competing ‘reasonable alternatives’ out of consideration.” *Simmons v. U.S. Army Corps of Eng’rs*, 120 F.3d 664, 666 (7th Cir. 1997).

12 [The stated primary purposes of the Complete 540 project are twofold: (1) “to improve mobility within or through the study area during peak travel periods,” and (2) “to reduce forecast congestion on the existing roadway network within the project area.”¹ These two primary purposes are largely the same purpose stated different ways: improving mobility during peak travel times is essentially the converse of reducing congestion, which naturally occurs at peak travel times. The primary purposes were developed based on identified transportation needs within the study corridor, including mobility, the need to provide for high speed travel along the 540 Outer Loop, and existing and projected poor levels of service on current roadways.² The DEIS also identifies completing the 540 Outer Loop as a secondary purpose, or desirable outcome, of the project.³

As discussed below, the premises underlying the project’s purposes and needs call into question how much a toll highway through the project study area is truly needed—and demonstrate the agencies’ clear bias in favor of a toll highway despite the lack of such documented need.

A. The Statement of Purpose and Need Was Developed Using Old Data

While the project’s purpose and need statement is not on its face too narrowly defined to pass legal scrutiny, the metrics used to ascertain whether or not project alternatives meet the

¹ DEIS, at 10.

² Purpose & Need Statement (2011), at 2-3. The DEIS appears to have simplified the needs identified in the Purpose & Need Statement into two needs of (1) more route choices and (2) reducing congestion on the existing roadway network. DEIS at 12-16.

³ DEIS, at 10; Purpose & Need Statement, at 4.

13 [stated purpose have that effect.⁴ Much of the stated need for the Complete 540 project revolves around projections of future growth in the study area and forecasts of future traffic congestion. The 2011 Purpose and Need document states, for example, that “[w]ith increases in traffic volumes projected in the future, a substantial portion of the roadway network in and near the project study area will deteriorate to LOS E or F by 2035.”⁵ The Statement, however, bases such conclusions on 2008 traffic data that was put into a 2008 traffic model.⁶ That traffic modeling tool has since been updated,⁷ yet NCDOT failed to update its traffic data or the model used to generate its forecasts that purport to justify the need for this project. The Statement of Purpose and Need, and the DEIS by extension, thus relies on traffic data more than seven years out of date, and a traffic forecast model that is now obsolete.

14 [The U.S. Environmental Protection Agency (“EPA”) noted the outdated nature of these traffic forecasts in 2012: “The details of the traffic models and forecasts are not specifically identified in the report but appear to be generally based upon past development and population growth. Since 2009, the project study area’s growth rate has substantially decreased from the two previous decades. In the last 3 years, the growth in southern Wake County has been well below previous years and new development is reported to have stagnated.”⁸ The EPA again highlighted the lack of up-to-date information in critiquing the mobility purpose of the project, stating, “It is difficult to understand a purpose of reducing forecasted congestion when the traffic modeling, growth projections, and other assumptions are not identified in the report.”⁹

Developing a forecast from such outdated traffic data violates NCDOT’s own technical guidance, which directs that “the traffic counts used for capacity analysis purposes should have been taken no more than one year prior to the submittal date of the document.”¹⁰ Up-to-date data is imperative in the NEPA process. A long line of federal courts have held that agency reliance on data that is stale or inaccurate invalidates environmental review. *See, e.g., N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1085-86 (9th Cir. 2011) (ten-year old survey data for wildlife was “too stale” and thus reliance on it in EIS was arbitrary and capricious); *Lands Council v. Powell*, 395 F.3d 1019, 1031 (9th Cir. 2005) (six-year-old survey data for cutthroat trout was “too outdated to carry the weight assigned to it” and reliance on that data violated NEPA); *Seattle Audubon Soc. v. Espy*, 998 F.2d 699, 704-05 (9th Cir. 1993) (reliance on “stale scientific evidence” regarding owl population data without adequate

⁴ Stakeholder Report at 178 (2012 EPA Technical Assistance Comments on Draft Alternatives Development and Analysis Report) (“The purposes of the project were narrowly defined in the previous section of the report. The highway ‘threshold criteria’ as further defined and as alluded to in the report to meet purpose and need were ‘pre-disposed’ to eliminate all but new location, multi-lane toll road alternatives.”).

⁵ Purpose & Need Statement at 4.

⁶ *Id.* at 10.

⁷ *See e.g.* INST. FOR TRANSP. RESEARCH & EDUC., *History of the Triangle Regional Model*, <http://www.itre.ncsu.edu/TBM/trmsb/history.html> (last visited Dec. 29, 2015) (listing milestones, including that “2011 TRM version 5 is released and adopted for use by stakeholders”), Attachment 1.

⁸ Stakeholder Report at 177 (2012 EPA Technical Assistance Comments on Draft Alternatives Development And Analysis Report).

⁹ *Id.*

¹⁰ NCDOT, CONGESTION MANAGEMENT CAPACITY ANALYSIS GUIDELINES, at 3 (2015), *available at* <https://connect.ncdot.gov/resources/safety/Congestion%20Mngmt%20and%20Signing/Congestion%20Management/Capacity%20Analysis%20Guidelines.pdf>, Attachment 2.

discussion of scientific uncertainty violated NEPA). These courts have been clear that the quality of data must be proportional to the weight the agency assigns to it in its analysis.

Here, the inaccuracy of the traffic forecast data underlies both the purpose and need for the project and the entire analysis of alternatives. Population and economic growth are key factors in traffic forecasting. Accordingly, changes or slumps in projected growth can significantly impact projected traffic demand. Although the DEIS was published in November 2015, the traffic forecasts are derived from data more than seven years old, and on a similarly dated traffic model. As such, the traffic forecasts did not and could not have accounted for the multi-year recession and suppressed growth that began in 2008. Reliance on such stale and overly-optimistic data further inflates demand, and is a glaring oversight that violates NEPA. *Cf. 1000 Friends of Wisc., Inc., v. U.S. Dep't of Transp.*, No. 11-C-0545, 2015 WL 2454271, at *9 (E.D. Wisc. May 22, 2015).

15 [The old traffic forecasts are further dated in consideration of Wake County's recently-released long-term transit plan, which includes quadrupled bus service within the county and adding a commuter rail line connecting Garner with Raleigh, NCSU, Morrisville, RTP, Cary, Durham, and Duke.¹¹ The increase in mass-transit options will have a direct effect on future traffic conditions, and the alleged needs for this giant toll highway should be reassessed in light of the increased future public transportation services.

B. The Statement of Purpose and Need Was Crafted Using an Illegal Methodology.

16 [The traffic forecasts used to create the statement of purpose and need were created using a methodology that has been determined illegal by a long line of federal courts, including most recently the U.S. District Court for the Eastern District of North Carolina. *See Catawba Riverkeeper Found. v. N.C. Dep't of Transp.*, No. 5:15-CV-29-D, 2015 WL 1179646 (E.D.N.C. Mar. 13 2015), attached as Attachment 4. The DEIS purports to compare forecast traffic congestion in 2035 for "build" and "no build" scenarios, but in forecasting traffic, the DEIS relies on socio-economic projections that assumed growth that would occur *with* the Complete 540 toll highway would also occur *without* the toll road.¹² This approach necessarily overstates the level of congestion in a "no build" scenario because, as even NDCOT and FHWA admit, significant future developments and the traffic associated with them will only move forward if the Complete 540 project is built.¹³

The illegal approach has the effect both of making construction of the proposed highway appear more necessary, as well as making other, less damaging and more practicable

¹¹ RECOMMENDED WAKE COUNTY TRANSIT PLAN, at 8-11 (Dec. 2015), Attachment 3.

¹² DEIS at 15 & n.*.

¹³ Indirect and Cumulative Effects Report (Dec. 2014), at 76 (noting that building the toll highway will encourage faster growth, and specifically highlighting that "the planned Randleigh Farm project is more likely to begin to be developed if the Complete 540 project is constructed nearby") [hereinafter "ICE Report"]; *see id.* at 79 ("As a major new location facility, the Complete 540 project would dramatically increase access both within the project area and between locations in the project area and employment and commercial centers outside the project area. Local planners fully anticipate that the project would play a major role in influencing the land uses and intensities that will develop across the project area.").

alternatives—such as upgrades to existing roads—seem less attractive. It is not surprising that this flaw was contained in the DEIS. In an attempted appeal of the district court ruling that declared this method illegal, FHWA explained that this flawed approach to traffic forecasting was often used in NEPA analyses of highway projects around the country. FHWA cited 108 instances of other highway projects that had been analyzed using the same approach—the Complete 540 project being one of them.¹⁴ The appeal was denied by the U.S. District Court, and thus the court’s initial ruling declaring this method illegal stands. *Catawba Riverkeeper Found.*, No. 5:15-CV-29-D (E.D.N.C. Sept. 10, 2015). The case is currently on appeal to the Fourth Circuit. *See* Federal Defendants’ Notice of Appeal, *Catawba Riverkeeper Found.*, No. 5:15-CV-29-D, (E.D.N.C. Nov. 9, 2015); State Defendants’ Notice of Appeal, *Catawba Riverkeeper Found.*, No. 5:15-CV-29-D, (E.D.N.C. Oct. 21, 2015). FHWA’s apparent wide use of this flaw does not make the flaw any less illegal or misleading in the instant DEIS and supporting documents. *Izaak Walton League of America v. Butz*, 522 F.2d 945, 952 n.26 (4th Cir. 1975) (quoting *Wilderness Society v. Morton*, 156 U.S. App. D.C. 121, 479 F.2d 842, 865 (1973) (“[I]t is our firm belief that a line must be drawn between according administrative interpretations deference and the proposition that administrative agencies are entitled to violate the law if they do it often enough.”)).

The NEPA process for another highway on Defendants’ list, the Illiana Expressway, was recently determined illegal by a federal court in Illinois. *Openlands v. U.S. Dep’t Transp.*, No. 13 C 4950, 2015 WL 4999008, at *10 (N.D. Ill June 16, 2015), attached as Attachment 7. FHWA is not appealing the ruling.

C. The Purpose and Need Statement Is Impermissibly Narrow and Favors a Toll Highway over Any Other Alternative.

A secondary purpose of the project is to improve system linkage, or in other words, to complete the I-540 loop.¹⁵ As identified by the Environmental Protection Agency (“EPA”) early on in the alternatives development process, such a purpose is out of line with FHWA Guidelines and creates a clear preference for building a road and a bias against any alternatives that would not complete the I-540 loop.¹⁶ The FHWA Guidelines succinctly disapprove of such a purpose: “We don’t typically decide to link something just because we can.”¹⁷ Indeed, this guidance explains that a purpose of system linkage “does not necessarily translate to a completely new transportation facility,” and instead, “modification of an existing facility may be a viable method of improving system linkage.”¹⁸

17 [The DEIS, however, specifically limits this purpose to construction of the specific pre-identified roadway: “[a] secondary purpose of the project is to improve system linkage in the regional roadway network *by completing the 540 outer loop around the greater Raleigh area—a*

¹⁴ Gloria Shepherd Decl., Apr. 10, 2015, *Catawba Riverkeeper Found. v. N.C. Dep’t of Transp.*, No. 515-CV-29-D, ECF No. 75-3, Attachment 5; Letter from Gloria Shepherd, FHWA, to Kate Asquith, SELC (July 10, 2015), Attachment 6.

¹⁵ DEIS at 10.

¹⁶ Stakeholder Report at 176 (2012 EPA Technical Assistance Comments on Draft Alternatives Development and Analysis Report).

¹⁷ FHWA Guidance, Version 2 (Feb. 2009) at 17, Attachment 8.

¹⁸ *Id.*

17 | goal that has been sought for area planners by more than 40 years.”¹⁹ The system linkage goal is ostensibly a “secondary” purpose, and yet every single one of the DSAs in the DEIS completes the outer loop. Indeed, the name given to the project—*Complete 540*—underscores the focus and significance ascribed to the “secondary” purpose of completing the 540 Outer Loop. Even before adopting the catchy Complete 540 name, the 2011 Purpose and Need Statement similarly preordained that the solution would be a toll highway connecting 540 by referring to the project as the “Triangle Expressway Southeast Extension.”²⁰

The introduction to this document admits of such an impermissible focus in its first sentence, stating that the agencies proposed “transportation improvements *with a focus* on the consideration of *an extension of the Triangle Expressway (NC 540)* from NC 55 Bypass near Holly Springs to the US 64/US264 Bypass south of Knightdale.”²¹ The Statement is replete with examples illustrating that it was a foregone conclusion that the project would manifest only in the form of a highway completing the 540 Outer Loop.²² Such a fixed focus on completing the 540 Outer Loop is precisely the kind of narrow, illegitimate purpose the FHWA Guidance cautions against and should not be considered in the NEPA process.²³ Indeed, the U.S. Army Corps of Engineers and other agencies expressed concern about integrating local land use plans into any statement of purpose for the project at a 2012 interagency meeting.²⁴ Despite this flaw being brought to the attention of NCDOT early in the NEPA process, the DEIS retains this heavily-critiqued purpose.

III. INADEQUATE ALTERNATIVES ANALYSIS

NEPA requires that agencies “[r]igorously explore and objectively evaluate all reasonable alternatives.” *N.C. Wildlife Federation*, 677 F.3d at 602 (citing 40 C.F.R. § 1502.14(a)). In turn, “[a]ccurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA.” 40 C.F.R. § 1500.1(b). Such accuracy ensures that agencies take a “hard look” at environmental effects of proposed projects and that relevant information is available to the public. *Glickman*, 81 F.3d at 445-46 (holding that the economic assumptions underlying an EIS are subject to “narrowly focused review” to determine whether they “impair[ed] fair consideration of a project’s adverse environmental effects”). Moreover, agencies have a duty to “insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements.” 40 C.F.R. § 1502.24. The alternatives analysis, supported by thorough scientific, expert, and public review, is intended to be the “heart” of the impact statement. 40 C.F.R. § 1502.14. Despite this mandate, the DEIS only offers one true alternative:

¹⁹ DEIS at 10.

²⁰ Purpose & Need Statement at cover page.

²¹ *Id.* at 1.

²² *E.g. id.* at 5 (project history section devoted to history of the 540 Outer Loop, not transportation needs in project area); *id.* at 16 (identifying the State Transportation Improvement Program’s identifiers for the “proposed action[’s]” associated three “freeway facility on new location” projects, which complete the 540 Outer Loop); *id.* at 19 (highlighting local governments’ resolution requesting a study of toll funding for constructing I-540 in southwestern Wake County).

²³ Stakeholder Report at 179 (2012 EPA Technical Assistance Comments on Draft Alternatives Development and Analysis Report) (citing FHWA Administrator: 7/23/03 Memorandum on Guidance on “Purpose and Need,” available at <http://www.environment.fhwa.dot.gov/guidebook/Gjoint.asp>, Attachment 9.).

²⁴ *See* Meeting Minutes, Interagency Project Meeting (Aug. 22, 2012), at 2, Attachment 10.

18 | building an expensive, environmentally-destructive toll highway that completes the 540 Outer Loop.

As noted above, the project’s Purpose and Need, which provides the foundation for the evaluation of reasonable alternatives, was crafted based on outdated and flawed data, and was designed to include an impermissible narrow purpose. The tainted Purpose and Need Statement, including its bias in favor of a toll highway completing the 540 Outer Loop, set the stage for the agencies’ arbitrary and capricious alternatives analysis which prematurely rejected reasonable, non-toll highway, alternatives.

A. The Alternatives Analysis is Based on a Biased and Flawed Alternatives Screening Process.

The DEIS relies on a 2014 Alternatives Development and Analysis Report (“Alternatives Analysis”) to eliminate all non-toll highway alternatives prior to detailed environmental review. The preliminary review of alternatives involved three tiers of screening, with 8 out of 10 potential alternative types eliminated at the first tier of screening (not including the required No-Build baseline alternative).²⁵ This first tier of screening was designed with a heavy bias toward construction of a new-location toll highway²⁶. The process employed misleading metrics to ensure the toll road option progressed to later screening stages; used an arbitrary method to distinguish between alternatives that would supposedly meet the project purposes as opposed to alternatives that supposedly would not; and inconsistently applied different methodologies to evaluate highway-based options as opposed to other traffic improvements and mass-transit options.

1. Misleading Metrics Arbitrarily Removed Reasonable Alternatives

The first-tier screening process relied heavily on misleading, numeric “Measures of Effectiveness,” or “MOEs” to review the potential for each alternative concept to achieve travel time savings and congestion relief.²⁷ With each of these MOEs, the change from the No-Build scenario was expressed as a percentage.²⁸ Then, the different concepts were ranked for each MOE from greatest to least percentage change.²⁹ As noted by EPA, “[a]ll of these measures and the undefined Triangle Regional Model (TRM) are biased towards eliminating TDM, TSM, and Mass Transit/Multi-modal Alternative Concepts.”³⁰

19 | The different MOEs purported to help distinguish the alternatives according to the results of the MOEs. In reality, the MOEs illustrate how indistinguishable the considered alternatives

²⁵ Alternatives Development and Analysis Report (May 2014), at Table 2-9: Alternative Concepts to be Carried Forward to Second Screening [hereinafter “Alternatives Analysis Report”]

²⁶ Stakeholder Report at 178 (2012 EPA Technical Assistance Comments on Draft Alternatives Development and Analysis Report) (“The purposes of the project were narrowly defined in the previous section of the report. The highway ‘threshold criteria’ as further defined and as alluded to in the report to meet purpose and need were ‘pre-disposed’ to eliminate all but new location, multi-lane toll road alternatives.”).

²⁷ Alternatives Analysis Report at 2-6.

²⁸ *Id.* at 2-9.

²⁹ *Id.* at 2-9.

³⁰ Stakeholder Report at 179 (2012 EPA Technical Assistance Comments on Draft Alternatives Development and Analysis Report).

are in terms of their ability to relieve congestion or enhance mobility. For example, the 2035 projected average daily travel speeds during the evening rush hour for the different alternatives ranged from 43.7 MPH to 47.3 MPH—a difference of less than 4 MPH between the “worst” performing alternative and the “best” performing alternative.³¹

19 Similarly, the best performing alternative under the travel time MOE was only marginally better than the worst performing alternative. When reviewing travel times, the Alternatives Analysis focused on a “subset of the origin and destination points . . . for closer evaluation of the MOE for project purpose.”³² The origin points chosen were Brier Creek and Research Triangle Park (“RTP”).³³ As to the projected travel times for an RTP origin during peak PM travel times, the smallest average change over the No-Build alternative was 3.5% and the greatest change was 13.7%,³⁴ or stated in minutes saved, an average of 2.25 minutes saved and 5.75 minutes saved, respectively. A difference of an average of 3.5 minutes saved between the worst and best alternatives is hardly a significant difference,³⁵ and demonstrates that the toll road highway option did not significantly outperform the other reviewed alternatives. Advancing the toll highway alternative over other alternatives, based on such slight differences, is arbitrary and capricious.

2. The Ranking System Arbitrarily Distinguished Between Successful and Unsuccessful Alternatives.

20 Next, the first-tier screening process used the misleading MOEs to draw false distinctions between the alternatives by dividing them into two groups: alternatives that met the purpose and need and alternatives that did not.³⁶ After ranking the alternatives from greatest to least percentage changes for each MOE, the alternatives were given different “quartile” scores according to where they fell in the rankings.³⁷ The alternatives in the top quartile were given a score of “4,” and those in the next quartile a “3” and so on.³⁸ This quartile ranking system thus had the effect of artificially inflating significance of the incremental differences among alternatives, creating the illusion that some were much more successful than others.

Traffic forecasts are inherently limited in their ability to accurately forecast future traffic. Given this level of uncertainty, the minute differences between the respective performance of the various alternatives were likely not even statistically significant.

Indeed, the Complete 540 Traffic Forecast Technical Memorandum recognized the inherent inaccuracy of traffic forecasts:

³¹ Alternatives Analysis Report at Table 2-1: Average Daily Travel Speeds in Traffic Study Area (2035)—PM Peak Period.

³² *Id.* at 2-11.

³³ *Id.* at 2-12.

³⁴ *Id.* at Table 2-2: Average Travel Times from RTP to Listed Destinations (2035) – PM Peak Period.

³⁵ The range of difference in travel times with a Brier Creek origin are similar, with the lowest average percentage change being 3.4% and the highest being 12.1%, or a difference of 2 minutes saved and up to 7.5 minutes saved. With this example, unlike the RTP example, the “best” performing alternative was Hybrid 1 and not the New Location Highway.

³⁶ *Id.* at 2-9.

³⁷ *Id.* at 2-9.

³⁸ *Id.* at 2-9.

The 2009 TRM V4 model run data was extrapolated to 2010 and shows daily assignment volumes varying (some higher and some lower) from existing count data along study area roadways. This can be attributed to a quickly changing and developing study area and very low base year volumes, which make it difficult for the regional model to completely account for all existing conditions and recent changes.³⁹

Despite the insignificant differences between the best-performing and worst-performing alternatives, the Alternatives Analysis used the quartile ranking system to prematurely discard purportedly lower-performing alternatives. Alternatives that achieved a quartile ranking of 3 or 4, were regarded as meeting the project purpose, while alternatives that were (artificially) ranked lower were discarded as unable to meet the purpose and need.⁴⁰

Under this ranking system, a project that scored well under one MOE, but marginally less well than the next project, would be described as not meeting the project purpose—even if it performed better than all other alternatives regarding another purpose. Additionally, an alternative that performed only slightly better than another alternative would be deemed to meet the project purpose, while the other alternative would be deemed to not meet the project purpose, despite an insignificant difference between the performances of the two.

For example, the Hybrid 1 Alternative received quartile rankings of 3 and 4 in every MOE except Average Speed, where it received a 2 for a projected averaged speed of 44.7 MPH.⁴¹ However, the next-best-performing alternative under the Average Speed MOE, which earned a “passing” quartile ranking of 3, was projected to achieve an average speed of 45.6 MPH.⁴² Thus, a difference of 0.9 MPH separated the Hybrid 1 Alternative from the alternatives that passed muster under this MOE. This small difference,—which cannot be statistically significant given the uncertainty of traffic forecasting—was thus used to eliminate from consideration an alternative that was otherwise competitive.

If the forecast speed for the Hybrid 1 Alternative had been a mere *one* MPH greater, it would have received a quartile ranking of “3” under this MOE and advanced beyond the first-tier screening process.

This arbitrary screening of alternatives failed to provide the objectively and holistic review of a reasonable range of solutions that NEPA requires.

3. The Screening Process Arbitrarily Used Different Methods to Assess Non-Road Building Alternatives.

21 [The first-tier screening process applied the quantitative MOEs and corresponding methodology to road-building or road-upgrading alternatives, but failed to use the same

³⁹ Traffic Forecast Tech. Mem. (Apr. 2014), at 17; *see id.* at Table 9. Base Year No-Build Forecast Traffic Volumes.

⁴⁰ Alternatives Analysis Report at 2-7, 2-17, Table 2-7: Summary of Quartile Rankings of MOEs for Build Alternative Concepts.

⁴¹ *See id.* Table 2-1: Average Daily Travel Speeds in Traffic Study Area (2035) – PM Peak Period; Table 2-7: Summary of Quartile Rankings of MOEs for Build Alternative Concepts.

⁴² *Id.* Table 2-1: Average Daily Travel Speeds in Traffic Study Area (2035) – PM Peak Period.

21 methodology to assess the transportation demand management (“TDM”), transportation system management (“TSM”), and Mass Transit/Multi-Modal Alternatives. The methodology used for measuring the MOEs, the Triangle Regional Model (“TRM”), could not be used to evaluate the various MOEs as to the TDM, TSM, and Mass Transit/Multi-Modal Alternative Concepts.⁴³ Thus, these three alternative concepts were not evaluated using the same methodology as the other road-building or road-upgrading options and were thus not included in any of the tables summarizing the numeric differences between the alternatives. They did not receive relative scores nor a quartile ranking. As highlighted by the EPA in 2012, the MOEs were “biased towards personal vehicle use and alternative concepts that promote new location, high-speed highways.”⁴⁴ This use of inconsistent methodologies to evaluate different alternatives failed to allow the public to review the relative merits of these less costly and less destructive alternative concepts.

4. The Arbitrary and Flawed Alternatives Analysis Process Violates NEPA

After this arbitrary and inconsistent first tier screening process had been applied, only highway based alternatives advanced to later screening stages.⁴⁵ Thus, a wide range of alternative solutions were eliminated before any study of their feasibility or potential environmental impacts,⁴⁶ including transportation demand management, transportation system management, mass transit/multi-modal, three different alternatives to improve existing roadways and two different hybrid alternatives.⁴⁷ The Alternatives Analysis thus “stacked the deck” in favor of the toll highway, which performs poorly in comparison to the other less expensive and less destructive options, when such factors are considered.

22 The agencies’ methodology undercuts the very purpose of the NEPA process, which is to fully and fairly evaluate a reasonable range of alternatives and to do so in a manner that involves the public. The NEPA process, including the EIS, is designed to “serve[] as an environmental full disclosure law, providing information which Congress thought the public should have concerning the particular environmental costs involved in a project.” *Silva v. Lynn*, 482 F.2d 1282, 1285 (1st Cir. 1973). Additionally, a detailed EIS “helps to insure the integrity of the process of decision by precluding stubborn problems or serious criticism from being swept under the rug.” *Id.*; see *Dubois v. U.S. Dept. of Agriculture*, 102 F.3d 1273, 1285–86 (1st Cir. 1996) (“Thus, the EIS helps satisfy NEPA’s ‘twin aims’: to ensure that the agency takes a ‘hard look’ at the environmental consequences of its proposed action, and to make information on the environmental consequences available to the public, which may then offer its insight to assist the agency’s decision-making through the comment process.”).

The EIS must contain sufficient and necessary information to allow the public to scrutinize the agency’s review and examine the “basis for a comparison of the problems involved

⁴³ See Alternatives Analysis Report at 2-10 (average daily travel speeds); *id.* at 2-11 (travel times); *id.* at 2-14 (average daily VHT); *id.* at 2-15 (congested VMT); *id.* at 2-16 (congested VHT).

⁴⁴ Stakeholder Report at 177 (2012 EPA Technical Assistance Comments on Draft Alternatives Development and Analysis Report).

⁴⁵ Alternatives Analysis Report at Table 2-9: Alternative Concepts to be Carried Forward to Second Screening.

⁴⁶ *Id.* at 3-9.

⁴⁷ *Id.*

with the proposed project and the difficulties involved in the alternatives.” *Silva*, 482 F.2d at 1285 (quoting *Monroe Cnty. Conservation Council v. Volpe*, 472 F.2d 693, 697 (2d Cir. 1972)). Because the Alternatives Analysis for the Complete 540 project eliminated the majority of alternatives from consideration prematurely, the transportation agencies deprived the public and local decision-makers of the opportunity to meaningfully participate in the alternatives selection process and contravened NEPA. *See N.C. Wildlife Fed’n*, 677 F.3d at 601-02 (quoting *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 371 (1989)) (internal quotation marks omitted).

B. The Alternatives Analysis Fails to Analyze Traffic Patterns and Potential Time Savings.

23 [The stated purpose of improving travel times in the study area is a legitimate goal and should help guide a thorough and rigorous examination of alternatives for the Complete 540 project. Given this goal, however, it is surprising that NCDOT has settled on a range of expensive highway options that result in such meager travel time improvements—even 20 years out. Moreover, the Alternatives Analysis fails to address two key considerations: Where are travelers in the project study area going and how will this project help them? The DEIS fails entirely to look at the percentage of traffic in the corridor that is local, i.e. moving within a town or traveling from one town in the study area to another, and the percentage that is traveling through the project area. Without some knowledge of this basic information, it is impossible to determine which alternatives will be most effective.

24 [The DEIS states that “[i]t is expected the project could reduce travel times to the area’s major employment and commercial centers by as much as ten minutes or more.”⁴⁸ The DEIS itself contains no information on projected time-savings aside from this fleeting mention, despite time-savings already being the primary purpose of the entire project. The DEIS likewise does not elaborate on how this estimate was derived, or to which trips the estimate would apply. Indeed, as highlighted above, the “representative” trips selected for the Alternatives Analysis, with an RTP or Brier Creek origin during “PM peak” travel periods, yielded an average time savings of far less than 10 minutes under a New Location Highway alternative.⁴⁹

25 [Many questions that would help in understanding the 10 minute time-savings estimate are left unanswered. For example, when would these time-savings be realized? Will drivers who use existing roadways, as opposed to the toll road, experience these time savings? What is the average time-savings for drivers in the study area? Which origin and destination points were considered in the DEIS’s broad “as much as ten minutes or more” time savings estimate? What percentage of drivers in the study area actually takes those trips? Such questions must be answered in order to fully evaluate the ability of different alternative solutions to meet the purpose of the project, and to fairly evaluate whether the potential time-savings can justify the high costs—financial, human and environmental—of the project.

The 2011 Purpose and Need Statement—which as discussed above, relies on outdated data—briefly notes that “more than 25 percent of residents within the project study area

⁴⁸ DEIS at 104.

⁴⁹ Alternatives Analysis at Table 2-2: Average Travel Time from RTP to Listed Destinations (2035) – PM Peak Period, Table 2-3 Average Travel Time from Brier Creek to Listed Destinations (2035) – PM Peak Period.

commute to RTP.”⁵⁰ There is no support or explanation for how this number was determined. Without more, such as pertinent information about *where* in the study area such trips to RTP originate, this percentage does little to illuminate the demand for or anticipated use of a toll highway. There is nothing in the EIS to suggest that all 25% of the commuters headed to RTP would be willing or able to pay a toll to use the project. Moreover, there is no information about the regular commutes of the remaining 75% of residents in the project study.

Travel-time savings Tables buried in an appendix to a technical report present an incomplete picture of the potential time savings associated with building the toll road. The tables provide no clue as to how the “ten minute” travel-time estimate came about. Instead, the tables show great variation in the travel time savings for various representative trips within the project area—but the savings are overwhelmingly slim. Considering all 264 trips represented in the tables, the average amount of time saved from a No-Build scenario compared to a Build Scenario in the year 2035 is a mere *3.44 minutes*. Notably, trips during the peak morning hours would save an average of only 1.75 minutes, while the time-savings in the peak evening hours would average 5.13 minutes. More than 41% of all trips studied would not experience any time-savings at all, and 231 of the trips, or 87.5% of the trips, would see *less than 10 minutes saved*. Even if the trips with at least 1 minute or more of time-savings are isolated, of which there are 154, the average time saved for those trips is 5.9 minutes. Even then, while 264 representative trips are analyzed, there is no indication of which trips are most popular. In other words, there is no explanation or analysis of what percentage of commuters travel between any given origin and destination point, thus limiting the utility of the travel time savings estimates.

26 [In addition, it is unclear from the DEIS, but after questioning NCDOT staff at the recent public meeting it became clear that the travel time savings documented in the trip tables are limited to potential users of the proposed toll-highway. The DEIS and technical reports do not document how—if at all—travel time savings that might accrue to drivers who opt to remain on the existing, non-toll road network. This failing is significant because elsewhere the DEIS states that construction of this project will have benefits for users of the entire transportation network.⁵¹

C. The Alternatives Analysis Lacks any Documentation of Demand or Anticipated Use of a Toll Highway in the Project Area.

The DEIS also fails to document how many people it anticipates will actually use the road, a criticism raised by the EPA early when it noted that the “[r]eport does not identify social and economic demands for the project.”⁵² The response to this comment was that the population of the project area has grown and is expected to grow;⁵³ however, a potentially growing population does not necessarily mean there is a demand for a new location toll road through the project area. Similarly, the ICE Report states, without any supporting data or analysis, that “[i]t is expected that many of those who currently travel between locations in the project area and employment and commercial centers within and outside the project area would use the proposed

⁵⁰ Purpose & Need Statement at 9.

⁵¹ DEIS at 40 (“Compared with other concepts, the new highway concept provided the largest decrease in average travel times and the largest reductions in congestion on the local roadway system.”); *id.* at 85.

⁵² Alternatives Analysis Report at 6-19.

⁵³ *Id.*

facility because it would provide a faster, more direct route to these areas.”⁵⁴ There is simply no support for this statement.

27 [Use of the road would largely be dictated by the price of tolls, which has yet to be estimated or disclosed. In other words, NCDOT appears to assume, without justification, that people will use the toll road regardless of the duration of their trip in the project area, and regardless of the toll price associated with that trip. Drivers will be even less likely to opt for paying a toll in light of the limited travel-time savings associated with the project. As the EPA highlighted in comments on an earlier draft of the Alternatives Analysis Report, “[t]here is no actual traffic data or public surveys demonstrating why commuters would leave local free roadways where there is little to no congestion and utilize a 6-lane toll facility.”⁵⁵

28 [The current public outcry over the planned I-77 toll facility north of Charlotte underscores the North Carolina public’s disapproval of toll facilities.⁵⁶ Similar sentiments were echoed during the public hearing for the Complete 540 project on December 9, 2015. Without more information about projected actual use of the toll road, which depends on the cost of tolls, it is not at all clear that a toll road would actually improve mobility or decrease congestion. Moreover, without more information on likely users of the project it is impossible to determine if such a toll road project is financially feasible.

D. The Transportation Agencies Must Consider a Full Range of Reasonable Alternatives and Combinations of Alternatives.

Agencies have a “duty under NEPA . . . to study all alternatives that appear reasonable and appropriate for study at the time of drafting the EIS, as well as significant alternatives suggested by other agencies or the public during the comment period.” *Roosevelt Campobello Int’l Park Comm’n. v. U.S. EPA*, 684 F.2d 1041, 1047 (1st Cir. 1982) (internal quotation marks omitted). Only unreasonable alternatives can be eliminated. 40 C.F.R. § 1502.14(a). NCDOT’s initial screening of alternatives took place prior to 2011⁵⁷ and was based on outdated and flawed methodology as discussed above. This Alternatives Analysis prematurely eliminated a number of reasonable alternatives which would avoid much of the harmful environmental impacts associated with the current iterations of the Complete 540 road.

29 [The DEIS appears to contain a large number of DSAs, but each “alternative” is simply a slight alteration of the same, new-location toll highway alternative. In fact, the 17 DSAs are fundamentally variations on three basic routes. Such tunnel vision hurts the NEPA process and prevents a fair and thorough evaluation of other, non-road building alternatives. *See California v.*

⁵⁴ ICE Report at 13.

⁵⁵ Stakeholder Report at 177 (2012 EPA Technical Assistance Comments on Draft Alternatives Development and Analysis Report).

⁵⁶ E.g. Steve Harrison, *Charlotte City Council is Now the Decider for I-77 Toll Lanes*, THE CHARLOTTE OBSERVER, Jan. 2, 2016, <http://www.charlotteobserver.com/news/politics-government/article51335005.html>, Attachment 11; Lacey Hampton & Carrie Causey, *Towns Talk Tolls*, THE HERALD WEEKLY, Dec. 10, 2015, <http://huntersvilleherald.com/news/2015/12/10/14336/towns-talk-tolls>, Attachment 12.

⁵⁷ Alternatives Analysis Report at 2-1 (incorporating results of Southeast Extension First Tier Screening Traffic Memorandum from 2011).

Block, 690 F.2d 753, 767 (9th Cir. 1982) (holding that an agency’s decision to consider only a narrow set of alternatives prohibited a “reasoned choice” by decision-makers).

30 [As discussed above, the Alternatives Analysis screening process was severely flawed and biased against TDM, TSM, mass transit or multi-modal, and upgrade-existing alternatives. Each of these alternatives is these is more practicable and less-environmentally damaging than the toll road alternatives, and each would provide some degree of mobility improvement. Moreover, a combination of these alternative solutions could provide the best alternative to meet the project’s purpose and need while costing far less and correlating to far fewer environmental impacts. See *Davis v. Mineta*, 302 F.3d 1104, 1121-22 (10th Cir. 2002) (agency decision was arbitrary and capricious when it only evaluated alternatives “standing alone,” not cumulatively). The below sections review how these alternatives were unreasonably eliminated from consideration and why they must be considered in developing the FEIS.

1. Improvements to Existing Highways

Failure to give “substantial treatment” to this reasonable alternative—improving existing highways—without providing “adequate justification for its omission” is necessarily arbitrary and a violation of NEPA. *Southeast Alaska Conservation Council v. FHWA*, 649 F.3d 1050, 1059 (9th Cir. 2011). Yet, that is precisely what NCDOT has done here.

The Alternatives Analysis eliminated three different alternatives pertaining to improving existing roadways. These alternatives consisted of widening existing expressways in the project study area, upgrading a primary parallel arterial road, or a combination of such improvements.⁵⁸ Each of the alternatives would widen some portions of I-40, I-440 and the US 64/US 264 Bypass to 12 lanes.⁵⁹ Improve Existing Roadways 1 consists entirely of widening parts of these expressways throughout the project study area.⁶⁰ Improve Existing Roadways 2 would widen segments of NC 55 and NC 42 to six lanes in addition to widening eastern parts of I-40, I-440 and US 64/264. Improve Existing Roadways 3 would likewise widen the eastern segments of the freeways, and would widen sections of Jessie Drive and Ten Ten Road.⁶¹

31 [For each of these, the Alternatives Analysis concludes that the road improving alternatives would not “result in a comparatively large reduction in travel times relative to the other Build Alternative Concepts.”⁶² In reality, the diminutive differences in time savings between the alternatives, as noted above, show that all the alternatives were comparable in terms of their improvements over the No-Build Alternative. Upgrade alternatives are more competitive and practicable than the faulty MOEs and quartile ranking system suggested, and their environmental impacts and feasibility should be evaluated as against the costly, destructive toll highway DSAs. In particular, upgrading existing roadways should be considered in combination with TDM, TSM, and mass transit options as discussed below.

⁵⁸ Alternatives Analysis at 2-4.

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² *Id.* at 2-25.

2. Hybrid Alternatives

The Alternatives Analysis reviewed three “hybrid” alternatives, each of which involved “a combination of constructing a roadway on new location and either widening existing expressways or upgrading a primary parallel arterial roadway between NC 55 Bypass in Apex and I-40.”⁶³ These alternatives performed nearly as well as, or better than, the New Location Highway option under the travel times review in the Alternatives Analysis.⁶⁴ Additionally, Hybrid alternatives 1 and 3 consistently performed well under the other MOEs.

Hybrid 1’s environmental, human, and feasibility impacts were never considered despite its strong potential to meet the project’s purposes. Because of a quartile ranking of “2” in the Average Speed MOE, Hybrid 1 was eliminated from consideration early in the screening process. Strangely, the Alternatives Analysis concluded that this alternative would simultaneously “result in a comparatively large reduction in travel times relative to the other Build Alternative Concepts,” but “result in a reduction in average travel speeds.”⁶⁵ The Alternatives Analysis does not investigate this counterintuitive result, and instead dismissed the option because of its apparent inability to improve average speeds in the travel area.

32 [Hybrid 1 also would use only the western segments of the toll highway that already have funding programmed in the North Carolina State Transportation Improvement Program.⁶⁶ In contrast, Hybrids 2 and 3 would have included a segment of the toll highway which currently lacks any funding,⁶⁷ as discussed in greater detail below.⁶⁸ Given Hybrid 1’s secured funding and relatively strong performance in the comparison of alternatives, this alternative should have received greater evaluation to determine whether it could achieve the project’s purposes at a lower environmental and human cost than the expensive, full toll highway option.

3. Transportation Demand Management

33 [The DEIS also includes an insufficient analysis of TDM options that might work in conjunction with other alternatives by reducing demand for the road infrastructure. The DEIS and Alternatives Analysis report rejected TDM because “there is no evidence to suggest that significantly larger percentages of area workers will begin to take advantage of TDM strategies.”⁶⁹ The report, however, provides no contrary evidence suggesting workers and employers would *not* be able to utilize TDM strategies. Indeed, a preparer of the DEIS acknowledged in an earlier draft of the document that there is *not* evidence that reaching 60% participation in TDM strategies is unattainable.⁷⁰

⁶³ *Id.* at 2-5.

⁶⁴ *Id.* at Table 2-2: Average Travel Time from RTP to Listed Destinations (2035) – PM Peak Period, Table 2-3 Average Travel Time from Brier Creek to Listed Destinations (2035) – PM Peak Period.

⁶⁵ *Id.* at 2-26.

⁶⁶ *See id.* at 2-5–2-6.

⁶⁷ *See id.* at 2-6.

⁶⁸ *See infra* notes 197 – 204.

⁶⁹ Alternatives Analysis at 2-20; DEIS at 39.

⁷⁰ Draft DEIS document titled “Lochner responses to DOJ comments 1-4”, at 24 attached as Attachment 13 (see comments NCDOJ 112 and JS113). The preparer attempted to address this through citation to supporting technical documents; the final version of the DEIS cites to the Alternatives Analysis to “support” The claim that there is no

The Alternatives Analysis was purportedly able to generate data and provide research regarding the new location highway alternatives and should have done likewise for the TDM alternative. The purpose of the NEPA process is to generate and evaluate evidence regarding different alternatives, including TDM strategies. NCDOT and the DEIS highlight that the main traffic problems in the project study area occur during peak commute times, which makes TDM a particularly appropriate and effective solution.

In fact, NCDOT itself has evidence on point, suggesting that significantly larger percentages of workers could indeed take advantage of TDM strategies. NCDOT has successfully implemented TDM strategies to manage traffic in relation to its Fortify 440 project, which is adjacent to the northern boundary of the Complete 540 project study area. NCDOT recently celebrated the collaborative effort between “NCDOT and local, transportation, business, and community leaders,” noting “[i]n addition to drivers taking advantage of alternate routes . . . they have also changed their working hours and started telecommuting to help limit the traffic impact.”⁷¹ NCDOT staff attribute this success to a “significant” number of individuals who have adjusted the times of day they travel through the project zone, or who avoid the project zone altogether.⁷² Such statements fly in the face of the suggestion that there is no evidence that significant numbers of workers in the area would use TDM strategies. NCDOT even has an entire website devoted to TDM-style strategies around the Fortify Project, including resources for employers about flexible work schedules and teleworking,⁷³ and commuting resources for drivers in the area.⁷⁴ NCDOT cannot now arbitrarily claim that while TDM strategies have been successful with the Fortify 440 project, such strategies would not be feasible elsewhere.

Elsewhere, the Alternatives Analysis asserts that “60,000 traffic study area workers,” or “60 percent of maximum TDM-eligible employees” would have to use TDM strategies “to achieve a congested VHT reduction comparable to the Build Alternative Concepts.”⁷⁵ This does not reveal what the vehicle hours traveled (“VHT”) reduction would be in such a scenario—nor does it provide information about what sort of VHT reductions could occur with a different number of workers utilizing TDM. For example, if 30,000 workers utilizing TDM could still reduce congested VHT over the No-Build scenario, and if having 30,000 workers utilizing TDM strategies is feasible, that is information necessary for evaluating this alternative’s practicability.

This inadequate review of TDM strategies did not provide sufficient justification to eliminate the TDM alternative from review. The TDM alternative should have advanced to later stages of study, where its environmental, economic, and human impacts could have been evaluated. Moreover, it should have been studied as one aspect of a combination of solutions.

evidence large numbers of commuters would use TDM strategies, yet the Alternatives Analysis likewise contains no evidence to support this claim as noted above. *See id.*; DEIS at 39 n.1.

⁷¹ News Release, NCDOT, *Improving Fortify Travel Times a Collaborative Effort* (Nov. 20, 2015), <https://apps.ncdot.gov/newsreleases/details.aspx?r=11993>, Attachment 14.

⁷² *Id.*

⁷³ *See* NCDOT.gov, *Employer Resources, Fortify NC*, <http://www.ncdot.gov/fortifync/employer-resources/> (last accessed Dec. 22, 2015), Attachment 15.

⁷⁴ *See* NCDOT.gov, *Driver Resources, Fortify NC*, <http://www.ncdot.gov/fortifync/driver-resources/> (last accessed Dec. 22, 2015), Attachment 16.

⁷⁵ Alternatives Analysis at 2-16.

4. Transportation System Management

37 TSM strategies received similarly inconsistent and inadequate review in the Complete 540 NEPA process. The Alternatives Analysis Report claimed that “TSM improvements can increase speeds on freeways/expressways and major arterials by 2 to 3 percent”—an increase comparable to the road-building alternatives—but that “these types of facilities only account for a small portion of traffic study area roadway facilities in the 2035 TRM.”⁷⁶ The Alternatives Analysis Report then concludes that the small percentage and small number of applicable roads means that TSM cannot compete at the same level of the road-building alternatives. By contrast, the MOEs used to evaluate the alternatives, all refer to the “major roadway network in the project study area” which presumably would be comprised of the freeways, expressways, and major arterials in the area, such as those eligible for TSM improvements.⁷⁷

Additionally, the Alternatives Analysis Report should have included more information about the “small portion” of TSM-eligible roadway facilities—such as what percentage of the roadways they reflect, and what that two to three percent change in travel speeds would mean for a representative trip in the study area, as the Alternatives Analysis did for road-building concepts evaluated under the MOEs. TSM strategies represent yet another feasible alternative that should have received detailed review.

38 NCDOT’s implementation of TSM strategies along US 74 in Union County demonstrate how effective these methods can be in decreasing congestion. Beginning in 2007, “NCDOT implemented several measures to improve traffic flow along existing US 74 and partially mitigate congestion.”⁷⁸ TSM improvements were applied to 23 intersections along US 74 and included measures such as signal timing optimization and directional crossovers.⁷⁹ After implementing these low cost TSM strategies, average travel speeds along US 74 increased from approximately 20 to 30 MPH in 2007 to approximately 40 to 44 MPH during peak travel times.⁸⁰ An additional TSM improvement—constructing a superstreet facility for certain intersections along US 74—is scheduled for construction later this year.⁸¹

If TSM strategies in the Complete 540 study area could yield gains in average speed *half* as great as those along US 74, a TSM alternative would outperform the toll highway option in forecast average speed improvements.⁸² The success of TSM improvements along US 74 establish the necessity of thoroughly reviewing the ability of TSM strategies to address the Complete 540 project’s legitimate purposes and needs. TSM strategies should be studied independently, as well as in combination with other concepts, such as TDM, upgrading existing roadways, and mass transit.

⁷⁶ *Id.* at 2-21.

⁷⁷ *Id.* at 2-7–2-8.

⁷⁸ Monroe Connector /Bypass Draft Supplemental Final EIS, Chapter 1 at 1-3, Attachment 17.

⁷⁹ Monroe Connector /Bypass Draft Supplemental Final EIS, Chapter 2 at 2-10–2-12, Attachment 18

⁸⁰ Monroe Connector /Bypass Draft Supplemental Final EIS, Chapter 1 at 1-6–1-7, Attachment 17.

⁸¹ Monroe Connector /Bypass Draft Supplemental Final EIS, Chapter 2 at 2-12, Attachment 18.

⁸² Alternatives Analysis at Table 2-1: Average Daily Travel Speeds in Traffic Study Area (2035) – PM Peak Period (showing the forecast average speed for a No-Build scenario as 44.8 mph, and for a New Location Highway as 44.7 mph—a difference of less than 3 mph).

5. Increased Public Transportation

The mass transit/multi-modal alternative was also unfairly evaluated in the Alternatives Analysis. After acknowledging that the TRM could not determine travel times for a mass transit/multi-modal alternative, the only evaluation of this alternative was the unsubstantiated statement “[b]uses may actually increase travel times due to frequent stops.”⁸³ The report made a similar fleeting statement regarding average speeds, conceding that buses could improve speeds, but that they also may reduce speeds due to stops.⁸⁴ These unhelpful, vague conjectures are an insufficient basis to determine that a mass transit/multi-modal option is not reasonable—particularly when considered alongside other solutions.

39 The DEIS and Alternatives Analysis note that the “number of buses serving the study area on a daily basis would need to increase from the 50 or so that are currently in use to nearly 600, and each would need to consistently operate at nearly full capacity . . . in order to achieve a decrease in study area traffic congestion and an improvement in travel times sufficient to meet the project’s primary purposes.”⁸⁵ Importantly, the project purposes do not contain a threshold level of reductions or quantitative measures; the purposes are generally to increase mobility and reduce congestion, and not by any particular amount. Either NCDOT has some preconceived requisite amounts of congestion and mobility in mind, or it compared these alternatives to the specific numbers attainable by building the toll road.

For example, what if increasing bus service to 300 buses would reduce congestion and increase mobility by a discernible amount, even if not by as much as the toll road? This, in conjunction with other alternatives’ elements such as TDM, TSM, and improving existing roadways, could combine to *better* achieve the project’s purposes with less costs and fewer impacts than the Complete 540 toll highway. Such considerations are particularly relevant now that Wake County has released its recent long-term transit plan, which includes quadrupled bus service within the county and adding a commuter rail line connecting Garner with Raleigh, NCSU, Morrisville, RTP, Cary, Durham, and Duke.⁸⁶ This plan will directly impact the feasibility of a mass transit/multi-modal alternative, as well as other alternatives, within the project study area.

40 The DEIS also suggests that increasing bus service to 600 buses within the project study area would not be feasible due to cost: “The cost associated with such a large expansion of bus service would be high It is unlikely that these expansion and ongoing operation costs could be met by bus fares alone.”⁸⁷ Such an assertion is unsupported when the toll highway will cost upwards of \$2 billion, and no financial plan is in place to pay for it. The EPA even suggested that mass-transit would be a reasonable alternative to the new toll highway option because it would create new, permanent jobs “without the disproportionate requirement for infrastructure

⁸³ *Id.* at 2-11.

⁸⁴ *Id.* at 2-10.

⁸⁵ DEIS at 39-40; Alternatives Analysis at 2-14–2-15.

⁸⁶ RECOMMENDED WAKE COUNTY TRANSIT PLAN, at 8-11 (Dec. 2015), Attachment 3; Rebecca Martinez, *\$2.3 Billion Recommended Wake Transit Plan Would Quadruple Bus Service*, WUNC, Dec. 9, 2015,

<http://wunc.org/post/23-billion-recommended-wake-transit-plan-would-quadruple-bus-service#stream/0>, Attachment 19.

⁸⁷ DEIS at 40.

maintenance,” as well as with “fewer and less substantial indirect and cumulative impacts.”⁸⁸ Without more supporting data about bus costs, the comparative cost of bus service does not provide a rational basis for rejecting the mass transit/multi-modal alternative.

6. Combination of Strategies

The Alternatives Analysis also failed to consider a combination of alternatives which might meet the project’s purpose. While the Alternatives Analysis consistently rejected the upgrade existing roads, TDM, TSM, and mass transit alternatives as not being able to meet the project’s purposes to the same degree as the toll highway option, the Alternatives Analysis never considered whether combining two or more of these options would meet the project purposes as well or better than a toll highway option—and at a lower cost, with fewer environmental and human impacts.

41 The agencies must investigate alternatives such as TDM, TSM, mass transit/multi-modal, and upgrading existing roadways, separately and in combination, in order to fulfill their obligations under NEPA to rigorously review a reasonable range of alternatives. Indeed, the EPA suggested that NCDOT evaluate a combination alternative early on.⁸⁹ As highlighted above, it is unreasonable to reject this slate of alternatives because any one might not achieve the same levels of congestion-relief or mobility as building the 540 toll road. And indeed, due to the flawed analysis, these alternatives may well perform better than suggested in the Alternatives Analysis. NCDOT must evaluate whether combining these unreasonably rejected alternatives could meet the project purpose. See *Mineta*, 302 F.3d at 1121-22. *C.f. Muckleshoot Indian Tribe v. U.S. Forest Serv.*, 177 F.3d 800, 814 (9th Cir. 1999) (“A ‘viable but unexamined alternative renders the environmental impact statement inadequate.’” (quoting *Citizens for a Better Henderson v. Hodel*, 768 F.2d 1051, 1057 (9th Cir. 1985))).

IV. UNPRECEDENTED AND SEVERE IMPACTS

The DEIS presents 17 different DSAs, each of which is environmentally destructive. All of the DSAs would impact thousands of feet of streams, dozens of acres of wetlands and ponds, and correspond to destructive indirect and cumulative impacts through shifting traffic and land use patterns. Most of the DSAs would also imperil the endangered dwarf wedgemussel by crossing over the portion of Swift Creek that is most important to the species. While the DSAs using the Red Route would avoid most of the direct impacts to the dwarf wedgemussel, and correspond to far fewer environmental impacts in comparison to the other DSAs, these Red Route options are still environmentally damaging. The excessive impacts associated with all DSAs underscore the need for a more thorough examination of non-toll highway alternatives which would avoid most of these harmful effects.

A. Each DSA Would Result in Significant Adverse Impacts to Water Quality Which Would Not Occur With Non-Toll Highway Alternatives.

⁸⁸ Stakeholder Report at 178 (2012 EPA Technical Assistance Comments on Draft Alternatives Development and Analysis Report).

⁸⁹ *Id.* at 180 (“Light rail was not considered for the mobility analysis nor was a full comparative combination of alternatives, such as some TSM, some modest increases in express bus services from significant commuting areas and a light rail connecting major commuting center and destinations.”).

42 [A cursory examination of the direct impacts associated with any and all of the DSAs easily establishes the excessive environmental damage that would be caused by this project. Even the DSAs with the associated “least” environmental damage would result in substantial adverse impacts on wetlands, streams, and other natural resources. By way of comparison, the EPA had previously considered the proposed Garden Parkway project in Union and Mecklenburg counties to be one of the most environmentally damaging North Carolina projects in the preceding ten years of the NEPA/Section 404 Merger process with 36,416 linear feet of impacted streams, 7.02 acres of impacted wetlands, 4.5 acres of impacted ponds and 91 impacted stream crossings.⁹⁰ Here, every single DSA has a far greater number of impacts as to each of these environmental features, with even the “least” harmful option, DSA 7, corresponding to 51,582 linear feet of impacted streams, 51.4 acres of impacted wetlands, 17.7 acres of impacted ponds, and 106 impacted stream crossings.⁹¹ Moreover, once the indirect impacts from changed land uses and induced growth are considered, the environmental consequences will be even more severe.

1. Miles of Impacted Streams and Ponds

43 [Direct impacts from the DSAs would affect anywhere from 51,582 to 78,087 linear feet of impacted streams, including anywhere from 106 to 142 separate stream crossings.⁹² DSAs 6 and 7, which use the Red Route, are associated with the fewest stream impacts.⁹³ The possible 51,582 to 78,087 linear feet of stream impacts translates to anywhere from just under *10 miles* of affected streams to more than *fourteen miles* of affected streams. These stream impacts make the Complete 540 DSAs significantly worse than the previously mentioned Garden Parkway project.

43 [Additionally, building the proposed toll road would directly impact anywhere from 25 to 44 ponds, comprising a total of 17.7 to 27.6 acres of ponds.⁹⁴ Streams and ponds provide vital ecosystem resources, in addition to contributing to the natural beauty of this area. For example, many of the streams and ponds are inhabited by a diverse array of aquatic wildlife,⁹⁵ including a rich variety of mussel species.⁹⁶ Additionally, the section of the Neuse River and many of its tributaries flowing through the study area is recognized by North Carolina resource agencies as Anadromous Fish Spawning Area (“AFSA”) and as a Primary Nursery Area (“PNA”).⁹⁷ The AFSA designation means that anadromous fish species—which are fish species that begin their lives in freshwater, migrate to the open ocean for their adult lives, and return to freshwater areas to spawn—have been directly observed in the area.⁹⁸ While the Red Route DSAs represent the

⁹⁰ Letter from Heinz J. Mueller, U.S. EPA, to Jennifer Harris, N.C. Turnpike Authority (Feb. 22, 2011), Attachment A: FEIS Detailed Review Comments, Gaston East-West Connector Toll Facility, at 4, Attachment 20.

⁹¹ DEIS at 108, Comparative Evaluation Matrix

⁹² *Id.*

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ Natural Res. Tech. Report at 11.

⁹⁶ *Id.* App. E: Freshwater Mussel Survey Report (Mar. 2011), at i-ii.

⁹⁷ DEIS at 27; Natural Res. Tech. Report at 5; NAT’L MARINE FISHERIES SERV., A REFERENCE GUIDE TO THE DISTRIBUTION OF ANADROMOUS FISHES IN NORTH CAROLINA RIVERS (2010), at 5 (listing tributaries within Neuse River AFSA, including, for example, Swift Creek and Middle Creek) *available at* <https://connect.ncdot.gov/resources/hydro/Hydraulics%20Memos%20Guidelines/A%20Reference%20Guide%20to%20the%20Distribution%20of%20Anadromous%20Fishes%20in%20NC.pdf>, attached as Attachment 21.

⁹⁸ DEIS at 27.

options with the fewest impacts to ponds and other water resources, the Red Route is also the only route to directly impact approximately 6.7 acres of the Swift Creek Critical Watershed.⁹⁹ The Swift Creek Critical Watershed is a water supply watershed, and development within the watershed is limited according to Wake County's Swift Creek Land Management Plan.¹⁰⁰ The DEIS fails to explain how these limits on development would affect the project and provides no information about the nature of the impacts to the 6.7 affected acres. The Red Route would cross Swift Creek between Lake Wheeler and Lake Benson, a section of the creek particularly susceptible to increased pollution and other ill effects.

44 [As documented in the DEIS, the nature of the impacts to water resources include increased sedimentation, increased turbidity, habitat degradation to aquatic species, changes in water temperature, increased pollution from highway runoff and construction activities, and changes in water flows.¹⁰¹ While preventive measures such as sedimentation and erosion controls are mentioned in the DEIS, there is no commitment they will be followed and it is unlikely they will be fully successful. Because the water resources at stake include essential fish habitat and long stretches of streams, these impacts are even more alarming.

45 [The DEIS also lacks much information regarding stream and water quality impacts. Fish monitoring of the streams in the area appears to have been very limited, with data being collected at *one location* within a mile of the study area back in June of 1991 and again in April of 1995.¹⁰² Likewise, the benthic monitoring within the study area is dated, with the majority of the designations coming from the 1980s or early 1990s.¹⁰³ The site with the most recent benthic water quality assessment is from July 2000.¹⁰⁴ This dated, incomplete information harms the NEPA process by failing to provide information necessary to the selection of a preferred alternative.

2. Already Impaired Waters

Many of the streams in the Complete 540 project area are already listed as impaired under Section 303(d) of the CWA ("Section 303(d)" or "303(d)"), meaning that the streams' water quality levels are below the applicable water quality standards. In other words, these impaired streams are already polluted, and their polluted status would only worsen with the addition of more impervious paved surfaces and conversion of natural areas into commercial and industrial developments,¹⁰⁵ which would result in increased stormwater runoff, nonpoint pollution, and sedimentation issues within the affected watersheds as noted above. Four of the DSAs would impact more than one thousand linear feet of already impaired streams, and another ten would impact between 500 and 1,000 linear feet of 303(d) impaired streams.¹⁰⁶

⁹⁹ DEIS at 108, Comparative Evaluation Matrix.

¹⁰⁰ Community Impact Assessment (June 2015), at 38.

¹⁰¹ DEIS at 87-88.

¹⁰² Natural Resources Technical Report (Aug. 2014) at 5

¹⁰³ Natural Resources Technical Report (Aug. 2014) at 5

¹⁰⁴ Natural Resources Technical Report (Aug. 2014) at 5

¹⁰⁵ Indirect and Cumulative Effects Report (Dec. 2014), at E-4-E-5.

¹⁰⁶ DEIS at 108, Comparative Evaluation Matrix

Aside from its numeric summary of Section 303(d) impacts in the Comparative Evaluation Matrix, the DEIS only makes fleeting mention of these 303(d) impaired waters in a general section about Water Resource Protection: “Section 303(d) of the CWA prohibits the addition of certain new sources of pollutants into waters listed as not meeting water quality standards. Several water bodies in the Complete 540 study area are on the North Carolina Section 303(d) list.”¹⁰⁷ On the following page, in a discussion specific to the Neuse River, the DEIS notes that “the Neuse River in the study area . . . is listed on the North Carolina 2014 Final 303(d) list of impaired waters due to high copper levels,” and “portions of Swift Creek in the study area” are on the Section 303(d) list due to “impaired benthic integrity.”¹⁰⁸ Terrible Creek and Beddingfield Creek are also listed under 303(d) due to their impaired benthic community,¹⁰⁹ and Little Creek and Middle Creek are on the 303(d) list due to impaired benthic integrity and a poor fish community.¹¹⁰ As noted in the Natural Resources Technical Report prepared prior to the DEIS, both the Neuse River and Middle Creek had previously been listed as impaired due to turbidity.¹¹¹ The Indirect and Cumulative Effects (“ICE”) Report identifies still more 303(d) streams within reach of future land use impacts caused by the project, including Crabtree Creek, Walnut Creek, Kenneth Creek and Neills Creek.¹¹²

46 [This is the extent of the DEIS’s documentation of Section 303(d) impaired waters—there is no analysis of how the impaired streams would be further impacted and no discussion of how NCDOT intends to prevent further impairment. As previously noted, the DEIS succinctly summarized and acknowledged the import of Section 303(d) in prohibiting “the addition of certain new sources of pollutants into waters listed as not meeting water quality standards.”¹¹³ Yet, the DEIS omits any discussion of the nature of the projected impacts to the several hundred linear feet of Section 303(d) listed streams.

47 [This lack of sufficient explanation of impacts must be corrected in order to provide the public and resource agencies with necessary project information. Pursuant to § 401 of the Clean Water Act, 33 U.S.C. § 1341, the state of North Carolina must certify that any discharge from the Project complies with the relevant provisions of the Clean Water Act. The North Carolina Division of Water Resources (“DWR”) has explained that certification is predicated on a determination that a project “does not result in cumulative impacts, based upon past or reasonably anticipated future impacts, that cause or will cause a violation of downstream water quality standards.”¹¹⁴ For “projects such as roads on new location,” DWR requires a “[q]uantitative (i.e. [d]etailed) [a]nalysis of water quality impacts.”¹¹⁵ According to DWR policy, impaired waters listed pursuant to CWA Section 303(d), “warrant special attention with

¹⁰⁷ DEIS at 26.

¹⁰⁸ DEIS at 27.

¹⁰⁹ DEIS at 29.

¹¹⁰ DEIS at 27, 29.

¹¹¹ Natural Resources Technical Report at 5.

¹¹² Indirect and Cumulative Effects Report (Dec. 2014), at E-3, 21-22.

¹¹³ DEIS at 26.

¹¹⁴ N.C. DIV. WATER QUALITY, CUMULATIVE IMPACT POLICY FOR THE 401 AND ISOLATED WETLAND PERMITTING PROGRAMS, at 1 (April 10, 2004) at http://portal.ncdenr.org/c/document_library/get_file?uuid=b567bb9e-09fd-4ec0-9231-6d47e19e085e&groupId=38364 (citing 15A NCAC 2H .0506 and 15A NCAC 2H .1300), attached as Attachment 22.

¹¹⁵ *Id.* at 2.

respect to cumulative impact analysis since existing regulatory programs often have not adequately addressed pollution sources for these waters.”¹¹⁶ DWR therefore advises that “a detailed, quantitative analysis should be conducted by DOT to determine 1) if cumulative impacts are likely,” and “2) what non-point source control measures will be needed and how they are to be implemented.”¹¹⁷ DWR goes on to explain that “[t]his analysis will often require watershed-level modeling using export coefficients, estimated levels of treatment for BMP’s and comparison to numerical water quality standards or numeric water quality goals.”¹¹⁸

48 [Here, the DEIS and supporting reports fail entirely to discuss potential cumulative—or any—impacts to impaired waters within the project study area as directed by the DWR guidance. This lack of study and documentation of impacts to CWA 303(d) streams will make obtaining Section 401 certification difficult, if not impossible.

3. Devastated Wetlands

In addition to the thousands of yards of impacted streams, each DSA would directly impact at least 135 separate wetlands and as many as 161 wetlands, comprising a total of 51.4 to 75.6 acres of impacted wetlands.¹¹⁹ These numbers comprise only the wetlands directly impacted by the various proposed DSAs, as the underlying Natural Resources Technical Report identified far more wetlands within the study area as a whole—a total of 543 wetlands—which would likely be impacted by the indirect impacts of the project.¹²⁰

49 [Much like the DEIS’s cursory overview of the quantitative impacts on streams, the DEIS and Natural Resources Technical Report fail to document the extent or nature of any of the wetlands impacts. Nonetheless, in reviewing the maps associated with the project and in light of nature of the project, it appears that large areas of wetlands would be completely destroyed, and others would be impaired or damaged by consequent increases in runoff and pollution. While the DEIS does not specifically discuss sedimentation, turbidity, increased runoff and pollution issues within its specific wetlands impacts section,¹²¹ the DEIS identified these impacts in the general section on water resources.¹²² The noted direct impacts to water resources apply to wetlands, and may have greater negative impacts in light of the sensitive nature and ecological importance of wetlands. Additionally, wetlands in the project area would suffer more impacts in the form of indirect and cumulative impacts as land uses change and development shifts—thus the impacts to wetlands would be even worse than what is already depicted in the DEIS.

4. Lack of Buffer Protections

The DEIS and ICE Report emphasize that existing state and local buffer rules provide protection for waterways within the study area.¹²³ The ICE Report highlights that some local

¹¹⁶ *Id.* at 3.

¹¹⁷ *Id.*

¹¹⁸ *Id.*

¹¹⁹ DEIS at 108: Comparative Evaluation Matrix.

¹²⁰ Natural Res. Tech. Report at 12.

¹²¹ DEIS at 90-91.

¹²² *Id.* at 88-89.

¹²³ *Id.* at 27; ICE Report at E-4, 32.

50 [jurisdictions within the study area have imposed more stringent buffer requirements. In making this observation, however, the DEIS and ICE Report fail to document the impacts of the proposed project on these riparian buffers established or protected by local ordinance.

51 [Exclusive reliance on the enforcement of state-mandated buffer protections is questionable given the myriad steps taken by the North Carolina General Assembly to weaken the State’s riparian buffer protection requirements. First, in recognition of the breadth of buffer protections currently afforded by local ordinance, the legislature recently sought to restrict the authority of local governments in this arena. Legislation passed earlier this year prevents any local government, absent completed review and approval by the State prior to 2017, from enacting, implementing, or enforcing any buffer ordinance unless “necessary to comply with or implement federal or State law or a condition of a permit, certificate, or other approval issued by a federal or State agency.” 2015 N.C. Sess. Laws 246 § 13.1(b) (Sept. 23, 2015) (enacting N.C. Gen. Stat. § 143-214.23A). The same legislation limited the ability of local governments to enforce buffer ordinances in their extraterritorial jurisdiction, regardless of observed impacts on water quality. *Id.* § 3 (amending N.C. Gen. Stat. § 160A-365). Thus, the ICE Report’s statement regarding local ordinances providing more stringent buffers is outdated, and NCDOT cannot assume such protections will be in place to assist in reducing impacts from the Complete 540 project.

The State’s disregard for the water quality protection afforded by riparian buffers is also evidenced by a recent reduction in required mitigation when a project impacts existing riparian buffers. A 2015 law eliminated all mitigation requirements previously applicable under state law to account for impacts to riparian buffers bordering intermittent streams. 2015 N.C. Sess. Law 286 § 4.31(a) (Oct. 22, 2015) (amending N.C. Gen. Stat. § 143-214.7C). In other words, the DEIS cannot genuinely claim that selected routes would have a smaller impact on “protected buffer zones” than suitable alternatives when it fails to consider actions by the State to narrow the scope of protected buffer zones. The DEIS fails to fully and fairly assess the project’s potential impacts to buffer zones in light of recent state legislation, and assumes that many now-defunct local buffer zones would be in place. These buffer zone considerations will have a serious effect on environmental impacts in the project area, as well as a serious impact on measures NCDOT may be required to undertake to provide additional buffer protections in light of these legislative changes.

A. Building the Toll Highway Would Jeopardize an Endangered Species in Violation of the Endangered Species Act

52 [Under the Endangered Species Act (“ESA”), federal agencies must consult with the U.S. Fish and Wildlife Service to ensure that “any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined . . . to be critical.” 16 U.S.C. § 1536(a)(2). The Complete 540 project is subject to this mandate, and indeed, the project cannot legally proceed because it would jeopardize the continued existence of the endangered dwarf wedgemussel—and possibly other rare, soon-to-be federally listed species.

Thirteen rare aquatic species occur within the project study area, including the federally-listed endangered dwarf wedgemussel, and a number of species that will likely be listed before project construction is scheduled to begin on this project. Here, all but DSAs 6 and 7 would cause direct adverse effects to the dwarf wedgemussel, as well as likely damaging effects on the 12 other rare aquatic species. It is possible that even DSAs 6 and 7, through indirect or cumulative impacts, could jeopardize the continued existence of the dwarf wedgemussel.

1. Building the Toll Road Would Result in Severe Direct, Indirect, and Cumulative Impacts to the Dwarf Wedgemussel

As documented throughout the DEIS and supporting reports, an essential population of the dwarf wedgemussel occurs within the Swift Creek watershed.¹²⁴ The North Carolina Wildlife Resources Commission includes the Swift Creek Watershed on a list of 25 areas in the state “considered essential for the continued survival of endangered or threatened aquatic wildlife species.”¹²⁵ The USFWS considers Swift Creek as being essential for the recovery of the dwarf wedgemussel.¹²⁶ All of the DSAs cross Swift Creek, with the majority crossing Swift Creek downstream of Lake Benson. The section of Swift Creek upstream of Lake Benson is not known to support dwarf wedgemussels, while the section downstream of Lake Benson supports a well-documented, persistent population of dwarf wedgemussels. As stated in the ICE Report, the “portion of Swift Creek downstream of the Lake Benson dam is particularly important for the long-term survival of this species.”¹²⁷

The DSAs not using the Red Route all cross Swift Creek below Lake Benson, in the stretch of Swift Creek where dwarf wedgemussels have been consistently observed in stream surveys. Indeed, the Orange Route segment “appear[s] to connect with I-40 at a particularly unfavorable location with regard to potential impacts to the dwarf wedgemussel,” placing the I-40 and US 70 Bypass interchanges “on top of several tributaries to Swift Creek and also in close proximity to Swift Creek mainstem. These routes would tear up these critical portions of Swift Creek, and the dwarf wedgemussel would suffer further direct impacts from erosion and siltation resulting from construction of the road.”¹²⁸ The only route that would avoid the direct impacts on the dwarf wedgemussel is the Red Route, which is included only in DSAs 6 and 7.

53 [The indirect and cumulative impacts identified by USFWS and the ICE Report would jeopardize the dwarf wedgemussel’s continued existence under any of the current DSAs. Given the induced growth and other indirect and cumulative impacts likely to occur with this road, even DSAs 6 and 7 may jeopardize the dwarf wedgemussel’s continued existence.¹²⁹ The USFWS expressed concern about this project’s indirect impacts to the dwarf wedgemussel early on,

¹²⁴ *E.g. id.* at 30.

¹²⁵ Dwarf Wedgemussel Viability Study: Phase 1 (Mar. 2014), at 1 [hereinafter “DWM Viability Report”].

¹²⁶ *Id.* at 1.

¹²⁷ ICE Report, at E-3.

¹²⁸ Letter from Gary Jordan, USFWS, to Jennifer Harris, NCTA (Feb. 3, 2010), at 1-2, Attachment 23; *see also* Sarah McRae, USFWS, Powerpoint Presentation: ESA Consultation Considerations for Complete 540 Transportation Project (Feb. 3, 2015), at slide 18, Attachment 24.

¹²⁹ Natural Res. Tech. Report, App. E: Freshwater Mussel Survey Report, at ii (“[D]irect impacts to the dwarf Wedgemussel are unlikely to occur if the Red Corridor is constructed; however, conclusions regarding Indirect and Cumulative Impacts to the population cannot be determined at this time, and will need to be addressed with all alternates within the study area.”).

noting that “[t]his population of dwarf wedgemussel is at risk . . . from indirect effects associated with the degradation of water quality from secondary development induced by the new road.”¹³⁰ USFWS further noted that additional impervious surfaces in the area and increased storm water runoff due to the induced development would further degrade water quality in the Swift Creek watershed.¹³¹ In turn, the ICE report acknowledges likely cumulative effects on the dwarf wedgemussel, noting that this species is “extremely sensitive to urban pollutants,” and “urban development activities lead to soil erosion and sedimentation that also harms the species.”¹³² In other words, the increased level of urban development anticipated to occur as a result of the building of the road would have serious impacts on the dwarf wedgemussel’s viability, in addition to the direct impacts associated with the direct devastation of the road crossing at Swift Creek.

The initial dwarf wedgemussel viability study completed in conjunction with the DEIS acknowledges the dwarf wedgemussel’s susceptibility to direct, indirect, and cumulative impacts while also noting the population’s recent rebound. The study establishes that “there are numerous stressors to aquatic communities, particularly the DWM population, the [Swift Creek Watershed],” with many of the stressors resulting from urbanization of the watershed.¹³³ The study further reports that declines in the mussel population “appear to have leveled off,” and evidence indicates that “mussel recruitment has increased within the last few years.”¹³⁴

54 [The study confusingly appears to focus on the current viability of the dwarf wedgemussel, rather than the viability of the dwarf wedgemussel in the event any of the DSAs are built.¹³⁵ The Endangered Species Act protections do not depend upon a species’ viability—indeed, such an interpretation would be in complete contravention of the purpose of recovering and conserving species whose viability are of concern precisely because of their endangered or threatened status. Instead, the key question for ESA protection is whether the species or habitat supporting it exists within the area. 16 U.S.C. § 1536(a)(2) Viability becomes relevant only when reviewing whether or not a proposed action would threaten the species’ survival. *Id.*; *see id.* at § 1536(b)(3)(A) (at conclusion of consultation, FWS will provide “a summary . . . detailing how the agency action affects the species or its critical habitat,” and “suggest those reasonable and prudent alternatives which . . . would not violate” the ESA). Nonetheless, recent studies suggest the dwarf wedgemussel population may be rebounding.¹³⁶ The toll road would reverse that trend of improvement and doom this dwarf wedgemussel population.

¹³⁰ Letter from Gary Jordan, USFWS, to Jennifer Harris, NCTA (Feb. 3, 2010), at 1-2, Attachment 23; *see also* Sarah McRae, USFWS, Powerpoint Presentation: ESA Consultation Considerations for Complete 540 Transportation Project (Feb. 3, 2015), at slide 18, Attachment 24.

¹³¹ Letter from Gary Jordan, USFWS, to Jennifer Harris, NCTA (Feb. 3, 2010), at 1-2, attached as Attachment 23.

¹³² ICE Report, at 77; *see also* letter from Gary Jordan to Jennifer Harris, NCTA (Feb. 3, 2010), at 2, attached as Attachment 23 (noting that “[a]dditional cumulative impacts may occur in conjunction with the proposed widening of I-40 within this same study area”).

¹³³ DWM Viability Report at ii.

¹³⁴ *Id.*

¹³⁵ *Id.* at 47 (noting goal of determining “long term viability”).

¹³⁶ *Id.* at 75 (“The decline [in dwarf wedgemussel populations] seems to have leveled off in recent years, which when coupled with evidence of recent reproduction and recruitment, may suggest a chance for the species to persist into the future.”).

55 Under the strictures of the ESA and its implementing regulations, this project cannot legally proceed if it will jeopardize the dwarf wedgemussel or adversely affect the dwarf wedgemussel’s critical habitat. 16 U.S.C. § 1536(a)(2); 40 C.F.R. § 230.10(b)(3). The required ESA consultation process with USFWS is still underway.¹³⁷ Until USFWS completes its consultation process, which will determine whether the project is likely to jeopardize the dwarf wedgemussel or adversely affect its habitat, the NEPA process and project as a whole cannot proceed.

Simply stated, building DSAs 1-5 and 8-17 is illegal under the ESA, and construction of DSAs 6 and 7 may also be barred under the ESA once additional research is completed. NCDOT should explore non-highway options that will not place the species in jeopardy.

2. Insufficient Information Impedes Full Review of the Impacts to the Dwarf Wedgemussel

56 While the DEIS acknowledges some of the possible adverse effects, it is also incomplete in its analysis and defers the full ESA evaluation for later. The DEIS states “[t]he Biological Conclusion for this species is unresolved,” and states NCDOT will not undergo the necessary Consultation process until a preferred alternative is selected, at which point the consultation results will be published in the FEIS or ROD.¹³⁸ Additionally, the mussel survey relied upon in
57 the DEIS for documenting mussel species, including the existence of dwarf wedgemussels within portions of Swift Creek, was completed more than five years ago.¹³⁹ It appears that each included segment was surveyed only once during the study period.¹⁴⁰ This study’s limits and dated nature require that additional mussel surveys be conducted to better document the presence of a variety of rare mussel species.

3. A Propagation Facility Cannot “Offset” Impacts to the Dwarf Wedgemussel or Comply with the ESA

58 Documents obtained from NCDOT raise the concern that the agencies may attempt to circumvent the ESA’s conservation mandate through a mussel propagation program that would simply put more mussels into an uninhabitable environment once the Complete 540 toll road is built. Correspondence between NCDOT and USFWS staff reveal that the agencies are coordinating on a plan that would establish a dwarf wedgemussel propagation facility in conjunction with North Carolina State University. Given the plan’s development in conjunction with NCDOT and relative to the Complete 540 DEIS, the plan appears to be intended to offset or “mitigate” harm to dwarf wedgemussels that may result from the Complete 540 toll highway,
59 rather than a plan developed independently to assist the viability of the species in its current state. NCDOT has presented no evidence to suggest that the dwarf wedgemussel could be successfully propagated in captivity and then reintroduced into the wild.

¹³⁷ DEIS at 95.

¹³⁸ *Id.* at 95-96.

¹³⁹ Natural Res. Tech. Report, App. E: Freshwater Mussel Survey Report at 2.

¹⁴⁰ *Id.* at 1-2.

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Even if NCDOT could successfully propagate mussels in captivity and release them into the wild, the time for implementing such a program has passed.¹⁴¹ It is too late to successfully complete such a program so as to augment the current mussel population, rather than effectively replace the current mussel population once wiped out by the proposed Complete 540 toll road.¹⁴² More than a year and a half ago, USFWS warned NCDOT that such “population augmentation” would be a time-sensitive and resource-intensive process:

[T]he process of acquiring a captive propagation facility and developing a captive propagation program would take considerable time to accomplish. After acquiring the necessary facility and equipment, dwarf wedgemussel brood stock would need to be acquired from Swift Creek and progeny produced and raised to sufficient size to release into the wild—a process that takes years.¹⁴³

USFWS emphasized that “time is of the essence” in collecting possible brood stock for such a propagation venture. That warning was issued more than a year and a half ago, and yet NCDOT has not collected the necessary brood stock that would enable NCDOT to successfully augment the existing wild population in advance of the current expected construction start date in 2018, less than two years away. Strangely, despite USFWS’s initial cautionary words about the time and resources necessary for propagation efforts, USFWS included such measures in a later draft document regarding conservation of the dwarf wedgemussel in Swift Creek.¹⁴⁴ This document, and the DEIS, fail to explain how propagation will help the dwarf wedgemussel population if decreased water quality and habitat degradation resulting from construction of the toll road leaves Swift Creek uninhabitable by wild or captive-propagated dwarf wedgemussels.

Additionally, given the supposedly limited number of wild individuals in Swift Creek, it is unclear how NCDOT would be able to acquire a sufficient brood stock to support such a program. In fact, when discussing how to improve viability of the Swift Creek dwarf wedgemussel population, USFWS’s first recommended strategy is to “[i]dentify habitat refugia” and “[p]rovide long term protection of the best habitats in Swift Creek.”¹⁴⁵ Such protections are paramount, and if habitat in Swift Creek cannot be adequately protected, a mussel augmentation program would be a fool’s errand. A senior USFWS fisheries and ecological services biologist raised this concern in e-mail correspondence with NCDOT and others involved in a possible mussel propagation facility:

It is my firm belief that captive propagation, augmentation and reintroductions should be sparingly-used; *the optimal way to ensure sustainability of at-risk and*

¹⁴¹ Sarah McRae, USFWS, Powerpoint Presentation: ESA Consultation Considerations for Complete 540 Transportation Project (Feb. 3, 2015), at slide 31, attached as Attachment 24 (stating that in order to successfully propagate dwarf wedgemussels for population augmentation, “[n]eed to collect DWM broodstock ASAP”).

¹⁴² USFWS, Draft Proposal: Conservation of Dwarf Wedgemussel in Swift Creek (Neuse), Including Captive Propagation Needs and Future Augmentation Scenarios (Feb. 2015), at 4, Attachment 25 (describing augmentation plan which would require releases of 3-year old dwarf wedgemussels annually over a 10-year period).

¹⁴³ Letter from Gary Jordan, USFWS, to Jennifer Harris, NCDOT (May 14, 2014), at 1–2, Attachment 26.

¹⁴⁴ USFWS, Draft Proposal: Conservation of Dwarf Wedgemussel in Swift Creek (Neuse), Including Captive Propagation Needs and Future Augmentation Scenarios (Feb. 2015), Attachment 25.

¹⁴⁵ Sarah McRae, USFWS, Powerpoint Presentation: ESA Consultation Considerations for Complete 540 Transportation Project (Feb. 3, 2015), at slide 19, Attachment 24.

*imperiled species is to ensure the quality and quantity of the habitat which sustains them, as well as enforcing existing protective measures already in place under both state and federal statutes. In the absence of such complementary education, habitat, and enforcement measures, my concern is that we will just be placing valuable and costly captive-propagated individuals in harms way alongside their remaining wild companions.*¹⁴⁶

61 Unlike impacts to wetlands and streams, impacts to endangered species cannot be “offset” or “mitigated.” Protected species are not fungible, and raising dwarf wedgemussels in captivity or releasing them somewhere other than Swift Creek will not satisfy the ESA conservation mandate to ensure the species’ viability in the wild. While another USFWS biologist promised that, “[r]est assured, we will not pursue propagation and augmentation without simultaneous habitat protection,” no habitat protection plan appears to have been developed to buttress the current augmentation plan.¹⁴⁷

62 Finally, the highway cost estimates in the DEIS do not appear to include the costs associated with such a mussel propagation facility. In order to present a full cost of alternatives that will require construction of such a facility NCDOT must disclose the full costs that would be associated with its construction and running.

4. NCDOT Must Fully Study Other Species Which Will be Federally Listed Prior to Completion of the Project

63 In addition to the dwarf wedgemussel, Swift Creek supports 12 other rare aquatic species,¹⁴⁸ including a number that USFWS is currently considering to propose for listing as endangered or threatened under the ESA.¹⁴⁹ USFWS has directly informed NCDOT of these pending listings, stating that these species—the Atlantic pigtoe, the yellow lance, the green floater, the Carolina madtom, the American eel, and the Neuse River Water dog—may be listed as “threatened or endangered *prior to the completion of the project.*”¹⁵⁰ The 2011 Freshwater Mussel Survey completed for the DEIS documented 41 Atlantic pigtoe individuals, 8 yellow lance individuals, and 39 green floater individuals within the project area.¹⁵¹ Moreover, USFWS considers Swift Creek a “stronghold for yellow lance in [the] Neuse basin.”¹⁵² According to a USFWS presentation, the listing decisions and rulemaking process for these species will begin October 2016.¹⁵³ With that in mind, NCDOT should thoroughly study these other species now rather than later in order to fully evaluate how a listing of any of these species would affect the current DSAs.

¹⁴⁶ E-mail from Wilson Laney, USFWS, to Ken Bridle, Piedmont Land Conservancy, et al. (Jan. 26, 2015), Attachment 27 (emphasis added).

¹⁴⁷ E-mail from Sarah McRae, USFWS, to Wilson Laney, USFWS (Jan. 27, 2015), Attachment 27 (same chain).

¹⁴⁸ See DWM Viability Report at Table 1. Rare Aquatic Species in Swift Creek.

¹⁴⁹ See Natural Res. Tech. Report, App. E: Freshwater Mussel Survey Report at 1; Letter from Gary Jordan, USFWS, to Jennifer Harris, NCDOT (May 14, 2014), at 2, Attachment 26

¹⁵⁰ Letter from Gary Jordan, USFWS, to Jennifer Harris, NCDOT (May 14, 2014), at 2, attached as Attachment 26.

¹⁵¹ Natural Res. Tech. Report, App. E: Freshwater Mussel Survey Report at Tables 3–111.

¹⁵² Sarah McRae, USFWS, Powerpoint Presentation: ESA Consultation Considerations for Complete 540 Transportation Project (Feb. 3, 2015), at slide 12, attached as Attachment 24.

¹⁵³ *Id.*

B. The DEIS Contains an Insufficient Analysis of Air Quality.

Like many aspects of the DEIS, NCDOT’s cursory analysis of air quality suffers from insufficient information. While the Air Quality Report documents the relevant Clean Air Act (“CAA”) standards and suggests that this project would not lead to violations of those standards, the report fails to provide a complete analysis of how the project might affect the quality of air for those living and working in the project area. First, the report provides only a vague qualitative assessment of likely increases in ambient air pollution from increased vehicular traffic throughout the project study area. Second, the report likewise provides an insufficient, ambiguous discussion of increased concentrations in air toxics from cars. Third, the report fails to consider the indirect and cumulative effects on air quality that could result from the project, particularly as a result of induced growth in the project area. Finally, the report fails to even mention possible impacts on greenhouse gas emissions (“GHGs”).

1. Unacknowledged Harmful Increases in Ambient Pollution

Pollutants from cars include harmful carbon monoxide (“CO”), nitrogen oxides (“NO_x”), and volatile organic compounds (“VOCs”).¹⁵⁴ In turn, NO_x and VOCs emissions are precursors to ozone, which is associated with a variety of detrimental human health and ecological effects.¹⁵⁵ NO_x are also a precursor to nitrogen dioxide (“NO₂”). The CAA regulates certain air pollutants, called “criteria pollutants”, including CO, NO₂, and ozone, through National Ambient Air Quality Standards (“NAAQS”). Attainment of these NAAQs is assessed on a region-by-region basis.

64 [The Air Quality Analysis failed to document the deleterious effects associated with any of the criteria pollutants. In particular, the Air Quality Analysis failed to discuss future ozone levels in the project study area beyond the observation that Wake and Johnston Counties are in attainment under the ozone NAAQs.¹⁵⁶ This naked observation about the current attainment status provides no information about the toll highway’s impact on ozone levels in Wake and Johnston Counties. Indeed, localized ozone levels would almost certainly increase along the toll highway. Given the smog-causing nature of ozone, as well as its severe impacts on human health, the Air Quality Analysis needs to provide more information about the Complete 540 project’s impacts on ozone, and not just the current ozone attainment status of the affected regions.

2. Incomplete and Vague Evaluation of Toxic Pollutants from Cars

The CAA authorizes EPA to regulate emissions of toxic air pollutants emitted by motor vehicles that are associated with significant adverse health effects, known as mobile source air toxics (“MSATs”). 42 U.S.C. § 7521(1). The Air Quality Report reviews the Complete 540 project’s possible increases in MSATs in a cursory, qualitative fashion, and the Report fails to

¹⁵⁴ EPA, AUTOMOBILE EMISSIONS: AN OVERVIEW 2 (1994), available at <http://www3.epa.gov/otaq/consumer/05-autos.pdf>, Attachment 28; EPA, *Greenhouse Gas Emissions: Transportation Sector Emissions*, <http://www3.epa.gov/climatechange/ghgemissions/sources/transportation.html> (last updated September 11, 2015), Attachment 29.

¹⁵⁵ EPA, *Ground-Level Ozone*, <http://www3.epa.gov/ozonepollution/> (last updated October 1, 2015), Attachment 30.

¹⁵⁶ Air Quality Analysis Report (Oct. 2015), at 12.

then explain the corresponding health impacts from such an increase in tail pipe pollution. MSATs include chemical compounds such as benzene, 1,3-butadiene, formaldehyde, acetaldehyde, polycyclic organic matter (“POM”), naphthalene, and diesel particulate matter.¹⁵⁷ MSATs can cause cancer and a variety of respiratory, neurological, cardiovascular, liver, kidney, and other harmful health effects.¹⁵⁸

Section 7 of the Complete 540 Air Quality Report primarily disclaims responsibility for analyzing MSATs, explaining that “[w]hile much work has been done to assess the overall health risk of air toxics, many questions remain unanswered.”¹⁵⁹ Nonetheless, the Air Quality Report repeatedly notes that even if VMT rates increase with the toll highway, the EPA’s stringent new vehicle requirements will result in lower MSAT emission levels over the long-term.¹⁶⁰ In doing so, the Report does not provide any information about the analysis conducted to reach this conclusion. Even if MSAT emission levels will reduce 20 or 30 years out, the focus on the long-term improvement fails to acknowledge the possible increased emission levels in the short-term, before EPA’s new fuel and vehicle regulations fully take effect. The Air Quality Report advances the dubious rationale that while “it is expected there would be slightly higher MSAT emissions in the project study area relative to the No Build Alternative due to the increased VMT . . . current tools and science are not adequate to quantify them”—nor apparently to provide any information other than a hopeful assessment that “EPA’s vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions” in MSATs.¹⁶¹

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This optimistic analysis fails to provide the basis for a meaningful assessment of the DSAs’ environmental impacts, as required by NEPA. The DEIS should catalogue the schools, hospitals, public parks and other locations in the project area where sensitive populations would likely suffer exposure to MSAT generated by the toll road. Indeed, the Air Quality Report acknowledges that the DSAs “will have the effect of moving some traffic closer to nearby homes, schools and businesses,” and that “under each DSA there may be localized areas where ambient concentrations of MSAT would be higher under certain DSAs than others.”¹⁶² Yet the DEIS and Air Quality Report do not attempt to document how this would impact the health of those families living and working in these areas. A possible increase in MSATs is especially important given that “[n]umerous schools, places of worship, parks, recreation areas, and other community resources” are within the project corridor area.¹⁶³ Children and the elderly are particularly susceptible to air pollution, thus the proximity of the proposed toll highway to such community resources is troubling. Twenty-five Wake County public schools and six of Johnston County’s public schools fall within the Demographic Study Area.¹⁶⁴ Additionally, “several

¹⁵⁷ EPA, Mobile Source Air Toxics – Basic Information, <http://www3.epa.gov/otaq/toxics.htm> (last updated June 26, 2014), as Attachment 31.

¹⁵⁸ See, e.g., EPA, *Mobile Source Air Toxics – Health Effects and Risk*, <http://www3.epa.gov/otaq/toxics-assessment.htm#health> (last updated Oct. 29, 2012), Attachment 32.

¹⁵⁹ Air Quality Analysis Report at 14.

¹⁶⁰ *Id.* at 14–15.

¹⁶¹ *Id.* at 19.

¹⁶² *Id.* at 17.

¹⁶³ Community Impact Assessment at E-3; Final Community Characteristics Report at E-3.

¹⁶⁴ Community Impact Assessment at 25.

private schools” fall within the project corridor, as do “dozens of private daycare centers and preschools.”¹⁶⁵

The DEIS should estimate the likely emissions exposures at important community locations—such as schools and daycare centers—using accepted testing methods, relate these estimates to findings in contemporary, peer-reviewed health studies of MSAT exposures, and discuss specific mitigation measures that could safeguard the identified sensitive populations. Finally, the DEIS should compare these dollar and human health costs with those associated with a plausible alternative that does not involve a new-location toll road, such as upgrades to existing highways, transit, and TDM and TSM strategies in the study area.

The Report suggests that “information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated” the current DSAs.¹⁶⁶ Given the clear link between the MSATs in vehicle exhaust and health impacts, the question is not whether the toll highway will have negative health effects for those who live nearby. Rather, the question is the extent of those impacts, and how accurately they can be predicted. The agencies may not have a computer model specifically designed for this task and there may be limits on how accurately the health impacts in the area can be predicted. But the purpose of NEPA is to force agencies to consider and disclose the reasonably foreseeable consequences of their actions; the Air Quality Report focuses instead on justifying its failure to consider these consequences. The agencies must model the health impacts of the increased MSAT exposure to the extent practicable to fully inform resource agencies and the public about the air quality impacts associated with building the toll highway.

3. No Analysis of Indirect and Cumulative Effects on Air Quality

66 In addition to possible increases in MSAT emissions, the DEIS and related documents wholly fail to consider the indirect and cumulative impacts on air quality in the project area. Building any of the DSAs will correlate to significant shifts in land uses and growth patterns in the project area. In turn, these changed land uses will have indirect and cumulative effects on air quality throughout the project area—but the DEIS fails to evaluate the effects of induced growth and changed land uses resulting from building the toll highway. The DEIS admits this general shortcoming, stating that the 2035 forecast traffic conditions used for developing the project “do not reflect the reallocation of land use that would be expected from the project not being built.”¹⁶⁷ Instead, NCDOT will not complete “a quantitative assessment of the indirect effects of the build and no-build scenarios on land use and associated traffic conditions” until a preferred alternative is selected.¹⁶⁸ Moreover, the current, qualitative ICE Report fails to mention even the possibility of indirect and cumulative effects on air quality. Such information about the indirect and cumulative impacts associated with changed land uses and growth as between a no-build and build scenario is essential to a complete understanding of the air quality impacts of the Complete 540 toll highway.

¹⁶⁵ *Id.* at 25; Final Community Characteristics Report at 24.

¹⁶⁶ Air Quality Analysis Report at 17.

¹⁶⁷ DEIS at 15 n.*.

¹⁶⁸ *Id.*

For example, the massive toll highway would likely induce growth and development in previously undisturbed areas, which would cause greater amounts of air pollution. Most of the DSAs would pull such induced growth south, expanding development away from the already developed Raleigh metropolitan region into less-developed areas. This development could take the form of residential, commercial, and industrial growth,¹⁶⁹ each of which causes impacts to air quality. Such sprawling development would correspond to longer commutes, and longer commutes equate to more tailpipe emissions decreasing air quality.

Building roads also can paradoxically cause an increase in congestion. Travelers who previously avoided congested roads by foregoing discretionary trips or by traveling at non-peak hours might now opt to take more trips at different times. Moreover, development might expand along the new road, creating new communities and new travel demands. As such, building roads entices new vehicle trips, creating what is known as “induced demand” and in turn causing more, not less, congestion. This indirect effect that would result from building the Complete 540 toll highway is not mentioned in the Air Quality Report or ICE Report.

The DEIS fails to document any of these induced-growth effects on air quality. These likely air quality impacts again underscore the need to consider other alternatives, like TDM, TSM, and mass-transit, which would correspond to less induced growth and fewer air quality impacts.

4. No Review of Greenhouse Gas Emissions

67 Finally, the DEIS and its corresponding Air Quality Analysis Report fail to include any reference to possible impacts on greenhouse gas emissions (“GHGs”). In December 2014, the Council of Environmental Quality (“CEQ”) issued draft guidance on “Consideration of Greenhouse Gas Emissions and the Effects of Climate Change,” under NEPA. Revised Draft Guidance on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change, 79 Fed. Reg. 77801 (Dec. 24, 2014), attached as Attachment 33. The draft guidance instructs agencies to consider impacts on GHGs when conducting a NEPA analysis. As recognized by the CEQ’s draft guidance, while “climate impacts are not attributable to any single action,” they are “exacerbated by a series of smaller decisions, including decisions made by the government” and should be analyzed as such. Revised Draft Guidance, 79 Fed. Reg. at 77825. Thus, even if the agencies were to assert that the project’s effects on GHGs would be negligible, they must model those effects for the sake of being able to evaluate cumulative impacts on GHG levels. Prior to publishing any FEIS, the agencies must complete an analysis of the Complete 540 project’s impacts on GHG levels as directed by the CEQ draft guidance.

¹⁶⁹ See Community Impact Assessment at E-4 (“The municipalities in the project area anticipate that the project will spur commercial and industrial growth near interchange areas”); *id.* at 42.

C. The DEIS Fails to Provide an Adequate Analysis of Community and Public Interest Impacts.

All of the DSAs currently considered by NCDOT would have significant human and community impacts. Each DSA would force families and businesses to relocate and disrupt established communities. The costs of the toll highway—much of which would be borne by commuters paying the toll and taxpayers across the state—along with the unexplained and limited time-savings, do not outweigh the community and public interest impacts.

As highlighted in the discussions above, unprecedented environmental destruction and exorbitant estimated costs vastly outweigh the meager time-savings benefits that building the toll road under any of the 17 DSAs would encompass. Figures from the DEIS suggest that the majority of commuters would save less than 10 minutes if the road is constructed—and will be charged a toll to do so. The project is currently estimated to cost anywhere from \$2 billion to nearly \$2.6 billion—in other words a financial cost of approximately \$200 to \$260 million per minute of travel time saved.¹⁷⁰ The DEIS and Alternatives Analysis fail to provide any indication of how many people would be likely to use the facility.

Moreover, the DEIS provides no explanation of the benefits—if any—that would accrue to drivers opting to remain on existing roads. When asked at the recent public hearings NCDOT staff were unable to provide any answer to such questions.¹⁷¹ If only those able to pay for the toll would stand to experience the time-savings benefits, the project would unfairly benefit only the wealthy while effectively pricing out low-income families. In turn, the project's potential disproportionate impact on low-income and minority communities, given the cost of using the road, must be evaluated and mitigated, as required by Executive Order 12898. Exec. Order No. 12,898, 59 Fed. Reg. 7629 (Feb. 11, 1994) The Community Impacts Assessment contains one-page on the possible effects on tolling, but notably absent is any discussion of the cost of tolls.¹⁷² In a table listing general environmental justice considerations for toll facilities, the row for “cost of toll” states “(to be added after traffic and revenue study.”¹⁷³ The Community Impact Assessment acknowledges that “travel times for drivers using non-toll routes could be slightly greater than using the new facility” but provides no further explanation to help assess the extent of the differences in travel times, or if non-toll highway users would reap any benefit from the \$2.6 billion project.¹⁷⁴

In contrast to the variable possible time savings, the toll road would displace neighborhoods and uproot hundreds of families. Depending on the DSA selected, there would be anywhere from 234 to 550 necessary residential relocations.¹⁷⁵ Those not forced to leave would

¹⁷⁰ See Southeast Extension – First Tier Screening Traffic Memorandum Appendix A: Travel Time Calculations.

¹⁷¹ Attorneys Kym Hunter and Ramona McGee attended the public meeting on December 8, 2015 at Holly Springs High School on behalf of the Conservation Groups. The attorneys were directed to Bradley Reynolds to discuss issues regarding traffic forecasting. When Mr. Reynolds was asked what travel time savings would accrue to those travelers who plan to continue using existing roads he stated that this issue had not been studied.

¹⁷² Community Impact Assessment, at 53-54 & Table 20: General Environmental Justice Evaluation for Toll Facilities.

¹⁷³ Community Impact Assessment at Table 20.

¹⁷⁴ *Id.*

¹⁷⁵ DEIS at 107: Comparative Evaluation Matrix.

now have a massive toll road facility running through what was formerly their backyard. The road would run through natural areas providing aesthetic value for these neighborhoods. And given that this transportation facility would be a toll road, with an as of yet undisclosed price per trip, many of the people living along the road may not be able to afford the toll road or may not find the potential time-savings worth the cost of the toll.

70 [This road’s cost, , and the environmental and human damage are too great to justify the limited possible time savings, particularly when there are other practicable alternatives with fewer environmental impacts. This costly, community-disrupting, and environmentally devastating toll road is not in the public interest.

D. The Analysis of Indirect and Cumulative Effects Is Superficial and Inadequate.

71 [While the sheer quantity of direct impacts to resources presented in the DEIS are deeply concerning standing alone, they do not represent the full extent of the DSAs’ potential impacts. The DEIS fails to adequately address the project’s indirect and cumulative effects, as required by CEQ regulations. In addition to direct impacts, Complete 540 would cause extensive indirect impacts and cumulative impacts. The ICE Report presents only a vague qualitative analysis of these effects—not specific to any particular DSA. Moreover, non-highway alternatives—like upgrading existing roads, TDM, TSM, and mass transit are not considered in the ICE Report, further complicating a fair and thorough review of alternatives.

The qualitative review does not assist in distinguishing between the DSAs. Even that non-numeric review demonstrates that additional environmental degradation would result through indirect and cumulative impacts to wetlands, streams, federally endangered species, and other natural resources.

1. Unstudied and Unaccounted-for Indirect Effects

NEPA requires consideration of indirect effects, defined as those effects that are “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” 40 C.F.R. § 1508.8(b). The CEQ regulations state that NEPA documents should specifically include “growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.” *Id.*

72 [All of the DSAs stand to have sweeping indirect effects, impacts caused by induced growth and changed land-use patterns. These effects go largely undocumented in the ICE Report, since it is merely a “qualitative” and generalized analysis, rather than a quantitative review of specific indirect impacts likely from any of the given DSAs. The DEIS and ICE Report make no attempt to quantify any of the superficial characterizations that typify its assessment of indirect impacts.

The ICE Report fails to acknowledge the indirect effect of attracting new, “induced growth” and development to the area. Building new, large transportation structures often attracts new growth and development along the highway and off its interchanges. A large highway

effectively facilitates greater growth rates in the vicinity of the highway than would occur in the area if the highway were not build, as highlighted by the Complete 540 consultants in e-mails with NCDOT staff.¹⁷⁶ With respect to Complete 540, NCDOT acknowledges that land use patterns are likely to change once the highway is constructed. Certain large scale new developments such as the Veridea development in Apex are unlikely to move forward without the toll highway.¹⁷⁷

Moreover, the pattern of sprawling growth associated with large highways corresponds to paved over wetlands, clearcut forests, elimination of wildlife habitat, and increased pollution of waters through greater stormwater runoff. Such land use is thus more environmentally damaging than compact land use in an area with existing development.

73 While the amount of induced growth would be substantial under any of the current DSAs, the effects of that induced growth would vary greatly. Specifically, the DSAs with the Red Route would have fewer impacts associated with induced growth by concentrating that growth in areas which are already developed, whereas other DSAs would bring environmentally destructive development to undisturbed areas further south. The non-Red Route DSAs would enable more harmful, less-guided sprawling growth patterns—and such indirect effects should be documented in any future ICE analysis.

74 Most importantly, as the agencies have noted, the DEIS fails to include any consideration of “the reallocation of land use that would be expected from the project not being built.”¹⁷⁸ As such, the DEIS fails to provide an honest assessment of the land use and development likely to occur under a No-Build scenario, and consequently fails to accurately present the extent of induced development and associated environmental damage that is attributable to the new road.

An accurate No-Build baseline is essential for a satisfactory NEPA review. *N.C. Wildlife Fed’n v. N.C. Dep’t of Transp.*, 677 F.3d 596, 603 (4th Cir. 2012) (citing *Friends of Yosemite Valley v. Kempthorne*, 520 F.3d 1024, 1037-38 (9th Cir. 2008)); *see also Friends of Back Bay v. U.S. Army Corps of Eng’rs*, 681 F.3d 581, 588 (4th Cir. 2012) (“A material misapprehension of the baseline conditions existing in advance of an agency action can lay the groundwork for an arbitrary and capricious decision.”); *Catawba Riverkeeper Found. V. N.C. Dep’t of Transp.*, No. 5:15-CV-29-D, slip op. at 16, 2015 WL 1179646, at *8 (E.D.N.C. Mar. 13, 2015); *Openlands v. USDOT*, No. 1:13-cv-04950, 2015 WL 4999008, at *10 (N.D. Ill. June 16, 2015) (holding that without a true “no build” scenario, it is “impossible to determine the extent to which building the

¹⁷⁶ E-mail from Andrew Lelewski, NCDOT, to Theresa Ellerby, NCDOT, (Apr. 21, 2014), Attachment 34 (including Lochner’s feedback on how interchanges between the proposed 540 extension and existing I-40 will provide “direct access between the managed lanes on I-40 and 540 will likely result in additional wetland and stream impacts for both the Orange and Lilac Corridors”).

¹⁷⁷ ICE Report at 46 (noting Veridea development plans “are based on the assumption that a new interchange is built at NC 540 and Old Holly Springs-Apex Road . . . and that the Complete 540 project will connect this area to I-40 south of Raleigh”); *see id.*, App. A: Apex Town Hall Meeting Summary (Sept. 12, 2012) at 2-3 (noting that Apex’s “land use and economic development objectives are highly dependent on the construction of the Southeast Extension,” and “Veridea, in particular is heavily dependent on the project”); *id.*, App A: Wake County Conference Call Meeting Summary, at 3 (“The project will likely stimulate development of major and minor retail centers near interchanges and residential development nearby).

¹⁷⁸ DEIS at 15 n.*

Corridor will increase traffic on existing roads and the impact such increased traffic may have on the study area). Yet, NCDOT fails to include such an accurate baseline with regularity. *E.g.* *N.C. Wildlife Fed’n*, 677 F.3d at 603–04; *Catawba Riverkeeper*, slip op. at 16, 2015 WL 1179646, at *8; *N.C. Alliance for Transp. Reform v. USDOT*, 151 F. Supp. 2d 661, 689-90 (M.D.N.C. 2001). As such, NCDOT frequently presents NEPA documents that fail to account for the full extent of indirect environmental impact that is likely to result from major new highway construction.

In recognizing this fundamental deficiency, the DEIS suggests that the error is overcome because “a quantitative assessment of the indirect effects of the build and no-build scenarios on land use and traffic conditions will be evaluated,” once a preferred alternative is selected. But this statement misses the point;¹⁷⁹ an accurate No-Build baseline is a necessary requirement of any analysis of induced growth regardless of the “build” alternative that is ultimately chosen and studied. Indeed, such information is needed *before* a preferred alternative is selected in order to compare the extent of the indirect impacts—at least generally—of all different “build” alternatives. NCDOT’s current analysis lacking a realistic baseline provides a wholly incomplete picture of the indirect and cumulative impacts attendant to any and all of the DSAs.

75 [Given that a comprehensive, quantitative indirect and cumulative effects study has yet to be completed for this project,¹⁸⁰ it is unclear how many more wetlands and streams within the project area would be impacted as induced growth results in changed land use and consequent additional pollution and destruction of wetlands in the project area. While the DEIS estimates 135 to 161 wetlands out of a total 543 wetlands in the area would be directly impacted, it is likely that far more would feel the impact of the new toll highway. Similarly, indirect impacts on water quality and aquatic ecosystems would further jeopardize the endangered dwarf wedgemussel and other rare aquatic species. The extent of the degradation of aquatic ecosystems would be significantly more extensive than what is documented in the DEIS.

2. Unstudied and Unaccounted-for Cumulative Impacts

In addition to indirect effects, NEPA requires consideration of cumulative impacts, defined as those impacts “which result[] from the impact of the action when added to other past, present, and reasonably foreseeable future actions.” 40 C.F.R. § 1508.7. Cumulative impacts may result from “individually minor but collectively significant actions taking place over a period of time.” *Id.* “The purpose of the cumulative impact analysis is to provide readers with a complete understanding of the environmental effects a proposed action will cause.” *N.C. Alliance for Transp. Reform, Inc. v. US DOT*, 151 F. Supp. 2d 661, 698 (M.D.N.C. 2001).

76 [The ICE Report devotes just five-pages to consideration of cumulative impacts. The majority of that discussion is devoted to simply identifying current and future actions and the affected environment with only minimal conjecture about general cumulative effects of associated development in the project study area. The ICE Report lacks any detailed analysis of the cumulative impact of the project alternatives and thus does not fulfill NCDOT’s NEPA obligations to consider cumulative impacts.

¹⁷⁹ DEIS at 15 n.*

¹⁸⁰ *See id.* at vi, 15 note *.

The ICE Report initially acknowledges that rapid development within the Neuse River Basin has already resulted in substantial increases in impervious areas, which ultimately has caused increased sedimentation, stream bank erosion, low dissolved oxygen levels and poor biological integrity.¹⁸¹ The ICE Report then asserts that additional water quality and aquatic habitat degradation due to anticipated growth and development is likely to occur under a Build or No-Build scenario. Such an assertion ignores how a massive transportation facility would induce growth and alter land uses to a greater degree than under a No-Build scenario. The ICE Report fails to study or acknowledge how growth would be different under Build and No-Build scenarios, and instead treats all growth as inevitable, with its corresponding cumulative impact inevitable regardless of whether the toll highway is built. As highlighted above, this approach is arbitrary and capricious.

The ICE Report admits in its generalized review that cumulative effects may be greater under a Build scenario due to possible increased development. For example: “[t]he addition of the Complete 540 project to this area will

add to the cumulative effects of [existing planned projects] on water quality and aquatic habitat in the Swift Creek watershed;” and “[b]y encouraging faster growth in this area, the build scenarios all have the potential to contribute to cumulative effects on Middle Creek, along with other planned projects.”¹⁸² The ICE Report also notes that under the No-Build scenario, development would likely occur near existing transportation facilities, thus constraining future development to already disturbed environments. In contrast, the Complete 540 project would likely pull that development southward into more undisturbed areas susceptible to greater environmental impacts—an effect that would be even more pronounced if an “orange” route alternative is selected¹⁸³

The ICE Report briefly acknowledges the “potential” for specific locations of, or general increases in, development to cumulatively impact water quality and aquatic habitat, dwarf wedgemussel habitat, and terrestrial communities and habitat.¹⁸⁴ The ICE Report fails, however, to provide any meaningful distinction in cumulative impacts as between the DSAs and instead briefly dismisses cumulative impacts as inevitable. Such an analysis is insufficient to pass legal muster. *N.C. Wildlife Fed’n v. N.C. Dep’t of Transp.*, 677 F.3d 596, 602 (4th Cir. 2012) (“Conclusory statements that the indirect and cumulative effects will be minimal or that such effects are inevitable are insufficient under NEPA.”); *see also Western N.C. Alliance v. N.C. Dep’t of Transp.*, 312 F. Supp.2d 765, 771-72 (E.D.N.C. 2003) (holding that defendants violated NEPA by failing to consider all reasonably foreseeable actions in cumulative impact assessment).

The ICE Report fails to comprehensively study and document the likely indirect and cumulative effects of each of the DSAs. This information is essential to understanding the full extent of environmental impact of any of the DSAs, particularly in regard to the sensitive and endangered dwarf wedgemussel. Moreover, because this analysis was completed after elimination of the less-damaging alternatives of improving existing roadways, TDM, TSM, and

¹⁸¹ ICE Report at 75.

¹⁸² *Id.* at 76.

¹⁸³ *Id.* at 77-79.

¹⁸⁴ *Id.* at 76-78

mass-transit, the report does not document how these alternatives would correspond to far less cumulative impact to the environment. NCDOT should review such alternatives in an exhaustive, updated ICE Report.

E. Of the Identified DSAs, Those That Include the Red Route Are the Least Environmentally Damaging Practicable Alternatives.

80 [We reiterate that none of the currently studied DSAs represent the LEDPA, as a number of less-environmentally damaging and more practicable alternatives were prematurely eliminated from study. Additionally, there is nothing to suggest that any of the DSAs are financially practicable. Moreover, the agencies failed to study how a combination of solutions including upgrades to existing roads and other strategies could work to achieve the project purpose. It is likely that such an alternative if studied, would represent the true LEDPA. Nonetheless, of the DSAs presented in the DEIS, those utilizing the Red Route are the least environmentally damaging and most practicable given the associated costs and human impacts.

The DSAs using the Red Route (DSAs 6 and 7) would impact the smallest acreage of wetlands, with each directly impacting approximately 52 acres of wetlands.¹⁸⁵ The DSAs using the Purple-Blue Corridor (DSAs 8-12) would impact the next smallest amount of wetlands - impacting an average of approximately 59 wetland acres.¹⁸⁶ By comparison, DSAs including the western segment of the Orange Route would impact the largest amount of wetlands with an average of approximately 74 acres of wetlands—which, according to the DEIS, is “approximately 43 percent greater than the average impact” of DSAs using the Red Route.¹⁸⁷ Similarly, the Red Route DSAs would impact the fewest linear feet of streams, with 53,014 feet for DSA 6 and 51,582 feet for DSA 7 versus the other DSAs which would impact anywhere from 61,322 to 78,087 linear feet of streams¹⁸⁸

DSAs 6 and 7 would also have the fewest stream crossings, with 109 and 106 for DSAs 6 and 7 respectively.¹⁸⁹ The fewest number of ponds would also be impacted by the Red Route, with 28 ponds accounting for 20.0 acres corresponding to DSA 6, and 25 ponds accounting for 17.7 acres corresponding to DSA 7.¹⁹⁰ While these Red Route DSAs would impact 6.7 acres of the Swift Creek Critical Watershed, the thousands of fewer impacted streams, tens of acres less of affected wetlands and ponds, and the avoidance of harm to the dwarf wedgemussel may outweigh these smaller in size, but nonetheless significant, impacts to the Swift Creek Critical Watershed.¹⁹¹

81 [Perhaps most importantly, the Red Route also represents the only alternative to not cross Swift Creek downstream of Lake Benson, thus likely avoiding all of the most direct impacts to the endangered dwarf wedgemussel.¹⁹² As noted above, this represents an independent reason

¹⁸⁵ DEIS at 90.

¹⁸⁶ *Id.*

¹⁸⁷ *Id.* at 91.

¹⁸⁸ *Id.* at 108: Comparative Evaluation Matrix.

¹⁸⁹ *Id.*

¹⁹⁰ *Id.*

¹⁹¹ *Id.*

¹⁹² *Id.* at 35-36.

for not issuing a Section 404 permit. However, it also helps inform the LEDPA analysis, since an alternative that stands to wipe out an essential population of an endangered species could hardly be considered the least-environmentally damaging, practicable alternative—particularly when alternatives exist which would avoid this impact. As noted above, it appears that NCDOT and USFWS are investigating a mussel mitigation facility to theoretically offset the impacts an Orange Route would have to the dwarf wedgemussel population. The feasibility of such a program to conserve the dwarf wedgemussel and to prevent a finding of jeopardy, however, has not been established. Moreover, the additional costs, time, and complications associated with such a propagation facility and population augmentation plan weigh toward such an option being impracticable. The Red Route DSAs, as well as non-toll highway options, would avoid the most severe and immediate impacts to the dwarf wedgemussel as well as the potential costs of a mussel propagation facility.

As between the selected DSAs, the Red Route DSAs would pull development less far south. In turn, the Red Route DSAs would likely result in less drastic indirect, induced growth related impacts by going through an area that is already developed, as opposed to other DSAs which would disrupt natural areas and bring new growth to previously undisturbed areas. Even then, the as-of-yet-undocumented indirect and cumulative effects associated with a Red Route DSA could still result in significant environmental degradation and negative impacts to the endangered dwarf wedgemussel.

82 [Additionally, all of the alternatives using the full Orange Route—in other words, all alternatives not using the Red Route—would impact and possibly eliminate an existing mitigation site associated with the Northern Wake Expressway. The DEIS fails to mention this fact, and instead, the information is buried in the Natural Resources Technical Report which misleadingly states: “it is important to note that the Underhill Mitigation Site is located within the Orange (A) corridor which affects all alternatives currently under consideration.”¹⁹³ The report provides no further details on this mitigation site’s location, its size, or any plans to offset the potential impacts to the site.

83 [According to NCDEQ’s Ecosystem Enhancement Program’s interactive map feature, the Underhill mitigation site is located near Swift Creek, within the triangular area created by the intersections of I-40 with NC-42, I-40 with 70, and NC-42 with 70.¹⁹⁴ While it is true that every DSA uses at least a segment of the Orange Route, alternatives using the Red Route (DSAs 6 and 7) do not use the eastern segment of the Orange Route nor the Lilac Route, both of which would traverse the southern portion of the study area, near Swift Creek. In other words the Natural Resources Technical Report is wrong in saying that *all alternatives* would be affected by this mitigation site; only those alternatives not using the Red Route—DSAs 1-5 and 8-17—would be close enough in proximity to impact the Underhill mitigation site.

The EIS does not explain why a mitigation site was placed within the protected corridor for the Orange route where NCDOT expected to begin construction within a few years of the site’s designation. The location of the Underhill mitigation site, however, provides a further

¹⁹³ Natural Res. Tech. Report at 12.

¹⁹⁴ See NCDEQ, DIV. OF MITIGATION SERVICES, *EEP Interactive Map*, <http://portal.ncdenr.org/web/eep/interactive-mapping> (last visited Jan. 7, 2016) (search for “underhill”), Attachment 35.

demonstration of how DSAs utilizing the full Orange route cannot be environmentally-preferred. Moreover, the fact that a site used to mitigate impacts from a highway project is already being disturbed only a few years after that highway project was constructed serves to illustrate why mitigation measures should only be used as a last resort, and avoidance of impacts must instead be prioritized. In the event NCDOT were to select one of these routes as the preferred alternative, NCDOT would need to not only provide compensatory mitigation for the Complete 540 project, but would need to provide further mitigation to replace the mitigation lost through destruction or harm to the existing Underhill mitigation site.

V. EXORBITANT, UNFUNDED PROJECT COSTS

Standing in contrast to the project's limited utility is its extraordinarily high project cost. The DEIS lists the cost of the various DSAs as between \$2.1 and \$2.6 billion—making it the most expensive project in North Carolina's history. Even then, it is not clear that the DEIS includes all project costs, such as the cost of a mussel propagation facility that would be needed to attempt to compensate for some of the more destructive alternatives. Even if the cost comes out at the low end of NCDOT's estimates—\$2.1 billion—there is no financial plan in place to pay for the project. The high cost listed in the NEPA documents does not match the cost in state and federal planning documents and is far out of line with the cost estimate used to prioritize the highway over other statewide transportation needs. As such, the toll road cannot be considered “practicable.” Other more affordable and less damaging alternatives that could actually achieve project funding in the next twenty years are better placed to provide the “*cost-effective*” transportation improvement desired by the local MPO and listed in the project statement of purpose and need.¹⁹⁵

A. Funding Discrepancies in the STIP.

Federal regulations require that a highway project receiving federal funding must be part of a fiscally constrained State Transportation Improvement Program (“STIP”). 23 C.F.R. §450.222. FHWA guidance further requires that cost estimates in the STIP mirror those in the NEPA documents.¹⁹⁶ According to the guidance, a record of decision cannot be signed until these funding requirements are met.¹⁹⁷ The project cost estimates listed in the DEIS, however, did not match up with the STIP current at the time the document was published. That STIP, included Complete 540 as three separate projects: R-2721, R-2828, and R-2829 with a total cost of approximately \$1.355 billion - a far cry from the \$2–\$2.5 billion costs noted in the DEIS.¹⁹⁸ Even then, not all of the listed cost was actually allocated in the 10-year STIP. The STIP allocated just \$354.08 million for Project R-2721; \$502.950 million for Project R-2828, and just \$40.7 million for Project R-2829.¹⁹⁹ Thus allocating a total of just \$897.73 million in funding: 70% percentage of the project cost listed in the STIP and only about 45% of the DEIS's \$2 billion estimated cost.

¹⁹⁵ Purpose & Need Statement at 2.

¹⁹⁶ FHWA, *Transportation Planning Requirements and Their Relationship to NEPA Approvals*, (Feb. 9, 2011), available at http://www.fhwa.dot.gov/planning/tpr_and_nepa/tprandnepasupplement.cfm, Attachment 36.

¹⁹⁷ *Id.*

¹⁹⁸ NCDOT June 2015 STIP, at 214, available at <https://connect.ncdot.gov/projects/planning/STIPDocuments1/2016-2025%20STIP.pdf>, Attachment 37.

¹⁹⁹ Funding for R-2829 is limited to right of way and utilities costs, not construction costs, see *id.*

85 [Furthermore, the STIP suggested each of the three projects would largely be paid for with revenue bonds with only \$463 million budgeted from the Highway Trust Fund. As noted below it is unlikely that toll revenue would be able to cover the discrepancy in project funding, and it was therefore unclear where the debt service pay for the bonds would come from.

The cost estimates in the STIP remained unchanged until yesterday. The January STIP—released yesterday, January 7, 2015—updated the projected costs for the Complete 540 segments, and the costs now appear to better match the DEIS’s low-end cost estimates. The January STIP reflects a total project cost of \$2.127, with much of that still coming from revenue bonds.²⁰⁰ While the new STIP now better reflects the DEIS’s cost estimates, even more of the funding is unaccounted for: \$1.2 billion is unfunded.²⁰¹ Moreover under the new STIP, much of the funding is not available until much farther in the future, making the project’s funding security even more questionable than the earlier STIP.²⁰² Only \$370 million—or about 17% of the project cost—is allocated in the next 5 years, and that money would all go toward only one of the three segments.²⁰³ Segment R-2828 does not have any funding allocated until 2024, and R-2829 has no allocated funding at all.²⁰⁴

B. Cost Estimate Discrepancies with the Strategic Transportation Investment Act.

86 [Even more important, the huge project costs listed in the NEPA documents also fail to match up with the numbers used in the North Carolina project prioritization process, known as the Strategic Transportation Investments Act (“STI”). *See* N.C. Gen. Stat. § 136-189.11. The STI uses a variety of metrics including cost estimates, travel time benefits and other factors to prioritize where North Carolina’s funding should be spent.²⁰⁵

Under the STI, the total actual cost of Complete 540 was listed as \$1.328 billion—a significantly lower figure than the more than \$2 billion cost estimate in the DEIS or the current STIP.²⁰⁶ The cost to NCDOT, a key figure used to determine the rank of the highway in the prioritization process, was listed as totaling just \$728 million for all three segments.²⁰⁷ To arrive at this figure, NCDOT assumed that 46% of the project would be paid for with toll revenue—an assumption that is not supported by any traffic and revenue study. In fact, an internal NCDOT e-mail that included capital costs and toll revenue estimates—based on a 2009 analysis—suggested that the likely toll revenue would total \$385.8 million, or less than 19% of a \$2 billion price tag.²⁰⁸ There is no explanation as to how NCDOT arrived at its toll revenue estimate.

²⁰⁰ NCDOT, Current STIP (Jan. 2015), at 96-97, *available at* https://connect.ncdot.gov/projects/planning/STIPDocuments1/LIVE_STIP.pdf Attachment 38.

²⁰¹ *Id.*

²⁰² *Id.*

²⁰³ *Id.*

²⁰⁴ *Id.*

²⁰⁵ NCDOT, *Strategic Transportation Investments*, <http://www.ncdot.gov/strategictransportationinvestments/>, (last visited January 7, 2016), Attachment 39.

²⁰⁶ NCDOT, Highway STI Data, *available at* <http://www.ncdot.gov/strategictransportationinvestments/stidata.html> (last updated July 15, 2014), at rows 1238-1240, Attachment 40.

²⁰⁷ *Id.*

²⁰⁸ E-mail from Donna Keener, NCDOT, to Jennifer Harris, NCTA et al. (Dec. 18, 2013), Attachment 41.

NCDOT staff has recognized the importance of using accurate data during the STI process. When staff were asked to provide data for the Complete 540 project so that it could be run through the scoring process a NCDOT staffer noted the importance of data being substantiated and correct. Specifically, the staffer noted that the project’s cost estimates “could well influence the final score” and ranking of the Complete 540 project.²⁰⁹ Indeed, it appears the project gained priority and associated funding under false pretenses. “Cost to NCDOT” is used to calculate a project’s “cost-benefit score”—a key factor in the project prioritization process that accounts for 25% of the project score.²¹⁰ As such, if an improperly low project cost is used, a project is likely to score more highly than it otherwise would. The use of data that is so divergent with reality is directly contrary to the purposes of the STI to take the politics out of the project selection process and choose highway projects based on objective facts. To determine if the more than \$2 billion toll highway actually achieves a high enough score under the STI to gain priority over other projects, realistic project costs—including overall costs and costs to NCDOT— must be used. If realistic data is not used, the purpose of the STI is subverted.

87 In addition, now that the project cost estimates have been updated, it appears that the funding set in place may run afoul of the STI’s “corridor cap,” a provision of the STI that limits on funding for projects that fall within the same corridor. Under the law, the amount of funds to be allocated to projects within the same corridor from the “statewide” funding pot cannot exceed 10% of the total allotted statewide funds or about \$200 million during a five year period. § 136-189.11 (d)(1)(b). In the current STIP, all funding for the Complete 540 project is expected to come from the statewide funds. In the next 5 year period, however, \$370 million is allocated from statewide funds. Between 2021-2025, \$907 million is allocated. And in future years an additional \$1.22 billion remains to be funded. Even assuming that a portion of these costs will be covered by toll revenue, it is clear that the Complete 540 project will violate the corridor cap during every funding cycle.

C. No Funding Feasibility

88 Under current laws and financial realities it is clear that NCDOT is unable to fund a project of this magnitude. During the alternatives screening process, NCDOT found that hybrid alternatives that completed just one or two segments of the Complete 540 project, in addition to other improvements, all failed to meet the project purpose and need. Because NCDOT is unable—legally and financially—to fund more than one project segment in the next ten years, NCDOT will be left only able to complete a part of the toll highway—just like under the hybrid options it rejected. It is therefore clear that each of the DSAs must also fail to meet the purpose and need, by NCDOT’s own reasoning.

Under current North Carolina law, not one of the DSAs can be constructed before 2026. Even then, the current STIP demonstrates that the project will still require \$1.2 billion in project funding—and only then if the project with the lowest cost estimate is the one chosen. It would be impossible for this full amount could be allocated in the next five year project cycle due to the

²⁰⁹ E-mail from Don Voelker, NCDOT, to David Wasserman, NCDOT et al. (Jan. 23, 2014), Attachment 42.

²¹⁰ NCDOT, *Strategic Transportation Investments*, <http://www.ncdot.gov/strategictransportationinvestments/>, (last visited January 7, 2016), Attachment 39.

“corridor cap” constraint, and it is therefore unlikely that the project would be fully funded until at least 2031.

NCDOT and FHWA have previously rejected the feasibility of a transportation project much less expensive than this one precisely because of its high cost and questionable funding security. When considering the replacement of the Bonner Bridge project on North Carolina’s Outer Banks, the agencies asserted that the anticipated cost of between \$942.9 million and \$1.441 billion for a “long bridge” option rendered such a solution “imprudent” due to its high costs.²¹¹ The agencies not only determined the alternative was cost-prohibitive, but asserted they completed extensive studies and evaluation of the costs of the alternative which demonstrated it could not be funded.²¹² The agencies asserted that the cost of the project would “consum[e] an excessive share of federal dollars made available to North Carolina” causing a variety of transportation projects to be deferred due to limited available funds.²¹³ The agencies specifically reviewed and rejected tolling as a funding option due to the cost of potential tolls, because tolls would only provide partial funding, and because “tolling would not make for a prudent business decision as the estimated toll revenue ‘is not going to be sufficient to warrant the financial rating necessary to allow debt financing of this project.’”²¹⁴ The agencies were unwilling to look at other creative solutions due to what they deemed to be legal constraints.²¹⁵

89 [The agencies cannot arbitrarily decide that costs and the constraints of state laws and funding mechanism matter when analyzing one project and its alternatives, but ignore such constraints when analyzing another project and its alternatives—especially when the costs at stake are so incredibly high.

D. Insufficient Information About Tolling and Revenue

90 [The agencies have failed to study and disclose both a thorough breakdown of costs of the Complete 540 proposed toll highway, as well as a thorough explanation of funding sources for the project. No traffic and revenue study has been completed.²¹⁶ No toll revenue estimates have been disclosed, and the only mention of possible toll costs is that certain traffic forecasts assumed a cost of \$0.12 per mile.²¹⁷ There is no explanation of why how this assumed toll cost was developed or whether it was realistic in light of how much of the project’s cost will purportedly come from tolls.

During public meetings for the Complete 540, project attorneys for the Conservation Groups asked Susan Pullium, director of Customer Service for the North Carolina Turnpike Authority, for information regarding the assumptions that NCDOT had used with regard to the

²¹¹Page-Proof Joint Answering Brief for Defs., *Defenders of Wildlife v. N.C. Dep’t of Transp.*, No. 13-2215, at 45, (Jan. 17, 2014), attached as Attachment 43. The cost estimates were in 2006 dollars. *Id.*

²¹² *Id.* at 44–47.

²¹³ *Id.* at 45.

²¹⁴ *Id.* at 48.

²¹⁵ *Id.* at 48.

²¹⁶ See E-mail from Eric Midkiff, NCDOT, to Andy Wittman (Dec. 4, 2013) (explaining that “there is no plan of finance for the Complete 540 project currently under study between Apex and Knightdale,” and that “the amount of available funding for the Complete 540 project is not a consideration in study of alternative routes”), Attachment 44.

²¹⁷ Traffic Forecast Tech. Mem. (Apr. 2014), at Table 2. Forecast Scenarios and Alternatives (assuming that the toll cost for using the highway would be \$.12 per mile).

percentage of the project cost that would be borne by tolls. Ms. Pullium assured the attorneys that she would get back to them promptly with this information. A follow-up e-mail was sent to Ms. Pullium on December 9, 2015 date.²¹⁸ At a public hearing that same evening, Ms. Pullium noted her receipt of the e-mail and assured the attorneys she was looking into their questions. As yet, no response has been received from Ms. Pullium or anyone else at NCDOT.

91 [The only information seeming to touch possible toll revenues is in an appendix to the 2014 Traffic Forecast Technical Memorandum, and even that information fails to explain how tolls can fund this project. The relevant appendix is a 2010 report on the development of a toll diversion model—it explains the Triangle Regional Toll Diversion Model, but does not reveal NCDOT’s assumptions about how much tolls would cost or the revenue such tolls would generate. Even then, the model appears dated. The model relies on “willingness to pay” studies from 2010, 2009, and 2008, with the 2008 study being specific to the Complete 540 study area and allegedly providing the most “complete” information.²¹⁹ Moreover, the outdated willingness to pay study results are limited in their application because “[t]he calculations took into account only those who responded that they would be willing to pay under at least one of the scenarios presented to them”—thus survey respondents who said they would *not* be willing to pay under *any* scenario were not counted in the assessment.²²⁰ Thus, this study does not illustrate the true demand or anticipated use for a toll highway in the Complete 540 study area. The technical memorandum as a whole fails to provide sufficient information about toll costs and actual anticipated use to help explain how the high costs for the toll highway will be funded.

At a minimum, the agencies must demonstrate that their expensive preferred alternatives are able to be funded. They must evaluate and disclose the funding mechanisms at play, and fairly evaluate the costs associated with the toll road alternative as compared with other alternatives. In turn, the economic information used by agencies must be accurate to support their analysis of impacts and alternatives. Due to “the potential for misleading economic assumptions to defeat the functions of an EIS,” courts must review “the economic assumptions underlying a project to determine whether the economic assumptions were so distorted as to impair fair consideration of the project’s adverse environmental effects.” *Hughes River Watershed Conservancy v. Glickman*, 81 F.3d 437, 446 (4th Cir. 1996) (internal quotation marks omitted). Here, NCDOT’s varied and unverified assumptions about the costs and funding for this project defeat the function of the DEIS. Without clear evidence of funding for this project and current, verifiable cost calculations, the DEIS cannot comply with NEPA and fails to inform the Corps’ practicability analysis under Section 404.

E. The True Project Costs Will Exceed the \$2.1- 2.6 Billion Projection.

92 [The DEIS barely discusses costs other than listing, without explanation, various dollar amounts in the Comparative Evaluation Matrix.²²¹ The costs included are the projected total, construction, right-of-way and relocation, utility, and environmental mitigation costs. The DEIS does not elaborate on any of these cost categories. Moreover, several categories of costs are

²¹⁸ E-mail from Ramona McGee, SELC, to Susan Pullium, NCDOT (Dec. 9, 2015), attached as Attachment 45.

²¹⁹ Traffic Forecast Tech. Mem., App. D: Triangle Regional Toll Diversion Model Development, Tech. Mem. (Dec. 2010), at 2.

²²⁰ *Id.*

²²¹ DEIS at 107: Comparative Evaluation Matrix.

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conspicuously absent from this list, such as mitigation of impacts to historic sites and public parks protected under Section 4(f) Department of Transportation Act of 1966, 49 U.S.C. § 303, possible costs associated with building near hazardous materials and contaminations sites,²²² and perhaps most importantly, costs associated with any mussel propagation and augmentation program. As highlighted above, NCDOT and FWS appear to be contemplating what would be a multi-million dollar mussel propagation facility in an attempt to skirt ESA requirements regarding the dwarf wedgemussel. These costs are unaccounted for in the DEIS. NCDOT must provide a full, detailed explanation of anticipated project costs in order for the public and resource agencies to distinguish between alternatives—and to determine whether the project is even worth the cost.

None of the DSAs can be considered practicable given these significant funding questions and cost concerns. Before moving forward with an FEIS NCDOT must: Establish the full cost to the project for all alternatives.

- Establish the percentage of the cost that can reasonably be expected to be covered by toll revenue and therefore establish the true “cost to NCDOT.”
- Establish, based on updated realistic costs, whether the project can score high enough to achieve any funding from the STI.
- Establish and disclose a realistic funding plan for the project.

VI. OBSTACLES TO OBTAINING SECTION 404 PERMIT

If a project will require the dredging or filling of material into waters of the United States, the agency proposing the project must secure a permit from the U.S. Army Corps of Engineers under Section 404 of the CWA (“Section 404 permit”). In deciding whether to issue a Section 404 permit, the Corps must apply the EPA’s Section 404(b)(1) Guidelines. As required by the CWA, the guidelines specify where and under what conditions dredged or fill material can be discharged lawfully.

The Corps cannot issue a permit if any of the following are true: (i) there is a less harmful “practicable alternative” to the project, (ii) the project would cause a “significant degradation of the aquatic ecosystem,” (iii) the applicant has not taken appropriate steps to “minimize potential harm to the aquatic ecosystem,” or (iv) the Corps does not have “sufficient information” to make a reasonable permit decision. 40 C.F.R. § 230.12(a)(3). Moreover, the Corps’ Section 404 Guidelines strictly prohibit issuance of a permit that would “jeopardize[] the continued existence of species listed as endangered or threatened under the Endangered Species Act . . . or result[] in likelihood of the destruction or adverse modification of a habitat which is determined . . . to be a critical habitat under the Endangered Species Act.” 40 C.F.R. § 230.10(b)(3). The Corps is further constrained by its consideration of the public interest impacts of the project. 33 C.F.R. § 320.4(a).

²²² *Id.* at 102 (noting without any elaboration that “[t]he sites found are not expected to have a substantial effect on anticipated project costs or schedules”).

The Corps often looks to a project’s NEPA documents to assist in its decision of whether to issue a 404 permit for a particular project. The Corps is not limited to the information provided in the EIS or associated documents, and in some instances, it may be necessary for the Corps to conduct its own studies or investigations so as to be able to satisfy its Section 404 obligations.

Because the Complete 540 DSAs would impact wetlands and other federal waters, NCDOT must obtain a Section 404 permit from the Corps. As thoroughly established throughout these comments, this project would have unprecedented environmental impacts, would yield little in time-savings benefits, and would cost an exorbitant amount.

93 [All of the DSAs would cause “significant degradation of the aquatic ecosystem” as thoroughly highlighted above. 40 C.F.R. § 230.12(a)(3)(ii). Most significantly, all but the Red Route DSAs would jeopardize the continued existence of the endangered dwarf wedgemussel. *Id.* at § 230.10(b)(3). Additionally, non-toll highway options exist which would be less-environmentally damaging, and practicable in light of their lesser costs. *Id.* at § 230.12(a)(3)(i). The DEIS also fails to provide sufficient information about the extent of the toll highway’s impacts—or its funding sources and tolling assumptions—to adequately inform the Corps’ 404 analysis. Each of these characteristics of the Complete 540 project provide an independent and sufficient reason for the Corps to reject any Section 404 permit application for the toll highway.

The improbability of the Corps issuing a permit for any DSA is yet another reason that NCDOT must consider non-toll highway options which will be less environmentally damaging and more practicable in light of costs and human impacts. An alternative involving a combination of TDM, TSM, mass transit options, and upgrades to existing roads will cause far fewer environmental impacts. Such an alternative would also cost far less than the impracticable estimated \$2.6 billion cost of the toll highway.

94 [Nonetheless, as we have highlighted throughout these comments, the Red Route represents the least environmentally damaging practicable alternative (“LEDPA”) of the presented DSAs. The Red Route DSAs avoid most of the direct impacts to the dwarf wedgemussel and also would result in the fewest impacts to streams, ponds, and wetlands. The Red Route DSAs—DSAs 6 and 7—are the “least damaging” DSAs out of a slate of environmentally undesirable options.

The Red Route DSAs are no less practicable than any of the other DSAs. The DSAs including the Red Route are in the bottom half of DSAs for both cost and relocations. Ten DSAs are more expensive than the Red Route DSAs, and nine DSAs would cause more residential relocations than either of the Red Route DSAs.²²³ The relatively lower cost and fewer relocations associated with the Red Route make it a more practicable alternative than most of the other alternatives. Nonetheless, the relocations associated with the Red Route is the most commonly cited reason against choosing a Red Route DSA. Yet each of the 17 DSAs would cause hundreds of relocations, and it is arbitrary and capricious to suggest that the 450 relocations associated with the Red Route make it untenable, but the approximately 240 plus relocations associated with other routes are acceptable. In turn, the Red Route DSAs have

²²³ See *id.* at 108: Comparative Evaluation Matrix.

indisputably fewer environmental impacts on balance. As such, DSAs 6 and 7 represent the least environmentally damaging practicable alternatives of the 17 DSAs presented in the DEIS.

VII. INSUFFICIENT ANALYSIS OF SECTION 4(f) RESOURCES

Section 4(f) of the Department of Transportation Act of 1966 prevents a federal project from using publicly owned land unless “(1) there is no prudent and feasible alternative to using that land; and (2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.” 49 U.S.C. § 303(c).

95 [When there is no feasible and prudent avoidance alternative, the regulation implementing Section 4(f) states that “the Administration may approve only the alternative that . . . [c]auses the least overall harm,” using a balancing of seven factors. 23 C.F.R. § 774.3(c)(1); *see* 49 U.S.C. § 303(c)(2). At the heart of Section 4(f) lies the policy that “special effort should be made to preserve the natural beauty of the countryside,” including “public park and recreation lands . . . and historic sites” in the development of transportation plans. *See* 49 U.S.C. § 303(a), (b). The Complete 540 Draft Section 4(f) Evaluation does not adhere to this preservation mandate, and instead focuses on justifying potential impacts as being de minimis in nature or else unavoidable. Absent from the Draft Section 4(f) Evaluation is any acknowledgement of how a non-toll highway option could avoid and best mitigate harm to Section 4(f) resources.

Each of the Complete 540 DSAs stands to impact one or more 4(f) properties,²²⁴ and yet the Draft Section 4(f) Evaluation fails to fully assess these impacts and possible feasible and prudent alternatives. Six Section 4(f) eligible existing or planned public parks or recreation sites would be impacted by the current slate of DSAs: Middle Creek School Park, the Watershed Extension loop trail in Clemmons Educational State Forest, the Neuse River Trail, the planned Sunset Oaks Park, the planned expansion area for White Deer Park, and the planned Bryan Road Nature Park.²²⁵ In turn, 25 historic sites included in the National Register of Historic Places (“NRHP”) or eligible for listing in the NRHP are within the project corridor and subject to Section 4(f).²²⁶ Six of the 25 sites “have the potential to be affected by Complete 540 DSAs,” and three—the Dr. L.J. Faulhaber Farm, the Bryan Farms Historic District, and the Baucom-Stallings House,²²⁷—“have the potential be adversely affected and have potential Section 4(f) use by DSAs.”²²⁸

A. The Draft Section 4(f) Evaluation Erroneously Suggests Certain Impacts Would Be “De Minimis.”

Several DSAs would impact the Middle Creek School Park, the Neuse River Trail, or the Clemmons Educational State Forest. The Neuse River Trail would be impacted under any

²²⁴ Community Impact Assessment at 56.

²²⁵ DEIS App. C: Draft Section 4(f) Evaluation at 2.

²²⁶ Community Impact Assessment (June 2015), at 59.

²²⁷ DEIS App. C: Draft Section 4(f) Evaluation at 2. “None of these sites are currently listed in the NRHP, but all have been determined to be eligible for listing.” *Id.*

²²⁸ *Id.*

96 DSA.²²⁹ The Draft Section 4(f) Evaluation anticipates that the impacts to these resources would only be “de minimis” in nature, and thus not subject to the substantive Section 4(f) review. 49 U.S.C. 303(d); 23 C.F.R. § 774.3(b). Under the implementing regulations, an impact to “parks, recreation areas, and wildlife and waterfowl refuges” is de minimis if it “will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f).” 23 C.F.R. § 774.17. Thus, to demonstrate a de minimis impact to a park or other public lands, the agencies must consider the features and particular uses of the property. In turn, “use” within the meaning of Section 4(f) includes uses that result in the actual incorporation of land into a transportation facility, as well as constructive uses that create proximity impacts causing substantial impairment to a resource. *See* 23 CFR 774.17, 774.15.²³⁰ In addition, temporary occupancies that do not satisfy all of conditions set forth in 23 C.F.R. § 774.13 (d) fall within the definition of use.

1. All of the DSAs Would Impact the Neuse River Trail

The Neuse River Trail is a 27.5 mile paved Greenway Trail running through urban Raleigh to rural areas of Southeastern Wake and Johnston Counties. This is a valuable greenway resource, connecting urban and natural environments. The southern, less-developed segments of the trail provide a means of retreat from urban living into quieter, tree-lined and scenic areas of Wake and Johnston Counties. Users of the Neuse River Trail can enjoy the sounds of nature—not highways and traffic—on parts of the trail and river. The Trail follows the Neuse River, and is part of the Mountains-to-Sea Trail that begins in the Great Smoky Mountains and runs across North Carolina to the Outer Banks.

97 The Draft 4(f) Evaluation incorrectly asserts that impacts to the Neuse River Trail would be de minimis. The Draft Section 4(f) Evaluation suggests that because the trail already runs alongside existing roads and there are already “unsightly features such as wastewater treatment facilities,” along the trail, adding an enormous toll highway near and crossing over the trail would not “create unusual conditions” along the trail.²³¹ This flawed reasoning suggests that once a Section 4(f) property has experienced *any* negative impacts, the “door is opened” for any other adverse impacts. Moreover, the reasoning ignores the significant difference between existing minor, arterial roadways in the project study area, and a massive, multi-lane toll highway which would be larger, have greater noise impacts, and generate greater environmental impacts than any of the current roadways near the Neuse River Trail. Particularly in this southern part of the Trail, the toll highway would indeed “create unusual conditions” along undeveloped portions of the Trail.

²²⁹ DEIS App. C: Draft Section 4(f) Evaluation at Table 1: Potential Effects on Section 4(f) Resources by Detailed Study Alternative.

²³⁰ According to 23 C.F.R. § 774.15 (a):

A constructive use, occurs when the transportation project does not incorporate land from a Section 4(f) property, but the project’s proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the resource are substantially diminished.

²³¹ DEIS App. C: Draft Section 4(f) Evaluation at 9.

The figures depicting the impacts to the trail demonstrate how the toll highway would be exponentially larger than any existing roadways in the area and substantially alter the character of the Trail in the affected area.²³² The affected section of the Trail would not be an urbanized strip of open trail in Raleigh, instead, the affected portion of the trail runs through a forested and less-developed, scenic area of southeastern Wake County. The Brown Route—as included in DSAs 4, 5, 11, 12, 16 and 17—would not simply cross the Trail, but would run directly *over* the current trail and place an interchange above and following a 90-degree angle turn in the trail, covering several hundred feet of the current trail.²³³ The Tan Route would cross the Trail twice within the span of a few hundred feet,²³⁴ and the Mint Route would cross the Trail and run parallel alongside the Trail for several hundred feet, thus impacting the visual and sound aesthetics of the trail indirectly.²³⁵ The Green Route would “simply” cross the trail once.²³⁶

These impacts to the Neuse River Trail would be more than *de minimis*, as they would “adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f).” 23 C.F.R. § 774.17. Under any alternative, users of the trail would now be subjected to increased traffic sounds and pollution and the eyesore of a giant toll highway—such impacts would adversely affect the experience of bicyclists, joggers, and walkers on this greenway, which currently does not have any comparable disturbances in this southern portion of the Trail.

2. Impacts to the Middle Creek School Park Must Be More Thoroughly Studied and Documented

98 [Finally, the Draft Section 4(f) Evaluation suggests that the impacts to the Middle Creek School Park would be *de minimis* because the toll highway would only “directly affect a narrow strip of land at the extreme northern edge of Middle Creek School Park,” affecting a total of approximately 1.6 acres.²³⁷ The Draft Section 4(f) Evaluation notes the lack of “designated trails or other active recreational uses” after describing the affected area as “wooded open space” that is half-a-mile away from existing recreational facilities, and a quarter-of-a-mile from a planned greenway trail.²³⁸ While the report describes the uses of adjacent areas of the park, the Report fails to describe what the 1.6 acres of wooded open space are currently used for. The final Section 4(f) analysis should review how this strip of affected wooded open space is used. Likewise, further study and documentation should be completed to demonstrate that constructive uses would not substantially impair this resource.

3. DSAs 4 and 16 Would Impact Use and Management of the Clemmons Educational State Forest

99 [The Draft Section 4(f) Evaluation also suggests that the impacts to the Watershed Extension Loop Trail in Clemmons Educational State Forest, impacts corresponding to DSAs 4

²³² *Id.* at Figures 22-25.

²³³ *Id.* at Figure 25.

²³⁴ *Id.* at Figure 24.

²³⁵ *Id.* at Figure 23.

²³⁶ *Id.* at Figure 22.

²³⁷ *Id.* at 7.

²³⁸ *Id.*

99 and 16, would be de minimis. However, this assertion is undercut by the North Carolina Forest Service’s expressed concerns about the impacts to this site, including disruption of the trail system in the forest, losses of working forests, ranger patrol and fire control difficulties if the forest property were split into two.²³⁹

4. Feasible and Prudent Avoidance Alternatives to the Toll Highway DSAs Exist

100 The FHWA may approve a project with negative impacts to Section 4(f) resources only if no feasible or prudent alternative exists. Because each of the DSAs would likely have a negative impact on Section 4(f) resources, FHWA must examine feasible and prudent avoidance alternatives to the Complete 540 project, or establish that no such alternatives exist. The current feasibility analysis in the Draft Section 4(f) Evaluation fails to fulfill this obligation, and will need to be corrected to inform the Section 4(f) determination.

An alternative is infeasible under Section 4(f) “if it cannot be built as a matter of sound engineering judgment.” 23 C.F.R. § 774.17. An alternative is not prudent if (1) after reasonable mitigation, it still causes “severe social, economic, or environmental impacts . . . or severe impacts to environmental resources protected under other Federal statutes”; (2) “[i]t results in additional construction, maintenance, or operational costs of an extraordinary magnitude”; or (3) “[i]t causes other unique problems or unusual factors.” 23 C.F.R. § 774.17.

101 The feasibility analysis of the Draft Section 4(f) Evaluation is entirely limited to considering alignment shifts in the DSA routes that impact 4(f) resources and assumes that the only way to meet the project purpose is through completing the 540 Outer Loop.²⁴⁰ For example, in suggesting that there are no feasible alternatives that would avoid the Neuse River Trail, the Draft Section 4(f) Evaluation broadly asserts that because “the Neuse River Trail follows the Neuse River for almost 30 miles in eastern Wake County, it is not possible for this project to completely avoid the trail.”²⁴¹ This statement is false—non-toll highway alternatives could in fact completely avoid the Trail. The Draft Section 4(f) Evaluation never considers any of the many feasible, non-toll highway options that would avoid these impacts, such as upgrading existing roadways, TDM, TSM, or mass transit options, all of which would result in *fewer* severe environmental, social, and community impacts. Moreover, each of these would be more feasible and prudent than the current DSAs which lack secure funding for their estimated cost of over \$2 billion.

The number of Section 4(f) resources in the project study area and the nature of the impacts to these resources underscore the necessity of further examining non-toll highway alternatives to the transportation needs of the project study area. A combination of upgrading existing roadways, implementing TDM and TSM strategies, and increasing mass transit options is a feasible and prudent alternative that would avoid impacts to Section 4(f) resources. FHWA must consider such alternatives as part of its Section 4(f) analysis.

²³⁹ *Id.* at Attachment 3.

²⁴⁰ *Id.* at 9-12.

²⁴¹ *Id.* at 12.

B. Section 4(f) Does Not Prevent FHWA from Sanctioning the Least-Environmentally Damaging Red Route Alternatives.

FHWA should look to feasible and prudent non-toll highway alternatives, but as between the current DSAs, the Red Route DSAs are the only feasible and prudent alternatives. The other DSAs all would result in much more severe environmental impacts than the Red Route DSAs, which in turn prevents FHWA from considering these other DSAs as prudent.

According to the Draft Section 4(f) Evaluation, the Red Route would likely negatively affect two parks and two historic sites,²⁴² and there are no viable mitigation or avoidance measures that could be incorporated into the Red Route to minimize the harm to Section 4(f) resources.²⁴³ The Draft Section 4(f) discounts any possible shifts in alignment of the Red Route, stating that a modified Red Route was considered, but it “had such numerous design constraints that it was not a feasible alternative.”²⁴⁴

In turn, however, the only reasons given by the Alternatives Analysis for rejection of this modified Red Route was (1) that the alignment would be “operationally undesirable” even though it would still “meet minimum design standards,” and (2) that if speeds were increased on this section the 540 Outer Loop—as NCDOT is doing for other sections—then the alignment of the route would need to be modified to accommodate the increased speed, which “would likely shift the right-of-way” for this modified Red Route into the Section 4(f) resources.²⁴⁵ These supposed justifications for eliminating the modified Red Route fail to indicate that the route was infeasible or imprudent. There is no requirement that the full 540 Outer Loop have the same speed limit, nor that design standards must be exceeded. Indeed, FHWA recently announced intended revisions to its design standards to allow for greater flexibility for roadway designers. *See* FHWA Notice: *Revision of Thirteen Controlling Criteria for Design; Notice and Request for Comment*, 80 Fed. Reg. 60732 (Oct. 7, 2015), attached as Attachment 46. The spirit of design flexibility may allow for previously unevaluated modifications to the Red Route, or may make the formerly identified “design constraints” less problematic. FHWA must consider modifications to the Red Route when conducting its Section 4(f) analysis, and NCDOT should better evaluate and document whether this modified route is feasible.

The Red Route’s 4(f) impacts are particularly significant because the Red Route DSAs are the least environmentally damaging alternatives under consideration. Between the current slate of DSAs, only Red Route DSA could possibly be found to be the “LEDPA” pursuant to section 404 of the Clean Water Act. This tension between the Section 4(f) and LEDPA determinations may pose a significant barrier to any of the DSAs receiving all necessary federal approvals, but ultimately, FHWA must consider the environmental effects of alternatives in determining whether the alternatives would be “prudent” under Section 4(f). 49 U.S.C. § 303(c)(1)–(2). As such, even if the DSAs without the Red Route did not have any impacts to Section 4(f) resources—which is not the case, as detailed above—an alternative using the Red

²⁴² *Id.* at 5-6 (documenting impacts to Dr. L. J. Faulhaber Farm and Bryan Farms Historic District), 9 (documenting impacts to White Deer Park Planned Expansion Area and Planned Bryan Road Nature Park).

²⁴³ *Id.* at 10-12.

²⁴⁴ *Id.* at 10.

²⁴⁵ Alternatives Analysis at 5-40.

Route may still be selected if the other alternatives are not “prudent and feasible alternative[s]” to using the Section 4(f) resources that fall within the Red Route’s path.

As thoroughly explained above in the analysis of impacts above,, the non-Red Route DSAs would directly jeopardize the endangered dwarf wedgemussel and would result in far greater and more severe environmental impacts. Moreover, if NCDOT and FWS were to create a mussel propagation facility to “offset” the non-Red Route DSAs’ impacts to dwarf wedgemussels, this would “result in additional construction, maintenance, or operational costs of an extraordinary magnitude.” *Id.* The impacts to the dwarf wedgemussel, standing alone, present “severe environmental impacts . . . or severe impacts to environmental resources protected under other Federal statutes,” and would cause “other unique problems or unusual factors” if NCDOT attempted to address mussel impacts with a new mussel propagation facility. 23 C.F.R. § 774.17.

As recognized by the Fourth Circuit, “[a] cumulation of small problems may add up to a sufficient reason to use §4(f) lands.” *Hickory Neighborhood Def. League v. Skinner*, 910 F.2d 159, 163 (4th Cir. 1990) (quoting *Eagle Found., Inc. v. Dole*, 813 F.2d 798, 805 (7th Cir. 1987)). DSAs 6 and 7, which use the Red Route, are the least environmentally damaging DSAs and avoid the additional costs associated with mussel propagation and environmental mitigation measures. The cumulation of the non-Red Route DSAs’ greater impacts to water quality, streams, wetlands, aquatic ecosystems, and rare and endangered species “add up to a sufficient reason to use” the Section 4(f) resources at stake here.

Thus, while Section 4(f) may counsel against selecting any of the DSAs over a non-toll highway alternative, Section 4(f) does not bar selection of the Red Route DSAs over the other currently considered DSAs. Indeed, Section 4(f) guides FHWA to select the “prudent and feasible” alternative, which would be a Red Route DSA in light of the other DSAs’ extensive environmental impacts.

Nonetheless, the truly most prudent and feasible alternative will be one which does not involve building a toll highway, and which instead incorporates upgrades to existing roadways, TDM and TSM strategies, and increases to mass transit. Such an alternative will meet the project’s purposes and avoid impacts to the discussed Section 4(f) resources.

VIII. PREDETERMINED DECISION-MAKING

The Council on Environmental Quality’s NEPA regulations specifically require that an EIS be more than merely a “disclosure document,” stating that an “environmental impact statement shall serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made.” 40 C.F.R. §§ 1502.1, 1502.2(g). And the United States Court of Appeals for the Fourth Circuit itself has recognized that NEPA requires action and study based on “good faith objectivity rather than subjective impartiality.” *Fayetteville Area Chamber of Commerce v. Volpe*, 515 F.2d 1021, 1026 (4th Cir.1975); *see also Nat’l Audubon Soc’y v. Dep’t of Navy*, 422 F.3d 174, 199 (4th Cir. 2005) (noting that “NEPA of course prohibits agencies from preparing an EIS simply to ‘justify decisions already made.’” (quoting 40 C.F.R. § 1502.2(g)). Predetermined decision-making is antithetical to the purpose of NEPA to fairly evaluate reasonable alternatives and disclose to the public the agency’s findings regarding the different alternatives at a meaningful time

Here, NCDOT has made clear for decades that it would only build the Orange Route and would never build the Red Route. First, NCDOT designated the Orange Route as its preferred route in the 1990s by limiting development throughout that corridor. Second, as vocal opponents to the Red Route called for its elimination, NCDOT assured the public that the Red Route would never be built.

A. The Protected Orange Corridor Was Illegally Pre-determined.

103 [The North Carolina General Assembly passed the Transportation Corridor Official Map Act (“Map Act”) in 1987. This act allows NCDOT to designate and preserve certain roadway corridors for future transportation projects. In the 1990’s, NCDOT used the Map Act to preserve what has become known as the Orange Route, limiting development throughout this corridor in anticipation of the 540 Outer Loop being completed along this route. NCDOT’s commitment to this protected corridor for multiple decades demonstrates its predetermined decision to only build the Orange Route.

Moreover, NCDOT’s determination to build the Orange Route has negatively impacted communities in the area. Residents in the area have been unable to sell their homes and move, unable to develop retirement properties, and have been living in limbo for the past two decades as a result of NCDOT’s use of the Map Act.²⁴⁶ The North Carolina Court of Appeals ruled that the Map Act is unconstitutional by allowing the state to effectively “take” residents’ land by preventing residents from being able to derive economic value from their property. *Kirby v. N.C. Dep’t of Transp.*, 769 S.E.2d 218 (N.C. Ct. App. 2015). The case is now on appeal to the Supreme Court of North Carolina. 775 S.E.2d 829 (Aug. 20, 2015).

B. Rejection of the Red Route Was Illegally Pre-determined.

104 [After NCDOT designated the protected corridor of the Orange Route in the 1990s, environmental resource agencies expressed concern about the severe impacts this route would have on the dwarf wedgemussel and other natural resources in the area. In response, NCDOT developed the Red Route which would avoid direct impacts to the dwarf wedgemussel—but cross through developed areas of the Town of Garner. The Town of Garner voiced its strong opposition to the route, reaching out to the Governor and Secretary of Transportation to try and remove the Red Route from consideration.²⁴⁷

In response to Garner’s outcry, NCDOT made repeated public statements indicating that it would never build the Red Route: “We were never going to build the red route. It was only for study.”²⁴⁸ News outlets explained that “[t]he Turnpike Authority has said it wouldn’t use the red route because of its adverse impact” on the Town of Garner, “[b]ut the DOT had to study the

²⁴⁶ Bruce Siceloff, *Road Worrier: On the Orange Route, NCDOT Holds Property Owners in Limbo*, THE NEWS & OBSERVER, Sept. 28, 2015, <http://www.newsobserver.com/news/traffic/road-worrier-blog/article36833802.html>, Attachment 47.

²⁴⁷ E-mail chain from Ed Brown, to Tony Beasley, Town of Garner, (Feb. 22, 2011), attached as Attachment 48.

²⁴⁸ Shirley Hayes, *With Red Route Gone, What’s Next for I-540 Expressway Extension?*, GARNER NEWS, Mar. 29, 2011, Attachment 49; *see also* Colin Campbell and Bruce Siceloff, *DOT: We Won’t Build Red Route*, GARNER-CLAYTON RECORD, Mar. 2, 2011, Attachment 50.

option because the Army Corps of Engineers requires that at least two proposed routes be studied.”²⁴⁹ According to Town of Garner e-mails, N.C. Turnpike Authority staff stated in November 2010 that the chances of the Red Route being built were “one in a million.”²⁵⁰ The animosity to the Red Route culminated in the North Carolina General Assembly passing a law in 2011 prohibiting the Complete 540 project from being located north of an existing, protected corridor—essentially outlawing the Red Route and attempting to guarantee the selection of the Orange Route. 2011 N.C. Laws S.L. 2011-7.

Federal agencies warned that more than one route would need to be studied and presented in order for the project to obtain federal approval.²⁵¹ Consequently, the Regional Transportation Alliance helped fund studies of route alternatives to the Red and Orange Routes so as to keep the Complete 540 toll highway project moving forward.²⁵²

RTA’s involvement with this project provides further evidence of the transportation agencies’ predetermined decision-making and disregard of the NEPA process. The non-governmental organization—an arm of the Raleigh Chamber—has a stated position in support of completing 540 as a toll highway along the orange route. The transportation agencies have granted RTA a special role to participate throughout the NEPA process while failing to offer the same level of access to other stakeholders, such as the Conservation Groups that favor other options.²⁵³

Despite RTA’s assistance and study of additional routes,²⁵⁴ the federal agencies refused to condone the project without the Red Route. In December 2012, FHWA and the Corps withdrew support for the project, informing NCDOT that they believed “the project can no longer move forward . . . and satisfy all federal environmental requirements.”²⁵⁵

While grappling with how to handle the federal agencies’ withdrawal of support, members of the Transportation Advisory Committee (“TAC”) made statements to the effect of “even though we know the red route will never be built, to move this along,” the TAC should encourage the N.C. General Assembly to repeal the law.²⁵⁶ Eventually, in 2013, the N.C. General Assembly did remove its statutory restriction of routes to be studied for the Complete 540 project, see 2013 N.C. Laws S.L. 2013-94, despite the Town of Garner’s strong

²⁴⁹ Bruce Mildwurf, *Without ‘Red Route,’ Feds to End Funding for Extending Wake Toll Road*, CAPITOL BROADCASTING CO., Apr. 10, 2012, Attachment 51.

²⁵⁰ E-mail from Thomas H. Johnson to Hardin Watkins, Town Manager, Town of Garner (Nov. 22, 2010), Attachment 52.

²⁵¹ Bruce Mildwurf, *Without ‘Red Route,’ Feds to End Funding for Extending Wake Toll Road*, CAPITOL BROADCASTING CO., Apr. 10, 2012, attached as Attachment 51.

²⁵² Bruce Siceloff, *New TriEx Proposals May Save Garner from Red Route*, NEWS & OBSERVER, May 22, 2012, Attachment 53.

²⁵³ E-mail from Eric Midkiff, NCDOT, to Jamille A. Robbins, NCDOT & Kiersten R. Bass, nHNTB (Aug. 22, 2013), Attachment 54.

²⁵⁴ Bruce Siceloff, *New TriEx Proposals May Save Garner from Red Route*, NEWS & OBSERVER, May 22, 2012, Attachment 53.

²⁵⁵ Letter from John F. Sullivan, FHWA, and Steven A. Baker, USACE, to Terry R. Gibson, P.E., NCDOT (Dec. 7, 2012), Attachment 55.

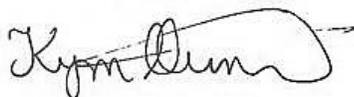
²⁵⁶ Transp. Advisory Comm. Meeting Minutes (Dec. 12, 2012) at 4, Attachment 56.

opposition.²⁵⁷ NCDOT resumed inclusion and study of the Red Route in the Complete 540 NEPA process. Nonetheless, given NCDOT's repeated promises to not build the Red Route, the route's perfunctory inclusion in the DEIS is merely an attempt to pass legal muster. In other words, in the current DEIS NCDOT attempts to justify its already-made decision to build the Orange Route—in contravention of NEPA's implementing regulations. 40 C.F.R. §§ 1502.1, 1502.2(g).

IX. CONCLUSION

No one—not the Conservation Groups, not NCDOT, nor any of the affected communities—wish to see the Town of Garner crushed by the Red Route. The route may avoid significant environmental impacts, including the devastating effects to the dwarf wedgemussel associated with other routes, but it still comes with an excessive environmental toll. Indeed, all of the routes under consideration correspond to both substantial environmental impacts and significant relocation impacts, with anywhere from 234 to 550 required residential relocations. The only truly reasonable and practicable alternative is for NCDOT to evaluate options other than the 17 DSAs included in the DEIS. NCDOT should refocus on upgrading existing roadways, incorporating TDM and TSM strategies, and integrating mass transit options where possible. Such alternative solutions would address mobility in the project area without wiping out existing neighborhoods, endangered species, and special, sensitive natural resources.

Sincerely,



Kym Hunter
Staff Attorney



Ramona H. McGee
Associate Attorney

CC (via e-mail and US mail, w/attachments):

Matthew Starr, Sound Rivers
June Blotnick, Clean Air Carolina
Ned Curran, BOT
John Sullivan, FHWA
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Cynthia Van Der Wiele, USEPA
Eric Alsmeyer, USACE
Gary Jordan, USFWS

²⁵⁷ See Letter from Town of Garner to N.C. Gen. Assembly (Jan. 23, 2013), Attachment 57.

Marla Chambers, NCWRC
Amy Simes, NCDEQ
Shelley Blake, NCDOT
Chris Lukasina, CAMPO
Joe Milazzo, RTA
Ronnie S. Williams, Mayor of Garner
John W. Byrne, Mayor of Fuquay-Varina
James Roberson, Mayor of Knightdale
Nancy McFarlane, Mayor of Raleigh
Richard G. Sears, Mayor of Holly Springs
Jody McLeod, Mayor of Clayton
Lance Olive, Mayor of Apex
Matt Calabria, Wake County Commissioner
Senator Chad Barefoot
Senator Tamara Barringer
Senator Dan Blue
Senator E.S. Newton
Senator Josh Stein
Representative N. Leo Daughtry
Representative Nelson Dollar
Representative Rosa U. Gill
Representative Duane Hall
Representative Darren G. Jackson
Representative James H. Langdon
Representative Grier Martin
Representative Paul Stam

Southern Environmental Law Center Letter – 1/8/16

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Project Cost	Project is impracticable because anticipated cost is more than the amount NCDOT has allocated in the STIP.	The project is practicable from a financing perspective. The costs reported in the Draft EIS are expressed in year of expected expenditure dollars, while the figures in the STIP are in current dollars. The project is planned for implementation in phases that extend beyond time span of the current STIP at the time of the Draft EIS, which only includes costs for the phases anticipated during the STIP time span. Project revenue sources will include local, state, and federal resources, along with toll bonds. The project is included in CAMPO's fiscally constrained transportation plan.
2	Project Cost	Project was scored in NCDOT's STI process using outdated, lower cost estimates. Project should be rescored.	The costs reported in the Draft EIS are expressed in year of expected expenditure dollars, while the figures in the STIP are in current dollars. The project has been rescored under NCDOT Prioritization 4.0, using revised cost estimates (in current dollars) and it did score high enough for inclusion in the Adopted 2018-2027 STIP.
3	Project Cost	Lack of information on projected users of the road and its projected revenue.	This information is detailed in the project's <i>Planning Level Traffic and Revenue Study</i> , which is referenced in Chapters 4 and 5 of the Final EIS.
4	Traffic	Data suggest most commuters in study area won't experience meaningful travel time savings.	The analysis in the Draft EIS includes an examination of forecast travel times between representative origin and destination points, showing considerable travel time savings for the new location build alternatives between all origin and destination points examined, as compared with the No-Build Alternative.
5	Traffic	For users that will see travel time savings, benefits would average 10 minutes or less, equating to \$200 million per minute saved.	This statement assigns the entire project cost to ten minutes saved by one person on one trip through the project area. More correctly, travelers would save several minutes of travel time each time they pass through the project corridor, and it is reasonable to assume thousands of trips would be taken through the corridor every day for decades to come.
6	Alternatives	NCDOT did not adequately consider many less expensive and less environmentally damaging alternatives.	Chapter 4 of the Draft EIS reports that a range of options, including transportation system management, transportation demand management, mass transit, improving existing local roads, and combination (hybrid) options, was examined to determine which would be feasible and practical for meeting the purpose of the project. Each of these options was ultimately rejected as not practicable. NCDOT, FHWA and USACE are all satisfied that the non-toll highway concepts are not practicable and therefore do not require any further analysis. As noted on page 48 in the Draft EIS, specific details regarding the full range of alternatives considered and the multi-tiered screening process used are documented in the <i>Alternatives Development and Analysis Report</i> . As outlined on pages 8 through 11 in the Section 6002 Project Coordination Plan for the project, the Purpose and Need for the project and the development and analysis of alternatives for detailed evaluation in the Draft EIS were vetted with participating regulatory and resource agencies as well as the public. .

Appendix K3 – Interest Group Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
7	Relocations	Project will force hundreds of relocations and will divide neighborhoods.	NEPA does not prevent implementation of projects with significant effects on the human environment. It is virtually impossible to construct a new, limited-access facility in a region as densely populated as the Triangle without incurring community impacts. During the NEPA process a project proponent is required to evaluate a full range of alternatives that achieve the project's purpose and need and then compare the impacts of the alternatives. The Draft EIS satisfies this requirement. Efforts to avoid and minimize impacts will continue as the project develops.
8	Natural Environment	Project would cause significant damage to the natural environment.	Similar to the response to comment #7, NEPA does not prevent implementation of projects with significant effects on the natural environment. It is virtually impossible to construct a new, limited-access facility without incurring environmental impacts. During the NEPA process a project proponent is required to evaluate a full range of alternatives that achieve the project's purpose and need and then compare the impacts of the alternatives. The Draft EIS satisfies this requirement. Efforts to avoid and minimize impacts have and will continue to be undertaken as the project develops.
9	Protected Species	Project would jeopardize existence of Dwarf Wedgemussel and affect other rare species.	NCDOT and FHWA worked collaboratively with USFWS to avoid jeopardizing the existence of protected species including the DWM. The Biological Assessment evaluates the potential effects of the project on federally listed species, per the Endangered Species Act. The BA, summarized in Chapter 4 of the Final EIS, details the conservation measures NCDOT proposes to use to help offset anticipated effects and promote the recovery of the DWM. Section 7 Consultation with USFWS will be finalized prior to publication of the Record of Decision (ROD) for the project.
10	Section 4(f)	Project would affect parks and historic sites; every DSA would cross Neuse River Trail.	Neither NEPA nor Section 4(f) of the Department of Transportation Act prohibit impacts to these resources. The preferred alternative would not have adverse effects on any NRHP listed or eligible sites and it would avoid non- <i>de minimis</i> effects on Section 4(f)-eligible park properties.
11	Study Methods	Methods used in Draft EIS declared illegal by Federal Court.	See response to comment #13.
12	Purpose and Need	Improving mobility and reducing congestion are the same thing.	Reducing congestion can contribute to improved mobility, but mobility is also defined in other ways, including reducing travel times independent of traffic congestion.

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Comment Number	Primary Topic	Paraphrased Comment	Response
13	Traffic	Purpose and need based on outdated traffic data and analysis.	<p>The traffic modeling tool used in the development of Draft EIS, North Carolina State Triangle Regional Model (TRM) versions V4-2008 and V4-2009, was the officially approved model at the time the Draft EIS was initiated and prepared. The TRM V4-2008 was used as a tool in the development of the First Tier Screening (2011), Complete 540 Detailed Study Alternatives Traffic Forecast (2012, 2014), and Complete 540 Detailed Study Alternatives Capacity Analysis (2015) memoranda.</p> <p>The TRM has since been updated to TRM, version V5 (TRM V5), the Triangle Region's officially approved travel demand model. TRM V5 was adopted in February 2016 after being developed by the Triangle Regional Model Service Bureau at the Institute of Transportation Research and Education. TRM V5 was used as a tool in the development of the Complete 540 Preferred Alternative Traffic Forecast (2016) and Complete 540 Preferred Alternative Traffic Capacity Analysis (2017) memoranda (2017), which are documented in Chapter 4 of the Final EIS.</p> <p>CAMPO developed a future year (FY) (2040) socioeconomic (SE) data set for use with the TRM V5, which is a tool used to plan for future transportation needs and to demonstrate air quality conformity. The FY SE data set was also used as an input to prepare the Preferred Alternative Traffic Forecast for the Complete 540 project. Based on information available, the 2040 FY SE data set is understood to represent a future year allocation of population and employment and associated land use conditions based on CAMPO's fiscally constrained 2040 Metropolitan Transportation Plan (MTP). The Complete 540 project is included in the 2040 MTP.</p>
14	Purpose and Need	Study area's growth rate has substantially decreased since 2009 and new development has stagnated.	<p>This is inaccurate. According to the NC Office of State Budget and Management, Wake County's population grew by almost 12 percent between 2010 and 2015, twice the Statewide rate. The US Census Bureau reported that Wake County was the nation's second fastest growing county with a population over 1,000,000 between 2010 and 2015. Communities in the project area, including Holly Springs, Apex, and Garner, continue to see new development.</p>
15	Traffic	"Outdated" traffic forecasts didn't reflect Wake County Transit Plan.	<p>See response to comment #13. The TRM, version V5, used in developing the traffic forecasts for the preferred alternative analysis includes Wake County's long-term transit plan and the effect of increase in mass transit in the study area.</p>

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Comment Number	Primary Topic	Paraphrased Comment	Response
16	Purpose and Need	"Illegal" approach to purpose and need traffic forecasts overstates level of congestion in no-build scenario.	<p>The First Tier Screening Traffic Memorandum (2011) was completed using the TRM V4-2008 as a tool to quantitatively assess measures of effectiveness (MOEs) of alternative concepts at a region-wide level and within the project traffic study area in 2035. As part of the analysis, a No-Build alternative concept was developed that included all projects in the fiscally-constrained CAMPO 2035 LRTP highway and transit networks, except Complete 540.</p> <p>The first tier screening of alternative concepts has since been reassessed using TRM V5. The <i>Complete 540 First Tier Alternative Screening & Traffic Reassessment Report</i> (December 2017) examines the impacts on the transportation network when using the TRM V5 with both the official socioeconomic (SE) data and the SE data developed using CommunityViz for the Complete 540 Indirect and Cumulative Effects Memo series which removes any influence of the Complete 540 project on forecast growth. In other words, having removed potential population and employment attributable to the project, the No-Build alternative concept did not meet the project's primary purposes. This report shows negligible changes in vehicle miles traveled, vehicle hours traveled, congested vehicle miles traveled, network speeds, and overall traffic volume assignments when comparing TRM model runs using both the official and ICE SE data sets.</p>
17	Purpose and Need	Purpose and need statement is impermissibly narrow because it includes system linkage as a secondary purpose.	Secondary purposes are also known as "other desired outcomes." As is clearly stated in the Draft EIS and the supporting technical reports, Alternative Concepts were not eliminated if they could not meet the secondary purpose of the project. Only the primary purposes were used to eliminate/retain Alternative Concepts.
18	Alternatives Analysis	Draft EIS only offers one alternative (new location highway).	See response to comment #6.
19	Alternatives Analysis	Differences between Alternative Concepts according to Measures of Effectiveness (MOEs) are too small to justify eliminating any of the alternatives. The different MOEs purported to help distinguish the alternatives according to the results of the MOEs. In reality, the MOEs illustrate how indistinguishable the considered alternatives are in terms of their ability to relieve congestion or enhance mobility. Advancing the toll highway alternative over other alternatives, based on such slight differences, is arbitrary and capricious.	<p>SELC appears to dismiss all MOEs used to assess the project, yet mentioned only average daily travel speed and travel times in their comments.</p> <p>SELC makes the statement that the average time savings between RTP and four representative destination points under the different build Alternative Concepts only range from 2.25 minutes (for Improve Existing 2 – Arterial) to 5.75 minutes (for New Location Highway), and concludes that this difference is not "significant." There are three key problems with this:</p> <ul style="list-style-type: none"> • SELC calculated the average time savings for the New Location Highway concept incorrectly; the average time savings relative to the No-Build scenario for trips from RTP to the destination points is actually 8.25 minutes. This is a more than three-fold greater time savings than the 2.25 minute average time savings offered by Improve Existing 2 – Arterial. • SELC makes the arbitrary judgment that a specific number of minutes saved is not "significant." Whether or not the differences between the average time savings are "significant" is completely subjective. • SELC leaves out the important point that the reported time savings is per vehicle trip. Thousands of daily trips would benefit from the potential time savings.

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Comment Number	Primary Topic	Paraphrased Comment	Response
20	Alternatives Analysis	Quartile ranking system artificially inflated significance of small differences between Alternative Concepts.	<p>The quartile ranking system was used specifically to avoid setting arbitrary thresholds for the MOEs as it explicitly measures each concept relative to the other concepts. While the differences between the concepts may be small for some of the MOEs, they are larger for others. Examining the quartile rankings for several different MOEs showed that some concepts consistently performed better than the other options, across all the MOEs.</p> <p>The key point to note is that the ranking system and the rationale for eliminating concepts according to the rankings were clearly laid out in the alternatives analysis and all of the alternative concepts were subjected to the same process.</p>
21	Alternatives Analysis	Different screening process used for non-roadway Alternative Concepts.	<p>The Alternatives Development and Analysis Report clearly states that the non-roadway Alternative Concepts could not be modeled using the Triangle Regional Model. The discussion of each MOE includes a qualitative description of the predicted effect of each non-roadway Alternative Concept, using Census data and other available data sources to supplement the findings.</p>
22	Alternatives Analysis	Alternatives screening method violates NEPA	<p>Under NEPA, it is not necessary to fully evaluate all possible alternatives. Only those alternatives that would best meet the purpose and need for the project based on a standard screening process are evaluated in the Draft EIS. The rationale used to dismiss the alternatives not carried forward for more detailed study is detailed in the <i>Alternatives Development and Analysis Report</i> and summarized in the Draft EIS; all of this information has been available for public review and comment.</p>
23	Alternatives Analysis	Without information about proportions of local and through traffic, it is impossible to predict the most effective alternatives.	<p>A purpose of the project is “to improve transportation mobility for trips within, or traveling through, the project study area...”; i.e., the project purpose does not draw a distinction between local and through traffic. The MOEs also do not draw a distinction between local and through traffic, so information about the proportions of local and through traffic is not necessary to measure the ability of each Alternative Concept to meet the project purpose.</p>
24	Alternatives Analysis	Not enough information is provided to support the Draft EIS statement that the project could reduce travel times by as much as ten minutes or more.	<p>Using a reader-friendly approach to preparing the Draft EIS, the project team summarized key information in the supporting technical reports to make the information easily understandable. The <i>Alternatives Development and Analysis Report</i> includes detailed information about travel time analysis of the Alternative Concepts. The Draft EIS statement SELC indicates is unclear/unsubstantiated is, in reality, an accurate representation of information in the Alternatives Report, which is directly referenced in the Draft EIS on page 104. For example, Table 2-2 and 2-3 in the Alternatives Report show that the New Location Highway would shorten the trips to Clayton from RTP and Brier Creek by 17 minutes. This is consistent with stating that “the project could reduce travel times to the area’s major employment and commercial centers by as much as ten minutes or more.”</p>
25	Alternatives Analysis	There are many unanswered questions about the stated time savings.	<p>It is clear by the wording of the statement in question (“could reduce travel times...by as much as ten minutes or more”) that the statement is not asserting that all trips by all travelers would see a reduction in travel times by ten minutes. It is the opinion of NCDOT and FHWA that the screening process followed in the <i>Alternatives Development and Analysis Report</i> provides sufficient information to, as SELC describes, “fully evaluate the ability of different alternative solutions to meet the purpose of the project.”</p>

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Comment Number	Primary Topic	Paraphrased Comment	Response
26	Alternatives Analysis	No documentation is provided about travel time savings to drivers using existing road network.	As described on page 54 of the <i>Community Impact Assessment</i> , drivers who do not use the toll road would nonetheless benefit from reduced congestion on existing roadways as a result of traffic diversion onto the new roadway.
27	Tolls	There is no evidence that drivers will pay to use this facility when free roads with little to no congestion are nearby.	As documented in the Draft EIS, there is notable forecast congestion on roads near the proposed project that would make use of a tolled facility alternative. As a nearby example, traffic volumes on the existing NC 540 in western Wake County have grown by 24 percent per year since the road opened to traffic in 2012, and revenue from the roadway has exceeded forecasts.
28	Alternatives Analysis	Not enough information about tolls, road use, to determine financial feasibility.	See response to comment #3.
29	Alternatives Analysis	Not enough distinct alternatives were considered.	See response to comment #6.
30	Alternatives Analysis	Screening process was biased against Alternative Concepts other than the new location highway.	See response to comment #6.
31	Alternatives Analysis	Improving existing roadways concepts are more competitive than screening process suggests.	As described in the response to comment #20, the quartile ranking system was used specifically to avoid setting arbitrary thresholds for the MOEs as it explicitly measures each concept relative to the other concepts. The ranking system and the rationale for eliminating concepts according to the rankings were clearly laid out in the alternatives analysis and all of the alternative concepts were subjected to this process in the same way.
32	Alternatives Analysis	Hybrid 1 concept should have been studied in more detail.	See response to comment #31. The Hybrid 1 concept was eliminated after objective application of this screening process and therefore did not advance to more detailed study.
33	Alternatives Analysis	No evidence provided to suggest that 60% participation in TDM strategies is unattainable.	As described in the Community Impact Assessment, about 82 percent of workers in the project area currently travel to work in single-occupancy vehicles. To achieve 60 percent participation in TDM strategies would require over half of those who currently drive alone to work to switch to TDM strategies such as carpooling. Such a massive sociological shift in travel behavior would be unprecedented.
34	Alternatives Analysis	NCDOT has successfully implemented TDM strategies to manage traffic on its Fortify 440 project, which suggests that these strategies could be feasible on the Complete 540 project.	Fortify 440 is a poor comparison to the Complete 540 project as TDM strategies are being implemented for the project on a temporary basis, while work is being completed on relatively short individual segments. Additionally, as described in the response to comment #33, to achieve over 60 percent participation in TDM strategies would require over half those who currently drive alone to work in the 540 study area to switch to TDM strategies. There is no evidence from the Fortify 440 project to suggest that this proportion of drivers would switch to TDM strategies.

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Comment Number	Primary Topic	Paraphrased Comment	Response
35	Alternatives Analysis	No indication of whether smaller increases in the number of workers using TDM strategies could make TDM concept feasible.	The <i>First Tier Alternative Concepts Screening & Traffic Reassessment (2017)</i> provides sufficient methodology, explanation, and quantitative estimates of 2040 average daily congested VHT comparisons to calculate VHT reduction estimates. In a TDM alternative scenario where over 45,000 (over 21 percent of maximum TDM-eligible) employees in the traffic study area use TDM, the congested VHT reduction would equal the reduction from the No-Build ICE to New Location Highway alternative concepts. This would require rates of telecommuting and carpooling greater than 130 percent of the current levels on a long-term basis. There is currently no evidence to suggest that significantly larger percentages of area workers will begin to take advantage of TDM strategies.
36	Alternatives Analysis	Documentation provides inadequate review of TDM strategies and did not provide sufficient justification to eliminate the TDM alternative.	See response to comment #6.
37	Alternatives Analysis	TSM strategies could be used on many of the same roadways for which the build concepts were analyzed—how would using these strategies on these roadways affect travel times?	Not all the freeways, expressways, and major arterials in the study area would be amenable to TSM improvements. As explained in the <i>First Tier Alternative Concepts Screening & Traffic Reassessment (2017)</i> , while TSM improvements can result in small increases in speeds on freeways/expressways and major arterials, these types of facilities only account for 26 percent of the highway network within the traffic study area. The reassessment notes that roughly 43 percent of traffic study area VHT occurs on facilities that could accommodate TSM improvements. Speeds on all TSM-amendable facilities would have to be increased by roughly 34 percent to equal the 11,000 VHT reduction experienced when comparing the New Location Highway and No-Build ICE alternatives.
38	Alternatives Analysis	TSM implementation on US 74 in Union County shows that this strategy can be successful.	There is no facility in the Complete 540 study area that is analogous to US 74, a major arterial that crosses the entire Complete 540 project area from east to west. Moreover, NCDOT disagrees with the validity and basis of this comment that "after implementing these low cost TSM strategies, average travel speeds along US 74 increased from approximately 20 to 30 MPH in 2007 to approximately 40 to 44 MPH during peak travel times." These speeds compare traffic simulation computer model (Sim Traffic) travel times from 2007 and real-time travel times from 2013, which should not be directly compared. This is an invalid comparison of average travel speeds and, therefore, invalid to make a determination of TSM impacts to US 74 average travel speeds.
39	Alternatives Analysis	Documentation says that an increase to 600 buses in use would be needed "to meet the project's primary purposes." Doesn't this mean there was a threshold for congestion and mobility?	In addition to an increase in mass transit service in the study area, an increase in transit use would be necessary to achieve a decrease in study area traffic congestion and an improvement in travel times comparable to the New Location Highway alternative that the screening process showed would meet the project purpose. There was no threshold set for congestion and mobility. The Mass Transit alternative concept would only meet the purposes of the project if the transit-vehicles had sufficient ridership in conjunction with expanded service. The <i>First Tier Alternative Concepts Screening & Traffic Reassessment (2017)</i> shows the level of mass transit improvements that would be required to affect measures of effectiveness results equivalent to the New Location Highway alternative.

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Comment Number	Primary Topic	Paraphrased Comment	Response
40	Alternatives Analysis	Assertion that expanded transit costs could not be met by fares is unsupported in light of high cost of toll highway and its uncertain financing.	The comparison is invalid. The projected cost and financing strategy of a toll highway have no bearing on whether bus fares would be sufficient to pay for expanded transit costs on another facility.
41	Alternatives Analysis	NCDOT should examine an alternative that would combine non-toll highway options.	<p>Non-toll highway options on new location are not financially practicable. Options to improve existing highway facilities were examined in the Alternatives Report and were not found to be reasonable and feasible as Detailed Study Alternatives. Additionally, hybrid alternatives combining improving existing highway facilities and new location toll road options were examined in the Alternatives Report and were not identified for further consideration in the study process.</p> <p>The Alternatives Report showed that none of the options of transportation demand management (TDM), transportation systems management (TSM), mass transit/multi-modal, or upgrade existing roadways were reasonable options for further consideration since they did not satisfy the two primary project purposes. Likewise, combinations of these options would also not meet these purposes. These were eliminated in the first tier screening process. Hybrid 3 was an alternative that went beyond the first tier screening. Hybrid 3 was eliminated because of factors that would not have benefited from inclusion of TDM, TSM, mass-transit/multi-modal, or other existing roadway improvements beyond what is already programmed in the local area long-range transportation plan. Therefore, reasonable alternatives or combinations of alternatives were not prematurely rejected. The alternatives analysis process for this project was reviewed by an interagency team including the USEPA. The team did not identify any issue of concern about this analysis.</p>
42	Natural Environment	Each DSA would have substantial adverse effects on wetlands, streams, and other natural resources	See response to comment #8.
43	Aquatic Environment	Each DSA would have significant negative effects on the aquatic environment.	As suggested in the response to comment #8, NEPA does not prevent implementation of projects with significant effects on the aquatic environment. It is virtually impossible to construct a new, limited-access facility without incurring environmental impacts. During the NEPA process a project proponent is required to evaluate a full range of alternatives that achieve the project's purpose and need and then compare the impacts of the alternatives. The Draft EIS satisfies this requirement. Efforts to avoid and minimize impacts to the aquatic environment will continue as the project develops.
44	Aquatic Environment	There is no commitment to implement erosion and sedimentation controls, and those strategies are unlikely to be successful.	Proper erosion and sedimentation controls will be implemented for the project. NCDOT is required by State law to comply with all rules and regulations described in the Sedimentation and Pollution Control Act and all requirements stipulated in the program delegation from the NC Department of Environmental Quality. In addition, Design Standards for Sensitive Watersheds will be used throughout the project as a conservation measure

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Comment Number	Primary Topic	Paraphrased Comment	Response
45	Aquatic Environment	Draft EIS has insufficient information about stream and water quality impacts.	The state and federal agencies with the responsibility to participate in the process have been given formal opportunities to comment on the analyses conducted and conclusions reached over the course of the study. These agencies have concluded that the level of detail and methods used are adequate to render the required decisions. That process has continued after publication of the Draft EIS, and the Final EIS summarizes the technical findings and results of agency coordination that occurred after publication of the Draft EIS. Additional water quality data were gathered for the lower Swift Creek watershed after publication of the Draft EIS; this is summarized in the <i>Lower Swift Creek Water Quality Report</i> (2016), which has been incorporated by reference into the Final EIS. A quantitative water quality indirect and cumulative impacts analysis was completed after selection of the preferred alternative (after publication of the Draft EIS). This work is summarized in Chapter 4 of the Final EIS.
46	Aquatic Environment	Draft EIS has insufficient information regarding impacts to Section 303(d) impaired waters.	See response to comment #45.
47	Aquatic Environment	Insufficient information has been provided to meet requirements of the Clean Water Act.	See response to comment #45.
48	Aquatic Environment	Draft EIS doesn't include information about cumulative impacts to water quality.	A quantitative water quality indirect and cumulative impacts analysis was completed after selection of the preferred alternative (after publication of the Draft EIS) as is customary. This work is summarized in Chapter 4 of the Final EIS.
49	Wetlands	Each DSA would have significant negative effects on wetlands; Draft EIS has insufficient information on wetland impacts.	As suggested in the response to comment #8, NEPA does not prevent implementation of projects with significant effects on the wetlands. It is virtually impossible to construct a new, limited-access facility without incurring environmental impacts. During the NEPA process a project proponent is required to evaluate a full range of alternatives that achieve the project's purpose and need and then compare the impacts of the alternatives. The Draft EIS satisfies this requirement. Efforts to avoid and minimize impacts have continued as the project has developed (minimization is discussed in Chapter 4 of the Final EIS) and will continue during final design of the project. See also response to comment #45.
50	Riparian Buffers	Draft EIS doesn't document potential impacts on wider riparian buffer areas required under some local jurisdictions' ordinance.	NCDOT documented the DSAs' potential impacts to riparian buffers in accordance with USACE and NCDWR requirements. Riparian buffer impacts are summarized in the Comparative Evaluation Matrix on page 108 in the Draft EIS. NCDOT will continue to work with agencies and local government to minimize impacts to riparian buffers in accordance with applicable regulations.
51	Riparian Buffers	NCDOT cannot assume more stringent local buffer requirements will still be in effect to assist in reducing impacts from the Complete 540 project.	See response to comment #50.
52	Protected Species	Project would jeopardize existence of Dwarf Wedgemussel and affect other rare species.	See response to comment #9.
53	Protected Species	Project would have significant direct, indirect and cumulative impacts on the Dwarf Wedgemussel.	See response to comment #9.

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Comment Number	Primary Topic	Paraphrased Comment	Response
54	Protected Species	Focus of the Dwarf Wedgemussel viability study is on current viability and not viability in the event that the Complete 540 project is built.	The Dwarf Wedgemussel (DWM) Viability Study was conducted at the request of USFWS specifically for the purpose of: characterizing existing conditions in the Swift Creek watershed; summarizing conservation measures implemented to protect DWM in Swift Creek watershed; and assessing historic trends and future viability of DWM population and habitat conditions. The results of the Viability Study informed the Biological Assessment to establish the environmental baseline. This baseline plus the anticipated effects of the project are disclosed in the Biological Assessment.
55	Protected Species	Until USFWS completes its consultation process for the Dwarf Wedgemussel the NEPA process and project as a whole cannot proceed.	See response to comments #9 and 54.
56	Protected Species	Draft EIS has insufficient information to allow full review of impacts to Dwarf Wedgemussel.	NCDOT and FHWA have consulted with USFWS on the possible effects on threatened and endangered species. NCDOT and FHWA have worked collaboratively with USFWS to satisfy the requirements of the Endangered Species Act. Additional DWM surveys have been conducted following publication of the Draft EIS, as noted in Chapter 4 of the Final EIS. A Biological Assessment, summarized in Chapter 4 of the Final EIS, has been prepared for the project.
57	Protected Species	Mussel surveys completed for the Draft EIS were completed more than five years ago. Each segment was surveyed only once during the study period.	Additional mussel surveys were completed and documented in the DWM Viability Study (May 2016) and in the Complete 540 Aquatic Species Survey Report (June 2017).
58	Protected Species	Including Dwarf Wedgemussel propagation as part of mitigation would not offset impacts or comply with the Endangered Species Act.	The Biological Assessment evaluates the potential effects of the project on the DWM as well as measures to offset and conserve the species in accordance with the Endangered Species Act. The 1993 USFWS Recovery Plan for the Dwarf Wedgemussel includes several actions to aid in species recovery. Within action 5 (on page 31) is the potential for augmenting species populations and re-establishing populations in suitable habitat. The proposal is consistent with the Recovery Plan. The consultation process with USFWS will be concluded prior to finalizing the Record of Decision.

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Comment Number	Primary Topic	Paraphrased Comment	Response
59	Protected Species	NCDOT has presented no evidence of successful mussel propagation and reintroduction into wild.	<p>The Biological Assessment reports that numerous imperiled freshwater mussel species have been successfully propagated and released into the wild for various projects in the United States, such as the Aquatic Fauna Restoration Project in the Cheoah River in Western North Carolina. This is an on-going cooperative effort between NCWRC, USFWS, and other private entities that has successfully propagated and released several freshwater mussels, including Appalachian Elktoe (<i>Alasmidonta ravenelaina</i>), which is federally listed, Slippershell Mussel (<i>Alasmidonta viridis</i>), Wavy-rayed Lampmussel (<i>Lampsilis fasciola</i>) and Rainbow (<i>Villosa iris</i>), as well as several native fish species and a federally threatened fish species, the Spottfin Chub (<i>Erimonax monachus</i>), into a nine-mile reach of the river. The Appalachian Elktoe and Slippershell Mussel are closely related to the DWM. To date there have not been any DWM population augmentation or re-introduction efforts using captive propagation. However, the species has successfully been propagated from two different source populations, the Po River of the York River Basin in Virginia and Moccasin Creek of the Neuse River Basin in North Carolina. There were 1,191 juveniles produced from two gravid females collected from Moccasin Creek; however, they were not released back into the creek due to logistical reasons regarding the State's species augmentation / re-introduction policy at that time. A number of the partners involved in the Cheoah River project will be an integral part of the proposed propagation facility. Lastly, the Dwarf Wedgemussel Workgroup for North Carolina concluded that propagation / augmentation was the highest priority management action for the Swift Creek population.</p>
60	Protected Species	The time for implementing a mussel propagation program has passed.	<p>Please see the response to Comment 58. In addition, Section 7 consultation with USFWS for impacts to DWM is ongoing. Potential indirect and cumulative impacts, which will inform the Section 7 consultation, have continued to be evaluated and the results have been shared with USFWS and the entire interagency team. One measure that NCDOT, NCWRC and the USFWS have undertaken is to conduct targeted surveys in the best habitats to find DWM and apply radio transmitter pit tags to the individuals to allow for easier recapture once the propagation facility is ready to accept individual mussels. Additionally, as part of this effort, future suitable release sites in Swift Creek have been identified.</p>
61	Protected Species	No Dwarf Wedgemussel habitat protection plan appears to have been developed to buttress the current augmentation plan.	<p>Existing DWM habitat protection strategies in the Swift Creek watershed were identified in the DWM Viability Study. One such protective measure arose from the Section 7 consultation for the Clayton Bypass, where NCDOT and USFWS worked in collaboration with local governments to implement impervious surface and nutrient limitations within riparian buffers. Additionally, NCDOT has committed to stream mitigation efforts in the larger Neuse River Basin for this project. While no sites have yet been identified in the Swift Creek Watershed, sites in other streams within the Neuse 01 Basin could provide locations for future introduction. The Regional Watershed Plan for the Neuse 01 Basin identifies Swift Creek as a restoration priority.</p>

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Comment Number	Primary Topic	Paraphrased Comment	Response
62	Protected Species	Project cost estimates don't include cost of mussel propagation facility.	<p>Costs for environmental mitigation (wetland, stream, and buffer impacts) were included in the cost estimates for the project in the Draft EIS for all 17 DSAs. Specific mitigation and conservation measures for the DWM were not identified at the time of the Draft EIS. Therefore, specific costs for these measures were not available. The cost for a mussel propagation facility is relatively small as a percentage of the overall project cost. Therefore, cost differentials between DSAs would not be significantly changed if the cost for a propagation facility was added to those DSAs crossing Swift Creek below Lake Benson Dam. Additionally, with the potential listing of the Yellow Lance, and other freshwater mussel species, a propagation facility is likely a cost that would be applied to all 17 DSAs. The addition of the cost of a propagation facility would not alter the selection of the preferred alternative.</p>
63	Protected Species	NCDOT should study all of the rare aquatic species with the potential to be listed as endangered or threatened.	<p>NCDOT has conducted surveys for currently listed and several potentially listed species; the results are summarized in the Final EIS. Species that were specifically targeted in this effort include the Yellow Lance (<i>Elliptio lanceolata</i>), which is officially proposed for listing, and has been addressed in the Biological Assessment, as well as the petitioned Atlantic Pigtoe (<i>Fusconaia masoni</i>), Carolina Madtom (<i>Noturus furiosus</i>) the Green Floater (<i>Lasmigona subviridis</i>), and Neuse River Waterdog (<i>Necturus lewisii</i>). However, consultations and other issues associated with the ESA are limited to currently protected and proposed species, consistent with the ESA. These surveys were conducted to assist in developing environmental baselines for these species in the event that they become formally listed and subject to Section 7 before Complete 540 project completion. USFWS determined that the American Eel is not warranted for listing as of October 2015.</p>
64	Air Quality	Air quality analysis has insufficient information about potential for increases in ambient air pollution.	<p>The air quality analysis completed for the Draft EIS was completed to a level of detail consistent with policies of NCDOT and FHWA. Because ozone is primarily an area-wide pollutant, it is typically assessed in system-level planning as part of the air quality State Implementation Plan development and conformity process, not at an individual project level. According to FHWA's "Guidance for Preparing and Processing Environmental and Section 4(f) Documents," ozone air quality concerns are regional in nature and as such, meaningful evaluation on a project-by-project basis is not possible. Also, ozone is not produced at the roadside, but forms downwind from vehicle emissions and only when weather conditions (heat and sunlight) are supportive of its formation.</p> <p>It should also be noted that Wake County and Johnston County are in attainment with EPA's air quality standards, and the Complete 540 project is not anticipated to change this attainment status.</p>

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Comment Number	Primary Topic	Paraphrased Comment	Response
65	Air Quality	Air quality analysis has insufficient information about MSATs.	Following selection of the preferred alternative, NCDOT completed an Air Quality Report Addendum, including a qualitative MSAT analysis, completed in accordance with current FHWA policy and guidance. This is summarized in the Final EIS. A detailed analysis of MSAT concentrations at individual properties that may be used by sensitive populations is not part of the analysis. The tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. The air quality analysis explains that the science has not yet been advanced such that this information is available. Moreover, according to FHWA's 2016 "Updated Interim Guidance on MSAT Analysis in NEPA Documents," national trends project substantial overall reductions in MSATs due to stricter engine and fuel regulations issued by EPA.
66	Air Quality	There was no analysis of the indirect and cumulative effects on air quality.	The effect on land use, travel patterns and congestion of a roadway project is the responsibility of the local MPO as they develop their long range transportation plan. In order for the long range transportation plan to be approved, it must be shown to be in conformity with the State Implementation Plan. The Complete 540 project comes from a long-range plan that has been shown to be in conformity with the State Implementation Plan. Indirect and cumulative impacts are better addressed through consultation between NCDOT and the Capital Area MPO in developing the long-range transportation plan and associated air quality conformity determination. It is likely that any indirect and cumulative effects on air quality would follow a similar pattern to the project's indirect and cumulative effects on land development. A detailed quantitative study of the potential indirect and cumulative effects of the preferred alternative on land development has been completed and is summarized in Chapter 4 of the Final EIS.
67	Air Quality	There was no analysis of greenhouse gas emissions.	Comment noted. On April 5, 2017, the Council on Environmental Quality (CEQ) rescinded its guidance on greenhouse gas emissions and climate change. Consistent with FHWA policy, greenhouse gas emissions and climate change were not included in the Final EIS.
68	Traffic	There is no information on projected toll road usage.	This information is detailed in the project's <i>Planning Level Traffic and Revenue Study</i> , which is referenced in Chapters 4 and 5 of the Final EIS.
69	Traffic	There is no information on travel benefits to non-toll road users.	As described on page 54 of the <i>Community Impact Assessment</i> , drivers who do not use the toll road would nonetheless benefit from reduced congestion on existing roadways as a result of traffic diversion onto the new roadway. Drivers who elect to use the toll road would be removed from the non-toll network, which would indirectly benefit the users of the non-toll network.
70	Project Cost	Project cost and negative effects are too high to justify a build decision.	This is a statement of opinion and not a critique of the study process or documentation. Project benefits and burdens have been considered and disclosed in accordance with NEPA and other applicable laws, policies, and regulations.

Appendix K3 – Interest Group Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
71	Indirect and Cumulative Effects	Qualitative analysis of indirect and cumulative effects (ICE) is inadequate and doesn't distinguish between DSAs.	The Qualitative ICE Report clearly indicates that there would likely be differences in the indirect and cumulative effects of the different DSAs but the indirect and cumulative effects of each DSA would be of similar magnitudes. This is summarized on pages 104 and 105 of the Draft EIS and detailed discussion of each corridor are included in Chapter 6 of the Qualitative ICE Report. A more detailed quantitative analysis of the indirect and cumulative effects of the preferred alternative on land use has since been completed and is summarized in Chapter 4 of the Final EIS.
72	Indirect and Cumulative Effects	There was no quantitative analysis of potential indirect land use effects.	Although the differences in indirect and cumulative effects between each DSA were not relevant for decision-making between alternatives, a more detailed quantitative analysis of the indirect and cumulative effects of the preferred alternative on land use was completed after publication of the Draft EIS and is summarized in Chapter 4 of the Final EIS.
73	Indirect and Cumulative Effects	DSAs using Red Corridor would minimize indirect land use effects; documentation does not disclose this.	The Qualitative Indirect and Cumulative Effects Report includes extensive discussion of the relative indirect effects of each of the different corridors on land use in different parts of the study area. It is not accurate to say that the Red Corridor would minimize indirect land use effects. While DSAs using the Red Corridor could limit development pressures in areas at the southern edges of the study area, it would nonetheless cross undeveloped and less developed areas, including the Swift Creek Water Supply Watershed Critical Area, encouraging shifts to higher densities and more commercial development in these areas. It would also promote development patterns in direct conflict with local land use plans.
74	Indirect and Cumulative Effects	There was no fair quantitative comparison of ICE under build and no-build scenarios.	A detailed quantitative analysis of the indirect and cumulative effects under clear build and no-build scenarios was completed after publication of the Draft EIS and is summarized in Chapter 4 of the Final EIS.
75	Indirect and Cumulative Effects	There was no assessment of indirect and cumulative effects on wetlands and aquatic resources.	As described in the response to comment #45, the agencies involved in the project have concluded that the level of detail about potential impacts contained in the Draft EIS is adequate for decision-making among alternatives. As described in the responses to comments #48 and #67, a more detailed quantitative analysis of the indirect cumulative effects of the preferred alternative on land use has since been completed and is summarized in Chapter 4 of the Final EIS.
76	Indirect and Cumulative Effects	There is insufficient information about potential cumulative effects.	See response to comment #71.
77	Indirect and Cumulative Effects	There was no acknowledgement of the differences in growth under Build and No-Build scenarios.	This is incorrect. The Qualitative ICE Report includes extensive qualitative discussion of the differences in predicted growth patterns in the Build and No-Build scenarios. As described in the response to comment #71, a detailed quantitative analysis of the indirect and cumulative effects for the preferred alternative under clear build and no-build scenarios was completed after publication of the Draft EIS and is summarized in Chapter 4 of the Final EIS. The results are consistent with the qualitative assessment of indirect and cumulative effects.
78	Indirect and Cumulative Effects	ICE Report doesn't distinguish between predicted cumulative effects among the DSAs.	Each section of the cumulative effects discussion in the Qualitative ICE Report does address the varying potential for the different DSAs to lead to cumulative effects on the different resources examined.

Appendix K3 – Interest Group Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
79	Indirect and Cumulative Effects	ICE Report doesn't address indirect and cumulative effects of non-toll highway options.	As described in the response to comment #6, each of the non-new location highway options SELC mentions was ultimately rejected because it was found not to be a feasible or practical alternative for meeting the project purpose. Because these options did not advance to the level of detailed environmental studies, they were not subject to ICE analysis.
80	Alternatives	DSAs using the Red Corridor represent the least environmentally damaging and most practicable option among the alternatives presented.	<p>This project is following the SAFETEA-LU Section 6002 process rather than the combined Section 404/NEPA Merger Process. For that reason, there is no signed agency concurrence with a project LEDPA. However, in accordance with Section 6002, NCDOT prepared a <i>Preferred Alternative Report</i>, detailing the selection of DSA 2 (which does not include the Red Corridor) as the project's preferred alternative, and provided this information to the agencies for review and comment. Under Section 6002, it is then the responsibility of the agencies to identify any issues of concern that could delay the project or could prevent an agency from granting a permit or other approval that is needed for the project. There were no issues of concern that were raised by any agency.</p> <p>While DSAs 6 and 7, which use the Red Corridor, would generally avoid DWM habitat and have the smallest impact on streams, they are the only alternatives that would directly affect the Swift Creek Critical Watershed Area, (regulated to protect drinking water). DSAs 6 and 7 would also affect four sites subject to Section 4(f) and two sites eligible for the National Register of Historic Places.</p>
81	Permitting	The Red Corridor's minimization of direct impacts to Dwarf Wedgemussel habitat "...represents an independent reason to not issue a Section 404 permit."	Through interagency coordination following the Section 6002 process, FHWA and NCDOT have no reason to believe a Section 404 permit cannot be issued for the preferred alternative, which in part follows the Orange Corridor. No "issues of concern" have been raised by members of the interagency team regarding the preferred alternative.
82	Mitigation Site	Documentation has insufficient information about potential impacts to Underhill Mitigation Site.	Impacts to the Underhill Mitigation Site are addressed in the Final EIS for the preferred alternative. The impact is located at the extreme northern tip of the site and involves a bridge crossing of approximately 0.5 acres of this 84.5 acre site. The bridge vertically crosses approximately 20 feet above the mitigation site.
83	Mitigation Site	Natural Resources Technical Report (NRTR) does not indicate that DSAs using the Red Corridor would avoid the Underhill site.	When the NRTR was initially prepared, the Red Corridor was not under study. The DSAs using the Red or Lilac Corridors to cross Swift Creek would avoid the Underhill Site. See response to comment #82.
84	Project Cost	Discrepancy between project costs listed in Draft EIS and STIP.	As described in the response to comment #2, the costs reported in the Draft EIS are expressed in year of expected expenditure dollars, while the figures in the STIP are in current dollars.
85	Project Cost	Toll revenue likely won't be sufficient to cover bond payments.	This information is addressed in the project's <i>Planning Level Traffic and Revenue Study</i> , which is referenced in Chapters 4 and 5 of the Final EIS.
86	Project Cost	Discrepancy between project costs listed in Draft EIS and used in STI prioritization.	See response to comment #2.

Appendix K3 – Interest Group Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
87	Project Cost	Project would violate STI corridor cap.	NCGS 136 136-189.11(b)(7) exempts toll bond revenue from STI. Therefore, only the portion of the toll project that is funded from Statewide Strategic Mobility (SSM) funds is subject to the corridor cap. For the (2018-2027) STIP, the available SSM budget is \$9.03 billion. \$4.30 billion of the total is available for 2018-2022, resulting in a corridor cap of \$430 million for that period. The remaining \$4.73 billion is available for 2023-2027, for a corridor cap of \$473 million. Based on the STIP, the anticipated STI cost for the portions of Complete 540 programmed for 2018-2022 is \$198.55 million and for the portions programmed for 2023-2027, it is \$328.8 million.
88	Project Feasibility	Due to STI corridor cap, NCDOT wouldn't be able to complete all segments of the project, meaning that purpose and need wouldn't be met.	See response to comment #87.
89	Project Cost	Agencies cannot arbitrarily decide that costs and the constraints of state laws and funding mechanisms matter when analyzing one project but not for other projects.	See response to comment #87. While tolling was not a feasible financing option for the Bonner Bridge, the Complete 540 project's <i>Planning Level Traffic and Revenue Study</i> shows that tolling is a feasible option for Complete 540. In addition, the financial analysis completed for the Bonner Bridge project was prior to enactment of STI, so the analysis was conducted using a different set of funding rules and is not directly comparable to the analysis for this project.
90	Project Cost	Lack of information on tolls and projected revenue.	This information is addressed in the project's <i>Planning Level Traffic and Revenue Study</i> , which is referenced in Chapters 4 and 5 of the Final EIS.
91	Project Cost	Draft EIS and supporting technical reports do not illustrate the true demand or anticipated use for a toll highway in the Complete 540 study area.	See response to comment #90.
92	Project Cost	Cost estimates in Draft EIS don't include all likely project costs.	Cost estimates for each of the 17 DSAs included construction, right of way, mitigation, and utility costs. These cost estimates were completed in the same manner and included the same cost elements for each of the DSAs. These cost estimates are based on the available information at the time that they are prepared. Contingencies are included for specific additional features that may be added as the project design is refined.
93	Permitting	Magnitude of impacts and lack of information in the Draft EIS would preclude ability of USACE to issue Section 404 permit.	As described in the response to comment #45, the agencies involved in the project have concluded that the level of detail about potential impacts contained in the Draft EIS was adequate for project decisions during that time period, and was adequately supplemented for decisions to date which are documented in this Final EIS. Additionally, the purpose of a Draft EIS is not to function as a Section 404 permit application. NCDOT, FHWA, and USACE recognize that additional analyses are required during the continuing project development process before a Section 404 individual permit application can be finalized.
94	Alternatives	Red Corridor DSAs are not less practicable than other DSAs.	See response to comment #80.

Appendix K3 – Interest Group Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
95	Section 4(f)	Draft Section 4(f) Evaluation doesn't address how non-toll highway options could avoid Section 4(f) sites.	As described in the response to comment #6, each of the non-new location highway options SELC mentions was ultimately rejected because it was found not to be a feasible or practical alternative for meeting the project purpose. Because these options did not advance to the level of detailed environmental studies, they were not subject to Section 4(f) evaluation. None of the alternatives that would meet the purpose of the project would avoid the Neuse River Trail.
96	Section 4(f)	The Draft Section 4(f) Evaluation erroneously anticipates that the impacts to these resources would be <i>de minimis</i> and thus not subject to substantive Section 4(f) review.	The FHWA Section 4(f) Policy Paper defines a <i>de minimis</i> impact as one that "would not adversely affect the activities, features, or attributes qualifying [the resource] for protection under Section 4(f). None of the potential impacts of the preferred alternative to these resources would adversely affect their use for recreation. This has been confirmed with the entities responsible for the two parks related to the preferred alternative and documented in the Stakeholder Involvement Report and the Final EIS.
97	Section 4(f)	Impacts to the Neuse River Trail would not be <i>de minimis</i> .	As described in the Final EIS, the trail would be accommodated under the preferred alternative (DSA 2) at the bridge over the Neuse River. This is a very common feature along greenway trails and would not adversely affect the trail's recreational use. Additionally, the existing Neuse River Trail crosses over or under several transportation facilities including similar highway facility crossings at I 540, I-495, US 1, US 401, and US 64. The <i>de minimis</i> determination has been confirmed with the City of Raleigh as the entity responsible for this resource.
98	Section 4(f)	More information is needed about the impacts to the Middle Creek School Park.	As noted in the Draft Section 4(f) Evaluation (Appendix C, page 7), the 1.6-acre wooded open space is simply a wooded buffer behind a residential neighborhood. It has no formal use beyond that. The <i>de minimis</i> determination has been confirmed with the Town of Cary as the entity responsible for this resource.
99	Section 4(f)	Impacts to Clemmons Educational State Forest would not be <i>de minimis</i> .	The preferred alternative completely avoids the Clemmons Educational State Forest.
100	Section 4(f)	Because each of the DSAs would likely have a negative impact on Section 4(f) resources, FHWA must examine feasible and prudent avoidance alternatives to the Complete 540 project, or establish that no such alternatives exist.	See response to comment #96. The two impacted Section 4(f) park resources along the preferred alternative have been determined to be <i>de minimis</i> and this determination has been confirmed with the entities responsible for these resources.
101	Section 4(f)	Impacts to Neuse River Trail could be avoided by non-new location highway options.	See response to comment #95.
102	Section 4(f)	Reasons listed for eliminating the modified Red Corridor, which would avoid Section 4(f) sites, are not sufficient.	As detailed in the Alternatives Report, the modified Red corridor is undesirable because its sharp curves and steep grades would create undesirable operational conditions. If the posted speed is increased on Complete 540 as has been done on other sections of the 540 Outer Loop, the alignment of this option would have to be modified to accommodate the higher speed. This would shift the alignment into the Section 4(f)/park sites that are trying to be avoided, eliminating the ability of this option to avoid Section 4(f) sites. Additionally, there are two Section 4(f)/historic sites that are impacted by the modified Red corridor that also preclude this option as a Section 4(f) avoidance alternative.

Appendix K3 – Interest Group Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
103	Alternatives	Orange Corridor was illegally predetermined.	Designation of a potential corridor two decades ago, so early in the 540 consideration process, does not establish a case of predetermination. NCDOT followed the State's Transportation Corridor Official Map Act in establishing the protected corridor for the project. No Federal or State law was violated by establishment of the protected corridor. In developing, analyzing and evaluating the project alternatives, NCDOT considered a range of alternatives in addition to the Orange Corridor (protected corridor), subjecting the Orange Corridor to the same detailed study process as the other alternatives. It is unreasonable to conclude that NCDOT was irreversibly and irretrievably committed to that corridor, even though it was ultimately selected.
104	Alternatives	Rejection of Red Corridor was illegally predetermined.	The Draft EIS and the supporting technical documentation show that the Red Corridor was subjected to the same analysis and evaluation process used to screen the other alternatives. DSAs using the Red Corridor were not selected as the preferred alternative because, based on analysis documented in the Draft EIS and on the comments on the project by agencies, local governments, other organizations, and the public, they did not represent the best option for balancing practicability with minimization of negative environmental effects.

Maseman, Kristin

From: Milazzo II, Joe <Joe@letsgetmoving.org>
Sent: Thursday, December 10, 2015 9:02 AM
To: complete540@ncdot.gov
Cc: Robbins, Jammie A (jarobbins@ncdot.gov); Midkiff, Eric (emidkiff@ncdot.gov); Beau Memory (bmemory@ncdot.gov)
Subject: formal comments from RTA

Jammie and colleagues,

See below for written comments from RTA. Let me know if you have questions.

Thank you,
 Joe

Comments from: Joe Milazzo II, PE, RTA Executive Director, 800 S Salisbury St., Raleigh NC 27601

- I serve as Executive Director of the Regional Transportation Alliance business coalition
- RTA is a regional program of the Greater Raleigh Chamber of Commerce
- We support the "Complete 540" initiative and the completion of all remaining sections of the proposed 540 freeway in southern and eastern Wake County
- The 540 southeast extension turnpike will help create a resilient transportation network in the southern part of the county for commuting, freight, transit, and more
- Unlike improvements to secondary roadways with traffic signals, this new stoplight-free roadway will provide free-flow, rapid mobility across Wake County both during peak periods and throughout the day
- Since the extension of 540 is proposed to be constructed as a toll road, the Turnpike Authority will be able to manage demand by time of day as traffic grows in the future, for example, by providing off-peak discounts or other measures to optimize travel flow
- Extending 540 into southern Wake County would also create an opportunity to support future express bus service in the area. Even today, GoTriangle, our regional transit agency, frequently uses portions of the existing 540 Triangle Expressway turnpike during peak periods to avoid congestion on I-40 and keep transit schedules on time
- While our organization has not endorsed any of the specific corridor alternatives, we urge NCDOT, Federal Highway Administration, and the many partner resource agencies to select the corridor and appropriate mitigation that will protect the environment while maintaining broad support from the community
- The RTA would like to thank NCDOT and their many federal and state partners for their leadership on this project, and for the opportunity to comment

Comments from Mark Helwig, RTA Freeways chair, 5429 Denberg Lane, Raleigh, NC 27606

- I serve as the Freeways vice chair for the Regional Transportation Alliance business coalition
- RTA represents the regional business community on transportation issues, policies, and priorities that are vital to the continued success of our market
- Our top new freeway priority is the completion of 540 between Holly Springs and the I-40/US 70 Clayton Bypass, and we support the completion of all remaining portions of the Raleigh Outer Loop between the Holly Springs bypass and the I-495/US 264 Knightdale bypass
- Completing 540 in southern Wake County will be an essential part of our future transportation backbone from the moment it opens to traffic, by creating vital linkages to major freeways and other roadways in the Triangle
- The extension of 540 will relieve overburdened secondary roads from congestion including N.C. 42, N.C. 55 and Ten Ten Road and reduce the traffic local travelers have to compete with on their local roadways

- The Triangle Expressway turnpike is already providing travelers with a mobility option that they may not have otherwise seen for decades, and as a result it is helping preserve our area's economic vitality and quality of life
- The Completion of 540 will continue that success, and serve us well both now and as we grow
- The RTA would like to thank NCDOT and their many federal and state partners for their leadership on this project, and for the opportunity to comment

Joe Milazzo II, PE
Executive Director
Regional Transportation Alliance
The business coalition advancing transportation solutions

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joe@letsgetmoving.org
www.letsgetmoving.org

Regional Transportation Alliance – 12/10/15

Comment Number	Primary Topic	Paraphrased Comment	Response
--	Project Support	RTA supports completion of 540 as a new location toll road.	This support has been noted in the <i>Preferred Alternative Report</i> .

TRIANGLE GREENWAYS COUNCIL

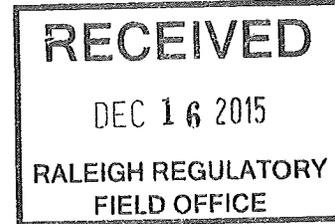


December 12, 2015

Eric Alsmeyer
USACOE, Raleigh Reg Field Office
3331 Heritage Trade Drive
Wake Forest, NC 27587

ADVISORY BOARD MEMBERS

TERRY REEVES
SMEDES YORK
GREGORY POOLE



RE: Corps Action ID#: SAW-2009-02240
STIP Project # R-2721, R-2828, & R-2829

Mr. Alsmeyer,

The Triangle Greenways Council (TGC) is a nonprofit conservation and land trust organization. It advocates for local government greenway systems and related issues regionally, statewide, and nationally. The TGC owns several riparian properties in proximity to one or more of the I-540 Triangle Expressway SE Extension, and the following comments address potential impacts to those properties and the greater surrounding watershed.

Purple Corridor. (1) Wake County REID# 13263, 24 acres on Middle Creek is in very close proximity to the proposed route. The parcel is jurisdictional wetland, floodplain, and limited adjoining sideslopes. The town of Holly Springs has a section of its paved greenway trail system crossing this property. (2) Wake County REID#s 231716, 238920, 230598 & 211676, constituting seventy-eight acres on Middle Creek approximately two miles downstream of the proposed route. These adjoining parcels are jurisdictional wetland (natural & beaver enhanced), floodplain, and minimum adjoining sideslopes. These parcels are on the edge of Cary's and Fuquay-Varina's land use jurisdictions, and are part of their designated future greenway system plans.

All Corridors are within the Neuse River Basin. Johnston County REID# 1405401, 79 acres is on the Neuse River at US 70 (soon to be I-495) downstream of all the proposed/alternative routes. The parcel is jurisdictional wetland (including repetitive former channel/meander depressions), floodplain, and limited adjoining sideslopes. It is within Smithfield's land use jurisdiction, and part of its designated future greenway system plan. Further: (1) the Neuse River within Johnston County is also identified as the location of the State's proposed Mountains to Sea Trail, part of which has already been dedicated in Clayton and Smithfield; and (2) the TGC is currently preparing an assessment of the potential for National Water Trail (NWT) designation of the River through Wake, Johnston and Wayne Counties (122 river miles). TGC's existing Johnston County property is strategically located to serve as both a location for Smithfield's greenway trail & MST, as well as a location for camping/comfort facilities/ picnicking along a future NWT.

Based upon available screen-scale digital mapping, it does not appear that any of the TGC's current property holdings will be directly impacted by the current alternative

BOARD MEMBERS
JON ANDERSON, WILLIAM BREAZEALE, SKIP BROWDER, NORMAN CAMP, RICK CANNITY, SUSAN CARL, BONNIE ESTES,
WILLIAM FLOURNOY, LARRY GILES, ROBERT HINSON, ANDREW LEAGER, DAVID PERMAR, GRADY SHIELDS.

- 2 [Expressway corridors. Nevertheless, there is ample reason for concern about potential indirect and cumulative impacts.

While the NCDOT will have to meet minimum regulatory sediment control standards during construction, that does not equate to zero sedimentation above natural conditions. Given the scale of necessary land disturbance, there is a potential for significant incremental short-term sediment loss during the duration of construction, and a higher new-normal release thereafter. Further, the vulnerability of the construction area to infrequent but high-impact storms could result in devastating releases of sediment to the downstream environment.

The accelerated sedimentation that will result from completion of I-540 will be particularly damaging to impacted wetlands, as a habitat type, and their ecosystems. At a minimum the rate of transition from open water, to herbaceous, to wet meadow, to shrub, to bottomland hardwood forest will be increased throughout downstream riparian corridors. Likewise, storm driven sediment surges within stream channels will be even more frequent, because all storms will release sediment to watercourses, but all storms will not generate enough volume to overflow into the floodplains.

The TGC's wetlands, particularly its meander depressions on the Neuse and beaver enhanced ponding elsewhere, are uniquely vulnerable. They function as sediment basins, due to reduced flow rates and increased deposits/sedimentation. As a result, even a relatively short-term exposure to exaggerated sediment loads will have a disproportionate and permanent impact. While the more common wetlands and floodplains are less susceptible, they will also be exposed to increased rates of sedimentation.

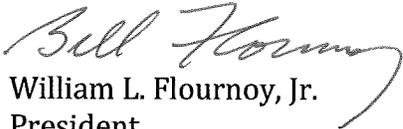
Other indirect and cumulative impacts relate to the existing and likely public infrastructure within downstream floodplains. Multiple local governments (Raleigh, Knightdale, Garner, Holly Springs, Fuquay-Varina, Clayton, Smithfield, Goldsboro, etc) have greenway facilities (trails, bridges, benches, signage, etc) within riparian corridors that may be impacted by the proposed Expressway project. The management/maintenance costs of removing increasing amounts of sediment and otherwise maintaining facilities, in order to provide for public safety and quality of user experience, will continue to climb. Increased wear/damage to facilities and the lifespan of maintenance equipment, as well as additional staff requirements must be expected budget requirements. How the proposed Expressway is designed and executed will determine the rate of perpetual cost increase. Further, environmental and ecological interpretation will become a double-edged challenge, with an opportunity to explain the cause/effect of changes to fragile natural systems, offset by increased costs to accommodate more rapidly changing conditions.

- 3 [The Prospect of National Water Trail designation on the upper Neuse River offers another potential indirect and cumulative impact. Water quality is a factor that influences several designation criteria. Hopefully the Expressway's design and

construction standards will include conditions that will insure water quality in the near and long-term. That will protect the opportunity for designation, trail user experience, interpretive and educational enhancements, regional quality of life, and natural resource based tourist economy built around the greenway & NWT corridor system. NWT designation will assure appropriate facility development (parking lots, river access, comfort stations, camping, picnicking, etc), and related maintenance costs over time will be more or less depending upon the expressway's design and construction standards.

In conclusion, the TGC does not oppose the proposed SE Expressway. However, it should proceed on the basis of criteria that exceed minimum standards where needed to avoid short and long-term degradation of current and future public infrastructure and the riparian corridors they occupy. This will require attention and appropriate responses to indirect and cumulative impacts, through focused completion of the NEPA process and involvement in project related permitting processes.

Sincerely,


William L. Flournoy, Jr.
President

Triangle Greenways Council – 12/12/15

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Alternatives	Concerns about potential impacts of Purple Corridor on planned greenways.	Comment noted. The Purple Corridor is not part of the preferred alternative.
2	Indirect and Cumulative Effects	Concerns about potential indirect and cumulative effects.	Comment noted. A quantitative analysis of the indirect and cumulative effects of the preferred alternative on land development and water quality was completed after publication of the Draft EIS and is summarized in Chapter 4 of the Final EIS. The results of the quantitative analysis were consistent with the qualitative analysis summarized in the Draft EIS and suggested that the project would lead to relatively small changes in land development and water quality as compared to the no-build scenario.
3	Natural Resources	The Neuse River may be designated a National Water Trail; the project design should protect water quality to the greatest extent possible.	Best management practices will be used for stormwater discharge from the project in order to protect receiving waters. The Neuse River has not yet been designated a National Water Trail by the National Park Service - Rivers, Trails, and Conservation Assistance Program. There is a 122.3 mile suggested water trail along the Neuse River from Falls Lake Dam to Seven Springs, NC that is sponsored in part by the Triangle Greenways Council. All 17 DSA corridors cross the Neuse River at relatively the same location east of Auburn Knightdale Road. There are no river access points in this area of the suggested water trail.

Appendix K3 – Interest Group Comments

(insert Morrisville letter)

Morrisville Chamber of Commerce – 1/8/16

Comment Number	Primary Topic	Paraphrased Comment	Response
--	Project Support	The Morrisville Chamber of Commerce supports completion of 540.	This support has been noted in the <i>Preferred Alternative Report</i> .

Public Comments Made During the Draft EIS Review Period / Public Hearings

During the comment period for the Draft EIS, from early November 2015 through January 8, 2016, comments addressing the DSAs, the Draft EIS, or other substantive project issues were received from 1,476 public commenters. The comments included 255 individual written comment forms plus one completed comment form photocopied and signed by 527 different individuals, 387 emails, 6 letters, and a petition with 239 signatures. There were also 34 people who gave oral comments during the December 9, 2015, Public Hearing and 5 people who gave oral comments at the public meetings on the preceding days. A transcript of the Public Hearing is in **Appendix E**. There were also 23 people who submitted comments via NCDOT’s mySidewalk site. Most of the comments generally cited only preference for or opposition to particular color-coded corridor segments or DSAs.

There were also more specific comments that addressed aspects of the project design, the project development process, or information included in the Draft EIS. The table below summarizes the substantive public comments received during the Draft EIS comment period, along with the project team’s response to each. It is important to note that many of these comments were expressed by numerous commenters. As listed in the table, each comment is paraphrased to capture the common issue expressed by those who addressed that particular topic.

Comment Index Number(s)	Summary of Comment (duplicate comments omitted)	Response
O-01	The preferred alternative should use the Orange Corridor, due to its long-term status as a protected corridor.	Comment noted.
O-02	Any alternative that includes the Red Corridor should not be selected, due to that corridor’s extensive social impacts.	Comment noted.
O-03	The preferred alternative should use the Orange Corridor because the Orange Corridor affects the fewest homes.	Comment noted.
O-04	Alternatives that include the Blue and Purple Corridors should not be selected, due to their high relocations and other impacts.	Comment noted.
O-05	The project should not be a toll road.	Decisions regarding funding for transportation projects are made at the local level by regional transportation planning organizations, in this case, the Capital Area Metropolitan Planning Organization (CAMPO). In 2005, CAMPO requested that the NCDOT and the Turnpike Authority evaluate and construct the remaining sections of the Raleigh Outer Loop (western, southern and eastern sections) as toll facilities. CAMPO’s current long range transportation plan does include tolling the existing northern sections of the Raleigh Outer Loop to pay for needed improvements.

Appendix K4 – Public Comments

Comment Index Number(s)	Summary of Comment (duplicate comments omitted)	Response
O-06	General support for the project expressed.	Comment noted.
O-07	Alternatives that include the Red Corridor should not be chosen simply to avoid affecting the endangered mussel species; human impacts are more important than impacts to mussels.	The effect the project would have on both the natural and the human environment must be (1) identified, (2) avoided to the greatest practical extent, and (3) minimized and mitigated to the greatest practical extent. Alternatives for meeting the project's purpose that would avoid affecting endangered species were developed, and the impacts of those alternative identified, to inform the final decision.
O-08	Alternatives that include the Green Corridor are preferred, given that this segment was identified long ago, and that the alternatives to the Green Corridor have greater impacts.	Comment noted.
O-09	The project as proposed should be dropped because (1) the environmental impacts are excessive and (2) the small travel time savings do not justify the cost and environmental impacts.	Comment noted. Federal and state agencies with jurisdiction over various affected resources are charged with ensuring the impacts to those resources comply with applicable regulations; they also provide information and advice that is used in making judgments about the merits, costs, and impacts of the proposed action. Likewise, the process required under National Environmental Policy Act produces information intended to inform decision makers about the expected consequences of the proposed action. With the knowledge that all applicable environmental regulations and procedures have been followed, a decision is made about whether the proposed action's benefits justify its expected impacts.
O-010	Regardless of the alternative chosen, there will be social impacts to adjacent residents.	The introduction of a new highway into the landscape creates both direct and indirect effects. Indirect social effects, outside of the immediate "footprint" of the project, are an unavoidable consequence of the project. Some of these can be positive, others negative. Negative indirect social effects are difficult to quantify and often cannot be mitigated; however, they have been identified to inform the final project decision.
O-011	Support for Detailed Study Alternative (DSA) 1, due to lower impacts in some categories.	Comment noted.
O-012	Relocations and access changes are a concern among some residents of the Bells Pointe community.	Comment noted. As the highway's construction plans are refined, accommodations for maintaining access to all properties are examined in close detail and modified, as needed, to ensure adequate access is maintained. Likewise, attempts are made to keep the number of relocations as low as possible.
O-013	Please select route that will protect environment, and mitigate impacts that will occur.	The National Environmental Policy Act, and other federal regulations, require that impacts to the natural and human environment be avoided to the greatest practical extent; impacts that cannot be avoided must be kept to a minimum, and the resulting impacts mitigated, to the greatest practical extent.

Appendix K4 – Public Comments

Comment Index Number(s)	Summary of Comment (duplicate comments omitted)	Response
O-014	Information presented in Draft EIS on water quality impacts, particularly the fact that Swift Creek has been designated as a 303(d) stream, means Orange Corridor not legally allowable because it would affect Swift Creek.	Streams with the 303(d) designation do not pose an absolute barrier to roadway construction. Federal permits must be granted to allow such construction, and are contingent upon established Best Management Practices being used and other precautions being taken during construction to prevent further degradation of such streams.
O-015	Orange Corridor would be detrimental to Swift Creek watershed.	The North Carolina Division of Water Resources must review the proposed action and ultimately issue approval, contingent upon established Best Management Practices being used and other precautions being taken during construction to prevent further degradation of the watershed.
O-016	Opposed to DSAs that include Orange Corridor.	Comment noted.
O-017	Support for DSAs that include the Green Corridor; Randleigh Farms and nearby cell towers should not be considered an important detriment to the selection of the Green Corridor.	Comment noted.
O-018	Opposed to the project as a whole because it would not solve traffic problems and would bring unwanted types of development near residential areas.	Two important objectives of the study process are ensuring that all applicable environmental regulations and procedures have been followed, and that accurate information about the proposed project's benefits and impacts is documented for use by decision makers. The ability of the proposed action to address the identified transportation needs has been documented in the study's Draft EIS. The types of land development allowed in residential areas are regulated by local and county governments.
O-019	Opposed to DSAs that include the Red Corridor, due to water quality and wetland impacts.	Both the US Army Corps of Engineers and the North Carolina Division of Water Resources must review the proposed action and ultimately issue permits or other approvals. These are contingent upon established Best Management Practices being used and other precautions being taken during construction to prevent degradation of water resources. Opposition to the Red Corridor is noted.
O-020	The Orange Corridor should be shifted to avoid Turner Farms development.	The location of each corridor segment is the result of a great deal of planning, scrutiny, and refinement – all in an attempt to keep social and environmental impacts to a minimum and to balance impacts that cannot be avoided. If a particular residential area is affected, it means that there was no alternative location that would not cause other, similar impacts. Efforts to minimize impacts are ongoing.

Appendix K4 – Public Comments

Comment Index Number(s)	Summary of Comment (duplicate comments omitted)	Response
O-021	Concern about sediments entering the water supply during construction.	Both the US Army Corps of Engineers and the North Carolina Division of Water Resources must review the proposed action and ultimately issue permits or other approvals. These are contingent upon established Best Management Practices being used and other precautions being taken during construction to prevent degradation of water resources.
O-022	Concern about traffic impacts and congestion, especially at Ten-Ten Road, Jordan Road, Dwight Rowland Road, US 70 bypass at Cornwallis Road, and local roads near White Oak.	Regardless of the outcome of the current study, ongoing growth and development in the area will result in changes to travel pattern on area expressway, major and minor arterial roads. These effects, which include traffic volume increases and decreases and changes in traffic patterns, could be somewhat different if the proposed project is built, due to the introduction of a new expressway and interchanges and the associated redistribution of traffic that would likely not occur otherwise. These effects could include the redistribution of traffic to the new Complete 540 expressway and away from existing major and minor roads near the expressway such as those mentioned. The proposed project has been developed in a manner that addresses these anticipated travel pattern changes by providing level of service D or better on Complete 540 and nearby intersections during peak travel hours. During construction, short-term disruptions to local traffic patterns may occur. To keep such disruptions to a minimum, specific “maintenance of traffic” plans are developed.
O-023	Concern about the impact of expansion of Jordan Road required as part of this project.	In general, when construction of a new highway requires modifications or expansion of a crossing roadway, those effects are identified and become a part of the overall decision making process. Often, those effects are temporary, occurring only during construction. In the case of Jordan Road, the proposed project has been modified such that there would be limited property impacts at Jordan Road.
O-024	Will residents have input into the noise analysis that is conducted?	<p>The procedures used to calculate the noise impacts from highway projects have been developed and refined over many years by FHWA and State DOTs. These procedures, and computer models developed to carry them out, are highly technical and must be strictly followed to ensure accurate results. While the public is free to access and review the procedures, data, and guiding policies used to prepare the noise analysis, direct input into the analysis methods is not allowed.</p> <p>Where noise walls are found to be feasible and reasonable in accordance with the NCDOT Traffic Noise Policy, property owners and tenants benefited by potential noise walls will be allowed to vote on whether they want the walls to be constructed. The voting process occurs during final project design.</p>

Appendix K4 – Public Comments

Comment Index Number(s)	Summary of Comment (duplicate comments omitted)	Response
O-025	The October 2010 public meeting held for the Complete 540 project generated 42 letters in support of the Orange Corridor, which should be included in the record.	All comments submitted over the course of the Complete 540 project are retained and taken into account in the decision making process.
O-026	Opposed to DSAs that include the Purple Corridor.	Comment noted.
O-027	Please find a way to propagate the Dwarf Wedgemussel, so that its presence in Swift Creek is not a key factor in the decision about a preferred alternative.	Propagation of this species has been discussed as a possible way of mitigating some of the effect the project could potentially have on this species. The project's Biological Assessment, summarized in Chapter 4 of the Final EIS, details several conservation measures NCDOT proposes to use to help offset the effects of the project on the DWM, including development of a mussel propagation laboratory at Yates Mill Pond.
O-028	The Draft EIS does not discuss how the project might decrease property values in the vicinity of the project.	Property values are influenced by a great number of variables, each of which can shift over time, for various reasons. Because highway projects represent only one of these many variables, it is not possible to isolate the effect a highway may have on property values. And, while the location of a highway can indeed effect land values, those affects can be both positive and negative.
O-029	Opposed to the project as a whole because the full range of alternatives was not examined in the Draft EIS.	The decision about which alternatives to consider is appropriately guided by reason and practicality. It is not necessary to analyze alternatives that the NCDOT and the Federal Highway Administration have rejected as being "too remote, speculative, impractical, or ineffective" (<i>Airport Neighbors Alliance, Inc. vs. United States</i> 1996). The alternatives presented in the Draft EIS have been judged to be practical; others that may fall within the full spectrum of those that are technically possible but have not been included in the Draft EIS have been deemed impractical.
O-030	Opposed to Alternatives that include the Mint Green Corridor.	Comment noted.
O-031	Concern about access to my property; requesting a re-design.	As the highway's construction plans are refined, accommodations for maintaining access to all properties are examined in close detail and modified, as needed, to ensure adequate access is maintained. Once all the refinements and modifications are made to the construction plans, they are presented at public meetings and are otherwise available for public review and discussion with representatives from the NCDOT.
O-032	Requesting a shift in the alignment of the Orange Corridor to avoid property impacts.	The location of each corridor segment is the result of a great deal of planning, scrutiny, and refinement – all in an attempt to keep social and environmental impacts to a minimum, and to balance impacts that cannot be avoided. If a particular residential area is affected, it means that there was no alternative location that would not cause other, similar impacts.

Appendix K4 – Public Comments

Comment Index Number(s)	Summary of Comment (duplicate comments omitted)	Response
O-033	Concerned about the Brown Corridor's effect on the Avalon subdivision.	Comment noted. See above response.
O-034	Concern about the project's effect on area businesses.	As with residential impacts, the location of each corridor segment is the result of a great deal of planning, scrutiny, and refinement in an attempt to keep impacts to a minimum and to balance impacts that cannot be avoided. If a particular business is directly affected, it means that there was no alternative location that would not cause other impacts. Indirect effects on businesses are an unavoidable consequence of highway projects. Some of these effects can be positive, others negative. And, as with changes to property values, businesses are influenced by a great number of variables, each of which can shift over time. Because a highway project represents only one of these many variables, it is not possible to fully isolate the effect a highway may have on area businesses.
O-035	Concerned about effects on a local church and associated cemetery.	The location of each corridor segment is the result of a great deal of planning, scrutiny, and refinement – all in an attempt to keep social and environmental impacts to a minimum, and to balance impacts that cannot be avoided. If a particular place of worship area is affected, it means that there was no alternative location that would not cause other, similar impacts. In no instance would any known cemeteries be directly affected by any of the Alternatives.
O-036	Concerned about the Central Crops Research Station and its impact on NCSU Agriculture students.	Comment noted. The Tan Corridor is the only corridor segment would affect this property; it is not part of the preferred alternative.
O-037	Concern about congestion at approaches to the project's interchanges and increased congestion along area roads as a result of the project.	The Capital Area Metropolitan Planning Organization (CAMPO) is responsible for developing and updating the area's long range transportation plan. That planning effort takes into consideration the entire network of roadways, assessing future needs and, working with the NCDOT, assigning priorities for improvements. If the proposed project is approved, any additional improvements to local roads needed to adequately accommodate changing traffic patterns will be reflected in the transportation plan.
O-038	The cost of project is excessive.	While the cost of a project is certainly an important consideration, the first objective of a highway planning study is to understand the impacts the project would cause and benefits it would achieve. If the benefits justify the impacts, then a decision is made about whether the need for the project is extensive enough to justify the cost of implementing it.
O-039	Concerned about the cost of DSAs 8-12.	Comment noted. See above response.

Appendix K4 – Public Comments

Comment Index Number(s)	Summary of Comment (duplicate comments omitted)	Response
O-040	Concern about property values depreciating at Sunset Oaks.	Property values are influenced by a great number of variables, each of which can shift over time, for various reasons. Because highway projects represent only one of these many variables, it is not possible to isolate the effect a highway may have on property values. And, while the location of a highway can indeed effect land values, those affects can be both positive and negative.
O-041	The project design should utilize vacant land on Bells Lake Road.	The location of each corridor segment is the result of a great deal of planning, scrutiny, and refinement in an attempt to keep impacts to a minimum and to balance impacts that cannot be avoided. All undeveloped parcels in the study area were reviewed to determine their suitability for highway development. The vacant land on Bells Lake Road was not able to be used, due to surrounding land use constraints.
O-042	Concerned about displacing homes and neighborhoods.	The location of each corridor segment is the result of a great deal of planning, scrutiny, and refinement – all in an attempt to keep social and environmental impacts to a minimum, and to balance impacts that cannot be avoided. If a particular residential area is affected, it means that there was no alternative location that would not cause other, similar impacts.
O-043	Concerned about displacing senior communities.	Great care is taken with respect to possible impacts on senior communities because the elderly often experience additional impacts as result of having to relocate. If a particular senior community area is affected by any of the proposed alternatives, it means that there was no available location that would not cause other, similar impacts.
O-044	Concerned about the proximity of neighborhoods to the project with respect to noise and traffic.	A traffic noise analysis was completed to identify noise sensitive land uses where noise levels would approach or exceed levels where noise abatement must be considered. NCDOT has identified areas where impacts would occur due to traffic noise and where noise walls have been preliminarily identified as feasible and reasonable in accordance with our Traffic Noise Policy. During final project design, any noise walls found to be feasible and reasonable will be recommended. They will be constructed if residents/owners of affected noise receptors vote for their construction.
O-045	Concerned about the project physically dividing my community.	When a new highway is proposed, one type of impact that must be studied is called is “the barrier effect,” which refers to the introduction of a separation or partition between people, between people and places, or between two places. Avoiding such impacts was an important consideration in developing the project alternatives, and any such impacts that would occur are necessary to avoid other types of impacts. There will be crossing locations to connect communities on either side of the highway at interchanges and grade separated bridges.

Appendix K4 – Public Comments

Comment Index Number(s)	Summary of Comment (duplicate comments omitted)	Response
O-046	The project would have a positive effect on economic development in Harnett County, and economic growth in general.	Comment noted.
O-047	Concerned about the project's effect on endangered species.	Alternatives that meet the project's purpose that potentially could avoid or minimize affecting endangered species must be developed, and the impacts of those alternatives identified, before a final decision is made about the project's location. NCDOT and FHWA have worked collaboratively with USFWS to minimize impacts to threatened and endangered species and satisfy the requirements of the Endangered Species Act. The Biological Assessment, summarized in Chapter 4 of the Final EIS, details several conservation measures NCDOT proposes to use to help offset the effects of the project on the DWM and other aquatic species.
O-048	Concerned about environmental impacts.	The National Environmental Policy Act, and other federal regulations, require that impacts to the natural and human environment be avoided to the greatest practical extent; impacts that cannot be avoided must be kept to a minimum, and the resulting impacts mitigated, to the greatest practical extent.
O-049	Concern about property substantially losing value as a result of the project.	Property values are influenced by a great number of variables, each of which can shift over time, for various reasons. Because highway projects represent only one of these many variables, it is not possible to isolate the effect a highway may have on property values.
O-050	Suggestion that flood control ponds be considered as part of the project.	Comment noted. Hydraulic considerations will continue to be examined as the design process continues.
O-051	Concerned that the northern, existing segment of 540 is not a toll route, while the proposed project would require tolls.	Decisions regarding funding for transportation projects are made at the local level by regional transportation planning organizations, in this case, the Capital Area Metropolitan Planning Organization (CAMPO). In 2005, CAMPO requested that the NCDOT and the Turnpike Authority evaluate and construct the remaining sections of the Raleigh Outer Loop (western, southern and eastern sections) as toll facilities. CAMPO's current long range transportation plan does include tolling the existing northern sections of the Raleigh Outer Loop to pay for needed improvements.
O-052	Concerned about Garner communities, parks, and future growth if an Alternative that includes the Red Corridor is selected.	Comment noted. The types of impacts mentioned have been taken into consideration in the Draft EIS.
O-053	Concerned about how the project would affect growth of Holly Springs, Fuquay-Varina, and Clayton.	Comment noted. The types of impacts mentioned have been taken into consideration in the Draft EIS.

Appendix K4 – Public Comments

Comment Index Number(s)	Summary of Comment (duplicate comments omitted)	Response
O-054	Concerned about impacts to historic sites.	Historic sites that are on or qualify for listing on the <i>National Register of Historic Places</i> receive a high degree of protection from highway projects, in keeping with both Section 106 of the National Historic Preservation Act and Section 4(f) of the US Department of Transportation Act. Other, locally designated historic properties do not necessarily fall under these protections, but the NCDOT endeavors to avoid impacts to such properties to the greatest practical extent.
O-055	Humans are more important than protected species.	The effect the project would have on both the natural and the human environment must be (1) identified, (2) avoided to the greatest practical extent, and (3) minimized and mitigated to the greatest practical extent. Likewise, alternatives for meeting the project's purpose that would avoid affecting endangered species must be developed, and the impacts of those alternative identified, before a final decision is made.
O-056	Concerned about the project's effect on wells.	Both the US Army Corps of Engineers and the North Carolina Division of Water Resources must review the proposed action and ultimately issue permits or other approvals. These are contingent upon established Best Management Practices being used and other precautions being taken during construction to prevent degradation of water resources that ultimately fill wells.
O-057	Concerned about impacts to River Ridge.	The location of each corridor segment is the result of a great deal of planning, scrutiny, and refinement – all in an attempt to keep social and environmental impacts to a minimum, and to balance impacts that cannot be avoided. If a particular residential area is affected, it means that there was no alternative location that would not cause other, similar impacts.
O-058	Concerned about impacts to the Juniper Level Botanic Garden.	Comment noted. It is not possible to shift the proposed Alternative in this area without affecting many additional residences.
O-059	Concerned about the project's involvement with Duke Energy Transmission lines and gas pipelines.	An extensive survey of all utility installations in the study has been conducted so that the location and type of each utility (including transmission lines and pipelines) could be taken into consideration in the development of project alternatives and the preparation of design plans.
O-060	Concerned about impact on McCullers cemetery.	The corridor segment has been shifted to avoid impact to this cemetery.
O-061	Concerned about impacts to Middle Creek.	Both the US Army Corps of Engineers and the North Carolina Division of Water Resources must review the proposed action and ultimately issue permits or other approvals. These are contingent upon established Best Management Practices being used and other precautions being taken during construction to prevent degradation of water resources.

Appendix K4 – Public Comments

Comment Index Number(s)	Summary of Comment (duplicate comments omitted)	Response
O-062	Concerned about the need for an interchange at Bells Lake Rd, displacing Bells Pointe subdivision.	The location of an interchange on the proposed project is the result of detailed investigations of future land uses and future traffic patterns. The placement of interchanges is also guided by state and federal policies concerning appropriate distances between interchanges. In locating and designing the layout of interchanges, attempts have been made to keep social and environmental impacts to a minimum, and to balance impacts that cannot be avoided. If a particular residential area is affected by an interchange, it means that there was no alternative that would not cause other, similar impacts.
O-063	Concerned about the need for the southern routes.	Comment noted.
O-064	Concerned about noise from construction and traffic.	The assessment of noise impacts is an important part of the study process. Construction and traffic noise is calculated to determine whether the project would create conditions that would require noise abatement measures to be developed (such as noise walls). Areas that would exceed certain established thresholds for noise, and that meet other feasibility and reasonableness requirements in accordance with NCDOT's Traffic Noise Policy, are recommended to receive noise walls.
O-065	Concerned about the cost of constructing noise walls.	The costs associated with constructing required noise walls are considered as part of the overall cost of the project. If noise walls are shown to be warranted in accordance with the NCDOT Traffic Noise Policy, they cannot be eliminated to lower the overall cost of the project.
O-066	Concerned about impacts to the Neuse River Trail; other parks.	Section 4(f) of the Department of Transportation Act stipulates that the Federal Highway Administration and other DOT agencies cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites, unless there is no feasible and prudent avoidance alternative to the use of land, and, the action includes all possible planning to minimize harm to the property resulting from such use; or, the Federal Highway Administration determines that the use of the property will have an extremely minor (<i>de minimis</i>) impact.
O-067	Concerned about pollution from vehicles.	The Capital Area Metropolitan Planning Organization (CAMPO) has the responsibility of assessing regional air quality and ensuring that federal standards for air quality are not exceeded (or, if they are currently exceeded, that steps are taken to bring them into conformance). The proposed projects contribution to regional air quality has been assessed to ensure it would not cause violations in these required air quality thresholds.

Appendix K4 – Public Comments

Comment Index Number(s)	Summary of Comment (duplicate comments omitted)	Response
O-068	Existing roads should be expanded before this project is developed.	The Capital Area Metropolitan Planning Organization (CAMPO) is the agency responsible for creating and periodically updating the area's long range transportation plan. That planning effort takes into consideration the entire network of roadways, assessing future needs and, working with the NCDOT, assigning priorities for improvements. Improvements to local roads will occur as needed, and will not eliminate the need for the proposed project.
O-069	Concerned about the ultimate disposition of property already purchased in the Orange (protected) Corridor if a DSA that includes the Orange Corridor is not selected as preferred.	If properties that have been purchased by the State are determined to not be needed for public purposes, they are made available for purchase, with the previous owner given the right of first refusal.
O-070	What is the process for buying land for highway right-of-way?	The NCDOT offers a fair market value for property based on an independent appraisal by a professional appraiser knowledgeable of the local market. The acquisition process is very much like any private real estate transaction except in the event that agreement cannot be reached on the property value, the courts become the final decider of value. NCDOT compensates residents that are required to move with relocation assistance services and compensation.
O-071	Concern about the relocation of TV towers in the southeast portion of the study area.	The communication towers in the southeastern portion of the study area are substantial in that they accommodate a wide variety of emergency, weather, and commercial uses. Additionally, the design of these towers is such that their relocation would be costly and disruptive. Attempts have been made to avoid affecting those towers in the development of project alternatives.
O-072	Concerned about the visual impacts of the project.	Most of the land along the DSAs consists of low-density suburban and rural uses, with visually pleasing landscapes that include open agricultural fields, pastures, forest-lined streams, and woodland areas. Overall, the visual changes experienced by those living or working along the DSAs would be intermittent, with some residents subjected to a view of the roadway and others shielded from the roadway by topography and vegetation.
O-073	Concerned about the visual impacts of noise walls.	Any noise walls required for the project would be designed according to the NCDOT's established aesthetic standards, helping to make such barriers more visually appealing. NCDOT requires that texture simulating brick and/or stone be applied to both the highway and community sides of noise walls. Noise walls are also stained on both sides. For each recommended noise wall, there will be a vote to determine if the property owners of each impacted receptor want the noise wall to be installed.

Appendix K4 – Public Comments

Comment Index Number(s)	Summary of Comment (duplicate comments omitted)	Response
O-074	Concerned about the project's effect on the area's waste water treatment plants.	While none of the area's wastewater treatment plant structures would be directly affected by any of the alternatives, two water treatment spray fields would be affected. The preferred alternative, which includes the Orange Corridor, would affect spray fields associated with the Dempsey E. Benton Water Treatment Plant. NCDOT has coordinated with and will continue to coordinate with the City of Raleigh relative to impacts to this site.
O-075	Concerned about wetlands impacts.	The US Army Corps of Engineers must review the proposed action and ultimately issue permits for any unavoidable filling of jurisdictional wetlands. Appropriate mitigation must be established for any wetland impacts, with mitigation plans approved by the Corps of Engineers.
O-076	Concerned about impacts to wildlife in general.	The location of each corridor segment is the result of a great deal of planning, scrutiny, and refinement in order to keep social and environmental impacts – including impacts to wildlife -- to a minimum. Any species listed as threatened or endangered under the Endangered Species Act receives special scrutiny; the project cannot be approved if the US Fish and Wildlife Service determines that it would jeopardize the continued existence of any endangered species. NCDOT and FHWA have worked collaboratively with USFWS to minimize impacts to threatened and endangered species and satisfy the requirements of the Endangered Species Act. The Biological Assessment for the project, summarized in Chapter 4 of the Final EIS, details several conservation measures NCDOT proposes to use to help offset the effects of the project on aquatic species.

APPENDIX L

RESPONSE TO COMMENTS ON THE FINAL EIS

ORGANIZATION OF APPENDIX L

- L1. Agency Comment Letters**
- L2. Local Government Comment Letters**
- L3. Interest Group Letters**
- L4. Public Comments Made During the Final EIS Review Period**

APPENDIX L1 AGENCY COMMENTS AND RESPONSES

Following publication of the Final EIS, NCDOT received formal review comments from several federal and state agencies. Copies of each of these comments are on the following pages of this Appendix. For tracking purposes, each comment letter was assigned a document number—this number has been placed in the upper right corner of each comment letter. The table below lists each agency that submitted comments, the document number assigned to that agency’s comments, and the date of the comments. On each comment letter, the individual comment topics are noted with numbered brackets. A comment response table follows each comment letter. The comment response table lists each bracketed topic number, along with a summary of the comment, and the project team’s response to the comment.

Document Number	Agency	Date
a001	US Environmental Protection Agency Region 4 (EPA)	1/30/18
a002	NC Department of Environmental Quality (NCDEQ)	1/26/18
a003	NC Wildlife Resources Commission (NCWRC)	1/23/18
a004	NCDEQ – Division of Water Resources (DWR)	1/22/18
a005	NC Department of Public Safety (DPS)	1/12/18
a006	NC Department of Agriculture and Consumer Services (NCDA&CS)	1/31/18



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 REGION 4
 ATLANTA FEDERAL CENTER
 61 FORSYTH STREET
 ATLANTA, GEORGIA 30303-8960

JAN 30 2018

John F. Sullivan, III, P.E.
 Federal Highway Administration
 310 New Bern Avenue
 Suite #410
 Raleigh, North Carolina 27601

Re: Federal Final Environmental Impact Statement for the Complete
 540-Triangle Expressway Southeast Extension Project, Wake and Johnston
 Counties, North Carolina; CEQ No.: 20170247; NC Department of Transportation
 (NCDOT) TIP Project Nos.: R-2721, R-2828, and R-2829

Dear Mr. Sullivan:

The U.S. Environmental Protection Agency has reviewed the above referenced document in accordance with §309 of the Clean Air Act (CAA) and §102(2)(C) of the National Environmental Policy Act (NEPA). The NCDOT and the Federal Highway Administration's (FHWA) Final Environmental Impact Statement (FEIS) proposes an approximately 28-mile, six-lane, divided, limited-access toll highway originating at NC 55 in Apex, North Carolina and connecting to US 64/US 264 Bypass (I-495) in Knightdale, North Carolina.

The EPA reviewed the Draft Environmental Impact Statement (DEIS) and provided comments that identified environmental concerns and requested additional information in a letter dated January 4, 2016. In the DEIS, 17 Detailed Study Alternatives (DSAs) consisting of 1000-foot corridors on new locations ranging from 25.2 to 32.0 miles in length were assessed. Of the 17 proposed alternatives, the EPA identified DSAs 6 and 7 as the environmentally-preferred alternatives because those alternatives have the fewest potential impacts on jurisdictional streams and wetlands. However, the EPA understands that the FEIS identifies the transportation agencies' preferred alternative as DSA 2. DSA 2 is a combination of the Orange Corridor segment, the southern portion of the Green Corridor segment, the Mint Corridor segment, and the northern portion of the Green Corridor segment. This alternative was selected by the transportation agencies primarily based on fewer relocations, lower cost, protected properties, avoidance of the Swift Creek Critical Watershed Area, public support and agency input, and potentially fewer conflicts with local land uses.

The preferred alternative will impact approximately 217 residential relocations, 59,533 linear feet of streams, 69.5 acres of wetlands, 61.2 acres of 100-year floodplains, 325 noise receptors, cultural resources including two National Register of Historic Places listed sites, and two Transportation Act §4(f) public parks.

The EPA appreciates FHWA's and NCDOT's response to our DEIS comments. While most of the EPA's comments have been addressed, we have several recommendations based upon our review of the FEIS.

Comment: The FEIS depends on population and land-use data for its analysis from years 1990-2000.

Recommendation: The EPA recommends that population and land use characteristics for the proposed project area be confirmed in the Record of Decision (ROD) using more recent 2010 census data to ensure that population and land use impacts and conclusions are valid and similar to those discussed in the FEIS.

Comment: Significant wetland and stream impacts will result from the preferred alternative. To address these impacts, the FEIS states that the NCDOT will follow the provisions of the 2016 Memorandum of Agreement (MOA) between NCDOT and the North Carolina Division of Mitigation Services for off-site mitigation of wetland, stream, and riparian buffer impacts. A conceptual mitigation plan was not provided nor was detailed information concerning possible mitigation locations discussed in the FEIS for the significant impacts to jurisdictional wetlands and streams (FEIS pg. 53-54).

Recommendations: Consistent with Section 404 of the Clean Water Act, the Section 404(b)(1) Guidelines found at 40 C.F.R. Part 230, and the 2016 MOA, the EPA recommends that additional avoidance and minimization measures, to the maximum extent practicable, be made during final design to reduce impacts to jurisdictional waters of the United States. Furthermore, we recommend that the transportation agencies include a mitigation plan in the ROD consistent with the 2008 Mitigation Rule, 40 CFR Part 230, Subpart J.

Comment: The FEIS states that two activities under the Endangered Species Act have to be completed. These include consultations with the U.S. Fish and Wildlife Service for federally-listed species and the National Marine Fisheries Service regarding critical habitat for endangered species that could be affected by the proposed project.

Recommendation: The EPA defers to these agencies regarding the protection of endangered species and their critical habitat. However, we recommend that the conclusions of these consultation processes be documented in the ROD.

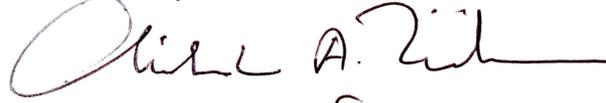
Comment: The EPA also understands that a more detailed review of specific noise barrier locations will be performed during the project's final design process.

Recommendation: The EPA continues to encourage consideration of evergreen roadside vegetation in locations that do not meet the threshold for noise barriers. The use of vegetative roadside screening ameliorates noise impact issues, visual quality impacts, as well as provides some potential beneficial effects for downwind vehicle emissions from near-roadway air pollutants.

The EPA recommends that should there be a substantial change to the preferred alternative, the NCDOT and FHWA continue their efforts to keep the agencies and any affected communities informed. Once the ROD is signed, please provide a copy to us for our administrative record.

The EPA appreciates the opportunity to review the Complete 540-Triangle Expressway Southeast Extension FEIS. If you wish to discuss this matter further, please contact Ms. Amanetta Somerville, of the NEPA Program Office, at (404) 562-9025 or by e-mail at somerville.amanetta@epa.gov.

Sincerely,

A handwritten signature in dark ink, appearing to read "Carol J. Monell". The signature is fluid and cursive, with a long horizontal stroke at the end.

Carol J. Monell
Acting Director
Resource Conservation and Restoration Division

cc: Mr. Brian Yamamoto, P.E., NCDOT

US Environmental Protection Agency Region 4 – 1/30/18

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Human Environment	Final EIS depends on population and land use data from 1990 to 2000. Confirm information using 2010 Census data in the ROD.	The Final EIS does not depend on population and land use data from 1990 to 2000. Data from those years are cited when they are part of relevant trends, but Census data from more recent time periods were incorporated when available. For example, the Community Impact Assessment (May 2015), which contains extensive population and land use data, uses 2010 decennial Census data, along with data from the 2009-2013 American Community Survey.
2	Natural Environment	USEPA recommends incorporating additional avoidance and minimization measures into final designs to reduce jurisdictional impacts and including a conceptual mitigation plan in the ROD.	<p>Avoidance/minimization measures for incorporation into final designs were addressed at the July 12, 2017, Interagency Meeting and are referenced in the ROD. These measures included horizontal and vertical alignment shifts, bridging, and retaining walls and interchange layouts. NCDOT plans to use Design Standards in Sensitive Watersheds throughout the project to minimize indirect erosion and sedimentation related effects on the project. NCDOT also plans to incorporate one or two hazardous spill basins for the crossing at Swift Creek to minimize the potential for adverse effect to the Dwarf Wedgemussel and the Yellow Lance. Additional avoidance and minimization measures will be coordinated with the permitting agencies prior to project letting.</p> <p>A conceptual mitigation plan for all wetland, stream, and buffer impacts is included in the ROD.</p>
3	Natural Environment	Conclusions of endangered species consultations should be included in the ROD.	These conclusions are included in the ROD.
4	Noise Impacts	USEPA recommends including roadside vegetation in locations that do not meet the threshold for noise barriers.	Landscaping will be included in the construction of the Complete 540 – Triangle Expressway Southeast Extension. The use of this landscaping as a visual screen from adjacent properties will be considered in the development of the project landscaping plan.



ROY COOPER
Governor
MICHAEL S. REGAN
Secretary

MEMORANDUM

To: Crystal Best
State Clearinghouse Coordinator
Department of Administration

From: Lyn Hardison *LBH*
Division of Environmental Assistance and Customer Service
Environmental Assistance and Project Review Coordinator
Washington Regional Office

RE: 18-0173 (16-0134 & 10-0283)
Final Environmental Impact Statement – Proposed project is for Complete 540 Triangle
Expressway Southeast Extension.
TIP Projects: R-2721, R-2828 and R-2829
Wake and Johnston Counties

Date: January 26, 2018

1 [The Department of Environmental Quality has reviewed the proposal for the referenced project. Based on the information provided, several of our agencies have identified permits that may be required and offered some guidance. The comments are attached for the applicant’s review.

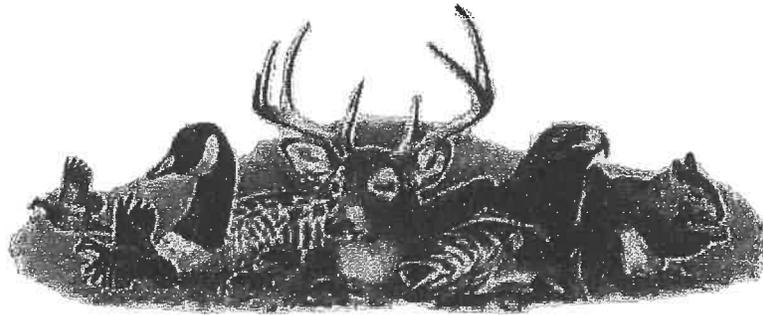
The Department encourages the applicant to continue to work with our agencies during the NEPA Merger Process and as this project moves forward.

Thank you for the opportunity to respond.

Attachments

NCDEQ Letter – 1/26/18

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Permitting/Impacts	Several agencies within NCDEQ provided information about required permits and offered guidance to minimize impacts to natural resources. NCDEQ encourages continued coordination with the agencies as the project moves forward.	Comment noted. See subsequent response tables for responses to each agency's individual comments.



☒ North Carolina Wildlife Resources Commission ☒

Gordon Myers, Executive Director

MEMORANDUM

TO: Lyn Hardison, Environmental Assistance Coordinator
Division of Environmental Assistance and Outreach, DENR

FROM: Travis Wilson, Highway Project Coordinator
Habitat Conservation Program

DATE: January 23, 2018

SUBJECT: North Carolina Department of Transportation (NCDOT) Final Environmental Impact Statement (FEIS) for the proposed Complete 540 Triangle Expressway Southeast Extension in Wake and Johnston Counties, North Carolina. TIP Nos. R-2721/R-2828/R-2829. SCH Project No. 18-0173

Staff biologists with the N. C. Wildlife Resources Commission have reviewed the subject FEIS and are familiar with habitat values in the project area. The purpose of this review was to assess project impacts to fish and wildlife resources. Our comments are provided in accordance with certain provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667d).

NCDOT is proposing the construction of a limited access facility on new location from NC 55 in Apex to US 64/US264 Bypass (I-495) in Knightdale. Known as the Complete 540- Triangle Expressway Southeast Extension, it is proposed as a toll facility. The FEIS identifies the selected preferred alternative and has outlined the direct, secondary and cumulative impacts associated with the approximate 28.4 mile long facility.

1 [WRC has participated in stakeholder meetings as well as interagency coordination that has occurred during the planning of this project. That involvement has allowed us to express concerns involving the potential direct and indirect impacts associated with the preferred alternative. The FEIS documents our involvement as well as implemented recommendations directly resulting from our participation. A highway facility of this magnitude will have significant unavoidable impacts, and as the planning process moves forward NCDOT should continue its coordination with WRC to further avoid, minimize, and ultimately mitigate impacts to natural resources in the project area.

Thank you for the opportunity to comment. If we can be of any further assistance please contact me at (919) 707-0370.

NCWRC Letter – 1/23/18

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Natural Environment	Final EIS documents NCWRC's input. As the project proceeds, NCDOT should continue to coordinate with NCWRC to avoid, minimize, and mitigate impacts.	Comment noted.



ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

LINDA CULPEPPER
Interim Director

January 22, 2018

MEMORANDUM

To: Lyn Hardison, Environmental Coordinator, Office of Legislative and Intergovernmental Affairs

From: Rob Ridings, NC Division of Water Resources, Transportation Permitting Branch

Subject: Comments on the Final Environmental Impact Statement for proposed NC 540 Southeast from NC 55 to US 64/264, Wake County, Federal Aid Project No. STP-0540(19-21), State Project No. 37673.1.TA2, TIP Nos R-2721, R-2828 & R-2829; State Clearinghouse Project No. 18-0173.

This office has reviewed the referenced document received January 22, 2018. The NC Division of Water Resources (NCDWR) is responsible for the issuance of the Section 401 Water Quality Certification for activities that impact Waters of the U.S., including wetlands. It is our understanding that the project as presented will result in impacts to jurisdictional wetlands, streams, and other surface waters. The NCDWR offers the following comments based on review of the aforementioned document:

Project Specific Comments:

1. This project is being planned as part of the 404/NEPA SAFETEA-LU Section 6002 Process. As a participating team member, the NCDWR will continue to work with the team.
2. Streams and tributaries in the project area include NSW waters of the State. The NCDWR is very concerned with sediment and erosion impacts that could result from this project. The NCDWR recommends that highly protective sediment and erosion control BMPs be implemented to reduce the risk of nutrient runoff to these streams. Additionally, to meet the requirements of NCDOT's NPDES permit NCS0000250 the NCDWR requests that road design plans provide treatment of the storm water runoff through best management practices as detailed in the most recent version of the *North Carolina Department of Transportation Stormwater Best Management Practices Toolbox* manual.
3. Streams and tributaries in the project area include 303(d) impaired waters of the State. The NCDWR is very concerned with sediment and erosion impacts that could result from this project. The NCDWR recommends that the most protective sediment and erosion control BMPs be implemented in accordance with *Design Standards in Sensitive Watersheds* (15A NCAC 04B .0124) to reduce the risk of further impairment to these streams. Additionally, to meet the requirements of NCDOT's NPDES permit NCS0000250, the NCDWR requests that road design plans provide treatment of the storm water runoff through best management practices as detailed in the most recent version of the *North Carolina Department of Transportation Stormwater Best Management Practices Toolbox* manual.
4. Review of the project reveals the presence of surface waters classified as Water Supply Critical Area in the project study area. Given the potential for impacts to these resources during the project implementation, the

 Nothing Compares

State of North Carolina | Environmental Quality

1617 Mail Service Center | Raleigh, North Carolina 27699-1617

1 [NCDWR requests that the NCDOT strictly adhere to North Carolina regulations entitled *Design Standards in Sensitive Watersheds* (15A NCAC 04B .0124) throughout design and construction of the project. This would apply for any area that drains to streams having WS CA (Water Supply Critical Area) classifications. Should any bridges be located within the Critical Area of a Water Supply, the NCDOT may be required to design, construct, and maintain hazardous spill catch basins in the project area. The number of catch basins installed should be determined by the design of the bridge, so that runoff would enter said basin(s) rather than flowing directly into the stream, and in consultation with the NCDWR.

2 [5. This project is within the Neuse River Basin. Riparian buffer impacts shall be avoided and minimized to the greatest extent possible pursuant to 15A NCAC 2B.0233. New development activities located in the protected 50-foot wide riparian areas within the basin shall be limited to “uses” identified within and constructed in accordance with 15A NCAC .02B.0295. Buffer mitigation may be required for buffer impacts resulting from activities classified as “allowable with mitigation” within the “Table of Uses” section of the Buffer Rules or require a variance under the Buffer Rules. A buffer mitigation plan, coordinated with the North Carolina Division of Mitigation Services, must be provided to the NCDWR prior to approval of the Water Quality Certification. Buffer mitigation may be required for buffer impacts resulting from activities classified as “allowable with mitigation” within the “Table of Uses” section of the Buffer Rules or require a variance under the Buffer Rules. A buffer mitigation plan, coordinated with the North Carolina Division of Mitigation Services, must be provided to the NCDWR prior to approval of the Water Quality Certification.

General Comments:

3 [6. The environmental documents and permit applications should provide a detailed and itemized presentation of the proposed impacts to wetlands and streams with corresponding mapping. If mitigation is necessary as required by 15A NCAC 2H.0506(h), it is preferable to present a conceptual (if not finalized) mitigation plan with the environmental documentation. Appropriate mitigation plans will be required prior to issuance of a 401 Water Quality Certification.

4 [6. Environmental impact statement alternatives shall consider design criteria that reduce the impacts to streams and wetlands from storm water runoff. To meet the requirements of NCDOT’s NPDES permit NCS0000250 these alternatives should include road designs that allow for treatment of the storm water runoff through best management practices as detailed in the most recent version of the *North Carolina Department of Transportation Stormwater Best Management Practices Toolbox* manual, which includes BMPs such as grassed swales, buffer areas, preformed scour holes, retention basins, etc.

5 [7. After the selection of the preferred alternative and prior to an issuance of the 401 Water Quality Certification, the NCDOT is respectfully reminded that they will need to demonstrate the avoidance and minimization of impacts to wetlands (and streams) to the maximum extent practical. In accordance with the Environmental Management Commission’s Rules (15A NCAC 2H.0506[h]), mitigation will be required for impacts of greater than 1 acre to wetlands. In the event that mitigation is required, the mitigation plan shall be designed to replace appropriate lost functions and values. The North Carolina Division of Mitigation Services may be available to assist with wetland mitigation.

6 [8. In accordance with the Environmental Management Commission’s Rules (15A NCAC 2H.0506[h]), mitigation will be required for impacts of greater than 150 linear feet to any single stream. In the event that mitigation is required, the mitigation plan shall be designed to replace appropriate lost functions and values. The North Carolina Division of Mitigation Services may be available to assist with stream mitigation.

7 [9. Future documentation, including the 401 Water Quality Certification Application, shall continue to include an itemized listing of the proposed wetland and stream impacts with corresponding mapping.

- 8 [10. The NCDWR is very concerned with sediment and erosion impacts that could result from this project. The NCDOT shall address these concerns by describing the potential impacts that may occur to the aquatic environments and any mitigating factors that would reduce the impacts.
- 9 [11. An analysis of cumulative and secondary impacts anticipated as a result of this project is required. The type and detail of analysis shall conform to the NC Division of Water Resources Policy on the assessment of secondary and cumulative impacts dated April 10, 2004.
- 10 [12. The NCDOT is respectfully reminded that all impacts, including but not limited to, bridging, fill, excavation and clearing, and rip rap to jurisdictional wetlands, streams, and riparian buffers need to be included in the final impact calculations. These impacts, in addition to any construction impacts, temporary or otherwise, also need to be included as part of the 401 Water Quality Certification Application.
- 11 [13. Where streams must be crossed, the NCDWR prefers bridges be used in lieu of culverts. However, we realize that economic considerations often require the use of culverts. Please be advised that culverts should be countersunk to allow unimpeded passage by fish and other aquatic organisms. Moreover, in areas where high quality wetlands or streams are impacted, a bridge may prove preferable. When applicable, the NCDOT should not install the bridge bents in the creek, to the maximum extent practicable.
- 12 [14. Whenever possible, the NCDWR prefers spanning structures. Spanning structures usually do not require work within the stream or grubbing of the streambanks and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges shall allow for human and wildlife passage beneath the structure. Fish passage and navigation by canoeists and boaters shall not be blocked. Bridge supports (bents) should not be placed in the stream when possible.
- 13 [15. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. To meet the requirements of NCDOT's NPDES permit NCS0000250, please refer to the most recent version of the *North Carolina Department of Transportation Stormwater Best Management Practices Toolbox* manual for approved measures.
- 14 [15. Sediment and erosion control measures should not be placed in wetlands or streams.
- 15 [16. Borrow/waste areas should avoid wetlands to the maximum extent practical. Impacts to wetlands in borrow/waste areas will need to be presented in the 401 Water Quality Certification and could precipitate compensatory mitigation.
- 16 [17. The 401 Water Quality Certification application will need to specifically address the proposed methods for stormwater management. More specifically, stormwater shall not be permitted to discharge directly into streams or surface waters.
- 17 [18. Based on the information presented in the document, the magnitude of impacts to wetlands and streams will require an Individual Permit application to the Corps of Engineers and corresponding 401 Water Quality Certification. Please be advised that a 401 Water Quality Certification requires satisfactory protection of water quality to ensure that water quality standards are met and no wetland or stream uses are lost. Final permit authorization will require the submittal of a formal application by the NCDOT and written concurrence from the NCDWR. Please be aware that any approval will be contingent on appropriate avoidance and minimization of wetland and stream impacts to the maximum extent practical, the development of an acceptable stormwater management plan, and the inclusion of appropriate mitigation plans where appropriate.
- 18 [19. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.

- 19 [20. If temporary access roads or detours are constructed, the site shall be graded to its preconstruction contours and elevations. Disturbed areas shall be seeded or mulched to stabilize the soil and appropriate native woody species shall be planted. When using temporary structures the area shall be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact allows the area to re-vegetate naturally and minimizes soil disturbance.
- 20 [21. Unless otherwise authorized, placement of culverts and other structures in waters and streams shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and downstream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by the NCDWR. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NCDWR for guidance on how to proceed and to determine whether or not a permit modification will be required.
- 21 [22. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation, floodplain benches, and/or sills may be required where appropriate. Widening the stream channel should be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.
- 22 [23. If foundation test borings are necessary; it shall be noted in the document. Geotechnical work is approved under General 401 Certification Number 3883/Nationwide Permit No. 6 for Survey Activities.
- 23 [24. Sediment and erosion control measures sufficient to protect water resources must be implemented and maintained in accordance with the most recent version of North Carolina Sediment and Erosion Control Planning and Design Manual and the most recent version of NCS000250.
- 24 [25. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of the NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.
- 25 [26. While the use of National Wetland Inventory (NWI) maps, NC Coastal Region Evaluation of Wetland Significance (NC-CREWS) maps and soil survey maps are useful tools, their inherent inaccuracies require that qualified personnel perform onsite wetland delineations prior to permit approval.
- 26 [27. Heavy equipment should be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams. This equipment shall be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.
- 27 [28. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed.
- 28 [29. Riparian vegetation (native trees and shrubs) shall be preserved to the maximum extent possible. Riparian vegetation must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.

The NCDWR appreciates the opportunity to provide comments on your project. Should you have any questions or require any additional information, please contact Rob Ridings at 919-707-8786.

NCDEQ – Division of Water Resources Letter – 1/22/18

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Water Resources	The project area includes nutrient sensitive waters, impaired 303(d) streams and Water Supply Critical Area; sediment and erosion control BMPs should be implemented to reduce the risk of nutrient runoff. To meet NCDOT's NPDES permit requirements, designs should include stormwater treatment. If project includes bridges within the Critical Area of a Water Supply, NCDOT may be required to include hazardous spill catch basins in the project area.	NCDOT will implement sediment and erosion control Best Management Practices in accordance with <i>Design Standards in Sensitive Watersheds</i> , as appropriate. NCDOT also plans to incorporate one or two hazardous spill basins for the crossing at Swift Creek to minimize the potential for adverse effect to the Dwarf Wedgemussel and the Yellow Lance. Additionally, NCDOT will adhere to the most recent version of the <i>North Carolina Department of Transportation Stormwater Best Management Practices Toolbox</i> manual. This is listed as a special project commitment in the Final EIS. The proposed route for the project does not cross the Water Supply Critical Area.
2	Water Resources	Riparian buffer mitigation may be required; NCDOT will need to provide a buffer mitigation plan prior to approval of the Water Quality Certification.	NCDOT will meet all riparian buffer mitigation requirements as necessary. See response to comment #1.
3	Water Resources	Documentation should include itemized impacts to wetlands and streams, with corresponding mapping. Mitigation plans required prior to issuance of 401 Water Quality Certification.	Comment noted. Itemized impacts to wetlands and streams are included in Chapter 4 of the Final EIS. For compensatory mitigation of R-2721, NCDOT currently proposes to use the NC DMS (on-site mitigation is being reviewed as an alternative approach). For R-2828, NCDOT currently proposes to use DMS for mitigation of impacts to wetland and riparian buffers along with private mitigation banks and DMS for impacts to streams (on-site mitigation is being reviewed as an alternative approach). For R-2829, a mitigation approach has not yet been established since the anticipated construction date is more than five years in the future (2027).
4	Water Resources	Alternatives should consider design criteria that reduce stormwater impacts on streams and wetlands.	See response to comment #1.
5	Water Resources	Prior to issuance of 401 Water Quality Certification, NCDOT will need to demonstrate avoidance and minimization of impacts to wetlands and streams.	Avoidance and minimization measures for the preferred alternative were discussed with agencies throughout the NEPA process. This included two meetings with agencies to discuss avoidance and minimization measures for the Preferred Alternative after publication of the Draft EIS. This coordination is described in the <i>Stakeholder Involvement Report</i> and summarized in Chapter 3 of the Final EIS. Avoidance and minimization coordination will continue through the permitting process for the project.
6	Water Resources	Mitigation will be required for impacts greater than 150 feet to any single perennial stream.	See response to comment #3.
7	Water Resources	Future documentation should include itemized impacts to wetlands and streams, with corresponding mapping.	Comment noted.
8	Water Resources	NCDOT should address potential impacts to aquatic environment and any mitigating factors.	NCDOT will meet all applicable requirements for obtaining 401 Water Quality Certification. See response to comment #1.
9	Water Resources	Analysis of cumulative and secondary impacts anticipated as a result of the project is required.	A quantitative water quality indirect and cumulative impacts analysis was completed after selection of the preferred alternative and is summarized in Chapter 4 of the Final EIS.

Appendix L1 - Agency Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
10	Water Resources	All impacts to jurisdictional wetlands, streams, and riparian buffers need to be included in final impact calculations, which need to be included in the 401 Water Quality Certification application.	NCDOT will submit all data required as part of the 401 Water Quality Certification.
11	Water Resources	Where streams must be crossed, the Division of Water Resources prefers bridges in lieu of culverts. When used, culverts should be countersunk.	Minimizing impacts through bridging has been discussed with the agencies during the NEPA process. Culverts will be buried in accordance with NCDOT Hydraulics Unit's 2004 "Pipe Burial Depths" reference, unless otherwise determined through interagency coordination on hydraulic design at specific locations.
12	Water Resources	Whenever possible, the Division of Water Resources prefers spanning structures.	Comment noted—this request will be considered during final design. Minimizing impacts through bridging has been discussed with the agencies during the NEPA process.
13	Water Resources	Bridge deck drains should not discharge directly into streams.	Comment noted. The design-build team(s) will be required to provide bridge drainage features that prevent direct discharge into surface waters.
14	Water Resources	Sediment and erosion control measures should not be placed in wetlands or streams.	See response to comment #1.
15	Water Resources	Borrow/waste areas should avoid wetlands as much as possible. Impacts to wetlands in borrow/waste area need to be disclosed in the 401 Water Quality Certification.	Comment noted. The design-build team(s) will be required to acquire applicable permits relative to borrow pits and comply with requirements for borrow pits, dewatering, and any temporary work in jurisdictional areas.
16	Water Resources	401 Water Quality Certification application will need to address proposed methods for stormwater management.	Comment noted. The application will propose methods for stormwater management.
17	Water Resources	Individual Permit application to USACE and corresponding 401 Water Quality Certification may be required due to magnitude of impacts to wetlands and streams. Approval will be contingent on appropriate avoidance, minimization, and mitigation.	NCDOT will obtain all applicable permits, including Section 404 Individual Permit and associated 401 Water Quality Certification. Avoidance, minimization and mitigation efforts to date are summarized in Chapter 4 of the Final EIS. These efforts will continue as final design progresses
18	Water Resources	If concrete is used during construction, dry work area should be maintained.	All currently approved NCDOT BMPs for the protection of surface waters will be implemented during project construction. As indicated in the NCDOT Construction BMPs, no live or fresh concrete shall come into contact with jurisdictional waters until the concrete has cured.
19	Water Resources	If temporary access roads or detours constructed, site should be graded to preconstruction contours and elevated. Disturbed areas should be seeded/mulched and planted with appropriate species.	Temporary access and haul roads other than public roads will be addressed in the Erosion and Sedimentation Control Plans. This commitment will be included in design-build team contracts.
20	Water Resources	Culverts and other structures in waters, streams, and wetlands should be placed below elevation of the streambed according to specified requirements.	Culverts will be buried in accordance with NCDOT Hydraulics Unit's 2004 "Pipe Burial Depths" reference.
21	Water Resources	If multiple pipes or barrels are required, they should mimic natural stream cross sections as closely as possible.	Final design for Preferred Alternative will be completed according to NCDOT's <i>Guidelines for Drainage Studies and Hydraulic Design</i> .

Appendix L1 - Agency Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
22	Water Resources	Any necessary foundation test borings should be noted in the document.	If additional geotechnical investigations are needed, subsurface investigations, including borings, will be conducted in accordance with current NCDOT Geotechnical Unit Guidelines and Procedures Manual. This commitment will be included in design-build team contracts.
23	Water Resources	Sediment and erosion control measures must be implemented and maintained in accordance with NC Sediment and Erosion Control Planning and Design Manual.	The final Design-Build Request for Proposals will require development of erosion control plan, to be implemented and maintained during construction. The plan will incorporate NPDES permit requirements. See response to comment #1.
24	Water Resources	All work in or adjacent to stream waters should be conducted in dry work area, incorporating approved BMP measures.	NCDOT will implement approved BMP measures from the most current version of NCDOT <i>Construction and Maintenance Activities Manual</i> .
25	Water Resources	Inherent inaccuracies in NWI wetland maps and soil survey maps require that qualified personnel perform onsite wetland delineations.	As discussed in the Natural Resources Technical Report, stream surveys and wetland delineations were performed by qualified personnel onsite for all project DSAs. The delineations were verified by USACE and NCDWR. Surveyed wetland and stream data were used to calculate impacts to jurisdictional resources as shown in the Draft and Final EIS.
26	Water Resources	Heavy equipment should be operated from the bank to minimize sedimentation.	See response to comment #24.
27	Water Resources	Riprap should not be placed in active channel or streambed.	All appropriate measures will be taken to protect streams and aquatic life based on NCDOT standard practices.
28	Water Resources	Riparian vegetation should be preserved to the maximum extent possible.	Appropriate measures will be taken to preserve and reestablish riparian vegetation to the maximum extent practicable. NCDOT will require the NCDOT design-build team(s) to preserve trees and vegetation along the project, particularly in riparian areas.



North Carolina Department of Public Safety

Emergency Management

Roy Cooper, Governor
Erik A. Hooks, Secretary

Michael A. Sprayberry, Director

January 12, 2018

State Clearinghouse
N.C. Department of Administration
1301 Mail Service Center
Raleigh, North Carolina 27699-1301

Subject: Intergovernmental Review State Number: 18-E-4220-0173
540 Triangle Expressway Southeast Extension, TIP R-2721, R-2828, and R-2829,
Wake County

As requested by the North Carolina State Clearinghouse, the North Carolina Department of Public Safety Division of Emergency Management Risk Management reviewed the Final Environmental Impact Statement for the 540 Triangle Expressway Southeast Extension Project and offers the following comments:

- 1) All project alternatives include crossings of the Special Flood Hazard Area (SFHA). North Carolina Executive Order 123 directs NCDOT to coordinate with and follow the FHWA floodplain management requirements which are found in the Federal Executive Order 11988. To ensure NCDOT compliance with EO 11988 and 44 CFR the NCDOT Hydraulics Section and the NC Floodplain Mapping Program have a Memorandum Of Agreement (MOA). Please coordinate with NCDOT Hydraulics to determine if the proposed crossings within this project are eligible to fall within the MOA.
- 2) Crossings that are not eligible to fall within the MOA will require a Conditional Letter of Map Revision (CLOMR) issued by the Federal Emergency Management Agency (FEMA) prior to construction.

Thank you for your cooperation and consideration. If you have any questions concerning the above comments, please contact me at (919) 825-2300, by email at dan.brubaker@ncdps.gov or at the address shown on the footer of this document.

Sincerely,

John D. Brubaker, P.E., CFM
NFIP Coordinator
Risk Management

Cc: File

MAILING ADDRESS:
4218 Mail Service Center
Raleigh NC 27699-4218
www.ncdps.gov
www.ncfloodmaps.com



GTM OFFICE LOCATION:
4105 Reedy Creek Road
Raleigh, NC 27607
Telephone: (919) 825-2341
Fax: (919) 825-0408

NCDEM Letter – 1/12/18

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Floodplains	Coordinate with NCDOT Hydraulics to determine if proposed crossings of Special Flood Hazard Areas are eligible to fall within its MOA with the NC Floodplain Mapping Program.	NCDOT will adhere to the Memorandum of Agreement for crossings of Special Flood Hazard Areas.
2	Floodplains	Crossings not eligible to fall within the MOA will require a Conditional Letter of Map Revision (CLOMR) by FEMA.	NCDOT will prepare Conditional Letter of Map Revisions (CLOMR) for all crossings that are not eligible for inclusion in the MOA.



Dr. Richard Reich
Assistant Commissioner

**North Carolina Department of Agriculture
and Consumer Services**
Agricultural Services

Joseph Hudyncia
Environmental Programs

Crystal Best
State Clearinghouse
N.C. Department of Administration
1301 Mail Service Center
Raleigh, North Carolina 27699-1301

RE: S# 18-E-4220-0173

January 31, 2018

Dear Ms. Best:

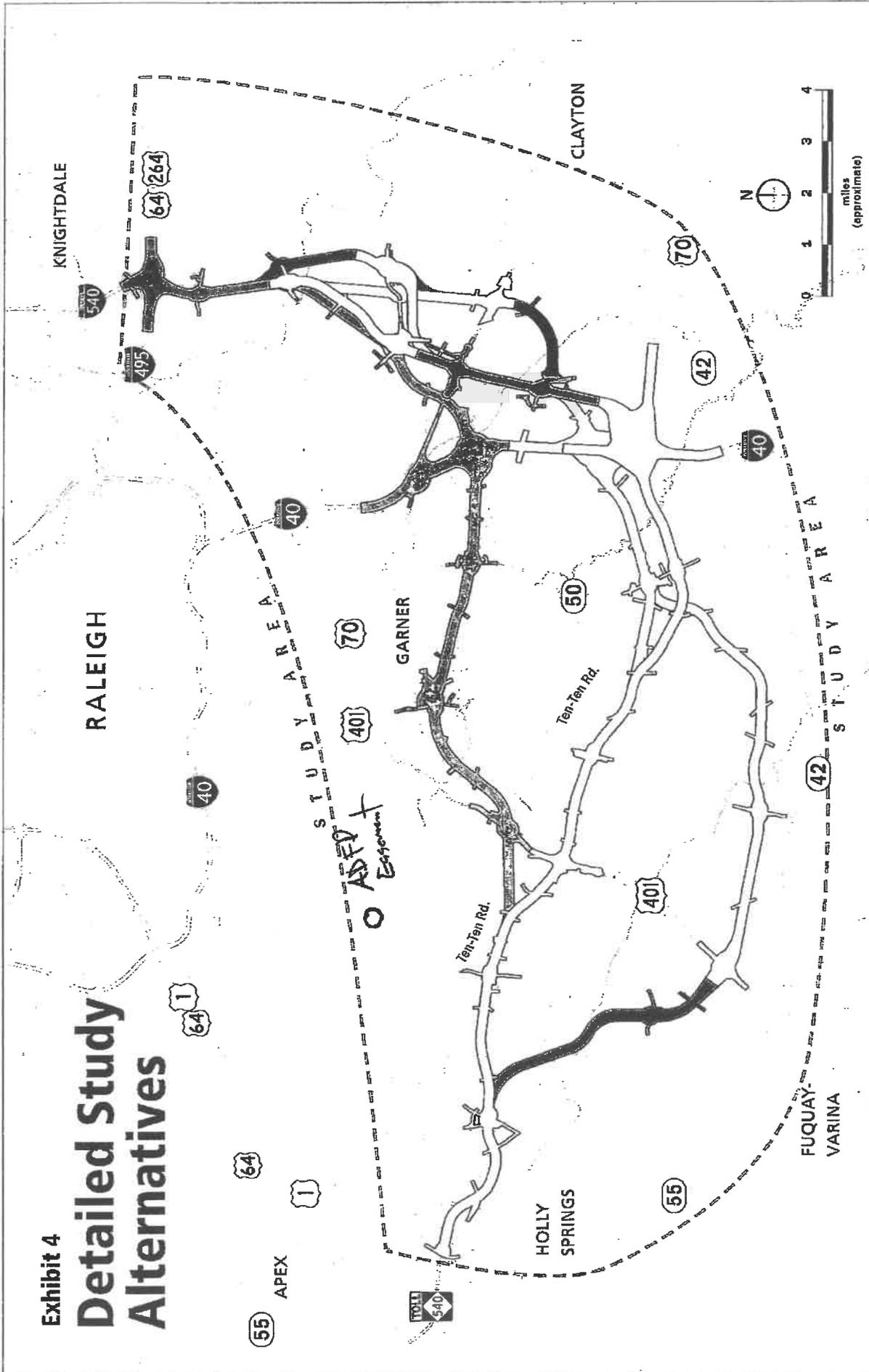
The proposed project for the Complete 540 Triangle Expressway Southeast Extension has the potential for a conflict with an existing Agriculture Development and Farmland Preservation Trust Fund easement on an agricultural property. Although not directly in the path of any of the 17 detailed study alternatives, this existing easement is, nonetheless, within the study area. It is recommended that NCDOT staff please refer to the attached map with the general location of the property with the easement. If there is a need for additional information please contact NCDA&CS ADFP staff by referring to the following web address: <http://www.ncadfp.org/>.

Thank you for your consideration,

Joseph Hudyncia
Environmental Programs
NCDA&CS
joseph.hudyncia@ncagr.gov

Exhibit 4

Detailed Study Alternatives



Segment Colors

	Orange		Lilac		Brown
	Purple		Green		Mint
	Blue		Teal		
	Red		Tan		

Segment Combinations for the 17 Detailed Study Alternatives

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NCDACS Letter – 1/31/18

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Farmland	There is an existing Agriculture Development and Farmland Preservation Trust Fund easement in the 540 project study area.	The easement is not near the selected route for the project and will not be affected by the project.

APPENDIX L2

LOCAL GOVERNMENT COMMENTS AND RESPONSES

Following publication of the Final EIS, NCDOT received formal review comments from two local governments. Copies of each of these comments are on the following pages of this Appendix. For tracking purposes, each comment letter was assigned a document number—this number has been placed in the upper right corner of each comment letter. The table below lists each local government that submitted comments, the document number assigned to that local government’s comments, and the date of the comments. On each comment letter, the individual comment topics are noted with numbered brackets. A comment response table follows each comment letter. The comment response table lists each bracketed topic number, along with a summary of the comment, and the project team’s response to the comment.

Document Number	Agency	Date
b001	Wake County Board of Commissioners	1/30/18
b002	Wake County Public School System	1/23/18



Board of Commissioners
P.O. Box 550 • Raleigh, NC 27602

TEL 919 856 6160
FAX 919 856 5699

JESSICA N. HOLMES, CHAIR
SIG HUTCHINSON, VICE-CHAIR
JOHN D. BURNS
MATT CALABRIA
GREG FORD
ERV PORTMAN
JAMES WEST

January 30, 2018

Mr. Rodger D. Rochelle, P.E.
North Carolina Department of Transportation/Turnpike Authority
1578 Mail Service Center
Raleigh, North Carolina 27699-1578

Re: Complete 540 Triangle Expressway Southeast Extension – Final Environmental Impact Statement
(December 2017)

Dear Mr. Rochelle:

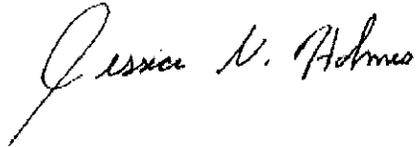
On behalf of Wake County, I am pleased to express our support for the Final Environmental Impact Statement for the Triangle Expressway Southeast Extension and the selection of the Preferred Alternative that closely follows the corridors that have been planned, protected and anticipated by the public for many years. Wake County residents and landowners have relied upon the anticipated corridors for many years to make investment and location decisions. The Final Environmental Impact Statement and the selection of the Preferred Alternative are key steps in finalizing this project that has created uncertainty in this area for many years.

Wake County is among the nation's fastest growing urban areas, with an associated growing demand for efficient movement of people and goods. We endorse the completion of 540 using the preferred alternative, because we recognize the value of this project and the role it plays in improving the safe and reliable operation of our transportation network, the traveling public and our community. This support is consistent with the County's position, evidenced by resolutions adopted by the Wake County Board of Commissioners in 2010, 2013, and 2015 (attached).

Finally, we would ask that North Carolina Department of Transportation Turnpike Authority consider the attached report on future greenway crossings. The report was prepared by Alta Planning and Design, Wake County's consultant on a future greenways plan, and details six planned crossings that may necessitate tunnels and/or overpasses.

If you need additional information or have any questions about the County's position, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica N. Holmes". The signature is written in a cursive style with a large initial 'J'.

Jessica N. Holmes, Chair
Wake County Board of Commissioners

cc: Wake County Mayors
David Ellis, Interim County Manager, Wake County

Attachments:

Resolution, 2015
Resolution, 2013
Resolution, 2010
Alta Memo re: Future Greenway Crossings of I-540

MEMORANDUM



111 East Chapel Hill Street, Suite 100
Durham, NC 27701
(919) 484-8448
greenways@altaplanning.com

To: Christopher Snow, Director, Wake County Parks, Recreation & Open Space

From: Jason Reyes, Associate Planner, Alta Planning + Design

Date: 12/21/2016

CC: Eric Staehle, Senior Facilities Project Manager, Wake County

Re: Future Greenway Crossings of I-540

Background

As lead consultant for the Wake County Greenway System Plan, Alta Planning + Design was asked to review the future route of I-540, and to list the future greenway crossings that relate to that plan. The following crossing locations were confirmed during a meeting with representatives from Wake County (Christopher Snow, Eric Staehle, Bill Shroyer, Keith Lankford, and Tim Gardiner). Please note that this memo is for the Wake County crossings from the Greenway System Plan, and there may be other crossings from municipal plans that require further coordination between NCDOT and municipalities.

Design Guidance

Attached are relevant design guidelines from the *AASHTO Guide for the Development of Bicycle Facilities* (2012, Fourth Edition). The AASHTO guide represents minimum standards. Best practices observed by Alta Planning + Design for underpasses include:

- Minimum height of 10’;
- Minimum width of 14’, with greater widths preferred for lengths over 60’;
- Centerline stripe is recommended for grade-separated facilities;
- To mitigate safety concerns, an underpass should be designed to be spacious, well-lit, equipped with nearby emergency phones, and completely visible for its entire length from end to end.

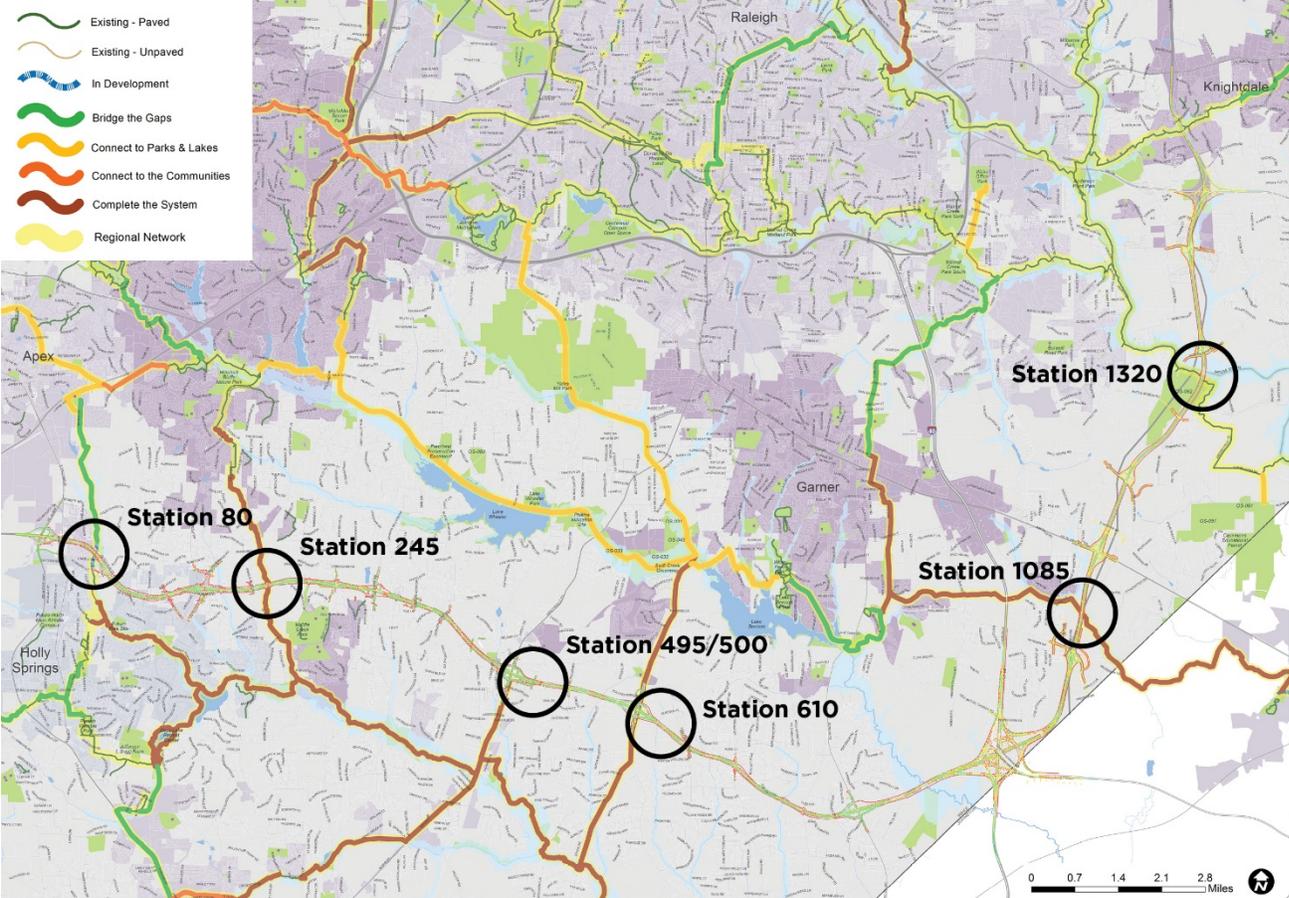
Underpasses should also be designed in a way that best mitigates flooding and drainage issues, thereby also helping to mitigate future maintains needs.

[Project Name]

Crossing Locations

The station numbers noted below are in reference to the I-540 design drawings available at the time of this memo (December 2016). The images that accompany the descriptions are screen shots of those drawings (in ArcGIS), at the *approximate* location of the proposed greenway crossings.

- **Overall Context Map:**



- **Station #1320:** The I-540 drawings as of December 2016 already indicate a proposed greenway underpass at this location along the Neuse River, which is supported by the Wake County Greenway Plan.

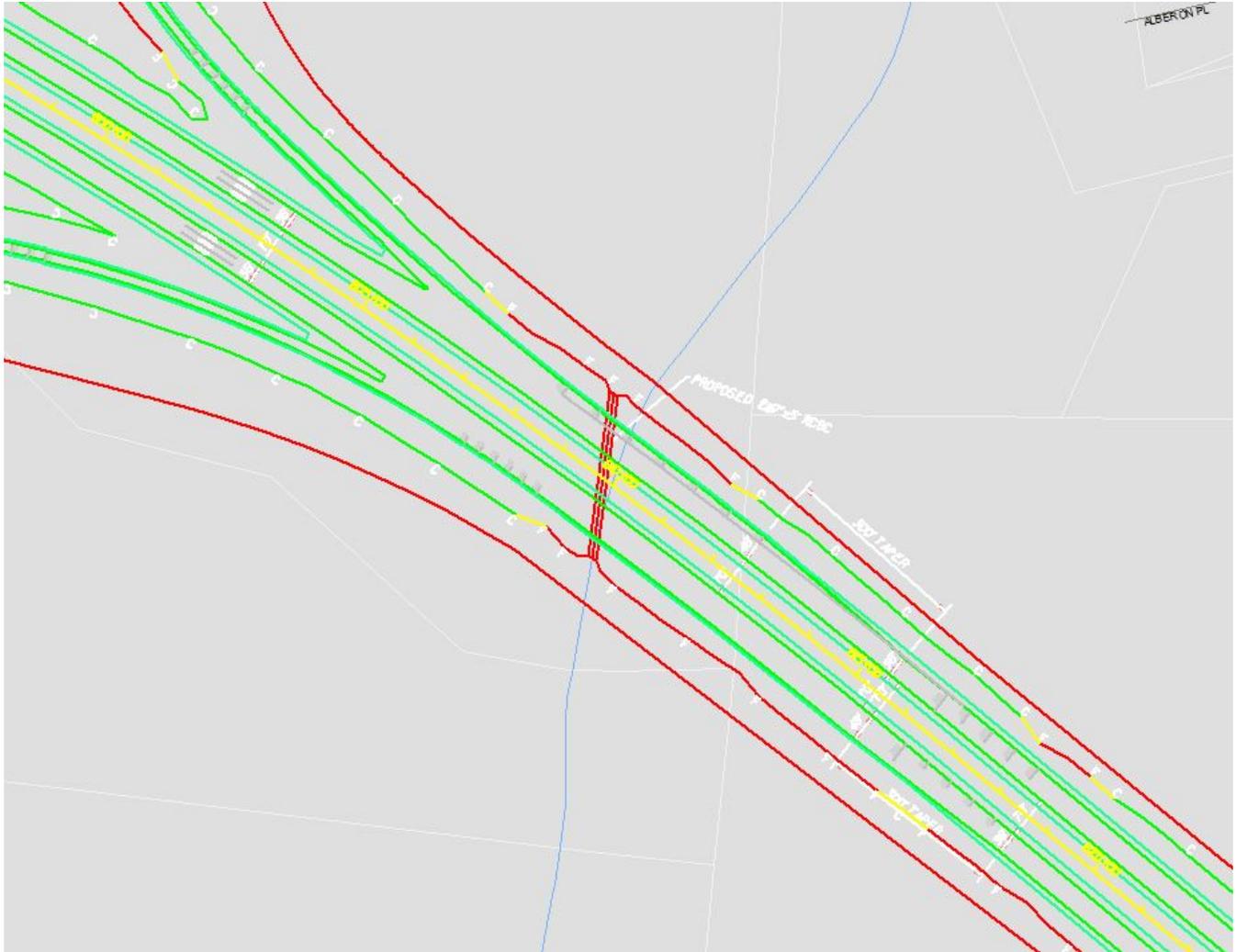


[Project Name]

- **Station #1085:** The Wake County Greenway Plan indicates a proposed greenway trail corridor providing a future connection to Clayton. The desired crossing of I-540 for this trail corridor is an underpass at White Oak Creek, near station #1085.



- **Station #610:** The Wake County Greenway Plan indicates a proposed greenway trail corridor along Old Stage Road. The desired crossing of I-540 for this trail corridor is an underpass at Little Creek, near station #610.

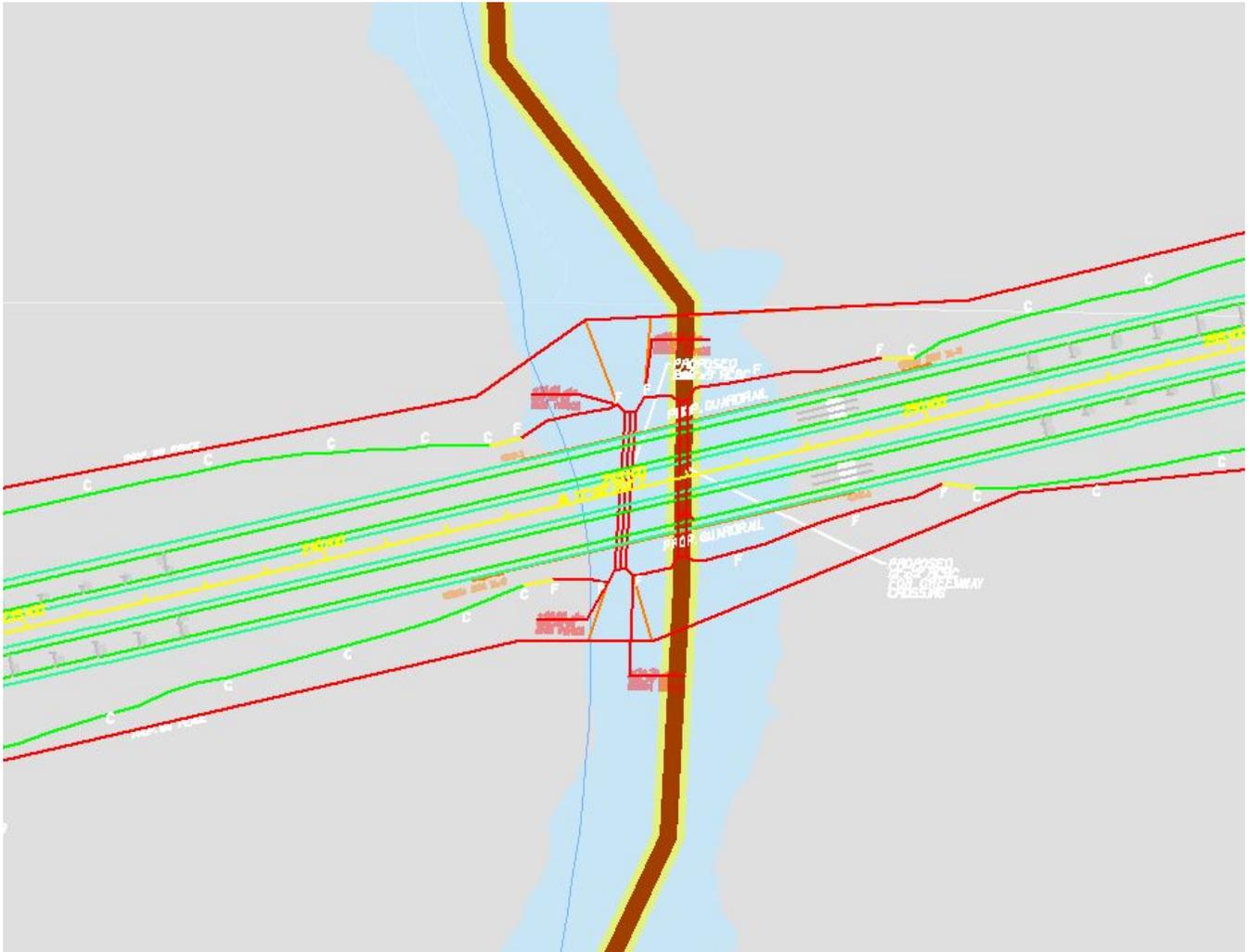


[Project Name]

- **Station # 495/500:** The Wake County Greenway Plan indicates a proposed greenway corridor along US Route 401 near Wake Technical Community College. The desired crossing of I-540 for this corridor is at Old McCullers Road. The drawings indicate a roadway underpass at this location, which should be designed to accommodate a future greenway trail (10-12' wide shared use path).

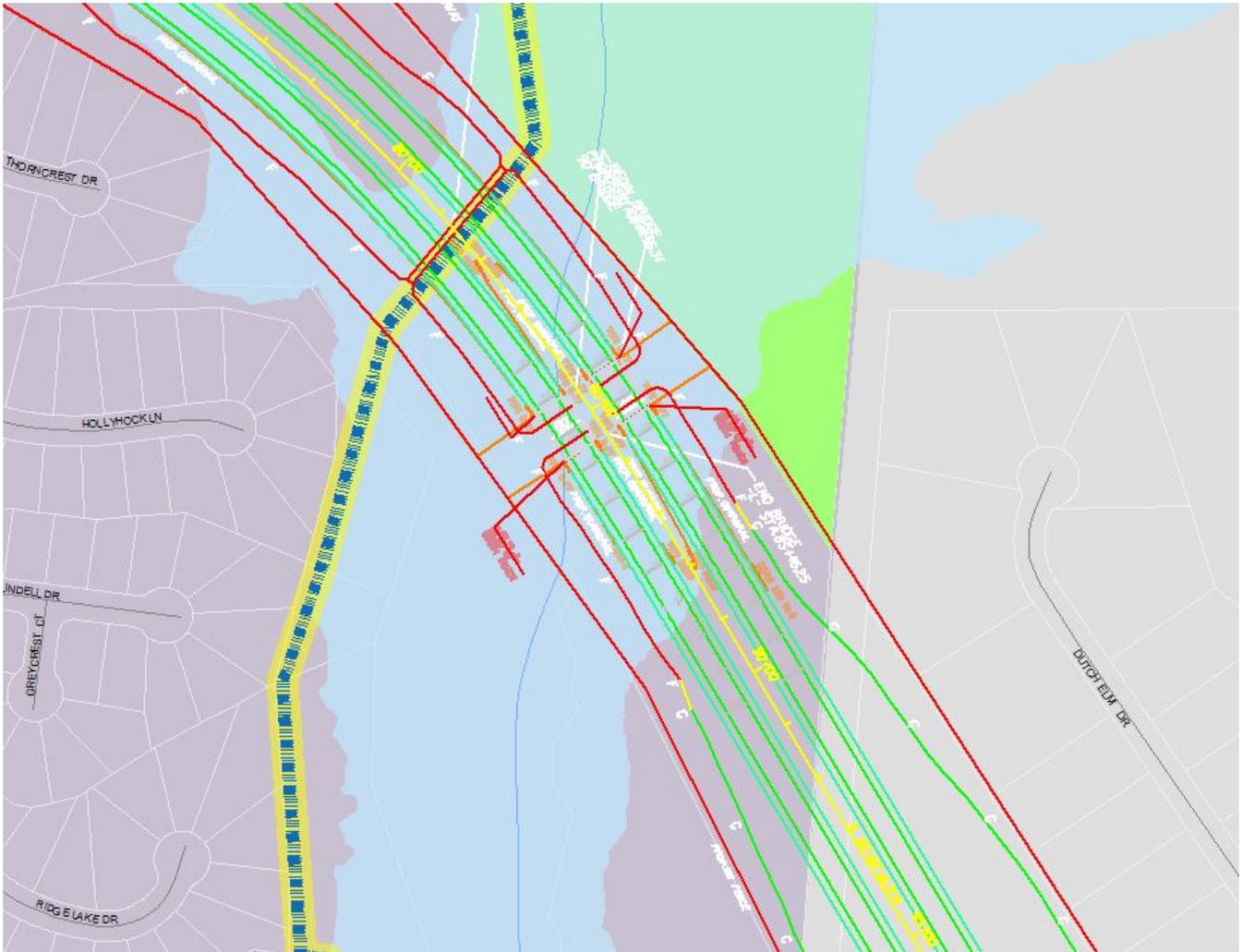


- **Station # 245:** The I-540 drawings as of December 2016 already indicate a proposed greenway trail underpass at this location, which is supported by the Wake County Greenway Plan.



[Project Name]

- **Station #80:** The I-540 drawings as of December 2016 already indicate a proposed greenway trail underpass at this location, which is supported by the Wake County Greenway Plan.



While loads on shared use paths will be substantially less than roadways, paths should be designed to sustain wheel loads of occasional emergency, patrol, maintenance, and other motor vehicles that are expected to use or cross the path. When motor vehicles are driven on shared use paths, their wheels often will be at, or very near, the edges of the path. This can cause edge damage that, in turn, will reduce the effective operating width of the path. The path should, therefore, be constructed of sufficient width to accommodate the vehicles, and adequate edge support should be provided. Edge support can be provided by means of stabilized shoulders, flush or raised concrete curbing, or additional pavement width or thickness. The use of flush concrete curbing has other long-term maintenance benefits, such as reducing the potential for encroachment of vegetation onto the path surface. If raised curbs are used, one foot of additional path width should be provided, as users will shy away from the curb, resulting in a narrower effective path width.

It is important to construct and maintain a smooth riding surface on shared use paths. Pavements should be machine laid; soil sterilizers should be used where needed to prevent vegetation from erupting through the pavement. On Portland cement concrete pavements, the transverse joints needed to control cracking should be saw cut, rather than tooled, to provide a smoother ride. On the other hand, skid resistance qualities should not be sacrificed for the sake of smoothness. Broom finish or burlap drag concrete surfaces are preferred.

Utility covers (i.e., manholes) and bicycle-compatible drainage grates should be flush with the surface of the pavement on all sides. Preferably, manhole covers and drainage grates would be located to the side of the paths so when work needs to be performed, the path would not need to be closed. Railroad crossings should be smooth and be designed at an angle between 60 and 90 degrees to the direction of travel in order to minimize the possibility of falls. Refer to Chapter 4 for design treatments that can be used to improve railroad crossings.

Where a shared use path crosses an unpaved road or driveway, the road or driveway should be paved a minimum of 20 ft (6 m) on each side of the crossing to reduce the amount of gravel scattered onto or along the path by motor vehicles. The pavement structure at the crossing should be adequate to sustain the expected loading at that location.

5.2.10 Bridges and Underpasses

A bridge or underpass may be needed to provide continuity to a shared use path. The “receiving” clear width on the end of a bridge (from inside of rail or barrier to inside of opposite rail or barrier) should allow 2 ft (0.6 m) of clearance on each side of the pathway, as recommended in Section 5.2.1, but under constrained conditions may taper to the pathway width.

Carrying the clear areas across the structures has two advantages. First, the clear width provides a minimum horizontal shy distance from the railing or barrier, and second, it provides needed maneuvering space to avoid conflicts with pedestrians or bicyclists who have stopped on the bridge (e.g., to admire the view).

Access by emergency, patrol, and maintenance vehicles should be considered in establishing design clearances of structures on shared use paths. Similarly, vertical clearance may be dictated by occasional authorized motor vehicles using the path. A minimum vertical clearance of 10 ft (3.0 m) is desirable for adequate vertical shy distance.

At transitions and approaches from paths to bridge decks, the height of the path’s surface should match the height of the bridge deck surface so as to provide a smooth transition between path-

Chapter 5: Design of Shared Use Paths

way and bridge deck. Bridge deck lips, formed by differences between pathway and bridge deck heights, should be avoided because they can cause tire blowouts, bent wheels, crashes, and injuries. These lips can be eliminated by placing a transitional layer of asphalt between the path surface and the bridge deck.

Where grade separation is desired between a path and a roadway or railroad, designers sometimes have the choice between constructing a bridge over the roadway or railroad, and constructing a tunnel or underpass under the roadway or railroad. The adjacent topography typically is the greatest factor in determining which option is best; however, bridges are preferred to underpasses because they have security advantages and are less likely to have drainage problems.

When a bridge or underpass is built over a public right-of-way (such as a road), a connection is often needed between the path and roadway; as this represents a potential access point for pedestrians and bicyclists. This often involves significant ramping or other means to provide an accessible connection between the two.

Protective railings, fences, or barriers on either side of a shared use path on a stand-alone structure should be a minimum of 42 in. (1.05 m) high. There are some locations where a 48-in. (1.2 m) high railing should be considered in order to prevent bicyclists from falling over the railing during a crash. This includes bridges or bridge approaches where high-speed, steep-angle (25 degrees or greater) impacts between a bicyclist and the railing may occur, such as at a curve at the foot of a long, descending grade where the curve radius is less than that appropriate for the design speed or anticipated speed.

Openings between horizontal or vertical members on railings should be small enough that a 6 in. (150 mm) sphere cannot pass through them in the lower 27 in. (0.7 m). For the portion of railing that is higher than 27 in. (0.7 m), openings may be spaced such that an 8 in. (200 mm) sphere cannot pass through them. This is done to prevent children from falling through the openings. Where a bicyclist's handlebar may come into contact with a railing or barrier, a smooth, wide rub-rail may be installed at a height of about 36 in. (0.9 m) to 44 in. (1.1 m), to reduce the likelihood that a bicyclist's handlebar will be caught by the railing (see Figure 5-11).

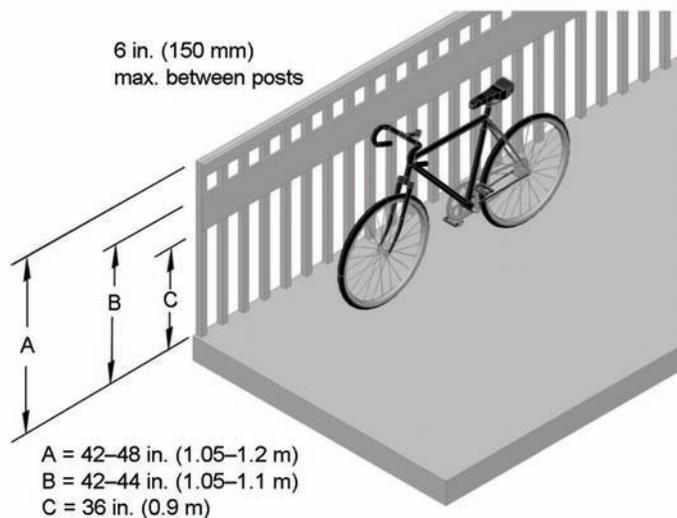


Figure 5-11. Bridge Railing

Bridges should be designed for pedestrian live loadings. Where maintenance and emergency vehicles may be expected to cross the bridge, the design should accommodate them. On all bridge decks, special care should be taken that bicycle-compatible expansion joints are used, and that decking materials are not slippery when wet. There are often opportunities to retrofit path structures to existing highway or railroad bridges. Using an existing bridge can result in significant cost



Figure 5-12. Example of Bridge Structures (Photo courtesy of Jennifer Toole of Toole Design Group.)

savings and provide path continuity over large rivers and other obstacles. These retrofits can be accomplished in several ways, including cantilevering the path onto an existing bridge, or by placing the path within the substructure of the existing bridge, as shown in Figure 5-12.

In many situations, there is a desire to retrofit a path under a bridge along a river or waterway to provide a grade-separated crossing of a major road or railroad. Special treatments may be needed in these circumstances. These paths are often located within a floodplain, so path pavement and subgrade treatments may need to be enhanced. In extreme cases, paths can be built below the normal water level, such that the water would need to be retained

and a pumping system would need to be provided for the path. The structural design of bridges for shared use paths (e.g., railings) should be designed in accordance with the *AASHTO LRFD Bridge Design Specifications (1)* and the *Guide Specifications for Design of Pedestrian Bridges (3)*. The technical provisions in this manual either meet or exceed those recommended in the current versions of these respective specifications.

5.2.11 Drainage

The minimum recommended pavement cross slope of 1 percent usually provides adequate drainage. Sloping in one direction instead of crowning is preferred and usually simplifies drainage and surface construction. An even surface is essential to prevent water ponding and ice formation. On unpaved shared use paths, particular attention should be paid to drainage to avoid erosion.

Depending on site conditions, typically paths with cross slope in the direction of the existing terrain will provide sheet flow of surface runoff and avoid the need for channelizing flow in ditches, cross culverts, and closed pipe systems. However, where a shared use path is constructed on the side of a slope that has considerable runoff, or other conditions that result in relatively high runoff, a ditch of suitable dimensions should be placed on the uphill side to intercept the slope's drainage. Such ditches should be designed so that the potential for injury to errant bicyclists is limited. Where needed, catch basins with drains should be provided to carry the intercepted water under the path. Bicycle-compatible drainage grates and manhole covers should be located to the side of the pathway.

Wake County Board of Commissioners – 1/30/18

Comment Number	Primary Topic	Paraphrased Comment	Response
1	General	Wake County supports the Final EIS and the selected alternative.	Comment noted.



WAKE COUNTY
PUBLIC SCHOOL SYSTEM

FACILITIES
M. J. Desormeaux, Jr., Assistant Superintendent

1551 ROCK QUARRY RD.
BUILDING B
RALEIGH, NC 27610
PHONE: 919-588-3551
EMAIL: JDESORMEAUX@WCPSS.NET

January 23, 2018

Complete 540 Project Team
N.C. Department of Transportation
Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699-1578

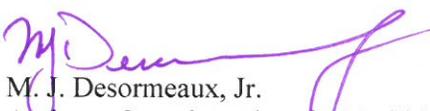
RE: Federal Final Environmental Impact Statement for the Complete 540 – Turnpike Expressway Southeast Extension Project (NCDOT TIP Project Numbers R-2721, R-2828, R-2829), Wake and Johnston Counties

Dear Complete 540 Project Team:

Thank you for the opportunity to review and comment on the impact of the 540 Turnpike Expressway Southeast Extension Project, as it relates to the Wake County Public School System. Review of this document, in respect to current and future school sites, does not indicate any major concerns or need for comments at this time.

The district would appreciate your continued consideration of including us in this process as it proceeds.

Sincerely,


M. J. Desormeaux, Jr.
Assistant Superintendent for Facilities

Attachment



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

December 29, 2017

Dr. James Merrill
Wake County Schools
5625 Dillard Drive
Cary, NC 27518

TO
JOE

Dear Dr. Merrill:

SUBJECT: Federal Final Environmental Impact Statement for the Complete 540 – Triangle Expressway Southeast Extension Project (NCDOT TIP Project Numbers R-2721, R-2828, and R-2829), Wake and Johnston Counties

Pursuant to Public Law 91-190, "National Environmental Policy Act of 1969", we are transmitting the Final Environmental Impact Statement (EIS) for the subject project.

Copies of the Final EIS are being submitted to the North Carolina State Environmental Clearinghouse, area wide planning agencies, and counties, towns, and cities involved in the project. Additionally, the Final EIS and all associated technical reports can be accessed from the Library section of the project website at www.ncdot.gov/projects/complete540/.

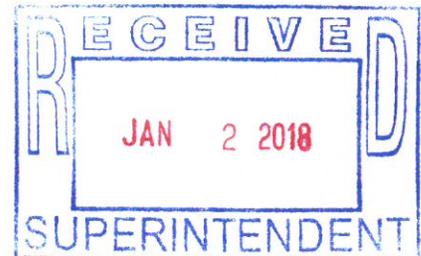
You are requested to furnish us comments with respect to the environmental considerations over which your agency has jurisdiction by law or expertise. Comments are due by February 1, 2018.

Please send any comments, requests or acknowledgement letters to the Complete 540 project team at the address below or by email at complete540@ncdot.gov.

Sincerely,

Rodger D. Rochelle, P.E.
NCTA Chief Engineer

Attachment



Wake County Public School System – 1/23/18

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Schools	The school system has no major concerns about the project as it relates to current and future school sites.	Comment noted.

APPENDIX L3 INTEREST GROUP COMMENTS AND RESPONSES

Following publication of the Final EIS, NCDOT received formal review comments from several area interest groups. Copies of each of these comments are on the following pages of this Appendix. For tracking purposes, each comment letter was assigned a document number—this number has been placed in the upper right corner of each comment letter. The table below lists each interest group that submitted comments, the document number assigned to that group's comments, and the date of the comments. On each comment letter, the individual comment topics are noted with numbered brackets. A comment response table follows each comment letter. The comment response table lists each bracketed topic number, along with a summary of the comment, and the project team's response to the comment.

Document Number	Agency	Date
c001	Southern Environmental Law Center	2/22/18
c002	Regional Transportation Alliance	2/1/18
c003	Triangle Greenways Council	1/18/18
c004	Cary Chamber of Commerce	(undated)
c005	Center for Biological Diversity	2/1/18
c006	Defenders of Wildlife	(undated)
c007	NC League of Conservation Voters	2/1/18
c008	NC Conservation Network	2/1/18
c009	NC Justice Center	(undated)
c010	Wildlands Network	2/1/18
c011	WakeUp Wake County	2/1/18

SOUTHERN ENVIRONMENTAL LAW CENTER

Telephone 919-967-1450

601 WEST ROSEMARY STREET, SUITE 220
CHAPEL HILL, NC 27516-2356

Facsimile 919-929-9421

February 22, 2018

VIA E-MAIL AND U.S. MAIL

Mr. Rodger Rochelle
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548
complete540@ncdot.gov

RE: Complete 540: Final Environmental Impact Statement

Dear Mr. Rochelle:

On behalf of Sound Rivers and Clean Air Carolina (the “Conservation Groups”), the Southern Environmental Law Center (“SELCC”) submits the attached comments on the Final Environmental Impact Statement (“FEIS”) for the Complete 540 Toll Road.

INTRODUCTION

The FEIS fails entirely to address the concerns raised by the Conservation Groups in their comments on the Draft Environmental Impact Statement (“DEIS”). Moreover, the FEIS contains little new information and the additional facts that are provided only serve to raise further questions about the advisability of moving forward with this \$2.2 billion project.

It is clear from the FEIS that the North Carolina Department of Transportation (“NCDOT”) and the Federal Highway Administration’s (“FHWA”) (collectively, the “Transportation Agencies”) primary aim is nothing more than completing a loop: tidily filling in the last gap in a circle. Since the idea of an outer loop around Raleigh was first dreamed up in the late 1960s much has changed. The vibrant, educated workforce living and moving to the Raleigh area is much less interested in long commutes and suburban living. Instead, workers are searching for exciting urban opportunities. Employers are looking for strong mass transit systems and walkable, bikeable communities. Technology is changing—autonomous vehicles are fast coming online, ride-hailing is on the rise, and even drone technology looks set to change our mobility patterns. We are poised at a moment of enormous change, and this is therefore exactly the wrong time to consider a massive, unprecedented investment in the transportation system of the past.

The Transportation Agencies should use this opportunity to reconsider alternative solutions. The FEIS illuminates that, expensive though this 28 mile highway is, it would not

actually even achieve one of the main purposes it was designed to achieve. Data included with the FEIS show that rather than improving congestion on surrounding roadways, the preferred alternative will actually make congestion *worse*. By contrast, the Conservation Groups present an alternative focused on upgrades to the existing highway system that would do a much better job of improving local congestion. The alternative would be much less expensive, would have significantly less impact on the natural environment, and would be available for all users, not just those able to pay an expensive toll.

The FEIS does nothing to allay the Conservation Groups' concerns about the massive, unprecedented impacts from the project. The document details significant impacts to water quality and wetlands, but offers little information as to how such impacts will be mitigated. The document is woefully inadequate in describing the impacts to air quality and how the project and its associated growth will impact climate change—a concerning development given North Carolina's stated commitment to the Paris Accord. The document brushes off impacts to low income and minority communities, ignoring the fact that an entire mobile home park will be essentially obliterated and disregarding the fact that low-income families will not be able to pay the price of a costly toll with the false promise that they will get the benefit of congestion relief regardless. And the document punts on one of the key legal obstacles that has always faced this project: the existence of two federally protected species that lie in its path and will be thrown into jeopardy with construction. Despite knowing about this issue for decades, the Transportation Agencies have still failed to come up with more than a vague proposal to commit to a short-term experimental breeding population, without any guarantee of success or any plan for successful release into the wild.

In short, the FEIS is a legally deficient document for a project that is a bad idea, a waste of money and a guarantee of nothing other than destruction of all that makes this part of our region special. As detailed further below we urge the Transportation Agencies to take a closer look at alternative solutions and to publish a Supplemental EIS.

I. POOR PUBLIC PROCESS

Throughout the Complete 540 project's development, the agencies have been slow to engage stakeholders and address concerns raised by the public. In particular, the Transportation Agencies failed to substantively address Conservation Groups' concerns and comments raised about the project's Draft Environmental Impact Statement ("DEIS"). The Transportation Agencies also misled the public about the project schedule, impairing the ability of Conservation Groups and other members of the public to effectively weigh in on the project.

1. The Agencies' Violated NEPA by Failing to Consider and Respond to the Conservation Group's Comments

¹ [The Transportation Agencies' responses to the Conservation Groups' comments on the DEIS,¹ were legally insufficient. Under NEPA, an agency must solicit comments on a DEIS, 40 C.F.R. § 1503.1, and must respond to substantive comments in the subsequent FEIS, 40 C.F.R.

¹ Stakeholder Involvement Report, Appendix J3.

§ 1502.9(b). The response must “discuss at appropriate points in the final statement any responsible opposing view which was not adequately discussed in the draft statement and shall indicate the agency’s response to the issues raised.” *Id.*; *see also Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 n.13 (1989). In its responses the agency may:

- (1) Modify alternatives including the proposed action.
- (2) Develop and evaluate alternatives not previously given serious consideration by the agency.
- (3) Supplement, improve, or modify its analyses.
- (4) Make factual corrections.
- (5) Explain why the comments do not warrant further agency response, citing the sources, authorities, or reasons which support the agency's position and, if appropriate, indicate those circumstances which would trigger agency reappraisal or further response.

40 C.F.R. § 1503.4(a). The procedural requirements prescribed in NEPA’s implementing regulations must be “strictly interpreted ‘to the fullest extent possible’” in accord with the policies implemented in NEPA. *California v. Block*, 690 F.2d 753, 769 (9th Cir. 1982) (quoting 42 U.S.C. § 4332). In order to fulfill this mandate, an agency must identify all opposing views raised in comments and provide a “good faith, reasoned analysis in response” to each. *Block*, 690 F.2d at 773 (quoting *Silva v. Lynn*, 482 F.2d 1282, 1285 (1st Cir. 1973)); *Sierra Club v. U.S. Army Corps of Engineers*, 701 F.2d 1011, 1030 (2d Cir. 1983) (same); *see also Nat’l Audubon Soc’y v. Dep’t of Navy*, 422 F.3d 174, 198 (4th Cir. 2005) (explaining that the test for NEPA compliance is objective good faith).

Moreover, agencies must respond explicitly and directly to opposing views in a way that addresses the underlying issue raised. *See Hughes River Watershed Conservancy v. Johnson*, 165 F.3d 283, 288 (4th Cir. 1999) (agency must give “careful scientific scrutiny and respond[] to all legitimate concerns that are raised”); *N. Carolina Wildlife Fed’n v. N. Carolina Dep’t of Transp.*, 677 F.3d 596, 600 (4th Cir. 2012) (faulting responses that “failed to address the underlying issue”); *Earth Island Inst. v. Carlton*, 626 F.3d 462, 472 (9th Cir. 2010) (agency must respond “explicitly and directly”); *Ctr. for Biological Diversity v. U.S. Forest Serv.*, 349 F.3d 1157, 1167 (9th Cir. 2003). Agencies must candidly acknowledge information revealed in public comments. *N. Carolina Wildlife Fed’n*, 677 F.3d at 603; *see also Nat’l Audubon Soc’y*, 422 F.3d at 198 (explaining that NEPA requires “candid acknowledgement” of environmental harms). And agencies must give the comments of sister agencies special consideration. *See Hughes River Watershed Conservancy*, 165 F.3d at 288; *Sierra Club v. U.S. Army Corps of Engineers*, 701 F.2d 1011, 1030 (2d Cir. 1983); *see also* 42 U.S.C. § 4332(C) (requiring consultation and solicitation of comments from any federal agency with jurisdiction or “special expertise”) *Nat’l Wildlife Fed’n v. Andrus*, 440 F. Supp. 1245, 1253 (D.D.C. 1977) (implicit in obligation to consult with and obtain comments from sister agencies with expertise is obligation to consider and respond).

The Transportation Agencies’ responses—or lack thereof—to the Conservation Groups comments failed to satisfy their legal obligations to candidly acknowledge and respond to the concerns raised by Conservation Groups. First, the Transportation Agencies selected only limited portions of the Conservation Group’s letter to respond to and ignored a number of

significant concerns. These deficiencies are documented below in the substantive sections.

3 [Second, a large number of the agencies’ responses merely stated that information that had been lacking in the DEIS had been studied further and the results of the investigations made available in the FEIS. *See, e.g.*, Responses 9, 52. As SELC pointed out in its first comment letter, this late investigation of issues and delayed dissemination of information to the public undercuts the two core principles of NEPA: forcing thoughtful, informed agency decision-making and making information available to the public at a meaningful time. 40 C.F.R. § 1502.14; *see Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989) (“NEPA guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process” and “provide[] a springboard for public comment.”); *Webster v. U.S. Dep’t of Agric.*, 685 F.3d 411, 421 (4th Cir. 2012) (an agency has not taken the required “hard look” at the environmental consequences of an action unless it has prepared an EIS in a way that “foster[s] both informed decision-making and informed public participation.”).

4 [It is also important to document that NCDOT has made some significant missteps in its public review process. Internal NCDOT emails produced in response to a NC Public Records Act request revealed that at least some members of the agency attempted to stymie public participation in the NEPA process by intentionally obscuring the project’s timeline from the public.² In an internal email, the project manager for Complete 540 warned his supervisor not to reveal that the environmental review for Complete 540 would issue well ahead of schedule for fear that “likely litigants” would submit additional FOIA requests.³ In fact, the FEIS was issued eight months ahead of schedule, right before Christmas, making it challenging for the public to submit comments in a timely manner. NCDOT then continued to further confuse the public by publishing two different public comment deadlines. The first, February 1, 2018, was the deadline published in the FEIS, the second, March 23, 2018 was noted on the project website. Attorneys for the Conservation Groups alerted NCDOT to the confusion being created by these different deadlines but no clarifying action was taken.⁴

II. AN OUTDATED PROJECT

1. Changing Preferences

5 [Complete 540 was first included on transportation planning documents in 1968.⁵ Since that time much has changed. Urban loops around cities are no longer the preferred solution by urban planners seeking to grow vibrant sustainable communities. And our communities themselves are changing. The young, educated workforce that Wake County hopes to attract is less interested in suburban living and long commutes—instead there is a preference for walkable

² Richard Stradling, *NCDOT accused of misleading public about \$2.2 billion highway project*, THE NEWS & OBSERVER, Jan. 24, 2018, available at <http://www.newsobserver.com/news/traffic/article196102254.html>. Attachment 1.

³ E-mail from Brian F. Yamamoto, N.C. Dep’t of Transp., to Tatia White, N.C. Dep’t of Transp. (Sept. 13, 2017 9:35 AM). Attachment 2.

⁴ E-mail from Kym Hunter, S. Env’tl Law Ctr., to Rodger Rochelle, N.C. Dep’t of Transp., et al. (Feb. 5, 2018 11:36 AM). Attachment 3.

⁵ Purpose and Need Statement 18 (2011).

6 [downtowns and robust public transit systems. Meanwhile, experiences in the Charlotte area have showed that North Carolinians are no fans of toll roads, and there are increasing concerns about the impact of tolls on equity. On top of all these demographic changes we are seeing an explosion of new technology. Autonomous vehicles are coming online much faster than previously anticipated and, coupled with ride hailing and ride sharing applications, look set to completely change the face of our transportation system long before the Complete 540 project would be finished. Even drone technology is poised to change the way we think about commerce and freight. In short, we are no longer living in 1968. What may have been a good idea in the past is no longer the best solution for Wake County. These changes are discussed in more detail below. The Transportation Agencies' failure to examine these new trends constitutes a clear violation of NEPA.

Worse still, NCDOT's proposal to extend the 540 outer loop traps tomorrow's Triangle within yesterday's infrastructure. Introduced in the 1940's, loop roads were designed with the car-commuter in mind. By encircling cities with vast highways, planners aimed to keep vehicles moving and out of downtown. There is disagreement about whether loop roads met this twentieth-century aim,⁶ but there is wide agreement that they offer no solutions for future growth. Tired of long commutes and enticed by city amenities, more and more young professionals are leaving suburban life for downtown living.⁷ With the growth from this "great inversion,"⁸ cities are no longer asking how to move vehicles around downtown but how to move people within it. Not only do loop roads fail answer to this twenty-first century question, they actively obstruct new solutions.

7 [One does not need to look beyond the Triangle itself to see the dangers of loop roads. Durham has spent almost two decades trying to rid itself of its downtown loop. It currently seeks funding to remove the "big gutter around downtown" and replace it with a pedestrian-friendly two-way street.⁹ The "decades-old design," explained the city, "does not support pedestrians, bicyclists or transit users who want to safely get around downtown or the businesses and retailers in the City's central business district. The loop also creates a barrier between downtown and adjoining low-income and minority neighborhoods."¹⁰ Durham wants to escape the loop, and it is in good company.

⁶ See René Lavanchy, *Congestion-Beaters Or Roads to Hell: Is There Still a Place for Urban Motorways?*, THE GUARDIAN (July 8, 2014), <https://www.theguardian.com/cities/2014/jul/08/congestion-roads-hell-urban-motorways>. Attachment 4.

⁷ See Eric Jaffe, *Is Gentrification the Result of Rich People's Quest for Shorter Commutes?*, THE ATLANTIC (Nov. 19, 2015) <https://www.theatlantic.com/business/archive/2015/11/shorter-commutes-gentrification/416646/>. Attachment 5.

⁸ Richard Florida, *How and Why American Cities Are Coming Back*, CITY LAB (May 17, 2012), <https://www.citylab.com/life/2012/05/how-and-why-american-cities-are-coming-back/2015/>. Attachment 6.

⁹ Jeffrey C. Billman, *Durham Applies for a Federal Grant to Two-Way the Loop, and It's About Damn Time*, INDY WEEK (Oct. 18, 2017), <https://www.indyweek.com/news/archives/2017/10/18/durham-applies-for-a-federal-grant-to-two-way-the-loop-and-its-about-damn-time>. Attachment 7.

¹⁰ *Id.* Attachment 7.

7

Beginning with Portland in 1974 and San Francisco in 1991, vibrant cities all over the country are escaping the confines of loop roads.¹¹ Just last year, Rochester, New York tore down part of its downtown loop and replaced the twelve-lane highway with a walkable, tree-lined boulevard.¹² Now Oakland, California wants to do the same with a stretch of I-980—a renovation that would open 21 new city blocks for development.¹³ Rochester Mayor Lovely Warren explains the escape-the-loop phenomenon, “It gives us more space to develop. Before this, businesses had to stop development. They had nowhere to go because of that highway.”¹⁴

The Triangle area is rapidly growing. NCDOT has an opportunity to address this growth with creative, twenty-first century solutions. Its proposed action instead threatens to strangle the Triangle within a twentieth-century mistake.

2. Autonomous Vehicles

8

The FEIS is completely silent on an emerging technology that could have a significant impact on the purpose, need, and success of the Complete 540 project, as well as the efficacy of less damaging alternatives.

Autonomous vehicles (“AVs”) essentially use a variety of sensors to detect the vehicle’s surroundings and feed that information to software that controls the vehicle’s steering, braking and acceleration.¹⁵ “Connected” AVs can communicate with other AVs or infrastructure.¹⁶ AVs are generally defined by different levels of autonomy along a five-part continuum suggested by the National Highway Traffic Safety Administration (“NHTSA”), from non-autonomous at “Level 0” through full autonomy at “Level 4”.¹⁷

AVs will undoubtedly affect transportation in multiple ways that are relevant to planning the project or whether it is needed at all. The stated purpose and need for the Complete 540 project is to improve transportation mobility and to reduce forecast congestion on the existing roadway network.”¹⁸ Mobility can be defined as the time and costs required for travel.¹⁹

¹¹ Lavanchy, *supra* note 6. Attachment 4.

¹² *Freeways Without Futures*, CONGRESS FOR THE NEW URBANISM, <https://www.cnu.org/highways-boulevards/freeways-without-futures/2017#70> (last visited Feb. 21, 2018). Attachment 8.

¹³ *Id.* Attachment 8.

¹⁴ *Id.* Attachment 8.

¹⁵ *Self-Driving Cars Explained*, Union of Concerned Scientists, <https://www.ucsusa.org/clean-vehicles/how-self-driving-cars-work#.WoNOs3xG2Hs> (last revised Jan. 26, 2017). Attachment 9.

¹⁶ *Id.* Attachment 9.

¹⁷ JAMES M. ANDERSON, ET AL., RAND CORP., AUTONOMOUS VEHICLE TECHNOLOGY: A GUIDE FOR POLICYMAKERS xiii (2016), available at https://www.rand.org/content/dam/rand/pubs/research_reports/RR400/RR443-2/RAND_RR443-2.pdf. Attachment 10.

¹⁸ Purpose and Need Statement (2011); *see also* FEIS iii.

¹⁹ *See* NAT’L ACADEMY OF SCI., KEY TRANSPORTATION INDICATORS: SUMMARY OF A WORKSHOP 16 (2002), available at <https://www.nap.edu/read/10404/chapter/4>. Attachment 11.

Congestion is simply traffic.²⁰ AVs are expected to bring a wide variety of benefits and costs, from reducing crashes and improving access for those unable to drive, to potentially worsening sprawl.²¹ The types and extent of benefits depends in significant part on thoughtful planning.²² However, AVs will very likely improve both mobility and reduce congestion.

By communicating with one another and coordinating traffic flows, AVs have the capacity to reduce urban traffic dramatically. The city of Boston has examined the effect of AVs on traffic as part of its Go Boston 2030 long term transportation plan, which aims to improve access to all Boston neighborhoods and improve safety and reliability of transportation.²³ The BCG report examined the effect of AVs on traffic in a half-kilometer square section of downtown Boston under two scenarios, one in which there was a substantial shift to AVs and one in which there was a revolutionary shift.²⁴ In the “substantial shift” scenario, traffic and travel time each fell by 11%.²⁵ In the “revolutionary shift” scenario, the number of vehicles in the area fell by 28%, and average travel time declined by 30%.²⁶ A recent analysis by MIT’s Senseable City Lab determined that AVs using “slot-based intersections” rather than traditional traffic lights could achieve a two-fold increase in the intersection’s capacity and dramatic reductions in delay,²⁷ cutting travel delays to almost zero.²⁸

AVs also will likely improve mobility in ways distinct from reduced congestion. One huge potential shift will be the intersection of AV transportation and ridesharing services akin to Lyft Line and UberPool. It is expected that as these two innovations combine, AV-based transportation will become considerably cheaper than car ownership.²⁹ The cost per mile to

²⁰ See *Traffic Congestion and Reliability: Trends and Advanced Strategies for Congestion Mitigation*, FHWA, https://ops.fhwa.dot.gov/congestion_report/chapter2.htm (last modified Feb. 1, 2017). Attachment 12.

²¹ See *id.* at 9-40, Attachment N; see also U. OF MICH. CENTER FOR SUSTAINABLE SYSTEMS, AUTONOMOUS VEHICLES (2017), http://css.umich.edu/sites/default/files/Autonomous_Vehicles_Factsheet_CSS16-18_e2017.pdf. Attachment 13.

²² See UNION OF CONCERNED SCIENTISTS, MAXIMIZING THE BENEFITS OF SELF-DRIVING VEHICLES (2017), available at https://www.ucsusa.org/clean-vehicles/principles-self-driving-cars?_ga=1.159516669.1761058560.1485893388#.Wmn28HIG2Ht. Attachment 14.

²³ NIKOLAUS LANG, ET AL., BCG, MAKING AUTONOMOUS VEHICLES A REALITY: LESSONS FROM BOSTON AND BEYOND (2017), available at http://image-src.bcg.com/Images/BCG-Making-Autonomous-Vehicles-a-Reality-Oct-2017_tcm9-173687.pdf. Attachment 15.

²⁴ *Id.* at 6-9. Attachment 15.

²⁵ *Id.* at 9. Attachment 15.

²⁶ *Id.* Attachment 15.

²⁷ REMI TACHET, ET AL., MASS. INST. OF TECH., REVISITING STREET INTERSECTIONS USING SLOT-BASED SYSTEMS (2016), available at http://senseable.mit.edu/papers/pdf/20160316_Tachet_etal_RevisitingStreet_PLOS.pdf. Attachment 16.

²⁸ *Light Traffic*, MASS. INST. OF TECH., <http://senseable.mit.edu/light-traffic/> (last visited Jan. 25, 2018). Attachment 17.

²⁹ NIKOLAUS LANG, ET AL., BCG, MAKING AUTONOMOUS VEHICLES A REALITY: LESSONS FROM BOSTON AND BEYOND 7 (2017), available at http://image-src.bcg.com/Images/BCG-Making-Autonomous-Vehicles-a-Reality-Oct-2017_tcm9-173687.pdf. Attachment 15.

travel by shared electric AV could be 30-60% lower than to travel by private vehicle by 2025.³⁰ In addition, AVs will improve mobility for those who are currently unable or unwilling to drive, such as the young, the elderly, and the blind.³¹

These effects are more than reasonably foreseeable. Between now and the time Complete 540 is finished, around 2040,³² AVs will become commonplace, likely comprising approximately half of the vehicle fleet and more than half of new vehicle sales. NCDOT itself projects that AVs will comprise 40-60% of vehicle sales, 20-40% of the vehicle fleet, and 30-50% of vehicle travel by 2040.³³ Similarly, an independent transportation consultancy predicts that 25% of the U.S. fleet will be AVs by 2035,³⁴ and Goldman Sachs has predicted that sales of Level 3 and 4 AV will pass 50% by 2030 and comprise 100% by 2040.³⁵ AVs' share of the fleet and market will rise continuously between now and 2040, and experts predict that AVs will comprise a significant proportion of the vehicles on the road well before then. Seven different car companies have made announcements that they will have AVs ready for market by 2020,³⁶ and the National League of Cities expects fully autonomous vehicles will be widely available for wealthy consumers and as fleet vehicles in transportation and freight enterprises by the same year.³⁷ Even NCDOT's NC Readiness for Connected and Autonomous Vehicles ("CAV") report estimated introduction of Level 4 AVs into the passenger vehicle market by the year 2025.³⁸ In an interview, NCDOT's Kevin Lacy said "I expect that before I hit 30 years with the department, 2023 to be precise, we will have autonomous vehicles on the roads."³⁹ Tesla plans to undertake a cross-country road trip with an AV in the next three to six months.⁴⁰

³⁰ MCKINSEY & CO., AN INTEGRATED PERSPECTIVE ON THE FUTURE OF MOBILITY 24 (2016), available at <https://www.mckinsey.com/~media/mckinsey/business%20functions/sustainability%20and%20resource%20productivity/our%20insights/an%20integrated%20perspective%20on%20the%20future%20of%20mobility/an-integrated-perspective-on-the-future-of-mobility.ashx>. Attachment 18.

³¹ JAMES M. ANDERSON, ET AL., RAND CORP., AUTONOMOUS VEHICLE TECHNOLOGY: A GUIDE FOR POLICYMAKERS xv (2016), available at https://www.rand.org/content/dam/rand/pubs/research_reports/RR400/RR443-2/RAND_RR443-2.pdf. Attachment 10.

³² ICE Report ii.

³³ Burt Tasaico, PowerPoint Presentation: Transportation Funding – Continued, slide 26 (Sept. 6, 2017), https://www.ncdot.gov/download/about/board/bot/archiveMeeting/2017/201709_MeetingArchive.pdf. Attachment 19.

³⁴ JANE BIERSTEDT, ET AL., EFFECTS OF NEXT-GENERATION VEHICLES ON TRAVEL DEMAND AND HIGHWAY CAPACITY 10 (FP Think Working Grp., 2014), available at http://orfe.princeton.edu/~alaink/Papers/FP_NextGenVehicleWhitePaper012414.pdf. Attachment 20.

³⁵ THE GOLDMAN SACHS GROUP, INC., MONETIZING THE RISE OF AUTONOMOUS VEHICLES 15-16 (2015), available at http://pg.jrj.com.cn/acc/Res/CN_RES/INVEST/2015/9/17/f70472c6-f4ad-4942-8eab-3c01f3c717a7.pdf. Attachment 21.

³⁶ CTR. FOR CITY SOLUTIONS AND APPLIED RESEARCH, NAT'L LEAGUE OF CITIES, CITY OF THE FUTURE: TECHNOLOGY AND MOBILITY 17 (2016), available at <http://www.nlc.org/sites/default/files/2016-12/City%20of%20the%20Future%20FINAL%20WEB.pdf>. Attachment 22.

³⁷ *Id.* Attachment 22.

³⁸ Kimley Horn et al., *NC Readiness for Connected and Autonomous Vehicles* 29 (Nov. 2016), available at http://www.ncav.org/wp-content/uploads/2016/03/NC-Roadmap-for-CAV_Final_ALL.pdf. Attachment 23.

³⁹ Gary Forger, *NextGen Supply Chain with Kevin Lacy*, North Carolina Department of Transportation, LOGISTICS MGMT., Nov. 13, 2017, available at

Moreover, NCDOT is actively planning for the advent of AVs outside the Complete 540 NEPA process. NCDOT is considering the effect AVs will have on funding upcoming projects.⁴¹ The agency continues actively to encourage the adoption of autonomous vehicles, citing reduction of congestion as a possible benefit.⁴² It has dedicated significant resources to AVs, including hiring an engineer whose entire career will be focused on the transition to autonomous vehicles.⁴³ NCDOT officials have expressed a desire to work with AV manufacturers on building road networks which will support AVs in the future.⁴⁴ Indeed, following NCDOT's acceptance into the USDOT pilot program for AVs,⁴⁵ the agency is allowing AV companies to use the existing 540 toll road as a testing ground for the technology.⁴⁶ The North Carolina General Assembly recently passed legislation regulating AVs⁴⁷ apparently hoping to encourage AV testing within the state while laying the foundation for North Carolina to attract major components of the AV industry.⁴⁸ In addition, stakeholders who have been

http://www.logisticsmgmt.com/article/nextgen_supply_chain_with_kevin_lacy_north_carolina_department_of_transport. Attachment 24.

⁴⁰ Cadie Thompson, *Elon Musk says Tesla will launch its cross-country road trip in a self-driving car in 3 to 6 months*, BUS. INSIDER (Feb. 7, 2018, 7:25 PM), <http://www.businessinsider.com/elon-musk-tesla-road-trip-in-autonomous-car-mid-2018-2018-2>. Attachment 25.

⁴¹ See Gary D. Robertson, *NCDOT Chief: Electric, driverless cars could dry up road funds*, U.S. NEWS & WORLD REP. (Oct. 2, 2017, 6:42 PM), available at <https://www.usnews.com/news/best-states/north-carolina/articles/2017-10-02/dot-chief-electric-driverless-cars-could-dry-up-road-funds>. Attachment 26.

⁴² Joe Hummer, PowerPoint Presentation: NCDOT Autonomous Vehicle Roadmap Policy, slide 5 (Apr. 26, 2017), https://connect.ncdot.gov/projects/planning/TPB%20Model%20User%20Groups/07.NCMUG_2017-04-26_Present_5_AV_NCRoadMapPolicy_JHummer_NCDOT.pdf. Attachment 27.

⁴³ Gary Forger, *NextGen Supply Chain with Kevin Lacy, North Carolina Department of Transportation*, LOGISTICS MGMT., Nov. 13, 2017, available at http://www.logisticsmgmt.com/article/nextgen_supply_chain_with_kevin_lacy_north_carolina_department_of_transport. Attachment 24.

⁴⁴ Sara Svehla, *NC wants "open dialogue" on possibility of driverless cars*, THE DAILY TAR HEEL, Jan. 21, 2015, available at <http://www.dailytarheel.com/article/2015/01/google-moves-forward-with-driverless-cars>. Attachment 28.

⁴⁵ Lauren K. Ohnesorge, *Officials: What we know about the self-driving vehicle testing program coming to the Triangle Expressway*, TRIANGLE BUS. J., Jan. 23, 2017, available at <https://www.bizjournals.com/triangle/news/2017/01/23/officials-what-we-know-about-the-autonomous-vehicle.html?s=print>. Attachment 29.

⁴⁶ Gary D. Robertson, *NCDOT Chief: Electric, driverless cars could dry up road funds*, U.S. NEWS & WORLD REP. (Oct. 2, 2017, 6:42 PM), available at <https://www.usnews.com/news/best-states/north-carolina/articles/2017-10-02/dot-chief-electric-driverless-cars-could-dry-up-road-funds>. Attachment 26.

⁴⁷ An Act to Regulate the Operation of Fully Autonomous Motor Vehicles on the Public Highways of this State, 2017 N.C. Laws S.L. 2017-166 (H.B. 469) (Dec. 1, 2017) (to be codified at N.C. GEN. STAT. ANN. §§ 20-18-400 to -403), available at <https://www.ncleg.net/Sessions/2017/Bills/House/PDF/H469v7.pdf>. Attachment 30.

⁴⁸ Colin Campbell, *Could driverless car regulations help attract testing to NC?*, THE NEWS & OBSERVER, Apr. 25, 2017, available at <http://www.newsobserver.com/news/politics-government/state-politics/article146718619.html>, Attachment 31; Richard Stradling, *Self-driving cars are coming soon. Will North Carolina be ready?*, The News & Observer, Dec. 05, 2017, <http://www.newsobserver.com/news/traffic/article188164719.html>. Attachment 32.

actively involved with Complete 540 have expressed the importance of considering AVs in order to make smart transportation improvements⁴⁹ because of the impact they may have.⁵⁰ Despite the clear evidence that AVs have the capacity to impact the primary purposes of the proposed Complete 540 project and relative feasibility of other less damaging alternatives, the FEIS fails to consider AVs at all. Failure to take a “hard look” at this key issue violates NEPA. *Citizens to Pres. Overton Park, Inc. v. Volpe*, 401 U.S. 402, 416 (1971).

3. Delivery Drones

Drone technology has taken off in recent years, in turn popularizing recreational drone use;⁵¹ however, the devices also have huge potential as delivery vehicles and have already been deployed for this purpose. Delivery company Flirtey made the first urban drone delivery in the U.S. in Nevada in March 2016.⁵² In May 2016, DHL’s parcelcopter made a delivery in the Bavarian mountains more than three times as quickly as a delivery truck.⁵³ Alphabet’s (Google) Project Wing began delivering Chipotle burritos to students at Virginia Tech in September 2016⁵⁴ and is expanding burrito delivery in Australia.⁵⁵ Domino’s Pizza made its first drone delivery in New Zealand in November 2016.⁵⁶ Amazon’s “Prime Air” delivery service made its first delivery in the U.K. in December 2016,⁵⁷ and the company is testing drones in Canada, United Kingdom, and the Netherlands.⁵⁸ Amazon Prime Air will provide delivery within 30

⁴⁹ Natalie Griffith, *How the Triangle can leverage new transportation tech*, REG’L TRANSP. ALLIANCE BLOG, May 26, 2017, <http://letsgetmoving.org/rta-blog/triangle-can-leverage-new-transportation-tech/>. Attachment 33.

⁵⁰ Lauren K. Ohnesorge, *Officials: What we know about the self-driving vehicle testing program coming to the Triangle Expressway*, TRIANGLE BUS. J., Jan. 23, 2017, available at <https://www.bizjournals.com/triangle/news/2017/01/23/officials-what-we-know-about-the-autonomous-vehicle.html?s=print>. Attachment 29.

⁵¹ See Richard Stradling, *You may be able to fly your drones in most Raleigh city parks after all*, THE NEWS & OBSERVER, Feb. 13, 2018, available at <http://www.newsobserver.com/news/politics-government/article199917369.html>, Attachment 34; Ian Frazier, *The Trippy, High-Speed World of Drone Racing*, THE NEW YORKER, Feb. 5, 2018, available at <https://www.newyorker.com/magazine/2018/02/05/the-trippy-high-speed-world-of-drone-racing>. Attachment 35.

⁵² Kelsey D. Atherton, *The First Urban Drone Delivery Just Happened In Nevada*, POPULAR SCI., Mar 25, 2016, available at <https://www.popsci.com/first-urban-drone-delivery-successful>. Attachment 36.

⁵³ Kelsey D. Atherton, *DHL Delivery Drone Is Three Times As Fast As A Car*, POPULAR SCI., May 9, 2016, available at <https://www.popsci.com/dhl-delivery-drone-is-three-times-as-fast-as-car>. Attachment 37.

⁵⁴ *Chipotle burrito drone delivery begins at Virginia Tech*, WTKR.COM, Sept. 17, 2016, available at <http://wtkr.com/2016/09/17/google-drones-will-deliver-chipotle-burritos-at-virginia-tech/>. Attachment 38.

⁵⁵ Nick Statt, *Alphabet’s Project Wing drones will deliver burritos to Australian homes*, THE VERGE (Oct. 16, 2017), <https://www.theverge.com/2017/10/16/16486208/alphabet-google-project-wing-drone-delivery-testing-australia>. Attachment 39.

⁵⁶ Andrew Meola, *Shop online and get your items delivery by a drone delivery service: The future Amazon and Domino’s have envisioned for us*, BUS. INSIDER (Jul. 18, 2017), <http://www.businessinsider.com/delivery-drones-market-service-2017-7>. Attachment 40.

⁵⁷ *Amazon Prime Air*, AMAZON.COM, INC., <https://www.amazon.com/Amazon-Prime-Air/b?node=8037720011> (last visited Feb. 14, 2108). Attachment 41.

⁵⁸ Dave Gershgorn, *We Now Know Where Amazon Will Be Testing Their Delivery Drones*, POPULAR SCI., Feb. 1, 2016, <https://www.popsci.com/we-now-know-where-amazon-will-be-testing-their-delivery-drones>. Attachment 42.

minutes and the company expects Prime Air drones to become “as normal as seeing mail trucks on the road.”⁵⁹

9 [Future congestion in the project area may be alleviated by the future deployment of delivery drones. Analysts expect drones primarily to reduce delivery time and costs at the “last mile” between a distribution center (or restaurant) and a customer’s home; however, drones may also increase efficiency in supply chain deliveries.⁶⁰ Drones themselves will of course avoid traffic,⁶¹ and they are expected to ease congestion.⁶² Delivery drones also will likely reduce greenhouse gas emissions compared to diesel delivery trucks, depending on factors such as warehouse usage and the cleanliness of the grid charging the drones.⁶³ NCDOT has been “researching and investing in drone technology for years.”⁶⁴ The agency has submitted a proposal to the Federal Aviation Administration for drone medical supply delivery,⁶⁵ and plans to use drones in natural disaster response.⁶⁶ NCDOT already has established regulations for commercial drone use.⁶⁷ And just a few weeks ago, the North Carolina Board of Transportation heard from North Carolina-based drone company Precision Hawk about its technologies and predictions for increasing drone use in coming years.⁶⁸ Clearly, NCDOT sees the benefits delivery drones may bring and is expecting their use. As the agency considers options for Complete 540 it should be considering how the increased use of drones, alongside other technologies, will alter the transportation picture going forward.

⁵⁹ *Amazon Prime Air*, AMAZON.COM, INC., <https://www.amazon.com/Amazon-Prime-Air/b?node=8037720011> (last visited Feb. 14, 2108). Attachment 41.

⁶⁰ Jonathan Camhi, *The Drone Delivery Report: Opportunities and challenges in automating logistics with drones*, BUS. INSIDER (May 18, 2017), <http://www.businessinsider.com/the-drone-delivery-report-opportunities-and-challenges-in-automating-logistics-with-drones-2017-5>. Attachment 43.

⁶¹ See Hugo Gye, *Now that's a special delivery: Domino's builds DRONE to deliver pizzas by air and beat the traffic*, DAILY MAIL (June 5, 2013, 10:38 AM), <http://www.dailymail.co.uk/news/article-2336324/Dominos-builds-DRONE-deliver-pizzas-air-beat-traffic.html>. Attachment 44.

⁶² See Ben Farmer, *Drones to tackle traffic and deliver medical supplies in UK cities*, THE TELEGRAPH, Nov. 27, 2017, <http://www.telegraph.co.uk/news/2017/11/27/drones-tackle-traffic-deliver-medical-supplies-uk-cities/>. Attachment 45.

⁶³ Joshua K. Stolaroff, et al., *Energy use and life cycle greenhouse gas emissions of drones for commercial package delivery*, 9 NATURE COMM'NS 409, Feb. 13, 2018, available at <https://www.nature.com/articles/s41467-017-02411-5>. Attachment 46.

⁶⁴ Press Release: NCDOT Proposes Drone-Based Medical Supply Delivery, N.C. DEP'T OF TRANSP., Feb. 5, 2018, <https://apps.ncdot.gov/newsreleases/details.aspx?r=14824>. Attachment 47.

⁶⁵ Press Release: NCDOT Proposes Drone-Based Medical Supply Delivery, N.C. DEP'T OF TRANSP., Feb. 5, 2018, <https://apps.ncdot.gov/newsreleases/details.aspx?r=14824>. Attachment 47.

⁶⁶ *NCDOT using drones as new tool for natural disaster response*, WAVY.COM (Sept. 1, 2017, 11:11 PM), <http://wavy.com/2017/09/01/ncdot-using-drones-as-new-tool-for-natural-disaster-response/>. Attachment 48.

⁶⁷ *Commercial Operators*, N.C. DEP'T OF TRANSP., <https://www.ncdot.gov/aviation/uas/operators/> (last visited Feb. 14, 2018). Attachment 49.

⁶⁸ Agenda, Economic Development and Intergovernmental Relations Committee, Board of Transportation, Jan. 31, 2018. Attachment 50.

III. A BETTER ALTERNATIVE

Rather than stay glued to this outdated vision of the past, the Conservation Groups recommend a different solution. The Groups have worked with expert transportation planner Walter Kulash to develop an alternative focused on upgrades to the existing infrastructure—an approach that can be taken incrementally over time as traffic congestion worsens. This solution has the benefit of being open to all users, not just those able to pay a pricey toll. The alternative is named “ACCESS2040.” Mr. Kulash’s full report is set out in full in Attachment 168. The alternative is however, summarized briefly below.

The objectives of ACCESS2040 are to:

1. Achieve most of the benefits (mobility, congestion relief and regional connectivity) of *Complete 540* at a fraction of its cost and environmental impact.
2. Attain objectives of mobility, congestion relief and regional connectivity by augmenting projects already recommended in plans adopted by the Capital Area Metropolitan Planning Organization (CAMPO).

Important secondary objectives of ACCESS2040 are to:

3. Create transportation solutions for a wide range of users.
4. Guide the suburban growth in Southern Wake County into sustainable patterns.

ACCESS2040 starts with a foundation of 52 projects selected from the *2040 Metropolitan Transportation Plan* (“CAMPO MTP”) adopted by the North Carolina Capital Area Metropolitan Planning Organization (“CAMPO”). Most of these projects are widening of roads to multi-lane divided arterials. To this base of improvements, ACCESS2040 would add a small mileage of extensions to existing roads and replacement of at-grade intersections with grade-separated intersections. These widenings and extensions would create continuous multi-lane arterial routes across southern Wake County in both the east-west and north-south directions.

The improvements would form seven arterial (road or street) corridors. Upgrading these corridors would yield both: (1) increased all-mode capacity for local trips (within the study area); and (2) increased connectivity for external travel (trips with origin, destination or both outside the study area). East-west regional connectivity, an important purpose of the *Complete 540* project, would be served by three corridors.

ACCESS2040 anticipates an increase in transit travel as projected by the *Wake County Transit Plan* and the GoRaleigh five-year transit improvement plan. ACCESS 2040 meshes with projects for non-motorized (bicycle and pedestrian) travel as programmed in the *CAMPO 2040 MTP*. ACCESS2040 would complement these plans with road designs that immediately accommodate a wide range of users and anticipates and provides for future increases in non-automobile travel.

The ACCESS2040 approach of building on a base of *CAMPO 2040 MTP* projects differs somewhat from the “IE” (“Improve Existing”) alternatives that the Transportation Agencies

12 [eliminated early in the process. The first tier screening selected only a limited (“fiscally constrained”) number of the planned CAMPO projects, thereby eliminating almost all projects with more than a 15-20 year funding horizon.

13 [Nonetheless, Mr. Kulash points to the Transportation Agencies’ analysis of Improve Existing 3-Arterials (“IE3-A”) as an alternative that is most like ACCESS2040. Mr. Kulash notes that ACCESS2040 goes significantly further than IE3-A. One can assume that ACCESS2040 will achieve **at least** the same level of benefit as IE3-A. Specifically, Mr. Kulash notes that under the Transportation Agencies’ analysis IE3-A would yield around one half of the mobility gains and **more** congestion relief than the New Location Highway.⁶⁹ Tables in the Transportation Agencies’ own traffic analysis show that a new location highway is expected to reduce congested VMT by just 12.06% in the study area while IE3-A is expected to improve the same measure by 22.49%.⁷⁰ It is therefore reasonable to anticipate that ACCESS 2040 would likewise do a much better job of reducing congestion on existing roads—one of the primary stated purposes of the project. At the same time, while not producing the exact same result as a \$2.2 billion new-location 70 mile per hour toll freeway, the alternative would make significant gains in mobility—the other project purpose.

14 [Coupled with this strong showing by ACCESS2040 in meeting the project purpose and need is the fact that it would be significantly less destructive to the environment, would cost significantly less—just \$294 million over costs already schedule in the CAMPO MTP—and perhaps most important, would be open to all users, not just those willing and able to pay a pricey toll. Due to these advantages, and the fact that ACCESS2040 *out-performs the preferred alternative* on one of the primary purposes for the project, the Transportation Agencies must take a hard look at this solution, which is likely to be the Least Environmentally Damaging Practicable Alternative for purposes of Section 404 of the Clean Water Act.

IV. THE ILLEGAL NEPA ANALYSIS

In January 2016 the Conservation Groups submitted significant concerns about the DEIS. As noted above, the Transportation Agencies failed to adequately consider these comments. The vast majority of the concerns remain unaddressed, as noted below. The FEIS and supporting documents present a number of additional legal problems. The deficiencies and inconsistencies in the Transportation Agencies’ analyses are discussed in detail below.

1. The Statement of Purpose and Need is Arbitrary and Capricious

As noted in the previous comments, the Statement of Purpose and Need is essential to the NEPA process because it guides the agencies’ scope of review. 40 C.F.R. § 1502.13. As stated by the United States Court of Appeals for the Fourth Circuit, “[o]nly alternatives that accomplish the purposes of the proposed action are considered reasonable, and only reasonable alternatives require detailed study. So how the agency defines the purpose of the proposed action sets the contours for its exploration of available alternatives.” *Webster v. U.S. Dep’t of Agric.*, 685 F.3d

⁶⁹ First Tier Concepts Screening and Traffic Reassessment at Tbls 2-8 (2017).

⁷⁰ *Id.* at Tbl. 3.

411, 422 (4th Cir. 2012). Because the Statement of Purpose and Need forms the basis upon which to compare alternatives, an agency is not permitted “to contrive a purpose so slender as to define competing ‘reasonable alternatives’ out of consideration.” *Simmons v. U.S. Army Corps of Eng’rs*, 120 F.3d 664, 666 (7th Cir. 1997). Despite this key role, many of the previously identified concerns about the Statement of Purpose and Need for Complete 540 remain and others have emerged.

A. The Preferred Alternative Does Not Meet One of the Two Stated Primary Purposes for the Project

Perhaps the single biggest revelation in the FEIS is the fact that the preferred alternative does not, in fact meet one of the two stated primary purposes for the project. The FEIS states:

Two primary purposes have been established for the Complete 540 project, based on general transportation problems in the Raleigh area and specific, more localized needs. The first purpose is to improve mobility within or through the study area during peak travel periods. **The second purpose is to reduce forecast congestion on the existing roadway network within the project study area.**⁷¹

The FEIS, however, demonstrates that the preferred alternative will not meet the second purpose. Not only would the preferred alternative not reduce forecast congestion on the existing roadway network, but NCDOT’s own forecasts suggest that it will actually make congestion on a number of key roadways *worse* than if the road was not built at all. This straightforward truth has been hidden from the public by NCDOT, who in public, disingenuously claim without support that “You can expect travel speeds to increase by 8 percent and more on arterials.”⁷²

The DEIS screened for the congestion relief purpose with three different “Measures of Effectiveness” (“MOE”s). The Conservation Groups discussed at length in previous comments, and reiterate again below how this general screening concept is utterly arbitrary. The three MOEs employed to assess alternatives for congestion relief were “Total Vehicle Hours Traveled (VHT) on the major roadway network in the project study area over an average daily period;” “Congested Vehicle Miles Traveled (VMT) on the major roadway network in the project study area during the PM peak travel period;” and “Congested VHT on the major roadway network in the project study area during the PM peak travel period.”⁷³ Obscured from the public, however, is the fact that these measures were all assessed on a system-wide basis with the Complete 540 factored into the results.⁷⁴ As such, it is completely unknowable whether congestion relief would actually occur on the existing roads, or whether the improvements in VHT, VMT and Congested

⁷¹ FEIS at 7, emphasis added.

⁷² *Community Meetings Will Provide Info on NC 540 Extension*, WRAL.COM (Feb. 20, 2018, 5:52 PM), available at <http://www.wral.com/community-meetings-will-provide-info-on-nc-540-extension/17357806/> (when asked by counsel for the Conservation Groups to identify what this 8% improvement figure referred to, Mr. Rochelle was unable to identify his source). Attachment 51.

⁷³ 2004 Alternatives Development and Analysis Report at 2-8

⁷⁴ Alternatives Development and Analysis Report (May 2014) at 2-12 - 2-18 (noting that the measures were calculated using the TRM).

VHT are all due to the high speeds and limited congestion on the Complete 540 project itself rather than any relief on existing roadways. Because the purpose and need of the project was to “reduce forecast congestion on the existing roadway network within the project study area,” and *not* “reduce forecast congestion on a system-wide basis” these MOEs were completely useless to assess the ability of the project alternatives to meet the stated purpose and need.

17 [The Quantitative ICE study included with the FEIS, however, makes clear that the preferred alternative will not, in fact, reduce congestion on existing highways. The study shows that by 2040 the preferred alternative would result in 12 primary corridors with daily congested roadway mileage whereas under a no-build condition there would only be seven congested primary roadways.⁷⁵ Similarly, in its review of PM congestion, the study shows that 23 corridors would be congested under a build condition compared to 21 under a No Build condition.⁷⁶ Moreover, when compared to existing conditions, forecasts for the preferred alternative show reduced speeds and increased congestion for nearly every road link studied.⁷⁷ This revelation is important for two key reasons. First, the results in the ICE study demonstrate that the preferred alternative does not meet one of two primary stated purposes for the project. Second, the ICE study further illuminates the inadequacy of the screening methodology in the DEIS, and makes clear that a full range of alternatives have not been assessed based on their ability to relieve congestion on existing highways, as NEPA requires.

The Transportation Agencies’ error and obfuscation is further compounded by their utter failure to address significant concerns raised about this topic during the DEIS review as the Conservation Groups and others attempted to get to the bottom of what impact the project would have on existing roadways. The issue was raised at the public hearing and was set forth in person during a question and answer session with Bradley Reynolds on December 8, 2015. Attorneys for the Conservation Groups were directed by NC Turnpike Authority staff to Mr. Reynolds as the correct person to answer questions about traffic forecasts. When the attorneys asked Mr. Reynolds what travel time savings would accrue to travelers who plan to continue using existing roads he stated that this issue had not been studied.⁷⁸

18 [Worse, in response to the Conservation Groups’ written comments on this topic, the Transportation Agencies directed the Groups to “page 54 of the Community Impact Assessment.”⁷⁹ Here, the Conservation Groups were informed, it is explained that “drivers who do not use the roll road would nonetheless benefit from reduced congestion on existing roadways as a result of traffic diversion onto the new roadway. Drivers who elect to use the toll road would be removed from the non-toll network, which would indirectly benefit the users of the non-toll network.” This argument is also used to justify why the project would not have any negative impact on low-income or environmental justice communities. The response, and the Community

⁷⁵ Quantitative ICE Report 75.

⁷⁶ Quantitative ICE Report 77.

⁷⁷ Quantitative ICE Report 75-79.

⁷⁸ See Letter from Kym Hunter and Ramona H. McGee, SELC, to Eric Midkiff, P.E., NCDOT 35 n.171 (Jan. 8, 2016). Attachment 52.

⁷⁹ Final Stakeholder Involvement Report at Response 69 to SELC Comments (2017).

18 Impact Assessment itself, is not just misleading, but wrong. The Quantitative ICE makes clear that in fact there will not be benefits to drivers who do not use the toll road. For many users commutes will, in fact, become more congested.

19 The Transportation Agencies may argue that while the preferred alternative will make key corridors more congested, overall the entire FLUSA will see congestion reduction.⁸⁰ This argument is unavailing for several reasons. First, the ICE study notes that the FLUSA-level congestion reduction is the result of relief on “many minor TRM links not identified as a major corridor.”⁸¹ The ICE study does not identify which roads these are, and there is therefore no way for the Conservation Groups or the public to know who, if anyone uses these roadways as part of their commute and how the increased congestion on these “minor links” in a “no build” scenario would impact travel in general, particularly when compared to the “build” alternative where major links are *more congested*. It also is unclear whether the project itself was factored into this FLUSA level forecast, as it was in the MOE screening process.

20 Second, when the statement of purpose and need was developed for the Complete 540 project, congestion relief on unidentified minor arterials was not discussed. Rather, the 2011 Statement of Purpose and Need report discussed existing poor levels of service on I-40, NC 42 and NC 50,⁸² and future poor levels of congestion on Ten-Ten Road and segments of US 1/64.⁸³ In the very next paragraph, the Transportation Agencies stated that the “second purpose of the proposed action is to reduce forecast congestion on the existing roadway network within the project study area.” The Report discussed congestion on these same roadways in more detail later in the report, noting that “several key roadway segments within traffic analysis area operate at an unacceptable LOS.”⁸⁴ And yet the Quantitative ICE study shows that the preferred alternative will actually result in more congestion on many of these exact roads.⁸⁵

21 Finally, and most importantly, while the Quantitative ICE is helpful in demonstrating to the public, for the first time, that the preferred alternative will actually lead to increased congestion on area roadways, it does not fulfil the core task of NEPA—i.e. to compare a variety of alternatives and see how they meet the stated purpose and need. As noted above, and as illuminated by the results of the Quantitative ICE, the original MOE screening was entirely inadequate for this purpose. To comply with NEPA, the Transportation Agencies must go back and screen a reasonable range of alternatives, including upgrade alternatives like ACCESS2040,

⁸⁰ ICE Report 74.

⁸¹ ICE Report 75.

⁸² Purpose and Need Statement 3.

⁸³ Purpose and Need Statement 4.

⁸⁴ Purpose and Need Statement 11. In a related, but separate point, the Conservation Groups note that no traffic counts were taken on Raleigh’s Inner Loop, I 440, despite congestion on this corridor being noted in the Statement of Purpose and Need report. Significant improvements are being made to this corridor which may have a bearing on how congested it is and how many people would use Complete 540 as an alternative. As such, current and future congestion on I-440 should be studied and a variety of alternatives should be screened based on their ability to reduce congestion on this road and others.

⁸⁵ See Quantitative ICE Report 75 (Table 35, showing that the Preferred Alternative will see increased congestion over a “no build” scenario on a variety of roadways including I-40).

and determine how they will meet the very specific stated purpose of improving forecast congestion on existing roadways.

NEPA does not mandate the selection of any particular alternative; however, NEPA does require a comprehensive hard look at a reasonable range of alternatives, “and it must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made.” *Forest Guardians v. USFWS*, 611 F.3d 692, 712 (10th Cir. 2010). The analysis presented to date has failed to live up to this mandate.

B. The Statement of Purpose and Need Was Developed Using Old Data

22 [In previous comments, the Conservation Groups noted that the purpose and need for the project was developed based on an outdated 2008 model using stale 2008 traffic data.⁸⁶ In response, the Agencies state that the 2008 model was the officially approved model at the time of first-tier screening in 2008. While this may be true, it is now a decade later and the Transportation Agencies have a responsibility to, at the very least, determine whether their reliance on that outdated data is still valid. *See 1000 Friends of Wisconsin, Inc. v. USDOT*, No. 11-C-0545, 2015 WL 2454271, at *7-8 (E.D. Wis. May 22, 2015) (agencies violated NEPA by failing to explain impact of updated demographic data, when new data could make discarded alternative viable); *Dow AgroSciences LLC v. Nat’l Marine Fisheries Serv.*, 707 F.3d 462, 472 (4th Cir. 2013) (Defendants acted arbitrarily and capriciously because they “never adequately explained why [they] relied on older data despite the existence of new data and the potential drawbacks of using the older data.”); *Western Watersheds Project v. Abbey*, 719 F.3d 1035, 1052 (9th Cir. 2013) (“[A]n agency errs when it relies on old data without showing that the data remain accurate.”). The Transportation Agencies admit that there is more current data available, the TRM V5 and TRM V6, which were used for the 2016 Complete 540 Preferred Alternative Traffic Forecast. The agencies have a responsibility to ensure that the purpose and need for the project remains valid based on this updated dataset.

C. The Statement of Purpose and Need is Impermissibly Narrow and Favors a Toll Highway Over Any Other Alternative

23 [The Agencies failed entirely to respond to the Conservation Groups’ concern that the stated purpose and need for the project was impermissibly narrow. The Transportation Agencies’ “secondary purpose” is articulated as improving system linkage in the regional roadway network “by completing the 540 outer loop around the greater Raleigh area.”⁸⁷ This purpose is contrary to FHWA guidelines, which disapprove of linking roads for no purpose other than to link them. Moreover, the purpose is impermissible in that it results in the foregone conclusion that the alternative that the Transportation Agencies would select would be a highway completing the 540 Outer Loop.⁸⁸ The Agencies only responded that alternatives were not

⁸⁶ Letter from Kym Hunter and Ramona H. McGee, SELC, to Eric Midkiff, P.E., NCDOT 4-5 (Jan. 8, 2016). Attachment 52.

⁸⁷ *Id.* at 6. Attachment 52.

⁸⁸ *Id.* at 7. Attachment 52.

screened out solely for failure to meet this secondary purpose.⁸⁹ This response does nothing to address SELC’s comments that the secondary purpose is contrary to FHWA guidelines and demonstrates an impermissibly narrow focus.

V. THE ALTERNATIVES ANALYSIS IS ARBITRARY AND CAPRICIOUS

NEPA requires that agencies “[r]igorously explore and objectively evaluate all reasonable alternatives.” *N.C. Wildlife Federation*, 677 F.3d at 602 (citing 40 C.F.R. § 1502.14(a)). In turn, “[a]ccurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA.” 40 C.F.R. § 1500.1(b). Such accuracy ensures that agencies take a “hard look” at environmental effects of proposed projects and that relevant information is available to the public. *Glickman*, 81 F.3d at 445-46 (holding that the economic assumptions underlying an EIS are subject to “narrowly focused review” to determine whether they “impair[ed] fair consideration of a project’s adverse environmental effects”). Moreover, agencies have a duty to “insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements.” *Id.* § 1502.24. The alternatives analysis, supported by thorough scientific, expert, and public review, is intended to be the “heart” of the impact statement. *Id.* § 1502.14. Despite this mandate, the DEIS only offers one true alternative: building an expensive, environmentally-destructive toll highway that completes the 540 Outer Loop.

1. An Arbitrary Screening Process

As noted above and in our 2016 comments, the first-tier alternatives screening process in the DEIS relied heavily on a misleading MOE process. Not only did the MOE process use a misleading methodology to calculate congestion relief on existing roadways, but it arbitrarily exaggerated minor differences between project alternatives in order to eliminate alternatives the Transportation Agencies did not want to move forward.⁹⁰ In response to this critique, the Transportation Agencies contended that the Conservation Groups’ comment inappropriately focused on average daily speed and travel times to the exclusion of other MOEs. Not only does this response fail entirely to address the Conservation Groups’ fundamental point, it overlooks the fact that these MOEs are key to an examination of which alternatives will meet the stated purpose and need.

The Agencies contend that the MOE ranking system was intended to avoid setting arbitrary thresholds.⁹¹ But the system employed by NCDOT just replaced arbitrary thresholds with an arbitrary ranking system. Miniscule differences in MOE scores resulted in different rankings and the Transportation Agencies just blindly applied these ranking numbers to reject alternatives without any investigation into whether these differences were meaningful. In other words the ranking system in effect directly *avoids* meaningful analysis. Accordingly, the Transportation Agencies’ secondary argument that all alternatives were subjected to the same analysis is also unavailing, because the analysis itself is flawed.

⁸⁹ Final Stakeholder Involvement Report at Response 17 to SELC Comments (2017).

⁹⁰ Letter from Kym Hunter and Ramona H. McGee, SELC, to Eric Midkiff, P.E., NCDOT 8-9. Attachment 52.

⁹¹ Final Stakeholder Involvement Report at Responses 20, 31 to SELC Comments.

2. The Scale of the Project Has Not Been Justified

25 [In addition to failing to look at alternatives to the Complete 540 concept, NCDOT has failed entirely to consider and therefore to justify why a six-lane highway is necessary. Forecast traffic volumes for the freeway average just 42,000 per day—a volume that does not justify either six lanes or a 70 foot median. Rather, a four lane highway would be sufficient to meet the projected level of traffic.

3. Multi-Modal Transportation Was Not Adequately Considered

26 [The Conservation Groups’ comments on the DEIS emphasized that the Agencies unfairly and summarily dismissed mass or multimodal transit by asserting without support that buses may increase travel times due to frequent stops and similar unsupported assertions.⁹² The Agencies did not respond to this comment.

27 [The Conservation Groups also noted that the Agencies asserted without support that an increase in mass transit would be too costly and would exceed the amount recovered from fares, when the Agencies are instead planning a project that will cost over \$2 billion and lacks financial plans to support it.⁹³ SELC explained that “[w]ithout more supporting data about bus costs, the comparative cost of bus service does not provide a rational basis for rejecting the mass transit/multi-modal alternative.”⁹⁴ The Transportation Agencies chose not to respond to this final sentence. Rather, the Transportation Agencies responded that there was no connection between financing the toll highway and financing additional buses.⁹⁵ This misses the point-- Conservation Group’s concern was that dismissing mass transit as too expensive and unfunded is entirely arbitrary given Complete 540’s funding situation.

28 [The FEIS persists in the same biased and inadequate review of mass transit or a combination of mass transit, park and ride options, TDM or TSM strategies. In particular, the FEIS fails to evaluate the projected increases in mass transit due to the recently-adopted Wake County Transit Plan, which will add new bus routes and increase frequency of existing routes throughout Wake County. The plan also calls for a commuter rail line from Garner to Durham and many bus rapid transit projects. During its first 10 years, the Wake County Transit Plan anticipates spending a significant \$2.3 billion on transit improvements to triple bus service, invest in commuter rail, and establish bus rapid transit infrastructure.⁹⁶ These substantial increases in mass transit availability are expected to in turn spur greater ridership throughout the County and alter commuting behavior,⁹⁷ thus reducing traffic and calling into question the need

⁹² Letter from Kym Hunter and Ramona H. McGee, SELC, to Eric Midkiff, P.E., NCDOT 19. Attachment 52.

⁹³ *Id.* Attachment 52.

⁹⁴ *Id.* at 20. Attachment 52.

⁹⁵ Final Stakeholder Involvement Report at Response 40 to SELC Comments.

⁹⁶ JARRETT WALKER + ASSOCIATES & KIMLEY HORN, WAKE TRANSIT PLAN: A WAKE COUNTY TRANSIT INVESTMENT STRATEGY REPORT 3 (2016). Attachment 53.

⁹⁷ *Id.* Attachment 53.

for the Complete 540 project. Such a significant expansion of mass transit within the project study area—costing the same amount as the Complete 540 project itself is anticipated to cost—warrants evaluation by the Transportation Agencies in relation to Complete 540.

29 [The FEIS further failed to evaluate any impacts that construction of the toll highway would have on implementation of the Wake County Transit Plan and transit ridership. The FEIS also failed to consider how transit vehicles may be able to use the toll road, whether they will be required to pay tolls, and whether park and ride lots may be built at exits to encourage mass transit use.

4. The Alternatives Analysis Fails to Analyze Traffic Patterns and Potential Travel Time Savings

30 [In previous comments, the Conservation Groups noted that the DEIS did not address two fundamental questions key to assessing alternatives: namely, where travelers in the project study area are going and how the alternatives will help them.⁹⁸ In response, the Transportation Agencies simply stated that the project purpose does not draw a distinction between local and through traffic.⁹⁹ The origin and destination of travelers is key, however, to assessing project alternatives. If, for example, the majority of traffic is local rather than through traffic then non-highway alternatives such as increased mass transit will be able to play more of a role in increasing mobility and reducing congestion. Similarly, alternatives such as ACCESS2040 which focus on upgrades to the local road system will be more effective for local traffic than for travelers looking simply to pass through the county on a single high speed roadway. The Transportation Agencies' failure to consider this issue constitutes a failure to take a "hard look" under NEPA. Furthermore, the Transportation Agencies' lack of interest in understanding the traffic problem they are seeking to address further demonstrates their narrow, predetermined focus on simply "completing" the 540 Outer Loop.

In comments on the DEIS, the Conservation Groups highlighted Transportation Agencies' wholly unsupported claim that the Complete 540 project would reduce travel times by 10 minutes or more.¹⁰⁰ In response, the Transportation Agencies admit that not all travelers will always save ten minutes.

31 [Documents attached to the FEIS illustrate that travel time savings will be even smaller than previously anticipated. Just as with the DEIS, the Transportation Agencies again bury this key piece of information in an appendix to a technical report. The tables in the Appendix continue to show great variation in the travel time savings for various representative trips within the project area—but the savings are overwhelmingly slim. Considering all 264 trips represented in the tables, the average amount of time saved when the 2040 No-Build ICE scenario is compared to the 2040 Preferred Alternative Build Scenario is *3.08 minutes*—0.36 minutes slower than the estimated time savings in the DEIS. Notably, trips during the peak morning hours

⁹⁸ Letter from Kym Hunter and Ramona H. McGee, SELC, to Eric Midkiff, P.E., NCDOT 12. Attachment 52.

⁹⁹ Final Stakeholder Involvement Report at Response 23 to SELC Comments; *see also* Community Impact Study 48-55 (2015) (reviewing community and environmental justice impacts in terms of relocations only).

¹⁰⁰ Letter from Kym Hunter and Ramona H. McGee, SELC, to Eric Midkiff, P.E., NCDOT 12. Attachment 52.

31

would save an average of only 2.75 minutes, while the time-savings in the peak evening hours would average 3.4 minutes. Though the average morning time savings saw an increase of a minute from the DEIS to the FEIS, the average evening time savings saw a decrease of 1.73 minutes. A full third of all trips studied would not experience any time savings at all, and, in fact, 15.2% of the trips would see their expected travel times increase. Fully half of the trips would see less than a minute saved, and 233, or 88.3% of the trips, would see less than 10 minutes saved. Even if the trips with at least 1 minute or more of time-savings are isolated, of which there are 121, the average time saved for the remaining trips is 6.7 minutes. And even then, while 264 representative trips are analyzed, there is no indication of which trips are most popular. In other words, there is no explanation or analysis of what percentage of commuters travel between any given origin and destination point, thus limiting the utility of the travel time savings estimates. The trip pairs with the highest travel time savings are between Holly Springs and Knightdale, Eastern Wake County, or Clayton, but despite repeated questions from the Conservation Groups, the Transportation Agencies have performed no investigation into how many travelers currently travel these routes, or how many are anticipated to do so in the future. Without this information, the selection of the preferred alternative and analysis of alternatives is completely arbitrary and without a rational basis.

Given the high cost of the project, it is essential that decision-makers understand who is actually likely to pay a toll to use it. And despite the Transportation Agencies' argument to the contrary, FHWA has suggested in the past that it is appropriate to assess the economic efficiency of a project.¹⁰¹ To do so more information is required: who is going to use the road and what benefit will they get?

5. The Alternatives Analysis is Based on Arbitrary Traffic Forecasting Methodology

32

The alternatives analysis in the FEIS reflects a highly arbitrary traffic forecasting methodology. While the 2016 forecasts were generated from the regional Travel Demand Model, the 2040 forecasts were developed by *applying a compound annual growth rate to the 2016 Base Year No Build volumes*.¹⁰² Failing to use a travel demand model for the basis of traffic forecasts is a highly unconventional way of doing traffic forecasts for a major facility such as Complete 540. Usually, the regional travel demand model is used to develop future year forecasts, both for the "build" and the "no build" cases, which are then "balanced/adjusted" for more detailed flows at specific intersections or turning movement. The method used here, which applies a compound growth rate to a diversion-adjusted base year estimate, has the effect of throwing away years of local model development and relying instead on a future unknown growth rate, but none of the interim growth or network changes between the base year and the future year. Moreover, the use of a 10 year historic growth rate to factor future congestion is highly unusual and needs to be further justified. Table 16 suggests that compound growth rates

¹⁰¹ See Memorandum from Polly Trotenberg, Asst. Sec. of Transp. Pol'y, Fed. Highway Admin., to Secretarial Officers and Modal Administrators on Revised Departmental Guidance on Valuation of Travel Time in Economic Analysis 19, 21 (Sept. 28, 2011) (measuring value of travel time savings in dollars per person-hour), *available at* https://www.transportation.gov/sites/dot.dev/files/docs/vot_guidance_092811c.pdf. Attachment 54.

¹⁰² Project Level Traffic Forecast 2 (2016).

within the study area will be 1.5-2 times the comparable rates for the region.¹⁰³ Given the current high growth rates in other areas of the greater Raleigh modeling area, which are among the fastest in the state, this seems unlikely.

The significant differences in modeled results versus observed counts present in table 15 of the Traffic Forecast report require further explanation.¹⁰⁴ While some variation is expected, the large gulfs between the numbers call into question the validity of one or both data sets.

6. The Alternatives Analysis Ignores the Phenomenon of Induced Traffic

33 [In previous comments, the Conservation Groups outlined at length how the statement of purpose and need was created using a methodology that has been determined illegal by a long line of federal courts, including most recently the U.S. District Court for the Eastern District of North Carolina. *See Catawba Riverkeeper Found. v. N.C. Dep’t of Transp.*, No. 5:15–CV–29–D, 2015 WL 1179646 (E.D.N.C. Mar. 13 2015). Evidently FHWA agreed with this concern, noting that at the very least “a sensitivity analysis or some other agreed upon evaluation method may be required to determine how the latest approved traffic model and socioeconomic data should be used prior to the conclusion of the NEPA process.”¹⁰⁵

The FEIS attempts to partially fix this error by reviewing travel time savings and other traffic forecasts as compared to an “ICE no build” condition. While this is an important step in the right direction, there is more that must be done. First, the step is too little too late. The Transportation Agencies should have used this information earlier in the process when they, and the public, were screening alternatives. Second as noted blow in Section VI(5), the ICE analysis is fundamentally flawed and therefore the revised traffic assessments are too.

VI. THE ANALYSIS OF ENVIRONMENTAL IMPACTS WAS ARBITRARY AND CAPRICIOUS

The Transportation Agencies’ preferred alternative would be one of the most environmentally-destructive highway projects in our state’s history, impacting thousands of feet of streams, dozens of acres of wetlands and ponds, and corresponds to destructive indirect and cumulative impacts through shifting traffic and land use patterns. This project would also negatively impact low-income communities and communities of color—impacts which were not adequately evaluated by the Transportation Agencies.

1. The FEIS Does Not Adequately Evaluate Environmental Justice Impacts

“Environmental justice” (“EJ”) is the fair treatment of all people under environmental laws, including the basic goals of equal protection from environmental hazards and equal access to the decision-making process in environmental matters.¹⁰⁶ With roots in the Civil Rights

¹⁰³ *Id.* at tbl. 16.

¹⁰⁴ *Id.* at tbl. 15.

¹⁰⁵ E-mail from Clarence Coleman, FHWA, to Kiersten Bass, HNTB, et al. (Dec. 5, 2014 2:04 PM). Attachment 55.

¹⁰⁶ *See Environmental Justice*, U.S. ENVT’L PROT. AGENCY, <https://www.epa.gov/environmentaljustice> (last visited Feb. 12, 2018). Attachment 56.

Movement of the 1960s, environmental justice was established as a legal concept in the late 1970s,¹⁰⁷ and took hold as a movement with the 1982 protest of a polychlorinated biphenyl (PCB) landfill in Warren County, North Carolina.¹⁰⁸ Over the following decades, recognition of EJ's importance has grown, although progress has been too slow in practice.¹⁰⁹

A. The Transportation Agencies Were Required to Review EJ Impacts

In 1994, President Clinton signed Executive Order 12898 the federal government's responsibility to address EJ.¹¹⁰ The Order requires federal agencies, to the greatest extent practicable to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."¹¹¹

In keeping with EO 12898, the U.S. Department of Transportation ("USDOT") maintains both a department-wide order on environmental justice and an environmental justice strategy. According to USDOT Order 5610.2(a),

It is the policy of DOT to promote the principles of environmental justice (as embodied in the Executive Order) through the incorporation of those principles in all DOT programs, policies, and activities. This will be done by fully considering environmental justice principles throughout planning and decision-making processes in the development of programs, policies, and activities, using the principles of the National Environmental Policy Act of 1969 (NEPA), Title VI of the Civil Rights Act of 1964 (Title VI) [and other laws and regulations.]¹¹²

¹⁰⁷ See *Bean v. Sw. Waste Mgmt. Corp.*, 482 F. Supp. 673, 674 (S.D. Tex. 1979).

¹⁰⁸ See *Environmental Justice*, U.S. ENV'T'L PROT. AGENCY, <https://www.epa.gov/environmentaljustice> (last visited Feb. 12, 2018). Attachment 56.

¹⁰⁹ See, e.g., Vann R. Newkirk II, *Fighting Environmental Racism in North Carolina*, THE NEW YORKER, Jan. 16, 2016, <https://www.newyorker.com/news/news-desk/fighting-environmental-racism-in-north-carolina>. Attachment 57.

¹¹⁰ Exec. Order No. 12,898 § 1-101, 59 Fed. Reg. 7629, 7629 (Feb. 11, 1994), available at <https://www.archives.gov/files/federal-register/executive-orders/pdf/12898.pdf>, Attachment 58; see also COUNCIL ON ENV'T'L QUALITY, ENVIRONMENTAL JUSTICE: GUIDANCE UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT (1997), available at <https://www.doi.gov/sites/doi.gov/files/migrated/pmb/oepe/upload/EJ-under-NEPA.pdf>, Attachment 59; N.C. DEP'T OF ENV'T'L QUALITY, 1 GUIDANCE FOR ASSESSING INDIRECT AND CUMULATIVE IMPACTS OF TRANSPORTATION PROJECTS IN NORTH CAROLINA I-28 to I-30 (2001), available at <https://connect.ncdot.gov/resources/environmental/compliance%20guides%20and%20procedures/volume%2001%20assessment%20guidance%20policy%20report.pdf>, Attachment 60.

¹¹¹ *Id.* Attachment 60.

¹¹² U.S. DEP'T OF TRANSP., DOT-OST-2012-044, DEPARTMENT OF TRANSPORTATION UPDATED ENVIRONMENTAL JUSTICE ORDER 5610.2(a), available at https://www.fhwa.dot.gov/environment/environmental_justice/ej_at_dot/orders/order_56102a/dot56102a.pdf. Attachment 61.

USDOT and other agencies entered a Memorandum of Understanding on Environmental Justice and Executive Order 12898 in which they agreed to periodically review and update their EJ strategies.¹¹³ The USDOT released an updated strategy in November 2016.¹¹⁴ According to the USDOT's updated EJ strategy, the agency's guiding EJ principles are the following:

To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process;

To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority or low-income populations; and

To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority or low-income populations.¹¹⁵

The USDOT's responsibility to ensure compliance with EO 12898 is not affected by NCDOT's assumption of primary responsibility for a project.¹¹⁶ In addition, FHWA maintains a separate directive on EJ in order to carry out its "longstanding policy to actively ensure nondiscrimination in federally funded activities."¹¹⁷ Recipients of federal funds,¹¹⁸ including NCDOT,¹¹⁹ are required to abide by EO 12898. NCDOT also encourages public participation in transportation planning to ensure environmental justice is incorporated into decisions about transportation policy and projects.¹²⁰

¹¹³ ERIC H. HOLDER, ET AL., MEMORANDUM OF UNDERSTANDING ON ENVIRONMENTAL JUSTICE AND EXECUTIVE ORDER 12898, available at <https://www.epa.gov/sites/production/files/2015-02/documents/ej-mou-2011-08.pdf>. Attachment 62.

¹¹⁴ *Environmental Justice Strategy*, U.S. DEP'T OF TRANSP. (Nov. 15, 2016), <https://www.transportation.gov/policy/transportation-policy/environmental-justice-strategy>. Attachment 63.

¹¹⁵ *Id.* Attachment 63.

¹¹⁶ STEWARDSHIP AND OVERSIGHT AGREEMENT ON PROJECT ASSUMPTION AND PROGRAM OVERSIGHT BY AND BETWEEN FEDERAL HIGHWAY ADMINISTRATION, NORTH CAROLINA DIVISION AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 5 (May 12, 2017), available at <https://connect.ncdot.gov/projects/Roadway/RoadwayDesignAdministrativeDocuments/FHWA%20and%20NCDO%20T%20Oversight%20Agreement.pdf>. Attachment 64. See 23 U.S.C. § 106(c); see also FEIS 17 (acknowledging applicability of Exec. Order 12,898).

¹¹⁷ FED. HIGHWAY ADMIN, ORDER 6640.23A, FHWA ACTIONS TO ADDRESS ENVIRONMENTAL JUSTICE IN MINORITY POPULATIONS AND LOW-INCOME POPULATIONS (2012), available at <https://www.fhwa.dot.gov/legisregs/directives/orders/664023a.pdf>. Attachment 65.

¹¹⁸ See Brenda C. Kragh, et al., FHWA-HRT-16-003, *Environmental Justice: The New Normal for Transportation*, 79 PUB. ROADS 5 (2016), <https://www.fhwa.dot.gov/publications/publicroads/16marapr/02.cfm>. Attachment 66.

¹¹⁹ *Title VI Nondiscrimination Program*, N.C. DEP'T OF TRANSP., <https://www.ncdot.gov/programs/titleVI/> (last visited Feb. 11, 2018). Attachment 67.

¹²⁰ *Toolkit Resources*, N.C. DEP'T OF TRANSP., <https://connect.ncdot.gov/projects/toolkit/Lists/ToolkitResources/DispForm.aspx?ID=85108&ContentTypeId=0x01004BE04D804D0A8A49BA2BEDFA43E08771> (last visited Feb. 11, 2018). Attachment 68.

Separately, both agencies also must comply with Title VI of the Civil Rights Act and may not conduct a highway project in a way that discriminates based upon race, color, and national origin.¹²¹ Title VI defines a program or activity as “all of the operations of . . . a department, agency . . . or other instrumentality of a State or of a local government . . . any part of which is extended Federal financial assistance.” 42 U.S.C. § 2000d-4a. Accordingly, if any part of a state agency receives federal funds, the entire agency is covered by Title VI.¹²² NCDOT is a North Carolina state agency¹²³ and is a recipient of federal funds.¹²⁴

B. The EJ Impacts of Toll Roads

Transportation projects generally raise EJ concerns when minority or low-income communities receive fewer benefits and may be disproportionately impacted by transportation investments.¹²⁵ The FHWA defines the “adverse effects” that may be suffered by EJ communities as follows:

The totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to: bodily impairment, infirmity, illness or death; air, noise, and water pollution and soil contamination; destruction or disruption of human-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community's economic vitality; destruction or disruption of the availability of public and private facilities and services; vibration; adverse employment effects; displacement of persons, businesses, farms, or nonprofit organizations; increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community; and the denial of, reduction in, or significant delay in the receipt of, benefits of FHWA programs, policies, or activities.¹²⁶

¹²¹ 42 U.S.C. § 2000d; *see Title VI of The Civil Rights Act of 1964 and Additional Nondiscrimination Requirements*, U.S. DEP'T OF TRANSP., <https://www.fhwa.dot.gov/civilrights/programs/tvi.cfm> (last modified Feb. 9, 2018), Attachment 69; *Title VI Nondiscrimination Program*, N.C. DEP'T OF TRANSP., <https://www.ncdot.gov/programs/titleVI/> (last visited Feb. 11, 2018), Attachment 67.

¹²² *See Ratliff v. Wake Forest Baptist Med. Ctr.*, No. 1:13CV991, 2014 WL 197809, at *2, *2 n.3 (M.D.N.C. Jan. 14, 2014); *see also* U.S. DEP'T OF JUSTICE, TITLE VI LEGAL MANUAL § V(C) (2017), *available at* <https://www.justice.gov/crt/fcs/T6manual5>. Attachment 70.

¹²³ *See* N.C. Gen. Stat. § 136-18.

¹²⁴ FEIS 5 (stating that Complete 540 project would include federal funding); *see* 49 C.F.R. § 21.23(f).

¹²⁵ *See* JOLANDA PROZZI, ET AL., CTR. FOR TRANSP. RES. AT THE UNIV. OF TEX. AT AUSTIN, ASSESSING THE ENVIRONMENTAL JUSTICE IMPACTS OF TOLL ROAD PROJECTS 2 (2010), *available at* http://ctr.utexas.edu/wp-content/uploads/pubs/0_6544_1.pdf (produced in cooperation with the Texas Department of Transportation and the Federal Highway Administration), Attachment 71; *see also* Richard Lazarus, *Highways and Biways for Environmental Justice*, 31 CUMB. L. REV. 569, 594 (2001) (stating that highway system in effect subsidizes those who live farther from urban centers, raising Title VI concern when disproportionately disfavoring minority residents), *available at* <https://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=1537&context=facpub>. Attachment 72.

¹²⁶ FED. HIGHWAY ADMIN, ORDER 6640.23A, FHWA ACTIONS TO ADDRESS ENVIRONMENTAL JUSTICE IN MINORITY POPULATIONS AND LOW-INCOME POPULATIONS § 5(f) (2012) (defining “adverse effects”), *available at* <https://www.fhwa.dot.gov/legregs/directives/orders/664023a.pdf>, Attachment 65. *See also* NAT'L ACADEMY OF

Tolls roads raise particular EJ concerns because the tolls themselves frequently disproportionately impact minority or low-income communities. In addition, like other major infrastructure projects, the roads impose a variety of proximity or footprint impacts that frequently disproportionately impact minority or low-income communities. Both concerns are discussed below.

C. The Inequitable Impact of Tolls

The cost imposed by a toll can have a number of economic impacts on users or potential users of the tolled facility, including changes in road use patterns, mobility, accessibility, travel reliability, trip-making behavior and trip purposes, disposable income and financial burden, and disposable time.¹²⁷ The degree to which these impacts will disproportionately affect low-income and minority communities depends on a number of factors including how many lower-income drivers will use the road, how many low-income drivers are priced out of discretionary trips, the quality of available alternative transportation options, and how toll revenues are used.¹²⁸

Accordingly, as FHWA recognizes in its 2011 Environmental Justice Emerging Trends and Best Practices Guidebook, “[c]onsideration of equity issues—such as who bears the burden of road pricing charges, who benefits from improved mobility, and how the revenues are used—is critical to ensure that road pricing programs effectively achieve environmental justice.”¹²⁹ As such, “[a] region that is considering implementation of road pricing should undertake studies to measure and assess potential impacts on disadvantaged communities at an early stage in the planning process.”¹³⁰ FHWA provides multiple data tools for conducting EJ analyses.¹³¹

FHWA has recognized for at least a decade that tolls have inequitable impacts that should be analyzed as environmental justice impacts under NEPA.¹³² In 2007, the metropolitan planning organization (MPO) for the Dallas-Fort Worth area studied the environmental justice

SCI., EFFECTIVE METHODS FOR ENVIRONMENTAL JUSTICE ASSESSMENT (2004), available at <http://www.trb.org/Publications/Blurbs/152430.aspx>. Attachment 73.

¹²⁷ NAT’L ACADEMY OF SCI., ASSESSING THE ENVIRONMENTAL JUSTICE EFFECTS OF TOLL IMPLEMENTATION OR RATE CHANGES: GUIDEBOOK AND TOOLBOX 2-3 (2018), available at <http://www.trb.org/Main/Blurbs/177062.aspx>. Attachment 74.

¹²⁸ JOLANDA PROZZI, ET AL., CTR. FOR TRANSP. RES. AT THE UNIV. OF TEX. AT AUSTIN, ASSESSING THE ENVIRONMENTAL JUSTICE IMPACTS OF TOLL ROAD PROJECTS 2 (2010), available at http://ctr.utexas.edu/wp-content/uploads/pubs/0_6544_1.pdf. Attachment 71.

¹²⁹ U.S. DEP’T OF TRANSP., ENVIRONMENTAL JUSTICE EMERGING TRENDS AND BEST PRACTICES GUIDEBOOK (2011), https://www.fhwa.dot.gov/environment/environmental_justice/resources/guidebook_2011/guidebook04.cfm. Attachment 75.

¹³⁰ *Id.* Attachment 75.

¹³¹ Resources: EJ Links - Data Tools and Resources, FHWA, https://www.fhwa.dot.gov/environment/environmental_justice/resources/data_tools/ (last visited Feb. 12, 2018). Attachment 76.

¹³² *Regional Tolling Analysis Informs NEPA Assessment of Cumulative Impacts on Low-Income Populations: Dallas-Fort Worth, Texas*, FHWA, https://www.fhwa.dot.gov/environment/environmental_justice/resources/ej_and_nepa/case_studies/case05.cfm (last visited Feb. 13, 2018). Attachment 77.

impacts of the tolled highways and high-occupancy vehicle (“HOV”) lanes in its long range plan using a “Regional Tolling Analysis” (“RTA”).¹³³ The MPO used the RTA to model traffic demand and the impact that tolling would have on EJ populations throughout the planning area. FHWA explains that “Environmental justice impacts of tolling are typically a component of NEPA analysis during project development,” but “individual project analyses did not address the potential cumulative impact of tolling.”¹³⁴ The RTA solved this problem. The FHWA describes the RTA as a “powerful tool for analysis of socio-cultural impacts and environmental justice” that has been “replicated in subsequent plans and emulated by other regions.”¹³⁵

The National Academy of Sciences (“NAS”) recently released a guidebook and toolbox for analyzing the EJ impacts of tolls, which it specifically identifies as suited for the environmental reviews conducted by USDOT under NEPA.¹³⁶ The NAS guidebook prescribes an eight-step process. First, project proponents should frame the project clearly in order to be able to focus on potential its EJ implications.¹³⁷ Second, proponents should identify the applicable EJ review framework governing the decision.¹³⁸ Third, proponents should identify the relevant decision-makers and stakeholders.¹³⁹ This requires

early and continuous communication and coordination to determine whether or not there is a potential for disproportionately high and adverse effects on minority and low-income populations; to ensure the full and fair participation by all potentially affected communities in the transportation decision-making process; and to prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.¹⁴⁰

Fourth, proponents should determine the proper scope to measure and address the impacts of the project.¹⁴¹ This may involve adjusting the study area based on input from affected communities, and identifying who would be potentially affected by the toll implementation or rate change.¹⁴² Fifth, proponents should analyze and measure EJ impacts.¹⁴³ This will involve

¹³³ *Regional Tolling Analysis Informs NEPA Assessment of Cumulative Impacts on Low-Income Populations: Dallas-Fort Worth, Texas*, FHWA, https://www.fhwa.dot.gov/environment/environmental_justice/resources/ej_and_nepa/case_studies/case05.cfm (last visited Feb. 13, 2018). Attachment 77.

¹³⁴ *Id.* Attachment 77.

¹³⁵ *Id.* Attachment 77.

¹³⁶ NAT’L ACADEMY OF SCI., *ASSESSING THE ENVIRONMENTAL JUSTICE EFFECTS OF TOLL IMPLEMENTATION OR RATE CHANGES: GUIDEBOOK AND TOOLBOX* (2018), <http://www.trb.org/Main/Blurbs/177062.aspx>. Attachment 74.

¹³⁷ *Id.* at 9. Attachment 74.

¹³⁸ *Id.* at 19. Attachment 74.

¹³⁹ *Id.* at 28. Attachment 74.

¹⁴⁰ *Id.* Attachment 74.

¹⁴¹ *Id.* at 32. Attachment 74.

¹⁴² *Id.* Attachment 74.

¹⁴³ *Id.* at 45. Attachment 74.

assessing impacts to mobility, access, and safety; social and economic impacts; physical and environmental impacts; and impacts to cultural and historic resources.¹⁴⁴ The “toolbox” includes a tool to help determine who benefits and who is burdened by tolls, the size of the benefit or burden, and whether the benefits or burdens are significantly greater for EJ populations.¹⁴⁵ Sixth, proponents should assess potential mitigation.¹⁴⁶ Proponents should quantitatively analyze Mobile Source Air Toxics (MSATs) for any project with higher potential MSAT effects.¹⁴⁷ Seventh, proponents should document the results of the analysis for decision-makers and the public.¹⁴⁸ Finally, proponents should conduct post-implementation monitoring to ensure that commitments are met.¹⁴⁹

Similarly, the Center for Transportation Research at The University of Texas at Austin has applied the following steps aimed at measuring EJ impacts: (1) analyze the impacts of a proposed toll road is to identify the populations that are potentially impacted by it; (2) identify the EJ populations that are impacted; (3) identify the additional impacts that would be caused by a toll road compared to a non-toll road alternative; (4) measure those impacts; (5) determine whether those impacts would be felt at a statistically significantly higher level by low-income and minority communities; and (6) identifies potential mitigation.¹⁵⁰

D. The Proximity and Footprint Impacts of Highways

Major highway projects have multiple footprint and proximity impacts that compound the injustice of the economic impacts discussed above.¹⁵¹ Proximity impacts include a wide variety of health hazards. For example, because highways impair air quality, living in close proximity increases risk for asthma and impaired lung function in children, for cardiac and pulmonary mortality, and likely for lung cancer.¹⁵² Stormwater runoff from highways can threaten public health.¹⁵³ Road noise is associated with increased risk of heart attack,¹⁵⁴ obesity,¹⁵⁵ and mental

¹⁴⁴ *Id.* Attachment 74.

¹⁴⁵ *Id.* Attachment 74.

¹⁴⁶ *Id.* at 48. Attachment 74.

¹⁴⁷ *Id.* at 58. Attachment 74.

¹⁴⁸ *Id.* at 62. Attachment 74.

¹⁴⁹ *Id.* at 67. Attachment 74.

¹⁵⁰ JOLANDA PROZZI, ET AL., CTR. FOR TRANSP. RES. AT THE UNIV. OF TEX. AT AUSTIN, ASSESSING THE ENVIRONMENTAL JUSTICE IMPACTS OF TOLL ROAD PROJECTS 4-7 (2010), available at http://ctr.utexas.edu/wp-content/uploads/pubs/0_6544_1.pdf. Attachment 71.

¹⁵¹ See JULIANA MAANTAY ET AL., USEPA, PROXIMITY TO ENVIRONMENTAL HAZARDS: ENVIRONMENTAL JUSTICE AND ADVERSE HEALTH OUTCOMES (2010), available at <https://archive.epa.gov/ncer/ej/web/pdf/maantay.pdf>. Attachment 78.

¹⁵² Doug Brugge et al., *Near-highway pollutants in motor vehicle exhaust: A review of epidemiologic evidence of cardiac and pulmonary health risks*, PUBMED CENTRAL (2007), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1971259/>, Attachment 79; JULIANA MAANTAY ET AL., USEPA, PROXIMITY TO ENVIRONMENTAL HAZARDS: ENVIRONMENTAL JUSTICE AND ADVERSE HEALTH OUTCOMES 62 (2010), available at <https://archive.epa.gov/ncer/ej/web/pdf/maantay.pdf>. Attachment 78.

¹⁵³ See *Frequently Asked Questions*, NCDOT, <https://www.ncdot.gov/programs/environment/stormwater/faq/> (last visited Feb. 11, 2018). Attachment 80.

health problems.¹⁵⁶ Low-income and minority populations tend disproportionately to suffer from proximity impacts.¹⁵⁷

FHWA has committed to analyzing these impacts, specifically explaining that “[i]n order to determine if there are disproportionately high and adverse effects on EJ populations, there must have been a comparison with non-EJ population.”¹⁵⁸ FHWA has developed an extensive list of quantitative and subjective questions for conducting an EJ analysis.¹⁵⁹ Environmental justice forms part of FHWA’s “Environmental Review Toolkit,”¹⁶⁰ which includes ten case studies in which the responsible agency addressed EJ early in the NEPA process.¹⁶¹ EPA also has collected methods and models for measuring disproportionate proximity impacts.¹⁶²

E. The Transportation Agencies’ Failure to Analyze EJ Impacts

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The Transportation Agencies’ discussion of EJ impacts in the FEIS was cursory and insufficient to satisfy NEPA and EO 12898.¹⁶³ First, the Transportation Agencies concluded that low-income, minority, and elderly people live throughout the study area, but are not concentrated next to any of the DSAs.¹⁶⁴ Second, the Agencies concluded that a “relatively small” number of

¹⁵⁴ Mette Sørensen, et al., Road Traffic Noise and Incident Myocardial Infarction: A Prospective Cohort Study, PLOS One (2012), available at <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0039283>. Attachment 81.

¹⁵⁵ Andrei Pyko et al., *Exposure to traffic noise and markers of obesity*, Occupational Environmental Medicine (2015), available at <http://oem.bmj.com/content/early/2015/04/28/oemed-2014-102516.full>. Attachment 82.

¹⁵⁶ Ester Orban et al., *Residential Road Traffic Noise and High Depressive Symptoms after Five Years of Follow-up: Results from the Heinz Nixdorf Recall Study*, Environmental Health Perspectives (2016), available at <https://ehp.niehs.nih.gov/14-09400/#tab1>. Attachment 83.

¹⁵⁷ See JULIANA MAANTAY ET AL., USEPA, PROXIMITY TO ENVIRONMENTAL HAZARDS: ENVIRONMENTAL JUSTICE AND ADVERSE HEALTH OUTCOMES 18 (2010), available at <https://archive.epa.gov/ncer/ej/web/pdf/maantay.pdf>, Attachment 78; Tegan K. Boehmer et al., *Residential Proximity to Major Highways — United States, 2010*, CDC, <https://www.cdc.gov/mmwr/preview/mmwrhtml/su6203a8.htm> (“The greatest disparities were observed for race/ethnicity, nativity, and language spoken at home; the populations with the highest estimated percentage living within 150 meters of a major highway included members of racial and ethnic minority communities, foreign-born persons, and persons who speak a language other than English at home. . . . consistent pattern was observed for poverty status”). Attachment 84.

¹⁵⁸ *Environmental Justics: [sic] What You Should Know*, FHWA, <https://www.fhwa.dot.gov/wadiv/crp/ejwadiv.cfm> (last visited Feb. 12, 2018). Attachment 85.

¹⁵⁹ *Id.* Attachment 85.

¹⁶⁰ *Environmental Review Toolkit: Environmental Topics: Environmental Justice*, FHWA, https://www.environment.fhwa.dot.gov/env_topics/environmental_justice.aspx (last visited Feb. 12, 2018). Attachment 86.

¹⁶¹ *Environmental Justice in NEPA Case Studies*, FHWA, https://www.fhwa.dot.gov/environment/environmental_justice/resources/ej_and_nepa/case_studies/case00.cfm (last visited Feb. 12, 2018). Attachment 87.

¹⁶² JULIANA MAANTAY, ET AL., USEPA, PROXIMITY TO ENVIRONMENTAL HAZARDS: ENVIRONMENTAL JUSTICE AND ADVERSE HEALTH OUTCOMES 21-45 (2010), <https://archive.epa.gov/ncer/ej/web/pdf/maantay.pdf>. Attachment 78.

¹⁶³ See Final Environmental Impact Statement 17-19 (2017).

¹⁶⁴ *Id.* at 17.

the displacements that would be required to build the preferred alternative would affect low-income residents.¹⁶⁵ The Transportation Agencies further concluded that the proportion of people who would be displaced by the preferred alternative who are low-income is lower than the proportion of low-income people in the study area as a whole, and therefore displacement would not disproportionately affect low-income residents.¹⁶⁶ The Transportation Agencies claim to anticipate no EJ impacts.¹⁶⁷

37 [The Agencies briefly and insufficiently addressed impacts to low-income communities and communities of color in the 2015 Community Impact Assessment (“CIA”). Here the agencies hurriedly dismissed any real consideration of toll impacts by stating that the continued availability of non-toll alternatives removes any impacts to low-income communities and communities of color.¹⁶⁸ The CIA does not examine the impact of the cost of the toll, stating that this will be added after the traffic and revenue study.¹⁶⁹ The Transportation Agencies conclude that “while low-income and minority populations are located in various parts of the Demographic Study Area, these populations are generally not concentrated within the [Direct Community Impact Area (“DCIA”)].”¹⁷⁰ The Transportation Agencies considered only whether the residential relocations required by the project would disproportionately affect low-income and minority populations, concluding that only small proportions of the people facing relocation would be low-income, and only one minority community would be affected, constituting a very small proportion of the relocations.¹⁷¹ Notably, the CIA relies on the 2011 Community Characteristics Report,¹⁷² which is nearly a decade old and relies on 1990 and 2000 census data.¹⁷³

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37 [The treatment of impacts to low-income communities and communities of color in the FEIS and supporting documents is wholly inadequate. First and most obviously, the Agencies failed to consider adequately the impacts of tolls themselves even though FHWA considers it standard to do so on the project level, and good practice to do so at the regional planning stage in order to capture the cumulative impacts of tolling. FHWA has produced a guidebook on conducting this analysis and has been aware of a tool to do so for at least a decade. Additionally, the NAS recently produced another helpful guidebook. However, the CIA merely dismisses most tolling impacts because of the availability of non-toll roads. This ignores two key facts: North Carolinian taxpayer resources are being poured into this project that the EJ communities will be unable to use; and moreover, while existing highways will continue to exist, the agencies’ own analysis shows that several will get *more* congested once the toll road is in place. Thus, the

¹⁶⁵ *Id.* at 17-19.

¹⁶⁶ *Id.* at 19.

¹⁶⁷ *Id.* at v.

¹⁶⁸ Community Impact Assessment 53-54 (2015).

¹⁶⁹ *Id.* 53.

¹⁷⁰ *Id.* 54.

¹⁷¹ *Id.* 54-55.

¹⁷² *Id.* 1.

¹⁷³ Community Characteristics Report 7 (2011).

low-income communities and communities of color are straddled with all the costs of the Complete 540 project, but will not get any of the benefit: failure to identify this fact for the public to consider is a clear violation of NEPA.

38 [Second, the Transportation Agencies did not analyze proximity impacts. The Transportation Agencies concluded that census data shows no particular concentration of low-income, minority, and elderly people next to a DSA. However, this falls far short of analyzing what the proximity impacts will be to those communities. Moreover, the Transportation Agencies' conclusion that these populations "do not appear to be concentrated in areas near any of the DSAs"¹⁷⁴ is vague and provides little basis from which even to infer that proximity impacts will be small.

39 [Third, even the Transportation Agencies' analysis of displacements is insufficient. The Transportation Agencies provided a numeric review of the low-income people who would be displaced,¹⁷⁵ but did not do so for minority displacements, merely stating that "Dreamland Mobile City neighborhood *appears to be* the sole cluster of minority residents affected by the DSAs" and would be affected by all DSAs, and therefore resulting minority relocations constitute "a very small proportion of the total relocations for each of the DSAs."¹⁷⁶ Notably, the Transportation Agencies' conclusion that this impact may be written off because all DSAs would impact Dreamland fails to acknowledge that non-highway alternatives would not do so. In addition, the Transportation Agencies did not analyze whether elderly people would be disproportionately impacted by displacements.

40 [Fourth, although the Transportation Agencies acknowledged the project would displace multiple communities, they failed to take full account of its impacts. For example, the Transportation Agencies acknowledge that "[t]he Orange Corridor would also bisect the nearby Blue Skies Mobile Home Park, requiring relocations of several of the mobile homes, and the Fairview Wooded Acres neighborhood."¹⁷⁷ Nevertheless, Blue Skies was not even included on the design public hearing maps.¹⁷⁸ When an SELC attorney asked about the park at the public meeting on February 21, 2018, noting that it was not represented on the public hearing maps, an NCDOT representative said he was not familiar with the park or its location. Not only would the highway bisect the community; according to residents, it may displace the well that supplies water to the residents of Blue Skies. Furthermore, Complete 540 will not greatly help and in many cases may worsen traffic along local roads, yet these are likely to be the routes used by low-income communities. For example, residents of the 70-East Mobile Acres & RV Park¹⁷⁹

¹⁷⁴ *Id.* at 17.

¹⁷⁵ Community Impact Assessment 55 (2015).

¹⁷⁶ *Id.* at 54-55 (emphasis added).

¹⁷⁷ *Id.* at 50; *see id.* at 51-52 (Tbl. 19).

¹⁷⁸ *See* 2018 Complete 540 Design Public Meetings & Hearing Guide to Subdivision Locations Near the Preferred Alternative, *available at* https://xfer.services.ncdot.gov/PDEA/Web/Complete540/final-eis/design-maps/C540_Subdivision_List.pdf, Attachment 88; *see also* Lisa Sorg, @lisasorg, TWITTER.COM, <https://twitter.com/lisasorg/status/966116968863617024>, Attachment 89.

¹⁷⁹ *See* GOOGLE MAPS, 70-East Mobile Acres & Rv Park, 117 Buffaloe Acres Ln, Garner, NC 27529, <https://goo.gl/maps/hKSww4pEMHYq> (last visited Feb. 22, 2018). Attachment 90.

can be expected to use I-70—which the Quantitative ICE memo shows will become more congested if Complete 540 is built—and I-70 Business, which will barely benefit.¹⁸⁰

For all these reasons, the Transportation Agencies’ analysis of EJ impacts in the FEIS is wholly inadequate to satisfy NEPA, or the agencies’ responsibilities pursuant to EO 12898. A full analysis should be prepared as part of a Supplemental EIS before the project is permitted to proceed.

2. The FEIS Does Not Adequately Evaluate Impacts to Threatened and Endangered Species

Under the Endangered Species Act (“ESA”), federal agencies must ensure that “any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined . . . to be critical.” 16 U.S.C. § 1536(a)(2). In turn, regulations from the U.S. Fish and Wildlife Service (“USFWS”) and National Marine Fisheries Service (“NMFS”) declare that the term “[j]eopardize the continued existence of” means “to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.” 50 C.F.R. § 402.02. In order to comply with the ESA’s mandate to not conduct an action likely to jeopardize endangered or threatened species, the action agency must engage in the consultation process with the USFWS or NMFS. Thus, Section 7(a)(2) imposes a procedural requirement that agencies complete the required consultation process, and a substantive requirement to not take an action that would result in jeopardy to an endangered or threatened species.

A population of dwarf wedgemussel, listed as endangered under the ESA, has long persisted in Swift Creek within the Complete 540 project area. This Swift Creek population of dwarf wedgemussel is considered essential to the recovery of the species, with the USFWS identifying this population as one that must be viable in order for the species to ever be downlisted from endangered to threatened.¹⁸¹ Similarly, the North Carolina Wildlife Resources Commission (“NCWRC”) identifies the Swift Creek Watershed as essential for the continued survival of endangered or threatened aquatic species.¹⁸² The USFWS stresses that the Swift Creek dwarf wedgemussel population’s viability is “vitaly important,” and that it “cannot understate the significance of this issue.”¹⁸³

Another mussel species, the yellow lance, is currently proposed to be listed as threatened under the Endangered Species Act and also inhabits streams within the Swift Creek Watershed. The yellow lance is already listed as endangered by the State of North Carolina.¹⁸⁴ Several other

¹⁸⁰ Quantitative ICE Report 75-76.

¹⁸¹ Dwarf Wedgemussel 2007 Status Review 5. Attachment 91.

¹⁸² Dwarf Wedgemussel Viability Study – Phase 2 (2016).

¹⁸³ Letter from Gary Jordan, USFWS, to Richard W. Hancock, P.E., NCDOT (Nov. 25, 2015), at 2. Attachment 92.

¹⁸⁴ See N.C. WILDLIFE RES. COMM’N, *Protected Wildlife Species of North Carolina* (Oct. 2017). Attachment 93.

rare and state-listed aquatic species that have been identified in the Complete 540 project area, including the Neuse River Waterdog (state special concern), Carolina Madtom, Atlantic Pigtoe (state endangered), and Green Floater (state endangered) have been petitioned to be listed under the ESA.¹⁸⁵ Additionally, the Neuse River which flows through the proposed Complete 540 action area, has been designated as critical habitat for the endangered Atlantic Sturgeon.

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The Complete 540 project as envisioned in the FEIS and supporting documents would jeopardize the continued existence of the dwarf wedgemussel and yellow lance mussel populations in violation of the ESA, may disrupt critical Atlantic Sturgeon habitat and harm spawning populations of sturgeon, and would result in severe impacts to other sensitive and rare species in the area.

A. Building the Toll Road Would Result in Severe Direct, Indirect, and Cumulative Impacts to Rare Mussels

The Biological Assessment (“BA”)¹⁸⁶ accompanying the Complete 540 FEIS documents a litany of likely impacts that would result from the project, reaching a biological conclusion of “likely to adversely affect” for both the endangered dwarf wedgemussel and the proposed to be listed as threatened yellow lance.¹⁸⁷ This result is hardly surprising considering the direct effects of a massive highway crossing over essential habitat for the dwarf wedgemussel as well as the indirect and cumulative effects from future increased traffic and land development.

In the most recent Status Review for the dwarf wedgemussel, the USFWS verified that four main factors listed in the species’ 1993 recovery plan continue to constitute key threats to the species: impoundments, pollution, riverbank alteration, and siltation.¹⁸⁸ The agencies’ BA lists as threats to the dwarf wedgemussel and yellow lance: sedimentation, habitat alteration, toxic contaminants, hydrologic changes due to land use changes, changes in peak discharge of stormwater flow, changes in runoff volume changes in base flow, thermal pollution, invasive species, and loss of riparian buffers. Similarly, the USFWS’s Yellow Lance Species Status Assessment highlights the negative impacts of road development on mussels, including land clearing, habitat fragmentation, increased impervious surfaces, sedimentation, heavy metal pollution, and changes in water temperatures and runoff patterns.¹⁸⁹ Many of these threats are likely to result from or be exacerbated by the Complete 540 project.¹⁹⁰

As highlighted in our previous comments on the DEIS, the USFWS has repeatedly warned NCDOT of its concerns with the project’s impacts to the endangered dwarf

¹⁸⁵ See N.C. WILDLIFE RES. COMM’N, *Protected Wildlife Species of North Carolina* (Oct. 2017), at 4, 6. Attachment 93.

¹⁸⁶ Two biological assessments accompany the FEIS—one for species under USFWS’s jurisdiction, and one for the Atlantic Sturgeon, which falls under NMFS’ jurisdiction. For simplicity, we refer to the main, USFWS biological assessment as the “Biological Assessment” or “BA” and specify when we are referring to the Atlantic Sturgeon BA.

¹⁸⁷ Biological Assessment 77, Tbl. 19 (2017).

¹⁸⁸ Dwarf Wedgemussel 2007 Status Review 11. Attachment 91.

¹⁸⁹ Yellow Lance Species Status Assessment Report (2017), at 42. Attachment 94.

¹⁹⁰ Biological Assessment 32-33 (2017).

wedgemussel, and the USFWS has continued that drumbeat of concern after the DEIS. In fact, as NCDOT was selecting its preferred alternative, the Service reiterated that it “does have an issue of concern, as we have previously stated multiple times, with the overall project. The likely adverse effects on the dwarf wedgemussel are a serious concern,” and the concerns persisted with the selection of DSA 2 as the preferred alternative.¹⁹¹ A later e-mail in this same chain warned that “it is still within the realm of possibility that USFWS could issue a Jeopardy Biological Opinion.”¹⁹²

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Indeed, the USFWS’s comments on the DEIS emphasized that the route ultimately selected by NCDOT as the preferred alternative is “very problematic” due to its “great potential to adversely affect the DWM since it crosses Swift Creek, tributaries to Swift Creek, and a significant portion of the watershed all downstream of Lake Benson.”¹⁹³ The comments also highlight that the interchanges with I-40 and the US 70 Bypass are “at a particularly unfavorable location for the DWM.”¹⁹⁴

The USFWS also stated that erosion and siltation from construction of the Complete 540 project, as well as indirect effects from water quality degradation due to induced growth would negatively impact the dwarf wedgemussel.¹⁹⁵ Mussel species are particularly sensitive to even small changes in water quality, as recognized by the BA, which notes “early life stages of freshwater mussels are among the most sensitive aquatic organisms to various inorganic toxicants such as copper,”¹⁹⁶ and even “[s]ediment accumulations of less than 25 mm (one inch) have been shown to cause high mortality in most mussel species.”¹⁹⁷ Sedimentation from projects can have far-reaching effects on downstream habitats—as noted in the BA, “[i]n 1997, a large plume of sediment in the Neuse River near New Bern was traced to a construction site along Crabtree Creek in Raleigh, over 180 miles upstream.”¹⁹⁸ A bridge project in Massachusetts devastated a dwarf wedgemussel population due to accelerated sedimentation and erosion.¹⁹⁹ Unsuitable flow, or drought conditions, is a top threat to dwarf wedgemussels and yellow lance.²⁰⁰ The BA even states that “sufficient stormwater controls accompanying future development activities in any given watershed are essential for conservation of sensitive aquatic species such as DWM and Yellow Lance.”²⁰¹

¹⁹¹ E-mail from Gary Jordan, USFWS to Kiersten Bass, HNTB (Feb. 22, 2016 2:23 PM). Attachment 95.

¹⁹² E-mail from Gary Jordan, USFWS to Kiersten Bass, HNTB (Feb. 22, 2016 4:01 PM). Attachment 95.

¹⁹³ Letter from Gary Jordan, USFWS, to Richard W. Hancock, PE, NCDOT (Nov. 25, 2015), at 3. Attachment 92.

¹⁹⁴ Letter from Gary Jordan, USFWS, to Richard W. Hancock, PE, NCDOT (Nov. 25, 2015), at 3. Attachment 92.

¹⁹⁵ Letter from Gary Jordan, USFWS, to Richard W. Hancock, PE, NCDOT (Nov. 25, 2015), at 3. Attachment 92.

¹⁹⁶ Biological Assessment 23 (2017).

¹⁹⁷ *Id.* at 23.

¹⁹⁸ *Id.* at 34.

¹⁹⁹ *Id.* at 23.

²⁰⁰ *Id.* at 30.

²⁰¹ *Id.* at 28.

43 Because of mussels' sensitivities, roadway runoff may be one of the most concerning aspects of the Complete 540 project. The BA documents the harmful pollutants contained in highway runoff, including heavy metals, sediment, pesticides, deicing salts, nutrients, and petroleum hydrocarbons—which can prove lethal to mussels, shorten mussel lifespans, and impact mussel health.²⁰² Significantly, the Complete 540 project would cause “localized increased exposure to roadway runoff” for the dwarf wedgemussel and yellow lance populations, “originating from 77 crossings draining to occupied habitat along the 540 alignment.”²⁰³ The BA also predicts increased runoff from the existing roadway network “due to induced increases in traffic volumes” as a result of the project.²⁰⁴ The runoff from a massive toll-highway into known mussel-occupied habitat from a startling 77 crossings, in addition to induced traffic on existing roads, will almost certainly directly harm existing dwarf wedgemussels and yellow lance, as well as impair the chances of future individual mussels to persist in what will be severely degraded habitat. These roadway runoff impacts alone would jeopardize the continued existence of these mussel species.

44 Both the dwarf wedgemussel and yellow lance populations in Swift Creek are also particularly susceptible to being wiped out by a single catastrophic event given their low numbers. As a high-speed facility that would likely serve much commercial trucking traffic, Complete 540 poses a high risk of toxic spills that would be devastating to the mussel populations in Swift Creek.²⁰⁵ The BA states that a toxic spill “event is likely to occur during the lifetime of the facility.”²⁰⁶ While NCDOT proposes to include 1-2 hazardous spill basins within the vicinity of the toll highway’s crossing of Complete 540, the BA fails to evaluate the efficacy of hazardous spill basins and to document what level of risk would persist with the proposed hazardous spill basins. Additionally, the BA fails to discuss what would happen if a hazardous spill occurred outside of the vicinity of the 1-2 hazardous spill basins. The BA also lacks detail about how these basins would be installed, including whether additional wetlands would be destroyed in order to create these basins.

45 While the BA states that NCDOT has committed to “avoid” in-stream fill related impacts at the crossing of Swift Creek, a commitment to avoid is not the same as a commitment to prohibit or abstain.²⁰⁷ The BA fails to identify the impacts that would result if NCDOT does not in fact avoid in-stream fill impacts at the crossing of Swift Creek. Indeed, the BA declares that the preferred alternative would result in “multiple crossings of streams within Swift Creek and Lower Middle watersheds that will result in both the permanent and temporary loss (fill and realignment) of stream channel.”²⁰⁸

²⁰² *Id.* at 40; *id.* at 23-25 (discussing harmful effects of toxic contaminants on mussels).

²⁰³ *Id.* at 40.

²⁰⁴ *Id.* at 40.

²⁰⁵ *Id.* at 49 (“[S]uch an event is likely to occur during the lifetime of the facility.”).

²⁰⁶ *Id.* at 49.

²⁰⁷ *Id.* at 36.

²⁰⁸ *Id.* at 46.

46 The crossings of at least three streams within a quarter-mile of known mussel-occupied habitat will require fill of stream channels, yet the BA fails to account for the likely impacts to water quality—such as water flow and sedimentation—that will almost certainly result from filling these streams.²⁰⁹ One of the identified stream crossings will result in a significant 443 liner feet of permanent fill in a stream that is less than a tenth of a mile away from known mussel-occupied habitat.²¹⁰ The BA concludes that “[t]he permanent and temporary st[re]am impacts associated with the construction of Complete 540 may have long-lived effects on the DWM and Yellow Lance’s ability to colonize these areas in the future.”²¹¹

The Swift Creek crossing is particularly concerning given its proximity to occupied mussel habitat. While the BA states that no permanent or temporary structures will be placed within Swift Creek, structures will be placed on the banks of the stream. An NCDOT engineer cautioned against making any promises about bank stability impacts as a result of these structures, noting “[t]here could be unforeseen bank failure during installation of drilled shafts nearby (i.e. 10 feet) the top of the bank,” and “extreme weather events could possibly overtop erosion control devices at the bridge crossing resulting in loss of sediment into Swift Creek.”²¹²

47 Regardless of the direct fill of streams, the BA is forthright about the likelihood of areas within the Swift and Middle Creek watersheds being used for “staging, storing, refueling, borrow pit, or spoil areas,” all of which are likely to negatively impact dwarf wedgemussels and yellow lance by altering water flow, exacerbating erosion, and increasing possible runoff and corresponding pollution.²¹³ The BA makes no commitments about avoiding these impacts—rather than prohibiting the construction activities within a specific proximity of Swift Creek, NCDOT has merely agreed to “strongly discourage the contractor” from conducting the activities within .25 miles of Swift Creek.²¹⁴ No similar limits for streams other than Swift Creek are mentioned. Indeed, an e-mail between NCDOT and a consultant reveals that NCDOT pushed to water down the consultant’s language about the borrow and fill sites and limit commitments about locating borrow and fill sites.²¹⁵

Confusingly, the BA states that no permanent or temporary structures will be allowed within 10 feet of the top of stream banks²¹⁶—but 10 feet is within applicable riparian buffers for the action area. Because riparian buffers help filter pollutants, promote stream channel stability, and maintain appropriate water and air temperatures, damage to these buffers can result in a host of detrimental impacts to water quality and in turn sensitive species like dwarf wedgemussels

²⁰⁹ *Id.* at 36.

²¹⁰ *Id.* at 36. The stream in question, SDJ, is identified in Table 10 on page 35 as being 0.071 river miles away from occupied habitat.

²¹¹ *Id.* at 47.

²¹² E-mail from Christopher Murray, NCDOT, to Kiersten Bass, HNTB (Aug. 16, 2017, 7:47 AM). Attachment 96.

²¹³ Biological Assessment 39 (2017).

²¹⁴ *Id.* at 48.

²¹⁵ E-mail from Christopher Murray, NCDOT, to Kiersten Bass, HNTB (Aug. 16, 2017, 7:47 AM). Attachment 96.

²¹⁶ Biological Assessment 38 (2017).

48 and yellow lance. In fact, as noted in the Phase 2 Dwarf Wedgemussel Viability Study, the NCWRC “recommends a minimum 200-foot native, forested buffer on perennial streams and a 100-foot forested buffer on intermittent streams in watersheds that support federally endangered and threatened aquatic species.”²¹⁷ In 2016, the Environmental Protection Agency specifically asked NCDOT whether it considered “wooded buffers under a permanent conservation easement, enhanced sediment and erosion control practices during construction,” as possible management actions regarding the dwarf wedgemussel, but NCDOT does not appear to have considered such measures in its FEIS.²¹⁸

49 Induced growth and traffic from building Complete 540 would exacerbate the harmful effects of all of the above-discussed threats by increasing impervious surface and in turn stormwater runoff, increasing roadway runoff and corresponding pollutants,²¹⁹ and increasing the chance of a catastrophic hazardous spill by virtue of simply having more traffic and more people within the area. As predicted by USFWS: “indirect habitat loss is expected due to secondary development induced by the new road facility,” and “[i]ncreased impervious surface and storm water runoff from additional development would likely further degrade the water quality of Swift Creek and its tributaries.”²²⁰ In fact, USFWS “believes that indirect effects from road-induced development are the greater concern,” to dwarf wedgemussels.²²¹ The USFWS also believes “cumulative habitat fragmentation effects will occur.”²²²

50 As acknowledged in the BA, increased impervious surfaces negatively impact water quality by changing stream flow, water temperatures, total suspended sediment, and pollutant loadings.²²³ Approximately 11% of the land area within Wake County consists of impervious surfaces, well beyond the recommendation of NCWRC to limit impervious surfaces to 6 percent of a watershed to protect aquatic species.²²⁴ Similarly, the portion of Johnston County within the Swift Creek Watershed that consists of impervious surfaces is approximately 8.6%, again above the NCWRC recommendation.²²⁵ Complete 540 will only worsen these ratios of impervious surfaces—both directly from the interjection of 28 miles of six-lane highway as impervious surface, and indirectly from the land use changes and induced development. Given the

²¹⁷ DWM Viability Study – Phase 2 at 16 (2016).

²¹⁸ E-mail from Cynthia Van Der Wiele, EPA, to Donnie Brew, NCDOT & Eric Midkiff, NCDOT (Feb. 11, 2016, 9:10 PM). Attachment 97.

²¹⁹ Indirect and Cumulative Effects Memorandum (Quantitative ICE Assessment Memo #4) (Nov. 2017), at vi (“[I]t is logical to expect more urban land use changes and larger increases in impervious area under the 2040 Build scenario in this watershed.”).

²²⁰ See, e.g., Letter from Gary Jordan, USFWS, to Richard W. Hancock, PE, NCDOT (Nov. 25, 2015), at 3, Attachment 92; see also Dwarf Wedgemussel 2007 Status Review, at 13 (“Development of adjacent uplands continues to be a significant and pervasive threat to southern populations.”), Attachment 91.

²²¹ Letter from Gary Jordan, USFWS, to Richard W. Hancock, PE, NCDOT (Nov. 25, 2015), at 1, 4. Attachment 92.

²²² Letter from Gary Jordan, USFWS, to Richard W. Hancock, PE, NCDOT (Nov. 25, 2015), at 1. Attachment 92.

²²³ Biological Assessment 27 (2017).

²²⁴ *Id.* at 27.

²²⁵ *Id.* at 27.

placement of one interchange directly next to Swift Creek, the cumulative effects of adding additional impervious surface to the Swift Creek Watershed could be devastating to the mussel populations.

B. Insufficient Information Impedes Full Review of the Impacts to Endangered and Threatened Mussels

51 [As alluded to above, the BA fails to adequately document likely impacts of the Complete 540 project to endangered and threatened species. The BA’s section dedicated to evaluating the specific effects of the proposed Complete 540 highway on mussels glosses over the actual likely effects of the project and instead focuses on mitigation measures to reduce those unspecified likely effects. Often, the BA makes a statement about the difficulty of predicting certain activities, despite having clearly identified detrimental effects from such activities in preceding sections. The BA fails to give an honest assessment of the likely impacts from this specific project.

52 [For example, the BA dodges an important analysis about sedimentation and erosion from construction, stating that predicting the amount of sedimentation likely to occur is difficult because it is “dependent on several factors, such as the frequency and duration of rainfall events that exceed the erosion control design devices, construction duration and adherence to proper maintenance of erosion control devices, and the promptness to respond and remediate erosion control failures.”²²⁶ Most of these factors are directly within NCDOT’s control, including maintenance of erosion control devices and remediation responding to erosion control failures. NCDOT should also be able to predict construction duration—and even rainfall events based on historical data. Given the detrimental impacts to mussel health associated with sedimentation, the BA should have thoroughly studied and analyzed these possible impacts.

53 [The BA also often limits its considerations of impacts to DWM and Yellow Lance to streams where they have been known to occur or recently found, even though adjacent streams are still within the species’ respective ranges and well within the area likely to experience direct and indirect effects from Complete 540.

54 [The BA regularly neglects consideration of the specific impacts to host fish species and does not appear to be taking any conservation measures specifically to protect these necessary partners in mussel development. Although the BA makes passing reference to the importance of fish host species for mussel populations, the document barely touches on the likely impacts to fish host species. In their larval form, mussels are parasitic and require living off of particular fish host species. Different mussel species have different host fish species, and as such, documenting and protecting the associated fish species is essential to ensure future viability of the mussels. The BA identifies the likely fish host species for dwarf wedgemussels as Tessellated darter, Johnny darter, Mottled Scuplin, and possibly Fantail Darter,²²⁷ and for yellow lance as “some type of minnow,” with White Shiner and Pinewoods Shiner as effective hosts in

²²⁶ *Id.* at 38.

²²⁷ *Id.* at 15-16.

laboratory tests,²²⁸ but nowhere does the BA document the current population numbers or range of these species within the Swift Creek Watershed. The BA’s discussion of impacts to fish host species is brief and general and fails to discuss impacts to the specific host species most likely to be used by the dwarf wedgemussel or yellow lance.

54 The BA should have discussed how the same threats to mussels—i.e. toxic contaminants, stormwater runoff, thermal pollution, roadway runoff, habitat destruction—would impact these fish host species. While the BA does acknowledge possible impacts such as fish “being crushed by construction materials, stranding in dewatered areas, physiological stress, and increased susceptibility to predation from dispersal, as well as acoustic related impacts,” this list of possible impacts is incomplete.²²⁹ The BA also notes that the Complete 540 project would require “some of the longest water conveyances (culvert and pipe) throughout the Swift Creek and Middle Creek watersheds,” which “have proven to be an impediment to fish migration and passage.”²³⁰ Apparently no evaluation was done to determine whether host fish species occur in any of the streams impacted by the Complete 540 project.²³¹ This glaring shortcoming of the BA must be rectified in order to determine the full extent of impacts to dwarf wedgemussels and yellow lance.

55 The BA also fails to evaluate impacts from increased dust or debris during construction of the toll highway, and also fails to analyze impacts from ingress of heavy trucks.

C. A Propagation Facility Cannot “Offset” Impacts to the endangered mussels or Comply with the ESA

56 The FEIS and corresponding reports confirm the agencies’ plans to circumvent the ESA’s conservation mandate through a mussel propagation program that would only result in more mussels being doomed to attempting to survive in unsuitable habitat. NCDOT is poised to provide a mere \$5 million to retrofit a facility for propagation purposes and to help fund the facility for just five years, but no agreements or memoranda of understanding have been finalized²³² The FEIS lacks details about when the proposed five-year agreement would begin or expire, or what would happen to the facility after those five years’ worth of funds dry up.

57 Other than explaining how the costs would be divided among Wake County and the NCWRC, the FEIS lacks any details of how the money would be spent or what it would cover. The FEIS fails to provide any cost breakdown or budget, making it impossible to tell whether \$5 million will actually be enough to fund retrofitting and running the facility. There is no way to assess the reasonableness of this funding proposal without such details.

²²⁸ *Id.* at 19.

²²⁹ *Id.* at 47.

²³⁰ *Id.* at 47.

²³¹ *Id.* at 47 (“If host fish species were determined to occur in these streams. . . .”)

²³² Final Environmental Impact Statement 58-60 (2017).

While the ESA permits agencies to incorporate conservation measures into a project in order to offset possible impacts, in order to satisfy the Section 7 requirement to not jeopardize the continued existence of the species in the wild, the agency must demonstrate that the measures are “reasonably specific, certain to occur, and capable of implementation; they must be subject to deadlines or otherwise—enforceable obligations; and most important, they must address the threats to the species in a way that satisfies the jeopardy and adverse modification standards.” *Ctr. for Biological Diversity v. Rumsfeld*, 198 F. Supp. 2d 1139, 1152 (D. Ariz. 2002) (citing *Sierra Club v. Marsh*, 816 F.2d 1376 (9th Cir. 1987)). “[E]ven a sincere general commitment” to conservation measures is insufficient under the ESA “absent specific and binding plans.” *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, 524 F.3d 917, 935–36 (9th Cir. 2008).

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As more fully detailed in the Conservation Groups’ comments on the DEIS, the Transportation Agencies had been anticipating that the cost of the propagation facility would be above \$7 million,²³³ which if correct, invites the question of where more than \$2 million additional necessary funds will come from under NCDOT’s current proposal. By comparison, a similar facility in Virginia cost \$2.3 million to construct and \$9.5 million to operate for 20 years.²³⁴ In a 2015 e-mail, NCDOT staff said that “the amount of funding for this conservation measure [augmentation] could then be justifiably increased,” in the event “any other species of mussels are listed before completion of Complete 540.”²³⁵ Yet NCDOT has apparently *decreased* what it is willing to spend on a propagation facility even as an additional mussel species—the Yellow Lance—has been set for being listed under the ESA.

Indeed, NCDOT appears to explicitly want to limit its involvement as much as possible: “NCDOT would not be responsible for the construction, management, or success of the YMACC or its propagation goals.”²³⁶ An e-mail from an NCDOT project manager shows NCDOT’s desire to simply “cut a check . . . after we agree on a figure” in an effort to deal with the mussel concerns.²³⁷ Another e-mail between NCDOT staff further documents NCDOT’s desire to provide a “counter proposal” to the Service with an aim to keep NCDOT’s dollar figure commitment “on the lower end of the pay spectrum.”²³⁸ And another NCDOT document indicates that USFWS “wants NCDOT to take a lead role and accept responsibility for [propagation and augmentation] plan implementation” but NCDOT was aiming to find the “appropriate/minimal level of involvement for NCDOT that is commensurate with the Complete 540 proj effects.”²³⁹

²³³ See e.g. Attachment to e-mail from Donnie Brew, NCDOT, to Jennifer Harris, et al. (Feb. 5, 2015 2:50 PM). Attachment 98.

²³⁴ E-mail from Sarah McRae to Donnie Brew, NCDOT, et al. (Apr. 21, 2015 11:38 AM). Attachment 99.

²³⁵ E-mail from Kenneth Medlin, NCDOT to Kiersten Bass, HNTB (June 5, 2015 11:39 AM). Attachment 99.

²³⁶ Final Environmental Impact Statement 60 (2017).

²³⁷ E-mail from Brian F. Yamamoto, NCDOT, to Jennifer Harris, HNTB, and Kiersten R Bass, HNTB (Nov. 2, 2016). Attachment 100.

²³⁸ E-mail from Philip Harris, NCDOT, to Richard Hancock, NCDOT, et al. (Apr. 20, 2015 8:55 AM). Attachment 101.

²³⁹ Attachment to e-mail from Donnie Brew, NCDOT to Jennifer Harris, et al. (Feb. 5, 2015 2:50 PM). Attachment 98.

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NCDOT cannot simultaneously point to the propagation facility as a means of satisfying its ESA obligations while also attempting to distance itself from the facility and rely on other entities to implement the propagation project. *See Oregon Nat. Desert Ass'n v. Tidwell*, 716 F. Supp. 2d 982, 1003 (D. Or. 2010) (citing *Nat'l Wildlife Fed'n v. NMFS*, 254 F. Supp.2d 1196, 1213 (D. Or. 2003)) (“The NMFS cannot rely on a third party to implement conservation measures that are not reasonably certain to occur.”); *Ctr. for Bio. Diversity v. Rumsfeld*, 198 F. Supp. 2d 1139, 1153 (rejecting suggested conservation measure where agency had “no authority . . . over the implementation of this mitigation measure.”). Given the limited scope of NCDOT’s proposed funding of a propagation facility and the lack of commitment to ensure that the habitat in Swift Creek watershed will be hospitable for mussels after the toll road is constructed, NCDOT cannot satisfy its obligations under the ESA simply by paying for another agency to grow mussels in captivity.

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As detailed in our comments on the DEIS, the process of setting up a propagation plan and facility is time-consuming and should have started years ago;²⁴⁰ it can take years simply to collect broodstock, let alone raise them to an age suitable for release. An early scope of work document for consultants working with NCDOT reinforces the lengthy process of establishing a propagation facility, successfully propagating the mussels, and releasing the mussels. The scope of work anticipated that collection efforts would begin in 2014, with ongoing annual collection efforts for seven years from 2016 to 2023, and annual releases of mussels for 10 years.²⁴¹ The scope of work also estimated that constructing the propagation facility would take at least two years’ time.²⁴² The North Carolina Dwarf Wedgemussel Work Group determined that three-year old dwarf wedgemussels are best suited for release, and a minimum of ten-years’ of releases would need to occur in order to “*potentially* achieve viability in Swift Creek.”²⁴³ In other words, a successful propagation plan will require at least 13 years from when sufficient broodstock is collected in order to potentially achieve viability—8 years more than what NCDOT is willing to contribute. As recently as September 2017, consultants for NCDOT expressed concern that “there has been little tangible progress in finalizing the plans for the facility and the funding and agreements necessary to implement the plans.”²⁴⁴

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Even if NCDOT could demonstrate that its funding proposal were sufficient to construct and operate a propagation facility, it has not demonstrated that dwarf wedgemussels and yellow lance from Swift Creek could be successfully propagated and reintroduced into the wild. The BA even admits that “there have not been any DWM population augmentation or re-introduction efforts using captive propagation.”²⁴⁵ In fact, past efforts by North Carolina State University

²⁴⁰ Meeting Summary re: Dwarf Wedgemussel Coordination for Phase 2 study and Review of USFWS Recommendations (July 18, 2014), at 2 (referring to the need to investigate population augmentation feasibility as “a time sensitive recommendation that needs immediate action.”), at 2. Attachment 102.

²⁴¹ Scope of Work, Dwarf Wedgemussel Viability Study – Phase 2: Complete 540 – Triangle Expressway 2-3 (2014). Attachment 103.

²⁴² *Id.* Attachment 103.

²⁴³ Dwarf Wedgemussel Viability Study – Phase 2 at 105 (2016) (emphasis added).

²⁴⁴ DAWSON & ASSOCIATES, ANALYSIS OF THE PROCESS AND SCHEDULES FOR THE COMPLETE 540 AND MID-CURRITUCK BRIDGE PROJECTS (2017). Attachment 104.

²⁴⁵ Biological Assessment of Potential Effects to Federally Listed Species 55 (2017).

(“NCSU”) researchers to propagate dwarf wedgemussels failed to produce viable juveniles. Between 2009 and 2011, researchers at NCSU—partially funded by NCDOT—conducted two trials attempting to breed dwarf wedgemussels in captivity. These trials were largely unsuccessful: in 2009 all juveniles were dead after one year and in 2010 there was 100% mortality after two months.²⁴⁶ Researchers stated that propagation of dwarf wedgemussel is “very difficult relative to most other species we have propagated in NC” and, further, “additional studies are required to determine the best diet and culture conditions for this species.”²⁴⁷ In particular, the researchers noted as difficulties: finding adults in the wild, females become gravid in winter when sampling is most challenging, and the small size of each dwarf wedgemussel makes it difficult to extract a large number of glochidia without damaging the mussel.²⁴⁸

To the extent NCDOT may believe it can satisfy the ESA by simply growing mussels in captivity, regardless of whether the mussels can be released later, the ESA’s mandate is clear that the goal is recovery of the species *in the wild*. ESA implementing regulations specifically tie the Section 7 jeopardy analysis to “survival and recovery of a listed species *in the wild*.” 50 C.F.R. § 402.02 (emphasis added). The ESA’s statement of purpose underscores the point of the Act in conserving and recovering species in the wild by emphasizing protection of wild ecosystems: “The purposes of this chapter are to provide a means whereby the ecosystems upon which endangered species and threatened species may be conserved” 16 U.S.C. § 1531(b).

NCDOT is well-aware of the challenges of successful propagation efforts, particularly those with dwarf wedgemussels in the Swift Creek Watershed. With the Clayton Bypass project, NCDOT funded dwarf wedgemussel propagation efforts, *but could not find brood stock from Swift Creek to start the propagation attempts*.²⁴⁹ Instead, broodstock from other locations were used to propagate 500 dwarf wedgemussels, but the mussels were never released due to concern of cross-contamination between different populations.²⁵⁰ A meeting summary document from 2014 raises the same concerns in the context of the Complete 540 project:

It appears that augmentation would require DWM from Swift Creek to start the propagation process. There is some concern that there may not be sufficient gravid DWM in Swift Creek that can be discovered and collected to initiate and maintain a propagation and augmentation program.²⁵¹

62 Given that few dwarf wedgemussels have been located in Swift Creek in recent years, it seems unlikely that sufficient broodstock could be collected—particularly without then harming

²⁴⁶ LEVINE, JAY AND ARTHUR BOGAN, NCDOT, FHwy/NC/2009-16, PROPAGATION AND CULTURE OF FEDERALLY LISTED FRESHWATER MUSSEL SPECIES 22-23 (2011). Attachment 105.

²⁴⁷ *Id.* at 23-24. Attachment 105.

²⁴⁸ *Id.* at 23. Attachment 105.

²⁴⁹ Dwarf Wedgemussel Viability Study – Phase 2 at 55 (2016).

²⁵⁰ *Id.*

²⁵¹ NCDOT, Meeting Summary re: Dwarf Wedgemussel Coordination for Phase 2 study and Review of USFWS Recommendations (July 18, 2014), at 2 (referring to the need to investigate population augmentation feasibility as “a time sensitive recommendation that needs immediate action.”), at 3. Attachment 102.

the remaining wild individuals' chances for survival in Swift Creek. Additionally, any propagation effort must be able to collect a sufficient number of broodstock to ensure adequate genetic diversity, and in turn, viability, in resulting offspring.

Despite the documented difficulty of dwarf wedgemussel propagation specific to Swift Creek, the agencies here have failed to consider how efforts related to the Complete 540 project will overcome these seemingly insurmountable hurdles.

At most, possibly three dwarf wedgemussels have been collected for propagation efforts to date. According to the Dwarf Wedgemussel Viability Study – Phase 2, three individual dwarf wedgemussels were collected in 2015 and transferred to a North Carolina Wildlife Resources Commission fish hatchery for propagation purposes.²⁵² No further details are provided—there is no indication whether the three specimens were male, female, or gravid: key details for purposes of propagation. Three male dwarf wedgemussels would do little to further propagation efforts. Similarly, three individuals is an insufficient number to ensure adequate genetic diversity in any possible progeny. NCDOT does not even verify whether the three dwarf wedgemussels survived the transfer to the hatchery. At the same time, nowhere does NCDOT document having collected any yellow lance for propagation efforts. The BA provides no information about whether yellow lance have been successfully propagated in captivity or reintroduced.

In light of these challenges to propagation efforts and the inherently time-consuming process of a potentially successful propagation facility, NCDOT's proposal to provide only five-years of funding is insufficient to even ensure the release of dwarf wedgemussels or yellow lance, let alone the viability of the Swift Creek populations after Complete 540 were built.

Even if NCDOT's funding proposal were sufficient to cover a successful propagation and release effort, NCDOT has failed to demonstrate that mussels propagated in captivity could be successfully reintroduced to the wild. In particular, NCDOT has failed to show that reintroduced mussels would have suitable habitat to foster survival post-construction of Complete 540. Growing mussels in captivity would be a futile exercise if the habitat available is severely degraded and not conducive to survival. While Swift Creek Watershed has already experienced some water quality concerns and habitat degradation, the construction of the Complete 540 toll highway would only stand to worsen those impacts, as discussed above.

The scientific community views captive breeding as a “last resort in species recovery and not a prophylactic or long-term solution” that must be carried out in conjunction with habitat *restoration* to save an endangered species from extinction.²⁵³ It is highly improbable that a captive breeding program could save a species from extinction when instituted in conjunction with habitat *destruction*. Notably, the list of threats to mussels in the agency's own BA almost exclusively pertain to habitat quality.²⁵⁴ Similarly, the most recent status review for the dwarf

²⁵² Dwarf Wedgemussel Viability Study – Phase 2 at 99 (2016).

²⁵³ Snyder, et al., *Limitations of Captive Breeding in Endangered Species Recovery*, 10 CONSERVATION BIOLOGY 338, 338 (1996), Attachment 106; *see also* Thomas, et al., *Captive Breeding of the Endangered Freshwater Pearl Mussel *Margaritifera Margaritifera**, 12 ENDANGERED SPECIES RES. 1, 7 (2010) (“[C]aptive breeding cannot be a substitute for habitat restoration.”). Attachment 107.

²⁵⁴ Biological Assessment of Potential Effects to Federally Listed Species 32-33 (2017).

wedgemussel identifies impoundments, pollution, riverbank alteration, and siltation as the main threats to the species²⁵⁵—all of which pertain to habitat quality. A recent scientific study of dwarf wedgemussels identifies unsuitable physical habitat and low water quality because of contaminants as two of three of the top threats to dwarf wedgemussels in Swift Creek and Middle Creek.²⁵⁶

As noted in one of NCDOT’s own studies incorporated into the FEIS, the North Carolina Dwarf Wedgemussel Work Group “identified ‘unsuitable physical habitat’ as the most important threat to the Swift Creek population,”²⁵⁷ and “the potential for this species to persist into the future in Swift Creek is highly dependent on habitat viability.”²⁵⁸ This same study expresses doubt about the adequacy of propagation efforts in the face of habitat degradation: “if underlying conditions (habitat degradation) are not sufficient to sustain the population, the release of propagated individuals may not enhance viability even if the Allee effect is operating.”²⁵⁹ This same report warns that “a propagation effort in and of itself will not maintain population viability,” and “[r]ather, physical habitat and water quality will also need to be sufficient to maintain population viability.”²⁶⁰

Propagation will not offset or overcome these harms to mussel habitat. In other words, NCDOT cannot avoid jeopardizing the continued existence of the dwarf wedgemussel or the yellow lance by funding—for a limited time—a propagation facility.

D. Insufficient Analysis of Atlantic Sturgeon

The Atlantic Sturgeon has been listed as endangered since 2012, and in August 2017, the NMFS designated critical habitat for the sturgeon. *See* Final Rule, Designation of Critical Habitat for the Endangered Atlantic Sturgeon, 82 Fed. Reg. 39160 (Aug. 17, 2017). This critical habitat determination includes the Neuse River throughout Wake and Johnston Counties.

When the FEIS and technical reports were released to the public on the NCDOT website on December 22, 2017, the Atlantic Sturgeon Biological Assessment (“Sturgeon BA”) was unavailable at that time. Instead, the link for this document led to a one-page placeholder document explaining that the BA was not complete, but that a copy of the draft Sturgeon BA would be provided upon request. On January 4, 2018, counsel for the Conservation Groups requested a copy of the draft Sturgeon BA, and in response on January 5, 2018, NCDOT staff stated the purpose of the placeholder document was to collect a list of interested individuals to whom to disseminate the final report upon its completion but made no mention of providing the

²⁵⁵ Dwarf Wedgemussel 2007 Status Review 11. Attachment 91.

²⁵⁶ Smith, et al., *Developing a conservation strategy to maximize persistence of an endangered freshwater mussel species while considering management effectiveness and cost*, FRESHWATER SCI., Dec. 2015, at tbl. 1. Attachment 108.

²⁵⁷ Dwarf Wedgemussel Viability Study – Phase 2 at 88 (2016).

²⁵⁸ *Id.* at 96. The study also states that the “chance of persistence” of dwarf wedgemussels in Swift Creek “is very tenuous, especially without active management and increased habitat protection.” *Id.* at 102.

²⁵⁹ *Id.* at 104.

²⁶⁰ *Id.* at 105.

draft Sturgeon BA as stated on the website.²⁶¹ On January 5, 2018, the attorney again requested the draft Sturgeon BA as indicated by the placeholder document, but received no response.²⁶² A week later, on January 12, 2018, counsel again requested the draft Sturgeon BA, and NCDOT finally provided the draft Sturgeon BA on January 16, 2018.²⁶³ The Conservation Groups and their counsel were never notified by NCDOT of when the final version of the Sturgeon BA was available; instead, counsel found the final Sturgeon BA available online on February 1, 2018—the day of the close of the general public comment period.

The Final Sturgeon BA identifies a host of likely harmful impacts that could result to Atlantic Sturgeon and its habitat due to roadway construction projects, including direct physical loss and alteration of stream habitat, acoustic effects from construction, increased chemical and thermal pollution from the project’s construction as well as induced land changes, and temporary or permanent changes in water flow.²⁶⁴ The Sturgeon BA acknowledges that Complete 540 would cause many of these impacts, including temporary and permanent placement of fill in streams and on adjacent floodplains and consequent alteration of normal water flow patterns and volumes.²⁶⁵ Complete 540 would also increase pollution from highway runoff with the 77 stream crossings along the Complete 540 route that drain into critical habitat,²⁶⁶ as well as due to induced higher traffic volumes throughout Wake and Johnston County.²⁶⁷ While the Sturgeon BA downplays the significance of water quality impacts from induced growth²⁶⁸—suggesting a small increase over a No-Build scenario—Section VI(5), below, details the flaws in the agencies’ ICE analysis and how the impacts from induced growth are likely much greater.

64 [Much like the separate analysis for impacts to mussels, the Sturgeon BA’s sections about the potential effects of Complete 540 are much more focused on discussing the agencies’ supposed mitigation measures or alleged unknowns, rather than actually documenting the impacts that would result from construction and operation of Complete 540.

65 [The Sturgeon BA’s final sections about conservation measures are similarly inadequate. For example, the Sturgeon BA claims that the Complete 540 project “is designed to not contribute sediments, toxicants, or pollutants into receiving waters where sturgeon occur,” yet

²⁶¹ E-mail from Rodger Rochelle, NCDOT, to Ramona McGee, SELC, et al. (Jan. 5, 2018 11:48 AM). Attachment 109.

²⁶² E-mail from Ramona McGee, SELC, to Rodger Rochelle, NCDOT, et al. (Jan. 5, 2018 12:53 PM). Attachment 109.

²⁶³ E-mail from Ramona McGee, SELC, to Rodger Rochelle, NCDOT, et al. (Jan. 12, 2018 10:04 AM), Attachment 109; E-mail from Rodger Rochelle, NCDOT, to Ramona McGee, SELC & Kym Hunter, SELC (Jan. 16, 2018 7:03 PM). Attachment 109.

²⁶⁴ Biological Assessment of Potential Effects to the Atlantic Sturgeon 21-22 (2018).

²⁶⁵ *Id.* at 25.

²⁶⁶ *Id.* at 27, 35.

²⁶⁷ *Id.* at 31.

²⁶⁸ *See* Endangered and Threatened Species; Designation of Critical Habitat for Sturgeon, 82 Fed. Reg. 39,160, 39,225 (Aug. 17, 2017) (“Land development and commercial and recreational activities on a river can contribute to sediment deposition that affects water quality necessary for successful spawning and recruitment.”).

the Sturgeon BA also acknowledges that juvenile sturgeon captured downriver from the action area were likely spawned upstream—which could include the action area.²⁶⁹ Indeed, in the publication of the final rule designating critical habitat for the Atlantic Sturgeon, NMFS highlighted recently-documented occurrences of Atlantic Sturgeon in the Neuse River, indicating that early and intermediate juveniles—while few in number—have regularly been found in the Neuse River. 82 Fed. Reg. at 39221. That the project is supposedly “designed to not contribute” harmful pollution and sedimentation also misses the point that the agency must not harm the sturgeon *or* its critical habitat, and ignores the reality that sediments, toxicants, and pollutants could flow downstream to wherever sturgeon do in fact occur. The Sturgeon BA also fails to explain how it will determine where sturgeon “are known to occur,” which could be variable and differ in the future from historical occurrences with changes related to the removal of the Milburnie Dam.

As discussed above regarding endangered mussels, toxic and hazardous spills pose additional threats to water quality. Importantly, “[w]ater of appropriate depth and absent physical barriers to passage” and “water quality” are two of the physical and biological features identified as being essential to adequate Critical Habitat for Atlantic Sturgeon. 82 Fed. Reg. at 39161.

66 [While the Sturgeon BA states that no construction would occur between August 15 and October 31 to avoid when Atlantic Sturgeon is most likely to be present, this moratorium does nothing to address permanent fill of channels, consequent disruptions in water flow, and altered levels of sediment and toxic pollutants.

As for acoustic or noise impacts, the Sturgeon BA states without any justification that “given the location of the project in a lotic river with running water (as opposed to estuaries or slack water runs), noise effects from drilled shafts to Atlantic Sturgeon if present are anticipated to be insignificant.”²⁷⁰ The Sturgeon BA fails to explain why the effects would be less, nor to document that the drilled shafts causing the acoustic impacts would be in locations with such “running waters” as opposed to slower-moving streams. Additionally, as observed in the Sturgeon BA, the drilled shafts for Complete 540 will actually be *larger* than the 36-inch diameter found to be not likely to adversely affect species in a separate Biological Evaluation.²⁷¹

67 [As for acoustic or noise impacts, the Sturgeon BA states without any justification that “given the location of the project in a lotic river with running water (as opposed to estuaries or slack water runs), noise effects from drilled shafts to Atlantic Sturgeon if present are anticipated to be insignificant.”²⁷⁰ The Sturgeon BA fails to explain why the effects would be less, nor to document that the drilled shafts causing the acoustic impacts would be in locations with such “running waters” as opposed to slower-moving streams. Additionally, as observed in the Sturgeon BA, the drilled shafts for Complete 540 will actually be *larger* than the 36-inch diameter found to be not likely to adversely affect species in a separate Biological Evaluation.²⁷¹

68 [Much like the project’s main BA for mussels, the Sturgeon BA fails to even attempt to document likely impacts from sedimentation and erosion likely to result from construction of the project, stating that predicting the amount of sedimentation likely to occur is difficult due to a number of factors.²⁷² That something is difficult to predict is not a valid reason to omit such an analysis in a BA or NEPA documentation.

The Sturgeon BA’s discussion of effects from borrow/fill, staging and storage is similarly lacking and conclusory—simply saying that no effects are anticipated because “these areas are

²⁶⁹ Biological Assessment of Potential Effects to the Atlantic Sturgeon 15 (2018); *see also id.* at 40 (recognizing that suitable spawning habitat occurs *upstream* of the project and that “it cannot be definitively concluded that the species is absent from this portion of the river.”).

²⁷⁰ *Id.* at 33.

²⁷¹ *Id.* at 32-33.

²⁷² *Id.* at 25.

68 regulated by NCDOT as part of project construction and will incorporate the specific PDCs in Appendix C.”²⁷³ Yet an earlier section of the Sturgeon BA noted that borrow/fill, staging and storage sites outside of regulated buffers “still have the potential to affect water quality through sedimentation, erosion, and introduction of toxic compounds into streams via stormwater channels, ditches, and overland runoff or through losses during the hauling process.”²⁷⁴

69 The Sturgeon BA also relies on wholly insufficient survey data in reaching its determinations about whether necessary physical or biological features of critical habitat are present in the project action area. The Sturgeon BA’s entire assessment appears premised on a *single day of qualitative* sampling in November 2017.²⁷⁵ Even worse, this single survey appears to have been limited to the immediate area surrounding where Complete 540 would cross the Neuse River—no surveys were completed for tributaries or areas downriver, where effects of increased sedimentation, toxic pollution, thermal pollution, and changes in water flow are likely to be experienced as a result of the project. Moreover, as acknowledged in Appendix B to the Sturgeon BA, the waterflow on this day was well below the 35-year mean according to a nearby U.S. Geological Survey water gauge, and the “distance from the water surface to the top of the respective banks (TOB) was estimated” making the Sturgeon BA’s conclusions about limited impacts to water quality and water flow even more circumspect.²⁷⁶ A geographically-limited single day of sampling fails to fairly assess seasonal and other changes in physical or biological features per the NMFS’ explanation accompanying the critical habitat final rule: “As we have discussed, these PBFs may be ephemeral or vary spatially across time. Thus, areas designated as critical habitat are not required to have the indicated values at all times and within all parts of the area[.]” 82 Fed. Reg. at 39219.²⁷⁷

In sum, the Sturgeon BA’s conclusion that the project “may affect, not likely to adversely affect” critical habitat is unsupported. The information provided in the Sturgeon BA, coupled with the inadequacies of the ICE analysis completed by the agencies, suggests that the impacts to Atlantic Sturgeon are likely to be greater than what the Sturgeon BA predicts.

E. Adverse Impacts to Other Species

70 In addition to the dwarf wedgemussel and yellow lance, Swift Creek supports 11 other rare aquatic species,²⁷⁸ including a number that USFWS is currently studying to consider whether they should be proposed to be listed as endangered or threatened under the ESA.²⁷⁹ Yet the agencies nowhere study the likely impacts to these species or other species as a result of

²⁷³ *Id.* at 33-34.

²⁷⁴ *Id.* at 26.

²⁷⁵ *Id.* at 23; *id.* at App. B at 1.

²⁷⁶ *Id.* at App. B at 1.

²⁷⁷ *See also id.* at 39220 (explaining that “a snapshot in time” may be inadequate because the “exact location of a habitat feature may change over time (e.g., water depth fluctuates seasonally, as well as annually, and even hard substrate may shift position).”).

²⁷⁸ *See* DWM Viability Study: Phase 1 (Mar. 2014) at Table 1. Rare Aquatic Species in Swift Creek.

²⁷⁹ *See* Biological Assessment at 4.

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Complete 540. Early on, NCDOT appeared poised to at least include information about the three species under review by the USFWS—the Atlantic Pigtoe, Carolina Madtom, and Neuse River Waterdog: “Given the high potential that some, or all, of these species will become listed prior to the completion of the Final Environmental Impact Statement (FEIS), it was determined to be prudent to include the baseline for these three species [Atlantic Pigtoe, Carolina Madtom, and Neuse River Waterdog] in the BA.”²⁸⁰ A recent consultant report recommended that NCDOT begin coordinating with USFWS about impacts to species “that may be under study before construction is completed.”²⁸¹

Despite these apparent plans and logic for including this species in the BA, the BA itself expressly does not include these species and provides no explanation for the omission.²⁸² The referenced baseline data was apparently gathered by NCDOT’s consultants, however, it was not disclosed in the BA or elsewhere in the FEIS and corresponding documents, leaving the public unable to comment on the adequacy of this data and the underlying methodology. In fact, an early Task Order for the Biological Assessment suggests that the baseline data for the Carolina Madtom is likely skewed because the surveys for this species were to be completed during mussel surveys, rather than during the ideal time for the species.²⁸³ Because the mussel BA and the Atlantic Sturgeon BA are the only documents accompanying the FEIS to address species impacts, this omission means that the FEIS fails to consider the impacts to these and other rare and sensitive aquatic species, violating the separate requirements of NEPA.

In its comments on the DEIS, USFWS highlighted that the Complete 540 project would “have very substantial impacts on fish and wildlife resources, including impacts to streams, wetlands, upland forest and other habitat type . . . in the form of direct loss of habitat and habitat fragmentation effects on remaining habitat.”²⁸⁴ The comments also explain that USFWS’s main concerns with the project relate to the “indirect habitat loss” anticipated from “secondary development induced by the new road facility.”²⁸⁵ Despite these warnings from USFWS, NCDOT has failed to investigate or document these likely impacts to species other than those listed under the ESA.

²⁸⁰ Aquatic Species Survey Report (June 2017), at 1; *see also id.* at 52 (“The other target species, the Atlantic Pigtoe, Carolina Madtom, and Neuse River Waterdog will be included in the BA should they become proposed before the beginning of project construction.”); H.W. Lochner, Inc., Scope of Services Task Order 12 (Sept. 14, 2016) at 1 (“Given the high potential that some, or all, of these species will become listed prior to the completion of the Final Environmental Impact Statement (EIS), it is prudent to include these species in the Biological Assessment (BA) for this project.”), Attachment 110.

²⁸¹ Dawson & Associates, Analysis of the Process and Schedules for the Complete 540 and Mid-Currituck Bridge Projects (Sept. 2017), at 9. Attachment 104.

²⁸² Biological Assessment at 4 (“These species [Atlantic Pigtoe, Carolina Madtom, Green Floater, and Neuse River Waterdog] are not addressed in this BA; however, Three Oaks has gathered baseline data for these species if they become formally listed during the development stages of this project.”)

²⁸³ H.W. Lochner, Inc., Scope of Services Task Order 12 (Sept. 14, 2016) at 3 (“The ideal time to survey for Carolina Madtom is early Spring to Summer, but the timeline for this project does not allow for such surveys.”). Attachment 110.

²⁸⁴ Letter from Gary Jordan, USFWS, to Richard W. Hancock, PE, N.C. Dep’t of Transp. (Nov. 25, 2015), at 1. Attachment 92.

²⁸⁵ *Id.* at 4. Attachment 92.

3. The FEIS Does Not Adequately Evaluate Impacts to Water Quality

71 [The FEIS confirms that the preferred alternative will impact 59,533 feet of streams, 145 acres of buffers, and 156 different wetlands comprising 69.5 acres. The Conservation Groups raised a number of concerns about this unprecedented level of impact in their earlier comments. Most of these comments were not responded to. For example, the Groups noted that the DEIS failed to explain how limits on development would affect the project and provided no information about the nature of Complete 540's impacts to the 6.7 affected acres of the Swift Creek Critical Watershed.²⁸⁶ The Agencies ignored this comment entirely. Similarly, the Conservation Groups pointed out that while the DEIS mentioned preventive measures such as sedimentation and erosion controls it did not contain any commitment that they would be followed and the measures would be unlikely to work.²⁸⁷ In response, the Agencies state that they are required to comply with the Sedimentation and Pollution Control Act and regulations, and will use Design Standards for Sensitive Watersheds throughout the project.²⁸⁸ However, this does not address the fundamental issue of whether these measures will successfully prevent contamination of the sensitive watersheds affected. The FEIS and corresponding reports continue to point to largely voluntary or non-binding measures as somehow reducing these water quality impacts.

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73 [The Conservation Groups further noted that the DEIS lacked information concerning stream and water quality impacts and that the information it did contain was dated. This harmed the "NEPA process by failing to provide information necessary to the selection of a preferred alternative."²⁸⁹ Moreover, the DEIS contained scant documentation about Section 303(d) impaired waters, which are protected from addition of certain new pollutant under the Clean Water Act.²⁹⁰ To each of these comments, the Transportation Agencies responded merely that state and federal agencies participating in the process were satisfied with the information provided.²⁹¹ But the NEPA process is not just for other state and federal agencies, it is designed to inform the public. The FEIS suffers from these same deficiencies—while it lists out the quantities of water bodies and wetlands impacted, nowhere does it provide any additional details about water quality impacts. The FEIS's Lower Swift Creek Water Quality Report was largely limited to reviewing water quality in relation to dwarf wedgemussel viability.²⁹² Even then, this report relied on sampling only three sites solely within Swift Creek—not Middle Creek or any

²⁸⁶ Letter from Kym Hunter and Ramona H. McGee, SELC, to Eric Midkiff, P.E., NCDOT 22. Attachment 52.

²⁸⁷ *Id.* at 22. Attachment 52.

²⁸⁸ Final Stakeholder Involvement Report at Response 44 to SELC Comments.

²⁸⁹ Letter from Kym Hunter and Ramona H. McGee, SELC, to Eric Midkiff, P.E., NCDOT 22. Attachment 52.

²⁹⁰ *Id.* at 23. Attachment 52.

²⁹¹ Final Stakeholder Involvement Report at Response 17 to SELC Comments.

²⁹² Lower Swift Creek Water Quality Report 1 (2016).

other tributaries—from nine different days in 2014 and 2015.²⁹³ Even this limited study revealed copper levels that exceeded applicable water quality standards.²⁹⁴

74 [Moreover, the record makes clear that USEPA, at least, was dissatisfied with the limited scope of the Transportation Agencies’ review. In a series of e-mails from November 2014, USEPA repeatedly asked for more information about stream impacts and the “lack of bridging at sites with 1000+ lf of stream impact *and* 2 or more culverts.”²⁹⁵ Then, in February 2016, USEPA was still seeking substantive responses from NCDOT regarding USEPA’s concerns and comments on the DEIS.²⁹⁶ In particular, NCDOT’s responses failed to “capture the EPA’s concerns regarding floodways, and NCDOT still had failed to satisfy USEPA’s questions about possible “further bridging to reduce project impacts,” and “what additional avoidance and minimization measures” might be implemented. USEPA also questioned what specific BMPs NCDOT intended to implement and how such measures might “go beyond the standard practice to further reduce nutrients and capture sediment,” or what stormwater mitigation measures would be employed.

75 [In a similar vein, the Conservation Groups noted that the DEIS and Natural Resources Technical Report failed to document the extent or nature of wetlands impacts.²⁹⁷ In response, the Agencies merely stated that NEPA does not prevent implementation of projects that harm wetlands.²⁹⁸ This response misses the point. NEPA emphatically does prevent implementing projects without taking a hard look at their environmental consequences. The FEIS similarly fails to take such a hard look. Nor is there any information in the FEIS regarding the mitigation that will be put in place to mitigate for the impacts of the wetlands loss. An internal NCDOT document reveals that “mitigation needs” for only Phase 2 of the project “include over 100,000 lf of stream and 85 acres of riparian wetlands,” and that this mitigation “must be implemented in FY 2015-2016.”²⁹⁹ As documented in the agencies’ 2016 Dwarf Wedgemussel Viability Report, finding sufficient mitigation sites within the appropriate area will prove challenging. The report observed that in the recent past “finding conservation areas within SCW has been very challenging,” and that “many of the landowners in the watershed believe their land is highly sought after for developers and the County alike.”³⁰⁰

76 [The Conservation Groups also noted that the Transportation Agencies’ reliance in the DEIS on local riparian buffer ordinances failed to account for the fact that North Carolina legislation prevents localities from enacting, implementing, or enforcing riparian buffers that are

²⁹³ *Id.* at 3-4.

²⁹⁴ *Id.* at 6.

²⁹⁵ E-mail from Cynthia Van Der Wiele, USEPA, to Jennifer Harris, NCDOT, and Eric Alsmeyer, USACE (Nov. 14, 2014, 12:16 PM). Attachment 111.

²⁹⁶ E-mail from Cynthia Van Der Wiele, USEPA, to Donnie Brew, FWHA, and Eric Midkiff, NCDOT (Feb. 11, 2016, 9:10 PM). Attachment 97.

²⁹⁷ Letter from Kym Hunter and Ramona H. McGee, SELC, to Eric Midkiff, P.E., NCDOT 24. Attachment 52.

²⁹⁸ Final Stakeholder Involvement Report at Response 49 to SELC Comments.

²⁹⁹ 540 Transportation Project – Triangle Expressway Southeast Extension (2015). Attachment 112.

³⁰⁰ Dwarf Wedgemussel Viability Study – Phase 2 53 (2016).

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more protective than state or federal requirements, and it was therefore error for the Agencies to rely on these buffers to mitigate the impacts of the project.³⁰¹ The Agencies provided no response to this key critique.³⁰² And the FEIS and supporting documents fail to address this concern, instead still referencing the riparian buffers of different jurisdictions respective riparian buffers without accounting for the change in law.³⁰³

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The Transportation Agencies also misrepresented and failed to address concerns about the preferred alternative’s crossing of the Neuse River Trail and other Section 4(f) resources. In the FEIS, Transportation Agencies claim that “[t]here was no expressed opposition by citizens to the proposed *de minimis* determinations for these resources [including the Neuse River Trail].”³⁰⁴ Conservation Groups provided extensive comments and concerns about the Transportation Agencies’ proposed *de minimis* determinations.³⁰⁵ With regards to the Neuse River Trail in particular, Conservation Groups stated the impacts would be far greater than *de minimis* because

users of the trail would now be subjected to increased traffic sounds and pollution and the eyesore of a giant toll highway—such impacts would adversely affect the experience of bicyclists, joggers, and walkers on this greenway, which currently does not have any comparable disturbances in this southern portion of the Trail.³⁰⁶

The Transportation Agencies’ *de minimis* determinations regarding the Neuse River Trail and other resources are in error, and the agencies must acknowledge and address Conservation Groups’ unanswered concerns.

4. The FEIS Does Not Adequately Evaluate Impacts to Air Quality

In previous comments on the DEIS, the Conservation Groups noted that the DEIS Air Quality Analysis failed to document the effects that the project would have on concentrations of harmful criteria pollutants, and in particular on ozone levels.³⁰⁷ The Transportation Agencies responded that the analysis was sufficient under NCDOT and FHWA guidelines; ozone is assessed only at the system-wide planning level; ozone is produced only downwind and in sunlight; and the Complete 540 project is not expected to push Johnson or Wake Counties out of “attainment” status for ozone under the Clean Air Act.³⁰⁸ This response fails to address the

³⁰¹ Letter from Kym Hunter and Ramona H. McGee, SELC, to Eric Midkiff, P.E., NCDOT 25. Attachment 52.

³⁰² Final Stakeholder Involvement Report at Response 50-51 to SELC Comments (2017).

³⁰³ *E.g.* Biological Assessment 43 (2017); *id.* at 50-51; Dwarf Wedgemussel Viability Study – Phase 2 44 (2016) (acknowledging change of law and possible changes to buffer regulations). While the Dwarf Wedgemussel Viability Study noted future likely changes to buffer protections, the FEIS and technical reports nowhere updates or addresses this prediction.

³⁰⁴ Final Environmental Impact Statement at 51.

³⁰⁵ Letter from Kym Hunter and Ramona H. McGee, SELC, to Eric Midkiff, P.E., NCDOT 49-52. Attachment 52.

³⁰⁶ *Id.* at 51. Attachment 52.

³⁰⁷ *Id.* at 31. Attachment 52.

³⁰⁸ Final Stakeholder Involvement Report at Response 64 to SELC Comments.

substance of SELC’s comment, which was the failure to analyze all the impacts of the project on all criteria pollutants.

78 [Now at the FEIS stage, the agencies still have not studied carbon monoxide, nitrogen oxides, volatile organic compounds, or particulate matter pollution likely to result from the project. Citing that Wake and Johnston counties’ current levels of such harmful pollutants do not exceed federal requirements, the Transportation Agencies determined they did not need to study how the road would impact such pollutant levels. That Wake and Johnston Counties are currently in attainment is irrelevant to what would be the likely future impacts of Complete 540 on air quality, including localized air pollution levels due to increased traffic in the study area.

A. The Evaluation of Toxic Pollutants from Cars is Inadequate

In the Conservation Groups’ comments on the DEIS, they also highlighted that the DEIS’s Air Quality Report gave cursory treatment to potential increases in toxic air pollutants emitted by motor vehicles, known as mobile source air toxics (“MSATs”). Specifically, the Conservation Groups explained that the Transportation Agencies failed entirely to explain the health impacts from increases in MSATs, disclaimed analyzing MSATs on the basis of difficulty, and then claimed, without explanation or analysis, that new EPA vehicle requirements will result in lower MSAT emissions.³⁰⁹ The Transportation Agencies did not respond to these comments. As already noted, agencies may not skip NEPA analyses simply because the analyses are difficult.

The Transportation Agencies responded that *after* selection of the preferred alternative they completed an Air Quality Report Addendum, but a detailed analysis of MSAT concentrations is not part of the analysis.³¹⁰ The Transportation Agencies stated that “tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited.”³¹¹ Finally, the Transportation Agencies stated that FHWA guidance also anticipates MSAT concentrations to decline as a result of EPA fuel regulations.³¹²

79 [These responses did not meaningfully address the substance of Conservation Groups’ comments, and these problems persist in the brief Air Quality Report accompanying the FEIS. The Transportation Agencies conducted a qualitative review of possible increases in MSATs, but failed to study the likely quantitative increases in MSATs, dismissing any likely increase as being offset by EPA’s stringent new vehicle requirements by the year 2050. These requirements could take decades to begin to offset pollution increases, meaning that localized increased emissions of these harmful toxics could be present in local air quality for years before any offset is experienced in Southeastern Wake County. Moreover, the expectation that MSAT emissions will decrease in the future rests on a shaky foundation in light of the Trump Administration’s

³⁰⁹ Letter from Kym Hunter and Ramona H. McGee, SELC, to Eric Midkiff, P.E., NCDOT 31-32. Attachment 52.

³¹⁰ Final Stakeholder Involvement Report at Response 65 to SELC Comments.

³¹¹ *Id.*

³¹² *Id.*

ongoing rollback of environmental regulations.³¹³ For example, the Administration is reconsidering the “Corporate Average Fuel Economy” (CAFE) standard regulating greenhouse gas emissions from cars and trucks.³¹⁴

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Additionally, the Transportation Agencies’ attempt to excuse their failure to analyze health impacts on the basis that “tools and techniques” are “limited” does not explain the Agencies’ failure to attempt to do so with the tools admittedly at their disposal. The Transportation Agencies do have the tools to study health impacts from MSATs. For example, in March 2017, well before the release of the Complete 540 FEIS in late December 2017, FHWA released a paper explaining how to conduct quantitative analysis of MSAT emissions for a hypothetical ten-mile urban freeway expansion project.³¹⁵

The Conservation Groups also noted that the DEIS should estimate the likely emissions exposures at important community locations, compare the human health costs of preferred alternative to at least one non-toll alternative, and model the health impacts of the increased MSAT exposure to the full extent practicable.³¹⁶ The Agencies did not respond to these points.

As explained previously, given that the preferred alternative would increase traffic and corresponding dirty tailpipe emissions—and that the highway would be located close to schools, day care centers, churches, and other community resources—the Transportation Agencies should study the air quality impacts of this project and provide the public with adequate information about the harmful air pollution effects of the road.

B. The FEIS Contains No Analysis of Indirect and Cumulative Effects on Air Quality

The Conservation Groups’ concerns about the DEIS’s lack of any analysis of indirect and cumulative impacts on air quality remain unanswered with the publication of the FEIS and corresponding reports. The FEIS, Air Quality Report, and ICE Memoranda are entirely silent on this topic—meaning that Conservation Groups’ comments from the DEIS remain unanswered. The Conservation Groups previously highlighted that the DEIS and related documents wholly failed to consider the indirect and cumulative impacts on air quality in the project area, noting that Complete 540 will affect growth and land use patterns, and that the Transportation Agencies stated that they planned to conduct a quantitative assessment of the indirect effects of build and no-build scenarios only *after* a preferred alternative was selected.³¹⁷

³¹³ See *Regulatory Rollback Tracker*, HARVARD LAW (2018) <http://environment.law.harvard.edu/policy-initiative/regulatory-rollback-tracker/>. Attachment 113.

³¹⁴ See EPA, *DOT Open Comment Period on Reconsideration of GHG Standards for Cars and Light Trucks*, USEPA NEWS RELEASES (Aug. 10, 2017), <https://www.epa.gov/newsreleases/epa-dot-open-comment-period-reconsideration-ghg-standards-cars-and-light-trucks>. Attachment 114.

³¹⁵ See C.D. Porter, et al., *Quantitative Mobile Source Air Toxics Analysis for a Hypothetical Transportation Project*, USDOT, FHWA TECHNICAL REPORT (Mar. 2017), https://www.fhwa.dot.gov/environment/air_quality/air_toxics/research_and_analysis/msat_hypothetical/index.cfm. Attachment 115.

³¹⁶ Letter from Kym Hunter and Ramona H. McGee, SELC, to Eric Midkiff, P.E., NCDOT 33. Attachment 52.

³¹⁷ *Id.* at 33.

In response, the Transportation Agencies disclaimed any responsibility for analyzing traffic and land use patterns and, apparently, the ensuing environmental impact, stating that such analysis is “the responsibility of the local MPO as they develop their long range transportation plan.”³¹⁸ The Transportation Agencies further stated that any long-range transportation plan must be shown to be in conformity with the state’s Clean Air Act State Implementation Plan (“SIP”) to be approved, and that because Complete 540 “comes from a long-range plan that has been shown to be in conformity with the State Implementation Plan.”³¹⁹ This appears to be the basis for the Transportation Agencies’ assertion that the project “is not expected” to push Johnson or Wake Counties out of attainment with the SIP, rendering that expectation suspect.³²⁰ The Agencies also stated that a quantitative analysis of the indirect and cumulative effects of the preferred alternative on *land development* was completed and included in the FEIS.³²¹

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The Agencies’ response fails to meaningfully address the Conservation Groups’ comment. First, the Transportation Agencies must conduct a full NEPA analysis and cannot pass their NEPA responsibilities to the MPOs. Second, the MPO’s development of a long-term regional transportation plan does not substitute for a NEPA analysis in any case. Finding that a project will not result in CAA attainment violations is simply not the same as *analyzing* its air quality impacts as NEPA requires. For example, a project that will not result in attainment violations easily could cause localized air quality impacts that must be analyzed under NEPA’s “hard look” requirement. Third, the Agencies do not explain what it means for Complete 540 to have “come from” the regional transportation plan and how that ensures that it will not result in attainment violations. Finally, the Quantitative ICE study included with the FEIS does not include an *air quality* analysis.

C. The FEIS Contains No Analysis of Greenhouse Gas Emissions

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The Conservation Groups also expressed concern that the DEIS and its corresponding Air Quality Analysis Report failed to include any reference to possible impacts on greenhouse gas emissions (“GHGs”).³²² In response, the Transportation Agencies merely state that “On April 5, 2017, the Council on Environmental Quality (CEQ) rescinded its guidance on greenhouse gas emissions and climate change” and FHWA policy does not require such analysis.³²³ This argument is a nonstarter: rather than explaining why the Agencies failed to conduct this analysis in the DEIS, the Transportation Agencies argue that because the Trump Administration has repealed climate change guidance they are *no longer* required to analyze GHGs. The Transportation Agencies are wrong. The response does not substantively address SELC’s comment, nor does it address that irrespective of the rescinded guidance (which was intended to help agencies navigate a pre-existing legal requirement), an analysis of GHG impacts must legally be part of the agencies’ “hard look” at environmental impacts likely to result from the

³¹⁸ Final Stakeholder Involvement Report at Response 66 to SELC Comments.

³¹⁹ *Id.*

³²⁰ *Id.* at Response 64.

³²¹ *Id.*

³²² Letter from Kym Hunter and Ramona H. McGee, SELC, to Eric Midkiff, P.E., NCDOT 34. Attachment 52.

³²³ Final Stakeholder Involvement Report at Response 67 to SELC Comments.

project. *See, e.g., Sierra Club v. Fed. Energy Regulatory Comm'n*, 867 F.3d 1357, 1373–74 (D.C. Cir. 2017) (holding FERC violated NEPA in not providing estimate of GHG emissions and rejecting argument that “it is impossible to know exactly what quantity of greenhouse gases will be emitted as a result of this project”); *Ctr. For Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1216–17 (9th Cir. 2008) (holding NHTSA was arbitrary and capricious when EA did not take hard look at climate change impacts of NHTSA Final Rule); *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174, 1190 (D. Colo. 2014) (holding FEIS violated NEPA where it failed to discuss impacts caused by GHG emissions); *see also Aqualliance v. U.S. Bureau of Reclamation*, No. 1:15-CV-754-LJO-BAM, 2018 WL 903746, at *39 (E.D. Cal. Feb. 15, 2018) (holding that failure to analyze impacts of climate change on project violated NEPA).

With the FEIS, the Transportation Agencies still have not studied how the preferred alternative would contribute to GHG emissions. The transportation sector now leads the power sector as the top contributor of greenhouse gas emissions,³²⁴ making it even more important to consider how expensive, long-term transportation projects like this will impact such emissions. Governor Cooper recently committed North Carolina to reducing its share of greenhouse gas emissions in line with the Paris Accord, but this toll highway would be a step away from meeting those goals by fostering and increasing dirty automobile traffic through Wake County.

5. The FEIS Contains a Flawed and Inadequate Analysis of Indirect and Cumulative Effects

NEPA requires consideration of indirect effects, defined as those effects that are “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” 40 C.F.R. § 1508.8(b). The CEQ regulations state that NEPA documents should specifically include “growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.” *Id.*

Toll roads in high-growth urban areas have generally led to significant amounts of induced growth.³²⁵ And the Transportation Agencies have long anticipated that the completion of the 540 loop would cause growth. NEPA documents identify the strong likelihood that it will do so,³²⁶ and USDOT, based on NCDOT’s representations, expects that Complete 540 will cause

³²⁴ Tom Randall, *America Crowns a New Pollution King*, BLOOMBERG NEWS (Dec. 4, 2017), <https://www.bloomberg.com/news/articles/2017-12-04/america-crowns-a-new-pollution-king>. Attachment 116.

³²⁵ Jeffrey Spivak, *Toll Roads: The Route to Redevelopment?*, URBAN LAND (Oct. 29, 2013), <https://urbanland.uli.org/industry-sectors/infrastructure-transit/toll-roads-the-route-to-redevelopment/>. Attachment 117.

³²⁶ Preferred Alternative Report 6 (2016) (“Compared to the no-build scenario, however, the build scenarios could lead to more rapid growth and more intense development in some areas near proposed interchanges.”); Qualitative ICE Report 8 (2014) (“The project will add access points for properties, which will be most notable at the project’s interchange locations, where nearby parcels will become attractive for higher intensity development such as retail and other commercial uses.”); Community Characteristics Report 34 (2011) (“Areas near interchanges can become attractive locations for retail and other commercial land uses.”).

82 [\$811 million in total economic impact through 2030.³²⁷ The FEIS and supporting documents acknowledge that Complete 540 would cause growth,³²⁸ but they fail to account sufficiently for the degree of “induced growth” and development to the area.

Regional and local planners also expect the highway to cause growth. As the 2015 Community Impact Assessment states:

While economic development is not an explicit component of the purpose of the Complete 540 project, local, regional, and state planners and elected officials believe the project would improve the economic competitiveness of the project area. The municipalities in the project area anticipate that the project will spur commercial and industrial growth near interchange areas, increasing local tax bases and providing new jobs for area workers.³²⁹

CAMPO has found that proximity to highway interchanges is one of the principal influences on where future development occurs³³⁰ and that the highway “should be a stimulus for economic development” in Garner.³³¹ Johnston County planners expect that Complete 540 will “encourage development”³³² and “facilitate growth.”³³³ The county’s economic development director expects Complete 540 to have a big impact on the county.³³⁴ Wake County planners share similar expectations. In a letter to NCDOT, the Director of Wake County Planning, Development and Inspections stated that the Orange Route has “played a key role in identifying areas for non-residential development,” some of which are already being developed according to plan.³³⁵ The Wake Board of Commissioners expressed support for the Orange Route on the

³²⁷ *Triangle Expressway*, USDOT, <https://www.transportation.gov/tif/financed-projects/triangle-expressway> (last visited Feb. 14, 2018). Attachment 118.

³²⁸ See FEIS 23-24 (effects on water quality could be greater under build scenario due to induced growth) 62 (expected growth); ICE Memorandum 1, 24; Community Impact Assessment (2015).

³²⁹ Community Impact Assessment E-4 (2015); see also FEIS 23 (“local governments in the study area have adopted land use plans that include completion of the 540 Outer Loop”).

³³⁰ 2040 Long-Range Transportation Plan 38 (2013), http://files.www.camponc.us/Plans/MTP/2040/2040_Joint_MTP_Chapter_6_v5_4-1-13.pdf. Attachment 119.

³³¹ Core Technical Team Meeting #2, SOUTHEAST AREA STUDY 6 (July 9, 2015), <http://www.southeastareastudy.com/documents/20150709%20CTT%20Meeting%20Notes.pdf>. Attachment 120.

³³² 2030 Comprehensive Plan, Johnston County, 25 (2009), <http://www.johnstonnc.com/files/planning/comprehensive%20plan%2003-02-09.pdf>, Attachment 121; see also *On the Road 2017: Johnston County*, TRIANGLE BUS. J. (2017), <https://www.bizjournals.com/triangle/news/2017/06/30/on-the-road-2017-johnston-county.html?s=print> (Johnston County leaders expect regional transportation plan to stimulate economic development), Attachment 122.

³³³ Integrated Planning For School And Community (IPSAC) Land Use Study Report, Johnston County Schools, 7 (2014), https://www.johnston.k12.nc.us/cms/lib/NC02214550/Centricity/Domain/94/20140428_JCS_LUS_FINAL.pdf. Attachment 123.

³³⁴ *On the Road 2017: Johnston County*, TRIANGLE BUS. J. (2017), <https://www.bizjournals.com/triangle/news/2017/06/30/on-the-road-2017-johnston-county.html?s=print>. Attachment 122.

³³⁵ Final Stakeholder Involvement Report 434 (2017).

grounds that residents, businesses and property owners face uncertainty as long as different alternatives are under consideration.³³⁶

Municipalities in the study area also expect the highway to induce growth.³³⁷ In its comprehensive plan, Holly Springs anticipates that its “Northeast Gateway” community growth area will become “a commercial destination with a regional commercial center proposed for the future NC540 interchange,”³³⁸ and that this area will not face development pressure until Complete 540 is completed.³³⁹ Planners expect Complete 540 to cause a “building boom” in Holly Springs.³⁴⁰ The town of Apex expects that Complete 540 may bring development pressure,³⁴¹ and Wake Forest considers proximity to I-540, “which eventually will circle metropolitan Raleigh,” important to its economic development.³⁴² Fuquay-Varina expects through-trips to increase dramatically with Complete 540, creating “great opportunities” for growth³⁴³ while increasing traffic³⁴⁴ and creating a barrier between a portion of the town and the majority of Fuquay-Varina.³⁴⁵

State and municipal representatives have made their expectations clear during the NEPA process. State Senator Chad Barefoot testified that “540 is extremely important and critical to our economic future in this area of Wake County and we must build it.”³⁴⁶ At a community meeting the representative from the Town of Apex stated that he believed Complete 540 would “make economic development explode” in the Garner area.³⁴⁷ Similarly, a representative from

³³⁶ *Id.* at 418.

³³⁷ See Ben Graham, *Towns plan for development spurred by 540 expansion*, TRIANGLE BUS. J., (2018), <https://www.bizjournals.com/triangle/news/2018/01/18/towns-plan-for-development-spurred-by-540.html> (“town officials in southern Wake County are already preparing for the new development that could come in the wake of the highway expansion”). Attachment 124.

³³⁸ Vision Holly Springs: Town of Holly Springs Comprehensive Plan Amended Supplement #4, 1-5, <https://www.hollyspringsnc.us/DocumentCenter/View/508>. Attachment 125.

³³⁹ *Id.* at 1-9. Attachment 125.

³⁴⁰ Kathryn Trogdon, *Holly Springs talks growth impacts amid increasing population*(2016), <http://www.newsobserver.com/news/local/community/southwest-wake-news/article63386967.html>. Attachment 126.

³⁴¹ The Apex Comprehensive Plan, Apex, NC, 2 (2013), *available at* <http://www.apexnc.org/DocumentCenter/View/494>. Attachment 127.

³⁴² Strategic Economic Development Action Plan for the Town of Wake Forest, North Carolina 8 (2005), <https://www.wakeforestnc.gov/Data/Sites/1/media/business/wakeforestecondevplan%209-20-05.pdf>. Attachment 128.

³⁴³ 2035 Community Vision Land Use Plan, Fuquay-Varina, 55 (2017), <https://www.fuquay-varina.org/documentcenter/view/2484>. Attachment 129.

³⁴⁴ *Id.* at 38. Attachment 129.

³⁴⁵ *Id.* at 118. Attachment 129.

³⁴⁶ Final Stakeholder Involvement Report 262 (2017).

³⁴⁷ 2014 Alternatives Development and Analysis Report, Attachment 4, Transportation Advisory Committee, December 12, 2012 Minutes at 4, *available at* https://xfer.services.ncdot.gov/PDEA/Web/Complete540/reports/C540_Alts_0514.pdf. Attachment 130.

Knightdale believed that economic growth would be inhibited until Complete 540 was built,³⁴⁸ and the representative from Holly Springs believed it growth would follow.³⁴⁹ Garner’s town manager testified that the town’s growth plans are “contingent on the development” of Complete 540 along the Orange Route.³⁵⁰

Representatives from the business community also expect Complete 540 to cause significant growth.³⁵¹ The CEO of the Greater Raleigh Chamber of Commerce believes that “the Complete 540 project opens up the southern part of Wake County for expanded development and new commercial, industrial and office opportunities.”³⁵² The freeways chair of the Regional Transportation Alliance (“RTA”) believes that Complete 540 is “an economic development issue, too, as companies considering expanding in North Carolina are looking at how a state’s government supports vital infrastructure projects.”³⁵³ The RTA believes, “if we build it, they can come.”³⁵⁴ The executive director of Holly Springs’ Chamber of Commerce expects Complete 540 to enable expanded growth, pointing out that businesses consider freeway access when making decisions on location.³⁵⁵

Indeed, Complete 540 is already affecting growth. Complete 540 will directly cause commercial and residential development in Apex, where the proposed Veridea development would be “almost impossible” without a new interchange, which will function as its “front door,”

³⁴⁸ *Id.* at 5. Attachment 130.

³⁴⁹ *Id.* at 6. Attachment 130.

³⁵⁰ Final Stakeholder Involvement Report 272 (2017); *see also id.* at 505 (Town of Garner comments on DEIS concerning expected growth in corridor); *Press Release: 540 accelerates*, GARNER CHAMBER OF COMMERCE (Dec. 22, 2017), <http://business.garnerchamber.com/news/details/news-release-12-22-2017> (declaring highway a “top freeway priority”), Attachment 131.

³⁵¹ *See Rating Action: Moody's upgrades Triangle Expressway's (NC) senior lien revenue bonds rating to Baa2 from Baa3; outlook stable*, MOODY’S INVESTORS SERVICE (Dec. 21, 2017), https://www.moodys.com/research/Moodys-upgrades-Triangle-Expressways-NC-senior-lien-revenue-bonds-rating--PR_904371552 (recognizing that Complete 540 could “lead to higher level of traffic and revenues on the corridor”). Attachment 132.

³⁵² *Press Release: Big News! Complete 540 highway project ahead of schedule*, GARNER CHAMBER OF COMMERCE (Dec. 22, 2017), <http://business.garnerchamber.com/news/details/big-news-complete-540-highway-project-ahead-of-schedule>. Attachment 133.

³⁵³ *See* Lauren K. Ohnesorge, *NC DOT Secretary: We want to accelerate I-540 project*, TRIANGLE BUS. J., <https://www.bizjournals.com/triangle/news/2017/07/14/ncdot-secretary-we-want-to-accelerate-i-540.html> (last visited Feb. 14, 2018). Attachment 134.

³⁵⁴ *America’s Most Forward-Moving Region: RTA 2018 Triangle Mobility Report*, REG’L TRANSP. ALL. 8 (2018), <http://letsgetmoving.org/cms/wp-content/uploads/2018/01/RTA-Final-printable.pdf>. Attachment 135.

³⁵⁵ Final Stakeholder Involvement Report 275 (2017); *see also id.* at 597 (email from Morrisville Chamber of Commerce to Complete 540 team expressing same); ICE Memorandum 4, ii (2017) (acknowledging growth and development patterns likely influenced by proximity to major transportation facilities and commercial and retail centers); *Press Release: Big News! Complete 540 highway project ahead of schedule*, GARNER CHAMBER OF COMMERCE (Dec. 22, 2017), <http://business.garnerchamber.com/news/details/big-news-complete-540-highway-project-ahead-of-schedule> (explaining that Raleigh Chamber of Commerce CEO believes that “[w]hen recruiting companies, infrastructure is a critical selling point.”), Attachment 133.

according to the town's transportation engineer.³⁵⁶ The Community Impact Assessment acknowledges that the project "is dependent upon construction of the Complete 540 project."³⁵⁷ The development will include 2 million square feet of office/industrial space, 3.5 million square feet of retail and 8,000 residential units,³⁵⁸ and could bring 30,000 jobs.³⁵⁹ Furthermore, commercial developers are promoting new developments based on proximity to the route for Complete 540,³⁶⁰ as they do along the existing route.³⁶¹ The towns of Fuquay-Varina³⁶² and Holly Springs³⁶³ are doing the same.

A. Existing Portions of I-540 Caused Extensive Growth

Recent experience has shown that construction of a large highway in this area will cause substantial growth; this is precisely what happened following construction of the existing portions of I-540.

Municipal planners expected growth from previous portions of I-540. The town engineer for Holly Springs expected it to "spark investment in western Holly Springs by encouraging more residential and commercial development in the area, where there are still many large pieces of undeveloped land" and making "existing subdivisions in the area more accessible and desirable."³⁶⁴ The mayor expected land prices to spike in the area near the interchange.³⁶⁵

³⁵⁶ Kathryn Trogdon, *New TriEx interchange to improve access to growing Apex, Holly Springs*, THE NEWS & OBSERVER (May 04, 2016), <http://www.newsobserver.com/news/local/community/southwest-wake-news/article75408412.html>. Attachment 136.

³⁵⁷ Community Impact Assessment 42 (2015), https://xfer.services.ncdot.gov/PDEA/Web/Complete540/reports/C540_CIA_0615.pdf. Attachment 137.

³⁵⁸ *Veridea*, Town of Apex Economic Development, <https://www.apexnc.org/910/Veridea> (last visited Feb. 14, 2018). Attachment 138.

³⁵⁹ Community Impact Assessment 42 (2015), https://xfer.services.ncdot.gov/PDEA/Web/Complete540/reports/C540_CIA_0615.pdf. Attachment 137.

³⁶⁰ *See, e.g., Fairview Village, Cary, NC*, CASTOINFO.COM, <http://www.castoinfo.com/retail/portfolio/north-carolina/fairview-village/> (last visited Feb. 14, 2018) ("Site is located less than 2 miles away from future Expressway Southeast Extension which will complete the I-540 Outer Loop around the greater Raleigh area."). Attachment 139.

³⁶¹ *See, e.g., Hilltop Shopping Center*, CENTER MANAGEMENT, <http://www.centermgmt.com/property-brochure.aspx?id=1741> (noting location in Fuquay-Varina "just minutes from the ever-expanding Triangle Expressway"), Attachment 140; *Woodcreek*, NORTHSIDE REALTY, <https://www.northside-realty.com/neighborhood/woodcreek-holly-springs-nc> (last visited Feb. 14, 2018) ("Woodcreek is also located just a mile from Hwy 55 and the Triangle Expressway . . ."), Attachment 141; *Shopping Center For Lease*, EDWARDS COMMERCIAL REAL ESTATE, http://c.ymcdn.com/sites/www.ncchiro.org/resource/resmgr/Temporary_files/Greenwood_Commons_Flyer.pdf, Attachment 142; *Highcroft*, KELLER WILLIAMS, <https://www.trianglehomesandrealstate.com/neighborhood/highcroft> (last visited Feb. 14, 2018), Attachment 143.

³⁶² *Infrastructure*, FUQUAY-VARINA ECONOMIC DEVELOPMENT DEPARTMENT, <https://www.fuquay-varina.org/596/Infrastructure> (last visited Feb. 14, 2018) ("proposed I-540 Southern Expressway . . . will "even greater access"). Attachment 144.

³⁶³ *2014 Developer's Luncheon: Come Grow With Us: An Update on Growth & Development in Holly Springs*, Slide 30, <https://www.hollyspringsnc.us/DocumentCenter/View/7089>. Attachment 145.

³⁶⁴ *Id.* Attachment 145.

Following the 2011 opening of the Triangle Expressway building permits in Holly Springs rose 47 percent in 2011 and again in 2012.³⁶⁶ Similarly, the Town of Apex expected the 2012 portion of the Triangle Expressway to make Apex a “destination of choice” for employers, workers, and retailers.³⁶⁷ In its 2013 comprehensive plan, the first “supporting recommendation” for economic growth is to identify “new industrial/business/office park sites totaling 100-150 contiguous acres on NC-55, US-64, US-1, and Jessie Drive to accommodate non-retail employment” because these roads “capitalize on access to NC-540.”³⁶⁸ The third recommendation is to “[i]dentify and reserve at least one industrial/business park parcel over 50 acres near an NC-540 interchange for a potential major employer relocation, taking advantage of the attractiveness of the confluence of three limited access highways” and maintain dialogue with the developers of Veridea.³⁶⁹

The planners were correct, and rapid growth followed. Beau Memory, Executive Director of the Turnpike Authority, declared, “[a]s a result of the Triangle Expressway, we’re seeing an explosion of growth around the facility,” adding that additional interchanges would also bring growth.³⁷⁰ Real estate developers have found the road was a “selling point for homebuyers.”³⁷¹ Shopping centers have sprung up, largely within a few miles of the road.³⁷² The Triangle Expressway led to the development of the Holly Springs Towne Center shopping plaza.³⁷³ The expressway also “created new market opportunities for development” in Cary.³⁷⁴ In Knightdale, commercial building permits nearly quadrupled and permits for new homes nearly doubled as a result of the northern portion of I-540.³⁷⁵

Raleigh was “reshaped” between 1997 and 2007 “as I-540 has fueled a surge in residential, commercial and office development from Brier Creek near Raleigh-Durham

³⁶⁵ *Id.* Attachment 145.

³⁶⁶ Jeffrey Spivak, *Toll Roads: The Route to Redevelopment?*, URBAN LAND (2013), <https://urbanland.uli.org/industry-sectors/infrastructure-transit/toll-roads-the-route-to-redevelopment/>. Attachment 117.

³⁶⁷ The Apex Comprehensive Plan, Apex, NC, 2 (2013), <http://www.apexnc.org/DocumentCenter/View/494>. Attachment 127.

³⁶⁸ *Id.* at 33. Attachment 127.

³⁶⁹ *Id.* Attachment 127.

³⁷⁰ Bruce Siceloff, *Two new interchanges will bring more paying customers to Triangle Expressway*, THE NEWS & OBSERVER (Jul. 10, 2015), <http://www.newsobserver.com/news/local/counties/wake-county/article27000928.html>. Attachment 146.

³⁷¹ *Id.* Attachment 146.

³⁷² *Toll road credited for Holly Springs construction boom*, WRAL.COM (Oct. 4, 2012), <http://www.wral.com/toll-road-credited-for-holly-springs-construction-boom/11627169/>. Attachment 147.

³⁷³ Kathryn Trogdon, *New TriEx interchange to improve access to growing Apex, Holly Springs*, THE NEWS & OBSERVER (May 04, 2016), <http://www.newsobserver.com/news/local/community/southwest-wake-news/article75408412.html>. Attachment 136.

³⁷⁴ Cary Community Plan 2040, 195, <http://www.townofcary.org/home/showdocument?id=14055>. Attachment 148.

³⁷⁵ *I-540 Speeds Growth in Knightdale*, WRAL.COM (June 19, 2007), <http://www.wral.com/news/local/story/1501713/>. Attachment 149.

International Airport to Wakefield on Raleigh’s Northern end.”³⁷⁶ “All this additional development has worsened congestions on the north-south roads that intersect I-540.”³⁷⁷ Already by 2011, residents living on those roads complained of “having to wait five to ten minutes to make a left turn from their local streets onto arterials that intersect I-540” and of congestion at interchanges.³⁷⁸ “Transportation planners say that the loop will eventually be overwhelmed by the growth it is fueling, and traffic will be as congested as it was before the first section—from I-40 to U.S. 70—opened in January 1997.”³⁷⁹ “But by then, hundreds of thousands more families will have established careers, homes and roots here, thanks in part to the Outer Loop.”³⁸⁰

Independent analysis further demonstrates the impacts that the existing portions of NC 540 has had on housing growth. Between 1977 and 1997, housing grew gradually to the north and west of downtown Raleigh.³⁸¹ But as NC 540 encircled the city between 1997 and 2012, these areas experienced dramatic growth.³⁸² Analyses of the change in the number of housing units available in the Raleigh area between 1990 and 2016³⁸³ or 2000 and 2016,³⁸⁴ and the percentage change between 1990 and 2016³⁸⁵ all show the same stark pattern: startling growth near the existing portions of NC 540 and more modest growth elsewhere. The following map depicts the percentage change between 1990 and 2016:

³⁷⁶ Matthew Eisley & Bruce Siceloff, *The News & Observer*, Sept. 7, 2007. Attachment 150.

³⁷⁷ WILLIAM M. ROHE, *THE RESEARCH TRIANGLE: FROM TOBACCO ROAD TO GLOBAL PROMINENCE* 125 (2011). Moreover the Turnpike Authority found that the highest percentage of growth in traffic between 2001 and 2005, “occurred on I-540 and on various arterial roadways in Morrisville. This may be due to the opening of I-540 to the east between I-40 and US 1 in 1997.” Attachment 150. N.C. TURNPIKE AUTHORITY, *TRIANGLE EXPRESSWAY: COMPREHENSIVE TRAFFIC AND REVENUE STUDY 2–6* (2008), https://www.ncdot.gov/projects/triangleexpressway/download/triex_200806CompTrafficRevenueStudy.pdf. Attachment 151.

³⁷⁸ *Id.* at 125. Attachment 151.

³⁷⁹ *Id.* (quoting Eisley & Siceloff, *supra* note 376 at A1). Attachment 150.

³⁸⁰ *Id.* Attachment 150.

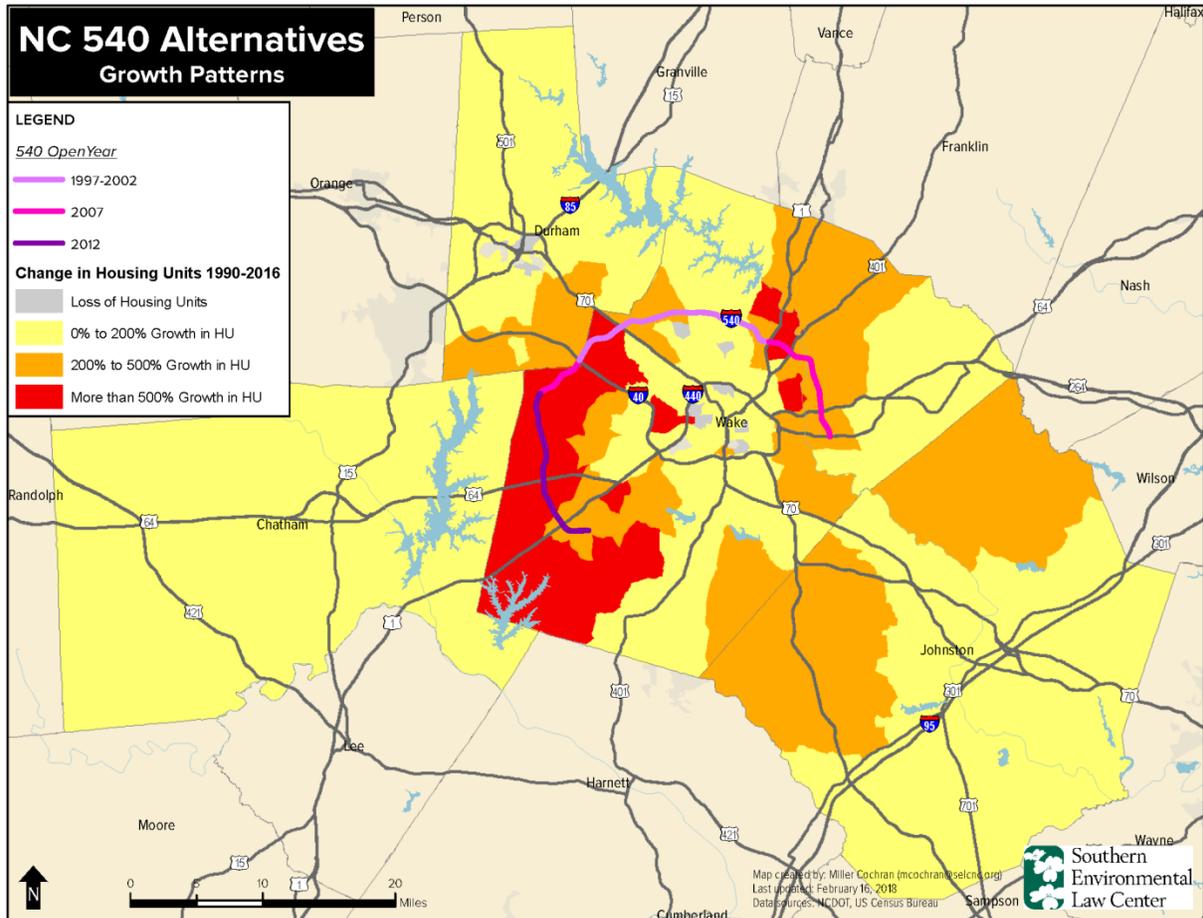
³⁸¹ NC 540 Alternatives, *Growth Patterns (1977-1997)*. Attachment 152.

³⁸² NC 540 Alternatives, *Growth Patterns (1998-2018)*. Attachment 153.

³⁸³ NC 540 Alternatives, *Growth Patterns (1990-2016)*. Attachment 154.

³⁸⁴ NC 540 Alternatives, *Growth Patterns (2000-2016)*. Attachment 155.

³⁸⁵ NC 540 Alternatives, *Growth Patterns, Percent (1990-2016)*. Attachment 156.



B. Interviews with Regional and Local Planners Revealed High Growth Expectations

As part of the investigation into the indirect and cumulative effects of Complete 540, the Transportation Agencies interviewed local authorities in a series of meetings. The summaries of these meetings provided in Appendix B to the “Memorandum on Local Jurisdiction Outreach and Methodology Updates (Quantitative ICE Assessment Memo #1)” (hereinafter ICE Memo 1) reveal high expectations for growth.

Representatives from Angier “hope to improve commutes to Raleigh and RTP.”³⁸⁶ Its town board is “trying to encourage quality growth and manage the wave of growth coming from the north.”³⁸⁷ Representatives expected that the “Old Stage Road corridor could have more mixed use/commercial under the Complete 540 Build Scenario” and that “East Wimberly will

³⁸⁶ ICE Memo 1 at PDF 141. For convenience, page citations to ICE Memo 1 are to the page in the full document. The page number is preceded by “PDF” in these citations.

³⁸⁷ *Id.* at PDF 141.

likely develop under Build perhaps with some mixed use and commercial.”³⁸⁸ Furthermore, “NC 55 will be more commercial at nodes under Build.”³⁸⁹ More broadly,

Local planners and the Town Mayor feel that completing NC 540 will make a significant difference in development. Under the Complete 540 No Build, NC 55 may need widening to handle traffic to 540. There would be pressure to increase the number of lanes on US 401. Piney Grove Wilbon may be expanded and NC 210 and Old Stage Road may be multi-lane.³⁹⁰

Representatives from Apex believed that some parcels in the eastern extraterritorial jurisdiction (ETJ) section of town could be “developed more densely as townhomes or apartments.”³⁹¹ Apex representatives noted that there “has been development interest in the area” around the existing NC 540 interchange with South Salem Street (Old US Highway 1) and mixed use development is planned for the area.³⁹² The Veridea area west of NC 55, which will be mixed use and light industrial, is “slated for Transit-Oriented Development and mixed use.”³⁹³ “The mixed use development planned around the existing NC 540 was spurred by the existing portion of the roadway,” although it has been delayed by other factors.³⁹⁴ The town’s planning director believed that the changes discussed in the meeting would occur regardless of the construction of Complete 540 because of existing access to NC 540.³⁹⁵

Representatives from Cary also expected growth. “The new Cary land use plan shows a large commercial area between Ten-Ten Road and I-540 as an employment center and this would only be likely if Complete 540 were built.”³⁹⁶ Two mixed-use centers were recently built or started in this area.³⁹⁷ Representatives believed that the “I-540 Build alternative would accelerate development but not change density,” although Cary would not be “completely built out by 2040” under either the build or no-build scenario.³⁹⁸

Clayton’s town planner described the town as a “bedroom community primarily serving Wake County employers” where development is “driven by low land prices and proximity to employers in the industrial area of the town.”³⁹⁹ Accordingly, representatives believe that the

³⁸⁸ *Id.* at PDF 141.

³⁸⁹ *Id.* at PDF 142.

³⁹⁰ *Id.* at PDF 142.

³⁹¹ *Id.* at PDF 144.

³⁹² *Id.* at PDF 144.

³⁹³ *Id.* at PDF 144.

³⁹⁴ *Id.* at PDF 144.

³⁹⁵ *Id.* at PDF 144.

³⁹⁶ *Id.* at PDF 145.

³⁹⁷ *Id.* at PDF 145.

³⁹⁸ *Id.* at PDF 145.

³⁹⁹ *Id.* at PDF 149.

Complete 540 interchange with Rock Quarry Road will lead to more residential development in the area.⁴⁰⁰ They also believed that the “development of Complete 540 could put more pressure on th[e] area around NC State University property,” where “[c]ommercial facilities and apartments may develop,” resulting in “higher density residential development in the north and commercial development along US 70 Business.”⁴⁰¹

Because Fuquay-Varina’s current land use plan was from 2006, representatives believed it reflected land use without I-540.⁴⁰² “Town planners said higher density would occur under the Build scenario but it is hard to predict.”⁴⁰³ Representatives believed that future development “will probably be suburban commercial and mixed-use” and will be concentrated around four nodes, foremost among them the “[v]icinity of I-540/ US 401,” where planners anticipated that “the pace of commercial development would be accelerated with the Complete 540 Build Alternative” at I-540/ US 401.⁴⁰⁴ In addition, County representatives believed that development would be slower at the US 401/Ten-Ten Road intersection under the no-build scenario and that the build alternative would accelerate growth on the west side of town.⁴⁰⁵ Representatives believed that “[d]evelopment will follow infrastructure.”⁴⁰⁶

Town of Garner representatives believed that “Some residential growth may result in the US 401/Swift Creek area under the Build Scenario,” with the highest density near the Ten-Ten Road, although development would be limited by the Swift Creek Land Management Plan.⁴⁰⁷ With Complete 540, “a Suburban Commercial Center may develop” near the interchange with Old Stage Road that would be smaller without Complete 540.⁴⁰⁸ At the interchange with Benson Road, Complete 540 would result in a “suburban commercial center” rather than a “neighborhood commercial center,” and “development along Cleveland School Road would be bigger and denser.”⁴⁰⁹ “Development pressures may increase the density of residential development” near the Complete 540 interchange with I-40.⁴¹⁰ The area near the Complete 540 interchange with Rock Quarry Road could become a “suburban commercial center” whereas it would “likely be smaller and less dense” under the no-build scenario and a “neighborhood commercial center” is more likely.⁴¹¹ There would also be residential growth near the high

⁴⁰⁰ *Id.* at PDF 150.

⁴⁰¹ *Id.* at PDF 150.

⁴⁰² *Id.* at PDF 153.

⁴⁰³ *Id.* at PDF 154.

⁴⁰⁴ *Id.* at PDF 154.

⁴⁰⁵ *Id.* at PDF 154.

⁴⁰⁶ *Id.* at PDF 155.

⁴⁰⁷ *Id.* at PDF 159.

⁴⁰⁸ *Id.* at PDF 159.

⁴⁰⁹ *Id.* at PDF 159.

⁴¹⁰ *Id.* at PDF 159.

⁴¹¹ *Id.* at PDF 159.

school.⁴¹² “Overall, the Complete 540 project is anticipated to have a positive impact on growth in Garner” and the “increased development pressure” raises infrastructure questions that would be “less pressing” otherwise.⁴¹³

Harnett County planners noted that “substantial development followed 6-8 years” after construction of NC 87 and “felt that the pace of development associated with Complete 540 could be quicker than the pace of development following the NC 87 project.”⁴¹⁴ Planners believed that “[b]oth commercial and industrial development may occur under a No Build scenario, with growth happening sooner if Complete 540 is built.”⁴¹⁵ They “anticipate some development pressure for residential uses followed by commercial development would occur under the Build Alternative” most likely bringing mixed density development to NC 55, Eastern Parkway, and near Buckhorn-Duncan Road.⁴¹⁶ Complete 540 would “increase development pressure within the FLUSA” by causing construction of a Food Lion just northwest of the boundary.⁴¹⁷ County planners also believed Complete 540 would spur new road projects. Noting that CAMPO believes NC 55 will need to be widened but the project is unfunded, planners “feel that NC 55 would score better under NCDOT’s prioritization formula if Complete 540 were constructed.”⁴¹⁸ Furthermore, they believed a widening project on Kennebec Church Road “will be more likely with Complete 540” and will likely result in higher and mixed density residential development.⁴¹⁹

Holly Springs representatives “indicated that the area currently outside the ETJ to the west of the interchange would likely be high density residential development under the Build Scenario and small-lot residential under the No Build Scenario” and two mixed use centers on Sunset Lake Road “would be more likely to develop to this level of density.”⁴²⁰ In addition, a “Suburban Commercial Center at the junction of Holly Springs Road and Kildaire Farm Road would likely be a Neighborhood Commercial Center under the No Build Scenario.”⁴²¹ “The Suburban Commercial Center at the junction of Holly Springs Road and Sunset Lake Road would likely [be designated] a Neighborhood Commercial Center under the No Build Scenario.”⁴²² Planners believed “the development in this area would be less intense” without Complete 540.⁴²³ Some parcels near the entrance to a mobile home park may “redevelop” and

⁴¹² *Id.* at PDF 159.

⁴¹³ *Id.* at PDF 160.

⁴¹⁴ *Id.* at PDF 164.

⁴¹⁵ *Id.* at PDF 164.

⁴¹⁶ *Id.* at PDF 164.

⁴¹⁷ *Id.* at PDF 164.

⁴¹⁸ *Id.* at PDF 165.

⁴¹⁹ *Id.* at PDF 165.

⁴²⁰ *Id.* at PDF 166.

⁴²¹ *Id.* at PDF 167.

⁴²² *Id.* at PDF 167.

⁴²³ *Id.* at PDF 167.

“[s]ome growth” would be expected in the Northwest Holly Springs area.⁴²⁴ “The Town of Holly Spring Representatives stated that existing NC 540 has boosted the desirability of Holly Springs for growth.”⁴²⁵ Furthermore, they believed that “[i]f Complete 540 is not built, the development intensity is not expected to shift to other areas. Instead it is likely to be less intense.”⁴²⁶

Johnston County planning representatives believed that the area near the intersection of NC 42 and NC 50 “is much less likely to experience commercial development under the No Build Scenario.”⁴²⁷ Near the Complete 540 interchange with NC 50, planners were “hoping that the Complete 540 project will funnel the Pleasant Grove traffic and some of the Smithfield traffic to the Complete 540 interchange with NC 50” because “[t]his would increase development potential in the area for the Build Scenario.”⁴²⁸ In western Johnston County, planners expected Complete 540 to reduce traffic “between McGees Crossroads and I-40, which may spur development south of Middle Creek,” which would most likely be small-lot residential.⁴²⁹

Town of Knightdale planners expected that “in general the Build scenario would accelerate mixed use development east and west of the I-540 alignment.”⁴³⁰ At a “primary activity center” near the Poole Road/ I-540 interchange, “[m]ixed use development would occur under the No Build and commercial development is more likely under the Build.”⁴³¹

Raleigh planners expected that the area east of Complete 540 would see commercial development near the intersection of Poole and Hodge Roads.⁴³² Planners hoped “to keep most growth inside the Complete 540 corridor.”⁴³³ They believed that Complete 540 also would likely create “a couple of Suburban Commercial Centers . . . on Auburn-Knightdale Road at Battle Bridge Road and Rock Quarry Road,” also noting that the timing of construction of a few roads in the area was uncertain, but once built they would “possibly encourage a node of commercial activity.”⁴³⁴ Complete 540 might lead to a suburban commercial center at Grasshopper, and under a no-build scenario such development was unlikely and would not be redistributed

⁴²⁴ *Id.* at PDF 167.

⁴²⁵ *Id.* at PDF 167.

⁴²⁶ *Id.* at PDF 167.

⁴²⁷ *Id.* at PDF 171.

⁴²⁸ *Id.* at PDF 171.

⁴²⁹ *Id.* at PDF 171.

⁴³⁰ *Id.* at PDF 174.

⁴³¹ *Id.* at PDF 174.

⁴³² *Id.* at PDF 178.

⁴³³ *Id.* at PDF 179.

⁴³⁴ *Id.* at PDF 179-80.

elsewhere.⁴³⁵ Planners also believed Complete 540 “might encourage additional growth” in historically slow-growing southeast Raleigh.⁴³⁶

Town of Smithfield planners noted that the “construction of the US 70 Bypass has significantly reduced traffic on US 70 Business, leaving the land along this facility ripe for development.”⁴³⁷ “Overall, Complete 540 would improve commutes for Smithfield residents.”⁴³⁸ The planners concluded, somewhat contradictorily, that “[a]lthough the Complete 540 project is unlikely to change the Place Types on parcels in Smithfield’s jurisdiction, it may help development on these parcels come to fruition.”⁴³⁹

Wake County planners were joined by representatives from Fuquay-Varina. Those representatives expected Complete 540 would cause higher development density in the area north of the Complete 540 interchange with US 401.⁴⁴⁰ Furthermore, “larger undeveloped parcels and some of the older subdivisions would convert to commercial” under the build scenario.⁴⁴¹ Growth at the development node would be slower under no-build and “only the big undeveloped parcels and some of the smaller parcels would be converted to commercial uses.”⁴⁴² Future development in the area of the Complete 540 interchange with Bells Lake Road, which will likely be annexed by Fuquay-Varina, would be “small scale and more contingent on the Build Scenario.”⁴⁴³

Wake representatives believed that the area in Garner near the Complete 540 interchange with Old Stage Road “has the potential for major growth with undeveloped large parcels and redevelopment possibilities” and “might resemble the White Oak area” under a build scenario.⁴⁴⁴ By contrast, under no-build, “development would occur at a lower level and be located along Ten-Ten Road to the south” and “[t]he amount of residential development associated with commercial development would also decrease.”⁴⁴⁵ Also in Garner, development in the area at the Complete 540 interchange with NC 50 “may include a Neighborhood Commercial Center (gas station/dollar store type of development)” if Complete 540 is built.

Town of Wendell planners, like the Town of Smithfield planners, somewhat contradictorily expected that Complete 540 “would not change place types, [but] it may increase the pace of development.

⁴³⁵ *Id.* at PDF 180.

⁴³⁶ *Id.* at PDF 180.

⁴³⁷ *Id.* at PDF 183.

⁴³⁸ *Id.* at PDF 183.

⁴³⁹ *Id.* at PDF 183.

⁴⁴⁰ *Id.* at PDF 186.

⁴⁴¹ *Id.* at PDF 186.

⁴⁴² *Id.* at PDF 186.

⁴⁴³ *Id.* at PDF 186.

⁴⁴⁴ *Id.* at PDF 186-87.

⁴⁴⁵ *Id.* at PDF 186-87.

C. The Quantitative ICE Study Lacks a Rational Basis and Employs an Arbitrary Methodology

Despite this overwhelming consensus at all levels of government that the Complete 540 project will bring significant growth to the project area and will have a dramatic impact on land use, the Transportation Agencies assert in the Quantitative ICE analysis attached to the FEIS that the highway will, in fact, have a fairly negligible impact on growth patterns. The Quantitative ICE concludes that Complete 540 would only result in 7,000 more households in the study area by 2040, compared to a “no build scenario” and only a one percent difference in developed acreage between the two scenarios—equating to just 6,000 additional developed acres if the highway is constructed. This conclusion is hard to square with the myriad statements from state and local planners and politicians highlighted above, as well as with the very real experience of growth and development that has followed the existing segment of the 540 toll highway.

The Quantitative ICE document is difficult to follow. The report is based on the assumption that because Wake County as a whole has grown at a fast rate over the past twenty years, the project area will see a high rate of development with or without the road.⁴⁴⁶ The report talks at length about the strong job market in the Raleigh area, the high quality of schools, and the relatively high median household income and notes that these factors will ensure continued growth in the FLUSA. This conclusion, however, takes an unjustified leap—suggesting that the growth that has been seen in the more dense, urban part of the county will naturally continue at a high pace in the more rural, undeveloped region even without a fast access toll road in place. This assumption is completely unsupported.

The Transportation Agencies note that MPO forecasts for the region represent a “build” scenario, i.e., a scenario that reflects how growth would occur if the Complete 540 preferred alternative was constructed. To assess how much of the growth can be attributed to the highway, the Agencies were therefore required to create a “No Build” baseline scenario. To do so, the Transportation Agencies turned to a 2012 study by Durant and Turner which looks at the effect of major highways on regional employment over a 20 year period.⁴⁴⁷ Durant and Turner found a relationship between centerline miles of highway miles and changes in employment in a region. The Transportation Agencies used this relationship to determine a “rule of thumb” that there would be a 20 year impact of 1.5% employment growth for every 10 percent increase in highway stock.⁴⁴⁸

83 [The use of the Durant and Turner study in this way resulted in an arbitrary and capricious analysis of indirect and cumulative effects. The Durant and Turner study was meant to look at overall average impact to regions. There is nothing in the study to suggest that it can be applied to reverse engineer the impact of a particular highway in a particular region of an individual city, as has been attempted in this case. Courts have been clear that reliance on studies that are not specific to the concerns of the particular project fail to satisfy NEPA. *See,*

⁴⁴⁶ *See, e.g.,* Quantitative ICE Report 4.

⁴⁴⁷ *See generally* Gilles Durant & Matthew A. Turner, *Urban Growth and Transportation*, REV. OF ECON. STUDIES, 2012. Attachment 157.

⁴⁴⁸ *Id.* at 15. Attachment 157.

e.g., Nat'l Audubon Soc'y v. Dep't of the Navy, 422 F.3d 174, 193-94 (4th Cir. 2005) (holding that citations to studies that did not correspond exactly to the issue of concern was not sufficient to demonstrate that the agency had taken a “hard look”).

The data in the Duranton/Turner study is primarily very historic, and in any case ends in 2003. As such, the data fails to acknowledge the shifting trends and preferences related to driving, public transportation and lifestyle preferences noted above that have occurred over the past 15 years.

In addition to these errors in application, the entire forecast of the “indirect cumulative effect” of NC 540 on population growth appears to rest on the critical assumption that *the impact of adding non-Interstate, tolled road mileage on regional job growth is the same as Interstate un-tolled roads*. Even the report recognizes this key assumption, but provides no evidence at all that this would be the case:

Although it will connect to interstate highways and will have similar design characteristics as an interstate highway, the proposed project is a tolled highway and will not be designated as an interstate highway. Most of the interstate highways included in the Duranton and Turner study were not tolled.⁴⁴⁹

Whether this assumption has the effect of increasing or decreasing the likely impact of the preferred alternative is open to question, but that assumption has not been studied here, and the Transportation Agencies have failed to “take a hard look” at how the highway will impact growth.⁴⁵⁰

84 Beyond the assumptions and leaps of logic that stem from totals derived from the Duranton and Turner study, the ICE analysis is further flawed in its failure to fully explain how growth is allocated in the study area. No data or description is provided as to exactly how the asserted reduction in development (households and jobs) under the No-Build scenario, is allocated to sub-area zones. This step is critical since it essentially determines the extent to which the Build scenario increases traffic near the proposed exits of NC 540. Therefore, without a detailed description of the method, its appropriateness cannot be determined. Further, there is no discussion of how commercial development, as opposed to ‘jobs’ and ‘households’ would be allocated. This is also a critical missing piece, since commercial development, particularly retail trade, has a very large effect on local traffic congestion, relative to housing. There is also no clear description as to exactly how the estimates of household and job differences between the “Build” and the “No-Build” scenarios are converted into acres of development.

85 The ICE analysis takes a number of arbitrary steps to eliminate almost half the growth that it had found to be attributable to construction of preferred alternative by arbitrarily excluding areas of impacted counties that are deemed to be “outside” the study area to arrive at a projection

⁴⁴⁹ *Id.* at 14. Attachment 157.

⁴⁵⁰ E-mail from Brian F. Yamamoto, N.C. Dep’t of Transp., to Brian Wert, N.C. Dep’t of Transp., and Scott Slusser, N.C. Dep’t of Transp. (May 5, 2016). Attachment 158.

85 where the preferred alternative has just a one percent impact on development.⁴⁵¹ This approach calls into question whether the correct study area has been used—if almost half the impact of the project is deemed to be outside of the defined zone. And, moreover, the results of the analysis, which show an extremely limited impact on jobs and development, call into question the wisdom of spending \$2.2 billion on a new highway project. The results are further suspect given the contradictory statements of the local planners noted above.

86 Given the apparently widespread impact of the project, another flaw of the Quantitative ICE is its failure to look at anything other than a “No Build” alternative and the preferred alternative. The analysis we have gives the reader no sense how alternative solutions, such as upgrades to existing highways, would impact jobs, growth and development. This is a fundamental flaw and fails the requirement of NEPA that alternatives should be presented in comparative fashion.

D. The Quantitative ICE Calls Into Question the Purpose of the Project

87 As noted above in Section IV(1) the Quantitative ICE demonstrates that the preferred alternative fails to meet one of the two primary purposes of the project—to improve forecast congestion on existing roads. While the FEIS shows that the project would overall reduce daily congestion by 8000 VHT, it also shows the project would result in an increase of daily travel time by 3000 VHT. This means that the project would likely have a small positive impact on peak hour delay, but at a significant price of increasing delay throughout the remainder of the day. In other words, if you’re a commuter using the full length of the road in the morning peak, this project would, on average, save some time, but for your spouse or on your return trip, daily traffic would actually be more congested on local streets, as your fellow residents converge to use the road and the development it attracts.

The ICE also shows that primary benefits will flow to travelers on parallel routes to the proposed project, particularly Ten Ten Road, and Auburn-Knightdale Road, each of which would see traffic drops of about 35%, compared with the “No-Build” scenario. But other roads, particularly US 1 and NC 55, would see very large increases in congestion. The ICE report makes this clear, stating:

The changes in traffic volumes show that many east-west roadways would see reductions in volumes, suggesting that trips will divert to the new facility. At the same time, many of the north-south roads, particularly those that access the Build Alternative from the south, would see greater than 10 percent forecasted increases in volumes. This pattern represents a predictable shift in traffic to the PA from existing east-west roads, many of which are congested today or forecasted to be congested in the future, such as NC 42 west of Fuquay-Varina.⁴⁵²

These increases in congestion on North-South roads should have been fully addressed and considered when the Transportation Agencies were screening for alternatives. Instead, the

⁴⁵¹ Quantitative ICE Report 18-34.

⁴⁵² *Id.* at 80-81.

agencies presented the false illusion that the preferred alternative would just generally provide ubiquitous congestion relief. It is imperative that the public be given the opportunity to study upgrades to the existing highway system such as ACCESS2040 and other alternative solutions with information about the full impact of the different project alternatives before them.

In a similar vein, the Transportation Agencies had a duty to provide this more in depth look at induced growth at an earlier stage in the process and for a full range of alternatives to meet the requirements of other key federal laws including Section 4(f) of the Department of Transportation Act, Sections 401 and 404 of the Clean Water Act, the Endangered Species Act so that the appropriate permitting agencies, and the public could see how different alternatives and their indirect and cumulative impacts would affect the resources protected under the applicable statutes.

VII. THE TRANSPORTATION AGENCIES HAVE NOT EXPLAINED HOW THEY WILL PAY FOR A \$2.2 BILLION PROJECT

88 [In their comments on the DEIS, the Conservation Groups noted that the Transportation Agencies have thus far failed to provide a plan on finance for the project. The Agencies did not respond to this comment. The FEIS also fails to include any plan of finance. Indeed, despite repeat questions, the Transportation Agencies have failed to answer the straight forward question of how much of the project cost is expected to be covered by toll revenue. Given the unprecedentedly high cost of the project, this information is key for the public and decisionmakers looking at alternative solutions.

89 [In responses to comments on the DEIS, the Transportation Agencies also point repeatedly to their traffic and revenue study to support the fact that the highway will support sufficient travelers to be economically viable. This document is extremely opaque—it generally lumps together the existing section of 540 alongside the extension, making it difficult to assess how much additional revenue the extension itself will bring in. A careful reading, however suggests that in 2025 the first two segments of the toll highway would bring in just \$11.5 million per year, rising to \$51.7 million by 2029. If and when the remaining segment of the Complete 540 project is funded, built and opened, the projections suggest that by 2034 all three segments would bring in \$122.1 million per year. Even under the most optimistic projections, the entire Complete 540 project is not expected to match revenue from existing 540 until 2051. Given the fact that the Complete 540 project will cost almost twice as much as the first stretch of 540 this low projection is surprising and calls into question the Transportation Agencies' investment in the \$2.2 billion project.

90 [It is also likely that even these low revenue projections are overly optimistic. The planning level traffic and revenue study is surprisingly crude. It is generally understood good practice to use different values of travel time for different types of trips (home-based work, home-based non-work, non-home based, commercial, school, etc.) The typical values of travel

time recommended for traffic modeling are shown below, from a national best-practice publication that relates value of travel time to the region's wage rate:⁴⁵³

Commute; 40–50% of Wage Rate

Personal Travel: 30–40% of Wage Rate

On the Clock Travel: 100% of Wage Rate

91 [For the greater Raleigh area, the overall regional wage rate is about \$24.23⁴⁵⁴ (the median wage rate is about \$ 18/hr). A typical value of travel time for commuters diverting to save time would average about \$9-12/hr., and less for non-work trips. This rate does not appear to match up with the high toll rates and limited travel time savings that are expected from the Complete 540 project. The Traffic and Revenue study relies on a much higher value of time (\$0.279 per minute (\$16.74/hr.) during peak travel periods and \$0.233 per minute (\$13.98/hr.) during off-peak travel periods). If Value of Time is, in fact, lower than anticipated in the Traffic and Revenue

92 [Another hidden assumption in the traffic modeling is that all travelers have perfect knowledge and can discern even small travel time differences for different routes. But many studies show that travelers cannot discern time differences in travel situations of less than about 5 minutes, so a small time saving by using a toll road, even if real, would go undetected by most travelers. The models used here to forecast travel do not account for these limitations of human perception, nor do they account for other reasons for using a toll road. If the asserted value of travel times shown in Table 4.7 were assumed to be 'seen' by all travelers, than not only are they too high, but also they are too widely applied. This means that the traffic and revenue forecasts for the Preferred Alternative are overestimated.

93 [The traffic and revenue study does not make clear the level of travel time savings it is relying upon for its projections and so it is difficult to determine if they match up with what has been published in the NEPA documents. Certainly, as noted above, the savings between travel time pairs included with the FEIS show that time savings will be extremely limited, even by 2040, further calling into validity the feasibility of this project.

94 [Given these uncertainties, the unprecedented high cost, and the relatively lower cost of other project alternatives, the Conservation Groups have asked repeatedly over the years how much of the project cost is expected to be covered by toll revenue. To date, the groups have gotten no answer. In public meetings in 2016, attorneys for the Conservation Groups were directed to NC Turnpike Authority employee Susan Pullium who promised to provide information on the assumptions had been used by regarding the percentage of the project that

⁴⁵³ National Cooperative Highway Research Program, Analytical Travel Forecasting Approaches for Project-Level Planning and Design, Report 765, Transportation Research Board, Washington DC, 20590, 2014, page 233, www.trb.org. Attachment 159.

⁴⁵⁴ US Dept. of Commerce, Bureau of Labor Statistics, Occupational and Employment Statistics, May 2016. At https://www.bls.gov/oes/current/oes_39580.htm. Attachment 160.

would be financed by tolls.⁴⁵⁵ Ms. Pullium has never provided this information. The attorneys reiterated this request in a recent meeting with NC Turnpike Authority employees Rodger Rochelle and Beau Memory.⁴⁵⁶ Mr. Memory and Mr. Rochelle responded that they did not know how much of the project would be covered by toll revenue.

The FEIS does not contain a financial plan for the preferred alternative. Given the extremely high cost, the fact that it is likely to saddle generations of North Carolinians with debt, the fact that the project has very limited utility, and the fact that there are much less expensive options available, this absence is extremely problematic. The public and local decisionmakers do not have the information they need to make an informed decision about advisability of moving forward with the project, and the resource agencies cannot determine if this project, or other alternative solutions are “practicable.”

VIII. THE TRANSPORTATION AGENCIES CONTINUED TO ENGAGE IN PREDETERMINED DECISION-MAKING

NCDOT’s public comment period on the DEIS and its 17 new-location highway detailed study alternatives (“DSAs”) closed on January 8, 2016. According to the final Preferred Alternative Report issued by NCDOT, a total of 1,476 public comments were received during this DEIS comment period.⁴⁵⁷

Less than a month after the public comment period closed, on Feb 3, 2016, NCDOT officially announced that it had selected DSA 2, one of the DSAs including the Orange Corridor, as its recommended preferred alternative for the project—but an NCDOT draft press release shows that NCDOT had already selected DSA 2 as early as the morning of January 26, barely two weeks after the close of the public comment period.⁴⁵⁸ In that draft press release, NCDOT claims to have considered “public comments made during the public comment period that ran from Nov. 9, 2015 through Jan. 8, 2016,” in reaching its recommendation about the preferred alternative.⁴⁵⁹

Yet according to a January 19, 2016 e-mail—one week before that January 26, 2016 press release recommending DSA 2 as the preferred alternative—NCDOT staff were still “compiling the public comments as the comment period ended last week,” which were “staggering” in number.⁴⁶⁰ Eric Midkiff explained to a concerned citizen that the “decision on the selection of the preferred route for the Complete 540 project is likely to be made the latter

⁴⁵⁵ Letter from Kym Hunter and Ramona H. McGee, SELC, to Eric Midkiff, P.E., NCDOT 35 n.171 (Jan. 8, 2016). Attachment 52.

⁴⁵⁶ Attorneys Ramona McGee and Kym Hunter met with Mr. Rochelle and Mr. Memory on January 30, 2018.

⁴⁵⁷ Preferred Alternative Report (Apr. 2016), at 9.

⁴⁵⁸ E-mail and attachment from Ginny T. Inman, N.C. Dep’t of Transp., to Steve Abbott, N.C. Dep’t of Transp. and Mike R. Charbonneau, N.C. Dep’t of Transp. (Jan. 26, 2016 9:13 AM). Attachment 161.

⁴⁵⁹ E-mail and attachment from Ginny T. Inman, N.C. Dep’t of Transp., to Steve Abbott, N.C. Dep’t of Transp. and Mike R. Charbonneau, N.C. Dep’t of Transp. (Jan. 26, 2016 9:13 AM). Attachment 161.

⁴⁶⁰ E-mail from Eric Midkiff, N.C. Dep’t of Transp., to Jenny Mcdaniel (Jan. 19, 2016 8:36 AM). Attachment 162.

part of March.”⁴⁶¹ As of February 1, 2016, two days before NCDOT officially announced its recommended preferred alternative, consultants working for NCDOT were still “working on responses” to the Conservation Groups’ comments on the Complete 540 DEIS by referencing responses to comments the Groups’ counsel had made on an entirely different project.⁴⁶²

95 Given it seems unlikely that NCDOT could have reviewed and considered nearly 1,500 comments during the two-week period between the close of the public comment period and when NCDOT had internally chosen DSA 2 as its preferred alternative (particularly given the fact that NCDOT was still simply compiling the comments as of January 19). NCDOT either rushed its decision about selection of the preferred alternative, or had simply predetermined that it would select DSA 2 without regard to the comments it received.

96 This is not surprising, as discussed in greater detail in comments on the DEIS, NCDOT has long favored, pushed for, and planned for a new-location toll highway along the Orange Corridor as the only real option for the Complete 540 project.⁴⁶³ For example, a collection of comments and responses on a 2014 draft Indirect and Cumulative Effects Report included a suggestion to label the Orange Route as having more severe “Future Population Shift” effects within a table about land use impacts, but the suggestion was rejected because “[w]e want to make it clear that Red would have a stronger effect in this category and do not suggest putting Orange/Lilac in this same category.”⁴⁶⁴ A later version of this same document includes a response to this suggestion, stating “Orange/Lilac would have a stronger attraction for development than No-Build b/c of the proposed activity center along the corridor, and would likely be as strong as Red. Please move up one to make this evident.”⁴⁶⁵ And yet the final version of the table in the Indirect and Cumulative Effects Report accompanying the DEIS lists Orange/Lilac *below* the Red Route.⁴⁶⁶ A 2016 e-mail from NCDOT staff to consultants again illustrates the persistent bias against the Red Route, suggesting that a bullet point about the Red Route being disfavored by NMFS and USEPA be removed from a presentation.⁴⁶⁷

NCDOT’s impossibly quick turnaround between the DEIS public comment period and the selection of the preferred alternative is another example of NCDOT’s ongoing tunnel vision with regard to the Orange Corridor.

⁴⁶¹ E-mail from Eric Midkiff, N.C. Dep’t of Transp., to Jenny Mcdaniel (Jan. 19, 2016 8:36 AM). Attachment 162.

⁴⁶² E-mail from Jennifer Harris, HNTB, to Christopher Werner, AECOM (Feb. 1, 2016 4:44 PM). Attachment 163.

⁴⁶³ See, e.g., e-mail from Hardin Watkins to Buck Kennedy et al. (Jan. 21, 2011) (reporting that NCTA stated “that in southern Wake County, the Orange Corridor is likely the only reasonable and feasible corridor”). Attachment 164.

⁴⁶⁴ Comp540 Response to Comments Matrix (Oct. 31, 2014), at 3. Attachment 165.

⁴⁶⁵ Comp540 Response to Comments Matrix CS Comments (Nov. 12, 2014), at 3. Attachment 166.

⁴⁶⁶ DEIS Indirect and Cumulative Effects Report (Dec. 2014), 53 at Tbl. 9.

⁴⁶⁷ E-mail from Eric Midkiff, N.C. Dep’t of Transp., to Kiersten Bass, HNTB, and Roy Bruce, HNTB (Feb. 10, 2016 2:03 PM). Attachment 167.

IX. CONCLUSION

For the foregoing reasons the Conservation Groups submit that the FEIS for Complete 540 violates NEPA by failing to take a “hard look” at environmental impacts, failing to rationally analyze a reasonable range of alternatives, failing to adequately consider and respond to public comments, and illegally predetermining the outcome of the NEPA process. We urge the Transportation Agencies to go back to the drawing board and publish a Supplemental EIS looking at a range of less damaging alternatives, including less expensive upgrades to the existing highway system.

Sincerely,



Kym Hunter
Staff Attorney



Ramona H. McGee
Associate Attorney

CC (via e-mail, w/attachments):

Matthew Starr, Sound Rivers
June Blotnick, Clean Air Carolina
Sen. Tamara Barringer
Sen. Chad Barefoot
Sen. Brent Jackson
Sen. Rick Horner
Sen. Jim Davis
Sen. Tom McInnis
Rep. Linda Hunt Williams
Rep. Nelson Dollar
Rep. Darren Jackson
Rep. Jeff Collins
Rep. Kelly Hastings
Rep. Frank Iler
Rep. Phil Shepard
Rep. John Torbett
Rep. Becky Carney
Rep. George Cleveland
Rep. Michael Speciale

Commissioner Jessica Holmes
Commissioner Sig Hutchinson
Commissioner Matt Calabria
Commissioner Erv Portman
Commissioner James West
Commissioner Greg Ford
Commissioner John Burns
Mayor Ronnie S. Williams Garner
Mayor Dick Sears of Holly Springs
Mayor Lance Olive of Apex
Mayor Harold Weinbrecht of Cary
Mayor Nancy McFarlane of Raleigh
Mayor Steve Schewel of Durham
Mayor Jody McLeod of Clayton
Mayor James Roberson of Knightdale
Mayor John W. Byrne of Fuquay-Varina
Chair Michael S. Fox, NC Board of Transportation
Vice Chair Nina Szlosberg-Landis, NC Board of Transportation
Jeremy Tarr, Office of Governor Roy Cooper
North Carolina Secretary of Transportation James Trogdon
General Counsel, Chuck Watts, NCDOT
Chris Lukasina, CAMPO
Joe Milazzo, RTA
Beau Memory, NCTA
John F. Sullivan, III P.E., FHWA

Southern Environmental Law Center Letter – 2/22/18

Comment Number	Primary Topic	Paraphrased Comment	Response
1	NEPA Process	Reponses to SELC's comments on Draft EIS were legally insufficient.	It is the opinion of NCDOT and FHWA that the responses to comments on the Draft EIS, which are detailed in the project's <i>Stakeholder Involvement Report</i> , are legally sufficient.
2	NEPA Process	NCDOT selected only limited portions of SELC's comments on Draft EIS to respond to.	It is the opinion of NCDOT and FHWA that the responses were provided to all substantive comments in SELC's letter regarding the Draft EIS.
3	NEPA Process	Many responses to SELC's comments on Draft EIS stated that information not included in the Draft EIS had been studied further and was included in the Final EIS.	It is the opinion of NCDOT and FHWA that these responses do not conflict with NEPA requirements.
4	NEPA Process	NCDOT attempted to stymie public participation in the NEPA process by intentionally obscuring the project's timeline from the public.	The timeline for a NEPA project is an ever evolving and changing dynamic as studies are undertaken and new information identified. While most NEPA project schedules seem to extend longer than anticipated, the Complete 540 project schedule was able to be advanced more quickly than anticipated based on prior events. There was no attempt to obscure the project timeline or stymie public participation. NCDOT has allowed and continues to allow for full and complete participation in the NEPA process throughout the Complete 540 project study timeframe. The time for comments on the Draft and Final Environmental Impact Statements have exceeded the mandatory requirements in an effort to provide sufficient opportunity for participation. Additionally, those that requested additional time to provide comments were granted additional time. Outside of the official comment periods on published documents, NCDOT has been available to the public via the project website, the project email address, and the project hotline. Additionally, meetings have been held with neighborhoods, businesses, and community groups that have requested information about the project.
5	Development Trends	Young, educated workforce Wake County hopes to attract is less interested in suburban living, and instead prefers walkable downtowns and robust public transit systems.	While many highly educated workers moving to the area certainly prefer walkable downtowns and strong public transit options, the continued rapid growth in low-density developments on the fringes of Cary, Apex, Holly Springs, and Fuquay-Varina suggests that many others prefer suburban, automobile-oriented development.
6	Tolls	Experiences in Charlotte suggest North Carolinians "are no fans of toll roads."	Traffic volumes on existing segments of 540 have outpaced original projections, suggesting drivers in the Triangle area are more than willing to use toll roads.
7	Project Concept	Urban loop roads have been falling out of favor.	540 is not a loop road in a central urban core similar to the facilities SELC cites. Instead, 540 is a regional, controlled-access expressway and is not comparable to the examples in SELC's argument.

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Comment Number	Primary Topic	Paraphrased Comment	Response
8	Technology	Final EIS does not address the potential of autonomous vehicles to affect the purpose, need and success of Complete 540.	<p>It is the opinion of NCDOT and FHWA that there is little credible evidence to support the implication that the anticipated spread of autonomous vehicles will notably affect the purpose, need, or success of Complete 540.</p> <p>The development of the Final EIS was done following strict NEPA standards and procedures required by the USDOT and the Federal Highway Administration. Neither USDOT nor FHWA have developed standards or procedures for the implementation of automated and connected vehicle technologies nor have they provided direction on how to factor this into the NEPA documents. Fully automated vehicles (human interaction not required) are not expected on the market until 2030 or later. With the average life expectancy of a vehicle currently being 11.5 years (Consumer Reports, May 9, 2017), it is estimated that there will not be a critical mass of fully automated vehicles on the roadway until 2041 at the earliest. Until then, there will be a transitional period of a variety of technologies on the roadway. This transitional period will provide incremental gains in safety and system efficiency, but these gains are expected to be outpaced by the growth rate of the greater Raleigh metropolitan area. Therefore, the anticipated spread of autonomous vehicle technology is not expected to notably affect need for the project.</p>
9	Technology	Future congestion in the project area may be alleviated by the future deployment of delivery drones.	<p>It is the opinion of NCDOT and FHWA that potential future deployment of delivery drones will not notably affect forecast congestion. Delivery drone technology has shown promise in the delivery of small lightweight packages to restricted areas that would be difficult to reach using current means and methods. However, this technology is restricted by the limitations of current battery technology, which would not support carrying larger, heavier weight packages long distances. Until more advanced battery technology is developed to address current limitations, this technology is not relevant to the NEPA/Final EIS discussion.</p>
10	Alternatives	Walter Kulash's newly developed Access2040 alternative, which would be focused on upgrades to existing infrastructure would meet the objectives of the project but would not require tolls.	<p>The objectives stated in the Access2040 report do not equate to the Complete 540 project's purpose. The assertion that the costs of Access2040 would be lower than for Complete 540 are based on faulty assumptions and incomplete analysis. A more detailed explanation of the limitations of the Access2040 alternative is available in the <i>Access2040 Claims and Performance Assessment</i> (HNTB, 2018). A copy of this document is included in Appendix M of this <i>Stakeholder Involvement Report</i>.</p>
11	Alternatives	Access2040 alternative anticipates an increase in transit travel as projected by the Wake County Transit Plan.	<p>The Triangle Regional Model (TRM), version V5, which was used in developing the traffic forecasts for the preferred alternative analysis, does include Wake County's long-term transit plan and the effect of an increase in mass transit in the study area. A more detailed explanation of the limitations of the Access2040 alternative is available in the <i>Access2040 Claims and Performance Assessment</i> (HNTB, 2018). A copy of this document is included in Appendix M of this <i>Stakeholder Involvement Report</i>.</p>
12	Alternatives	The first tier screening of the preliminary alternatives for Complete 540 selected only a limited ("fiscally constrained") number of planned CAMPO projects, thereby eliminating almost all projects with more than 15-20 year funding horizon.	<p>Only fiscally constrained projects are included in regional travel demand models. Fiscally constrained projects include projects anticipated in the next 20 years. Projects for which no funding has been identified and which have not gone through the air quality conformity process are not reasonably foreseeable projects.</p>

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Comment Number	Primary Topic	Paraphrased Comment	Response
13	Alternatives	The Access2040 alternative is comparable to the Complete 540 study's "Improve Existing Roadways 3 – Arterials" (IE3-A) alternative, but would perform as well or better than this comparable alternative.	These two options are not, in fact, comparable. The extensive analysis conducted for IE3-A identified several required improvements beyond and different from those included in Access2040, such as widening several expressways (e.g., I-40 from NC 42 to I-440 and I-440 from I-40 to US 1) to 12 lanes and widening Ten Ten Road to 6 lanes (instead of 4). Also, Mr. Kulash did not perform a technical analysis comparable to the analysis performed for the Complete 540 project alternatives. In the absence of an adequate technical analysis, the more accurate surrogate for the Access2040 concept would be the Complete 540 No-Build Alternative. A more detailed explanation of the limitations of the Access2040 alternative is available in the <i>Access2040 Claims and Performance Assessment</i> (HNTB, 2018). A copy of this document is included in Appendix M of this <i>Stakeholder Involvement Report</i> .
14	Alternatives	The Access2040 alternative would be less expensive than and less environmentally damaging than Complete 540.	The Access2040 report lacks details to back up the assertion that the required new roadway linkages, interchanges, and intersection reconfigurations would cost only \$50 million. NCDOT believes this estimate is unreasonably low. The Access2040 report does not include quantification of a full range of environmental impacts and does not provide details on how the included impacts were calculated. NCDOT's experience suggests that the stated number of relocations was severely underestimated. A more detailed explanation of the limitations of the Access 2040 alternative is available in the <i>Access2040 Claims and Performance Assessment</i> (HNTB, 2018). A copy of this document is included in Appendix M of this <i>Stakeholder Involvement Report</i> .
15	Purpose and Need	The Preferred Alternative will not meet the project purpose of reducing forecast congestion on the existing roadway network in the project study area.	<p>The <i>Indirect and Cumulative Effects Memorandum (Quantitative ICE Assessment Memo #4)</i> and the <i>Complete 540 First Tier Alternative Concepts Screening & Traffic Reassessment</i> both show that the Preferred Alternative will reduce congestion within the project study area overall and on many of the 24 corridors studied in ICE Memo #4.</p> <p>As shown in Table 37 from the report, localized congestion patterns (defined as equal to or greater than a volume to capacity (V/C) ratio of 0.8) are forecast around several interchange locations with the projected project in place. Without the project, most of the locations are still forecast to experience similar localized congestion patterns.</p>
16	Traffic	It is unknowable whether congestion relief would occur on existing roads or only on Complete 540 itself.	Tables 27-36 of the <i>Indirect and Cumulative Effects Memorandum (Quantitative ICE Assessment Memo #4)</i> provide data demonstrating changes on congestion under the Build and No-Build Scenarios for existing roads in the study area. Also see response to comment #15
17	Traffic	Quantitative ICE study indicates that Preferred Alternative will not reduce congestion on existing highways.	See response to comments #15 and #16.
18	Environmental Justice	Assertion in Community Impact Assessment that the project would not negatively affect low income communities because there would be reduced congestion on existing roadways is incorrect because the Preferred Alternative will not actually reduce congestion on existing highways.	See response to comments #15 and #16.

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Comment Number	Primary Topic	Paraphrased Comment	Response
19	Traffic	Quantitative ICE does not identify which roads would experience congestion reduction.	See response to comments #15 and #16.
20	Traffic	Quantitative ICE shows that Preferred Alternative would result in more congestion on many of the same roads cited in the Statement of Purpose and Need to underscore the need for the project.	<p>There is a difference between increases in traffic volumes and congestion. Traffic volumes can increase without resulting in congestion (with congestion defined for this project as a volume-to-capacity ratio exceeding 0.8). Traffic does increase on roadways with direct connections to Complete 540 within the direct vicinity of interchanges. Tables 27-36 of the <i>Indirect and Cumulative Effects Memorandum (Quantitative ICE Assessment Memo #4)</i> show that the vast majority of the roadways show improvement when examined at the corridor level. This is also displayed in Figure 20 of the ICE Memo #4.</p> <p>SELC has repeatedly cited I-40 as a road that will experience an increase in congestion if Complete 540 were constructed. As noted in Quantitative ICE Technical Memo 4 (table 35), 0.3 mile of the I-40 corridor in the vicinity of the proposed I-40 /Complete 540 interchange in the PM peak hour would experience congested conditions. However, the average PM peak hour speed of the I-40 corridor in the Traffic Study area would experience an increase from 56 mph (No-Build) to almost 61 mph if Complete 540 were constructed (table 36).</p> <p>Tables 33 and 34 specifically demonstrate roadway performance in terms of speed on the individual roadways. As can be seen in both tables, the vast majority of roads are projected to provide improved service with Complete 540 in place rather than without (No-Build scenario). (See also responses to comments #15 and #16.)</p>
21	Indirect and Cumulative Effects	Quantitative ICE did not compare a variety of alternatives.	The Qualitative ICE analysis, which was summarized in the Draft EIS, does compare a full range of alternatives. It is the opinion of NCDOT and FHWA that this qualitative analysis was sufficient for comparing the various build alternatives to each other. The Qualitative ICE Report clearly indicates that there would likely be differences in the indirect and cumulative effects of the different DSAs but they would be of similar magnitudes. This is summarized on pages 104 and 105 of the Draft EIS. NCDOT also has noted that the results of the Quantitative ICE have been consistent with the results of the qualitative study.

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Comment Number	Primary Topic	Paraphrased Comment	Response
22	Purpose and Need	The purpose and need for the project were developed using an outdated 2008 model and outdated 2008 traffic data.	<p>NCDOT used the most current available regional travel demand model that was available at the time the purpose and need were developed. The traffic modeling tool used in the development of Draft EIS, North Carolina State Triangle Regional Model (TRM) versions V4-2008 and V4-2009, was the officially approved model at the time the Draft EIS was initiated and prepared. The TRM V4-2008 was used as a tool in the development of the First Tier Screening (2011), Complete 540 Detailed Study Alternatives Traffic Forecast (2012, 2014), and Complete 540 Detailed Study Alternatives Capacity Analysis (2015) memoranda.</p> <p>The TRM has since been updated to TRM, version V5 (TRM V5), the Triangle Region's officially approved travel demand model. TRM V5 was adopted in February 2016 after being developed by the Triangle Regional Model Service Bureau at the Institute of Transportation Research and Education. TRM V5 was used as a tool in the development of the Complete 540 Preferred Alternative Traffic Forecast (2016) and Complete 540 Preferred Alternative Traffic Capacity Analysis (2017) memoranda (2017), which are documented in Chapter 4 of the Final EIS.</p> <p>CAMPO developed a future year (FY) (2040) socioeconomic (SE) data set for use with the TRM V5, which is a tool used to plan for future transportation needs and to demonstrate air quality conformity. The FY SE data set was also used as an input to prepare the Preferred Alternative Traffic Forecast for the Complete 540 project. Based on information available, the 2040 FY SE data set is understood to represent a future year allocation of population and employment and associated land use conditions based on CAMPO's fiscally constrained 2040 Metropolitan Transportation Plan (MTP). The Complete 540 project is included in the 2040 MTP.</p> <p>Subsequent to publication of the Final EIS, CAMPO adopted a new travel demand model. NCDOT has evaluated this new model relative to potential implications relative to indirect and cumulative effects and traffic related project conclusions. Sensitivity analyses were performed. For the ICE analysis see the <i>Connect 2045 Regional Forecasts</i> memo. For the traffic analysis see the <i>TRM V5 and TRM V6 Sensitivity Analysis</i> memo.</p>
23	Purpose and Need	Purpose and need statement is impermissibly narrow because it includes system linkage as a secondary purpose.	Secondary purposes are also known as "other desired outcomes." The Draft EIS and the supporting technical reports clearly state that only the primary purposes were used to narrow the range of options by indicating whether to eliminate or retain Alternative Concepts. Alternative Concepts were not eliminated merely because they could not meet the secondary purpose of the project.

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Comment Number	Primary Topic	Paraphrased Comment	Response
24	Alternatives Analysis	Screening process using Measures of Effectiveness (MOEs) used a misleading methodology to calculate congestion relief on existing roadways and arbitrarily exaggerated minor differences between Alternative Concepts.	<p>The quartile ranking system was used specifically to avoid setting arbitrary thresholds for the MOEs as it explicitly measures each concept relative to the other concepts. While the differences between the concepts may be small for some of the MOEs, they are larger for others. Examining the quartile rankings for several different MOEs showed that some concepts consistently performed better than the other options, across all the MOEs.</p> <p>The key point to note is that the ranking system and the rationale for eliminating concepts according to the rankings were clearly laid out in the alternatives analysis and all of the alternative concepts were subjected to the same process, which has been disclosed to the public.</p>
25	Traffic	Forecast traffic volumes of 42,000 per day on Complete 540 do not justify six lanes or a 70 foot median.	The AADT along Complete 540 varies from 68,700 to 21,600. Six lanes are needed throughout the corridor to maintain roadway continuity, meet driver expectations and promote safety.
26	Alternatives Analysis	NCDOT did not respond to SELC comment on Draft EIS that mass or multimodal transit options were unfairly dismissed.	<p>As explained in the response to comment #6 in the SELC comment letter on the Draft EIS (see Appendix J of the Stakeholder Involvement Report), Chapter 4 of the Draft EIS reports that a range of options, including mass transit, was examined to determine which would be feasible and practical for meeting the purpose of the project. Each of the non-roadway options was ultimately rejected as not practicable. NCDOT, FHWA and USACE are all satisfied that the non-toll highway concepts are not practicable and therefore do not require any further analysis. As noted on page 48 in the Draft EIS, specific details regarding the full range of alternatives considered and the multi-tiered screening process used are documented in the <i>Alternatives Development and Analysis Report</i>. As outlined on pages 8 through 11 in the Section 6002 Project Coordination Plan for the project, the Purpose and Need for the project and the development and analysis of alternatives for detailed evaluation in the Draft EIS were vetted with participating regulatory and resource agencies as well as the public.</p> <p>Additionally, page 65 of the FEIS explains that Alternative Concepts (including Mass Transit, Travel Demand Management, and Transportation System Management) were re-screened based on updated data and tools. This analysis is described in the <i>First Tier Alternative Concepts Screening & Traffic Reassessment</i> document that was incorporated into the FEIS by reference.</p>
27	Alternatives Analysis	It is arbitrary to assert that mass transit would be too costly while promoting a project that would cost \$2 billion but lacks financial plans to support it.	As explained in the response to comment #40 in the SELC comment letter on the Draft EIS, this comparison is invalid. The projected cost and financing strategy of a toll highway are a separate issue from whether bus fares would be sufficient to pay for expanded transit costs on another facility.
28	Alternatives Analysis	Final EIS fails to evaluate projected increases in mass transit due to recently-adopted Wake County Transit Plan.	This is inaccurate. As explained in the response to comment #15 in the SELC comment letter on the Draft EIS, the TRM, version V5, used in developing the traffic forecasts for the preferred alternative analysis includes those parts of Wake County's long-term transit plan that are included in the fiscally-constrained 2040 Metropolitan Transportation Plan and thus includes the effect of increases in mass transit in the study area.

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Comment Number	Primary Topic	Paraphrased Comment	Response
29	Mass Transit	Final EIS didn't evaluate construction impacts on implementation of Wake County Transit Plan and didn't address how transit vehicles would be able to use the toll road.	The Wake County Transit Plan notes only three elements within the vicinity of the project—these are noted as hourly bus connections available during rush hour only. They appear to follow NC 55 Bypass to Holly Springs, US 401 to Fuquay-Varina, and I-485 in the vicinity of Knightdale. Traffic on each of these major roadways would be maintained during project construction. The Transit Plan does not identify any proposed transit routes that would use Complete 540.
30	Purpose and Need	NCDOT has not addressed whether most project area traffic is local or through traffic.	As noted in Appendix A of the project's Community Impact Assessment, input from local governments indicates that a large proportion of workers living in the Complete 540 study area commute to jobs outside the study area.
31	Alternatives Analysis	Insufficient information about which and what proportion of project area trips would experience substantial time savings.	Appendix A of the <i>Complete 540 First Tier Alternative Concepts Screening & Traffic Reassessment</i> provides average AM Peak period and PM Peak period travel times to/from 12 origins/destinations in Wake, Durham, and Johnston Counties. These travel times were calculated using the TRMv5 for 11 of the alternatives. The New Location Highway Alternative provides the greatest travel time savings for long-distance trips that traverse the traffic study area and southern and eastern Wake County by providing a high-speed regional mobility connection.
32	Traffic Forecast	2040 forecasts were developed by applying a compound annual growth rate to 2016 base year No-Build volumes, which is a nonstandard and arbitrary forecast method.	The <i>Complete 540 Project-Level Traffic Forecast</i> utilized growth rates, trend line analyses, turning movement analyses, and travel demand models to determine appropriate traffic volumes in the 2040 Build forecast scenario. Section 2.2 of the National Cooperative Highway Research Program (NCHRP) Report 765, FHWA's traffic forecasting guidelines, considers those items to be traffic forecasting tools that are routinely used to develop traffic forecasts.
33	Alternatives Analysis	NCDOT should have evaluated the potential for induced traffic for all the Detailed Study Alternatives (DSAs); in other words, the quantitative ICE analysis should have been completed for all the DSAs, rather than just the preferred alternative.	See response to comment #21. Additionally, the alternative concepts identified and screened earlier in the study were re-screened, using traffic information derived from the Quantitative ICE analysis. The new location concept was the only concept that met the purposes of the project. Induced traffic was not a differentiating factor in selecting a preferred alternative; therefore, the Quantitative ICE Analysis included only the preferred alternative.
34	Environmental Justice	Discussion of environmental justice impacts in Final EIS was cursory and insufficient.	As noted clearly in the Final EIS, under the reader-friendly EIS format, the findings, conclusions, and recommendations from all of the supporting technical reports are summarized in the Final EIS, not repeated in detail. FHWA and NCDOT consider the methods used to identify and assess the potential impacts to environmental justice communities to be sufficient.
35	Environmental Justice	Analysis does not adequately examine impact of tolls on low-income communities.	Low-income communities can benefit from Complete 540 without using the toll facility. As shown in Tables 27-36 of the <i>Indirect and Cumulative Effects Memorandum (Quantitative ICE Assessment Memo #4)</i> , roads throughout the corridor are anticipated to have fewer hours of congested travel and higher average speeds with Complete 540 in place.
36	Human Environment	Community Impact Assessment relies on 2011 Community Characteristics Report, which is a decade old and relies on 1990 and 2000 Census data.	This is inaccurate. The decennial Census data included in the Community Impact Assessment is from the 2010 Census. The report also includes a substantial amount of Census data from the 2009-2013 American Community Survey. These were the most current available Census data sets at the time the Community Impact Assessment was prepared (in 2015.)

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Comment Number	Primary Topic	Paraphrased Comment	Response
37	Environmental Justice	Environmental justice analysis does not consider North Carolinian taxpayer resources are being poured into this project that “environmental justice communities” will be unable to use.	Because a substantial amount of this project’s funding will come from toll revenue, it is not accurate to suggest that taxpayer resources are the project’s chief funding source. See also response to comment #35.
38	Environmental Justice	Analysis did not include proximity impacts to environmental justice communities.	As is clear from the available Census data, the Complete 540 project area has a lower proportion of minority residents, low-income residents, and elderly residents than Wake County as a whole. Neither the Census data nor input from local governments indicated any area where there is a notably high concentration of these residents in the vicinity of the project’s DSAs, relative to the area as a whole. In accordance with applicable law, NCDOT concluded that none of the DSAs would have disproportionately high or adverse effect on minority, low-income, or elderly residents.
39	Environmental Justice	Analysis didn’t address whether elderly people would be disproportionately impacted by displacements.	Page 15 in the Community Impact Assessment notes that “There do not appear to be any general areas where the population composition has higher than average senior or youth populations.” Table 5 in Appendix B in that report lists the proportion of residents aged 69 and over in each Census Block Group in the project area. None of the Block Groups along the Preferred Alternative has more than 6.5 percent of residents aged 69 and over. Therefore, none of these Block Groups has a substantially greater proportion of senior residents than Wake County as a whole (5.5 percent). This indicates that older residents will not be disproportionately affected by displacements.
40	Environmental Justice	Analysis didn’t take full account of impacts to Blue Skies Mobile Home Park or 70-East Mobile Acres and RV Park.	<p>The traffic analysis and ICE Memorandum provide information on how the proposed project would reduce congestion on existing roadways in the vicinity of Blue Skies Mobile Home Park and 70-East Mobile Acres and RV Park. Figure 20 in the ICE Memo shows that there will be a 10% or more decrease in traffic volumes on neighboring streets such as Ten-Ten Road and Optimist Farm Road. Similarly, US 70 corridor just west of 70-East Mobile Acres and RV Park will have a 10% or more decrease in traffic volumes as well. At the park and the future interchange, the traffic will increase within 5% to 10%.</p> <p>Section 6.2.3 of the project’s Community Impact Assessment notes that the project would result in relocations of homes in Blue Skies Mobile Home Park. Additionally, as per the current design, Rhodes Road, which provides access to the Blue Skies Mobile Home Park, will be removed between Springtime Drive and just north of Deerborn Drive. Deerborn Drive will be extended to Deer Meadow Road. To travel south towards Optimist Farm Road from the mobile home park, the traffic will have to travel north using Ten-Ten Road, Deer Meadow Drive and Deerborn Drive extension, which is an approximately one-mile diversion. This diversion also applies to traffic on Ten-Ten Road and to those traveling from properties south of NC 540 to areas north of NC 540.</p>

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Comment Number	Primary Topic	Paraphrased Comment	Response
41	Protected Species	Project would jeopardize existence of Dwarf Wedgemussel (DWM) and Yellow Lance, may disrupt critical Atlantic Sturgeon habitat, and would result in severe impacts to other sensitive and rare species.	NCDOT and FHWA have worked collaboratively with USFWS and NMFS to avoid jeopardizing the existence of protected species. The project's Biological Assessments evaluate the potential effects of the project on federally listed species, per the Endangered Species Act, and detail the conservation measures that NCDOT proposes to use to help offset potential effects and promote the recovery of the Dwarf Wedgemussel. Section 7 Consultation with USFWS and NMFS has been finalized and is discussed in the Record of Decision (ROD) for the project. USFWS issued a Biological Opinion on April 10, 2018 that concluded "the Action (Complete 540) is not likely to jeopardize the continued existence of" DWM and Yellow Lance. NMFS provided written concurrence that the project is not likely to adversely affect the Atlantic Sturgeon or Atlantic Surgeon critical habitat.
42	Protected Species	USFWS indicates that the potential effects of the Preferred Alternative on DWM are very problematic.	See response to comment #41. USFWS has issued a Biological Opinion on April 10, 2018 that concluded "the Action (Complete 540) is not likely to jeopardize the continued existence of" DWM.
43	Protected Species	Runoff from direct and indirect effects of the project will jeopardize the continued existence of protected mussels and impair the chances of future viability.	See response to comment #42. The Biological Opinion issued by USFWS included an evaluation of the potential indirect and cumulative effects on protected mussels.
44	Protected Species	Biological Assessment (BA) for protected mussels doesn't include sufficient detail about hazardous spill basins and doesn't evaluate their efficacy.	In consultation with USFWS, NCDOT/FHWA identified the crossing of Swift Creek and tributaries within 0.25 mile of the creek as the locations where there is the highest potential for hazardous spills to impact the two species. As such, NCDOT is committing to installing one to two HSB(s) within the immediate vicinity/floodplain of the crossing of Swift Creek, the ultimate location(s) to be determined during final design. NCDOT will also require that final design attempt to direct road runoff through a HSB before being discharged to the Swift Creek tributaries (SCY, SDF, SDH, SDJ and SDK as labeled in NRTR) that are within 0.25 mile of Swift Creek. The basin(s) will be designed to contain a spill from a typical tanker truck that may have otherwise flowed directly into these water bodies. Factors that influence the efficacy of the basins are discussed in the BA. NCDOT will implement their standard protocols for upkeep and use of these basin(s).
45	Protected Species	BA doesn't identify impacts that would result if NCDOT does not avoid in-stream fill impacts at Swift Creek.	NCDOT has committed to avoid both permanent and temporary fill within Swift Creek. However, as stated in Section 4.1.1 of the BA, there is always a remote possibility that small amounts of fill (rip rap, bridge materials, etc.) could inadvertently fall into the channel. These unforeseen events are unlikely to occur, and if they do occur, the effects are expected to be minimal. This scenario was factored into the assessment of effects and conservation measures to offset effects (See Section 4.5.2.1 - Preconstruction Survey and Potential Mussel Relocation). If during the final design, or while the project is under construction, any type of fill (beyond the inadvertent scenario described) into Swift Creek becomes needed, this will require a re-initiation of Section 7 Consultation, as these effects would not have been disclosed in the BA. NCDOT is aware that re-initiation would result in project delays and increased costs and is confident that this commitment can be fulfilled.

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46	Protected Species	BA doesn't address potential water quality impacts of filling stream channels.	The BA addressed the general adverse effects associated with stream fill, including disturbance and/or loss of mussel habitat (substrate), and alteration of flows/channel stability. The consequences of alteration of flows/stability, degradation and/or aggradation (sediment deposition) are also discussed. Furthermore, the detrimental effects of erosion/sedimentation on freshwater mussels are discussed in multiple sections of the BA.
47	Protected Species	BA doesn't include commitments to avoid construction-related impacts to protected mussels.	Multiple commitments made by NCDOT to avoid/minimize, as well as conservation measures to offset construction related effects to protected mussels are discussed throughout the BA and are summarized in Section 4.5. These measures include, but are not limited to, implementing Design Standards in Sensitive Watersheds, avoiding in-stream fill, elimination of direct discharge, and mussel relocations at the Swift Creek crossing.
48	Protected Species	Final EIS does not address whether wooded buffers and enhanced sediment and erosion control practices will be incorporated into the project construction.	NCDOT will adhere to the NCDWR Neuse River Basin Buffer Rules during project construction. NCDOT plans to use Design Standards in Sensitive Watersheds throughout the project to minimize indirect erosion and sedimentation related effects on the project. The NCDOT also plans to incorporate hazardous spill basins for the crossing at Swift Creek.
49	Protected Species	USFWS believes that indirect and cumulative effects on DWM due to road-induced development will occur.	See response to comment #41. The Biological Opinion issued by USFWS included an evaluation of the potential indirect and cumulative effects on protected mussels.
50	Protected Species	Impervious surfaces already make up 11 percent of the land coverage within Wake County, higher than NCWRC's recommendation to limit impervious surfaces to 6 percent of a watershed to protect aquatic species. Project will worsen project area impervious surface ratios.	FHWA and NCDOT have taken a hard look at all significant effects on the natural environment including increases in impervious surfaces. Interested agencies including those who regulate water resources have been continuously involved in the NEPA process and have provided comments and suggestions for avoidance and minimization of environmental impacts. As a result, FHWA and NCDOT have agreed to efforts to avoid and minimize impacts as the project develops. The project's Quantitative ICE study indicated that the percentage increase in impervious surface in five of the six watersheds from the 2040 No-Build scenario to the Build scenario would be less than or equal to 1 percent, with the exception being the Mahlers-Swift Creek watershed, where the range is less than or equal to 1 to 6 percent.
51	Protected Species	BA does not adequately document the likely effects of the project on mussels.	USFWS has reviewed the BA and, as noted in the response to comment #42, issued a Biological Opinion on April 10, 2018 that concluded "the Action (Complete 540) is not likely to jeopardize the continued existence of" DWM and Yellow Lance. USFWS did not note that the BA lacked any necessary information and has accepted it as sufficient.
52	Protected Species	NCDOT should have analyzed the potential impacts of anticipated sedimentation on mussels.	As documented in the BA, NCDOT/FHWA analyzed potential effects to mussels resulting from erosion/sedimentation during project construction. NCDOT/FHWA have committed to implementing design standards in sensitive watersheds throughout the project to help avoid/minimize these effects. As noted in the response to comment #51, USFWS accepted the BA as sufficient.

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Comment Number	Primary Topic	Paraphrased Comment	Response
53	Protected Species	BA doesn't evaluate impacts to potential DWM and Yellow Lance outside of streams where they have been known to occur or have been recently found.	<p>In addition to researching existing survey data (NCNHP and NCWRC), NCDOT conducted numerous surveys for freshwater mussels in streams with potentially suitable habitat within the FLUSA. The results of these efforts indicate that the DWM and Yellow Lance are considered extant only within Swift and Middle Creeks within the action area. The survey efforts specifically conducted for this project took place between 2010 and 2016. The results of the various survey efforts are included in the DWM Viability Study report (2016) and appendices (2011-2015) and the Aquatic Species Survey Report (2017) and are summarized in the Final EIS.</p> <p>As noted in the response to comment #51, USFWS accepted the BA as sufficient.</p>
54	Protected Species	BA doesn't evaluate impacts to mussel host fish species.	<p>Both the BA and the BO address potential effects of the project on fish host species. When considering potential project-related effects associated with water quality (i.e. sedimentation, toxicants, heavy metals, etc.), NCDOT/FHWA focused on the effects to freshwater mussels in general. Freshwater mussels have been shown to be one of the most sensitive aquatic faunal groups to water quality degradation and are generally considered to be more sensitive than fish species.</p> <p>As noted in the response to comment #51, USFWS accepted the BA as sufficient (see section 4.4.1.2, which addresses mussel host fish species). See also sections 4.3 and 5.3 of the BO.</p>
55	Protected Species	BA doesn't evaluate impacts on protected mussels by increased dust or debris during construction.	<p>As noted in the response to comment #51, USFWS accepted the BA as sufficient. Additionally, NCDOT has standard specifications for dust control during construction. The final project design will have erosion and sedimentation controls for use during construction to control sediment migration.</p>
56	Protected Species	Final EIS lacks details about what will happen to the mussel propagation facility after the five-year agreement expires.	<p>The mussel propagation facility will be operated by NCSU. NCSU will manage the facility beyond NCDOT's funding of NCSU's operations and maintenance (via NCWRC for up to a five year period). USFWS accepted the proposed five-year agreement as sufficient to address potential impacts to the protected mussels.</p>
57	Protected Species	Final EIS doesn't provide cost breakdown or budget for mussel propagation facility.	<p>The mussel propagation facility will be operated by NCSU. Information on the cost breakdown or budget for this facility would need to come from NCSU. The construction of the facility will be handled by Wake County since it will be their facility. Likewise, the budget for this construction would need to come from Wake County. The agreement between NCDOT and Wake County for facility construction and the agreement between NCDOT and NCWRC for operation of the facility have been made available to SELC and have been posted on the project website.</p>
58	Protected Species	Proposed \$5 million of funding for mussel propagation facility does not seem to be enough to meet the likely actual cost of constructing and operating the facility.	<p>The budgets for construction and operations of the mussel propagation facility were established by Wake County and NCSU, respectively. Generally, the estimate is \$2 million for construction and \$3 million for operation for 5 years. These dollar amounts were reached based on estimated costs from Wake County and NCSU.</p>

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59	Protected Species	NCDOT cannot satisfy its obligations under the Endangered Species Act by paying for another agency to propagate mussels in captivity.	The ESA directs all Federal agencies to work to conserve endangered and threatened species and to use their authorities to further the purposes of the ESA. NCDOT/FHWA believe that providing funding to the resource agencies whose missions involve the conservation of endangered species is consistent with their obligations under the ESA. As stated in the BA, as well is in response to comment #61 below, propagation/augmentation is consistent with protection and recovery objectives for these species. As noted in the response to comment #56, USFWS, which administers the ESA, has accepted the propagation plan as sufficient to address potential effects to the protected mussels. Section 4.3.3 of the BO states: "the captive propagation facility is a substantial and proactive measure that would not only partially offset adverse effects to the DWM within the Action Area, but would be a significant tool in furthering the recovery of the species."
60	Protected Species	The five-year agreement is not long enough to ensure successful development of a mussel propagation program.	The five year period for funding the mussel propagation facility was mutually determined through discussions between NCWRC, USFWS, and NCDOT. With this facility in place, plus the facility at Marion, NC, additional funding for future mussel propagation could be included for other projects in North Carolina from various agencies.
61	Protected Species	NCDOT has not demonstrated that protected mussel species could be successfully propagated and reintroduced into the wild.	The Biological Assessment reports that numerous imperiled freshwater mussel species have been successfully propagated and released into the wild for various projects in the United States, such as the Aquatic Fauna Restoration Project in the Cheoah River in Western North Carolina. This is an on-going cooperative effort between NCWRC, USFWS, and other private entities that has successfully propagated and released several freshwater mussels, including Appalachian Elktoe (<i>Alasmidonta ravenelaina</i>), which is federally listed, Slippershell Mussel (<i>Alasmidonta viridis</i>), Wavy-rayed Lampmussel (<i>Lampsilis fasciola</i>) and Rainbow (<i>Villosa iris</i>), as well as several native fish species and a federally threatened fish species, the Spottfin Chub (<i>Erimonax monachus</i>), into a nine-mile reach of the river. The Appalachian Elktoe and Slippershell Mussel are closely related to the DWM. To date there have not been any DWM population augmentation or re-introduction efforts using captive propagation. However, the species has successfully been propagated from two different source populations, the Po River of the York River Basin in Virginia and Moccasin Creek of the Neuse River Basin in North Carolina. There were 1,191 juveniles produced from two gravid females collected from Moccasin Creek; however, they were not released back into the creek due to logistical reasons regarding the State's species augmentation / re-introduction policy at that time. A number of the partners involved in the Cheoah River project will be an integral part of the proposed propagation facility. Lastly, the Dwarf Wedgemussel Workgroup for North Carolina concluded that propagation / augmentation was the highest priority management action for the Swift Creek population [Smith, D. R., S. E. McRae, T. Augspurger, J. A. Ratcliff, R. B. Nichols, C. B. Eads, T. Savidge, and A. E. Bogan. 2014. <i>Conservation Strategies for Dwarf Wedgemussel In North Carolina: Maximizing Persistence While Considering Management Cost And Effectiveness</i> . Unpublished Manuscript, 30 pp.] and [Smith, D.R., S.E. McRae, T. Augspurger, J.A. Ratcliffe, R.B. Nichols, C.B. Eads, T. Savidge, A.E. Bogan. 2015. <i>Developing a conservation strategy to maximize persistence of an endangered freshwater mussel species while considering management effectiveness and cost</i> . Freshwater Science. On line July 24, 2015 DOI: 10.1086/683121].

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62	Protected Species	It does not appear that sufficient brood stock could be collected to successfully propagate protected mussel. Removing individuals from Swift Creek could harm species viability.	NCDOT, USFWS, and NCWRC feel confident that brood stock individuals can be collected in Swift Creek. NCDOT has been working in partnership with the USFWS and NCWRC in obtaining individuals and will continue to work on this effort. Section 4.3.3 of the BO states: "the captive propagation facility is a substantial and proactive measure that would not only partially offset adverse effects to the DWM within the Action Area, but would be a significant tool in furthering the recovery of the species."
63	Protected Species	NCDOT has not shown that reintroduced mussels would have suitable habitat for post-construction survival.	The DWM Viability Study, as well as the BA, recognizes various threats to in-stream habitat and mussel populations. In addition, these analyses have also demonstrated that there are still areas of high quality habitat and mussel concentrations within the stream that continue to persist as the watershed has become more developed.
64	Protected Species	Atlantic Sturgeon BA doesn't sufficiently document the likely impacts of the project on the species.	NMFS has reviewed the BA and provided written concurrence that the project is not likely to adversely affect the Atlantic Sturgeon or Atlantic Surgeon critical habitat.
65	Protected Species	Atlantic Sturgeon BA doesn't sufficiently document the project's conservation measures to minimize and mitigate effects on the species.	See response to Comment #64.
66	Protected Species	August 15 through October 31 construction moratorium to minimize impacts on Atlantic Sturgeon would not address permanent fill of channels, disruptions in water flow, and altered levels of sediment and toxic pollutants.	NCDOT has consulted with NMFS on these topics and has evaluated the permanent and temporary effects on the Atlantic Sturgeon and its habitat. Based on existing data, NCDOT feels that the Atlantic Sturgeon is unlikely to occur within the Action Area; however, its presence cannot be discounted entirely. As such, NCDOT has committed to ensuring sufficient passage during construction, agreeing to a February 15-October 31 moratorium for construction activities in the Neuse River. Furthermore, the proposed design of the new crossing structure is similar to the existing Auburn-Knightdale Road crossing. A thalweg channel that is sufficient for sturgeon passage is present at this location. The adherence to design standards in sensitive watersheds throughout the entire project will help avoid/minimize potential adverse sediment and toxic pollutant effects in the unlikely event that the Atlantic Sturgeon is found to occur within the action area.
67	Protected Species	Atlantic Sturgeon BA doesn't include justification for conclusion that noise effects on species would be insignificant.	See response to Comment #66 regarding likelihood of Atlantic Sturgeon in the Action Area. As stated in the BA, bridge piles will be installed using drilled shaft methodologies, which produce the least amount of noise of bridge construction methods. Furthermore, with adherence to the February 15-October 31 moratorium, it is very unlikely that Atlantic Sturgeon will be in this section of the river during drilled shaft operations
68	Protected Species	NCDOT should have analyzed the potential impacts of anticipated sedimentation, borrow/fill, etc., on Atlantic Sturgeon.	See response to Comment #66 regarding likelihood of Atlantic Sturgeon in the Action Area, as well as sedimentation.
69	Protected Species	Atlantic Sturgeon BA relies on insufficient survey data.	See response to Comment #64. NMFS has not indicated any concerns with the survey data used to draw conclusions included in the BA. Also, note that the BA for this species is due to the recent designation of critical habitat in the Neuse River basin and not due to known occurrence of the species in the vicinity of the Complete 540 project.

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Comment Number	Primary Topic	Paraphrased Comment	Response
70	Protected Species	NCDOT should study all of the rare aquatic species with the potential to be listed as endangered or threatened.	NCDOT has conducted surveys for currently listed and several potentially listed species; the results are summarized in the Final EIS. Species that were specifically targeted in this effort include the petitioned Atlantic Pigtoe (<i>Fusconaia masoni</i>), Carolina Madtom (<i>Noturus furiosus</i>), Green Floater (<i>Lasmigona subviridis</i>), and Neuse River Waterdog (<i>Necturus lewisii</i>). However, consultations and other issues associated with the ESA are limited to currently protected and proposed species, consistent with the ESA. These surveys were conducted to assist in developing environmental baselines for these species in the event that they become formally listed and subject to Section 7 before Complete 540 project completion.
71	Water Quality	NCDOT has not fully documented the project's likely effects on the Swift Creek Critical Watershed.	As noted on page 53 of the Final EIS, the Preferred Alternative would not directly affect the Swift Creek Watershed Critical Area.
72	Water Quality	NCDOT has not addressed the ability of sedimentation and erosion control measures to successfully prevent contamination of sensitive watersheds affected.	Erosion and sedimentation controls will be implemented in compliance with all rules and regulations as required by State law to prevent contamination of affected watersheds. NCDOT will implement sediment and erosion control Best Management Practices in accordance with <i>Design Standards in Sensitive Watersheds</i> , as appropriate. Additionally, NCDOT will adhere to the most recent version of the <i>North Carolina Department of Transportation Stormwater Best Management Practices Toolbox</i> manual. This is listed as a special project commitment in the Final EIS.
73	Water Quality	NCDOT has not adequately documented impacts to Section 303(d) impaired waters	The Preferred Alternative would bridge all Section 303(d) impaired waters it crosses, avoiding direct impacts on these waters.
74	Natural Environment	USEPA was not satisfied with the level of detail provided about stream impacts.	Coordination with USEPA continued after the February 2016 e-mail from USEPA cited by SELC. As documented in the Stakeholder Involvement Report (December 2017), this included a March 16, 2016, interagency coordination meeting. USEPA's January 30, 2018, comment letter on the Final EIS did not note any remaining concerns about the level of detail provided about stream impacts.
75	Natural Environment	NCDOT has not taken a hard look at the extent or nature of wetlands impacts.	It is the opinion of NCDOT and FHWA that the Draft EIS, Final EIS, and the supporting technical documents do, in fact, demonstrate this hard look on potential wetlands impacts. As discussed in the Natural Resources Technical Report, wetland delineations were performed by qualified personnel onsite for all project DSAs. The delineations were verified by USACE and NCDWR. Surveyed wetland data were used to calculate impacts, as shown in the Draft and Final EIS. Avoidance and minimization of impacts, including bridging of high quality wetlands, were coordinated with the regulatory agencies. Unavoidable impacts have been quantified and will be mitigated.

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76	Riparian Buffers	<p>The North Carolina legislation that prevents localities from enacting or enforcing riparian buffers that are more restrictive than state or federal requirements means that it was an error for NCDOT to rely on these buffers to mitigate the impacts of the project.</p>	<p>NCDOT’s intended approach to mitigating wetland, stream, and buffer impacts is summarized on pages 53 and 54 of the Final EIS. NCDOT is not relying on riparian buffer ordinances as part of that approach for mitigating impacts.</p> <p>The water quality model used in the Quantitative ICE analysis did incorporate regulatory buffers, as explained in Section 4.2.10 and Section 5 in Quantitative ICE Technical Memo 3. The memo explains that the buffers used in the model are surrogates for all best management practices (BMPs) used by jurisdictions to protect water quality. As stated in Section 5, “No other site-specific BMPs, such as bioretention basins, stormwater ponds, grass swales, etc., are accounted for in the results. Consequently, both runs of the watershed model likely over-estimate contaminant loadings from areas with treated stormwater and can be considered a conservative estimate.” For this and several other reasons, this approach did not “rely” on these buffers to mitigate the impacts to endangered species. Also, this approach was conservative, in that would tend to overestimate impacts for the following reasons:</p> <ul style="list-style-type: none"> • For the watersheds with endangered mussels, most of the perennial streams are still subject to 100-foot buffers due to existing mitigation agreements associated with the Clayton Bypass project. • The model simulates a single buffer width by watershed based on a weighted average of buffer widths in urban areas, and without any modification based on regulations in rural areas. The areas where the regulatory buffers may overestimate actual buffers are diluted in effect by the linear feet of all the streams in the same watershed with smaller buffers. As a result, attempting a more precise delineation of where 100-foot buffers already exist, are protected, or may not be enforced, would have had minimal impact on the water quality model results. • The water quality analysis was not conducted to predict the specific amount of contaminants for each modeled catchment, but was instead meant to indicate the trend of water quality over time for each catchment and the water quality study area as a whole. • The regulatory buffer widths used in the model were the same for the No-Build and Build model runs and therefore would not affect the difference between the two scenarios. The difference between the two scenarios is what indicates the likely indirect effects of the project on water quality.
77	Section 4(f)	<p>NCDOT misrepresented SELC’s concerns about the <i>de minimis</i> determination for the Neuse River Trail.</p>	<p>The text in the Final EIS, which is a brief summary of the topic, rather than a detailed explanation, refers to comments received by individual members of the public. Page 31 in the Stakeholder Involvement Report (December 2017) clearly notes SELC’s concerns about the <i>de minimis</i> determination, and also explains that SELC had failed to acknowledge in its concerns that the Neuse River Trail crosses over or under several other transportation facilities including similar highway facility crossings at I-540, I-495, US 1, US 401, and US 64. For this reason, the Complete 540 crossing would not create an unusual condition that would affect the function and use of the trail. The City of Raleigh, which has jurisdiction over the Neuse River Trail, concurred with the <i>de minimis</i> finding for the trail.</p>

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78	Air Quality	NCDOT has not studied carbon monoxide, nitrogen oxides, volatile organic compounds, or particulate matter pollution likely to result from the project.	The analysis of criteria pollutants in attainment areas is not required under CAA Parts 51 and 93 in order to satisfy the requirements of NEPA.
79	Air Quality	Air quality analysis of MSATs is insufficient.	The analysis followed the current guidance from FHWA to satisfy the requirements of NEPA. The MSAT analysis followed the FHWA's tiered approach. Based on the FHWA guidance, the project met the requirements for a qualitative analysis.
80	Air Quality	NCDOT has not addressed SELC's previous comment that there has been no analysis of the project's indirect and cumulative effects on air quality.	The indirect and cumulative impacts on air quality are directly tied to the project's effects on traffic volumes and congestion. The MSAT analysis considers the effects of the project on traffic volumes in determining the level of appropriate analysis. The MPO's conformity determination for the long range plan also considers traffic changes due to the project.
81	Air Quality	NCDOT's determination that an analysis of greenhouse gas emissions is no longer required is incorrect.	NCDOT consulted with the Federal Highway Administration and the US Environmental Protection Agency concerning the Council on Environmental Quality's rescission of their guidance on greenhouse gas emissions and climate change to ascertain that an analysis of greenhouse gas emissions would not be required.

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82	Indirect and Cumulative Effects	<p>Final EIS and supporting documents acknowledge that the project would cause growth, but fail to account sufficiently for the degree of “induced growth” likely to occur. Regional and local planners foresee significant growth as a result of the project and the experience of growth along existing segments of 540 suggest continued extensive growth.</p>	<p>In the supporting technical reports documenting the quantitative indirect and cumulative effects analysis, NCDOT lays out a clear methodology for quantifying the potential indirect and cumulative effects of the project on land use. This methodology was based on experiences on other projects and a review of the current academic literature, and was developed in consultation with FHWA, CAMPO, the Triangle J Council of Governments (TJ COG), and state and federal agencies. NCDOT then objectively applied this methodology. SELC’s assessment that the results didn’t predict enough induced growth is a <i>subjective opinion</i>. The technical reports summarizing both the qualitative and quantitative analyses of the project’s potential effects on induced land development clearly describe regional and local planners’ expectations, as demonstrated by the numerous citations from these reports SELC uses in its comments.</p> <p>The planners quoted by SELC understood that some areas of the project (for example, Garner, Wendell, and Smithfield) will likely reach build out conditions by 2040 regardless of whether Complete 540 is constructed. However, if the Complete 540 project were built, these areas would reach build out conditions sooner. Area land use plans and zoning ordinances indicate the type of land uses local governments envision within in their jurisdictions. Once an area is built out, the only way population and employment densities can increase is if these stipulated land uses are changed.</p> <p>It is also important to note that much of the Complete 540 area is anticipated to be approaching build-out conditions by 2040, regardless of whether the project is constructed. SELC selectively omitted an acknowledgement of TJ COG’s belief, documented in Quantitative ICE Technical Memo 1, that it is “unlikely that failure to construct 540 would have a sizeable or measurable impact on growth in the Triangle Region that would exceed the typical error rates in long-range growth forecasts.” As acknowledged throughout the interviews with planners and the cited literature in Quantitative ICE Technical Memo 1 and the Historic Growth Memorandum, many factors affect the amount of growth; i.e., not all growth that occurs in an area is attributable to the construction of new or expanded roads. The articles and statements cited by SELC compare future growth with Complete 540 to what is on the ground today. As such, SELC creates the implication that all future growth from today is attributable to Complete 540, which is not correct. While most local planners indicate that communities are planned with Complete 540 in mind, it is unrealistic to imply that all future communities will occur only if the Complete 540 project is built. SELC comments and arguments do not compare the future Build to a future No-Build as required by NEPA – only the quantitative ICE does that. Rather SELC improperly compares the future Build with what is on the ground today which creates a misleading concept of induced growth (i.e. growth attributable to the project).</p> <p>A more detailed response to this comment is available in a memo titled “Responses to Southern Environmental Law Center Comments on the Complete 540 Final Environmental Impact Statement’s Indirect and Cumulative Effects Discussion”, prepared by Michael Baker Engineering in 2018. A copy of this document is included in Appendix N of this <i>Stakeholder Involvement Report</i>.</p>

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83	Indirect and Cumulative Effects	Use of Duranton and Turner study in development of ICE methodology resulted in an arbitrary and capricious analysis of indirect and cumulative effects.	<p>NCDOT disagrees with this assessment and instead believes that the most appropriate way to evaluate the potential future effects of a major highway project is to look at past major highway projects. SELC notes that the projects included in the Duranton and Turner study were constructed several years ago, failing to acknowledge that this is the only way to look at long range changes in land use subsequent to highway construction.</p> <p>Duranton and Turner was not applied to a “particular region of an individual city” as stated by SELC. Duranton and Turner was used to calculate regional differences in economic growth, consistent with the geographies that formed the basis of Duranton and Turner’s analysis. The ICE analysis determined an allocation of the growth to specific counties within the region based on accessibility analysis, and then the full regional allocation of growth was modeled in CommunityViz. Thus, Duranton and Turner was applied at an appropriate, regional level.</p> <p>SELC misunderstands the caveat included in Quantitative ICE Technical Memo 1 (page 8) that notes that most of the highways included in the Duranton and Turner study were not tolled. The purpose of this caveat is to note that tolls may reduce the use of a highway facility. This could indicate that the approach defined in Duranton and Turner may actually <i>overestimate</i> the economic effect of Complete 540.</p> <p>The fact remains that by using the Duranton and Turner study, NCDOT used the largest available dataset on the economic effects of highway construction on area economies.</p> <p>A more detailed response to this comment is available in a memo titled “Responses to Southern Environmental Law Center Comments on the Complete 540 Final Environmental Impact Statement’s Indirect and Cumulative Effects Discussion”, prepared by Michael Baker Engineering in 2018. A copy of this document is included in Appendix N of this <i>Stakeholder Involvement Report</i>.</p>

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84	Indirect and Cumulative Effects	NCDOT did not explain how growth was allocated in the study area under the No-Build Scenario.	<p>The CommunityViz outputs used for the Imagine 2040 plan were stated by both CAMPO and TJ COG to be indicative of a build condition for the Complete 540 project. NCDOT’s approach for developing the No-Build Scenario was to use the same planning tool used for Imagine 2040 (the CommunityViz model), change control totals for the No-Build Scenario (using the Duranton and Turner approach), adjust future land uses (land suitability analysis factors and place types based on local planner interviews), and rerun the model. This approach avoids any conscious or unconscious bias on potential effects.</p> <p>Pages 13 through 19 in the Quantitative ICE Technical Memo 1 explain how reductions of population and employment were determined for FLUSA counties. A description of how these changes were allocated within Traffic Analysis Zones (TAZs) in the FLUSA is provided on page 4 of the same report, which details how the No-Build land use allocations were developed using the CommunityViz software package. Pages 20-24 of the same memo summarize the attractiveness factor and Place Type changes made by jurisdiction for the No-Build analysis, and the appendices of ICE Technical Memo 1 provide additional detail on these factors and their adjustments. ICE Technical Memo #4 includes an appendix that provides background information on the CommunityViz model and its use in Imagine 2040.</p> <p>NCDOT used the same model used by CAMPO and TJ COG in their approved land use plan, used a data-driven approach to reduce county-level control totals, adjusted land use factors to remove the influence of the Complete 540 project based on input from area planners, and developed the No-Build Scenario. NCDOT stands by this approach.</p> <p>A more detailed response to this comment is available in a memo titled “Responses to Southern Environmental Law Center Comments on the Complete 540 Final Environmental Impact Statement’s Indirect and Cumulative Effects Discussion”, prepared by Michael Baker Engineering in 2018. A copy of this document is included in Appendix N of this <i>Stakeholder Involvement Report</i>.</p>

Appendix L3 - Interest Group Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
85	Indirect and Cumulative Effects	ICE analysis took arbitrary steps to reduce the overall growth found to be attributable to the project.	<p>This is incorrect. SELC cites pages 18 through 34 of the Quantitative ICE Technical Memo 1, which refer to determining how reductions in population and employment, developed using the previously determined Durant and Turner methodology, were spread out in the FLUSA. NCDOT determined which areas would receive substantial travel time benefits if Complete 540 were constructed; these areas were in Wake and Johnston Counties, as shown in Figure 5, page 17 of the Technical Memo. Therefore, total numbers of jobs and employment in Wake and Johnston Counties were reduced from the Imagine 2040 Build Scenario to develop the No-Build Scenario, as shown on pages 18-19, Tables 7 and 8. These tables clearly show that the full amount of regional growth reduction derived from the Historical Research Approach (i.e., Durant and Turner) was included in the CommunityViz model.</p> <p>When CommunityViz performed the No-Build land use allocation, it allocated the alternate growth forecast according to relative attractiveness of parcels throughout the region, and while the differences were concentrated in the FLUSA overall, a portion of the reduced forecast was distributed across the remainder of the Imagine 2040 region. The resulting reductions in dwelling units and employment were not manipulated to arrive at a pre-determined outcome, nor were they arbitrarily reduced, as stated by SELC. Rather, the regional growth adjustments derived by the regionally-based Durant and Turner methodology were applied in the regional CommunityViz model, with adjustments to accessibility attractiveness reflected in the area of the FLUSA to reflect a No-Build condition. The resulting changes in No-Build land use allocation were carried forward into the remaining analysis of indirect and cumulative impacts in ICE Memos #2, 3 and 4.</p> <p>A more detailed response to this comment is available in a memo titled "Responses to Southern Environmental Law Center Comments on the Complete 540 Final Environmental Impact Statement's Indirect and Cumulative Effects Discussion", prepared by Michael Baker Engineering in 2018. A copy of this document is included in Appendix N of this <i>Stakeholder Involvement Report</i>.</p>
86	Indirect and Cumulative Effects	ICE analysis should have been applied to additional alternatives, besides the Preferred Alternative and the No-Build Alternative.	<p>As noted in the response to comment #26, the non-toll highway concepts considered during early screening were all ultimately rejected as not practicable, based on an approach developed in consultation with the resource and regulatory agencies.</p> <p>The Qualitative ICE analysis, which was summarized in the Draft EIS, does compare the full range of alternatives that would meet the purpose of the project. It is the opinion of NCDOT and FHWA that this qualitative analysis was sufficient for comparing the various build alternatives to each other.</p>
87	Indirect and Cumulative Effects	Quantitative ICE shows that Preferred Alternative would result in more congestion on many of the same roads cited in the Statement of Purpose and Need to underscore the need for the project (same as comment #20), which calls into question the project purpose.	See response to comments #15 & #20.

Appendix L3 - Interest Group Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
88	Project Cost	NCDOT has still not provided a plan for financing the project.	A detailed plan of finance for the first two segments (from NC 55 Bypass to I-40) is still being developed, but tolls are expected to cover at least half of the construction cost, plus operations and maintenance and renewal and replacement for the facility. This project went through NCDOT's project prioritization process and, as such, additional funding to supplement toll revenue financing would be secured through STIP funds. It is not expected that any additional appropriation bonds will be issued.
89	Project Cost	Planning Level Traffic and Revenue Study does not clearly show how much additional revenue Complete 540 will generate.	<p>Table 4.17 on page 4-33 of the Planning Level Traffic and Revenue Study report (May 2017) presents a comparison of annual systemwide toll revenue forecasts by scenario from FY 2017 through FY 2055, including the impacts of Scenarios 2, 3, and 4 compared with Scenario 1 (Triangle Expressway only). Scenario 2 was designed to isolate the impacts of Complete 540 Segment 1 (from NC 55 Bypass to U.S. 401), Scenario 3 was designed to isolate the impacts of Complete 540 Segment 2 (from U.S. 401 to I-40), and Scenario 4 was designed to isolate the impacts of Complete 540 Segment 3 (from I-40 to U.S. 64/264 Bypass).</p> <p>As stated in the report in page 4-15, annual transactions and toll revenue were dampened to reflect "ramp-up" during the initial 36 months of a new tolling zone. With new toll facilities, or extensions to existing facilities, it often takes time for motorists to learn about the improvements and change their travel patterns, particularly for motorists who may use the road infrequently or live far from the road. It also accounts for the time it takes motorists to learn about and feel comfortable with the toll collection methods, particularly if there aren't existing toll roads in the area. The following ramp-up factors were applied to the tolled traffic:</p> <ul style="list-style-type: none"> • 0.610 ramp-up factor for months 1 through 12; • 0.814 ramp-up factor for months 13 through 24; and • 0.945 ramp-up factor for months 25 through 36.
90	Project Cost	Toll revenue projections are likely overly optimistic.	<p>The values-of-time (VOT) used in the Planning Level Traffic and Revenue Study (May 2017) were based on stated preference surveys conducted as part of the 2009 Triangle Expressway Comprehensive Traffic and Revenue Study. They represent aggregate values that incorporate a distribution of trip purposes (commute, personal, on-the-clock) and corresponding factors for each purpose similar to the values in the Transportation Research Board document referenced by SELC.</p> <p>As part of the Planning Level Traffic and Revenue Study the travel demand model was calibrated to observed conditions on the Triangle Expressway and other area roads, including traffic volumes and travel speeds. This was accomplished based, in part, on the use of the VOT assumptions presented in the report.</p>

Appendix L3 - Interest Group Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
91	Project Cost	Wage rates used to assign value to travel time in the Planning Level Traffic and Revenue Study don't seem to match planned high toll rates and limited travel time savings expected from Complete 540.	<p>One of the primary goals of the the Planning Level Traffic and Revenue Study (May 2017) was to provide an updated traffic and revenue forecast for the Triangle Expressway to serve as a base case to which additional scenarios could be compared. The values-of-time (VOT) from the stated preference surveys conducted as part of the 2009 Triangle Expressway Comprehensive Traffic and Revenue Study represented the best available information for that purpose. VOT from the 2009 stated preference surveys were adjusted based on recent historical inflation in the Raleigh region and used to help calibrate the travel demand model to existing conditions on the Triangle Expressway and other area roads.</p> <p>Additionally, CDM Smith performed standard VOT calculations using American Community Survey data for Wake County and the results were similar to the results of the stated preference survey.</p> <p>A new stated preference survey is underway as part of a comprehensive traffic and revenue study for Complete 540. This new traffic and revenue study will incorporate updated VOT based on this survey, which includes broader sampling of potential users of the proposed Complete 540 segments.</p>
92	Project Cost	Planning Level Traffic and Revenue Study does not account for limitations in human perception or other reasons for using a toll road.	<p>Time savings is a key component in estimating demand for a toll road in a travel demand model. The relationship between time savings and demand for the tolled road is based on a diversion curve. If time savings are low, few vehicles will be assigned to the tolled road. As time savings increase, vehicles assigned to the tolled road increase. If travel time savings were in the range described by SELC as too small to be perceived by travelers (<5min), the travel demand model would assign few vehicles to the tolled road.</p> <p>It should also be noted that saving time is not the only reason travelers choose tolled roads. Many factors contribute to the perceived value of any road such as roadway condition, operating speeds, availability of roadside assistance, perceived safety, and ease of access. Based on such factors, some travelers choose tolled roads despite limited time savings for a particular trip.</p>
93	Project Cost	Planning Level Traffic and Revenue Study does not clearly identify the assumed level of travel time savings.	<p>The planning level study report does not contain information on travel time savings. Figures 2-8, 2-9, and 2-10 provide weekday travel times for an array of area road segments by time of day. Inferences can be made from these figures by comparing them to a similar trip on the proposed segments of Complete 540 which was assumed to be posted at 70 mph.</p> <p>A comprehensive traffic and revenue study is currently being conducted for Complete 540. It will reflect updated economic forecasts and roadway improvements in the study area. Travel time savings information will be included in the final report for that study.</p>
94	Project Cost	NCDOT has not identified how much of the project cost will be covered by toll revenue.	See response to comment #88.

Appendix L3 - Interest Group Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
95	Predetermined Decision-Making	Short timespan between close of Draft EIS public comment period and Preferred Alternative recommendation suggests NCDOT didn't really review all the public comments and instead recommended the Preferred Alternative before considering them.	<p>NCDOT did not wait until the January 8, 2016, close of the public comment period to begin reviewing comments. Instead, NCDOT staff reviewed the comments as they were received, beginning after publication of the Draft EIS in November 2015, NCDOT indeed did review every public comment received and, as noted in the project's Preferred Alternative Report (April 2016), the public comments demonstrated overwhelming support for the Orange Corridor. About 93 percent of submitted comments that stated support for a corridor expressed a clear preference for the Orange Corridor. This overwhelming support helped to inform the recommendation of DSA 2, which includes the Orange Corridor, as the Preferred Alternative.</p>
96	Predetermined Decision-Making	Comments about and changes to information describing land use impacts of the various DSAs in the various iterations of the qualitative Indirect and Cumulative Effects Report (December 2014) suggest NCDOT's persistent bias against the Red Corridor.	<p>SELC selectively omits several important points related to this topic, which relates to Table 9 in the qualitative Indirect and Cumulative Effects Report (December 2014). First, Table 9 summarizes the effects of the various DSAs <i>only on Zone 4</i> of the FLUSA, which is the area around Garner. The Red Corridor is the only corridor that crosses Zone 4. SELC also omits the final reviewer comment in the November 18, 2014 version of the comment response matrix. This comment states "...we suggest that the 'Future Pop[ulation] Shift' category mirrors that of the 'Pressure/Demand for Typically Higher Impact Development' category; The importance being the difference between the Orange and the No-Build as stipulated in the narrative...."In the no-build scenario, there would be moderate demand for development and population growth in Zone 4, influenced by the area's proximity to Raleigh and to I-40/440, US 401, and US 70. There may be a slightly greater demand for development and population growth with the Orange and Lilac Corridor Alternatives, particularly near NC 50 and I-40, where these options would include interchanges just south of Zone 4."</p> <p>The final version of Table 9 does indeed follow this final comment, with the first two columns ("Pressure/Demand for Typically Higher Impact Development" and "Future Shift of Regional Population Growth to the Growth Area") listing the corridors in the same order. Because the Red Corridor is the only corridor that crosses Zone 4, it would be expected that it would result in a greater shift of population <i>to Zone 4</i> than the other options, which would instead exert their greatest influence on development <i>outside of Zone 4</i>.</p>



Business Leadership

The voice of the regional business community on transportation

February 1, 2018

Rodger Rochelle, Chief Engineer
North Carolina Turnpike Authority
1548 Mail Service Center
Raleigh, NC 27699-1548

Re: Comments on the Complete 540 Final Environmental Impact Statement (FEIS)

Dear NC Turnpike Authority, NCDOT, Federal Highway Administration, and partner resource agencies,

On behalf of the Regional Transportation Alliance—the voice of the business community on transportation in the Triangle region—we applaud your efforts to develop a thoughtful, comprehensive, multi-year review of the impacts of a proposed freeway that will be more than 25 miles in length, in one of the fastest growing regions in the United States. We thank NCDOT, its consultants, partners, and various resource agencies for the countless hours spent analyzing the impact to the human and natural environment, as well as the various transportation benefits and costs.

The balance of this letter speaks to our ongoing support for the project and the completion of the FEIS and highlights some key elements of our rationale.

1 [**We concur with the selection of the preferred alternative.** This alternative strikes a balance that accomplishes the goals of the project while minimizing the various potential impacts to the greatest practical extent. It is consistent with land use plans that have been in place for decades and continues to be broadly supported by the community.

2 [**We believe that the purpose and need of the project is sound and rational, particularly given the clear rate of growth in the market, and achievable by the proposed project.** The Final EIS demonstrates that the preferred alternative can accomplish the primary objectives to improve mobility within and through the study area during peak periods, and to reduce congestion on the study area's existing roadway network.

3 [**The creation of the new freeway will create an effective conduit for local and regional use that will reduce the need to widen or modify the existing roadway network.** A new freeway by definition has zero signals, limited access, strong design standards to enhance safety, higher speed to improve regional accessibility, and minimum travel delays to enhance travel operations. Operating the road as a turnpike provides multiple additional benefits, including a dedicated funding source, the potential for guaranteed travel time even during potential future heavy travel periods through the ability to modify the toll if need be (e.g., by creating off-peak discounts to harmonize demand), and the means for public transit buses to use the facility to improve schedule adherence without having to construct a separate busway or bus lane.

4 [**Any contemplated alternatives to a new, signal free roadway cannot accomplish the travel time benefits for commuting, commerce, transit, and tourism.** It is imperative to note that a freeway uniquely provides significant delay reduction, travel time certainty, regional accessibility, and safety benefits. While most roads do not need to be freeways, the alternative of widening existing roadways will result in an average travel speed of zero for portions of each journey, as traffic signals remain and, no matter how wide a non-freeway arterial roadway gets, the signals will have to be red at some point – in addition to having far lower posted speeds on those arterial roadways compared to 70 MPH on the Triangle Expressway. As well, travelers on this proposed freeway will relieve traffic on adjacent roadways, so even those who do not plan to use the turnpike, or expect to use it only occasionally, will benefit.

(continued on reverse side)

- 5 **In the absence of a completed 540, growth will continue to occur in the area but travel conditions and quality of life will deteriorate for both current and new residents.** The selected alternative aligns with two decades of land use and transportation planning by both local municipalities and regional planners. A simple review of land and travel in suburban Northern Virginia or metropolitan Atlanta—where the removal of proposed freeways from their regional plans has certainly not eliminated the underlying pressure on land use development—demonstrates that in a growing market, “if you build it, they will come, but if you don’t, they will come anyway.” The Final EIS makes a similar determination noting that, “the amount of development and other land use changes actually induced by the project is expected to be very small compared to the overall development expected to occur in the (future land use study area).”
- 6 **We concur that improved system linkage is also a desired outcome and one that will result in enhanced network resilience.** We interpret “improved system linkage” to encompass both improved connectivity and the enhanced network resilience that results from that increased connectivity. Given that crashes will inevitably occur on the existing (or any) roadway network, and that delays due to such “nonrecurring congestion” can impact regional travel throughout a peak period, the connectivity and resiliency benefits of the proposed freeway are clear in that it will directly intersect with five freeways, including four Interstate routes: NC 540/Western Wake Freeway, Interstate 40, Interstate 42 (U.S. 70 bypass), Interstate 87 (U.S. 64/264/decommissioned I-495), and Interstate 540.
- 7 **Regional transit will also benefit from the completion of the new freeway.** Several GoTriangle buses already use portions of the existing 540 turnpike, either as part of their regular routes, or during peak periods to avoid delays on I-40 whenever rush hour congestion exists in the RTP area. Commuters, transit vehicles, and commercial traffic will have a similar ability to avoid congestion on the existing roadway network, thanks to the existence of this new freeway.

We thank you for the additional and follow-up research and studies that have occurred since the development of the draft EIS in 2015. In terms of environmental analysis and mitigation, we applaud NCDOT for their willingness to spend \$5 million to help preserve endangered and potentially protected species in the area, and to complement existing research efforts on those species, in cooperation with both university partners and resource agencies. We also thank NCDOT and the Turnpike Authority for reviewing the project in terms of updated traffic models, which demonstrate the continued validity of the traffic-related conclusions for our growing area.

We are hopeful that as result of the years of prior work through 2017 and the upcoming discussions associated with the Final EIS in 2018, that the Preferred Alternative can proceed in an expeditious fashion to the status of Selected Alternative and then as Build Alternative. The sooner that 540 begins construction, the sooner the benefits of a safer, resilient highway network can be realized for travelers and communities.

Thank you for the opportunity to comment, and for all the work you and your colleagues within NCDOT and your various partner and resource agencies do to enhance our natural and built environment.

Sincerely,



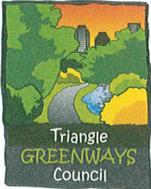
Joe Milazzo II, PE
Executive Director
Regional Transportation Alliance

Cc Bruce Sargent, RTA chair
Maeve Gardner, RTA legislative and policy chair
Pete Marino, RTA freeways chair

Regional Transportation Alliance Letter – 2/1/18

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Preferred Alternative	RTA concurs with the selection of the Preferred Alternative.	Comment noted.
2	Purpose and Need	Project purpose and need is sound and rational.	Comment noted.
3	Purpose and Need	Project will create effective conduit for local and regional use that will reduce the need to widen or modify existing roadway network.	Comment noted.
4	Alternatives	Any contemplated alternatives to a new, signal free roadway cannot accomplish the desired travel time benefits.	Comment noted.
5	Purpose and Need	Without the project, growth will continue to occur but travel conditions and quality of life will deteriorate.	Comment noted.
6	Purpose and Need	RTA concurs that improved system linkage is also a desired outcome of the project and will enhance network resilience.	Comment noted.
7	Purpose and Need	Regional transit will benefit from the project.	Comment noted.

TRIANGLE GREENWAYS COUNCIL



January 18, 2018

ADVISORY BOARD MEMBERS

TERRY REEVES
SMEDES YORK
GREGORY POOLE

Rodger D. Rochelle, PE
NCDOT, Turnpike Authority
1578 MSC
Raleigh, NC 27699-1578

RE: FEIS for I-540 Triangle Expressway Southeast Extension

Mr Rochelle,

The Triangle Greenways Council [TGC] submitted comments on the DEIS for the subject project. The following are several continuing concerns resulting from review of the FEIS. Again, the TGC does not oppose the need for transportation improvements within this high-growth region. However, there are concerns about the comprehensive integration of the proposed facility and public greenway corridor networks, as presented in the FEIS. Please find below, cryptic notes that address these concerns.

Page 10: Parks & Recreation Facilities

- 1 [- Greenway is mentioned herein, but not consistently throughout the FEIS; could this possibly result from the multiple agencies and consultants involved having different understandings of what greenways are and how they fit into applicable Federal & State laws/regulations?
- 2 [- Local Greenway Plans ID them as continuous and interconnected networks or systems [similar to road systems] but the FEIS does not reflect this characteristic.
- Mistakenly IDs the Neuse River Greenway as a Trail throughout the FEIS, while the trail is actually a facility within a greenway corridor that is part of a multi-jurisdictional, collaborative greenway network.
- 3 [- Further, Greenway Master Plans* [longrange & jurisdictionwide] are adopted by local governments and expected to be consulted/integrated with other [NCDOT] planning & design processes; yet they are not acknowledged in the FEIS, nor are the existing/anticipated greenway corridors that may be impacted by the proposed project.
- 4 [- Many future greenway corridors/trails IDed within therein could be severed by the proposed I-540 project if not accommodated through the planning/assessment process that lays the foundation for future Section 4(f) and design processes.
- Finally, many local government greenway networks host either or both the NC Mountain to Sea Trail and/or East Coast Greenway, and this public/nonprofit collaboration and its Section 4(f) implication is not acknowledged.
- Greenway corridor and trail projects are eligible for many funding programs, including but not limited to: TIGER Grants, National Recreation Trail Funds, Land & Water Conservation Funds, etc, as well as regional and local sources; thereby confirming their acceptance and importance as contemporary public infrastructure.

BOARD MEMBERS

JON ANDERSON, WILLIAM BREAZEALE, SKIP BROWDER, NORMAN CAMP, RICK CANNITY, SUSAN CARL, BONNIE ESTES, WILLIAM FLOURNOY, LARRY GILES, ROBERT HINSON, ANDREW LEAGER, DAVID PERMAR, GRADY SHIELDS.

Page 20: Neuse River Trail

- 5
- This facility is acknowledged under the topic “Effects on Community Facilities”, however, all of the other greenway corridors/trails [existing or proposed] within local Greenway Master Plans* of Raleigh and all the other impacted local governments were not acknowledged.
 - It is also noted that Chapter 5, Summary of Technical Reports, does not acknowledge the existence of Greenway Master Plans*, nor are any steps proposed within the NEPA process to avoid or mitigate impacts on these existing/proposed public infrastructure facilities and their responsible local governments.

Page 21: Effect on Section 4(f) Properties

- 6
- If the NCDOT/USDOT/FHWA do not recognize greenway corridors identified in longrange/jurisdictionwide Greenway Master Plans* then these continuous and interconnected public infrastructure networks will be jeopardized.
 - Unlike parks that float within urban/urbanizing/rural jurisdictions, riparian based greenway networks routinely follow stream systems, and while there is a degree of siting flexibility, they are not as “mobile” as traditional parklands.
 - As riparian based corridor systems, a major greenways purpose/benefit to the public health, safety, and welfare is their ecological quality and functions; thus adding measurable “green infrastructure” value to their urban/urbanizing area, as a complementary consideration [physical fitness/health, mental/emotional relief, air quality improvement, water quality benefits, nature/culture/historical interpretation, etc] to their recreational values.
 - If these considerations are not acknowledged in the FEIS, then what assurance is there that they will be revisited and addressed in ongoing steps of the planning and design processes?

Page 45: Protected Properties

- 7
- “The Preferred Alternative would avoid adversely affecting any historic sites that qualify ... and would avoid recreational properties and other land uses protected under Section 4(f) ...” although the FEIS does not identify future greenway corridors that are part of continuous and interconnected greenway networks proposed in adopted/official local government Greenway Master Plans. *

Page 47: Additional Minimization of Impacts

- 8
- This category of refinement addresses minimization of the project’s potential effect on natural systems and community resources, although the “Neuse River Trail” was the only crossing mentioned. While the City of Raleigh requested relocation of the trail to be under the proposed bridge, in lieu of a culvert, there was no explanation of how this complemented natural systems. While this relocation may be preferable for trail users, the advantages for the greenway corridor’s natural systems function were not noted.

Page 50: Final Section 4(f) Evaluation

- 9
- The Neuse River Trail is addressed again, with the conclusion that access to the trail “would not be permanently affected ... nor would it [I-540] adversely affect the trail’s recreational activities, features, or attributes”. While this may be a reasonable conclusion, there is still no suggestion as to whether other proposed greenway corridors and/or trails identified in adopted local government Greenway Master Plans* might be impacted. Nor is the integrity of the evolving continuous and interconnected regional/statewide greenway and/or trails network in jeopardy. Further, processes that will be followed to assure negligible-impact findings for these future public infrastructure projects, over the next several decades, have not been referenced in the text.

Page 61: Major Drainage Structures

- 10
- This text summarizes the “final hydraulic design” conclusions for 39 locations along the Preferred Alternative. Unfortunately, no more detailed explanation was provided for why each site decision was made. Thus, any consideration that may have been given to FEMA standards, Section 4(f), etc [incl. anticipated greenway corridor integrity] are not evident to FEIS reviewers.

I may have missed it as I scanned the FEIS, but I did not see explicit assurances that Federal and State regulations, policies, and procedures require the concerns expressed in these comments to be revisited, addressed, and mitigated as the I-540 project continues to its completion. This leaves uncertainty about whether the existing and official Greenway Master Plans* can ever be executed.

The TGC appreciates the opportunity to review the FEIS, but it would help if there were a little additional summarized detail carried-over [with page references] from the DEIS for context. Thereby providing some confidence that the topics had indeed been addressed and were indeed on the radar for final design and construction mitigation.

Sincerely,

William L. Flourney, Jr. FASLA
President

Footnotes: the (*) accommodates potentially unaddressed local Greenway Corridors unidentified in FEIS text or on maps. (a) Middle Creek in Apex & Holly Springs jurisdictions. (b) White Oak Creek in Garner & Clayton jurisdictions. (c) Swift Creek in Garner and/or Wake County jurisdictions. There may be others, but these are the most obvious examples of cooperative regional greenway network creation.

Cc: Roger Rochelle, Brian Yamamoto, Edward Parker, Donnie Brew, Kristin Maseman, Aldea Douglas

Triangle Greenways Council Letter – 1/18/18

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Greenways	"Greenway" is mentioned on page 10 of the Final EIS, but the term is not used consistently.	It is the opinion of NCDOT and FHWA that terms such as "greenway" and "trail" are used throughout the document in ways that are consistent with relevant laws and regulations.
2	Greenways	Final EIS should have noted that greenways are continuous and interconnected networks and should not have identified the Neuse River Greenway as a "trail."	This characteristic of greenways is not relevant to analysis under NEPA. Greenways that are part of interconnected networks and trails that are not part of interconnected networks would both need to be addressed in the analysis. The City of Raleigh, which has jurisdiction over the Neuse River Greenway Trail refers to this resource with that name (i.e., as a "trail.")
3	Greenways	Greenway master plans are not acknowledged in the Final EIS. Existing/anticipated greenway corridors that may be affected by the project are not acknowledged in the Final EIS.	Local land use, transportation, and park/recreation plans, including greenway plans, were reviewed and those with a bearing on the project are documented in the project's Community Impact Assessment (June 2015). Project analysis focused on existing and planned recreational facilities, including greenways/trails under public ownership. Section 4(f) does not apply to resources not owned by a public entity for existing or planned park/recreation use. The preliminary design of the project has provided for currently planned public greenways with provisions to accommodate these planned facilities through the project crossing in a manner acceptable to the local government responsible for the planned greenway facility.
4	Greenways	Many future greenway corridors/trails could be severed by Complete 540 if not accommodated through the project design and through future Section 4(f) processes.	See response to comment #3. Section 4(f) does not apply to resources not owned by a public entity for existing or planned park/recreation use. The only existing or proposed greenway/trail crossing the project that is currently in public ownership is the Neuse River Greenway Trail. The Neuse River Greenway Trail is part of the Mountains-to-Sea Trail and the East Coast Greenway; the Section 4(f) process as it applied to this resource is noted in the Final EIS. The Section 4(f) impacts to this resource were determined to be <i>de minimis</i> .
5	Greenways	Existing and proposed greenway corridors/trails besides the Neuse River Greenway were not acknowledged in the Final EIS. Greenway master plans are not acknowledged in the Final EIS.	See response to comment #3.
6	Greenways	The project will jeopardize continuous and interconnected greenway networks.	As noted in the response to comment #3, the preliminary design of the project has provided for currently planned public greenways with provisions to accommodate these planned facilities through the project crossing in a manner acceptable to the local government responsible for the planned greenway facility.
7	Greenways	Statement on page 45 of the Final EIS that the Preferred Alternative would avoid Section 4(f) impacts doesn't identify future greenway corridors.	See response to comment #4.

Appendix L3 - Interest Group Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
8	Greenways	Discussion of impact minimization to Neuse River Trail doesn't mention advantages for this greenway corridor's natural systems function.	Accommodation of the greenway corridor under the bridge would also be preferable from a natural systems function standpoint than a box culvert. Bridging of the Neuse River floodplain will serve to facilitate floodplain hydrologic function and wildlife movement, in addition to recreational uses.
9	Greenways	Section 4(f) discussion does not discuss the project's effects on the evolving continuous greenway network.	The Section 4(f) discussion addresses the characteristics that qualify the Neuse River Greenway Trail for protection under Section 4(f). The trail's role in a larger greenway network is not one of the characteristics that qualifies it for protection under Section 4(f). In any case, use of the Neuse River Greenway Trail will not be impeded by the project and its connections to the larger greenway network will not be affected. See also the response to comment #6.
10	Hydraulic Design	Discussion in the Final EIS of hydraulic design decisions along the Preferred Alternative doesn't include a detailed explanation about why each site decision was made.	As explained in the project's Preferred Alternative Report (April 2016) and Stakeholder Involvement Report (December 2017), these decisions were made in conjunction with the environmental resource and regulatory agencies at interagency meetings on November 13 and December 2, 2014.



Dear NC Turnpike Authority, NCDOT, Federal Highway Administration, and partner resource agencies,

Thank you for the opportunity to comment on the Complete 540 Final Environmental Impact Statement (FEIS), released in December.

We applaud the years of work by many partners to undertake a comprehensive alternatives analysis including the study of various impacts, leading to the selection by NCDOT and the Federal Highway Administration of detailed study alternative #2 as the preferred alternative.

The extension of 540 in southern and eastern Wake County will complete a primary backbone of our regional free way system, improve connectivity, reduce travel times, and alleviate peak traffic congestion. The selected alternative in the FEIS appropriately minimizes and mitigates human and environmental impacts, reduces costs, and aligns with decades of adopted local land use plans and objectives.

On behalf of the Cary Chamber of Commerce, we support efforts to advance and accelerate the construction of the preferred alternative for 540, which will help create a resilient, multimodal transportation network for our community.

Sincerely,

A handwritten signature in black ink that reads "Howard S. Johnson".

Howard Johnson
President, Cary Chamber of Commerce

Cary Chamber of Commerce Letter (undated)

Comment Number	Primary Topic	Paraphrased Comment	Response
--	Project Support	Cary Chamber of Commerce supports efforts to advance and accelerate construction of Preferred Alternative for 540.	Comment noted.



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DELIVERED VIA EMAIL: equorngw762B@pef.qvl.qx

Re: "Complete 540" Project FEIS Comments

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Vj g' Egpvgt "hqt "Dkqmi kcnF kxgtukv{ "E gpvgt+"uwo ku'v'j gug'eqo o gpw'lp "t'gur qpug'v'q v'j g' Hkpcn Environmental Impact Statement (FEIS) for the "Complete 540" project.

A. PURPOSE AND NEED

With "Complete 540," NC DOT has served up another km/eqpegkxgf . dqppf qi i ng d { r cuu'r tqlgev vq P qtv'j "Ectqrkpkcpu0Vj ku'v'ko g, it's the most expensive such project in the state's history. Y kj "v'j ku r tqlgev." P E "F QV"r wtuwgu r cmt { uj qtv'v'gto "i ckpu'lp"v'j g'ctgcu'qh'ko r tqxkpi "r gcm'v'cxgn'v'ko g'o qdkrkv{ cpf "t'gf wckpi "hwwt'g'htgcevugf "eqpi gukqp." y j kng'etgcvkpi "hpi /v'gto f gvtkqtcvckqp qp'dqv'j "qh'v'j gug htqpw'y kj "v'j g ko r ceu'qh'v'j g xgt { "uco g'r tqlgev0Ewo wv'v'xg'lpf wegf "t'chle"cpf "f gxgnr o gpv't'guwv'kpi htqo "v'j g'eqputv'ckqp"qh'v'j ku cpf "qv'j gt r tqlgeu y km'gtcug'v'j g uo cml'cxgtci g'i ckpu'o cf g'lp "f t'lxg'v'ko gu d { "v'j ku'r tqlgev'lp"uj qtv'qtf gt. eqpxgpkpwn{ justifying NC DOT's next ring road project idea.³

1 [Vj g'r tqi tguu'v'j cv'v'j ku'r tqlgev'y qwf "o cng'lp"ucxkpi "f t'kxgtu'v'ko g'dgi kpf "v'j g'y j ggn'qxgt"v'j g'uj qtv'v'gto ku'uwtr tkukpi n{ "kpu'kpkh'ecp'0Qpn{ "340" "qh'r tqlgev'v'v'k' u'v'j tqwi j "v'j g'ctgc'y qwf "dgpghk'v'y kj "c'v'ko g ucxkpi u'qh'32"o kpwgu'qt"o qtg0Cff kxqpcm{ . "v'j g'f t'lxkpi "r wdrle"v'j cv'y km'dgpghk'v'htqo "v'j ku'tqcf "y qwf dg gxgp"uo cngt. "t'gf wegf "d { "v'j g'r gtegpvci g'qh'v'j g'f t'lxkpi "r wdrle y j q"ecppqv'qt"y km'p'qvr c { "c"v'qm'v'q f t'lxg"ctqwpf "v'j gk"j qo gvqy p0

Y kj "gpqto qwu'lpv'gtpcrk gf "cpf "gzv'gtpcrk gf "equu."cpf "y kj "uo cm'dgpghku"ceetw'kpi "v'q"v'ko k'gf i tqwr . k'y qwf "dg"v'c tgeqtf /ugv'kpi y cuvg qh't'guqv'tegu v'q"ur gpf "4016 d'k'k'qp"qp"ci i t'cxv'kpi "cpf "r tqo qv'kpi qxgt/f gxgnr o gpv'lp"v'j g'j g'cxk{ /f gxgnr gf Tcrkij i t'gcv'gt"o gvtq ctgc0Vj ku'r tqlgev'v'qmu gur gekcm{ y cuvg'hw'k'p'iki j v'qh'v'j g'h'cev'v'j cv'v'j gug'r wdrle "hwp' u eqwf "dg"ur gpv'cf f t'guukpi North Carolina's hwwt'g v'v'cur qtv'ckqp pggf u."k'pen'v'kpi "ect/h'gg"o qdkrkv{0

11

11

³ Complete 540 Final Environmental Impact Statement ("FEIS") at 62.
[Alaska · Arizona · California · Minnesota · Nevada · New Mexico · New York · North Carolina · Oregon · Washington, DC](#)
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B. ALTERNATIVES

2 [P qt vj 'Ectqrkpcpu'cpf 'P E'F QV'ctg'uwenlkp'c'ur kp'e { erg'qh'gxgt/kpetgculpi 'r cxgo gpv'tchke'i tlf mjem r qmwkqp.'erko cvg'ej cpi g.'cpf 'gz vpevkqp0Vj ku'r tqlgev'vj tgcvgpu'qwt'ucvg'y kj 'o qtg'qh'gxgt { 'qpg'qh vj gug'r tqdngo u0Vj g'vko g'j cu eqo g hqt'P E'F QV'vq'ecvej 'wr 'vq'vj g'r tkqtkkku'qh43"/Egpmw { P qt vj Ectqrkpcpu0In this spirit, NC DOT should reject the "Build" alternatives and pursue responsible and ghhgevkxg'tcpur qt vckqp'uqmwkqpu.'uwej 'cu dgwgt'o clpvcplkpi gzkukpi 'tqcf u cpf 'kpetgculpi 'kpxguvo gpv kp vj g'uecrg'cpf ceeguukdkkx' { 'qh'r wdike'tcpur qt vckqp'qr vkpu0Cngtpevkxgu'vj cv'y qwf 'cee qo r rkuj 'vj gug qdlgev'xgu'y gtg'ctdktctkn' { 'griko kpcv'gf 'htqo 'tgxkgy 'kp'vj ku'HGKU

C. IMPERILED SPECIES

3 [Y kj '7; .755"rkpgct'hggv'qh'ko r cev'gf 'utgco u.'362"utgco 'etquukpi u.'378'y gw'cpf u'cpf '5; 'r qpf u impacted, it's not surprising that the i tgcvgu'ko r cev'qh'vj ku'r tqlgev'hcmu qp'cs wvke'ur gekgu0 Wphqtwpvcvgn' . 'vj ku'r tqlgev'y qwf 'twkp'vj g j cdkcv'htq mcecnko r gtrkf 'ur gekgu'vj cvctg crtgc { utwi i rki y kj 'rkg'vj tgcvgplkpi 'y cvgt's wcrk' { 'kuwgu'cpf vj g vj tgcv'qh'gz vpevkqp0Kivj g eqpvkpwgf 'uwxkcn'cpf tgeqxgt { 'qh'vj g ko r gtrkf f y cth'y gf i go wuugn' { gmqy 'rcpeg. cpf 'P gwug'Tkxgt'y cvgtf qi ctg'vq'dg gpuwtgf . 'vj gp'vj gk'j cdkcv'kp'Uy kn'Etggm'cpf 'O kf f rg'Etggm'lo wu'dg'r tqvgevgf 'htqo 'vj g kpgxkcdrg ugf ko gpvcvkqp'cpf 'ej go kecpollution certain to result if "Complete 540" y gtg vq'dg dwkn0Uko r n' 'r wv vj ku'r tqlgev'cpf pwo gtqwu gzkukpi 'y kf rkg'r qr wcvkpu'kp'Uy kn'Etggm'cpf 'O kf f rg'Etggmecppqv eqgzkn0

1. THE ENDANGERED SPECIES ACT

Vj g'Gpf cpi gtgf 'Ur gekgu'Cev'r tqj kdku'vj g'wpcwj qt k gf 'vcnkpi 'qh'ur gekgu'rkuvf 'wpgt'vj g'GUC'cu vj tgcvgpgf 'qt'gpf cpi gtgf ' "Take" is defined as to "harass." j cto . 'r wtuwg.'j wpv'uj qqv.'y qwpf . 'hkn'tcr . capture, or collect, or to attempt to engage in any such conduct."⁵ Cp'GUC/ rkuvf 'ur gekgu'ku'cnpg when "significant habitat modification or degradation [_cewcm' { 'hkn'qt'kplwtgu'y kf rkg'd { uki pkkcepvn' ko r ctkpi "guugpv'cn'dgj cxkqtcn'r cwgtpu.'kpen'f kpi . 'dtggf kpi . 'ur cy plkpi . 'tgcetkpi . 'o ki tcvkpi . feeding or sheltering."⁶ "Take" also occurs where "an intentional or negligent act or omission [_ etgcvgu'vj g'rkng'kj qqf "qh'kplwt { 'vq'y kf rkg'd { 'cppq { kpi 'k'vq'uwej "cp'gz vgp'cu'vq'uki pkkcepvn' "f kutw v normal behavioral patterns."⁷

Kp'qtf gt'vq'hw'rkni'vj g'r wtr qug'qh'vj g'GUC.'Ugevkqp'9*c+*4+'qh'vj g'ucwwg'tgs wkt gu'gcej 'hgf gtcn'ci gpe { 'vq eqpuwn'y kj 'vj g'WUWHuj 'cpf 'Y kf rkg'Ugtxleg'*WUHY U'+cpf 'vj g'P cvkqpcn'O ctkpg'Huj g'kpu'Ugtxleg (NMFS) to "insure that any action authorized, funded, or carried out by such agency . . . not likely to jeopardize the continued existence of any endangered species or threatened species."⁸ Vj wa.'Ugevkqp 9*c+*4+'ko r qugu'y q'qdrki cvkpu'wr qp'hgf gtcn'ci gpekgu0Vj g'htuv'ku'r tqegf wcn'cpf 'tgs wkt gu'vj cv ci gpekgu'eqpuwn'y kj "WUHY U'cpf 'P O HU'vq'f gvgto kpg'vj g'ghgew'qh'vj gk'cev'kpu'qp'gpf cpi gtgf 'qt vj tgcvgpgf 'ur gekgu'cpf 'vj gk'etk'ecn'j cdkcv'0 Vj g'ugeqpf 'ku'wduv'cv'kxg'cpf 'tgs wkt gu'ci gpekgu'vq'gpuwt g

⁴ 38'WUE0E'375: *c+0
⁵ Id0E'3754*3; +0
⁶ 72'E'CHT0E'4440240
⁷ 37'E'CHT0E'39050
⁸ Id0E'3758*c+*4+0
⁹ Id0E'3758*d+0

that their actions do not jeopardize the continued existence of listed species.⁸ If the agency proposing the project determines that the project “may affect” a listed species, the agency must engage in formal consultation with USFWS and NMFS.⁹ Formal consultation culminates in a report called a biological opinion.¹⁰ In the biological opinion, USFWS and NMFS must determine “whether the action is likely to jeopardize the continued existence of a listed species,” and it must suggest mitigation measures to ensure such jeopardy does not occur.¹¹

2. SWIFT CREEK

In 1993, the U.S. Fish & Wildlife Service identified Swift Creek as essential to the recovery of the federally endangered dwarf wedgemussel in the Neuse River basin.¹² Swift Creek is also home to the yellow lance, the Atlantic pigtoe, and the Neuse River waterdog. The FEIS describes how rapid urbanization in the Swift Creek watershed has led to rapid habitat degradation for mussels and other related aquatic species, but that some areas of the watershed still provide high-quality mussel habitat. Overall, most mussel populations in Swift Creek are in decline. Swift Creek is already impaired due to degraded benthic integrity. Construction of any of the “Build” alternatives would have unavoidable impacts to water quality and contribute to aquatic habitat degradation for the following species.¹³

3. DWARF WEDGEMUSSEL (*Alasmidonta heterodon*)

The federally endangered dwarf wedgemussel relies on the Swift Creek watershed for essential recovery habitat. All of the “build” alternatives cross Swift Creek, and the preferred alternative runs over the wedgemussel’s habitat in multiple places. The Biological Opinion for the dwarf wedgemussel indicated that the project is “likely to adversely affect” the species. The FEIS states:

Continued development in the lower Swift Creek watershed, below the Lake Benson dam, may threaten the long-term viability of Dwarf Wedgemussel habitat in this area . . . The addition of the Complete 540 project to this area has the potential to add to the cumulative effects of other past and planned future projects on the long-term viability of the species in the lower Swift Creek watershed.¹⁴

The same habitat sedimentation that has pushed the dwarf wedgemussel to the brink of extinction is threatened by the “Complete 540” project:

The potential effects of the Preferred Alternative on water resources include: (1) increased sediment loading and siltation due to watershed vegetation removal, erosion, and/or construction; (2) decreased light penetration and water clarity from increased turbidity; (3) reduced habitat suitability for Dwarf Wedgemussel and other aquatic species due to increases in sediment; (4) reduced ability of mussels and other aquatic

⁸ *Id.* § 1536(a)(2).

⁹ *Id.* § 1536(b); 50 C.F.R. § 420.4.

¹⁰ *Id.* § 1536(b)(3)-(4).

¹¹ *Id.*

¹² FEIS at 26.

¹³ *Id.* at 29.

¹⁴ *Id.*

species to feed because of increased suspended sediment in the water; (5) changes in water temperature with vegetation removal; (6) increased concentration of pollutants from highway runoff, construction activities, and construction equipment; and (7) alteration of water levels and flows as a result of interruptions or additions to surface and groundwater flow from construction.¹⁵

In order for NC DOT to comply with the Section 7(a)(2) of the ESA, it must ensure that “Complete 540” will not jeopardize the continued existence of listed species such as the dwarf wedgemussel.¹⁶ Typically, an agency would fulfill this duty by deploying mitigation measures to ensure that the action does not jeopardize the species. However, it appears that no mitigation measures can protect the dwarf wedgemussel from the inevitable sedimentation impacts that the preferred alternative threatens to inflict on Swift Creek. Unavoidable direct and indirect effects to the dwarf wedgemussel populations in Swift Creek are predicted by the NC DOT’s Biological Assessment (BA) for this project due to stream fill and sedimentation.¹⁷ Further, “[t]he permanent and temporary steam impacts associated with the construction of Complete 540 may have long-lived effects on the DWM and Yellow Lance’s ability to colonize these areas in the future.”¹⁸ Summing up, the BA states:

As discussed in Section 4.5.1, NCDOT is committing to using the Design Standards in Sensitive Watersheds [15A NCAC 04B .0124 (b) – (e)] throughout the project, which will reduce the potential for adverse effects; however, these effects cannot be entirely eliminated. Numerous factors influence the extent and magnitude of these types of impacts, making it difficult to quantifiably predict (See Section 4.1.3). As such, some level of direct sedimentation/erosion related adverse effects to the DWM and Yellow Lance are anticipated to occur as a result of project construction.¹⁹

The BA also points out that the project may kill or isolate the dwarf wedgemussel’s host fish, on which the mussels rely for successful reproduction, further impacting the reproductive success of the species within the watershed.²⁰ While no determination was made whether the host fish were present within Swift Creek, the BA stated that if the host fish are present, the project’s impacts to the fish population may be more damaging to the wedgemussel’s reproductive success than the direct impacts of the project itself.²¹

Because NC DOT cannot avoid jeopardy to the wedgemussel by mitigating the “Build” alternatives, it must select a “No Build” alternative in order to comply with Section 7 of the ESA.²²

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¹⁵ FEIS at 53.

¹⁶ 15 C.F.R. § 1536(a)(2).

¹⁷ BA at 46

¹⁸ *Id.* at 47.

¹⁹ *Id.*

²⁰ *Id.*

²¹ *Id.*

²² 15 C.F.R. § 1536(a)(2).

4. **YELLOW LANCE** (*Elliptio lanceolate*)

The yellow lance is a mussel that occupies habitat in Swift Creek. The U.S. Fish & Wildlife Service has proposed to list the yellow lance as federally threatened, and the species could be a federally listed under the ESA by the time that NC DOT is ready to begin building “Complete 540.” NatureServe (2008) reports that this species is “critically imperiled” in North Carolina, has declined by up to 30 percent in the short-term, and up to 50 percent in the long-term stating: “It is extremely threatened with extirpation in the Neuse River system.” Should the species be listed as proposed, NC DOT will owe an obligation under Section 7 of the ESA not to jeopardize the continued existence of the species with its “Complete 540” project.²³

6 [All of the impacts information listed above for the dwarf wedgemussel applies in equal measure to the yellow lance, and is hereby incorporated by reference.²⁴ The Biological Opinion for the yellow lance indicated that the preferred alternative is “likely to adversely affect” the species.²⁵ Because NC DOT cannot avoid jeopardy to the yellow lance by mitigating the “Build” alternatives, it must select a “No Build” alternative in order to comply with Section 7 of the ESA.²⁶

5. **NEUSE RIVER WATERDOG** (*Necturus lewisi*)

7 [The Neuse River waterdog is a permanently aquatic salamander found in Swift Creek that relies on high water quality for its survival. The waterdog is currently under consideration by the U.S. Fish & Wildlife Service for listing as a threatened or endangered species, and could be listed by the time NC DOT is ready to build “Complete 540.” Should the species be listed, NC DOT will owe an obligation under Section 7 of the ESA not to jeopardize the continued existence of the species with its “Complete 540” project.

The Neuse River Waterdog is known to be declining due to water quality degradation, but quantitative data are unavailable. Some populations are known to have been eliminated due to water pollution. AmphibiaWeb (2009) states: “Historical versus current abundance is unknown, but if high levels of pollution eliminate populations (Braswell and Ashton, 1985; see also Petranka, 1998), low levels of pollution may reduce abundances within remaining populations.”

Road construction, road repair and traffic degrade habitat for amphibians like the Neuse River waterdog. Roads can divide breeding locations from overwintering sites and increase mortality for migrating adults and dispersing juveniles, and can disrupt metapopulation dynamics and lead to population isolation, and light and noise from roads can disrupt breeding and feeding behaviors (Dodd 1997). Dodd (1997) states:

Transportation corridors, especially roads, can have serious deleterious effects on amphibian populations (Langton 1989). Road construction can lead to habitat destruction in both terrestrial and aquatic environments, and can negatively alter

²³ 15 C.F.R. § 1536(a)(2).

²⁴ FEIS at 60.

²⁵ *Id.*

²⁶ 15 C.F.R. § 1536(a)(2).

breeding habitats through increased siltation. Increased siltation can lead to increased amphibian mortality because of its own secondary effects. For example, nearly all aquatic life was eliminated downstream after U.S. HWY 441 was rebuilt in 1963 in the Great Smoky Mountains National Park.

As mentioned above, sedimentation impacts to Swift Creek are regarded as “unavoidable” in the event of implementation of any of the “Build” alternatives. BA at 46. Because NC DOT cannot avoid jeopardy to the Neuse River waterdog by mitigating the “Build” alternatives, in the event of listing before project implementation, it must select a “No Build” alternative in order to comply with Section 7 of the ESA.²⁷

D. CONCLUSION

Because Section 7 of the ESA is too steep a hill to climb for the “Build” alternatives of the “Complete 540” project, NC DOT should select a “No Build” alternative for this project.

Thank you for your consideration of our comments. Please contact me with any questions.

Sincerely,

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²⁷ 15 C.F.R. § 1536(a)(2).

Center for Biological Diversity Letter – 2/1/18

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Traffic	Projected travel time savings are insignificant and wouldn't benefit drivers who can't pay tolls.	<p>Appendix A of the <i>Complete 540 First Tier Alternatives Concepts Screening & Traffic Reassessment</i> provides average AM Peak period and PM Peak period travel times to/from 12 origins/destinations in Wake, Durham, and Johnston Counties. These travel times were calculated using the TRMv5 for 11 of the alternatives. The New Location Highway Alternative provides the greatest travel time savings for long-distance trips that traverse the traffic study area and southern and eastern Wake County by providing a high-speed regional mobility connection.</p> <p>Low-income communities can benefit from Complete 540 without using the toll facility. As shown in Tables 27-36 of the <i>Indirect and Cumulative Effects Memorandum (Quantitative ICE Assessment Memo #4)</i>, existing roads throughout the study area are anticipated to have fewer hours of congested travel and higher average speeds with Complete 540 in place.</p>
2	Alternatives	Alternatives other than building a new highway were arbitrarily eliminated from review in the Final EIS.	<p>As explained in the response to comment #6 in the SELC comment letter on the Draft EIS (see Appendix J of the Stakeholder Involvement Report), Chapter 4 of the Draft EIS reports that a range of options, including mass transit, was examined to determine which would be feasible and practical for meeting the purpose of the project. Each of the non-roadway options was ultimately rejected as not practicable. NCDOT, FHWA and USACE are all satisfied that the non-toll highway concepts are not practicable and therefore do not require any further analysis. As noted on page 48 in the Draft EIS, specific details regarding the full range of alternatives considered and the multi-tiered screening process used are documented in the <i>Alternatives Development and Analysis Report</i>. As outlined on pages 8 through 11 in the Section 6002 Project Coordination Plan for the project, the Purpose and Need for the project and the development and analysis of alternatives for detailed evaluation in the Draft EIS were vetted with participating regulatory and resource agencies as well as the public.</p>
3	Protected Species	Project cannot coexist with protection of wildlife populations in Swift Creek and Middle Creek.	<p>NCDOT and FHWA have worked collaboratively with USFWS and NMFS to minimize impacts to wildlife and avoid jeopardizing the existence of protected species. The project's Biological Assessments evaluate the potential effects of the project on federally listed species, per the Endangered Species Act, and detail the conservation measures that NCDOT proposes to use to help offset anticipated effects and promote the recovery of the Dwarf Wedgemussel. Section 7 Consultation with USFWS and NMFS has been finalized and is discussed in the Record of Decision (ROD) for the project.</p>
4	Protected Species	No mitigation measures can protect the Dwarf Wedgemussel (DWM) from sedimentation effects on the Swift Creek watershed due to the project.	<p>See response to comment #3. USFWS has issued a Biological Opinion on April 10, 2018 that concluded "the Action (Complete 540) is not likely to jeopardize the continued existence of" DWM.</p>

Appendix L3 - Interest Group Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
5	Protected Species	Because NCDOT cannot avoid jeopardy to DWM by mitigating the Preferred Alternative, it must select a No Build Alternative to comply with the Endangered Species Act.	See response to comment #3.
6	Protected Species	Because NCDOT cannot avoid jeopardy to Yellow Lance by mitigating the Preferred Alternative, it must select a No Build Alternative to comply with the Endangered Species Act.	See response to comment #3. USFWS has issued a Biological Opinion on April 10, 2018 that concluded "the Action (Complete 540) is not likely to jeopardize the continued existence of" Yellow Lance.
7	Protected Species	If Neuse River Waterdog is listed as a threatened or endangered species before the project is complete, NCDOT will be obliged not to jeopardize its continued existence.	NCDOT has conducted surveys for currently listed and several potentially listed species, including the Neuse River Waterdog; the results are summarized in the Final EIS. If the species is formally listed and subject to Section 7 before Complete 540 project completion, NCDOT will enter into Section 7 consultation with USFWS for the species.



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VIA E-MAIL

North Carolina Department of Transportation
 1548 Mail Service Center
 Raleigh, NC 27699-1548
 complete540@ncdot.gov

RE: Complete 540: Final Environmental Impact Statement

To Whom It May Concern:

Defenders of Wildlife (Defenders) respectfully submits the following comments in response to the Complete 540 project Final Environmental Impact Statement (FEIS), which was approved by the Federal Highway Administration, the N.C. Turnpike Authority, the N.C. Department of Transportation (NCDOT) in December 2017. Originally scheduled for publication in mid-2018, the FEIS timeline was accelerated and the document was approved earlier than anticipated. Approval of the FEIS is a key step toward constructing the final section of the Triangle Expressway from the N.C. 55 Bypass in Apex to U.S. 64/U.S. 264 in Knightdale.

Founded in 1947, Defenders of Wildlife is a national non-profit conservation organization focused on conserving and restoring native species and the habitat upon which they depend. Based in Washington, DC, the organization also maintains six regional field offices, including an office in Asheville, N.C. We submit these comments on behalf of almost 1.2 million members and supporters nationwide, which include more than 10,200 members in North Carolina. Our comments will focus specifically on the Complete 540 project's negative impacts on freshwater aquatic species, the destruction of wetland habitat, the lack of wildlife crossings included in the plan, opportunities for collaborative conservation, and our concerns regarding the accelerated timeline of this project.

I. Freshwater Aquatic Species

Defenders has a significant interest in the laws, regulations, policies and programs needed to conserve America's fish, wildlife and plants, including the protections for aquatic and mesic habitats. Indeed, the loss and degradation of wetland, stream and other aquatic habitats has been a major driver of species imperilment, requiring action to prevent species extinction. Wildlife protected under the Endangered Species Act are illustrative of this fact: of the 711 domestic animal species currently listed as "threatened" or "endangered," nearly half are from taxa that rely on water for all or part of their life cycle, including 164 fish, 89 clams and mussels, 35 amphibians and 28 crustaceans. Many other listed taxa include aquatic as well as terrestrial species that depend on aquatic



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environments: snails (springsnails, riversnails and limpets); insects (naucorids, dragonflies, damselflies and riffle beetles); and birds (whooping crane, southwestern willow flycatcher, yellow-billed cuckoo, wood stork and clapper rails). In fact, thousands of rare, imperiled, and more common species depend upon the availability of water sources.

Preserving the quantity and quality of aquatic habitats is key to meeting state species conservation objectives as well. For instance, North Carolina's State Wildlife Action Plan (SWAP), which outlines habitats, threats, and actions for conserving and recovering state-designated species of greatest conservation need, describes aquatic habitats as "living systems that represent some of the most endangered ecosystems in the state because they are subject to an increasing number of persistent threats that include resource withdrawals, pollution, invasive species, barriers, the effects of climate variability, and impacts to the surrounding terrestrial communities."¹ Of the more than 450 species listed as "species of greatest conservation need" (SGCN) in the most recent version of N.C.'s SWAP, nearly 40% are dependent on freshwater habitats for survival.

In regard to the Complete 540 project, there are multiple aquatic species that will be negatively impacted by the construction of a new highway through their current habitats. These species include, but are not limited to, the Dwarf Wedgemussel, Yellow Lance, Neuse River Waterdog, Carolina Madtom, and Atlantic Pigtoe. Currently, the Dwarf Wedgemussel is a federally-listed endangered species, and the Yellow Lance has been proposed for listing as federally threatened. Additionally, the U.S. Fish & Wildlife Service (FWS) is currently evaluating the Neuse River Waterdog, Carolina Madtom, and Atlantic Pigtoe for potential listing. The Dwarf Wedgemussel, Yellow Lance, and Atlantic Pigtoe have all been documented as inhabiting portions of Swift Creek, a waterway in Wake and Johnston Counties that the proposed Highway 540 will cross.

The Dwarf Wedgemussel, which was listed as federally endangered in 1990, is a small freshwater mussel that inhabits small streams and rivers on the East Coast.² This species is now extinct in Canada and facing vastly diminished populations in most of its former range. While North Carolina is home to more known populations than any other state within the historic range, most of these sites are small and sparsely populated. NCDOT and the Turnpike Authority have acknowledged in the Complete 540 FEIS that the preferred route (Orange Corridor Segment) will Swift Creek, which is known to be an important habitat for the Dwarf Wedgemussel in central N.C. The disturbances caused by clearing this site and constructing a large highway will negatively impact the population

¹ North Carolina Wildlife Resources Commission. 2015. North Carolina Wildlife Action Plan. Raleigh, NC, at 217

² U.S. Fish & Wildlife Service. https://www.fws.gov/raleigh/species/es_dwarf_wedgemussel.html. (Last visited at February 1, 2018.)



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of Dwarf Wedgemussels that inhabit Swift Creek – a population that, while small, has been identified as persisting and reproducing by the agencies’ survey biologists.

Like many freshwater mussel species, the Dwarf Wedgemussel is incredibly susceptible to the negative impacts on their habitat caused by disturbances in riparian buffers, sedimentation, stream flow, and habitat fragmentation. The biggest threat to their survival, however, comes from toxic chemicals associated with industrial, domestic, and agricultural pollution. The FEIS notes that the Orange Corridor Segment is a preferred alternative due to the lack of development along its intended route; unfortunately, this very lack of development is likely what created an opportunity for the Dwarf Wedgemussel to secure a foothold in the area. Undoubtedly, the disturbances caused by clearing land and constructing this highway will decimate what small haven the mussels have managed to find.

Another species reliant on freshwater habitat in the area is the Neuse River Waterdog. The Neuse River Waterdog, an aquatic salamander endemic to the Tar-Pamlico and Neuse River watersheds, is not listed as a threatened or endangered species at this time; however, FWS is currently evaluating the species for listing.³ In the Aquatic Species Survey Report (ASSR), which was completed in June 2017 at the request of NCDOT and the Turnpike Authority, researchers reported that while survey efforts confirmed the Neuse River Waterdog as present in Swift Creek and Middle Creek, the species was not found in the Neuse River. The report concluded, then, that the species was unlikely to occur in this section of its range.

We are concerned with this conclusion, and with several the “facts” presented regarding the Neuse River Waterdog and its habitat. First, the report states that the Neuse River Waterdog “will burrow into deep leaf beds and is rarely found” during the warm summer months.⁴ However, as this species requires a relatively high level of dissolved oxygen for survival (and deep leaf beds become anoxic during warmer months), this assessment is potentially flawed. The ASSR references research published by C.S. Brimley in 1924, as well as a web page published by AmphibiaWeb, yet the report omits subsequent research that offers a different perspective on Neuse River Waterdog habitat preferences. While these inaccuracies do not point directly to bad information, they do indicate a lack of thorough research and literature review by the individuals who surveyed waterways and prepared this subsequent report. Additionally, a more thorough review of available literature would have also shown that the Neuse River Waterdog has been documented in areas of the Little Creek (upstream from the selected survey site) in a survey completed by renowned herpetologist, Alvin Braswell. His report findings and methods would have

³ US Fish & Wildlife Service. <https://www.fws.gov/southeast/wildlife/amphibians/neuse-river-waterdog/> (last visited at February 1, 2018.)

⁴ Aquatic Species Survey Report (2017) at 13



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likely been helpful in completing more accurate surveys for this species, had they been included in the literature reviewed for the ASSR. While the Neuse River Waterdog is not (yet) as listed threatened or endangered, the fact that this endemic species is under consideration for listing should warrant more thorough research and planning regarding survey methods.

Finally, we commend NCDOT and the Turnpike Authority for including a plan in the FEIS to establish a propagation facility in Wake County to assist with management and restoration of Dwarf Wedgemussel and Yellow Lance populations in the region. Captive propagation projects for freshwater mussels are valuable tools for restoring declined populations of aquatic species, and they also provide opportunities for further research into the impacts of habitat and water quality degradation. This being said, Defenders has concerns over the limited number of years committed by NCDOT and the Turnpike Authority for support of this project. Five years is unlikely to provide sufficient time for the collection, propagation, and reintroduction of either the Dwarf Wedgemussel or Yellow Lance. By limiting their commitment to this short period of time, the agencies will effectively remove themselves from the project before the results are even demonstrated. Similarly, because freshwater mussels decline in disturbed and polluted habitats, it is likely that these species will face considerable challenges with reintroduction in their original habitats. We have substantial concerns with a plan that involves removing existing wildlife from their habitats, when there is no assurance that those animals may ever be returned to the wild. Propagation facilities cannot be viewed as a “holding cell” for species that got in the way of development.

II. Impacts to Wetlands

Wetlands are the link between land and water, and are some of the most productive ecosystems in the world. Wetlands have many important functions that benefit people and wildlife. They provide habitat for a wide variety and number of wildlife and plants, and act like sponges by holding flood waters and keeping rivers at normal levels. Wetlands also filter and purify water as it flows through the ecosystem. Plants found in wetlands help control erosion, as well.

Across the nation, more than half of the wetlands once in existence have disappeared.⁵ Pollution from agricultural and industrial production, coupled with unrelenting commercial and residential development, has decimated hundreds of millions of acres of this critical ecosystem. In recent decades, the Southeast has experienced some of the highest rates of wetland loss in the country.

⁵ Osmond, D.L., D.E. Line, J.A. Gale, R.W. Gannon, C.B. Knott, K.A. Bartenhagen, M.H. Turner, S.W. Coffey, J. Spooner, J. Wells, J.C. Walker, L.L. Hargrove, M.A. Foster, P.D. Robillard, and D.W. Lehning. 1995. WATERSHEDSS: Water, Soil and Hydro-Environmental Decision Support System, <http://h2osparc.wq.ncsu.edu>.



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Arguably, one of the most important functions of wetlands in terms of human benefit is the ability to control flooding. According to the Environmental Protection Agency (EPA), each acre of wetland can hold approximately three-acre feet of water (roughly one million gallons).⁶ This metric describes an acre of wetland with three feet of water standing on top. Recently, areas of North Carolina have been devastated by flooding associated with large storm events; it is likely that much of the losses from these floods could have been avoided had the region’s natural wetlands remained intact.

The proposed highway will impact acres of wetlands in both Wake and Johnston Counties. Each of the corridor segment alternatives would have an impact on wetlands, however the Orange Corridor would impact the greatest amount of acreage – 74 acres – which is nearly double the amount of wetland acreage that would be impacted by the alternative Red Corridor. While NCDOT and the Turnpike Authority acknowledge these wetland impacts, they have still selected the Orange Corridor as their Preferred Alternative. We can certainly understand the agency’s desire to avoid more populated areas of the region when planning the route of this highway, however the fact remains that any loss of wetlands is detrimental to the ecosystem and will have compounded effects beyond simply the number of acres impacted. Defenders feels strongly that the state of North Carolina, given recent devastating flood events, should be investing substantially more in the *protection* and *restoration* of wetlands, rather than massive road projects that will destroy intact ecosystems and compound flooding issues.

3

III. Wildlife Crossings

In January 2017, the conservation nonprofit Wildlands Network completed and published a study evaluating the threats to North Carolina’s wildlife caused by road networks and motor vehicles.⁷ The study reported that, from 2011 to 2013, there were “over 61,000 wildlife-related vehicle crashes, resulting in nearly 20 human fatalities, more than 3,400 injuries, and over \$149 million in damages.” Additionally, NCDOT’s own crash data shows that Wake County has topped the list for animal-related crashes across the state every year from 2011 through 2013.⁸ While Wake County is a highly populated area in the state, it is second in population size to Mecklenburg County, yet the number of

⁶ EPA, *Wetlands: Protecting Life and Property from Flooding*, at 1 (2018) available at <https://www.epa.gov/sites/production/files/2016-02/documents/flooding.pdf>

⁷ Ernest, M., and R. Sutherland, 2017, *Prioritizing Wildlife Road Crossings in North Carolina*, at 3, available at: <https://wildlandsnetwork.org/wp-content/uploads/2017/01/Prioritizing-wildlife-road-crossings-in-North-Carolina-2017-1.pdf>

⁸ Oliver, C., NCDOT, *North Carolina Animal Related Crashes: 2011 – 2013 County Rankings and Crash Data* (2014), Table Statewide Animal Crashes - County Rankings, available at: <https://connect.ncdot.gov/resources/safety/Documents/Crash%20Data%20and%20Information/201%20Animal%20Crash%20Data.pdf>



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animal-related crashes in Wake County more than doubles that of Mecklenburg each year. Johnston County (13th in population size for the state) ranked fifth on the animal-related crash list for 2011-2013.

4

The Complete 540 FEIS mentions a single wildlife crossing structure in the entirety of the document – a crossing on the Blue Corridor alternative, which was requested by the N.C. Wildlife Resources Commission (NCWRC). The preferred alternative, however, only mentions that bridges “can serve to support wildlife movement” in areas with larger streams and tracts of vegetated wetlands. Defenders feels that it is incumbent on NCDOT and the Turnpike Authority to provide further analysis of potential wildlife-related collision “hotspots” along the corridors included in the preferred alternative, and include plans for designated wildlife crossings in their final project. While we can certainly understand that adding wildlife crossing structures to existing roads across the state may be expensive and occasionally impractical, there is no excuse for excluding these structures in plans for roads not yet built. Given the eye-opening crash data provided by the agency’s own personnel, NCDOT should be using every available tool to avoid wildlife-related collisions on their roads.

Wildlife crossing structures on highways are win-wins for everyone involved. They provide safe passage through habitat for our state’s native wildlife, and reduce the chance that a driver will become involved in an animal-related crash. This not only increases the safety of our roads for drivers, but it also saves North Carolina’s citizens money. Considering that N.C. boasts one of the largest road networks in the country, the state should be setting an example for the rest of the nation by planning proactively to avoid wildlife-related crashes.

IV. Collaborative Conservation

Despite our concerns with some elements of the Complete 540 FEIS and supporting technical reports, we feel strongly that these areas provide an excellent opportunity for collaborative conservation between the federal government, state government, the counties involved, and local conservation organizations. With NCDOT’s *full* commitment to – not just the mention of – supporting initiatives like freshwater mussel propagation, Northern Long-Eared Bat research,⁹ and wildlife crossings along the preferred route, the agency can create opportunities for stakeholders to come to the table and produce results that benefit both our natural and human communities.

Not only would collaborative conservation measures provide a proactive strategy for avoiding negative impacts to the region’s wildlife, the process would also increase the overall efficiency of the project. Many red flags and potential barriers to conservation can

⁹ Northern Long-Eared Bat Section 7 Documentation (2015), at 44



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5 [be identified and addressed early in the planning process, rather than appearing later and causing interruptions during construction. This goal best reached in a purposeful, cooperative atmosphere, rather than through a process that alienates communities and conservationists from decision-making. Similarly, many conservation organizations have extensive experience and expertise in human-wildlife coexistence and conflict avoidance methods. Inviting these groups to the table *before* finalizing plans for the highway's construction would likely unearth alternatives that the agency has yet to realize.

V. Accelerated Project Timeline

6 [Defenders has serious concerns over the accelerated timeline of this project, and the seemingly intentional concealment of that timeline by the agency. Initial information provided by NCDOT and the Turnpike Authority reported that the FEIS would not be completed until Summer 2018, however the FEIS was published in December 2017. While we can certainly understand a desire to move quickly, rushing through environmental processes only increases the likelihood that important factors are overlooked. We've already noted in this comment letter multiple areas where there is a concerning lack of information, or where important information was negligently omitted from the research and planning process. We can only imagine what other data was excluded from these findings to accelerate its completion.

The email communications between Turnpike Authority project staff, which were discovered by the Southern Environmental Law Center (SELC) and reported on by the News & Observer in Raleigh, reveal a disturbing intent to conceal FEIS timeline information from "likely litigants" in order to avoid closer inspection into the project.¹⁰ We find this "unfortunate" correspondence to be unconscionable and a serious blow to the public's ability to rely on the agency for open and honest communication. Similarly, it seems rather suspect that the FEIS was published immediately prior to the Christmas and New Year holidays – a time of year known to all as popular for utilizing vacation time. While NCDOT and the Turnpike Authority contend there was nothing sinister behind their motivations, the fact remains that there was very little time for concerned citizens and stakeholders to closely review a FEIS with nearly 100 pages of information and eight additional technical reports (some of which were only published in January). These actions on the part of the agencies leave us apprehensive of our ability to fully trust in their commitment to truthful and timely communication of pertinent information.

VI. Conclusion

¹⁰ Stradling, R. "NCDOT accused of misleading public about \$2.2 billion highway project." News & Observer [Raleigh, NC], January 24, 2018.
<http://www.newsobserver.com/news/traffic/article196102254.html>



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In summation, Defenders of Wildlife has several serious concerns regarding the information put forth in the FEIS and accompanying technical reports for the Complete 540 highway construction project. We understand and empathize with NCDOT and the Turnpike Authority's desire to complete this high-profile toll highway, however we do not find it acceptable that this goal should be achieved by putting North Carolina's native, threatened, and endangered wildlife on the chopping block. As development continuously encroaches on wildlife habitat, protecting those few areas left undisturbed should be of the highest priority to the state and local communities.

7

The preferred alternative route chosen by NCDOT and the Turnpike Authority is, of all the alternatives, arguably the most environmentally damaging option. The USFWS described segments of this corridor "very problematic" due to its impact on the federally endangered Dwarf Wedgemussel, and the EPA concluded that this route also impacts the greatest amount of streams and wetlands of all the presented options. Likewise, the NCWRC expressed serious concern about "the effect of continued development in the lower Swift Creek watershed, below the Lake Benson dam, on long-term viability of the [Dwarf Wedgemussel] and other sensitive aquatic species." We are of a similar position, and strongly feel that every effort should be made to ensure the continued survival of these at-risk species – an effort that should begin with thoroughly reviewing *all* available and relevant information and conducting comprehensive species surveys of the region using proven techniques.

Additionally, we would like to see a more concerted effort made on behalf of the agencies to include wildlife-vehicle conflict mitigation structures in the Complete 540 plan, as well as an effort to bring stakeholders to the table for collaborative conservation discussions. These measures are both proactive in nature, and would demonstrate NCDOT and the Turnpike Authority's commitment to avoiding as many negative impacts on wildlife and habitat as possible. The agencies have an opportunity here to provide leadership for the state by committing to infrastructure projects that prioritize coexistence with wildlife, and therefore prioritizing human safety and our natural heritage as well.

Finally, Defenders is equal parts frustrated and disappointed with the agencies' apparently intentional concealment of important timeline information from the public and environmental protection organizations. This type of behavior does nothing to improve relations or garner trust with the people tasked with ensuring our natural resources and wildlife are adequately considered during planning, and undermines the very nature of an open and transparent regulatory process. It also compromises our ability to trust the agencies moving forward, and sours relationships that are critical to mitigating the negative environmental impacts resulting from the construction of this new highway.



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Defenders appreciates the opportunity to comment on this Final Environmental Impact Statement for the Complete 540 highway construction project. If you have any questions regarding our response, please contact Heather Clarkson, Southeast Program Outreach Representative, at 803-920-8048 or hclarkson@defenders.org.

Sincerely,

A handwritten signature in black ink that reads "Heather Clarkson". The signature is written in a cursive, flowing style.

Heather Clarkson

Defenders of Wildlife Letter (undated)

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Protected Species	Concerned with conclusion that Neuse River Waterdog unlikely to occur in the Neuse River in the project area.	Based on the aquatic species surveys conducted for this project, multiple baited traps were set at multiple locations in the Neuse River. No Neuse River Waterdogs were caught in these traps during this surveying effort in the Neuse River in and near the project area. Additionally, the last reported occurrence of the Neuse River Waterdog in the Neuse River was in 1987.
2	Protected Species	Concerned that propagation plan does not include a sufficient time for collection, propagation, and reintroduction of DWM or Yellow Lance.	The five year period for funding the mussel propagation facility was mutually determined through discussions between NCWRC, USFWS, and NCDOT. With this facility in place, plus the facility at Marion, NC, additional funding for mussel propagation could be included for other projects in North Carolina from various lead agencies.
3	Wetlands	Concerned about potential impacts to wetlands; would prefer to see North Carolina invest more substantially in protection and restoration of wetlands.	Comment noted. Detailed information about impacts to wetlands and streams are included in Chapter 4 of the Final EIS, which also includes information about proposed mitigation for wetland, stream, and riparian buffer impacts. All unavoidable wetland, stream and buffer impacts will be mitigated in accordance with state and Federal permitting requirements.
4	Wildlife	NCDOT should determine potential wildlife-related collision "hotspots" along Preferred Alternative and include plans for designated wildlife crossings in the final design.	NCDOT has coordinated with environmental agencies, including NCWRC and USFWS, about the project's potential effects on wildlife. Neither NCWRC nor USFWS has recommended any dedicated wildlife crossings along the Preferred Alternative. Bridging of the Neuse River floodplain will serve to facilitate wildlife movement, in addition to floodplain hydrologic function and recreational uses. A bridge was incorporated into the project design for the crossing of Middle Creek to facilitate wildlife movement.
5	Process	NCDOT should have engaged conservation organization in project development process.	As noted in the response to Comment #4, NCDOT has worked collaboratively throughout the project development process with environmental agencies responsible for protecting wildlife, including NCWRC and USFWS. NCDOT has solicited input from the public, including conservation organizations, throughout the study process.
6	Process	Concerned about NCDOT's acceleration of stated project timeline.	The timeline for a NEPA project is an ever evolving and changing dynamic as studies are undertaken and new information identified. While most NEPA project schedules seem to extend longer than anticipated, the Complete 540 project schedule was able to be advanced more quickly than anticipated based on prior events. There was no attempt to obscure the project timeline or stymie public participation. NCDOT has allowed and continues to allow for full and complete participation in the NEPA process throughout the Complete 540 project study timeframe. The time for comments on the Draft and Final Environmental Impact Statements have

Appendix L3 - Interest Group Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
			<p>exceeded the mandatory requirements in an effort to provide sufficient opportunity for participation. Additionally, those that requested additional time to provide comments were granted additional time. Outside of the official comment periods on published documents, NCDOT has been available to the public via the project website, the project email address, and the project hotline. Additionally, meetings have been held with neighborhoods, businesses, and community groups that have requested information about the project.</p>
7	Alternatives	Preferred Alternative is arguably the most environmentally damaging option.	<p>NCDOT strongly disagrees with this assessment. Chapter 4 of the Final EIS details the numerous environmental factors for which the Preferred Alternative offered the best option minimizing environmental impacts while also meeting the project's purpose. None of the cooperating or participating resource and regulatory agencies have noted any "issues of concern" regarding the Preferred Alternative.</p>

February 1, 2018

VIA E-MAIL AND US MAIL

Mr. Rodger Rochelle
 North Carolina Department of Transportation
 1548 Mail Service Center
 Raleigh, NC 27699-1548
complete540@ncdot.gov

RE: Complete 540: Final Environmental Impact Statement

Dear Mr. Rochelle,

The North Carolina Chapter of the League of Conservation Voters (“LCV”) offers the following comments with regard to the Final Environmental Impact Statement (“FEIS”) for the Complete 540 toll road project. LCV urges the North Carolina Department of Transportation (“NCDOT”) to look at alternatives to the 28.4 mile highway. The project is exorbitantly expensive and its high fiscal and environmental costs do not justify the minimal transportation benefits it might provide.

1 [• **Complete 540 would have significant impacts on wetlands and water quality.**

- The FEIS makes clear that the proposed Complete 540 project would seriously harm wetlands and water quality, with corresponding impacts to endangered species.
- The road would directly destroy 69.5 acres of wetlands, 39 different ponds, and would cross streams a remarkable 140 times, affecting 59,533 linear feet, or 11.27 miles.¹ .
- Construction of the project will produce large amounts of silt and sediment, which impairs water quality and harms sensitive aquatic species.

¹ See FEIS v (table).

- Once constructed, the highway would lead to runoff of heavy metals, inorganic salts, aromatic hydrocarbons, and suspended solids that accumulate on the road surface.² These contaminants are then washed off the highway and flushed into downstream waters during rain, causing water pollution³
- The extent to which this runoff will impact endangered mussels is not well documented in the EIS.
- In addition, Complete 540 would lead to sprawl, which would further degrade the watershed and carry its own suite of pollutants. The extent to which the project would exacerbate sprawl is not well documented in the FEIS.

2 [• **Complete 540 would destroy Riparian Buffers necessary to preserve water quality**

- Riparian buffers are crucial to preserving water quality, but Complete 540 will destroy 145 acres of stream buffer.
- In the FEIS NCDOT states that it is counting on riparian buffers along the Neuse River⁴ and other areas to protect water quality,⁵ yet the state legislature has steadily eroded protections for riparian buffers since 2011.⁶
- In 2017, in the name of “uniformity,” the state overrode local governments’ riparian buffer requirements.⁷ Senate Bill 434 not only prohibits local governments from enacting new ordinances that establish any greater protection than state or federal law already requires, but it prohibits them from implementing or enforcing *existing* riparian buffer ordinances that

² FHWA Environmental Technology Brief: *Is Highway Runoff A Serious Problem?*, Publication Number: FHWA-RD-98-079, FEDERAL HIGHWAY ADMINISTRATION, <https://www.fhwa.dot.gov/publications/research/infrastructure/structures/98079/runoff.cfm> (last modified March 08, 2016).

³ *Id.*

⁴ FEIS 10, 24.

⁵ See ICE Report 10.

⁶ *Buffers matter. Here’s why*, NCLCV, <https://nclcv.org/buffers-matter/> (last visited January 24, 2018).

⁷ Senate Bill 434 (Mar. 27, 2017), amending N.C. Gen. Stat. § 143-214.23A, available at <https://www.ncleg.net/Sessions/2017/Bills/Senate/PDF/S434v4.pdf>.

fit this definition.⁸ NCDOT must ensure that the riparian buffers it is relying on in its EIS would actually be in effect if the road is constructed, and plan for how it would mitigate against the impacts of the highway and associated growth if those buffers are further eroded.

- 3 [• **Complete 540 would put federally endangered species in jeopardy**
- The direct and indirect impacts to water quality described above would undermine any chance of recovery for the endangered dwarf wedgemussel (“DWM”) population in the Swift Creek Watershed,⁹ and other highly sensitive species such as the Neuse River Waterdog, Carolina Madtom, and yellow lance.
 - The top threats to the DWM, which has been federally listed as endangered since 1990, include riparian disturbance, pollution, sedimentation, and stream fragmentation—all impacts likely to result if Complete 540 is built.¹⁰
 - The mussel also relies on certain fish host species during its larval stages,¹¹ but NCDOT has failed to fully examine the effects of the highway on the fish.
 - Rather than candidly acknowledge that Complete 540 would completely undermine dwarf wedgemussel viability in Swift Creek, one of its remaining pockets of habitat, NCDOT states that a vague plan to breed more mussels in captivity and release them back into the creek – after seriously degrading it as described above – could improve its chances.¹²
 - Remarkably, NCDOT’s consultation with the U.S. Fish and Wildlife Service, which will determine whether it believes the project would contribute to putting the DWM species’ very existence in jeopardy, remains “unresolved.”¹³ Until we have more information on this proposal

⁸ *Id.* at 3 (amending N.C. Gen. Stat. § 143-214.23A(b)).

⁹ See *Dwarf wedgemussel (Alasmidonta heterodon)*, U.S. FISH & WILDLIFE SERV., https://www.fws.gov/raleigh/species/es_dwarf_wedgemussel.html (last visited Jan. 24, 2018).

¹⁰ *Id.*

¹¹ *Id.*

¹² FEIS 25.

¹³ *Id.*

and the impacts to the mussel it is impossible to make an informed decision about whether to move forward with Complete 540 in its present location,

- 4 [• **Complete 540 would saddle taxpayers with debt for decades**
- Complete 540 would be incredibly expensive, costing approximately \$2.2 billion.¹⁴
 - By way of comparison, that is significantly more than Wake County's annual operating budget.¹⁵ And it is significantly more than Governor Cooper has proposed to spend on two years of salaries and benefits for state employees.¹⁶
 - NCDOT expects part of the funding to come from toll revenue.¹⁷ Yet even under NCDOT's own studies less than 50% of the project cost will come from toll revenue. The remaining portion is not fully funded by the state. And even under this plan, North Carolina would be left repaying bond debt payments until 2055.
 - Funding the highway through toll revenue creates serious concerns about equity. Many lower income residents do not have access to cars, and those who do are ill-equipped to pay an expensive toll on a regular basis.
 - Spending so much of North Carolina's transportation tax money on a highway that only the wealthy can use is extremely regressive.
 - The FEIS does not demonstrate that the toll highway would provide any benefits for those unable to use it – there is no plan to increase or prioritize transit service, and there is no indication in NCDOT's traffic forecasts that congestion on existing roadways would improve.

¹⁴ FEIS 63.

¹⁵ See T. Keung Hui, *Wake school board faces \$24 million budget shortfall*, The News & Observer, June 20, 2017, <http://www.newsobserver.com/news/local/education/wake-ed-blog/article157056774.html>.

¹⁶ Governor Roy Cooper's Recommended Budget for FY 2017-19 at 7, available at <https://www.osbm.nc.gov/2017-19-governors-recommended-budget>; https://files.nc.gov/ncosbm/documents/files/BudgetBook_2017_web.pdf (direct).

¹⁷ See FEIS 63 (stating NCDOT estimated toll revenues).

- This inequitable result is glaring, yet NCDOT failed to include any study of equity impacts in the FEIS.
- 5 [• **There is a cheaper, better solution to Complete 540 : ACCESS2040**
 - An alternative relying on upgrading existing roads would have dramatically fewer environmental impacts at a fraction of the cost of Complete 540.
 - The ACCESS2040 plan would widen key roads to multi-lane divided arterials in Southeastern Wake County, ensuring adequate north-south and east-west routes for all commuters in the area.
 - ACCESS2040 would cost only \$1.18 billion, and the vast majority of the projects for ACCESS2040 are already being considered in local transportation plans.
 - ACCESS2040 would provide better congestion relief than would Complete 540 and would be available to all residents rather than only those wealthy enough to pay a toll.

Thank you for the opportunity to submit these comments. We hope NCDOT will reconsider this costly, destructive project and move ahead with a smaller scale, more incremental approach to improving mobility in SE Wake County.

Dan Crawford

NC League of Conservation Voters Letter – 2/1/18

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Natural Environment	Project would cause significant damage to the natural environment.	FHWA and NCDOT have taken a hard look at all significant effects on the natural environment with coordination and input from natural resource agencies. During the NEPA process a project proponent is required to evaluate a full range of alternatives that achieve the project's purpose and need and then compare the impacts of the alternatives. The Draft EIS and Final EIS for the project satisfy this requirement. Efforts to avoid and minimize impacts have and will continue to be undertaken as the project develops.
2	Natural Environment	Project would destroy riparian buffers necessary to preserve water quality.	See response to comment #1. NCDOT will meet all riparian buffer mitigation requirements as necessary and will implement sediment and erosion control Best Management Practices in accordance with <i>Design Standards in Sensitive Watersheds</i> , as appropriate. Additionally, NCDOT will adhere to the most recent version of the <i>North Carolina Department of Transportation Stormwater Best Management Practices Toolbox</i> manual. This is listed as a special project commitment in the Final EIS.
3	Natural Environment	Project would put federally endangered species in jeopardy.	NCDOT and FHWA have worked collaboratively with USFWS and NMFS to avoid jeopardizing the existence of protected species. The project's Biological Assessments evaluate the potential effects of the project on federally listed species, per the Endangered Species Act, and detail the conservation measures that NCDOT proposes to use to help offset anticipated effects and promote the recovery of the Dwarf Wedgemussel. Section 7 Consultation with USFWS and NMFS has been finalized and is discussed in the Record of Decision (ROD) for the project. USFWS issued a Biological Opinion on April 10, 2018 that concluded "the Action (Complete 540) is not likely to jeopardize the continued existence of" DWM and Yellow Lance and NMFS provided written concurrence that the project is not likely to adversely affect the Atlantic Sturgeon or Atlantic Sturgeon critical habitat.
4	Cost	Project would "saddle taxpayers with debt for decades."	A detailed plan of finance for the first two segments (from NC 55 Bypass to I-40) is still being developed, but tolls are expected to cover at least half of the cost, plus operations and maintenance and renewal and replacement for the facility. This project went through NCDOT's project prioritization process and, as such, additional funding to supplement toll revenue financing would be secured through STIP funds. It is not expected that any additional appropriation bonds will be issued.
5	Alternatives	Water Kulash's Access2040 would be a cheaper option with fewer environmental impacts.	The objectives stated in the Access2040 report do not equate to the Complete 540 project's purpose. The assertion that the costs of Access2040 would be lower than for Complete 540 are based on faulty assumptions and incomplete analysis. A more detailed explanation of the limitations of the Access2040 alternative is available in the <i>Access2040 Claims and Performance Assessment</i>

Appendix L3 - Interest Group Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
			(HNTB, 2018). A copy of this document is included in Appendix M of this <i>Stakeholder Involvement Report</i> .



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February 1, 2018

Mr. Rodger Rochelle
North Carolina Department of Transportation
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complete540@ncdot.gov

Re: Comments on the final Environmental Impact Statement (EIS) for the 'Complete 540' Project

Dear Mr. Rochelle:

We appreciate the opportunity to offer comments on the Environmental Impact Statement (EIS) for the Complete 540 – Triangle Expressway Southeast Extension, a proposed 27-mile tolled limited access highway. As proposed, the project is a self-defeating response to the region's rapid growth, frames its purpose too narrowly, will not meet the objectives it does identify, and will impose a raft of unnecessary harms on the communities and natural environments along its route. Both in the process it has followed to get here (with a misleading calendar¹), and in its predictable impacts, Complete 540 is inconsistent with the values and goals of this Administration.

This is not a small project; it should reflect the Administration's best thinking and priorities. With a price tag of \$2.2 billion, Complete 540 costs as much as the entire state legislative appropriation from the Highway Fund in FY17-18.² Below, we comment on the review documents for the project, noting several omissions. But while the most serious concerns could benefit from greater analysis in the EIS, they cannot really be resolved through mitigation or tweaks to the project. For that reason, we urge the NC Department of Transportation (NCDOT) and the Administration to pause the Complete 540 project and take a step back, to think through how it – or, ideally, a new and more creative alternative – could better serve this Administration's agenda and the needs of the region and state.

The Triangle region is growing. Between now and 2035, the end date for many of the analyses in the Complete 540 record, the population of the Triangle region is expected to grow by more than 50%; and in recent years, the Triangle has outpaced projections.³ An increasing share of the population will consist of seniors, many of whom need mobility without being able to

1

¹ Richard Stradling, '[NCDOT accused of misleading public about \\$2.2 billion highway project](#)', *Raleigh News & Observer*, January 24, 2018.

² S257, Joint Conference Committee Report on the Base, Capital, and Expansion Budget, June 19, 2017, at K-1.

³ Rebecca Tippet, UNC Demographics, '[NC Demographic Trends Through 2035](#)', presentation to House Select Committee on Strategic Transportation Planning and Long Term Funding Solutions, February 22, 2016.

1 drive. Autonomous vehicles may substantially increase the carrying capacity of the existing network of roads. Spending \$2.2 billion on a loop toll road that may be obsolete when it opens is not the way to plan for anticipated demographic and technological change.

2 *Too-narrow project purpose.* The EIS says the primary purpose of the project is ‘to improve mobility and traffic congestion south and east of the Raleigh area during peak travel periods’ and to reduce forecasted congestion (1, 7). Lead agencies have much flexibility to define project purposes for NEPA analysis, and it is common for a transportation department to define a project’s purpose in relation to the measures it knows best. From a societal and political perspective, however, the choice that matters is which alternative will best accommodate existing and expected growth while promoting economic vitality, high quality of life, and a resilient environment. That the project is not framed around this triple bottom line goal is a warning sign; ‘reducing congestion’ is an extremely narrow window. Maximizing ‘mobility’ says little about the how the project will address the purposes that really matter (and for which the Administration proposes to spend so much money).

3 Even framed as it is, however, the project will not meet the project purpose. The land use analysis offered as a supporting document for the EIS suggests that Complete 540 will spur significant densities of housing outside (south and east) of the route.⁴ Such an outcome would lock in increased greenhouse gas emissions, more dependence on individual cars for mobility (and therefore increased congestion), and higher cost of service for virtually all municipal services across the region. Although tools are available to evaluate the impacts of that distribution of growth on cost of service⁵, the EIS and supporting documents do not appear to apply any of them, or to consider this category of impacts.

4 In passing, we note that the model underpinning the analysis of cumulative impacts and induced development is, as presented in the EIS and ICE memos, essentially a black box; we have no idea whether it is plausible. The information presented on the model in the EIS and supporting technical memos is so opaque as to make it impossible for the public to offer meaningful criticism of it. One step that does not appear to have been taken is to test the model retrospectively on growth around previous sections of 540, which would offer some indication of its reliability.

5 In any event, there are better ways to spend \$2.2 billion to address the region and the study area’s transportation needs. An analysis commissioned by the Southern Environmental Law Center indicates that the limited project purposes of reducing current traffic congestion can be met for far lower costs through improvements to existing roads and a handful of new segments that are neither limited access nor tolled.⁶ That approach also has radically fewer environmental impacts. We suspect that an analysis that integrated transit – and perhaps also land use changes to reward density in Garner, Raleigh, and Cary – could meet project goals at an even lower cost, with greater collateral benefits to the economy, regional quality of life, and the environment.

Operating cost burden. The capital expense of Complete 540 is not the only way this project wastes money. Once built, the road must be maintained. Over 50 years ago, urbanist Jane Jacobs noted, “Almost unnoticed and unremarked, a great unbalance has developed in cities between money for building things and money for running things.”⁷ Complete 540 would contribute to this imbalance in the Triangle: the cost of ongoing

⁴ Memorandum on Land Use Scenario, Methodology and Results (Quantitative ICE Assessment Memo #2), November 2017, at 25.

⁵ Smart Growth America, [The Fiscal Implications of Development Patterns: A Model for Municipal Analysis](#), 2015.

⁶ Walter Kulash, *An Alternative to the Proposed I-540 Extension, Wake County, North Carolina*, January 23, 2018.

⁷ Jane Jacobs, ‘A Great Unbalance’, 1964 speech, collected in *Vital Little Plans*, 2017.

6 [maintenance will compete with funds needed to repair and maintain the rest of the Triangle’s road and transit networks. It would be more efficient to spend these funds on renovations of existing roads, displacing a cycle of maintenance costs, rather than simply expanding the burden on future taxpayers, as this project will do.

7 [*Environmental justice.* The environmental documents for Complete 540 fail meaningfully to assess the environmental justice implications of construction and operation of this highway as a toll road. This Administration has spoken in multiple contexts of the need for basic fairness in state government and for state programs to work for all citizens. Despite this, the only consideration of environmental justice in the document focuses on the physical displacement of low-income residents among various proposed routes (17, 19). That overlooks the question of whether the project should be built as a toll road, whether it should be built at all, and whether the toll road will have disproportionate impacts on low-income residents who do not live in its path. Yet, the federal transportation establishment has offered very direct guidance on how to assess the environment justice impacts of a toll road project.⁸ As that resource notes, in addition to the direct effects of tolls, burdensome impacts on environmental justice communities can arise from “creation of uncertain transaction costs, introduction of user account terms, change in access to the roadway network, creation or increase in the tolled facility footprint, or closer proximity between the tolled facility and the nearby community.”⁹ The review offered for public comment simply does not address this important range of impacts and concerns.

Affordable transportation and housing. Affordability is a major consideration left out of the EIS by the failure to address environmental justice impacts. The Triangle suffers from a lack of affordable housing.¹⁰ In the absence of a more robust state or local policy, the default policy has been to allow the market to create lower-cost housing on the exurban fringe.¹¹ As has been thoroughly documented in North Carolina and across the nation, this does not actually translate into more affordable lives for commuters, as the combination of housing and transportation costs continues to climb, as measured both in money and in free time lost from family, schools, churches, and civil society.¹² Low income families find themselves exiled to the exurbs, and then stranded when gas prices periodically rise.¹³ Designation of Complete 540 as a toll road will only compound those disparate impacts. If, as seems likely, the toll authority finds it must raise toll rates to make up for overly rosy revenue projections, that will hit these ‘non-choice drivers’ even harder. Again, the failure of the EIS to address this very real problem is a reflection of the narrow conception of the project purpose, and underscores the need for leadership from the Administration to rethink this project.

Loss of forest. Looking at the project mapped onto Google Earth, one really striking visual impression is the way the preferred alternative wipes out tracts of existing forest. Presumably it does this for the same reason it visits such massive impacts on waters and wetlands – those are the tract most free of existing residences and active farms. The combination of the proposed highway itself, and the induced

⁸ National Cooperative Highway Research Program, *Assessing the Environmental Justice Effects of Toll Implementation or Rate Changes: Guidebook and Toolbox*, NCHRP Research Report 860, 2018.

⁹ *Ibid.*, at 2.

¹⁰ See, for example, ‘Keep affordable housing in the Triangle despite the hot market’, *Raleigh News & Observer*, [editorial](#), July 22, 2017.

¹¹ See, for example, Emily Dreyfuss, ‘[The Year in Housing: The Middle Class Can’t Afford to Live in Cities Anymore](#)’, *Wired*, December 31, 2016; Richard Florida, ‘[The Search for Affordable Housing Is Pushing the Middle Class to the Exurbs](#)’, *CityLab*, April 8, 2014.

¹² See, Center for Neighborhood Technology, [Housing & Transportation Index](#); for a clear exposition of this concept, please see Joe Cortright, ‘[It’s time to change how we measure affordable housing](#)’, *CityLab*, June 23, 2017.

¹³ See, Alana Semuels, ‘[Suburbs and the New American Poverty](#)’, *the Atlantic*, January 7, 2015.

development that will spring up around the exits, will strip much of the forest from the larger project area. What remains will mostly be edge habitat vulnerable to invasive species, not interior forest, which supports a different and rarer community of birds.¹⁴ The EIS promises that NCDOT will ‘coordinate with’ the US Fish & Wildlife Service to minimize impacts to migratory birds during construction (56), but provides no details on what that means. It says nothing at all about the post-construction impacts of the loss of interior forest habitat.

Impervious surface and induced development. As noted above, the EIS relies on the conclusion that the presence or absence of the highway will not really change growth patterns. This is not a plausible conclusion. If growth does not follow the road, it really makes no sense to have the loop swing so far into southeastern Wake County – without substantial growth radiating through the study area, it is faster for nearly everyone else to the west, north, or east to use I-40 and local roads. The induced growth needed to justify the loop, mitigation and stormwater standards notwithstanding, will destroy water quality, wetlands, flow volumes, stream habitat, and both endangered and non-endangered aquatic populations. Envision for a moment what the study area will look like fifteen years into a ‘successful’ future for the toll road: there is no room for natural streams or undegraded natural areas in that landscape. Nor is this hypothetical; it is precisely the pattern that has resulted along the anticipated and then completed route of 540 in western Wake. Using the historical view in Google Earth shows the rapid expansion of cleared forest and impervious surface for residential and commercial developments around each of that highway’s exits.

In conclusion, we reiterate our request that the Administration take a step back and rethink Complete 540. Wake County and its municipalities, including Raleigh, Cary, and Garner, do face real transportation issues. Those issues, however, are part of a broader challenge of welcoming rapid growth in a way that sustains the region’s economy, quality of life, and environment.¹⁵ Complete 540 may succeed for a time in reducing congestion (though even that is not so clear), but none of the EIS documents has been written with an eye to the larger challenge, which is the challenge that really matters. As a result, the ‘solution’ Complete 540 proposes is likely to spin off undesired answers to the larger questions of regional sustainability: greater income inequality; greater neighborhood segregation by income; higher costs of service for municipalities; and massive environmental impacts that cannot be effectively mitigated. Administration leadership is needed to reorient this process towards measures that matter, and toward results that yield a better future for all the residents of the region.

Thank you for considering these comments.

Sincerely,

Grady S. McCallie
Policy Director
NC Conservation Network

¹⁴ Robert McDonald & Dean Urban, ‘Edge effects on species composition and exotic species abundance in the North Carolina Piedmont’, *Biological Invasions*, 2006, 8:1049.

¹⁵ For a robust exploration of how a region can address these interlocking questions, see National Academies of Science, [Pathways to Urban Sustainability](#), 2016.

NC Conservation Network Letter – 2/1/18

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Trends	Demographic and technological trends suggest that the project wouldn't best address mobility needs.	It is the opinion of NCDOT and FHWA that there is little credible evidence to support the implication that that anticipated demographic and technological trends, such as an aging population and the implementation of autonomous vehicles, would negate the purpose, need, or success of Complete 540.
2	Purpose and Need	Project purpose and need are too narrow.	The Purpose and Need for the project was vetted with participating regulatory and resource agencies as well as the public. It is the opinion of NCDOT and FHWA that the Purpose and Need are reasonable and sufficient.
3	Purpose and Need	Project will not meet the project purpose.	NCCN references costs of services, which is not required to be examined under NEPA. However, it is noteworthy that "smart growth" patterns of development with mixed use and higher densities tend to be more efficient for providing services and reducing overall amount of travel. These patterns are less likely to occur in the FLUSA under the No-Build Scenario, and more likely to occur under the Build Scenario. Also, it is evident from the interviews with area community planners documented in ICE Technical Memo 1 that growth patterns are strongly influenced by the provision of urban water and sewer services, and the Build scenario development pattern is generally consistent with the localities' plans to provide these services.
4	Indirect and Cumulative Effects	Model used in quantitative indirect and cumulative effects analysis is too opaque.	The models and methodologies used in the indirect and cumulative effects (ICE) analysis are described in ICE Memos 1 through 4 and references are supplied for parties desiring additional information. The Quantitative ICE used the same tool (CommunityViz) that was used to develop the CAMPO's Imagine 2040 and Connect 2045 plans. In addition to NCDOT's disclosure in the FEIS, CAMPO conducted numerous stakeholder meetings during the development and implementation of their plans to inform the public, so the public has been exposed to the model concepts for several years.
5	Alternatives	Results of analysis commissioned by SELC indicate another alternative (Water Kulash's Access2040) that would be a cheaper option with fewer environmental impacts.	The objectives stated in the Access2040 report do not equate to the Complete 540 project's purpose. The assertion that the costs of Access2040 would be lower than for Complete 540 are based on faulty assumptions and incomplete analysis. A more detailed explanation of the limitations of the Access 2040 alternative is available in the <i>Access2040 Claims and Performance Assessment</i> (HNTB, 2018). A copy of this document is included in Appendix M of this <i>Stakeholder Involvement Report</i> .
6	Alternatives	It would be more efficient to spend money on renovating existing roads than on this project.	As documented in the project's Draft EIS, an alternative concept that would improve existing roads in lieu of a new location roadway would not meet the purpose of the project.

Appendix L3 - Interest Group Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
7	Environmental Justice	Environmental documents do not meaningfully assess the environmental justice implications of a toll road.	<p>FHWA and NCDOT consider the methods used to identify and assess the potential impacts to potential environmental justice communities to be sufficient.</p> <p>Low-income communities can benefit from Complete 540 without using the toll facility. As shown in Tables 27-36 of the <i>Indirect and Cumulative Effects Memorandum (Quantitative ICE Assessment Memo #4)</i>, existing roads throughout the study area are anticipated to have fewer hours of congested travel and higher average speeds with Complete 540 in place.</p>



North Carolina Justice Center Comments on Complete 540 Project – Final Environmental Impact Statement

The North Carolina Justice Center appreciates the opportunity to submit comments on the Complete 540 project. At the current time, we believe further study is needed to assess the project’s benefits to low and moderate-income residents. Additional analysis is needed to assess whether the current proposal would deliver the greatest benefit possible for area residents that already struggle to afford transportation costs.

1 **Additional analysis needed to assess whether alternative projects could create greater economic return on investment**

The estimated \$2.2 billion cost of the proposed project represents an enormous investment of public resources. At the current time, we fear that insufficient analysis has been conducted to assess the potential economic benefits of the project, or whether those funds could be used on other projects that would deliver a greater return on investment for North Carolina taxpayers.

2 **The project would do little for low income residents who rely on public transportation**

As more communities work to orient development around public transportation options,¹ the proposed Complete 540 project could cause regional development to move in the opposite direction. The Complete 540 project would likely encourage additional housing development outside of the urban core of Raleigh, which could increase the population of low-income area residents that lack viable public transportation connections to their places of work.

Additional analysis should be conducted to assess the number of low income area residents who would benefit from the proposed project, what investments could alternatively be made to enhance and extend public transportation options, and what expansions of public transportation would be needed to serve low-income residents areas where development accelerates should the Complete 540 project proceed.

3 **A toll road could impose disproportionate burdens on low-income North Carolinians**

The FEIS does not directly address how different possible financing mechanisms would impact the benefits the project delivers to different communities. Of particular concern is the current plan to make the extension of I-540 a toll road, which will almost certainly place disproportionate burdens on low-income residents. Tolls are often a regressive way of financing transportation projects, essentially forcing low-income residents to pay for a larger share of their income than more affluent people. While tolls may be less regressive than some alternative sources of financing like the sales tax,² there are other tax and finance mechanisms that could impose a lower burden on low income residents.

Additional analysis should be conducted to evaluate whether alternative financing mechanisms could deliver the benefits associated with the Complete 540 project without imposing unnecessary costs on area residents who can least afford them.

4 **Unclear whether project would address or deepen the housing affordability crisis in the Research Triangle Area**

¹ Federal Transit Administration. (2014). *Trends in Transit-Oriented Development*.

https://www.transit.dot.gov/sites/fta.dot.gov/files/FTA_Report_No._0050_0.pdf

² *Access Magazine*. (2010). “Just Road Pricing.” <https://www.accessmagazine.org/tag/equity-in-transportation/>

The rapid growth in property values and rents in the Research Triangle Region is making housing increasingly unaffordable to many residents, particularly in the area’s urban centers. This is forcing many low-income residents to move farther away from employment centers, creating additional financial and human strains on families and communities.

The Complete 540 project could partially address this problem by creating new connections between affordable housing and job centers, but it could also lead to gentrification and increasing housing costs in communities that are comparably affordable today. Additional analysis is needed to assess how the Complete 540 project would likely impact housing affordability and job access in the region.

5 [**If project proceeds, priority should be placed on contracting with Historically Underutilized Businesses (HUB)**

To the greatest practically feasible degree, the contracting power of the Complete 540 Project should support local companies, particularly businesses rooted in communities that face barriers to starting viable enterprises. The HUB program provides a natural conduit to businesses owned by people of color, women, and other entrepreneurs facing historical barriers to success. The North Carolina Justice Center will be happy to provide additional comment or assistance in connecting Complete 540 to Historically Underutilized Businesses, should the project proceed.

6 [**The Complete 540 project must document how it will benefit low-income residents directly**

Beyond these concerns, the Complete 540 project should identify the ways that the project will drive benefits to residents of communities’ impacted and displaced and to low- and middle-income residents in these communities in particular. Community benefit agreements could establish a goal of hiring residents for jobs in the construction of the Complete 540 project or establish commitments to encourage the development of affordable housing along the route.

Once again, we appreciate the opportunity to submit comments on the Complete 540 project. We would welcome the opportunity to discuss the questions raised here and to collaborate on solutions to the transportation challenges facing low-income North Carolinians.

Sincerely,


Rick Glazier
Executive Director
NC Justice Center


Bill Rowe
General Counsel
NC Justice Center


Patrick McHugh
Policy Analyst, BTC
NC Justice Center

NC Justice Center Letter – 2/1/18

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Alternatives	Need to determine whether alternative projects could create greater economic return on investment.	In their long range planning for the region, CAMPO determines the merits of changes in the transportation network to meet the anticipated changes in population, employment, and land use in the region. They included the completion of the 540 loop around Raleigh as an element of their transportation plan. The need for this facility is not based on economic benefits but instead on the need for increased transportation mobility and the need for controlling congestion. Secondly, this facility is needed to provide improved linkages in the transportation network to serve both local and long-distance trips. NCDOT uses a data-based prioritization system to identify and implement transportation improvements across the state. Based on this prioritization system, the Complete 540 project scores well and has been determined to be a benefit to user of the transportation system in North Carolina.
2	Environmental Justice	Project wouldn't help low income residents who rely on public transportation.	As described on page 54 of the Community Impact Assessment, drivers who do not use the toll road would nonetheless benefit from reduced congestion on existing roadways as a result of traffic diversion onto the new roadway. Drivers who elect to use the toll road would be removed from the non-toll network, which would indirectly benefit the users of the non-toll network. Also, as noted on page 20 of the Community Impact Assessment, a very small proportion (0.2 percent) of those traveling to work from locations in the project's Demographic Study Area use public transportation, suggesting that a very small proportion of residents of the project area rely on public transportation. As noted on page 31 of the Community Impact Assessment, there very few existing public transit routes that serve locations in the project area.
3	Environmental Justice	Project would impose disproportionate burdens on low-income residents.	In the Community Impact Assessment, NCDOT clearly indicated that low-income residents may be affected by the project. However, the available data do not support NC Justice Center's conclusion that these effects would represent a disproportionate burden on low-income residents. The data actually show that a relatively small proportion of the project's required residential relocations will affect low-income residents. Low-income communities can benefit from Complete 540 without using the toll facility. As shown in Tables 27-36 of the <i>Indirect and Cumulative Effects Memorandum (Quantitative ICE Assessment Memo #4)</i> , existing roads throughout the study area are anticipated to have fewer hours of congested travel and higher average speeds with Complete 540 in place.
4	Housing	Unclear if project would address or deepen housing affordability crisis.	Addressing housing affordability is not an element of this project's purpose. The project will displace 209 residences of the more than 420,000 housing units (according to Census data) currently in Wake County. This means it will have a negligible effect on housing supply. Continued rapid population growth drives continued housing demand, while the approaching build-out of many parts of

Appendix L3 - Interest Group Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
			<p>Wake County constrains the expansion of housing supply. This discrepancy suggests that housing prices will continue to rise. A review of data from the Triangle Multiple Listing Service indicates that median house prices are continuing to rise, while the inventory of available housing is shrinking. While induced growth attributable to Complete 540 could increase housing demand, thereby increasing the upward pressure on housing prices, it is important to note that the quantitative indirect and cumulative effects analysis completed for the Preferred Alternative (summarized on page 62 of the Final EIS) suggested that the project will lead to a relatively small increase in additional development as compared to the already robust growth predicted in a no-build scenario. In other words, increased housing demand will mainly be driven by the continued rapid population growth anticipated in the Triangle Region, regardless of whether Complete 540 is constructed.</p>
5	Historically Underutilized Businesses	Priority should be placed on contracting with Historically Underutilized Businesses.	<p>NCDOT has individual project goals on each project for the use of disadvantaged business enterprises. The Complete 540 project will be no different and will have project goals for the use of these qualifying businesses.</p>
6	Environmental Justice	Project must document how it will benefit low-income residents directly.	<p>The project's Community Impact Assessment does document NCDOT's analysis of the potential effects of the project on low-income residents. In accordance with applicable law, NCDOT's analysis concluded that the project would not have a disproportionately high or adverse effect on low-income residents.</p>

Wildlands Network
 PO Box 51842
 Durham, NC 27717
www.wildlandsnetwork.org

February 1st, 2018

Rodger Rochelle
 North Carolina Department of Transportation
 1548 Mail Service Center
 Raleigh, NC 27699-1548

Re: Comments on the Complete 540 Final Environmental Impact Statement

Dear Mr. Rochelle,

1 [With increasing urban sprawl, landscape connectivity and habitat corridors become an ever-more crucial part of natural ecosystems, providing much-needed spaces for wildlife to travel and for species to remain intact and preserved. This is especially so in the Triangle region, as the burgeoning cities of Raleigh, Chapel Hill, and Durham provide less and less room for species to thrive. The proposed Complete 540 route would significantly disrupt both aquatic and terrestrial habitats in Southern Wake County, directly impacting a total of 69.24 acres of wetlands, 39 ponds, 55,674 linear feet of streams, and more than 2,000 acres of prime farmland soil. Judging by the existing 540 tollway in western Wake County, the completion of the 540 loop would likely contain numerous stretches of high speed traffic lanes surrounded by tall barrier walls on both sides of the road, providing a nearly impenetrable barrier to many species. The roadway would also lead to indirect impacts on thousands of acres of adjacent land, cutting off species dispersal routes, increasing roadkill mortality rates, and inflicting noise, air, and light pollution across a wide region.

2 [In addition, the Complete 540 project will greatly encourage the continuation of sprawl in Southern Wake County and adjacent counties to the south and east. This will lead to more habitat loss and water pollution across truly broad parts of the Piedmont landscape in North Carolina, indirectly leading to further impacts on federally protected species such as the endangered Dwarf wedgemussel (*Alasmidonta heterodon*) and the yellow lance, which has been proposed for listing as a federally protected species. The new road also poses a risk to the recently-designated critical habitat for the Atlantic Sturgeon, and may disturb other rare aquatic species occurring in the area, such as the Neuse River Waterdog (found only in the Neuse and Tar River basins), Carolina Madtom, Atlantic Pigtoe, and Green Floater. We find it concerning that the Final Environmental Impact Statement has failed to properly address mitigation efforts to protect all of these species. In addition, the uncertainty of success in breeding and reintroducing the Dwarf wedgemussel poses another reason to caution moving forward.

3

If the current preferred alternative goes forward, or even if a different alternative route is chosen, it is imperative to put in substantial wildlife mitigation efforts to lessen the resulting barriers to movement for terrestrial and aquatic species alike. Such measures should include extended bridges and elevated roads through the wetland areas to enable wildlife to travel underneath, for example. A rigorous scientific assessment should be undertaken to identify the best locations for such crossing structures, to avoid wasted effort and improper placement. Installing wildlife crossing structures (and enhanced bridges) would also help reduce the risk of increased deer-vehicle collisions, as the increasingly fragmented habitat would likely result in more deer attempting to cross the road, and would pose a major safety hazard to North Carolina drivers. We urge you to consider alternate routes that wouldn't pose such a risk to the existing landscape matrix and the imperiled species that reside there.

Sincerely,

Emily Blanchard, MEM

Ron Sutherland, PhD

Wildlands Network

Contact: ron@wildlandsnetwork.org, 919-641-0060

Wildlands Network Letter – 2/1/18

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Natural Environment	Project would cause significant negative effects on the natural environment.	FHWA and NCDOT have taken a hard look at all significant effects on the natural environment with coordination and input from natural resource agencies. During the NEPA process a project proponent is required to evaluate a full range of alternatives that achieve the project's purpose and need and then compare the impacts of the alternatives. The Draft EIS and Final EIS for the project satisfy this requirement. Efforts to avoid and minimize impacts have and will continue to be undertaken as the project develops.
2	Natural Environment	Final EIS did not properly address mitigation of impacts to protected species. Uncertainty about mussel propagation plan is of concern.	<p>Wildlands Network does not explain how the Final EIS fails to properly address mitigation. The Biological Assessments prepared for USFWS and NMFS, which are referenced in the Final EIS, do explicitly address conservation measures NCDOT proposes to help mitigate the potential effects of the project on protected species. NCDOT and FHWA have worked collaboratively with USFWS and NMFS to avoid jeopardizing the existence of protected species. Section 7 Consultation with USFWS and NMFS has been finalized and is discussed in the Record of Decision (ROD) for the project. USFWS issued a Biological Opinion on April 10, 2018 that concluded "the Action (Complete 540) is not likely to jeopardize the continued existence of" DWM and Yellow Lance and NMFS provided written concurrence that the project is not likely to adversely affect the Atlantic Sturgeon or Atlantic Surgeon critical habitat. The proposed mussel propagation facility has been coordinated with USFWS; implementation of the propagation plan was evaluated in the Biological Opinion.</p> <p>NCDOT has conducted surveys for currently listed and several potentially listed species; the results are summarized in the Final EIS. Species that were specifically targeted in this effort include the petitioned Atlantic Pigtoe (<i>Fusconaia masoni</i>), Carolina Madtom (<i>Noturus furiosus</i>) the Green Floater (<i>Lasmigona subviridis</i>), and Neuse River Waterdog (<i>Necturus lewisii</i>). However, consultations and other issues associated with the Endangered Species Act (ESA) are limited to currently protected and proposed species, consistent with the ESA. These surveys were conducted to assist in developing environmental baselines for these species in the event that they become formally listed and subject to Section 7 before Complete 540 project completion.</p>
3	Wildlife	Project should include wildlife crossings.	NCDOT has coordinated with environmental agencies, including NCWRC and USFWS, about the project's potential effects on wildlife. Neither NCWRC nor USFWS has recommended any dedicated wildlife crossings along the Preferred Alternative. Nevertheless, provisions are being included such as bridging over streams and stream banks so that wildlife can move along the stream and through the project area. Box culvert crossing have provisions to permit wildlife crossing.



P.O. Box 6484 Raleigh, NC 27628 **Speaking UP for a better tomorrow**
www.wakeupwakecounty.org

February 1, 2018

VIA E-MAIL AND US MAIL

Mr. Rodger Rochelle
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548
complete540@ncdot.gov

RE: Complete 540: Final Environmental Impact Statement

Dear Mr. Rochelle,

WakeUP Wake County offers the following comments and questions with regard to the Final Environmental Impact Statement ("FEIS") for the Complete 540 toll road project. As a non-profit organization focusing on challenges and opportunities presented by our county's growth, we have worked to promote transportation alternatives like public transit, smart land use decisions and protection of our drinking water resources. In our below remarks, WakeUP urges NCDOT to carefully consider and account for planned future investments in public transit (Wake County Transit Plan) and changes in transportation behavior, mitigation of water quality impacts, and equity and access concerns in its Complete 540 proposal.

Integrating Public Transit

In 2016, Wake County voters approved a sales tax referendum to support expanded transit service throughout the county (and to improve regional connections) through an updated Wake County Transit Plan. The Transit Plan includes plans for expanded routes and increased frequency of service as well as new bus rapid transit corridors and a commuter rail project from Garner to Durham. WakeUP was an early and key advocate in passing the referendum and supporting the expanded transit plans because we know that transit must be part of any environmentally sustainable transportation future for our county. As such, we are disappointed that NCDOT did not adequately address the potential impacts and opportunities of the updated Wake Transit Plan (and likely future expansions in all directions) in the analysis of the proposed I-540 extension in its review of the Complete 540 project.

- The Wake County Transit Plan will significantly increase mass transit service and use throughout all of Wake County, however, the FEIS bases its review of mass transit on *an outdated plan that focused on fixed guiderail and commuter rail system connecting Cary, west Raleigh, downtown Raleigh, and Wake Forest*. The publicly adopted 10-year plan significantly reorients and increases

Commented [JR1]: Sorry guys – I though we agree to NOT oppose the road but instead ask about how it would integrate with tyransit and mitigagte its impact on water. All the questions in here the read – dio you really want to build the road – do you need the road are not what I understood we were doing. I think we want to be at the table to ensure this fits with transit and water and other issues. Thart is where our questions should focus

Commented [KR2R1]:

Commented [JR3]: Look many of us do not want this road – but as much as some of you hate it – that is not our goals in this note

Commented [JR4]: Sorry - we do not know that – they did not talk about it – but we cannot assume

1

investments towards the southern and eastern portion of Wake County, and includes significantly expanded bus service, a planned commuter rail line to Garner (with the potential to extend to Johnston County) and a Bus Rapid Transit line along S. Wilmington Street. Given the adoption of the 10-year plan, the absence of consideration of these changes seems like a serious flaw in the current analysis.

- 1 • The Complete 540 toll road would extend from Eastern Wake County to RTP—a large portion of this distance is also destined to be covered by the Wake County Transit Plan’s commuter rail line from Garner to Durham. Did NCDOT consider the impact of this proposed commuter rail line on congestion in the area compared to the proposed toll road?
- In addition, the adopted plan calls for a bus rapid transit line running south from downtown Raleigh towards Garner along S. Wilmington Street that will improve mobility, decrease congestion, and reduce air pollution for commuters originating from southeastern Wake County. NCDOT must consider the effects of this significant investment in public transit on congestion, mobility, and air pollution relative to toll road.
- 2 • Did the NCDOT evaluate the potential regional air quality impacts that will result from further encouraging private automobile use relative to the *publicly adopted* Wake County Transit Plan?
- 3 • If NCDOT builds the proposed toll road, it must plan for use of the toll road by public transit. Will buses be able to use the toll road? Will buses be subject to a toll?

In summary, NCDOT must reevaluate its outdated 2014 Alternatives Development and Analysis Report as it relates to planned public transit. NCDOT relied on an aspirational plan that was not adopted by Wake County. The publicly adopted Wake County Transit Plan is substantially different with significant investments in the Study Area to reduce congestion and improve regional mobility. At a minimum, we recommend NCDOT update the Alternatives Report to reflect the impact of the *publicly adopted* public transit plan on the ability to manage congestion and reduce air pollution relative to the proposed toll road. New alternatives must be considered that promote public transit of rail and bus service as the primary mode of congestion relief and air quality mitigation. Perhaps portions of I-540 merit completion (for example completing the section from NC-55 to US-401), but given the substantial investment in public transit called for by Wake County citizens, NCDOT cannot rely on an outdated and flawed alternatives analysis.

Water Quality Concerns

4 The proposed Complete 540 toll road could have potentially serious water quality impacts from road construction, roadway runoff, and changed land use throughout the project area in Southern Wake County, unless watershed protections are central to the planning process. The increased traffic through this area will also increase the risk of spills of hazardous substances into streams and wetlands. Moreover, since Swift Creek itself is classified as a source of water supply for drinking water, NCDOT must protect against impacts to this important water resource.

Commented [JR5]: so far so good

- 5 [• Complete 540 stands to dramatically increase the acreage of impervious surfaces in Southern Wake County, both directly from the road and indirectly from induced growth. What measures will NCDOT take to limit the expansion of impervious surfaces in the project area? Is NCDOT considering the use of “Green Stormwater Infrastructure” methods (<https://www.raleighnc.gov/environment/content/PWksStormwater/Articles/GI LID.html>) to mitigate the water quality and runoff impacts that will result from this project?
- 6 [• Riparian buffers help protect water quality by maintaining natural ecosystem services that prevent erosion and help filter runoff pollution before hitting streams. The proposed toll road could potentially destroy 145 acres of stream buffer,. Can NCDOT reduce the stream buffer impacts from Complete 540? What is NCDOT doing to forge agreements with local jurisdictions to maintain adequate stream buffers?
- 7 [• The proposed toll road would have 140 stream crossings and directly impact more than 59,000 linear feet of streams. The FEIS provides no detail about mitigation of these impacts. Where and how will NCDOT mitigate and offset impacts to unique resources in Southeastern Wake County?
- 8 [• Many streams in Southeastern Wake County are already polluted and ranked poorly in terms of state water quality. Has NCDOT considered taking the opportunity to use green infrastructure to improve stream quality? What is being done to ensure that these streams are not further impaired during construction and operation of the toll highway?

Commented [JR6]: nice

Equity, Housing and Access Concerns

The proposed Complete 540 highway will only be available to those who are able to and willing to pay a toll to use the road. The proposed toll road would require more than 200 residential relocations, many of which are low-income households. There is potential for extreme imbalance between who will bear the costs and who will gain the benefits of the new road.

- 9 [• The FEIS does not document how much time will be saved by people who do not use the toll road, including those who may not be able to afford a toll. How much time will people who do not use the toll road save when using the existing road network after the road is built because more cars and trucks will be on the toll road? How much will the tolls cost, and will there be any sort of opportunity for low-income residents in impacted neighborhoods to have subsidized access to the toll road? Saying users still have access to non-tolled facilities seems to imply that state and federal funds will be used to build an exclusive facility.
- At least one mobile home park—Blue Skies Mobile Home Community—is in the direct path of the toll road and will require most residents to relocate. There is a growing housing affordability crisis in Wake County, with hundreds of affordable homes being lost to new development annually. The Wake Board of

- 10 [Commissioners have approved a Wake County Affordable Housing Plan to expand access to housing for people of all income levels. How will NCDOT assist low-income residents in finding new homes?
- 11 [• We are concerned with the Community Impact Assessment, specifically the environmental justice analysis. There are 17 relocations to a mobile home park whose residents are largely Hispanic/Latino. There are 6 relocations in another mobile home park. Minority households are also present in these block groups. While the CIA appears to have followed NCDOT's guidance, our concern is that the DSA (demographic study area) is so large that it dilutes the effect on minority and low-income populations. Since the DSA crosses multiple municipalities and counties, could NCDOT reduce the DSA into smaller areas for more accurate evaluation purposes?

Thank you for the opportunity to submit these comments. We strongly encourage NCDOT to consider the role of public transit's impact on congestion and regional mobility in light of the *publicly adopted* Wake County Transit Plan. We also encourage NCDOT to carefully consider additional means to minimize water quality impacts resulting from the project, and better assess impact on housing affordability and economic equity. We hope NCDOT will provide thorough answers to our questions before moving ahead with this project. Feel free to contact me at Karen@wakeupwakecounty.org or 919-637-4271.

Sincerely,

Karen Rindge
Executive Director

WakeUP Wake County Letter – 2/1/18

Comment Number	Primary Topic	Paraphrased Comment	Response
1	Transit	NCDOT did not adequately address the impacts of the updated Wake County Transit Plan.	The Triangle Regional Model (TRM), version V5, which was used in developing the traffic forecasts for the preferred alternative analysis, does include Wake County's long-term transit plan and the effect of increase in mass transit in the study area. In other words, the need for the project exists even when the planned expansions in transit are incorporated into the model used to develop traffic forecasts for the project.
2	Air Quality	Did NCDOT evaluate air quality impacts that will result from the project relative to the Wake County Transit Plan?	See response to comment #1. The need for the project exists even when the planned expansions in transit are incorporated into the model used to develop traffic forecasts for the project. A future scenario that would not include a new location Complete 540, even with the planned transit expansions, would not meet the purpose of the project. FHWA and NCDOT have taken a hard look at all significant effects on the natural environment with coordination and input from natural resource agencies. During the NEPA process a project proponent is required to evaluate a full range of alternatives that achieve the project's purpose and need and then compare the impacts of the alternatives. The Draft EIS and Final EIS for the project satisfy this requirement.
3	Transit	Will buses be able to use the toll road and, if so will they be subject to a toll?	The Wake County Transit Plan does not identify any proposed transit routes that would use NC 540 in the project study area. Should routes be designated to use NC 540, this will be a permitted use.
4	Natural Environment	NCDOT must protect against impacts to Swift Creek water supply watershed.	As noted on page 53 of the Final EIS, the Preferred Alternative would not directly affect the Swift Creek Watershed Critical Area. Erosion and sedimentation controls for the project will be implemented in compliance with all rules and regulations as required by State law.
5	Natural Environment	The project will dramatically increase the acreage of impervious surfaces in Southern Wake County. How will NCDOT limit the expansion of impervious surfaces in the project area? Is NCDOT considering green stormwater infrastructure?	NCDOT's quantitative analysis of indirect and cumulative effects showed that the project will, in fact, lead to a relatively small increase in impervious surfaces in the project area compared to the no-build scenario. This is because the area is expected to continue its rapid growth with or without the project. The responsibility for limiting expansion of impervious surfaces as the result of development lies with local governments. Many requirements are currently in place and administered by local jurisdictions. NCDOT will comply to the maximum extent practicable with stormwater requirements for the project and will follow available best management practices.

Appendix L3 - Interest Group Comments

Comment Number	Primary Topic	Paraphrased Comment	Response
6	Natural Environment	Can NCDOT reduce the project's riparian buffer impacts? What is NCDOT doing to forge agreements with local jurisdictions to maintain adequate stream buffers?	Avoidance, minimization and mitigation efforts to date are summarized in Chapter 4 of the Final EIS. These efforts have resulted in a slight decrease in the project's anticipated impacts to riparian buffers between the Draft EIS and the Final EIS. As the project's final design progresses, NCDOT will continue to look for opportunities to avoid and minimize impacts to riparian buffers. In addition, NCDOT will meet all riparian buffer mitigation requirements as necessary. Local buffer requirements are the responsibility of the local jurisdictions. Perennial streams in the Neuse River Basin are currently subject to state buffer requirements.
7	Natural Environment	Final EIS provides no detail about mitigation of impacts to streams.	NCDOT's intended approach to mitigating stream (and wetland) impacts is summarized on pages 53 and 54 of the Final EIS. All mitigation will meet state and federal permit requirements.
8	Natural Environment	Is NCDOT considering green stormwater infrastructure?	NCDOT will implement sediment and erosion control Best Management Practices in accordance with <i>Design Standards in Sensitive Watersheds</i> , as appropriate. Additionally, NCDOT will adhere to the most recent version of the <i>North Carolina Department of Transportation Stormwater Best Management Practices Toolbox</i> manual. This is listed as a special project commitment in the Final EIS.
9	Environmental Justice	Final EIS does not document how much time will be saved by people who do not use the toll road.	Low-income communities can benefit from Complete 540 without using the toll facility. As shown in Tables 27-36 of the <i>Indirect and Cumulative Effects Memorandum (Quantitative ICE Assessment Memo #4)</i> , existing roads throughout the study area are anticipated to have fewer hours of congested travel and higher average speeds with Complete 540 in place.
10	Relocation	How will NCDOT assist low-income relocatees in finding new homes?	NCDOT will follow the provisions of the NCDOT relocation assistance program for all relocates regardless of income levels. Special provisions within the program will be followed for low-income relocates to find suitable housing in accordance with applicable laws and regulations.
11	Environmental Justice	Analysis of potential effects on minority and low-income populations dilutes actual effects.	NCDOT and FHWA followed the requirements of Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority and Low-income Populations). The fundamental consideration with respect to effects is not whether minority or low-income residents would be affected, it is instead whether a proposed action would have disproportionately high or adverse effects on these residents. While low income and/or minority residents would be affected in certain locations, the key conclusion is that these residents would not bear a disproportionately high or adverse effect relative to other residents. Given that the number of relocatees that are likely members of minority groups and/or have low incomes is not notably higher than their concentrations in the surrounding area, NCDOT and FHWA concluded that the project would not have a disproportionately high or adverse effect on members of these groups.

Appendix L4

Public Comments Made During the Final EIS Review Period

The comment period for the Final EIS ran from late December 2017 through February 2, 2018. During this period, NCDOT received 84 individual emailed comments. Most of these comments focused on expressing support or opposition to the project, with 56 comments expressing opposition and 18 expressing support. Comments that expressed opposition typically cited the project's potential effects on the natural environment as a key reason for the opposition, and many expressed a preference for widening existing roads and expanding transit instead of constructing the project. Several of the opposition comments and several comments that expressed neither opposition nor support cited unhappiness about financing the project through tolls. Many of the comments that expressed support also expressed a desire to see the project constructed as quickly as possible, with several comments noting a strong need for the project. In addition to these comments, 595 individuals submitted copies of the same email noting opposition to the project, noting concerns about impacts to the natural environment and a preference for widening existing roads and expanding transit instead of the project. Also, 157 individuals submitted similar versions of another email noting support for the project, citing the need for the project and the belief that the Selected Alternative minimizes environmental impacts to the greatest extent possible.

A separate public comment period during and following the project's Design Public Hearing ran from February 20 through March 23, 2018. While the main purpose of that comment period was to solicit comments about the proposed project designs, and many of the comments submitted during that period did focus on the proposed designs, several comments did indicate project support, project opposition, or other concerns. The comments submitted during that period included 18 that noted support for the project and 6 that noted opposition to the project. Several of the comments submitted during that period noted concerns about the project's noise impacts and about tolls.

APPENDIX M
Access2040 Claims and Performance Assessment

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

STATE TRANSPORTATION IMPROVEMENT PROGRAM (STIP) PROJECTS R-2721, R-2828, & R-2829



ACCESS2040 Claims and Performance Assessment

FINAL

May 2018

Submitted to:

North Carolina Department of Transportation
Raleigh, North Carolina

Federal Highway Administration
Raleigh, North Carolina

Submitted for:

North Carolina Department of Transportation
Raleigh, North Carolina

Submitted by:

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1 INTRODUCTION

The Southern Environmental Law Center (SELC) recently released a proposed alternative concept for the Complete 540 project corridor. *ACCESS2040: An Alternative to the Proposed I-540 Extension* was developed in February 2018 by Walter Kulash, PE on behalf of SELC. ACCESS2040 proposes to widen numerous existing roads as well as constructing some new location roadways. SELC claims that their concept will provide benefits comparable to the Complete 540 project at a fraction of the cost. SELC further claims that ACCESS2040 closely resembles the Improve Existing 3 - Arterial (IE3A) Alternative with some modifications.

The purpose of this memorandum is to review the ACCESS2040 cost claims and assess its performance. In Section 2 of this memo, NCDOT will review the basic cost claims made in ACCESS2040. In Section 3 of this memo, NCDOT will evaluate ACCESS2040 using the same measures of effectiveness (MOEs) used in the Complete 540 EIS. For the purposes of this technical memorandum, the following alternative concepts were analyzed in comparison with ACCESS2040:

- **No-Build ICE:** This alternative concept includes all projects in the fiscally-constrained Capital Area Metropolitan Planning Organization (CAMPO) 2040 Metropolitan Transportation Plan (MTP) roadway and transit networks, except Complete 540. Socio-economic¹ data developed as part of the Complete 540 Quantitative Indirect and Cumulative Effects study was used in place of the official socioeconomic data for this alternative only.
- **No-Build:** This alternative concept includes all projects in the fiscally-constrained Capital Area MPO MTP roadway and transit networks, except the Complete 540 project.
- **New Location Highway:** This alternative concept consists of the official fiscally-constrained CAMPO 2040 MTP roadway and transit networks which includes the Complete 540 as a toll facility.
- **Improve Existing 3 (IE3) – Arterial:** This alternative concept includes all projects in the fiscally-constrained CAMPO 2040 MTP roadway and transit networks except Complete 540. In addition to projects in the MTP, Jessie Drive (NC 540 to Ten-Ten Road) and Ten-Ten Road (Jessie Drive to I-40, including a new location facility east of NC 50) would be upgraded to six-lane arterials. I-440 (I-40 to US 1) and US 64/264 (I-440 to I-540) are widened to 12 lanes.

As mentioned above, ACCESS2040 claims to essentially be a surrogate of the IE3-A Alternative. While certain aspects of the two alternatives do coincide, there are many differences between the two alternatives as well. These differences between the two alternatives are shown below in **Table 1**.

¹ Population and employment projections.

Table 1: Roadway Project Comparisons

Roadway	Location	IE3A Traffic Lanes	ACCESS2040 Traffic Lanes
I-40 (General Purpose Lanes)	NC 42 to I-440	10	8
I-440	I-40 to I-87/US 64-264	12	8
I-87/US 64-264	I-440 to I-540	12	8
Jessie Drive	NC 540 to Ten-Ten Road	6	4
Ten-Ten Road	Jessie Drive to NC 50	6	4
Ten-Ten Road Extension	NC 50 to I-40	6	0
Tryon Road	US 1/64 to Kildaire Farm Road	4	6
NC 42	US 401 to John Adams Road	2	4
Rand Road	Ten-Ten Road to NC 50	2	4
Ackerman Road Extension	NC 50 to White Oak Road	0	4
I-40 & White Oak Road Interchange	New Interchange at I-40 & White Oak Road	0	4
White Oak Road Extension	White Oak Road to Auburn- Knightdale Road	0	4
Auburn-Knightdale Road	White Oak Road Extension to Poole Road	2	4
Auburn-Knightdale Road Extension	Poole Road to I-540	0	4
Battle Bridge Road	Rock Quarry Road to Auburn- Knightdale Road	2	4
Lake Wheeler Road	Centennial Parkway to South Saunders Street	2	4
NC 50	NC 210 to Cleveland Road	2	4

The roadway improvements chosen in the IE3A Alternative were selected in an attempt to create a roadway network that would both reduce congestion and improve mobility. The ACCESS2040 roadway network differs from the IE3A Alternative in the following ways:

- ACCESS2040 does not address congestion on I-40, I-440, and I-87/US 64-264. It instead proposes only adding two lanes to Auburn-Knightdale Road and a short new-location facility that connects with I-540 in place of the eastern portion of the Complete 540 project to provide needed increased capacity through this area.
- ACCESS2040 makes very few east-west corridor improvements that were not already assumed in the CAMPO 2040 MTP. In addition to the improvements to I-40, I-440, and I-87/US 64-264, the IE3A Alternative widens Ten-Ten Road to six lanes instead of the four lanes assumed in ACCESS2040 and the CAMPO MTP.

2 ACCESS2040 COST ESTIMATE CLAIMS

SELC asserts that, in addition to items already included in the CAMPO 2040 MTP, ACCESS2040 would add approximately \$297.3 million to the costs described in the MTP. In addition, SELC states “Components of ACCESS2040 not included in the CAMPO MTP could require around twenty residential relocations. Most of these relocations would be near the proposed extension of Ten Ten Road and some

segments of new road in that corridor. ACCESS2040 would not divide or require access reconfiguration for any neighborhood developments.”

NCDOT has many years of experience in preparing cost estimates for transportation projects. We believe this estimate to be low for the following reasons.

SELC states that in addition to bicycle and pedestrian projects programmed in the CAMPO 2040 MTP, their concept would “complement these plans with road designs that immediately accommodate a wide range of uses and anticipated and provides for future increases in non-automobile travel.” ACCESS2040 would include “design features such as street connectivity, attractive routing for transit, large mileage of new sidewalk and selected grade separated intersections.” Such improvements would, by necessity, increase the cross section of the improved facilities, increasing their costs and impacts to the human and natural environment. For example, although SELC stated that their urban sections could contain a sidewalk or multiuse path, they only include a 5-foot sidewalk in their listed typical section for urban areas. SELC does not list the costs of accommodations for bus or light rail transit. It should also be noted that installing new sidewalks requires a cost share agreement with the local municipality.

SELC states that their site-specific improvements that are not already in the CAMPO MTP would include 28.88 miles of widening, 1.74 miles of new location roadway, 3 new intersection improvements, and 2 new interchanges. The claim that accomplishing these improvements for a cost of \$297.3 million while requiring only 20 relocations must be viewed with some caution, especially since SELC does not appear to have fully integrated all of their proposed improvements in the provided project typical sections. Other items that would need to be considered include utility relocation costs, stream and wetland mitigation costs, and costs for required improvements to intersecting roadways (turn lanes, etc.) to accommodate the new or widened facilities.

3 ACCESS2040 PERFORMANCE ANALYSIS

The Triangle Regional Model (TRM), Version 5 (V5), was used to generate, analyze, and calculate the 2040 traffic data used to evaluate MOEs for improving mobility and reducing congestion. After receiving SELC’s ACCESS2040 report, complete TRM model runs were conducted for each alternative concept included ACCESS2040. TRM MOE comparisons for the IE3A and ACCESS2040 alternatives were computed using the official socioeconomic data. The No-Build ICE Alternative model runs were used as the baseline for all MOE comparisons. In order to evaluate the performance of the ACCESS2040 alternative, that alternative was coded into the TRM consistently with the other alternatives considered for Complete 540. The Measures of Effectiveness (MOEs) and quartile rankings for ACCESS2040 were then developed using the methodology applied to the other alternatives considered for Complete 540.

The Complete 540 Alternatives Development and Analysis Report (Lochner, 2014) presents the methods for the quantitative analysis of project purpose MOEs. For each of the two primary project purpose elements (improve mobility and reduce congestion), those Alternative Concepts that received quartile rankings of 3 or better in each category (in these rankings, “4” is the best performing quartile, “1” is the worst performing quartile). In other words, these Alternative Concepts performed above the median value for each metric and would therefore have the largest potential for improvement relative to that element of the project purpose. These Alternative Concepts were considered to meet that element of the project purpose.

The Lochner 2014 approach was updated in the First Tier Concepts Screening and Traffic Reassessment (HNTB, 2017), based on the updated version of the TRM and 2040 socioeconomic data. That analysis is

updated here to include the ACCESS2040 concept based on conducting an analysis of ACCESS2040 that is identical to the analysis conducted for the other Complete 540 alternatives. The quartile rankings from the 2017 First Tier Concepts report are updated here to include ACCESS2040. The updated summary quartile rankings can be found in **Table 2**. Three Alternative Concepts quantitatively met the purpose element of improving mobility: New Location Highway, Improve Existing 3 – Freeway, and Hybrid 1. The New Location Highway Alternative Concept was the only one that met the purpose element of reducing congestion. Only one Alternative Concept met both project purpose elements: New Location Highway. Additionally, the New Location Highway alternative would satisfy the additionally identified desirable outcome of improving system linkage in the regional transportation network, as defined in the Lochner 2014 report.

Based on this reassessment of the first-tier screening that includes ACCESS2040 using 2040 traffic information, only the New Location Highway Alternative Concept warrants being carried forward. Therefore, the prior conclusions relative to Alternative Concepts in the 2017 first-tier screening for the project remain supported. All subsequent screening decisions and conclusions relative to alternatives for the project were based on factors other than traffic.

Table 2: Summary of MOE Quartile Rankings Including ACCESS 2040

Alternative Concept	Improve Mobility MOEs ¹			Reduce Congestion MOEs ¹		
	Average Speed - PM	Travel Time from RTP – PM	Travel Time from Brier Creek - PM	Average Daily VHT	Congested VMT – PM	Congested VHT - PM
New Location Highway	4	4	4	4	4	4
Hybrid 1	4	4	3	4	1	4
Hybrid 2	2	1	2	2	2	1
Hybrid 3	3	2	4	3	2	3
Improve Existing 1	1	1	1	1	1	1
Improve Existing 2 - Arterial	1	2	2	2	3	2
Improve Existing 2 - Freeway	2	2	1	1	2	1
Improve Existing 3 - Arterial	2	3	2	2	3	2
Improve Existing 3 - Freeway	3	3	3	3	1	3
ACCESS2040	1	1	1	1	4	2

4 DETAILED MEASURES OF EFFECTIVENESS COMPARISONS

The following sections explain the methodology used to calculate each individual MOE data set and present the results of the calculations including ACCESS2040.

4.1 Average Daily Vehicle Miles Traveled (VMT) & Vehicle Hours Traveled (VHT)

The VMT and VHT for each modeled alternative concept were extracted from the loaded TRM highway networks. VMT & VHT were calculated for both region-wide model traffic assignment and within the project traffic study area, for comparison purposes, for daily traffic flows. The region-wide totals account for every roadway modeled in the TRM, while the traffic study area only incorporates roadways from the TRM that fall within the traffic study area boundary. VHT provides a MOE for comparing the alternative concepts' ability to meet the project purpose of reducing traffic congestion. The results are shown in **Table 3**.

Table 3: 2040 Average Daily VMT & VHT Comparisons

Alternative Concept	SE Data Used	Region Wide				Traffic Study Area			
		VMT (miles)	VHT (hours)	% VMT Change	% VHT Change	VMT (miles)	VHT (hours)	% VMT Change	% VHT Change
No-Build	NB ICE	86,544,796	2,233,114	-	-	17,504,053	460,415	-	-
No-Build	Official	87,365,432	2,268,263	0.95%	1.57%	17,835,660	476,120	1.89%	3.41%
New Location Hwy	Official	87,872,949	2,243,677	1.53%	0.47%	18,393,282	458,973	5.08%	-0.31%
IE3 - Arterial	Official	87,631,444	2,253,996	1.26%	0.94%	18,197,949	469,187	3.96%	1.91%
ACCESS2040	Official	87,500,158	2,262,296	1.10%	1.31%	18,170,686	470,915	3.81%	2.28%

Regionally, ACCESS2040 produces the least amount of daily VMT growth but also produces the greatest increase in daily VHT compared to the No-Build ICE Alternative. The New Location Highway Alternative produces the greatest amount of VMT growth but also the least amount of VHT increase among the alternatives. In other words, vehicles would travel more miles in less time under the New Location Highway Alternative. The IE3A Alternative produces slightly more VMT but slightly less VHT compared to ACCESS2040.

Within the traffic study area, no alternatives (including ACCESS2040) provide a decrease in VMT. The New Location Highway Alternative is the only alternative to provide a decrease in VHT within the traffic study area.

4.2 PM Peak Period Congested Vehicle Miles Traveled & Vehicle Hours Traveled

While daily congested VMT and VHT statistics provide useful MOE for comparison between alternative concepts, the PM peak period conditions were also examined to further evaluate impacts on reducing congestion. The PM peak period in the TRM assigns traffic on network roadways from 3:00 PM to 7:00 PM. The 2040 PM peak highway assignments from the TRM for each alternative were used to calculate totals for both region-wide and within the traffic study area. The congested VMT and VHT data were extracted from the loaded TRM highway networks. Roadways with PM Peak Period volume over PM Peak Period capacity (V/C) ratios of greater than 0.80 were considered to be "congested" and were included in the data set developed for each alternative concept. A V/C ratio of 0.80 or greater was chosen as the threshold because it typically equals a Highway Capacity Manual Level of Service (LOS) of D or worse. The results are shown in **Table 4**.

Table 4: 2040 Average PM Peak Period Congested VMT & VHT Comparisons

Alternative Concept	SE Data Used	Region Wide				Traffic Study Area			
		VMT (miles)	VHT (hours)	% VMT Change	% VHT Change	VMT (miles)	VHT (hours)	% VMT Change	% VHT Change
No-Build	NB ICE	13,738,032	408,111	-	-	3,471,245	108,220	-	-
No-Build	Official	14,021,753	421,672	2.07%	3.32%	3,591,552	114,428	3.47%	5.74%
New Location Hwy	Official	13,717,015	397,827	-0.15%	-2.52%	3,399,985	97,211	-2.05%	-10.17%
IE3 - Arterial	Official	13,762,436	406,608	0.18%	-0.37%	3,424,467	104,322	-1.35%	-3.60%
ACCESS2040	Official	13,889,685	413,444	1.10%	1.31%	3,370,999	105,803	-2.89%	-2.23%

Regionally, ACCESS2040 produces the greatest amount of increased PM Peak Period congested VMT growth and increased PM Peak Period congested VHT compared to the No-Build ICE Alternative. The New Location Highway Alternative provides the greatest decrease in VMT and VHT growth. ACCESS2040 is the only alternative to worsen the amount of both the PM Peak Period congested VMT and VHT.

Within the traffic study area, all alternatives provide a decrease in PM Peak Period congested VMT and VHT. ACCESS2040 provides the greatest decrease in VMT but the least decrease of VHT. The New Location Highway Alternative provides the greatest decrease in VHT.

4.3 Average Speed Analysis

Average network speed is a useful MOE in evaluating and comparing the ability of alternative concepts to meet the project purpose of improving mobility. The TRM was used to calculate the average 2040 speeds for each alternative concept. The average daily and average PM peak speeds were calculated by dividing the VMT totals by the VHT totals.

Average PM Peak Period Speed

2040 PM peak average speeds were calculated using the TRM outputs. The PM peak average speeds are the PM peak VMT divided by the PM peak VHT. The results for all alternative concepts are shown in Table 5.

Table 5: 2040 Average PM Peak Period Speed Comparisons

Alternative Concept	SE Data Used	Region Wide		Traffic Study Area	
		Speed	% Speed Change	Speed	% Speed Change
No-Build	NB ICE	35.4	-	33.7	-
No-Build	Official	35.1	-0.83%	33.1	-1.90%
New Location Hwy	Official	35.9	1.61%	36.4	7.93%
Improve 3 - Arterial	Official	35.6	0.51%	34.7	2.95%
ACCESS2040	Official	35.3	-0.28%	33.1	-1.48%

ACCESS2040 is the only alternative to decrease regional PM Peak Period speed when compared to the No-Build ICE Alternative. The same pattern holds true for PM Peak Period speeds within the traffic study area. The New Location Highway Alternative provides the greatest increases in PM Peak Period speeds both regionally and within the traffic study area.

4.4 PM Peak Period Travel Times

The TRM was used to calculate average PM Peak Period travel times to/from 12 origins and destinations throughout the region. The quartile rankings specifically looked at the travel times from the origins of Research Triangle Park and Brier Creek to the destinations of Fuquay-Varina, Garner, Clayton, and Knightdale. Average percentage changes in PM Peak Period travel times between the No-Build ICE Alternative and the other alternatives were calculated for both of the origins.

Research Triangle Park

- PM Peak Period travel times improved by over four percent with the New Location Highway alternative.
- PM Peak Period travel times improved by over one percent with the IE3A alternative.
- PM Peak Period travel times worsened by over four percent with the ACCESS2040 alternative.

Brier Creek

- PM Peak Period travel times improved by over 13 percent with the New Location Highway alternative.
- PM Peak Period travel times improved by over eight percent with the IE3A alternative.
- PM Peak Period travel times improved by nearly three percent with the ACCESS2040 alternative.

5 OTHER MEASURES OF EFFECTIVENESS COMPARISONS

5.1 Average Daily Congested Vehicle Miles Traveled & Vehicle Hours Traveled

Daily congested VMT and VHT were identified as a MOE for comparing each alternative concept's ability to meet the project purpose of reducing congestion. The congested VMT and VHT data were extracted from the loaded TRM highway networks. Roadways with daily V/C ratios of greater than 0.80 were considered to be "congested" and were included in the data set developed for each alternative concept. Average daily congested VMT & VHT were calculated region-wide and within the project traffic study area, for comparison purposes. The results are shown in **Table 6**.

Table 6: 2040 Average Daily Congested VMT & VHT Comparisons

Alternative Concept	SE Data Used	Region Wide				Traffic Study Area			
		VMT (miles)	VHT (hours)	% VMT Change	% VHT Change	VMT (miles)	VHT (hours)	% VMT Change	% VHT Change
No-Build	NB ICE	25,215,556	623,454	-	-	6,013,710	142,872	-	-
No-Build	Official	26,449,065	658,209	4.89%	5.57%	6,813,758	163,956	13.30%	14.76%
New Location Hwy	Official	24,995,659	611,707	-0.87%	-1.88%	5,288,158	121,783	-12.06%	-14.76%
IE3 - Arterial	Official	24,268,203	610,445	-3.76%	-2.09%	4,661,106	120,543	-22.49%	-15.63%
ACCESS2040	Official	25,728,993	638,298	2.04%	2.38%	5,659,427	140,039	-5.89%	-1.98%

5.2 Average Daily Speed

2040 average daily speeds were calculated using TRM output. The results for all model alternative concepts are shown in **Table 7**.

Table 7: 2040 Average Daily Speed Comparisons

Alternative Concept	SE Data Used	Region Wide		Traffic Study Area	
		Speed (MPH)	% Speed Change	Speed (MPH)	% Speed Change
No-Build	NB ICE	38.8	-	38.0	-
No-Build	Official	38.5	-0.77%	37.5	-1.32%
New Location Hwy	Official	39.2	1.03%	40.1	5.53%
IE3 - Arterial	Official	38.9	0.26%	38.8	2.11%
ACCESS2040	Official	38.7	-0.26%	38.6	1.58%

5.3 Daily Congested Roadway Mileage

The total daily congested roadway lane mileage, another MOE for evaluating reduction in congestion, was determined using the TRM. Model runs were used to calculate roadways in the highway network with a daily V/C above 0.80. The results are shown below in **Table 8**.

Table 8: 2040 Daily Congested Roadway Lane Mileage

Alternative Concept	SE Data Used	Region Wide		Study Area	
		Lane Mileage	Change	Lane Mileage	Change
No-Build	NB ICE	564.6	-	115.9	-
No-Build	Official	589.9	4.48%	130.9	12.94%
New Location Hwy	Official	562.6	-0.35%	102.8	-11.30%
Improve 3 - Arterial	Official	554.4	-1.81%	95.4	-17.69%
ACCESS2040	Official	568.8	0.74%	111.9	-3.45%

5.4 PM Peak Period Congested Roadway Lane Mileage

The total PM peak congested roadway lane mileage was determined using the TRM. Model runs were used to calculate roadways in the highway network with a PM peak V/C above 0.80. The PM peak totals were much higher than the daily totals. The results are show below in **Table 9**.

Table 9: 2040 PM Peak Period Congested Roadway Lane Mileage

Alternative Concept	SE Data Used	Region Wide		Study Area	
		Lane Mileage	% Change	Lane Mileage	% Change
No-Build	NB ICE	1350.1	-	315.9	-
No-Build	Official	1384.7	2.56%	328.1	3.86%
New Location Hwy	Official	1339.1	-0.81%	307.4	-2.69%
Improve 3 - Arterial	Official	1345.2	-0.36%	302.8	-4.15%
ACCESS2040	Official	1324.0	-1.93%	307.1	-2.79%

6 CONCLUSIONS

In this technical memorandum, we subjected ACCESS2040 to the same analysis and criteria used in the initial screening memoranda to determine how it performed relative to the previously evaluated alternatives.

Based on a complete and consistent traffic analysis, using the same criterion initially used to screen the project alternatives, ACCESS2040 would not meet the purpose and need of the project and does not merit further consideration.

In addition, we examined the reasonableness of the cost information included in ACCESS2040 and concluded that there are several factors that would increase the cost of ACCESS2040 beyond what is described in the SELC document.

APPENDIX N
Responses to Southern Environmental Law Center
Comments on the Complete 540 Final Environmental
Impact Statement's Indirect and Cumulative Effects
Discussion

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

STATE TRANSPORTATION IMPROVEMENT PROGRAM (STIP) PROJECTS R-2721, R-2828, & R-2829



Responses to Southern Environmental Law Center Comments on the Complete 540 Final Environmental Impact Statement's Indirect and Cumulative Effects Analysis

May, 2018

Submitted to:

North Carolina Department of Transportation
Raleigh, North Carolina

Federal Highway Administration
Raleigh, North Carolina

Submitted for:

North Carolina Department of Transportation
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1. INTRODUCTION

The Southern Environmental Law Center (SELC) provided several comments on the Complete 540 Final Environmental Impact Statement (FEIS). The purpose of this memo is to address those comments pertaining to the Indirect and Cumulative Effects (ICE) analysis.

The Qualitative ICE analysis, which was summarized in the Draft EIS, compares the full range of alternatives that would meet the purpose of the project. It is the opinion of NCDOT and FHWA that this qualitative analysis was sufficient for comparing the various build alternatives to each other. The Qualitative ICE report clearly indicates that there would be differences in the indirect and cumulative effects of the different Detailed Study Alternatives (DSAs), but they would be of similar magnitudes. This is summarized on pages 104 and 105 of the DEIS. Detailed discussion of each corridor is included in Chapter 6 of the Qualitative ICE report.

After preparation of the DEIS, NCDOT and FHWA worked with regulatory agencies in defining the scope of the Quantitative ICE for the preferred alternative. Based on this coordination, NCDOT developed a scope for the Quantitative ICE in June 2015. Quantitative ICEs and Water Quality Indirect and Cumulative Effects studies are resource intensive efforts. The Quantitative ICE was developed to fully assess and disclose the potential ICEs and allow for the implementation of measures to minimize these effects to sensitive resources, particularly for endangered species. NCDOT shared information on the draft Quantitative ICE with regulatory agencies in June 2017, and the agencies had no concerns regarding the approach implemented by NCDOT. The Quantitative ICE analysis estimates the indirect and cumulative effects on land use and water quality under 2040 No-Build and 2040 Build land use scenarios in the Future Land Use Study Area (FLUSA). The FLUSA contains portions of Wake, Johnston, and Harnett counties.

In the course of developing the Quantitative ICE, the NCDOT team met with area planners from all area jurisdictions, as well as with the Capital Area Metropolitan Planning Organization (CAMPO) and the Triangle J Council of Governments (TJ COG), who are responsible for long-range transportation and planning efforts in the region.

At the time of the completion of the FEIS, the existing land use plan for the region (including the FLUSA) was the Imagine 2040 Initiative. Imagine 2040 was an initiative started in 2010 by the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) and CAMPO to promote community-based regionalism, aimed at guiding growth and coordinating decision-making processes for a more sustainable transportation system. Imagine 2040 was developed using CommunityViz software. As an extension of ESRI's ArcGIS desktop software, CommunityViz facilitates the visualization and comparison of development scenarios.

2. SELC Comments on Proposed Growth

On pages 56 through 67 of their comments, SELC cites statements from state and local officials that portray the belief that the Complete 540 project will provide economic benefits to municipalities and the State of North Carolina. NCDOT noted similar comments in the Quantitative ICE (see Quantitative ICE Technical Memorandum 1 [hereafter ICE Memo #1], Appendix C). Therefore, in its analysis of potential ICEs associated with the project, NCDOT made specific changes to anticipated land use to compare the Complete 540 Build Scenario and the No-Build Scenario as cited in Tech Memo #1 (Michael Baker Engineering, 2018A), pages 23-24.

The SELC comments in Section A “Existing Portions of I-540 Caused Extensive Growth” and Section B “Interviews with Regional and Local Planners Revealed High Growth Expectations” overlook the distinction between “growth” and “induced growth.” Not all growth that occurs in an area is attributable to the construction of new or expanded roads; as acknowledged throughout the interviews with planners and the cited literature, many factors affect the amount of growth, such as land availability, quality of schools, availability of utilities, etc. The articles and statements cited by SELC compare future growth with Complete 540 to what is on the ground today. As such, SELC creates the implication that all future growth from today is attributable to Complete 540, which is not correct. While most local planners indicate that communities are planned with Complete 540 in mind, it is unrealistic to imply that all future communities will occur only if the Complete 540 project is built. SELC comments and arguments do not compare the future Build to a future No-Build as required by NEPA – only the quantitative ICE does that. Rather SELC improperly compares the future Build with what is on the ground today which creates a misleading concept of induced growth (i.e. growth attributable to the project).

“Indirect effects are those caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable (40 CFR 1508.8). The indirect effects analyses for the Complete 540 project are focused on projected land use changes and related changes in land cover in the Future Land Use Study Area (FLUSA), with or without the proposed project (i.e., 2040 No-Build or 2040 Build scenarios).”

SELC quotes numerous general statements from plans, planners, local officials, and others who indicate that Complete 540 will “encourage growth” and “facilitate growth,” which is not the same as inducing growth. There are various ways that the public conceptualizes growth, especially growth relative to current development, growth of the local tax base resulting from any future development, or the pace of growth. These are different concepts than the induced growth analysis required under NEPA, which compares growth in the design year (2040) for future scenarios with and without the project. The ICE analysis specifically addresses the question of how growth would be different from the Build scenario in 2040 by having local planners identify the specific differences in densities and type (i.e., residential vs mixed use) that would be anticipated if Complete 540 were not built. The statements quoted by SELC do not contradict the analysis.

In the Complete 540 Quantitative ICE analysis, land use differences in the Build and No-Build scenarios are primarily noticeable in the vicinity of the proposed interchanges for Complete 540. As NCDOT noted in the ICE’s Historic Growth Memorandum (Michael Baker Engineering, 2017), FLUSA counties have experienced rapid growth since the 1990s and are expected to continue growing through 2040 regardless of whether Complete 540 is constructed.

This is not merely NCDOT’s assertion. Data from the North Carolina Office of Budget and Management (OSBM)¹ anticipate that from 2020 through 2030, Wake County will grow by over 20 percent, Johnston County by over 25 percent, and Harnett County by over 16 percent. They also project that, from 2030 through 2037, Wake County will grow by over 12 percent, Johnston County will grow by over 14 percent, and Harnett County by over 9 percent.

As noted in ICE Memo #1:

“The forecasts developed by OSBM use time-series trend analysis of trend growth from 1990-2010 to forecast future year growth from past trends. For each county, an exponential smoothing or

autoregressive integrated moving average (ARIMA) model was selected that best fit the 2010 Census and 2010-2014 Census county estimates while maintaining a low mean average percentage error (NC OSMB, 2015). These models were then used to forecast population for each year out to 2031. Since these models are based on historic growth trends, they are not influenced by current or future decisions regarding transportation infrastructure, utility provision, or local land use policies.”

The changes in land use types that were used in the Quantitative ICE study are important because, due to the current and anticipated growth levels in Wake County, many of the communities along Complete 540 will approach build-out conditions by 2040 with or without construction of Complete 540. Area land use plans and zoning ordinances indicate the type of land uses local governments envision within in their jurisdictions. Once an area is built out, the only way population and employment densities can increase is if these stipulated land uses are changed.

SELC quotes extensively, but selectively, from the interviews with planners documented in ICE Memo #1. This input from planners provided the basis for specific changes that were made to the No-Build “Place Types” as discussed later in this memo. The Place Types, in turn, provided the basis for the differences in development between the 2040 No-Build and 2040 Build scenarios. A complete reading of the interviews in ICE Memo #1 and of ICE Memo #1 as a whole reveals that the planners input on the differences in growth density and type (such as residential vs commercial) that would occur if Complete 540 were not constructed *form the very basis* of the detailed 2040 No-Build Land Use allocation generated by CommunityViz.

It should also be noted that not all communities within the FLUSA would see substantial differences in the Complete 540 Build and No-Build scenarios. As SELC states on page 67 of their comments:

“Town of Wendell planners, like the Town of Smithfield planners, somewhat contradictorily expected that Complete 540 ‘would not change place types, [but] it may increase the pace of development.’”

This statement that SELC found contradictory can be explained as follows. The planners quoted by SELC understood that Wendell and Smithfield will likely reach build-out conditions by 2040 without substantive differences in the type or density of development regardless of whether Complete 540 is constructed or not. However, if the Complete 540 project were built, the planners expect these areas would reach build-out conditions sooner.

Although SELC quoted extensively from the Quantitative ICE Memo #1, there are noteworthy omissions. For example, as stated in ICE Memo #1, p. 8:

“The project team met with CAMPO and Triangle J COG on March 15, 2016. CAMPO and Triangle J COG stated that they believed it was unlikely that failure to construct Complete 540 would have a sizeable or measurable impact on growth in the Triangle Region that would exceed the typical error rates in long-range growth forecasts. They did believe that growth patterns within the FLUSA would be influenced by constructing Complete 540 and offered suggestions on which factors used in the CommunityViz modeling for Imagine 2040 could be modified to be reflective of a 2040 No-Build condition.”

Although NCDOT agrees with CAMPO's and Triangle J COG's assessment and believes it is the most likely outcome, for the purposes of the Quantitative ICE analysis, NCDOT adjusted regional population and employment totals to develop a conservative assessment of potential ICEs (one that sought to provide a high-end estimate of the potential induced land use effect of Complete 540). The process of the adjustment as well as SELC's comments on those adjustments are discussed in Section 3.

3. ICE Methodology Comments from SELC

In Section 5C of the SELC letter on pages 68-70, SELC questions the methodology for calculating induced land use in the ICE analysis. SELC questions:

1. Whether it is reasonable to assume regional growth trends will affect the FLUSA,
2. Whether the use of the Duranton and Turner methodology is applicable to Complete 540,
3. Whether the Duranton and Turner methodology was arbitrarily altered to reduce the amount of growth allocated in the FLUSA, and
4. Whether the ICE analysis was improperly limited to the preferred alternative.

SELC also comments that the ICE "document" is difficult to follow (note that there are four ICE memos and only one is referenced) and that there is no explanation of how the No-Build scenario growth is allocated, nor how the estimates of jobs and household differences are converted into acres of development. This comment is addressed first.

Overview of ICE Induced Land Use Allocation Methodology

The ICE Memo #1 with appendices provides a great deal of detail on the methodologies used and the basis for allocating No-Build Scenario growth. An overview is provided here, with reference to the more detailed sections of the ICE documents.

The CommunityViz outputs used for the Imagine 2040 plan were stated by both CAMPO and TJ COG to be indicative of a Build condition for the Complete 540 project. NCDOT's approach for developing the No-Build Scenario was:

1. To use the same planning tool used for Imagine 2040 (the CommunityViz model),
2. To change control totals for the No-Build Scenario (using the Duranton and Turner approach),
3. To adjust future land uses (land suitability analysis factors and Place Types based on local planner interviews), and
4. To rerun the model.

This approach avoids any conscious or unconscious bias on potential effects.

The basic inputs used in the CommunityViz model to produce an alternative land use allocation are Place Types (land use types with allowable densities of housing and employment) and county-level totals for dwelling units and employment. These Place Types are presented in ICE Memo #1 starting on page 21 and are explained in great detail in ICE Memo #1 Appendix B. The county-level values are called "control totals." In ICE Memo #1, NCDOT describes the process used to develop the No-Build Scenario control totals. Three potential No-Build conditions were evaluated:

- No-Build Scenario 1: No changes to the control totals.
- No-Build Scenario 2: Control totals were reduced based on the Durant and Turner historical research approach.
- No-Build Scenario 3: Control totals were reduced based on the TREDIS economic model used by NCDOT to evaluate the economic effects of potential projects.

Although the regional planners from the Triangle J COG and CAMPO stated that Complete 540 would not have a noticeable effect on 2040 control totals for the region, the study team decided that it would be appropriate and conservative to adjust the control totals in this case, given the size and scale of this project relative to others. Over the course of the evaluation, three possible methods for quantifying induced land use effects were considered. The Durant and Turner approach was determined to estimate the greatest difference between the Build and No-Build condition and therefore was used for the analysis. By using the Durant and Turner approach, NCDOT employed the most rigorous test of the project's potential induced land use effects. SELC did not agree with the use of the Durant and Turner approach; however, they did not propose an alternative methodology. (Additional criticisms of the Durant and Turner-based approach are addressed later in this memo.)

As stated in ICE Memo #1, page 8:

"The research of Durant and Turner (2012) provides a long-term historical research approach to analyzing the effects of major highways on regional employment over 20-year time periods. Their analysis of the effect of interstate highway construction on regional employment growth in the US from 1983 to 2003 indicates that each 10 percent increase in the stock of highways within a Metropolitan Statistical Area (MSA) causes about a 1.5 percent increase in employment over 20 years. Durant and Turner define highway stock as the centerline miles of interstate highways at the beginning of their analysis period."

Because Durant and Turner's research addresses economic impacts from highway expansions at a regional level, the control totals were applied in CommunityViz at a regional level. The model requires county-level control totals to be input; therefore, the study team divided the control totals according to the relative accessibility benefit of the Complete 540 project, as described on pages 13-19 of ICE Memo #1. However, the full regional CommunityViz model was run to determine the land use allocation.

SELC stated on page 69, paragraph 6, that NCDOT did not disclose how growth was allocated in the study area under the No-Build Scenario. However, Quantitative ICE Memo #1; page 4 details how the No-Build land use allocations were developed using the CommunityViz software package, Tables 7 and 8 on page 18-19 detail the control total adjustments for the CommunityViz model, and pages 20-24 summarize the attractiveness factor and Place Type changes made by jurisdiction for the No-Build analysis. The attractiveness factors for the No-Build allocation were adjusted to remove the proposed interchanges along Complete 540. These interchanges had conveyed enhanced accessibility to nearby areas in the Imagine 2040 (Build scenario) allocation. Place Types were also adjusted for the No-Build Scenario to convey the reduced attractiveness of the area for higher density and mixed-use development.

The adjustments made to the CommunityViz model were applied consistently with the input of regional and community planners as the primary driver, as documented in the memos and maps in Appendix C of ICE Memo #1. Note that some exceptions were made to planner input to achieve internal consistency in the overall No-Build analysis. For example, planners such as those with CAMPO, as quoted above, said

that no differences in future amount of growth would occur without Complete 540. However, the study team lowered the control totals for growth and lowered land-use densities and/or changed Place Types near the Complete 540 interchanges to achieve logical consistency for a corridor-wide analysis of the 2040 No-Build. Similarly, the Harnett County planners anticipated higher levels of development with Complete 540, but the ICE analysis of access to jobs with Complete 540 did not support these aspirations; therefore, the control totals for Harnett County growth were not changed for the No-Build analysis. However, the control totals were only *inputs* to the CommunityViz model, and the model's allocation of growth based on relative attractiveness of parcels throughout the region did alter minor amounts of growth in Harnett County under the 2040 No-Build scenario, as compared to the 2040 Build scenario.

It should also be noted that ICE Memo #1 was presented in the above order to adhere to the logic of starting with control totals and then detailing the assumptions used in allocating the reduced growth of the No-Build scenario. To be clear, the actual sequence of events was to prepare the alternative Place-Type model inputs for CommunityViz first (to be applied regardless of the prospective county-level control total changes), and then to run CommunityViz with all three of the potential No-Build scenario options for control total growth described above. This approach ensured that the comparison of the No-Build Scenario options all equally reflected the differences in the attractiveness-factor and Place-Type inputs that distribute the growth in dwelling units and employment in the regional CommunityViz model.

The CommunityViz documentation in ICE Memo #4, Appendix A includes extensive information regarding the Imagine 2040 modeling process and the variables and methodology used for allocating land use. Also, ICE Memo #2 describes how the CommunityViz data represent development patterns at the parcel level and how these outputs were converted to land-cover impacts. These components of the Quantitative ICE documentation refute the SELC comment on page 69 that there is no explanation of how the No-Build scenario households and jobs are allocated to sub-area zones and no description of how the scenarios are converted into acres of development.

In summary, NCDOT used the same model used by CAMPO and TJ COG in their approved land use plan, used a data-driven approach to reduce county-level control totals, adjusted land use factors to remove the influence of the Complete 540 project based on input from area planners, and developed the No-Build Scenario. NCDOT stands by this approach.

It is Reasonable to Assume Regional Growth Trends Will Affect the FLUSA

On page 68, paragraph 2, SELC states that the ICE analysis “takes an unjustified leap – suggesting that the growth that has been seen in the more dense, urban part of the county will naturally continue at a high pace in the more rural, undeveloped region even without a fast access toll road in place. This assumption is completely unsupported.” SELC’s observation overlooks the data provided in the Historic Growth memo indicating rapid growth is already occurring in the FLUSA (e.g., pages 10-11 with regard to population growth trends). The following two paragraphs clearly support the assertion that regional growth will extend to the FLUSA:

“To summarize, Census data show Wake County was and continues to be the dominant population center in the region. The FLUSA counties, Harnett, Johnston, and Wake, had the highest percent growth in the CSA from 1990 to 2010. Population projections indicate that FLUSA counties are likely to grow at a rate higher than the CSA [Raleigh-Durham-Chapel Hill, NC Combined Statistical Area] average through 2035. Zones within Harnett and Johnston Counties that are part of the FLUSA experienced substantial growth between 1990 and 2010. While growth within Wake County was more variable, Zones W3, W4, and W6, which include the majority of the FLUSA in

Wake County, had growth rates of 56 percent, 166 percent, and 252 percent, respectively.

“The population growth trends during and after the recession that began in late 2008 are also relevant to an understanding of growth trends in the FLUSA. Historical data taken from the ACS shows continual population growth in Harnett, Johnston, and Wake Counties over the last decade. The year of slowest growth occurred between 2009 and 2010 when the population grew by only 2.3 percent -- Harnett County’s by less than one percent. Between 2010 and 2015 the three counties experienced a combined growth of 14 percent. The FLUSA experienced an even larger growth during the same period of approximately 18 percent. The robust growth of the FLUSA counties and the FLUSA itself during and after the recession suggests the area has highly resilient drivers of growth.” (Historic Growth Memo, p. 11)

The Duranton and Turner Method is Applicable to Complete 540

SELC maintains that the use of Duranton and Turner’s review of the effect of regional highways on population and employment was not appropriate. SELC indicates that:

1. Use of Duranton and Turner is arbitrary and capricious
2. Duranton and Turner should not be applied to a “particular region of an individual city”
3. Duranton and Turner should not be applied to a toll road

First, it is NCDOT’s view that the most appropriate way to evaluate the potential future effects of a major highway project is to look at past major highway projects. SELC notes that the projects included in Duranton and Turner were constructed several years ago (ending in 2003) while failing to acknowledge that this is the only way to look at long-range changes in land use subsequent to highway construction. In fact, in their 2016 comments on the Mid-Currituck Bridge Supplemental EIS, SELC previously cited the work of Duranton and Turner, as documentation by “transportation experts,” on the same premise that it demonstrates the “. . . idea that transportation improvements encourage growth and development in areas that were previously difficult to access.”² Further, the Duranton and Turner method was chosen from three possible approaches because it predicted the greatest difference between the Build and No-Build scenarios; the alternative approaches provided less of an induced growth effect. This is a deliberate choice to take a hard look and is neither arbitrary nor capricious.

Second, Duranton and Turner was not applied to a “particular region of an individual city” as stated near the bottom of page 68 of the SELC letter. As described earlier in this memo, Duranton and Turner was used to calculate regional differences in economic growth, consistent with the geographies that formed the basis of Duranton and Turner’s analysis. The ICE analysis determined an allocation of the growth to specific counties within the region based on accessibility analysis, and then the full regional allocation of growth was modeled in CommunityViz. Thus, Duranton and Turner was applied at an appropriate, regional level. The allocation to the FLUSA was determined by 1) the changes in accessibility (as they influenced the allocation of the control totals to counties), 2) the removal of Complete 540 and its interchange accessibility factors in the CommunityViz model, and 3) the alteration of Place Types to represent the No-Build scenario as summarized earlier in this memo.

Third, SELC apparently misunderstood the caveats noted in the analysis on ICE Memo #1, p. 8:

“This Duranton and Turner historical research approach is not completely analogous to the situation of Complete 540. Although it will connect to interstate highways and will have similar design characteristics as an interstate highway, the proposed project is a tolled highway and will not be designated as an interstate highway. Most of the interstate highways included in the

Durantón and Turner study were not tolled.”

The purpose of this caveat is to note that tolls may reduce the use of a highway facility. This could indicate that the approach defined in Durantón and Turner may overestimate the economic effect of Complete 540. Contrary to SELC’s assessment on page 69, paragraph 5, NCDOT asserts that using the largest available dataset on the economic effects of highway construction on area economies demonstrates that NCDOT took a “hard look” at the effects of constructing this facility.

The Durantón and Turner Methodology Was Not Arbitrarily Reduced in the FLUSA

On page 69, final paragraph, and continuing on page 70, SELC incorrectly states that the ICE took steps to reduce overall growth anticipated in the region. They reference ICE Memo #1, pages 18 to 34. This assertion relies on the assumption that the allocation of the regional changes in growth derived from Durantón and Turner were manipulated so that only half of this growth was considered in the ICE analysis of the FLUSA. This is an incorrect interpretation of the analysis.

The total amount of population and employment changes between the Build and No-Build scenarios were developed using the previously determined Durantón and Turner methodology, also called the “Historical Research Approach.” The cited pages of ICE Memo #1 refer to determining how the reductions in population and employment were spread out in the FLUSA. NCDOT determined which areas would receive substantial travel-time benefits if Complete 540 were constructed; these areas were in Wake and Johnston counties, as shown in Figure 5, page 17. Therefore, total numbers of jobs and employment in Wake and Johnston counties were reduced from the Imagine 2040 Build Scenario to develop the No-Build Scenario, as shown on pages 18-19, Tables 7 and 8. These tables clearly show that the full amount of regional growth reduction derived from the Historical Research Approach (i.e., Durantón and Turner) was included in the CommunityViz model. However, as stated on page 15 of ICE Memo #1:

“An increase in job accessibility alone is not a sufficient condition for assuming significant changes in future land use. Local land use regulations, utility availability, and other factors will affect the desirability of any specific area within the FLUSA. Many of these factors are assessed within the CommunityViz model.”

In the growth allocation performed by the CommunityViz model, regional growth is distributed based on myriad factors of land attractiveness and according to the Place Type inputs that distinguish land use densities and development types (as discussed on pages 20-24 of ICE Memo #1). Thus, when CommunityViz performed the No-Build land use allocation, it allocated the alternate growth forecast according to relative attractiveness of parcels throughout the region, and while the differences were concentrated in the FLUSA overall, a portion of the reduced forecast was distributed across the remainder of the Imagine 2040 region. The resulting reductions in dwelling units and employment were not manipulated to arrive at a pre-determined outcome, nor were they arbitrarily reduced, as stated in the SELC letter. Rather, the regional growth adjustments derived by the regionally based Durantón and Turner methodology were applied in the regional CommunityViz model, with adjustments to accessibility attractiveness reflected in the area of the FLUSA to reflect a No-Build condition. The resulting changes in No-Build land use allocation were carried forward into the remaining analysis of indirect and cumulative impacts in ICE Memos #2, 3 and 4.

The ICE Analysis is Not Improperly Limited to the Preferred Alternative

In their comments on page 69, paragraph 2, SELC disagrees with limiting the ICE analysis to the Preferred Alternative and the No-Build. NCDOT notes that this approach was developed in consultation with

NCDOT, FHWA, and resource agencies. The Draft Environmental Impact Statement (DEIS) for the project included a Qualitative ICE Assessment (Lochner, 2014), which was considered in the selection of the Preferred Alternative.

The Qualitative ICE report clearly indicates that there would be differences in the indirect and cumulative effects of the different Detailed Study Alternatives (DSAs), but they would be of similar magnitudes. Because the total ICE of each DSA was of similar magnitude, it was not a determining factor in the selection of the Preferred Alternative. This is summarized on pages 104 and 105 of the DEIS. Detailed discussion of each corridor is included in Chapter 6 of the Qualitative ICE report. NCDOT noted that the results of the Quantitative ICE have been consistent with the results of the qualitative study.

Quantitative ICEs and Water Quality Indirect and Cumulative Effects studies are resource intensive efforts. The Quantitative ICE was developed to fully assess and disclose the potential ICEs and allow for the implementation of measures to minimize these effects to sensitive resources, particularly for endangered species.

Footnotes

¹North Carolina Office of Budget and Management website cited March 6, 2018: <https://www.osbm.nc.gov/demog/county-projections>, last updated 9/27/17.

² Southern Environmental Law Center, *Mid-Currituck Bridge NEPA Review*, December 21, 2016, letter to Tracy Roberts, NCDOT, and Mr. John F. Sullivan III, P.E, which cites on page 52: Duranton, Gilles, and Matthew A. Turner. 2011. "The Fundamental Law of Road Congestion: Evidence from US Cities." *American Economic Review*, 101 (6): 2616-52. SELC letter accessed March 23, 2018 at <https://www.southernshores-nc.gov/wp-content/uploads/2016/12/December-2016-Comments-on-Mid-Currituck-Bridge-NEPA-Review.pdf> [Note that this is not the same publication of Duranton & Turner as used in the Complete 540 ICE methodology, but it part of the same body of work by Duranton & Turner studying the long-term impact of highways on road congestion and economic growth.]

References

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Michael Baker Engineering. 2017a. *Memorandum on Local Jurisdiction Outreach and Methodology Updates (Quantitative ICE Assessment Memo #1)*. Prepared for NCDOT, Raleigh.

Michael Baker Engineering. 2017b. *Memorandum on Land Use Scenario Methodology and Results (Quantitative ICE Assessment Memo #2)*. Prepared for NCDOT, Raleigh.

Michael Baker Engineering. 2017c. *Memorandum on Water Quality Modeling Methodology and Results (Quantitative ICE Assessment Memo #3)*. Prepared for NCDOT, Raleigh.

Michael Baker Engineering. 2017d. *Indirect and Cumulative Effects Memorandum (Quantitative ICE Assessment Memo #4)*. Prepared for NCDOT, Raleigh.

Southern Environmental Law Center, 2018. *Comments on Complete 540 Final Environmental Impact Statement*, Letter to Mr. Rodger Rochelle, NCDOT.

APPENDIX O
SECTION 4(F) DE MINIMIS CONCURRENCE LETTERS



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

September 11, 2017

Mr. Doug McRaine, Director **PK**
Department of Parks, Recreation and Cultural Resources
Cary Town Hall
316 North Academy Street
Cary, NC 27513

Re: North Carolina Department of Transportation: STIP R-2721, R-2828, and R-2829
Complete 540 - Triangle Expressway Southeast Extension Project
Concurrence Request for *de minimis* Section 4(f) finding for Middle Creek School Park

Dear Mr. McRaine:

The Federal Highway Administration (FHWA) and North Carolina Department of Transportation (NCDOT) are preparing a Final Environmental Impact Statement (EIS) for the Complete 540 - Triangle Expressway Southeast Extension project. The proposed project would construct a six-lane expressway on new location between NC 55 Bypass in Apex to US 64/US 264 (I-495) in Knightdale (**Figure 1**).

On August 28, 2015 NCDOT notified the Cary Department of Parks, Recreation and Cultural Resources concerning potential impacts to Middle Creek School Park for the various alternatives under consideration at the time of the Draft EIS. This letter also notified your department of FHWA's intention to make a *de minimis* determination relative to the impacts of the project on Middle Creek School Park. This intention was also contained in the Draft EIS and the Draft Section 4(f) Evaluation for the project, which was issued in November 2015.

In April 2016, FHWA and NCDOT announced Detailed Study Alternative 2 (DSA 2) as the Preferred Alternative for the project. DSA 2 includes the Orange - Green - Mint Green - Green color-coded corridors. The enclosed map (**Figure 1**) shows DSA 2.

Highway right of way would necessitate the acquisition of a narrow strip of land at the northern edge of Middle Creek School Park. The enclosed map (**Figure 2**) of the area around the park shows where the preliminary proposed right of way for the Preferred Alternative would encroach onto the park. A more detailed view of this impact area (**Figure 3**) is also attached. The narrow strip of land that would be converted from the park to highway right of way would total about 2.8 acres. Previous correspondence indicated that this impact was about 1.6 acres; but, this was based on only acquiring two triangular portions of this narrow strip instead of the entire narrow strip of parkland. The change is necessary because of highway design changes that were needed for geotechnical and drainage reasons. Existing vegetation will likely be removed and replaced in

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NC DEPARTMENT OF TRANSPORTATION
NC TURNPIKE AUTHORITY
1578 MAIL SERVICE CENTER
RALEIGH, NC 27699-1578

Telephone: (919) 707-2715
Fax: (919) 715-5511
Customer Service: 1-877-368-4968

Location:
1 SOUTH WILMINGTON STREET
RALEIGH, NC 27601

Website: www.ncdot.gov

this narrow strip of land. Additionally approximately 0.1 acres of wetlands and 40 feet of streams are potentially impacted in the vicinity of the unnamed tributary to Camp Branch on this portion of the park.

The Southern Environmental Law Center (SELC) in their comments on the Draft EIS questioned the current use of the wooded space that would be impacted by the highway project. NCDOT addressed this question noting that this area has no formal park function and currently serves as a wooded area behind a residential neighborhood.

We did not receive any public comments specifically addressing the project's potential effects on Middle Creek School Park, but we did receive comments expressing general support for avoiding adverse effects on area park and recreation resources. There are no park facilities in the area of impact and all park facilities are well to the south of the potential right of way impact area.

As a recreational facility in public ownership, Middle Creek School Park is afforded special protections under Section 4(f) of the Department of Transportation Act (recodified in 49 U.S.C. 303 and 23 U.S.C. 138). Under the provisions of Section 4(f), if a proposed transportation project would result in adverse effects to the park or recreation facility, the transportation agency must conduct an evaluation to demonstrate that there is no prudent and feasible alternative to the use of the 4(f) property. In accordance with 23 C.F.R. Part 774 of the Safe, Accountable, Flexible, Efficient Transportation Act: A Legacy for Users (SAFETEA-LU), Pub. L. 109-59, FHWA is provided a method known as a *de minimis* (minimal) impact determination in cases where the official with jurisdiction over the park or recreation area concurs in a determination that the impacts from the transportation project "will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f)." This concurrence enables FHWA to make a *de minimis* finding, which satisfies the requirements of Section 4(f) and precludes the need for a full Section 4(f) Evaluation. The proposed Complete 540 project, as planned, will not have an adverse effect on the use or function of Middle Creek School Park.

If you concur that the planned impact on Middle Creek School Park as shown on the attached figures would not adversely affect the recreational activities, features, and attributes that qualify this facility for protection under Section 4(f), NCDOT requests that you sign and date this letter in the spaces below. We will maintain a copy of this letter in the project file.

As the official with jurisdiction over Middle Creek School Park, I concur with the determination that the proposed transportation project as described in this letter and shown on the accompanying attachments would not adversely affect the features, attributes, or activities that qualify Middle Creek School Park for protection under Section 4(f). I have also been informed that, based on my concurrence, the FHWA intends to make a *de minimis* finding regarding impacts to Middle Creek School Park, thus satisfying the requirements of Section 4(f).

Signature: Michael J. Byr

Date: 11/17/2017

After signing and dating this letter, please return a copy within 30 days of the date of this letter by email to jhharris1@ncdot.gov or by mail to the following address:

North Carolina Turnpike Authority
Attention: Jennifer Harris
1578 Mail Service Center
Raleigh, NC 27699-1578

NCDOT appreciates the assistance of the Town of Cary in making this transportation project possible. Should you have any questions or concerns, please contact me at (919) 707-2710 or Jennifer Harris at (919) 707-2704.

Sincerely,

A handwritten signature in black ink, appearing to read 'RR', is positioned above the typed name.

Rodger Rocheille, PE
North Carolina Turnpike Authority
Chief Engineer - Innovative Delivery

cc:
Donnie Brew, FHWA
Kiersten Bass, HNTB
Roy Bruce, H.W. Lochner, Inc.



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

September 11, 2017

Ms. Diane Sauer, Director
Raleigh Parks, Recreation and Cultural Resources Department
Raleigh Municipal Building
222 W. Hargett Street
Raleigh, NC 27601

Re: North Carolina Department of Transportation: STIP R-2721, R-2828, and R-2829
Complete 540 - Triangle Expressway Southeast Extension Project
Concurrence Request for *de minimis* Section 4(f) finding for the Neuse River Trail

Dear Ms. Sauer:

The Federal Highway Administration (FHWA) and North Carolina Department of Transportation (NCDOT) are preparing a Final Environmental Impact Statement (EIS) for the Complete 540 - Triangle Expressway Southeast Extension project. The proposed project would construct a six-lane expressway on new location between NC 55 Bypass in Apex to US 64/US 264 (I-495) in Knightdale (**Figure 1**).

On August 28, 2015 NCDOT notified the Raleigh Parks, Recreation and Cultural Resources Department concerning potential impacts related to crossing the Neuse River Trail for the various alternatives under consideration at the time of the Draft EIS. This letter also notified your department of FHWA's intention to make a *de minimis* determination relative to the impacts of the project on the Neuse River Trail. This intention was also contained in the Draft EIS and the Draft Section 4(f) Evaluation for the project, which was issued in November 2015.

In April 2016, FHWA and NCDOT announced Detailed Study Alternative 2 (DSA 2) as the Preferred Alternative for the project. DSA 2 includes the Orange - Green - Mint Green - Green color-coded corridors. The enclosed map (**Figure 1**) shows DSA 2.

The Southern Environmental Law Center (SELN) in their comments on the Draft EIS expressed their opinion that impacts associated with the proposed highway on the Neuse River Trail would not be *de minimis*. SELN indicated that the highway crossing of the trail would create unusual conditions along the trail. NCDOT has addressed this concern noting that the Neuse River Trail crosses over or under several transportation facilities including similar highway facility crossings at I-540, I-495, US 1, US 401, and US 64. Therefore, the Complete 540 crossing would not create an unusual condition that would affect the function and use of the trail.

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Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
1 SOUTH WILMINGTON STREET
RALEIGH, NC 27601

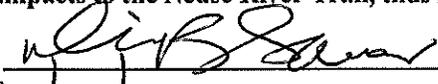
Citizen comments relative to the Neuse River Trail tended to be supportive of the proposed concept to cross the trail without adversely impacting the trail. There were some comments requesting that trail access be maintained during construction of the project.

On January 8, 2016 Mr. Todd Delk, Senior Planning Engineer with the City of Raleigh requested that NCDOT investigate bridging options for crossing the Neuse River Trail in lieu of using a culvert crossing. This request has been coordinated with the City of Raleigh and accommodated in the preliminary plans for the Preferred Alternative. The enclosed diagram (Figure 2) shows the preliminary plan for accommodating the Neuse River Trail under the bridge that crosses the Neuse River. Approximately a one-quarter mile section of the existing trail will be relocated to make this crossing possible. Refinement and finalization of this plan will be coordinated with your office at the time of the final design of the project. NCDOT will also coordinate with your department during construction of the highway to ensure that the Neuse River Trail remains open to trail users, to the extent practicable.

As a recreational facility in public ownership, the Neuse River Trail is afforded special protections under Section 4(f) of the Department of Transportation Act (recodified in 49 U.S.C. 303 and 23 U.S.C. 138). Under the provisions of Section 4(f), if a proposed transportation project would result in adverse effects to the park or recreation facility, the transportation agency must conduct an evaluation to demonstrate that there is no prudent and feasible alternative to the use of the 4(f) property. In accordance with 23 C.F.R. Part 774 of the Safe, Accountable, Flexible, Efficient Transportation Act: A Legacy for Users (SAFETEA-LU), Pub. L. 109-59, FHWA is provided a method known as a *de minimis* (minimal) impact determination in cases where the official with jurisdiction over the park or recreation area concurs in a determination that the impacts from the transportation project "will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f)." This concurrence enables FHWA to make a *de minimis* finding, which satisfies the requirements of Section 4(f) and precludes the need for a full Section 4(f) Evaluation. The proposed Complete 540 project, as planned, will not have an adverse effect on the use or function of the Neuse River Trail.

If you concur that the planned relocation and accommodation of the Neuse River Trail as shown on the attached figure would not adversely affect the recreational activities, features, and attributes that qualify this facility for protection under Section 4(f), NCDOT requests that you sign and date this letter in the spaces below. We will maintain a copy of this letter in the project file.

As the official with jurisdiction over the Neuse River Trail, I concur with the determination that the proposed transportation project as described in this letter and shown on the accompanying attachments would not adversely affect the features, attributes, or activities that qualify the Neuse River Trail for protection under Section 4(f). I have also been informed that, based on my concurrence, the FHWA intends to make a *de minimis* finding regarding impacts to the Neuse River Trail, thus satisfying the requirements of Section 4(f).

Signature: 

Date: 10/10/17

After signing and dating this letter, please return a copy within 30 days of the date of this letter by email to jhharris1@ncdot.gov or by mail to the following address:

North Carolina Turnpike Authority
Attention: Jennifer Harris
1578 Mail Service Center
Raleigh, NC 27699-1578

NCDOT appreciates the assistance of the City of Raleigh in making this transportation project possible. Should you have any questions or concerns, please contact me at (919) 707-2710 or Jennifer Harris at (919) 707-2704.

Sincerely,

A handwritten signature in black ink, appearing to be 'RR' with a stylized flourish at the end.

Rodger Rochelle, PE
North Carolina Turnpike Authority
Chief Engineer – Innovative Delivery

cc:

Donnie Brew, FHWA
Kiersten Bass, HNTB
Roy Bruce, H.W. Lochner, Inc.

APPENDIX P
SOUTHERN ENVIRONMENTAL LAW CENTER LETTERS



March 7, 2016

Nicholas Tennyson
Secretary of Transportation
North Carolina Department of Transportation
1501 Mail Service Center
Raleigh, NC 27699-1501
NJTennyson@ncdot.gov

Beau Memory
Executive Director
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699-1578
bmemory@ncdot.gov

Dear Secretary Tennyson and Mr. Memory,

The Southern Environmental Law Center (“SELC”), on behalf of Sound Rivers and Clean Air Carolina, and the Regional Transportation Alliance (“RTA”) business coalition share your commitment to creating transportation solutions that will serve our region – both now and as we grow – while preserving the natural environment and our communities.

This letter is a request for some additional information and clarifications about the proposed Complete 540 project to ensure that a transportation solution for Southeastern Wake County can fulfill those objectives and do so in a timely and cost-effective manner.

Overview

In the past few years the legislature has enacted both funding allocation reforms (i.e., the data driven Strategic Transportation Investments process) and a more balanced, access- and user fee-based funding model. Both SELC and RTA have applauded many of those critical improvements in how we prioritize and fund transportation investments. However, even with these enhancements, a significant funding gap exists and there are insufficient financial resources to complete the multimodal transportation network envisioned by regional and state planners in a timely fashion.

It is in the spirit of ensuring the most efficient use of the state’s transportation resources that we are requesting additional information and clarification on the following pages about the proposed “Complete 540” toll road which, if constructed in its entirety as outlined in the Draft Environmental

Impact Statement, would be the most expensive highway project in state history. In addition, this letter also offers some suggestions for consideration that may serve to scale portions of the project in order to meet vital environmental protection, context sensitivity, and system resilience objectives.

1. Confirm cost increases and rescore if necessary

Our understanding is that the costs of the three Complete 540 segments – west of US 401, between 401 and I-40, and east of I-40 – have each increased by 42% to 75%. These increases are significant, as each project segment now costs more than \$0.5 billion, with the total Complete 540 cost over \$2 billion. While we recognize that NCDOT cannot constantly be rescoring projects every time project costs change, the STI loses credibility when substantially inaccurate project cost estimates are used in the scoring process.

Requests:

- Please verify that significant cost increases have occurred (i.e., more than \$200 million for each of the three segments, representing more than 40% cost increases for each segment) subsequent to project scoring under STI, and whether this is an unusual level of post-scoring increase compared to other larger projects statewide in the current STIP.
- To the extent that these increases are accurate and that this is not a typical occurrence, please consider rescoring the project with newer, more accurate values, and note any resulting impact on prioritization.
- Consider creating a statewide policy whereby NCDOT will systematically rescore major projects when project costs have increased or decreased by more than 25% of the cost estimate used in STI.

2. Clarify the percentage of cost covered by tolls and the projected toll rates

We recognize that toll roads afford additional resources for transportation, by dedicating those user fees to a particular corridor and providing the opportunity to accelerate the creation of a particular travel option. However, while tolls can provide new transportation options much sooner, their use does create an additional cost on travelers and thus it is important to clarify the projected toll rates that users would pay. In addition, it is essential to determine how much of the project cost will be covered by toll revenue in order to assess the true cost of the project to state taxpayers.

Requests:

- Our understanding is that the “cost to NCDOT” in STI amounts to 34% of the current project cost listed in the STIP, implying that the remaining 66% of the project will be covered by toll revenue of \$1.4 billion. Please verify that the projected 66% of costs covered by tolls is correct, differentiating between capital costs and any operational and maintenance costs.
- By way of comparison, please verify the current and projected percentage of project costs covered by tolls for the existing Triangle Expressway turnpike freeway.
- Please verify the projected percentage of Complete 540 project costs covered by tolls if the project were constructed in segments (e.g. if the portions west of I-40 were completed and opened several years sooner than the eastern portion).
- While we recognize that there is always a degree of uncertainty about toll rates prior to the completion of an investment grade traffic and revenue study, please verify to the extent possible the projected costs to users assuming all three proposed segments of 540 are open, and also assuming that only the segments from I-40 west are open.

3. Confirm traffic forecasts and projected time savings

When a new limited access roadway opens, several things may occur: users of the new road will typically gain immediate time savings, travelers on nearby roadways may or may not see significant travel time savings, and overall traffic patterns and levels may change in response to the new accessibility created by the new roadway, which may impact travel behavior over time.

In the recent environmental study, NCDOT provided a document detailing the expected travel time benefits from a variety of travel pairs (i.e., Alternatives Development and Analysis Report 2014, pp 174–186). This is the only document we are aware of that provides an indication of travel time savings estimates, and that document did not provide either the current or projected number of drivers between the travel pairs. Additional information about travel time savings and projected users will be helpful in determining the utility and feasibility of the project.

Requests:

- Please verify the travel time savings to users of the toll road who are traveling to and from various destinations, assuming the toll road is entirely open to I-495/US 64-264.
- If the portions west of I-40 were completed several years sooner than the eastern portion, please verify the resulting travel time savings and projected number of users.
- Please assess the travel time savings to travelers on nearby roadways in the above cases.
- Please assess the traffic levels and projected travel times if the turnpike were either not built, or only built west of I-40 for a period of time. To the extent possible, please consider modifications to the socio-economic baseline and land use changes associated with decreased corridor accessibility due to the absence of all or portions of the proposed road from the network.

4. Examine potential for scaling the project to reduce environmental impacts

The proposed turnpike freeway envisions six lanes (three each way) for the entire 30 mile length. Given that environmental impacts will depend on project footprint, and with the understanding that avoidance is a superior form of environmental protection, it may be that a reduced footprint in some sections would provide significant opportunities to either reduce impacts and/or lessen the reliance on mitigation techniques. While all segments would have impacts on several acres of wetlands and thousands of feet of streams, the most vulnerable environmental area is the section just west of the proposed I-40 interchange, which is the primary location of the habitat of the endangered dwarf wedgemussel and other sensitive species.

Requests:

- Given the traffic forecast requests above, consider whether a smaller footprint for portions of the corridor, to four or two lanes (i.e., two or one each way), could provide sufficient avoidance or mitigation without substantially compromising the immediate or ultimate travel objectives for the corridor, particularly immediately west of I-40, and perhaps with modified design standards.
- While “Complete 540” implies the completion of the entire circumferential freeway around Raleigh, consider whether the portions west of I-40 could be constructed sooner, with the reservation of right of way for a future transportation corridor east of I-40, and how doing so may impact traffic, revenue, toll levels, and overall costs and timelines.

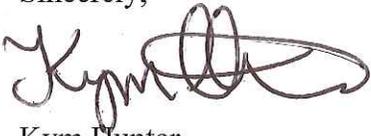
Thank you and summary

We applaud and share your commitment to advance cost-effective, multimodal transportation options for our growing state. While our organizations do have unanswered questions, we appreciate NCDOT's work on this project to date. We also appreciate the opportunity to comment and request additional information on this important transportation corridor.

We believe that providing the above information will help ensure that fully informed decisions can be made about the proposed roadway in order to minimize impacts to the community, toll users, other travelers, and the environment while maximizing travel benefits including overall system resilience, both now and as we grow.

Thank you for your consideration of the requests outlined in this letter. We would be happy to meet with you at your convenience.

Sincerely,



Kym Hunter
Staff Attorney
Southern Environmental Law Center



Joe Milazzo II, PE
Executive Director
Regional Transportation Alliance

CC (via email and U.S.):
Matthew Starr, Sound Rivers
June Blotnick, Clean Air Carolina
Chris Lukasina, Capital Area MPO



PAT McCRORY
Governor

NICHOLAS J. TENNYSON
Secretary

April 28, 2016

Ms. Kym Hunter
Staff Attorney
Southern Environmental Law Center
601 West Rosemary Street, Suite 220
Chapel Hill, NC 27516

Mr. Joe Milazzo II, PE
Executive Director
Regional Transportation Alliance
P.O. Box 2978
Raleigh, NC 27602

**Subject: Complete 540 - Triangle Expressway Southeast Extension
STIP Project Nos. R-2721, R-2828, and R-2829 (Wake and Johnston Counties)**

Dear Ms. Hunter and Mr. Milazzo:

The North Carolina Department of Transportation received your March 7, 2016 letter, with questions regarding the various stages of project development for Complete 540. We thank you for taking the time to submit these questions and we are excited for this opportunity to provide information related to the projected benefits of Complete 540 and regarding the success of its companion project, the Triangle Expressway.

As you know, Southern Wake County and Johnston County have been experiencing tremendous population growth and this growth is expected to continue. Complete 540 will span nearly 30 miles through southeastern Wake County and will increase the overall capacity of the region's existing roadway network, diverting traffic from congested secondary roads. The North Carolina Department of Transportation (NCDOT) and the North Carolina Turnpike Authority (NCTA) are developing Complete 540 as planned in the Capital Area Metropolitan Planning Organization (CAMPO) long-range transportation plan. The Complete 540 project is subject to the Strategic Transportation Investments (STI) law and the project has been prioritized and programmed accordingly.

STI provides for a locally driven process for transportation decision-making. Local Metropolitan Planning Organizations (MPOs) and Rural Planning Organizations (RPOs) submit projects for consideration. Once submitted, projects are scored according to mutually agreed upon criteria and weights, including but not limited to congestion relief, safety and economic impact. The results of that scoring process are shared with stakeholders and eventually used to develop the State Transportation Improvement Program (STIP). As a turnpike project, STI requires the approval of the MPO and RPO requesting it.



Cost estimates used for STI project scoring and those used for STIP development contain different elements and should not be compared directly. Moreover, project cost elements are continually refined and updated throughout project development. Complete 540 is included in the STIP as three projects (R-2721, R-2828, and R-2829). The segment referred to as R-2721 is programmed in the first five years of the current STIP and did not need to be reevaluated during Prioritization 4.0 (P4.0). Segments R-2828 and R-2829 have been reevaluated during P4.0, and updated cost estimate information based on the recommended preferred alternative from February 2016 was used during that process. The comparable difference from the 2014 STI project costs and the most current 2016 project cost estimate is less than 18%.

The Triangle Expressway, Complete 540's companion facility, is exceeding all projections for transactions and revenue. Through 2015, project-to-date transactions and revenue have exceeded projections by 10% and 21%, respectively (January 2014 – December 2015 data presented in Figures 1 and 2). Traffic on the Triangle Expressway has increased year over year by 37% in 2014 and 26% in 2015 (Figure 3), and traffic is expected to continue to increase.

Figure 1: Triangle Expressway Transactions Projection vs. Actual

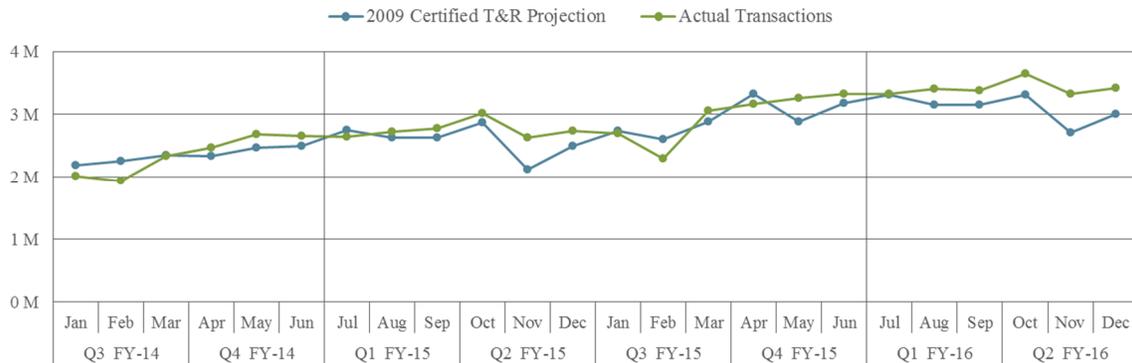


Figure 2: Triangle Expressway Revenue Projection vs. Actual

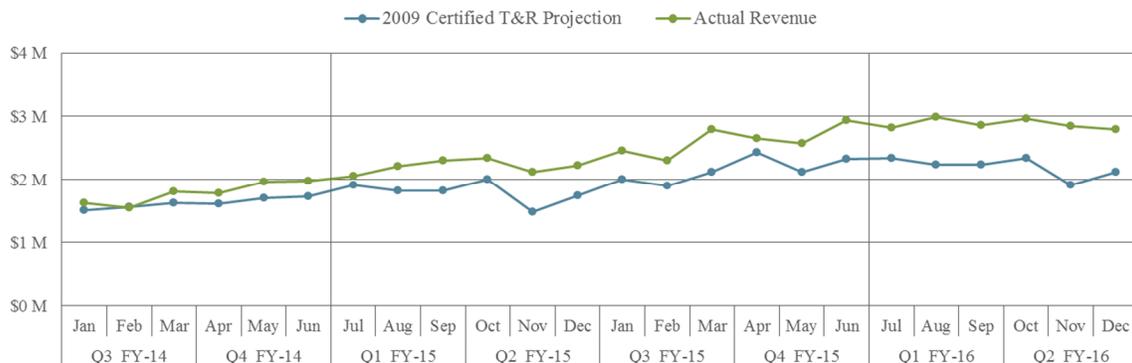
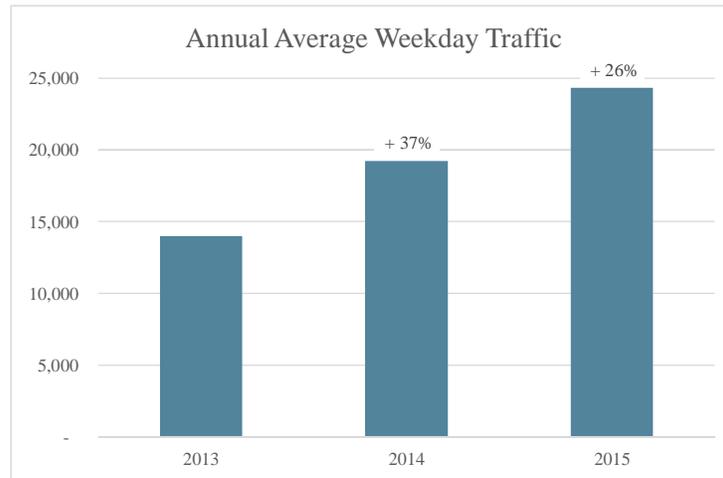


Figure 3: Triangle Expressway Annual Average Weekday Traffic



Projected toll revenues supported 65% of Triangle Expressway’s implementation costs (including capital costs, reserve accounts, capitalized interest, and bond insurance) and 100% of roadway operations and maintenance costs. Preliminarily, toll revenue for Complete 540 (all three segments) is currently projected to cover at least 50% of capital and financing costs and 100% of operations and maintenance costs. However, these early estimates are likely to change as an investment level Traffic and Revenue Study is underway. The toll rates for Complete 540 have not been developed; however, rates are expected to be similar to the existing Triangle Expressway.

As discussed in the Draft EIS, congestion in the region continues to increase, growth in the region is one of the fastest in the state, and Complete 540 will provide a new transportation option to existing routes. Figures 4 and 5 illustrate the daily levels of service on the main roads in and around the Complete 540 study area. Figure 4 shows conditions in 2011. Figure 5 shows the projected conditions in 2035, without the Complete 540 project in place. Conditions in 2035 reflect the congestion on the existing main roads resulting from the projected population and employment growth in the region.

Like the Triangle Expressway, the Complete 540 project will be constructed as a high speed fully controlled access facility, with no traffic signals and utilizing all electronic tolling, providing a 70 mile per hour alternative to the existing surface street network. A traffic analysis indicates that commute times for those traveling from the Research Triangle Park and Brier Creek areas to Fuquay-Varina, Clayton, Garner, and Knightdale would decrease by an average of 11.5 to 13.7%. When comparing 2035 with Complete 540 to the No-Build Alternative, evening peak period congested vehicle miles traveled would decrease by 26%, and evening peak period congested vehicle hours traveled would decrease by 30% for the region.

Recognizing the significant need to provide relief for the motoring public within the region, NCDOT remains committed to avoid and minimize the impact of this project on the surrounding environment. NCDOT and the resource and regulatory agencies will continue to examine strategies for avoidance and minimization impacts. Although it is too early to determine what the final design will be for Complete 540, all parties will continue to develop an environmentally sensitive design solution that meets the stated purpose and need of the project.



Figure 4: 2011 Daily Level of Service

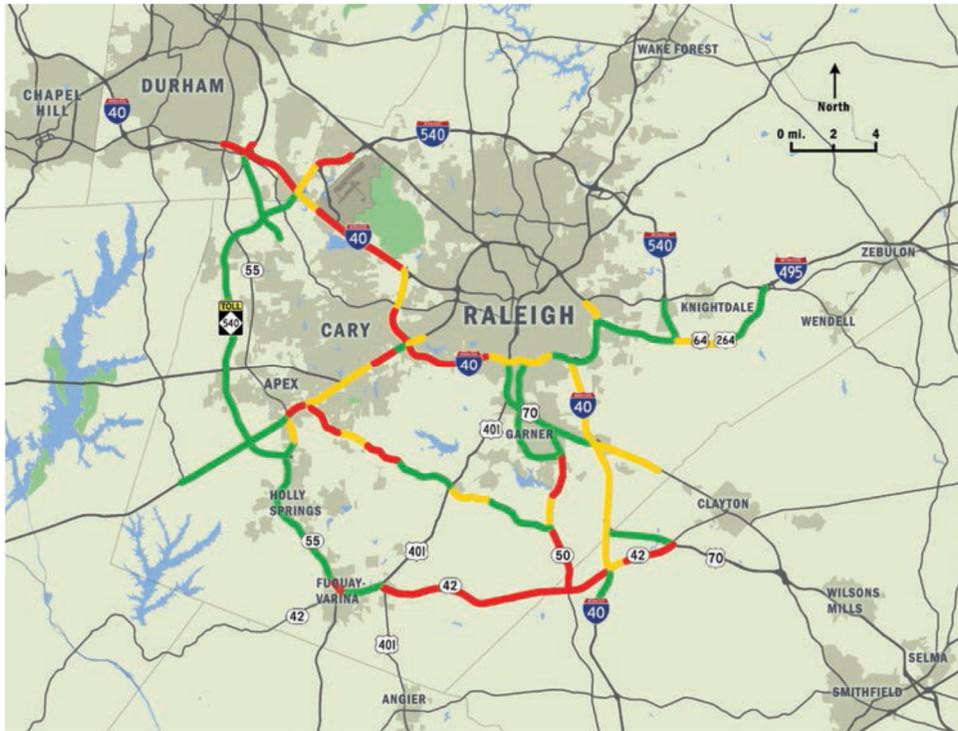
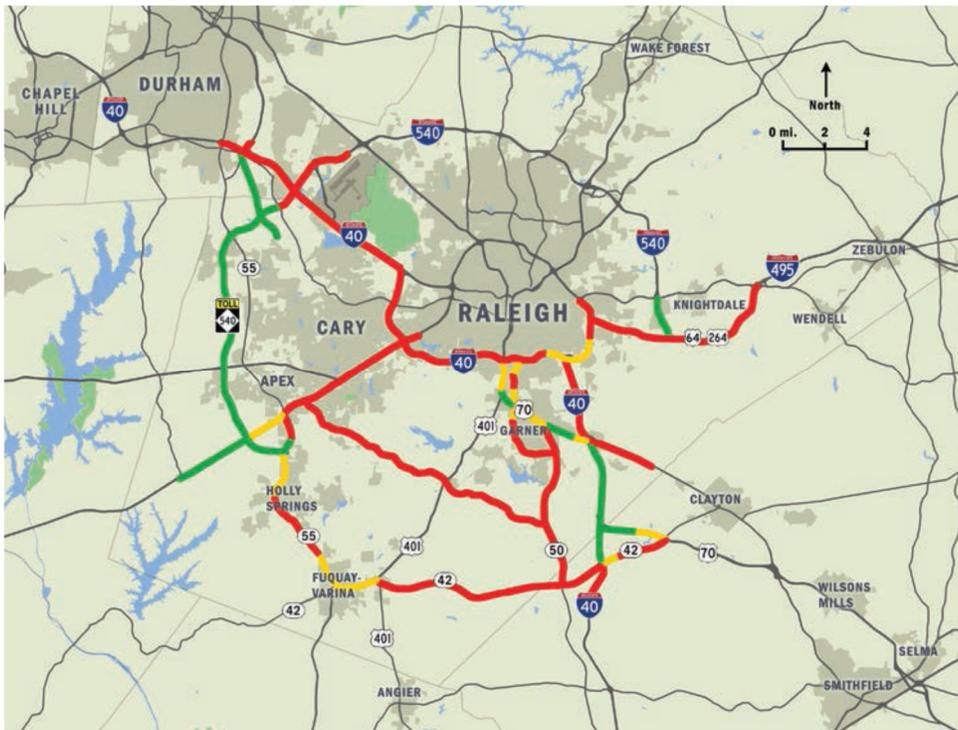


Figure 5: 2035 Daily Level of Service



 Nothing ComparesSM

Ms. Kym Hunter
Mr. Joe Milazzo
April 27, 2016
Page 5

Attached please find a memorandum with additional information specific to the detailed requests for each of the four topics included in your letter. If you have any questions regarding the above responses or would like to discuss the project, please contact me at bmemory@ncdot.gov or 919-707-2700.

Sincerely,



Beau Memory
Executive Director, NCTA

Attachment

cc: Nicholas Tennyson, Secretary of Transportation
Rob Hanson, PE, NCDOT
Chris Lukasina, Capital Area MPO
Matthew Starr, Sound Rivers
June Blotnick, Clean Air Carolina



SOUTHERN ENVIRONMENTAL LAW CENTER

Telephone 919-967-1450

601 WEST ROSEMARY STREET, SUITE 220
CHAPEL HILL, NC 27516-2356

Facsimile 919-929-9421

July 5, 2016

Mr. Beau Memory
North Carolina Department of Transportation
1501 Mail Service Center
Raleigh, NC 27699-1501

Re: Analysis of Project Alternatives – “Complete 540”

Dear Mr. Memory:

On behalf of Sound Rivers and Clean Air Carolina, I am writing to ensure that the North Carolina Department of Transportation revisits its analysis of project alternatives for the “Complete 540” highway project in light of the recent North Carolina Supreme Court decision in *Kirby v. North Carolina Department of Transportation*, 2016 WL 3221090 (N.C. 2016).

As you know, in *Kirby* the Supreme Court held that property restrictions authorized by the Roadway Corridor Official Map Act (“Map Act”) amount to a “taking” of property that triggers a constitutional requirement for the government to compensate the owners fairly. This ruling has significant implications for the “Complete 540” project.

On two occasions, in 1996 and 1997, NCDOT filed corridor maps with the Wake County Register of Deeds, pursuant to the Map Act. The maps depicted what was subsequently termed “the Orange Route” (R-2721, R-2828). The effect of the filings was to impose certain restrictions on development of property within the Orange Route corridor, for the purpose of minimizing land acquisition costs in the event NCDOT ultimately chose to construct a highway through that corridor. According to *Kirby*, by imposing those restrictions, NCDOT used the power of eminent domain to acquire property interests in lands within the Orange Route corridor, and the owners of those lands are entitled to just compensation for NCDOT’s takings.

Subsequent to the Supreme Court ruling, therefore, the cost of acquiring property along the Orange Route has increased to include the value of the property interests taken by NCDOT since 1996 and 1997. When NCDOT issued its initial Draft Environmental Impact Statement (“DEIS”) for the project in November 2015, these costs were not considered; nor were the costs taken into account when the agency announced its “Preferred Alternative,” the Orange Route, this past February.

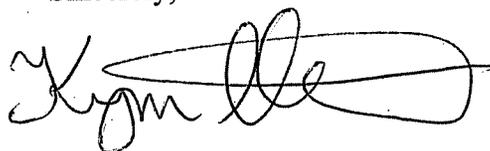
NCDOT must act swiftly to account for the *Kirby* ruling as it applies to the proposed “Complete 540” project. To comply with the National Environmental Policy Act, NCDOT must prepare a Supplemental Draft EIS that rigorously analyzes a full range of alternative solutions, and it must transparently present the post-*Kirby* cost estimates as part of that analysis. NCDOT must provide this information to the public so that informed decisions can be made about the

Mr. Beau Memory
July 5, 2016
Page 2

project. In addition, NCDOT must provide updated cost information to the United States Army Corps of Engineers so that it can accurately evaluate the "practicability" of all alternatives pursuant to section 404 of the Clean Water Act. NCDOT must also consider the new updated cost information in its analysis of projects under the Strategic Transportation Investments ("STI") ranking program.

We would be happy to discuss these concerns at your convenience.

Sincerely,

A handwritten signature in black ink, appearing to read "Kym Hunter", with a large, stylized flourish extending to the right.

Kym Hunter
Staff Attorney

cc: Eric Alsmeyer

SOUTHERN ENVIRONMENTAL LAW CENTER

Telephone 919-967-1450

601 WEST ROSEMARY STREET, SUITE 220
CHAPEL HILL, NC 27516-2356

Facsimile 919-929-9421

January 2, 2018

VIA E-MAIL & U.S. MAIL

Mr. Edward T. Parker
Federal Highway Administration
310 New Bern Avenue, Suite 410
Raleigh, North Carolina 27601-1418
edward.parker@dot.gov

Mr. Rodger D. Rochelle, P.E.
North Carolina Department of Transportation/Turnpike Authority
1578 Mail Service Center
Raleigh, North Carolina 27699-1578
rdrochelle@ncdot.gov

Re: Complete 540 FEIS – Public Comment Extension Request

Dear Mr. Parker and Mr. Rochelle:

We write to request an extension to the February 1, 2018 deadline for public comments on the Complete 540 Final Environmental Impact Statement (“FEIS”). The Southern Environmental Law Center (“SELC”), on behalf of its clients Clean Air Carolina and Sound Rivers, is preparing public comment on the Complete 540 FEIS and requires additional time in light of the importance and scope of this project, the early release of the FEIS, the voluminous supporting documentation, and an outstanding request for public records to North Carolina Department of Transportation (“NCDOT”) regarding this project.

SELC and its clients have long followed the proposed Complete 540 project and regularly expressed concerns about the environmental impacts and financial costs of this proposed toll highway. For example, SELC submitted a 58-page comment letter and supporting attachments regarding the project’s Draft Environmental Impact Statement (“DEIS”). As detailed in those comments and elsewhere, Complete 540 would be one of the most expensive transportation projects in our state’s history, with corresponding unprecedented environmental impacts.

SELC and the public at large had no prior notice that the environmental review process for Complete 540 was drastically ahead of schedule. NCDOT’s website previously estimated that the Complete 540 FEIS would be finished in “mid-2018,” and yet the Complete 540 FEIS was released the afternoon of December 22, 2017, nearly 8 months ahead of schedule. The unanticipated early release of the FEIS, immediately before two federal holidays, poses an obstacle to providing thorough, thoughtful feedback on the FEIS and supporting documentation within the short timeframe provided for public comment.

Additionally, more than 20 new technical reports accompany the FEIS and are “incorporated by reference.” These reports represent additional materials that the public, including SELC, must review in

order to provide fully-informed and thorough comment on the FEIS. The FEIS and technical reports also expressly incorporate certain aspects of the DEIS and its corresponding reports, requiring careful readers of the environmental documentation to cross reference and review the earlier DEIS and supporting reports in order to fully understand the current FEIS.

Finally, SELC submitted a public records request to NCDOT about the Complete 540 project on September 14, 2017—more than three months ago—and still has not received those records. The request covers the most recent agency documents related to the Complete 540 project, which are likely to be some of the most informative and important documents for providing public comment on this project. SELC needs these records, and time to review these records, in order to provide complete public comment on this project.

Given the significance of this project, the unadvertised accelerated timeline, the sheer volume of project-related materials, and SELC's unfulfilled pending public records request, additional time for public comment is warranted. SELC respectfully requests a 3-week extension to allow sufficient time to provide thorough public comment on the Complete 540 FEIS.

Sincerely,

A handwritten signature in black ink that reads "Ramona H. McGee". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Ramona H. McGee
Associate Attorney

CC via e-mail:
Beau Memory
Chuck Watts



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

January 8, 2018

Ms. Ramona H. McGee
Southern Environmental Law Center
601 West Rosemary Street, Suite 220
Chapel Hill, NC 27516-2536

Ms. McGee:

We are in receipt of your letter dated January 2, 2018, through which the Southern Environmental Law Center ("SELC") requested a three-week extension to comment on the recently published Final Environmental Impact Statement for the R-2721, R-2828, and R-2829 ("Complete 540") projects.

We appreciate your comment regarding the document completion relative to the holiday season and attempted to mitigate the timing of the holiday season on the review period. To that aim, we allowed more than the requisite time (35 days) from the date of publication in the Federal Register and endeavored to make the document available on our website one week prior. However, in light of your request, I have consulted with FHWA and we concur that a three week extension for SELC is feasible.

Therefore, please provide your comments no later than February 22, 2018; however, we request that, to the extent practicable, SELC provide comments (batched) as they become available. Moreover, the North Carolina Turnpike Authority, would like to extend an invitation to SELC, and your clients, Clean Air Carolina and Sound Rivers, to meet to discuss the Complete 540 projects' status and any concerns or topics you may wish to discuss. Please let me know if you feel such a meeting would be fruitful and if so, a few options for preferred meeting dates.

Thank you for your correspondence and please feel free to contact me at (919) 426-3075 if you have any questions.

Sincerely,

Rodger D. Rochelle
NCTA Chief Engineer

Cc: Beau Memory
Chuck Watts
Edward Parker

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March 23, 2018

VIA E-MAIL AND U.S. MAIL

Mr. Rodger Rochelle
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548
complete540@ncdot.gov

RE: Request for Clarification re Impact of Complete 540 Project

Dear Mr. Rochelle:

Since submitting our comments on the Final Environmental Impact Statement (“FEIS”) for the Complete 540 project on February 22, 2018, we have become aware of a recent development that further calls into question how the proposed highway will impact Southeastern Wake County and why it is planned for construction.

Earlier this week, the Wake County Mayors Association sent a letter to Capital Area Metropolitan Planning Organization Executive Director Chris Lukasina professing support for the Complete 540 project.¹ This support was premised on the belief that the new toll road will be an “economic engine for southern Wake municipalities . . . [and] many towns nearby” and that the new highway will reduce traffic on a number of area highways including Highway 1, I-40, and Highway 42.²

We wanted to draw your attention to this letter because, as you know, these statements are in direct conflict with NCDOT’s own analysis of the project documented in the FEIS.

First, NCDOT concluded that the Complete 540 project would induce *negligible* growth and development in the project area.³ In fact the FEIS states that the difference in development based on whether the road is constructed or not is just 1%.⁴ NCDOT is relying on this analysis

¹ Letter from Mayor James A. Roberson, Knightdale, to Chris Lukasina, CAMPO, attached as Attachment 1. While the letter is undated, the letter was shared during a March 21, 2018 CAMPO meeting as having been sent earlier this same week.

² *Id.*

³ See generally letter from Kym Hunter & Ramona McGee, SELC, to Rodger Rochelle, NCDOT (Feb. 22, 2018), at 68.

⁴ FEIS at 63; Indirect and Cumulative Effects Memorandum - Quantitative ICE Assessment Memo #4 at iv (2017) (hereinafter “Quantitative ICE Report”); see also FEIS at 62 (stating only “about 1,400 additional acres” would be developed under a Build as opposed to No-Build scenario).

to support its claims that environmental impacts from induced growth caused by the project would be minimal, including impacts to endangered species that will result from induced development. At our meeting with NCDOT and its consultants on March 20, 2018, regarding impacts to endangered and threatened species, NCDOT staff again emphasized that their assessment of impacts to wildlife was based on the assumption that development attributable to the Complete 540 project would be low. At the same time, the consultant who prepared much of the endangered species analysis for the FEIS stated that generally any increased development pressure in a watershed does have a negative impact on aquatic species such as endangered mussels.

As we noted in our comments on the FEIS we are skeptical that there would be such little growth attributable to the highway. As we explained throughout Section VI.5 of our comments, NCDOT's own documents and the public sphere are replete with examples of businesses and municipalities projecting increased growth as a result of the Complete 540 project. This latest letter from the Wake County Mayors only underscores our concern.

We note similar discrepancies between the basis for support of the highway as reported by the Mayors and NCDOT's analysis when it comes to how the highway will impact congestion. Where the mayors have based their support on a belief that the highway will result in improved congestion on area roadways, NCDOT's analysis actually shows that congestion will get worse on U.S.1, I-40, NC 42 and NC 55 and several other area roadways⁵

Complete 540 is a \$2.2 billion project. It is essential that before it moves forward NCDOT is clear on what impact the project is likely to have on development and how it may improve traffic congestion. We urge NCDOT to clarify its position and address the apparent misunderstandings included in the Wake County Mayors Association's letter. In a recent meeting with NCDOT we were informed that this expensive project is moving forward at the behest of the local communities. It is critical, then, that the local communities get a clear understanding of what can be expected if the road is constructed.

Sincerely,



Kym Hunter
Staff Attorney



Ramona H. McGee
Associate Attorney

⁵ See Quantitative ICE Report 76-77 (Tables 35 & 36).

CC (via e-mail, w/attachment):

Matthew Starr, Sound Rivers
June Blotnick, Clean Air Carolina
Mayor Ronnie S. Williams Garner
Mayor Dick Sears of Holly Springs
Mayor Lance Olive of Apex
Mayor Harold Weinbrecht of Cary
Mayor Nancy McFarlane of Raleigh
Mayor Steve Schewel of Durham
Mayor Jody McLeod of Clayton
Mayor James Roberson of Knightdale
Mayor John W. Byrne of Fuquay-Varina
General Counsel, Chuck Watts, NCDOT
Chris Lukasina, CAMPO
Joe Milazzo, RTA
Beau Memory, NCTA
John F. Sullivan, III P.E., FHWA

ATTACHMENT 1

Letter from Wake County Mayors Association

Wake County Mayors Association



Chris Lukasina
CAMPO Executive Director
421 Fayetteville Street, Suite 203
Raleigh, NC 27601



Mr. Lukasina:

As it relates to the issue of "Complete 540", the Mayors of Wake County all support the implementation and completion of this most important road project as soon as possible.

Not only is it an economic engine for southern Wake municipalities such as Fuquay-Varina, Garner, Holly Springs, Apex, and Cary – all of which have appropriately planned for the construction of 540 for decades – but also for many towns nearby including Knightdale, Wendell, Zebulon, and Clayton. We also feel it will have an impact on reducing traffic on Highway 1, I-40, 55 bypass, Highway 401, Highway 42, Ten Ten Road, and other internal roads in our area.

Existing I-540 in northern and western Wake has become an essential connector for Knightdale, Rolesville, Wake Forest, Raleigh, Morrisville, Cary, and Apex. Completing 540 will help our southern and eastern Wake communities – as well as nearby Johnston County – continue to prosper by providing a direct freeway connection to I-40 as well as to the Clayton and Knightdale bypasses.

Sincerely,

James A. Roberson, President
Mayor of Knightdale



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

March 27, 2018

Ms. Kym Hunter and Ms. Ramona H. McGee
Southern Environmental Law Center
6001 West Rosemary Street, Suite 220
Chapel Hill, NC 27516-2356

Subject: Request for Clarification re Impact of Complete 540 Project

Dear Ms. Hunter and Ms. McGee:

We are in receipt of your letter dated March 23, 2018 in which you assert that the support of local municipalities, and specifically that of the Wake County Mayors Association is a recent development. Further, you assert that this support letter is in "direct conflict" with the analyses completed for the Final Environmental Impact Statement.

As you are aware, the Complete 540 project has had significant and broad local support for many years, with a variety of resolutions, letters, and offered opinions. We do not see this support letter as a "recent development" nor do we believe that it conflicts with the analyses performed.

The Wake County Mayors Association has been supportive of the Complete 540 project and recently expressed that unanimous support in a letter to the Capital Area Metropolitan Planning Associate Executive Director. Their letter simply expresses their continued support of the project with general statements as to their outlook on what the project will mean to their communities. Their letter indicates that the local communities have planned for this transportation facility and they foresee that the highway will reduce traffic on other primary facilities in the area. Additionally, they indicate that the Complete 540 project will provide increased mobility for the study area. They further see the highway as an important element of the long-range planning for their communities. Understandably, the letter generally expresses how such project benefits will affect the economic vitality of the municipalities, and allow these communities to "continue to prosper."

The North Carolina Department of Transportation stands behind the analysis conducted for the Final Environmental Impact Statement relative to indirect and cumulative effects of the proposed project. The quantitative analysis has determined that comparable growth will take place in the area of influence of the project – with or without the project. The provision of the

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project has been shown to aid in the movement of people and goods in the project area. Local area growth is being driven by the demands of the project area, the population growth in the region, and the availability of suitable land for development more than any induced influence of the proposed project.

In your March 23 letter, and your prior comments on the Final Environmental Impact Statement, you cite numerous general statements from plans, planners, local officials, and others who indicate that Complete 540 will “encourage growth” and “facilitate growth,” or similar. These are statements generally made relative to existing conditions. In contrast, the analyses required under NEPA and contained in the Final Environmental Impact Statement include analyses of growth, comparing the conditions in 2040, with and without the project in place.

NCDOT stands by their analysis within the area of concern (the Future Land Use Study Area, or FLUSA). Based on coordination with resource agencies, the FLUSA was established with particular focus on watersheds known to contain occurrences of the Dwarf Wedgemussel and Yellow Lance. As stated in *Habitat Education Center vs. FS*, District Court, Wisconsin, 2009, “*One of the first steps in any cumulative effects analysis is to identify the geographic context in which cumulative effects will be measured. Identifying such boundaries is a task assigned to the special competency of the appropriate agencies.*” The indirect and cumulative effects analysis for the Complete 540 project specifically addresses the question of how land use in the FLUSA would be different in 2040 by having local planners identify the specific differences in land-use densities and type (i.e., residential vs mixed use) that would be anticipated if Complete 540 were not built. Again, the statements that you cite, including those of the Wake County Mayors Association, do not contradict this analysis.

Your letter also describes our March 20th meeting related to threatened and endangered species by inferring that our assessment of the potential effects on threatened and endangered species was based on low growth assumptions. In fact, the Biological Assessment is based upon a host of information developed for the project, including the Aquatic Species Survey Report, Dwarf Wedgemussel (DWM) Viability Study, Qualitative Indirect and Cumulative Effects (ICE) report, and other analyses. We also addressed your questions regarding successful case studies in regards to mussel propagation, transplant, as well as the proposed mussel mitigation facility that will be funded by NCDOT and used to mitigate any potential effects on the various mussel species. While Sound Rivers was not in attendance at this meeting, we hope you have conveyed our offer to entertain suggestions to further enhance that mitigation strategy.

Your letter asserts, in a general manner, that NCDOT’s analysis shows that congestion will get worse as a result of the project. Your letter cites a specific table that conveys information related to Congested Roadway Mileage and chooses specific routes within that table to support the general assertion. However, you will note that the general effect of the project in the entire area (FLUSA) for this performance measure (same tables that you cite) is actually a 14 – 15% reduction in Congested Roadway Mileage with the project. Since the measures of effectiveness like travel speed and Congested Roadway Mileage are numerous and vary by route, we provide all of this information available for review on the project website.

The NC Turnpike Authority looks forward to continuing our dialogue with you, Clean Air Carolina, and Sound Rivers this Thursday, March 29th.

Sincerely,



Rodger Rochelle, P.E.
Chief Engineer
North Carolina Turnpike Authority

cc:

Matthew Starr, Sound Rivers
June Blotnick, Clean Air Carolina
Mayor Ronnie S. Williams of Garner
Mayor Dick Sears of Holly Springs
Mayor Lance Olive of Apex
Mayor Harold Weinbrecht of Cary
Mayor Nancy McFarlane of Raleigh
Mayor Steve Schewel of Durham
Mayor Jody McLeod of Clayton
Mayor James Roberson of Knightdale
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General Counsel, Chuck Watts, NCDOT
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