DRAFT
7/1/16

Record of Decision

For

US 70 Havelock Bypass
Craven County, NC

Federal-Aid No. NHF-70(49)

NCDOT WBS No. : 34360
TIP Project No. R-1015

Craven County, North Carolina

Federal Highway Administration

North Carolina Department of Transportation

July 2016

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U.S. Department of Transportation, Federal Highway Administration
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1. INTRODUCTION

This Record of Decision (ROD) describes the Preferred Alternative for the proposed US 70 Havelock Bypass. In accordance with the National Environmental Policy Act (NEPA), the North Carolina State Environmental Policy Act (SEPA G.S. 113A, Article 1) and the requirements set forth by the Council on Environmental Quality (CEQ) (40 CFR 1505.2), this ROD identifies: 1) the Preferred Alternative; 2) all alternatives considered by the Federal Highway Administration (FHWA); 3) measures adopted to avoid and minimize environmental harm; 4) monitoring and enforcement programs for the implementation of mitigation measures; and, 5) comments on the Final Environmental Impact Statement (FEIS).

To maintain brevity, supporting project information (i.e., background information on the purpose of and need for the proposed project, discussion of the affected environment, a complete description of the anticipated impacts of each alternative) contained in the Final Environmental Impact Statement (FEIS), dated October 2015, are incorporated by reference (40 CFR 1502.21).

2. OVERVIEW

This document records the decision of the Federal Highway Administration (FHWA) and the North Carolina Department of Transportation (NCDOT) on the alternative to construct a new US 70 Bypass of Havelock, North Carolina. This transportation improvement is identified in the Statewide Transportation Improvement Program (STIP).

Project Setting

The project study area is located in Craven County, along the western edge of Havelock, North Carolina. Havelock is located near the Neuse River and is bordered by the Cherry Point Marine Corps Air Station. The US 70 corridor connects Raleigh, Smithfield, Goldsboro, Kinston, New Bern, Havelock and Morehead City. Regionally, US 70 provides connectivity

with the Port of Morehead City, Global TransPark, industries in New Bern and Craven County and Cherry Point US Marine Corps Air Station, Camp Lejeune and serves as a primary route for seasonal beach traffic. A large portion of the project study area traverses the Croatan National Forest (CNF) and privately-owned forested lands. The CNF and adjacent forested areas contain habitat for a number of protected species, including the red-cockaded woodpecker. There are also large stream and wetland systems present in the project study area.

Just east of the project, the NCDOT purchased 4,035 acres of land that has been developed and designated as the Croatan Wetland Mitigation Bank (CWMB) with the purpose of providing compensatory mitigation to streams and wetlands for several area projects inclusive of the Havelock Bypass project. The CWMB also provides mitigation for habitat fragmentation specific to the Havelock Bypass project. A discussion of the CWMB is contained in the Compensatory Mitigation section. Exhibit 1 shows the study area. Additional information on the study area and project history can be found in FEIS Chapter 1.5 (*Project Background*).

Purpose and Need Summary

The proposed project's purpose is to improve traffic operations along the US 70 corridor and enhance regional connectivity in eastern North Carolina. The US 70 corridor connects Raleigh, Smithfield, Goldsboro, Kinston, New Bern, Havelock and Morehead City. Regionally, US 70 provides connectivity with the Port of Morehead City, Global TransPark (a 2,500-acre multimodal industrial park in Kinston, NC), industries in New Bern and Craven County, Cherry Point US Marine Corps Air Station, Camp Lejeune and other military facilities, and it functions as a primary route for seasonal beach traffic.

Because US 70 is the state's primary connection to the Port of Morehead City and a main route between military facilities and the port, the NCDOT Strategic Highway Corridors (SHC) Program vision to provide a freeway on this section of US 70 is particularly important to regional and state decision makers.

Commercial, institutional, and residential growth in the City of Havelock and an increasing regional reliance on US 70 has led to deteriorating traffic operations along the existing route. The traffic-carrying capacity of US 70 in Havelock is currently limited by the operational capabilities of its many signalized intersections. By the design year 2035, only five of the thirteen signalized intersections will operate at an acceptable level of service.

The lack of access control on US 70, with its signalized intersections and numerous unsignalized street and driveway connections, substantially reduces the mobility of this corridor. In addition to improving regional mobility, the proposed controlled-access bypass

would provide travelers with a safer facility than the existing route. Median-divided, access-controlled roadways greatly reduce the typical conflict points found along undivided roadways with no access control. By eliminating a large volume of through-traffic on existing US 70, the proposed bypass would also provide congestion relief and a more relaxed driving experience through the City of Havelock. Chapter 1 of the FEIS describes the project's purpose and need in greater detail.

Project Background

The proposed bypass was initially included in the 1979 Havelock Thoroughfare Plan, and then included in the NCDOT State Transportation Improvement Program (STIP) in 1983. Environmental studies began in 1992 and the Environmental Assessment was approved in January 1998 and a Corridor Public Hearing was held in May 1998. Based on the project context and significant jurisdictional impacts presented in the EA, the decision was made in 2003 to prepare an EIS. In late 2011, the DEIS was completed and a second Corridor Public Hearing was held.

NEPA/404 Merger Process: In 1997, in an effort to streamline the NEPA process, the NCDOT, Federal Highway Administration (FHWA), and the US Army Corps of Engineers (USACE) developed an interagency agreement that merged/combined the NEPA process and the Section 404 permitting process. This "NEPA/404 Merger Process" allows federal and state environmental regulatory and resource agencies to participate in the transportation decision making process. The NEPA/404 Merger Process is structured with milestones called "concurrence points" that occur at key decision points in the NEPA process. The NEPA/404 Merger Team meets and seeks agreement on each of the following concurrence points: 1) Purpose & Need and Project Study Area; 2) Development of Study Alternatives; 2A) Alternative Bridging Decisions & Alignment Review; 3) Selection of the Least Environmentally Damaging Practicable Alternative (LEDPA) which is also referred to as the "Preferred Alternative"; 4A) Section 401/404 Avoidance & Minimization; 4B) 30% Hydraulic Review; and, 4C) Permit Drawings Review.

Concurrence Point 2 has one sub-point: 2A, in which the NEPA/404 Merger Team decides on bridge locations and the approximate bridge lengths for each detailed study alternative. Concurrence Point 4 includes three sub-points, 4A, 4B, and 4C, which focus on the project's alignment, hydraulic design, and permit drawings. Concurrence Points 3 and 4A occur after the distribution of the draft environmental document and the Public Hearing. Concurrence Points 4B and 4C occur during the final design and permitting phases of the project.

Prior to the creation of the NEPA/404 Merger Process, an interagency coordination process was utilized to ensure the systematic analysis of impacts to both the social and natural

environment. Interagency meetings held as part of this process were called Steering Committee meetings. Studies before the DEIS incorporated the earlier model of agency coordination. The DEIS presented decisions and studies resulting from agency coordination efforts, many of which pre-dated the NEPA/404 Merger Process. The information contained in the FEIS is comprised of the decisions and studies resulting from both Steering Committee meetings and the NEPA/404 Merger Process team meetings.

As discussed in FEIS Chapter 7.1.2, studies for the proposed project began in the early 1990's. These efforts included detailed environmental studies, alternatives development and analysis, agency coordination, and public involvement. Project studies were documented in an Environmental Assessment (EA), approved in January 1998. The EA also included NCDOT's recommendation of Alternative 3 as the Preferred Alternative. Concurrence from resource agencies (DEIS Appendix A) resulted in the approval of Alternative 3 as the Least Environmentally Damaging Practicable Alternative (LEDPA). Alternative 3 was presented as the Preferred Alternative at a Corridor Public Hearing in May 1998. The NCDOT Corridor Selection Committee endorsed the selection of Alternative 3 as the Preferred Alternative on August 27, 1998. Preliminary designs for the Preferred Alternative were further refined and on January 18, 2001, the NEPA/404 Merger Team approved avoidance and minimization measures for the revised project design. Hydraulic designs were also reviewed in 2002. Final designs were then produced.

Ongoing discussions subsequent to preparation of the EA resulted in the decision that natural and human environmental impacts collectively rose to a level of significance. In December 2003, FHWA directed that an EIS be prepared for the project. Earlier decisions to eliminate improving the existing US 70 corridor from detailed study were reviewed by the team and remained valid. The three new location options originally developed and assessed in detail in the EA were revisited by the NEPA/404 Merger Team. No additional alternatives were brought forward by the team members. FHWA approved the DEIS on September 6, 2011, followed by a comment period and Public Hearing. After reviewing public and agency comments, the NEPA/404 Merger Team met on April 10, 2012 and re-affirmed Alternative 3 as the LEDPA. These decisions were fully coordinated with the State.

3. DECISION

Alternative 3 was selected as the Least Environmentally Damaging Practicable Alternative (LEDPA) by the NEPA/404 Merger Team in May 1998. The NCDOT Corridor Selection Committee endorsed the selection of Alternative 3 as the Preferred Alternative on August 27, 1998. Alternative 3 was re-affirmed as the LEDPA by the NEPA/404 Merger Team on April 10, 2012 after reviewing public and agency comments on the DEIS. A description of this alternative is provided in the following paragraph.

The Preferred Alternative, shown in Exhibit 2, originates at an interchange with existing US 70, just north of SR 1760 (Hickman Hill Loop Road) and extends to the southwest. The proposed bypass continues in a southwesterly direction and crosses the North Carolina Railroad and Tucker Creek. It then turns southeastward and crosses SR 1747 (Sunset Drive) and the Southwest Prong of Slocum Creek to an interchange at SR 1756 (Lake Road). From the proposed SR 1756 (Lake Road) interchange, the Preferred Alternative continues southeastward over a grade separation at the Camp Lejeune Railroad before crossing over the East Prong of Slocum Creek. The alignment continues in a southeasterly direction to terminate at an interchange with existing US 70 southeast of SR 1824 (McCotter Boulevard)

Basis for Selection as Preferred Alternative

Alternative 3 was selected as the Preferred Alternative by NCDOT, and endorsed as the LEDPA by the Interagency Merger Team, because it provides the best opportunity to collectively minimize impacts to both the human and natural environments.

Alternative 3:

- Is the least cost alternative;
- Causes the second fewest relocations (18) – as compared to 15 with Alternative 1
- and 137 with Alternative 2;
- Minimizes habitat fragmentation effects;
- Conducive to conducting prescribed burns – which provides essential habitat management for the endangered RCW and other forest species of concern;
- Causes the least amount of stream impact;
- Causes a "middle ground" impact to prime farmlands;
- Causes a "middle ground" impact to riparian buffers
- Provides a balance between impacts to the human and natural environments – Although Alternative 3 impacts the highest amount of wetlands (131 acres) and has the highest impacts to NFS lands (240 acres), these impacts must be considered alongside Alternative 3's lower impacts in other areas; in particular habitat fragmentation and relocations.

Impacts of the Preferred Alternative

A summary of impact descriptions is provided in the following paragraphs. Detailed discussions and comparison of impacts is contained in FEIS Chapter 4.0 and FEIS Chapter 2.10. Table 1 summarizes the impacts associated with the construction of the Preferred Alternative for all environmental and engineering factors.

Land Use. Construction of the proposed project would create relocations and direct impacts to current land uses within the Preferred Alternative corridor. The Preferred Alternative would require a 250-foot right-of-way for most of its length, with additional right-of-way required at the proposed interchanges. Of the total 430 acres of right-of-way required for the project, 240 acres fall on National Forest System lands (including rural/urban modifications); the remaining 190 acres include privately-owned lands, public right-of-ways, and other human-dominated land uses.

Relocations. The Preferred Alternative would relocate an estimated 16 residences and three small businesses (relocation report, FEIS, Appendix G). It is anticipated that adequate relocation replacement facilities for the residences and businesses are available for the proposed project. Relocations are discussed in Chapter 4.2.1 of the FEIS.

Community Facilities. The Craven County Waste Transfer Facility would be displaced by the Preferred Alternative. NCDOT will compensate Craven County for relocation expenses; however, it is the County's decision where to relocate. The County is aware of the impact and is currently evaluating alternative sites. Additional information on this site can be found under the Hazardous Materials discussion. No other impacts to community facilities such as schools, parks or recreation facilities are associated with the Preferred Alternative.

Community Cohesion. Due to the predominantly rural character of the study area and the presence of the CNF, community cohesion effects would be limited to areas around the existing routes that cross the Preferred Alternative. Among the anticipated 16 residential relocations, a small community consisting of six properties at the proposed northern terminus would be relocated by the new interchange. Three relocations would occur in the southwest corner of the Greenfield Mobile Estates along SR 1747 (Sunset Drive).

The proposed bypass could create a physical barrier between existing houses on SR 1747 (Sunset Drive) and SR 1756 (Lake Road); however, the grade separations proposed at these locations would minimize this effect. Community cohesion effects would also be limited due to the more rural nature of residential development in this area.

Environmental Justice. There are no disproportionately high adverse impacts to minority, low-income or elderly populations. Benefits and burdens resulting from the proposed project are anticipated to be equitably distributed throughout the community.

Indirect and Cumulative Effects. Indirect effects are primarily associated with natural resources. These effects include: the potential spread of non-native, invasive species and habitat fragmentation. To minimize the potential for indirect effects, NCDOT has developed, in consultation with the USFS, appropriate measures that will contribute to the future viability of the CNF. In summary, these measures include:

- Periodic closure of the bypass to facilitate prescribed burns on National Forest Systems lands;
- Identification, propagation, and protection of rare plant species;
- Herbicide use specifications for right-of-way (ROW) maintenance;
- Non-native invasive plant species management; and,
- Transfer of the Croatan Wetland Mitigation Bank to the USFS.

Indirect and cumulative effects on natural resources are discussed throughout the FEIS and summarized in Chapter 4.16.2. Chapters 4.16.3 through 4.16.8 of the FEIS discuss the ICI water quality modeling analysis. A summary of conclusions related to indirect and cumulative effects on the human and natural environment is contained in Chapter 4.16.9 of the FEIS.

Cumulative effects could result from the development of private property in the vicinity of the Preferred Alternative and at the Lake Road interchange, construction of other roads, and timber harvesting on private lands in the area. Future development potential is primarily limited to the privately-owned lands surrounding the Lake Road interchange due to the proposed project's location within the CNF and the highway's full control of access. When considered in the context of other past, present and foreseeable actions, cumulative effects on natural resources are expected to be low.

Cultural Resources. Based on the results of the historic architectural resources survey conducted for this project, no properties listed in or eligible for listing in the National Register of Historic Places would be impacted by the Preferred Alternative.

Section 4(f) and Section 6(f) Resources. Although the CNF would be impacted by the Preferred Alternative, no impacted areas are primarily designated as recreational areas or national wildlife refuge lands. The project does not encroach on or use land from any of the types of specifically designated areas described above and consideration under Section 4(f) is, therefore, not applicable.

The proposed project will not convert any lands to highway use that are subject to either the United States Code (USC) Title 23 in Section 138 (Section 4(f)), or 16 USC 460, the Land and Water Conservation Fund Act (Section 6(f)).

Utilities. The Preferred Alternative crosses high-voltage electric power transmission lines at three locations. No disruption in service is expected.

Water and sewer service by the City of Havelock does not currently extend into the City's extraterritorial jurisdiction. The County's water and sewer systems do not extend into the project study area. As such, these services would not be affected by construction of the Preferred Alternative.

No natural gas lines traverse the Preferred Alternative corridor. The proposed project would not affect natural gas service.

Water Quality. In 2013, a water quality modeling analysis was conducted to quantify the project's potential indirect and cumulative impacts (ICIs) on water resources. The focus of the analysis was on the potential increases in stormwater runoff and non-point source loads of nitrogen, phosphorus, sediment, and fecal coliform resulting from future development scenarios with and without the proposed bypass.

The analysis predicted that non-point source loading is increased slightly in the Build scenario relative to the No-Build scenario, though the increases are reduced by the stormwater regulations governing the jurisdictions. The greatest percent increase in pollutant loads is estimated to occur in undeveloped watersheds with low baseline loads, and in subbasins where direct impacts from the proposed bypass or development along the proposed interchanges is expected to occur.

Air Quality. The project is located in Craven County, which has been determined to comply with the National Ambient Air Quality Standards. The proposed project is located in an attainment area: therefore, 40 CFR, Parts 51 and 93 are not applicable. This project is not anticipated to create any adverse effects on the air quality of this attainment area.

Noise. Traffic noise is predicted to create a total of 43 impacts in the design year from 2035 build-condition noise levels that will approach or exceed FHWA noise abatement criteria. The number of build-condition impacts (43) is lower than the number of no-build condition impacts (49) because the proposed bypass will reduce sound levels in some locations and some residences will be taken for right of way. No noise abatement measures are recommended.

Hazardous Materials. A recent geoenvironmental investigation of the Craven County Waste Transfer Facility, discussed in FEIS Chapter 3.8, indicates that there are no hazardous materials concerns associated with the site or the adjacent closed landfill (GEL Engineering of NC, Inc., 2013). The assessment recommends that background soil samples be collected and analyzed for arsenic as part of any planned excavation at the Transfer Station in order to confirm the presence or absence of soil impact from arsenic; however, earthwork associated with the proposed project would be limited to the placement of fill material; no major excavation is planned at the Craven County Waste Transfer Facility.

NCDOT will compensate Craven County for relocation expenses associated with the displacement of the Waste Transfer Facility; however it is the County's decision whether to build a new facility. Thus, the County accepts responsibility to locate and obtain a new site, conduct any appropriate environmental studies, and obtain permits for a new facility. The Craven County Solid Waste & Recycling Department informed NCDOT that it is presently coordinating with the County Planning Department to search for a new replacement facility location for the center. DENR Solid Waste Management is also aware of the planning effort. In coordination with USFS, the County must develop recommendations for a "site restoration plan" to return the current site to preexisting conditions.

No impacts to hazardous material sites are associated with the Preferred Alternative. There are no known UST sites within the Preferred Alternative corridor and the Preferred Alternative would not impact Foss Auto Salvage, identified in Chapter 3.9 as a potential hazardous material site on SR 1756 (Lake Road). In accordance with NCDOT Policy on hazardous materials, if any additional contaminated sites or underground storage tanks are discovered on the project, they will be assessed and recommendations for right-of-way and construction will be provided.

Mineral Resources. One inactive mine is located in the project study area. The former use of the site as a landfill precludes its future use a mine. No other mining sites are located in the project area. The proposed project would not impact the availability of mineral resources in the Havelock area.

Biotic Communities. The majority of impacts on private lands outside the CNF fall within upland (non-hydric) terrestrial communities. In total, roughly 72% of impacts are in upland areas. Approximately 28% of terrestrial community impacts outside the CNF fall within hydric terrestrial communities. Excluding human-dominated terrestrial communities (i.e., Rural/Urban Modifications, Successional /Ruderal Habitat, Powerline Corridor), the Preferred Alternative would impact approximately 123 acres of land categorized as natural vegetative communities outside the CNF. These totals include 92 acres of pine plantation (mesic and hydric). Upland terrestrial communities represent 53% of the total terrestrial impacts on NFS lands. Impacts to wetland terrestrial communities on NFS lands comprise 47% of terrestrial community impacts on NFS lands. Excluding human-dominated terrestrial communities (i.e., Rural/Urban Modifications, Successional /Ruderal Habitat, Powerline Corridor), the Preferred Alternative would impact approximately 209 acres of NFS lands categorized as natural vegetative communities. These totals include 15 acres of pine plantation (mesic and hydric).

Wildlife Communities. In addition to direct impacts to habitat, construction of the proposed bypass would create other impacts including loss of organisms due to construction and

roadway mortality. Open habitat created along the roadside and the highway itself will affect the movements of organisms to varying degrees. Movements including migration, home-range movements for food and shelter, and the dispersal of young from their natal area could all be affected by the bypass, which could act as a barrier or filter to some species.

The bridges proposed at East Prong and Southwest Prong of Slocum Creek would span the floodplain and provide passage for animals beneath the bypass. These crossings would provide connectivity to NFS lands fragmented by the bypass near the southern and central portions of the project. The proposed culvert at Tucker Creek may provide passage for small and medium-sized animals, as long as one culvert barrel will remain dry.

The Preferred Alternative is the most practicable alternative for minimizing and mitigating habitat fragmentation effects because it facilitates the conducting of prescribed burns on NFS lands. Conducting prescribed burns would help maintain the Pine Flatwood (i.e., long-leaf pine savanna) natural community and its associated niche species, including Red-cockaded Woodpeckers (RCW).

Although the purpose and function of the 4,035-acre Croatan Wetland Mitigation Bank (CWMB) is to provide compensatory mitigation for the proposed project and other projects in the region, it also connects to thousands of acres of designated black bear sanctuary (where hunting is prohibited) and other natural areas within the CNF. The conversion of the CWMB from its former silviculture use and its preservation in perpetuity will help mitigate habitat alteration effects along the Preferred Alternative corridor by creating a substantial amount of wetland interior habitat to counter the amount of edge habitat created by the proposed project.

Aquatic Communities. Long term effects to aquatic communities can include displacement of organisms in the vicinity of road crossings over waterways, caused by channel scour downstream or by aggradation. Aquatic wildlife may be temporarily displaced during the construction of bridges proposed for crossing streams. Most adverse effects should only be temporary if permanent impacts to stream channels are avoided.

Structures such as culverts may create flow depths and velocities that aquatic organisms cannot negotiate. Blocking movements of aquatic organisms may prevent access to feeding areas, refuge from predators, areas for spawning and breeding, and areas that remain inundated in dry periods; it also increases population isolation. The level terrain of the project study area would not contribute to creating high velocity flow due to large elevation changes, which would help minimize the potential for perching. In addition, the bottoms of NCDOT culverts are typically buried to prevent perching from

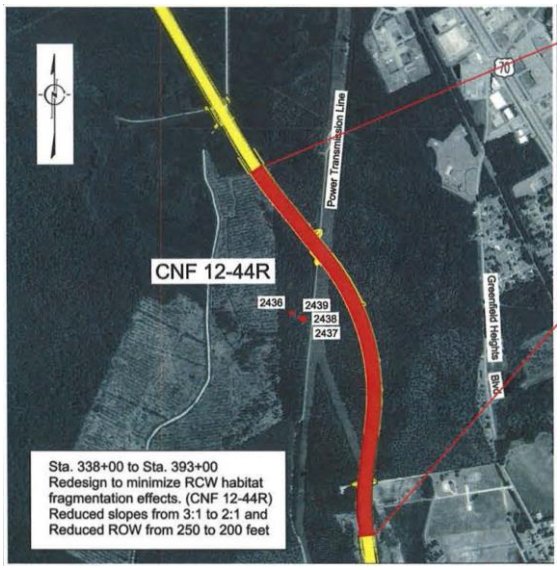
occurring. The use of sills in single barrel box culverts and high flow/low flow barrels in multiple barrel culverts can also help maintain adequate flow for the passage of organisms.

Changes to water temperature from tree removal, nutrient loading, and toxins from stormwater runoff could affect species distribution. The construction of roadside ditches may increase drainage in some areas, reducing aquatic habitat. Permanently inundated ditches may increase aquatic habitat for some organisms, but may increase their exposure to pollutants from highway runoff. Measures to maximize sediment and erosion control during construction will be implemented to protect water quality for aquatic organisms.

A portion of the Southwest Prong of Slocum Creek within the project study area is identified as anadromous fish spawning area; however, this reach does not extend into the Preferred Alternative alignment. No other anadromous fish habitat has been identified in the project corridor.

As detailed in the project commitments, NCDOT has committed to an in-water work moratorium from February 15 to June 15 for East Prong Slocum Creek, Southwest Prong Slocum Creek, and Tucker Creek at the proposed extension of the existing culvert at US 70. Goodwin Creek and Tucker Creek upstream of the existing US 70 structures will not require a moratorium. No other streams are subject to the anadromous fish construction moratorium.

Endangered Species. Biological conclusions for each protected species are detailed in Chapter 4.14.4 of the FEIS. With the exception of the RCW, the proposed project would have No Effect on any federally protected species. The biological conclusion for the RCW is May Affect, Not Likely to Adversely Affect; this conclusion was reached in consideration of the NCDOT's agreement to periodically close the bypass to conduct prescribed burns and NCDOT's commitment to a 200-foot clearing limit width for the refined 5,500-foot section of the project, so that forested areas to the east can be considered habitat for the RCW. As shown to the right, there are four RCW clusters to the west of the refined section of the proposed bypass.



USFS Rare Species. Surveys conducted from 2003-2013, in combination with records available from the North Carolina Natural Heritage Program (NCNHP) and the United States

Forest Service (USFS), resulted in the identification of potentially suitable habitat for 72 USFS rare plant species. Subsequent botanical studies confirmed the presence of 21 USFS rare plant species within the CNF evaluation area and the absence of 51 rare species. Potential indirect effects associated with the project's construction include the potential spread of non-native invasive species (NNIS) and increased sun exposure to currently shaded areas. The project commitments include measures to minimize these indirect effects, notably the periodic closure of the bypass to allow for prescribed burns and a number of measures associated with managing NNIS during and post construction. A complete discussion of USFS rare species is contained in Chapter 4.14.5 of the FEIS.

Farmland Impacts. The Natural Resources Conservation Service (NRCS) Farmland Conversion Impact Rating Form (Form AD-1006), is included in FEIS Appendix A.1. NRCS has completed their review and the Preferred Alternative received a total point value of 116.8. Therefore, this alternative falls below the NRCS minimum criteria rating of 160 points and will not be evaluated further for farmland impacts. The Preferred Alternative will not have a significant impact to farmland.

Wetland and Stream Impacts. The Preferred Alternative would create 2,948 linear feet of impact to jurisdictional streams and 131 acres of impact to jurisdictional wetlands. To date, the additional minimization of impacts due to the refined design includes a 9 acre reduction in impacts to wetlands.

Preliminary Cost Estimate The total cost of the Preferred Alternative (updated in 2013) is estimated to be $172,376,440. The estimated construction cost is $160,000,000. Right-of-way costs are estimated to be $11,425,000. Utility relocation is estimated to be $951,440.

Table 1 includes a summary of impacts for the Preferred Alternative. Impacts on NFS lands are shown in parentheses, as applicable.

TABLE 1
IMPACT SUMMARY TABLE FOR THE PREFERRED ALTERNATIVE

ENVIRONMENTAL FEATURES		PREFERRED ALTERNATIVE (Alternative 3)
Length (miles)		10.31
Relocations	**Residential**	16
	Business	1
	Non-profit [1]	1
Minority/Low Income Populations - Disproportionate Impact		No
Historic Properties (adverse effect)		No
Community Facilities Impacted [1]		Yes
Section 4(f) Impacts		No
Noise Receptor Impacts [2]		43

TABLE 1 cont.
IMPACT SUMMARY TABLE FOR THE PREFERRED ALTERNATIVE

ENVIRONMENTAL FEATURES		PREFERRED ALTERNATIVE (Alternative 3)
Prime Farmlands		71 acres
Forested Acres *(NFS lands)* [3]		332 (221) acres
Wetlands *(NFS lands)* [4]		131 (103) acres
Streams *(NFS lands)* [4]		2,948 (1,825) linear feet
Riparian Buffer Impacts *(NFS lands)* [4]	**Zone 1**	129,402 (54,884) sq ft
	Zone 2	81,142 (33,524) sq ft
	Total Buffer Impacts	210,544 (88,408) sq ft
100 Year Floodplain and Floodway Impacts		1.6 acres
Federally Protected Species [5]		May Affect Not Likely To Adversely Affect (1 species: RCW)
Right of Way Cost		$11,425,000
Utility Relocation Cost		$951,440
Construction Cost		$160,000,000
Total Cost		$172,376,440

NOTES:

1. NCDOT will compensate Craven County for relocation expenses associated with displacement of the Waste Transfer Facility; however it is the County's decision whether to build a new facility. Thus, the County accepts responsibility to locate and acquire a new site, conduct appropriate environmental studies, and obtain permits for a new facility. The Craven County Solid Waste & Recycling Department informed NCDOT that it is presently coordinating with the County Planning Department to search for a replacement facility location. DENR Solid Waste Management is also aware of the planning effort. Coordination on this effort will continue into the right of way acquisition phase of the project.
2. The total number of predicted impacts is not duplicated if receptors are predicted to be impacted by more than one criterion. The number of build-condition impacts is lower than the number of no-build condition impacts (49) because the proposed bypass will reduce sound levels in some locations and some residences will be taken for right of way.
3. Impacts to vegetative communities are based on proposed right-of-way limits. The total right-of-way required for the project is 430 acres (240 acres of NFS lands). The totals shown for forested areas include 92 acres of pine plantation outside the CNF and 15 acres within the CNF. The NCDOT will pay the USFS, or their approved contractor, to measure to USFS specifications, the volume of timber on USFS land within the right-of-way limits. The USFS and NCDOT will determine the precise monetary value of the timber through an appraisal at rates effective at the time of the timber sale contract.
4. Impact quantities are based on the construction limits of the Preferred Alternative plus an additional 25 feet buffer, in accordance with current NCDOT impact analysis guidelines. Direct impacts are projected to be less than those shown in the table.
5. The proposed project may affect, but is not likely to adversely affect, the red-cockaded woodpecker. USFWS concurrence with this biological conclusion is based, in part, on NCDOT's conceptual agreement to allow periodic closures of the Preferred Alternative in order for CNF staff to conduct prescribed burns as management for the RCW. Without this agreement, the USFS would be unable to conduct the necessary prescribed burns in the vicinity of the project thus causing an indirect adverse effect on the RCW. ROD Appendix B contains correspondence from NCDOT to the USFS regarding NCDOT's commitment to close the bypass to allow the USFS to conduct prescribed burns.

4. ALTERNATIVES CONSIDERED

This section addresses the various alternatives analyzed for the proposed action. Alternatives that did not meet the goals of the project, created disproportionate adverse impacts, or were considered impractical or noncompetitive, were eliminated from further consideration and are discussed in greater detail in Chapter 2 of the FEIS.

No-Build Alternative. The No-Build Alternative does not meet the purpose for this project because congestion on the existing route would contribute to travel time delays that collectively have regional and statewide effects.

Transportation Demand Management Alternative. The Transportation Demand Management (TDM) alternatives will not substantially achieve the goals of the project by improving the level of service for local, regional, and statewide traffic along the US 70 corridor. These improvements would not enhance the ability of US 70 to serve the regional transportation function in accordance with the Strategic Transportation Corridors Plan. TDM alternatives do not meet the purpose for the project, and therefore were eliminated from further consideration.

Transportation System Management Alternative. Transportation System Management (TSM) alternatives are relatively low-cost improvements to an existing facility. TSM measures enhance the operations of a facility while minimizing capital outlay. TSM measures may include operational improvements such as traffic signal timing optimization, speed restrictions, access control, flexible work hours, and physical improvements such as turning lanes, high-occupancy vehicle (HOV) lanes, intersection realignments, or new traffic signals.

Physical improvements require greater capital investment than operational improvements; however, the benefits are more substantial. Existing US 70 through the project study area is a four-lane, divided roadway with turn lanes at most of the signalized intersections. Intersection realignment and HOV lanes are not feasible due to roadside development and limited right-of-way. Striping, warning devices, and improved signing may reduce accidents, but will not substantially improve traffic flow or the level of service.

Mass Transit Alternative. The project area is not currently served by local, fixed-route, fixed-schedule mass transit. This is due to the lack of demand, dispersed residential areas, diffused employment centers, and diversity of trip origins and destinations. The Mass Transit Alternative was not considered a reasonable alternative to serve both regional and local traffic components, and was eliminated from further consideration.

Improve Existing Alternatives. Two alternatives to improve existing US 70 through Havelock were considered and then eliminated. The alternatives extend a distance of approximately six miles from the signalized intersection at Slocum Road south to the signalized intersection at McCotter Boulevard (SR 1824). Two preliminary build alternatives, an Expressway alternative and a freeway alternative, were considered to improve existing US 70. Both Improve Existing Alternatives proposed an additional through lane in each direction and would include a 22-foot median and two-way service roads to serve adjacent properties currently served by driveways. A right-of-way width of 360 feet was anticipated with additional right-of-way needed at signalized intersections or interchanges for these improvements.

In addition to creating 59 business relocation impacts, the Expressway Alternative would not be able to accommodate the high traffic volumes projected on US 70 and would constrain average speeds to only 22 to 25 mph. These characteristics would not fulfill the vision of the Strategic Highway Corridors Program. The Freeway Alternative would provide an adequate LOS for through traffic; however, it would not provide a design suitable for accommodating local traffic nor would it meet local community planning objectives. The Freeway Alternative would also relocate 59 businesses and impact the historic Needham B. White House. As such, the alternatives to improve US 70 on its existing alignment were not considered practicable. An interagency team comprised of federal and state regulatory and resource agencies eliminated alternatives to improve US 70 on its existing alignment from further consideration on February 15, 1996.

In summary, based on preliminary screening for potential impacts of each corridor and on consideration of comments received through public involvement and agency coordination, both alternatives were eliminated from further consideration, as documented in FEIS Chapter 2.6.

Build Alternatives

FEIS Chapter 2.6.7 describes the study alternatives, all of which bypass Havelock as a four-lane highway divided by a 46-foot median with full control of access. All build alternatives provide access to adjacent property only at interchange locations. A complete description of the anticipated impacts of each alternative is contained in FEIS Chapter 4.0.

Alternative 1 – Alternative 1 is the southernmost build alternative, located furthest away from Havelock, connecting with existing US 70 via a new interchange that is located just west of SR 1760 (Hickman Hill Loop Rd). All the alternatives converge to a common corridor just north of the new grade-separated crossing of the Camp Lejeune Railroad and continue to the common terminus at existing US 70 southeast of SR 1824 (McCotter Boulevard). Alternative 1 minimized impacts to existing development but was determined by the Interagency Team to have more substantial collective impacts to natural resources and therefore was eliminated.

Alternative 2 – Alternative 2 roughly parallels US 70 and the City of Havelock. This alternative also connects with existing US 70 via a new interchange just west of SR 1760 (Hickman Hill Loop Rd). This alternative terminates at an interchange with existing US 70 southeast of SR 1824 (McCotter Boulevard). This alternative minimizes impacts to the Croatan National Forest, but had substantial impacts to neighborhoods and businesses in Havelock and therefore was eliminated.

Alternative 3 (Preferred Alternative) – Alternative 3 originates at an interchange with existing US 70, just north of SR 1760 (Hickman Hill Loop Road) and extends to the southwest. The

proposed bypass continues in a southwesterly direction and crosses the North Carolina Railroad and Tucker Creek. It then turns southeastward and crosses SR 1747 (Sunset Drive) and the Southwest Prong of Slocum Creek to an interchange at SR 1756 (Lake Road). From the proposed SR 1756 (Lake Road) interchange, the Preferred Alternative continues southeastward over a grade separation at the Camp Lejeune Railroad before crossing over the East Prong of Slocum Creek. The alignment continues in a southeasterly direction to terminate at an interchange with existing US 70 southeast of SR 1824 (McCotter Boulevard).

5. MEASURES TO AVOID AND MINIMIZE HARM

Avoidance and minimization measures were finalized by the NEPA/404 Merger Team during the meeting for Concurrence Point 4A (*Avoidance and Minimization*) on August 20, 2014. FEIS Appendix E contains the Concurrence Point 4A signature form. FEIS Chapter 4.14 (*Jurisdictional Waters*) contains a detailed discussion of the mitigation measures associated with the Preferred Alternative.

Avoidance and Minimization Measures for the Planning and Design Phase

In addition to the measures contained in the description of the Preferred Alternative, avoidance and minimization measures include the following items:

- No new ditching in wetlands with inverts below existing wetland elevations Relocated ditches shall match existing ditch elevations
- Forty-six (46) foot median
- Bridge structures as listed below
    - Tributary of Tucker Creek – Double Box Culvert at 10 'x 8 ' x 400'
    - Southwest Prong of Slocum Creek – 925-foot Bridge (now 945-foot)
    - East Prong of Slocum Creek – 1,618-foot Bridge (now 1,620-foot)
    - Tucker Creek – retain and extend existing triple 9'x 7' box culvert approximately 25 feet upstream and 78 feet downstream.

Avoidance and Minimization Measures for the Construction Phase

The following avoidance and minimization procedures will be implemented during construction:

- Native vegetation will be retained as much as possible. Exposed soils would be promptly revegetated to avoid re-colonization by non-native invasive species (NNIS) or potential soil erosion. Only approved seed mixtures and weed seed-free mulch would be used. In consultation with the USFS, NCDOT will use seed mixes of native grasses and forbs or other non-native, non-invasive species on NFS lands for erosion control and revegetation.

- To prevent the spread of NNIS on NFS lands, NCDOT will require contractors to pressure wash all off-road equipment, including cranes, graders, pans, excavators, and loaders, prior to being brought into the CNF construction areas. Equipment would be cleaned thoroughly before moving from treatment sites to ensure that seeds or other propagules are not transported to other sites;
- To control the spread of NNIS on NFS lands, NCDOT, in coordination with the USFS, will locate and flag areas of targeted NNIS. If any of these areas are within areas of proposed fill, those areas will be cleared and grubbed, and the material disposed of outside the limits of the CNF. If NNIS are located in areas of proposed cuts, then the material and actual thickness of root mat or other defined amount will be disposed of outside the limits of the CNF;
- Use of mowing as a control method for NNIS should be timed to avoid spreading seeds (e.g. before seed set) to the extent possible;
- NCDOT will only use herbicides in specific areas on National Forest System lands in consultation with the USFS. All guidelines and mitigation measures presented in Forest Manual 2150, Pesticide-Use Management and Coordination, and Forest Service Handbook 2109.14, Pesticide Use Management and Coordination Handbook, would be followed. If any new herbicides come onto the market, NCDOT will coordinate with USFS before using on NFS lands.
- NCDOT will contact the USFS for non-routine maintenance and use of herbicides on NFS lands.
- Prior to treatment, proposed actions will be reviewed by forest resource specialists in the areas of wildlife biology, botany, aquatics, soils, recreation, and heritage resources.
- NCDOT will not use broadcast sprays for herbicides and pesticides on NFS lands. Herbicides and pesticides will only be used in specific areas on National Forest System lands in consultation with the USFS. In addition, NCDOT will coordinate with the USFS on any mechanical methods that would be allowed.
- Along stream edges and banks, wide-angle cone tip nozzle guards will be used on the end of herbicide applicator wands. All herbicides will be sprayed away from any water in ephemeral and perennial streams, vernal pools, or lakes. Aquatic-labeled herbicides will be used when within 150 feet of any live water. Only surfactants/adjuvants with low toxicity to aquatic species, such as Agri-dex, will be used in these areas.
- When conducting chemical control of targeted NNIS within 10 feet of any identified USFS Rare Plant Species populations, the following guidelines apply:
    - All the rare plant species occurrences would be flagged or marked prior to treatment to avoid any off-target effects.
    - No chemical treatment will occur within 1 foot of the rare plant.

- Prior to applying herbicide within 1-10 feet of these plants cover the rare plants or place an appropriate barrier adjacent to them.
- For vining species, pull the vines outside one foot of adjacent rare plants.
- For larger woody stems, diameters 1 inch or greater, apply herbicide to cut stem surfaces. Apply herbicides to the cut stems with a small wick applicator if possible or with a small spray bottle to minimize drift.
- For smaller woody NNIS stems, if broadcast treatment is the only feasible treatment, cut the stems and only treat after re-sprouting from 6-inches to 1 foot in height.
- While spraying the re-sprouting foliage, place a barrier (such as an appropriately sized cardboard sheet) next to the rare plant species or cover the rare plant species with an appropriate container.
- NCDOT will post "No Treatment" signs at rare plant sites along the roadway.

- When conducting mechanical control by hand, NNIS capable of starting new plants (seeds, rhizomes, root mats, etc.) require proper disposal outside the limits of the CNF. Plants should be bagged and moved off site. Bagged plants will receive standard garbage disposal. For large woody bushes that would be difficult to move, treatments will be scheduled prior to seed set as practical. NCDOT will coordinate with the USFS on any mechanical methods that would be allowed for NNIS.
- NCDOT commits to treating roadside NNIS in the CWMB prior to turning over the site to USFS. An initial treatment, followed by a second spot application, will address NNIS growing along or adjacent to the existing roads within the CWMB and will cover species on the USFS list of NNIS.
- NCDOT Division 2 will work with USFS staff on a periodic basis to control the presence of priority NNIS along the NCDOT right-of-way on NFS lands. In turn, USFS will work cooperatively with NCDOT to identify and effectively control prioritized NNIS. The current list of prioritized NNIS species is below; it is subject to change as new plant threats are identified.
  - Lespedeza cuneata, Sericea Lespedeza
  - Lespedeza bicolor, Bicolor Lespedeza
  - Albizia julibrissin, Mimosa
  - Ligustrum sinense, Privet
  - Rosamultiflora, Multiflora Rose
  - Ailanthus altissima, Tree-of-Heaven
  - Miscanthus sinensis, Chinese Silver Grass
  - Lonicera maacki or morrowii, Amur or Morrow's Honeysuckle
  - Lonicera japonica, Japanese Honeysuckle
  - Sorghum halepense, Johnson Grass
  - Arthraxon hispidus, Basket Grass
  - Elaeagnus umbellata, Autumn Olive
  - Pueraria montana var. lobata, Kudzu

- Hedera helix var. helix, English Ivy
- Vinca minor, Periwinkle
- Kummerowia striata, Japanese-clover
- Youngia japonica, Asiatic Hawk's-beard
- Wisteria sinensis, Chinese Wisteria
- Verbena brasiliensis, Brazilian vervain
- Imperata cylindrica, Cogongrass
- Persicaria perfoliata, Mile-a-minute
- Cayratia japonica, Bushkiller
- Pyrus calleryana, Bradford Pear
- Solanum viarum, Tropical Soda Apple
- Centaurea stoebe ssp. micranthos, Spotted Knapweed
- Commelina communis, Common Dayflower
- Baccharis hamlimifolia, Eastern baccharis*

** Native but considered invasive*

- If excavation work is required at the Craven County Waste Transfer Site, NCDOT will collect and analyze background soil samples to confirm the presence or absence of soil impact from arsenic, in accordance with NCDOT Policy on hazardous materials;
- As this project involves construction activities on or adjacent to FEMA-regulated streams, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon the completion of project construction, certifying that the drainage structures and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically;
- Fueling or oiling of mechanical equipment would occur away from aquatic habitats;
- Strict adherence to procedures contained in *Best Management Practices for Protection of Surface Waters* (NCDOT, 1997) and *Stream Crossing Guidelines for Anadromous Fish Passage* (NCDOT, 1999), as well as the NC Department of Environment and Natural Resources (NCDENR), Division of Land Resources, Land Quality Section's *North Carolina Erosion and Sediment Control Planning and Design Manual* (NCDENR, 1993) will aid in avoiding and minimizing impacts to water resources and aquatic communities;
- NCDOT will pay the USFS, or their approved contractor, to measure to USFS specifications, the volume of timber on NFS lands within the proposed right-of-way limits. NCDOT will then pay the USFS for the measured timber volume at which time the timber will become property of the NCDOT. The USFS and NCDOT will agree on the precise monetary value of the timber through appraisal at rates effective at the time of the timber sale contract;

- No borrow or disposal sites related to this project are to be located on NFS lands without express written permission from the USFS and completion of all required environmental studies;
- Before construction, a preconstruction conference will be held involving the contractor, pertinent local officials, the U.S. Forest Service, and NCDOT Division of Highways to discuss various construction procedures, including precautionary steps to be taken during construction that will minimize the interruption of public utility and traffic services.

Compensatory Mitigation

The NCDOT purchased the Croatan Wetland Mitigation Bank (CWMB), a 4,035-acre tract of land approximately 3.6 miles northwest of Havelock in Craven County, with the purpose, in part, of restoring, enhancing, and preserving riverine and nonriverine wetland systems and their functions and values to compensate for unavoidable stream and wetland impacts associated with the proposed US 70 Havelock Bypass and other projects in the region separately authorized under Section 404 of the Clean Water Act.

As a condition of the 2003 Mitigation Banking Instrument (MBI) entered into by NCDOT, USACE, USEPA, USFWS, NMFS, NCWRC, NCDCM, and NCDWQ, the CWMB title will ultimately be conveyed to the USFS. Prior to conveying the site to the USFS, the USACE, NCDOT, and USFS will execute a Memorandum of Understanding (MOU) concerning the disposition and long-term management of the CWMB. The MOU will identify NCDOT as being responsible for the mitigation success of the site and will include the requirement that the USFS allow for the long-term maintenance and preservation of CWMB wetland mitigation components in perpetuity.

The MOU's intention is to allow the other lands within the CWMB to be managed according to the Croatan National Forest Land and Resource Management Plan (Forest Plan) (USFS, 2002). Maintenance of roadways, culverts, habitat, and forest stands for fire risk will occur as prescribed by the Forest Plan.

In all cases, compensatory mitigation will be provided in sufficient quantity and quality to offset impacts in accordance with the requirements of the Clean Water Act of 1970, as amended.

6. MONITORING AND ENFORCEMENT PROGRAMS

Coordination will be maintained with regulatory and resource agencies during final design, permitting, right-of-way acquisition, and construction to ensure that the avoidance, minimization, and compensatory mitigation commitments will be initiated.

NCDOT and FHWA will enforce pertinent specifications and contract provisions in accordance with the intent of the Environmental Impact Statement and the welfare of the public.

Federal and State Enforcement Programs

The NCDOT, through the Clean Water Act (CWA) Section 404/401 permitting process will ensure that all project commitments are duly implemented before, during, and after, project construction.

Wetland impacts will be regulated by the US Army Corps of Engineers (USACOE), in cooperation with the USFWS and the US Environmental Protection Agency (USEPA), through the CWA Section 404 permitting process. Issuance of a federal Section 404 permit requires a state Section 401 Water Quality Certification, which is administered by the NC Division of Water Quality.

Local Enforcement Programs

The Neuse stormwater rules require the development of stormwater management plans for fifteen local governments within the basin, including the City of Havelock. The local government stormwater plans must be consistent with the overall 30% nitrogen reduction goal of the Neuse River NSW Management Strategy. The rules require that each new development must meet a nitrogen export performance standard with a provision for mitigation offset payments. The Neuse NSW stormwater management program imposes a 4.0 kg/ha/yr (3.6 pounds per acre per year or lb/ac/yr) nitrogen loading limit on new development. Nitrogen loads from new developments that exceed this performance standard may be offset by payment of a fee to the Wetlands Restoration Fund provided, however, no new residential development can exceed 6.7 kg/ha/yr (6.0 lb/ac/yr) and no new nonresidential development can exceed 11.2 kg/ha/yr (10.0 lb/ac/yr).

The rule also requires preservation of fifty-foot riparian buffers on perennial and intermittent streams. Further, all new development must control water runoff so that there is no net increase in the peak discharge from the predevelopment conditions for the 1-year, 24-hour storm.
Session Law 2006-246 was approved by the NC Legislature and signed into law in late summer of 2006. The act provides for the implementation of the federal Phase II stormwater program and additional stormwater management provisions. Under the Phase II stormwater program, any new development that cumulatively disturbs one acre or more of land located within the Phase II jurisdiction must comply with the standards set forth in Section 9 of Session Law 2006-246. Under Section 9, programs are deemed compliant where the Neuse River NSW Management Strategy is being implemented.

Session Law 2008-211 was approved by the NC Legislature and signed into law in 2008. The act provides for specific stormwater rules in the 20 coastal counties of the state. Under this law, any development activity that requires a major permit or a Sediment & Erosion Control Plan must comply with the standards set forth in Section 2.(b) of Session Law 2008-211. These standards specify limits on impervious surface area, the use of stormwater best management practices (BMPs), and the protection of vegetated riparian buffers. For the study area, these rules apply to Craven County, outside of Havelock, in addition to Carteret County and the Town of Newport. Additionally, rules specific to areas within 1 mile of shellfish waters apply to a small section of the northeast portion of the study area encompassing Cherry Branch, King Creek, and Sassafras Branch. Impervious cover thresholds for triggering the stormwater rules are lower in these shellfish areas.

7. COMMENTS ON THE FEIS

The FEIS was finalized on October 27, 2015 and distributed for review on December 4, 2015. FEIS Chapter 6.0 contains a list of the federal, state, and local agencies that received copies of the FEIS. Comments and responses on the FEIS are contained in Appendix A.

8. REVISIONS AND CORRECTIONS

State and federal environmental resource and regulatory agency comments on the FEIS necessitated the following corrections/revisions to the FEIS. The project commitments, as finalized and agreed to by the NCDOT, are contained in Appendix C.

- The USFS noted that the Biological Evaluation Report (BE), included in FEIS Appendix C, did not include final USFS comments (see USFS comments in Appendix B for specific edits). The revised BE was provided to the USFS in May 2015 and is included in Appendix B.

- In response to a comment from the USFS, the following project commitment is replaced with the following (new text in bold):

  "Prior to construction, NCDOT will coordinate with the USFS to identify USFS Rare Plant Species on NFS lands occurring near the project's construction limits**, including the powerline corridor,** and install high visibility protective fencing to be removed after completion of construction."

- In response to a comment from the NC Wildlife Resources Commission, the following project commitment is revised as follows (new text in bold):

  "NCDOT will utilize **a natural fiber mesh** or weed-free mulch for erosion control and revegetation on NFS lands. If erosion becomes problematic in any area post-construction, turfgrass may have to be judiciously utilized to limit soil disturbance."

- In response to a comment from the US Environmental Protection Agency (USEPA), the following commitment is added to the project commitments:

  "NCDOT will coordinate with the NEPA/404 Merger Team at Concurrence Point 4C to identify additional measures that would avoid, minimize, or otherwise mitigate direct and indirect project impacts to important groundwater resources within the project study area."

- Sections 4.12.4.2 and 4.15.5.3 are revised to indicate that the proposed project would impact 240 acres of NFS lands within the CNF, rather than 239 acres.

- Reference to Exhibits 4.16.1a-b on FEIS Page 4-143 are revised to reference Exhibits 4.16.1 and 4.16.2, as contained on Pages 4-139 and 4-141 of the FEIS.

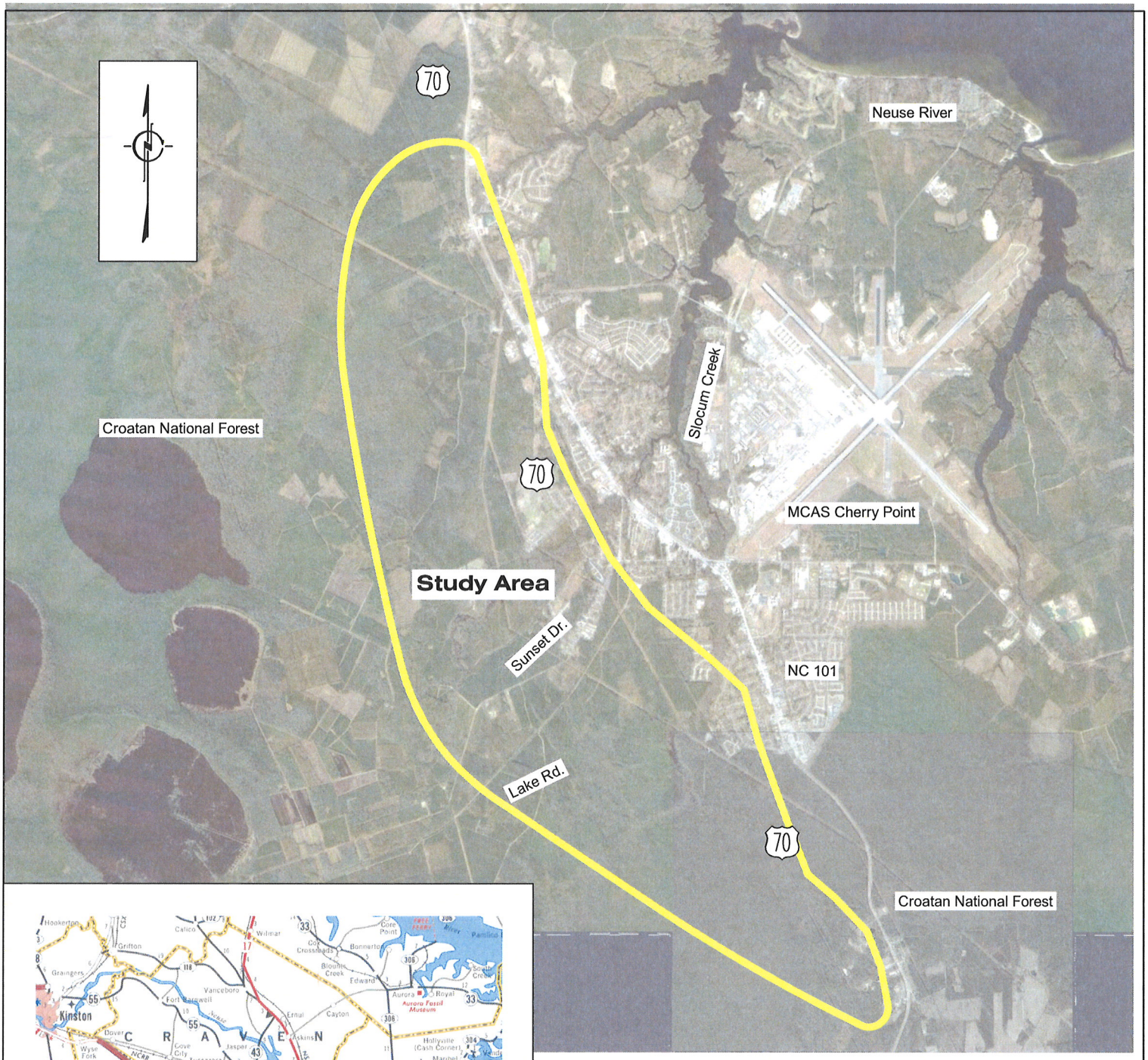
9. CONCLUSION

Based on the above information and after consideration of the input received from other agencies, organizations, and the public, FHWA has determined that the environmental studies completed for this project are in accordance with 23 CFR and 23 USC. Specifically, FHWA has determined that Alternative 3, with all incorporated project commitments, is environmentally preferable and in the best overall public interest. FHWA has determined that modifications and changes to Alternative 3 assessed in the Final Environmental Impact Statement do not result in any significant new impacts not previously identified; therefore, a Supplemental FEIS is not required. Hereby, Alternative 3 is the Federal Highway Administration's Preferred Alternative and approved for implementation in accordance with the provisions of this Record of Decision.

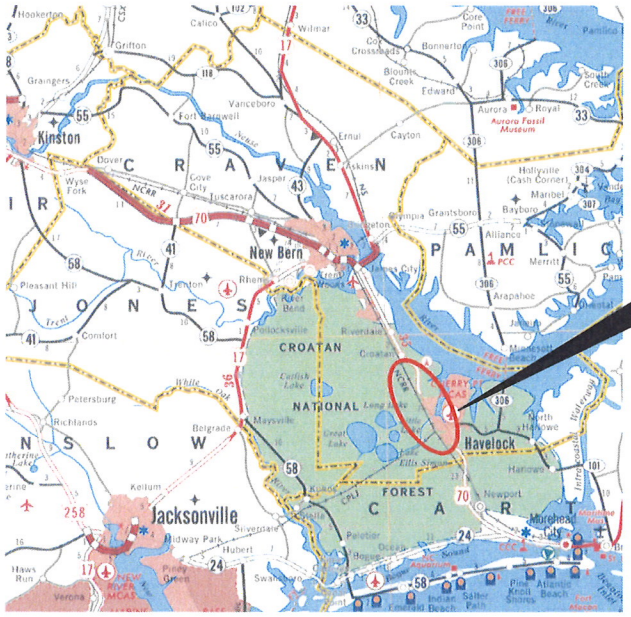
Date

John F. Sullivan, III, PE
Division Administrator
Federal Highway Administration

EXHIBITS



Note: Aerial photo from Google Earth Pro.



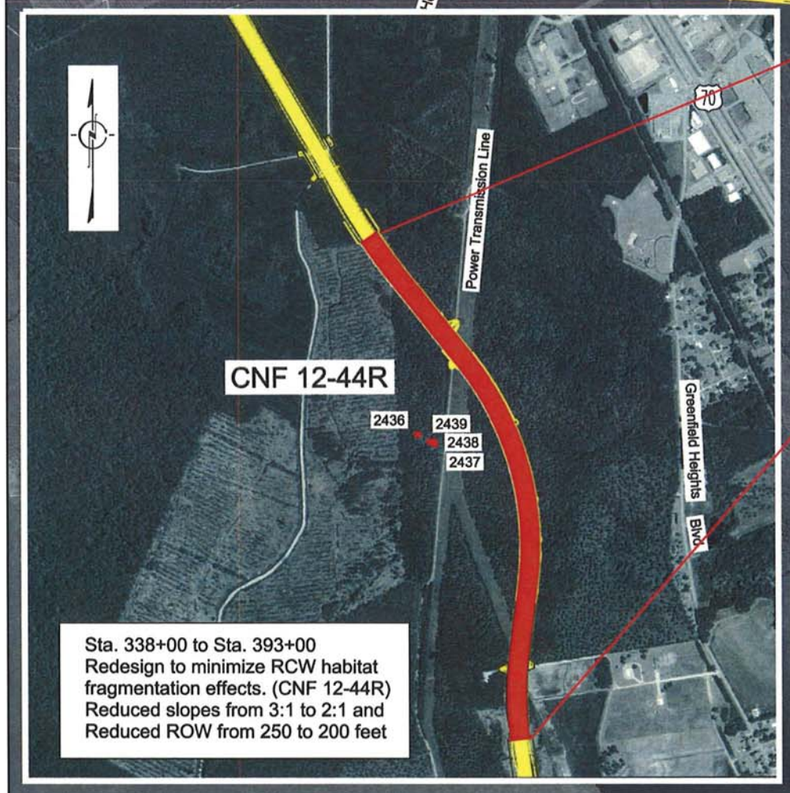
US 70, Havelock Bypass

Craven County, North Carolina

TIP No. R-1015

Project Vicinity
Not to Scale
Exhibit 1

Lewis Farm Rd.
70
North Carolina RR
Power Transmission Line
Old Landfill
Waste Facility
Headwaters of Tucker Creek
Sermons Blvd.
Slocum Road
Power Transmission Line
Greenfield Heights Blvd.
Sunset Dr.
Gray Rd.
Miller Blvd.
Lake Rd.
Camp Lejeune RR
Fontana Blvd.
Havelock
McCotter Blvd.
North Carolina RR
Power Transmission Line
East Prong Slocum Creek
Sunset Dr.
Southwest Prong Slocum Creek
Lake Rd.



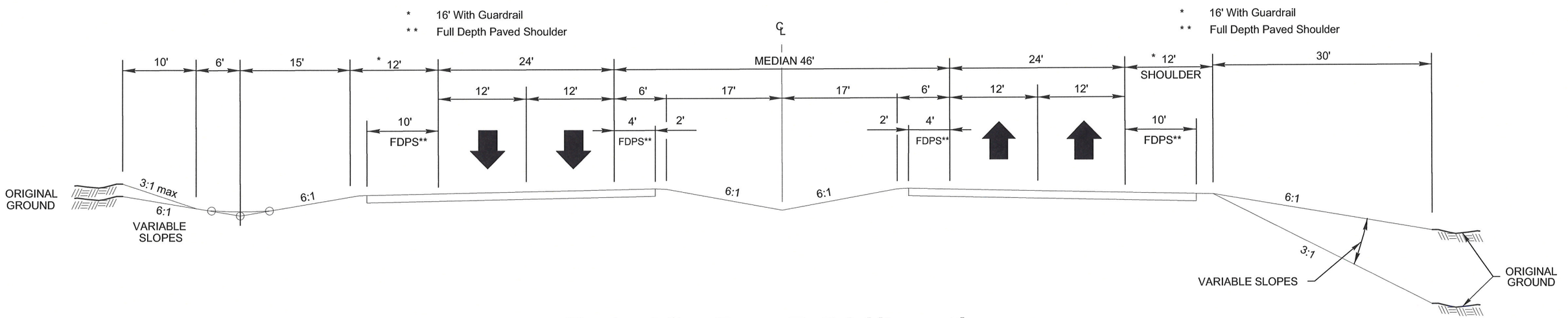
Sta. 338+00 to Sta. 393+00
Redesign to minimize RCW habitat fragmentation effects. (CNF 12-44R)
Reduced slopes from 3:1 to 2:1 and
Reduced ROW from 250 to 200 feet

US 70, Havelock Bypass

Craven County, North Carolina

STIP No. R-1015

Alternative 3
Preferred Alternative
Scale: 1" = 1 mile
Exhibit 2



Typical Section - Build Alternative

US 70, Havelock Bypass
Craven County, North Carolina
TIP No. R-1015

Typical Section
Not to Scale
Exhibit 3

APPENDIX A

RESPONSES TO COMMENTS ON THE FINAL ENVIRONMENTAL IMPACT STATEMENT

US FOREST SERVICE

January 29, 2016

1 **GENERAL COMMENTS**

All maps included in the FEIS must show the Croatan National Forest (CNF) boundaries.
Many maps were changed from 8.5" X 11" in the draft FEIS to 11" X 17" in the FEIS. We like the larger maps for their increased clarity; however, we noticed that the scale on the maps has not changed. Please correct the scale on the new larger maps.

Response: The preliminary draft FEIS was provided in pdf format with most exhibits sized to be 11x17, so it is assumed that the exhibits resized to 8.5 x 11 when printed by USFS staff. Exhibits in the ROD have been checked to confirm correct scale is shown.

2 Indirect and cumulative effects to all biological resources must be disclosed in the FEIS. Using a chart or a matrix is one way to accomplish this for cumulative effects. The various impacts could be given for this project and for other past, present, or foreseeable actions. A table similar to Table 4.21.1 with additional data could be used for this purpose.

Cumulative effects must be considered separately for each individual resource and cannot be lumped together for a determination of cumulative effects for the entire project.

Response: Similar comments were received from the USFS on the preliminary FEIS. As such, Chapter 4.16 of the approved FEIS includes a section describing the previous 2008 ICE study and 2011 ICE update (4.16.1); a summary section cataloging where ICE effect assessments for natural resources can be found throughout Chapter 4 (4.16.2); and a new cumulative effects table (Table 4.16.1).

3 The Biological Evaluation Report (BE), included in Appendix C, needs to be updated with the comments the USFS provided on February 13, 2015 and the latest monitoring information from the North Carolina Natural Heritage database. As part of our concurrence for this project the USFS must sign a copy of the BE. These updates need to be made before we are able to concur with and sign the BE.

Response: NCDOT provided the revised BE to the USFS in May 2015 for approval and signature. No subsequent correspondence has been provided by the USFS.

The May 2015 BE should have been appended to the FEIS; this correction and the specific changes between the two versions will be noted in the ROD. The May 2015 BE is included in Appendix B of the ROD.

4 **PROJECT COMMITMENTS**

The US Forest Service (USFS) will continue to work with NCDOT in finalizing the Croatan Wetland Mitigation Bank Agreement, an agreement to compensate the USFS for the loss of longleaf pine, and an agreement to outlines the parameters for prescribed burning within the project area.

As surveys have been completed over a number of years and rare plant individuals keep appearing in new locations across the best suitable habitat which includes the powerline right-of-way. We would like to see a commitment added that prevents the parking of equipment and the dumping or storing of road materials within the powerline right-of-way outside the direct impact zone of the project.

Response: PDEA project commitment #8 states: "Prior to construction, NCDOT will coordinate with the USFS to identify USFS Rare Plant Species on NFS lands occurring near the project's construction limits and install high visibility protective fencing to be removed after completion of construction." Although the powerline is on NFS lands and thereby included in the project commitment, the commitment's text was revised in the ROD to specifically mention the powerline corridor.

5 SUMMARY

Table S.1 cont. p. S-8: Footnote #10 states "…outside shoulder widths increased from 10 feet to 12 feet with paved shoulders increasing from 4 feet to 10 feet." Why did the paved shoulder width increase from 4 feet to 10 feet and was this change discussed and approved by the merger team?

Response: The shoulder width and paved shoulder width was increased in anticipation of a future interstate designation of the facility. This change was presented in the CP4A Merger Team packet and presentation but not a specific discussion item.

6 **S.9 ACTIONS REQUIRED BY OTHER FEDERAL AND STATE AGENCIES p. S-27:** The FEIS states "It is currently proposed that the Croatan Wetland Mitigation Bank will provide mitigation for impacts to USFS lands and land management activities." The USFS does not consider the Croatan Wetland Mitigation Bank (CWMB) compensation for the loss of 75 acres of mature longleaf pine/wiregrass communities. The USFS will continue discussions with NCDOT on compensation for the loss of longleaf pine.

Response: Comment noted.

7 **3.6.1 Electric Power Transmission Service p. 3.39:** Exhibit 3.3.1 p. 3-33 referenced here has a lot of information on it and it is difficult to identify the location of powerlines. A map with CNF boundaries that shows just the powerlines such as those included for sewer and municipal water lines would make it easier to identify which powerlines cross NFS lands.

3.6.5 Communications p. 3-40: Please include a map with CNF boundaries showing the location of the CenturyLink communication lines.

Response: The exhibit on the following page shows powerlines and communication lines in the project study area.

8 **3.11 PRIME, IMPORTANT, AND UNIQUE FARMLANDS p. 3-70:** The FEIS states "the Croatan National Forest contains large areas of prime and state-important farmland soil types. However, since it is public land, these areas are not considered prime farmlands". We appreciate you including the reference for this quote; however, the USFS thinks that the quote is incorrect in that we believe that public lands can be considered prime farmlands.

Response: Comment noted.

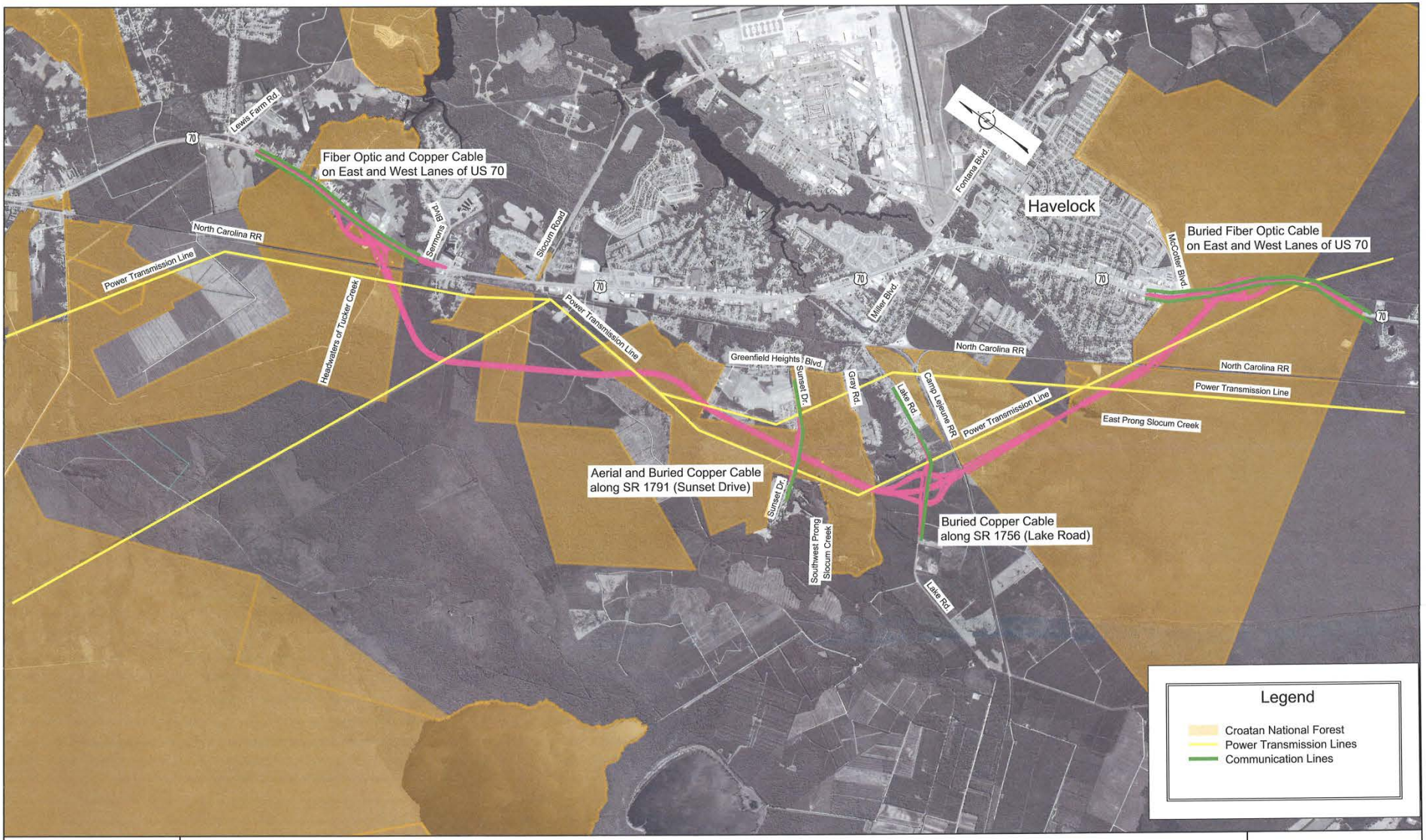
9 **4.12.4.1 State/National Forests p. 4-36:** Impacts acres on CNF should be 239 acres to match what is shown in Table 4.12.2.

Response: This correction is noted in Section 8 of the ROD.

10 **Table 4.14.5 CROATAN WETLAND MITIGATION BANK STREAM AND WETLAND CREDITS** p.4-49

p. 4-49: We noted a changed between the draft FEIS and this document. The number of acres in the CWMB classified as wetlands changed from 3,894.60 acres to 4,034.60 acres. This is the entire CWMB. Please clarify how all of the acres are considered wetlands when some of the areas are classified as uplands in documents describing the mitigation bank.

Response: The following explanatory footnote was inadvertently removed: "Approximately 140.00 acres of riverine wetlands (32.57 acres restoration, 85.27 acres enhancement, and 22.16 acres preservation are classified as Riparian Headwater System stream mitigation. Other parts of the CWMB include 46.00 acres of non-restorable area and 29.60 acres of non-hydric soils."



US 70, Havelock Bypass
Craven County, North Carolina
TIP No. R-1015

Croatan Wetland
Mitigation Bank
Not to Scale

11 **4.14.4.2.9 <u>Summary of RCW Impacts</u> p. 4-73:** The USFS needs to be compensated for the loss of 75 acres of mature longleaf pine/wiregrass communities. The USFS will be continuing discussion with NCDOT on compensation for the loss of longleaf pine.

Response: Comment noted. USFS and NCDOT will continue discussions on compensation for the loss of longleaf pine.

12 14.15.5.2 Management Indicator Species

Longleaf pine (Pinus palustris) pp. 4-114 – 4-115: It should be noted that the loss of longleaf pine under the preferred alternative would result in the loss of 75 acres of longleaf pine greater than 80 years old. While the CNF is increasing its longleaf pine component by restoring (versus conversion used in FEIS) loblolly pine dominated stands to longleaf pine, it is not reducing existing longleaf pine dominated stands such as would occur with the construction of the bypass. While the amount of longleaf pine dominated stands lost with the bypass construction will gradually be picked up with other longleaf pine plantings (within 3-4 years as stated) across the CNF, the loss of older longleaf pine stands will not be replaced for numerous decades

The USFS suggests that the loss of the older pines should be mitigated by vegetation management activities within and surrounding recently and previously active RCW clusters, in particular clusters 58 and 901. While this mitigation would not make up for the loss of the older longleaf pine stands it will improve the structure, reduced mid-story density and greater wiregrass/forb component, of existing longleaf pine and provide more suitable habitat for RCWs.

Response: Comment noted. USFS and NCDOT will continue discussions on compensation for the loss of longleaf pine.

13 **4.15.5.3 <u>Migratory Birds</u> p. 4-116:** NFS lands included for direct impacts for the Preferred Alternative should be 239 acres (per Table 4.12.2).

Response: This correction is noted in Section 8 of the ROD.

14 **4.15.5.4.3 <u>Herbicide Use Specifications</u> p. 4-122:** Potential impacts to the various resources from the use of herbicides needs to be disclosed in the body of the FEIS in addition to the mitigation measures for their use. This can be a summary of the information disclosed in the "Final Herbicide Evaluation Report" (June 2014).

Response: Mitigation measures associated with herbicide application are contained in the project commitments and discussed in Chapter 4.15.5.4.3. A summary of the potential impacts contained in the Herbicide Evaluation Report (FEIS Appendix C) is included in ROD Appendix B.

USFS comments on the Biological Evaluation Report, July 16, 2014

Review completed February 11, 2015

Overall the document is logical and well done; only a few brief comments:

There is updated survey data within the NC Natural Heritage database for surveys conducted in 2014 for: *Cirsium lecontei, Platanthera integra, Polygala hookeri,* and *Rhynchospora galeana.* While none of the surveys would result in a change in the determination of effects; it would be wise to indicate some updated surveys by John Fussell were completed for those species within and outside the proposed project area. If you need any of the specific information please contact Gary Kauffman.

USFS Regional Forest Sensitive species list is now scheduled to be upgraded in spring of 2015. This comment is pertinent for:

Lysimachia loomisii on page 16

Oxpolis ternata on page 18

Page 20: David Dumond, who conducted a portion of the plant survey for ESI, commented in the rare plant list serve he had seen *Persicaria hirsuta* in a few places on the Croatan during the last 10 years. The reference was to a roadside ditch along Catfish Lake road and in a beaver impoundment along Southwest Prong of Slocum Creek west of Havelock. This information needs to be updated and assessed for the BE. If you need the rare plant list serve information please contact Gary Kauffman.

Page 22: *Polygala hookeri* is a region 8 sensitive plant, displayed as locally rare. The species designation is correctly displayed as sensitive for the plant summary on page 32 and the determination of effect on page 50. It is also correct in Table B-1 in Appendix B and Table D-1 in Appendix D.

Response: Response: NCDOT provided the revised BE to the USFS in May 2015 for approval and signature. No subsequent correspondence has been provided by the USFS.

The May 2015 BE should have been appended to the FEIS; this correction and the specific changes between the two versions will be noted in the ROD. The May 2015 BE is included in Appendix B of the ROD.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

January 11, 2016

1 Socio-economic and Community Impacts: In our comments on the DEIS the EPA expressed concerns with the lack of current census data used in developing the relocation report, assessing environmental justice (EJ) impacts, unemployment rates, and income/poverty levels. The EPA notes that the FEIS used 2010 US Census data to update socioeconomic characteristics.

However, it remains unclear whether updated data was used to examine the number of relocations as these figures did not appear to change from the DEIS to the FEIS.

Recommendation: The EPA requests that the transportation agencies provide clarification on this issue during the Merger Team process or in the Record of Decision (ROD).

Response: FEIS Appendix G contains NCDOT's 2013 relocation report that was referenced in the FEIS.

2 Solid Waste Disposal Site Relocation: The EPA continues to have environmental concerns regarding solid waste disposal and the relocation/siting of the Craven County Waste Transfer Station. The DEIS did not fully address the potential impact to the City of Havelock or the County and the potential for illegal dumping and disposal of trash and other hazardous materials once the existing facility is removed. The FEIS provides that the NCDOT will coordinate this during right-of-way acquisition and that they are working with Craven County.

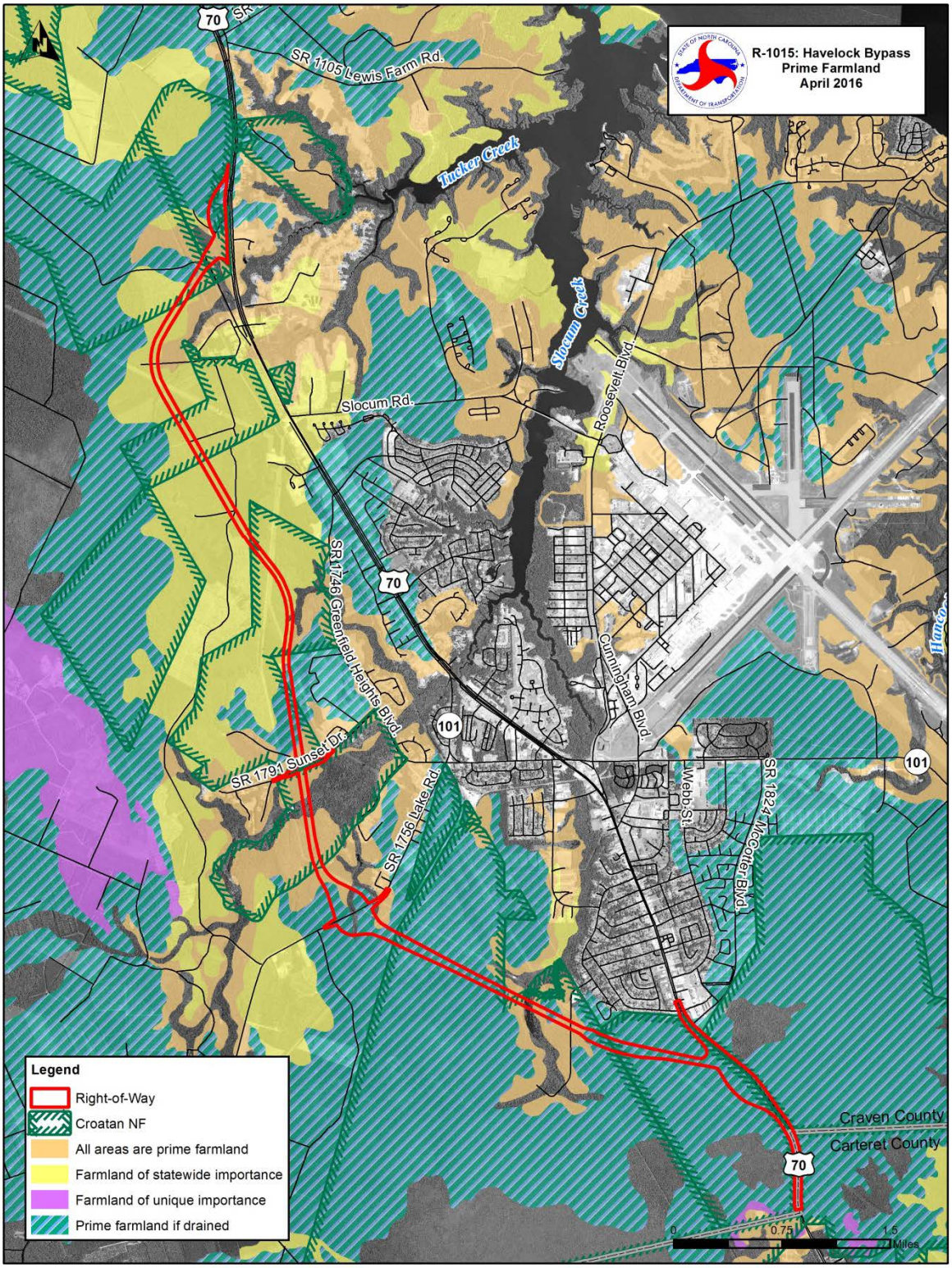
Recommendations: Siting new waste disposal facilities is an arduous process. The EPA noted that the failure to coordinate this early in the NEPA process can have the potential to cause substantial delays to the proposed project. The EPA encourages the transportation and local agencies to continue working to site a new solid waste facility for Craven County. The impacts to human and natural environment resources incurred from a new waste facility should also be considered in the total impacts from the proposed bypass project and included in the ROD.

Response: It is important to note that Craven County officials are relocating a transfer facility, not a permanent disposal facility. Infrastructure is limited to several large dumpsters and a small office building. As described in FEIS Chapters 3.6.3 and 3.9, this facility accepts household waste, used appliances, and furniture and then transfers the materials to permanent disposal facilities outside the project area. As stated in FEIS Chapter 4.9, coordination will occur at a local level with NCDOT right-of-way agents and county/municipal government staff.

3 Farmland Impacts: The EPA's comments on farmland were not addressed in the FEIS. Specifically, the EPA had concerns regarding the lack of information on Statewide and Local Important Farmland. The FEIS did not clarify the information on farmland impacts nor identify any potential issues involved with dissecting active fields within the corridor alignment, access for farm equipment, nor the presence of any Voluntary Agricultural Districts .

Recommendation: Prior to the issuance of the ROD, it is requested by the EPA that the transportation agencies address farmland impact concerns in the Merger Team process.

Response: To clarify, the farmland impact form contained in DEIS Appendix A.1 shows that 71 acres within the project corridor are considered prime and unique farmland and 29 acres are considered statewide and local important farmland. The map on the following page shows farmland soils within the project study area. The majority of the project is on NFS lands; as such, NCDOT coordinated with the USFS to identify access locations as shown in FEIS Exhibit 4.4.1. FEIS Chapter 3.11 states that there are no VADs within the project study area.



4 Jurisdictional Stream and Wetlands: The DEIS Preferred Alternative (Alternative 3) was listed as impacting 2,505 linear feet of streams and 115 acres of wetlands. Alternative 3 also impacts Neuse River Riparian Buffers (NRRB). The FEIS Preferred Alternative (Refined Alternative 3) impacts 2,948

linear feet of streams and 131 acres of wetlands; total NRRB impacts have also increased. Thus, the impacts to jurisdictional aquatic resources has increased rather than decreased since the issuance of the DEIS and the selection of the LEDPA.

Recommendations: While we understand that the Croatan Wetland Mitigation Bank (CWMB) will be used for compensatory mitigation needs, the EPA requests that the transportation agencies perform additional avoidance and minimization of impacts to waters of the U.S. during final design. Additionally, the EPA also requests that the transportation agencies confirm with the U.S. Army Corps of Engineers that the Refined Alternative 3 is still the LEDPA and that this determination be shared with the EPA and other Merger Team agencies prior to the issuance of the ROD.

Response: As discussed in Chapter 2.10.3.3., wetland impact totals increased primarily due to a systematic error associated with transferring data between GIS and MicroStation . After reconciling the conversion error, avoidance and minimization measures reduced wetland impacts by nine acres. Stream impacts increased due to reclassification of areas that were originally considered wetlands. This change added 1,067 feet of stream to the project study area totals. Maps of these changes were presented to the Merger Team at the Concurrence Point 4A meeting. Although this change increased stream impacts, avoidance and minimization measures reduced total stream impacts such that additional stream impacts (443 feet) are less than the amount of stream (1,067 feet) added by the reclassification.

EPA states, "...the impacts to jurisdictional aquatic resources has increased rather than decreased since the issuance of the DEIS and the selection of the LEDPA." The revisions described above correct conversion errors and reclassify impacted resources but it is important to note that the footprint of the project did not increase but was actually reduced in a number of locations to create the impact reductions discussed in FEIS Chapters 2.10.3.3 through 2.10.3.5.

5 Stormwater: Indirect impacts to jurisdictional aquatic resources from stormwater runoff also remain a concern to the EPA. Neither the FEIS Section 4.12 .2.2 on Indirect Effects to Aquatic Communities, nor Section 4.13 .4 on Stormwater adequately describe specific measures to treat stormwater runoff from the substantial amount of impervious surfaces from the new bypass. The FEIS does not quantify the residual (post-treatment) pollutant loadings nor calculate/estimate effects on water quality, including for large/extreme storm events that exceed the capacity of proposed treatment and detention systems.

Recommendation: Final design, including hydraulic design, should address the EPA's concerns regarding stormwater runoff treatment and take into consideration how the frequency and severity of large/extreme storm events may increase with changing climate.

Response: Comment noted for evaluation during final design and discussion at Concurrence Point 4C.

6 *Groundwater:* The DEIS and FEIS note that the Castle Hayne aquifer is within the project study area and serves as the water supply for the City of Havelock via municipal wells . However, the FEIS did not provide a discussion on groundwater quality, quantity, flow rates and direction, recharge areas, aquatic connectivity and ecological function, or whether/how the project would potentially affect these features. Dewatering activities during construction is anticipated where trenches or below-grade cut slopes occur in areas of shallow groundwater. However, the FEIS does not provide the information regarding the estimated volume and/or duration of dewatering activities or a discussion of construction techniques that could avoid or reduce the need for dewatering.

Recommendation: The EPA recommends that the transportation agencies provide supplemental information as described above to improve characterization of groundwater resources, ecological

functions, vulnerabilities, and potential impacts during final design for the NEPA/404 Merger Team's 4C hydraulic design review. The EPA recommends that a commitment be provided in the ROD to the appropriate measures that would potentially avoid, minimize, or otherwise mitigate direct and indirect project impacts to important groundwater resources within the project study area.

Response: The majority of the proposed project is on fill, with a few areas of minor grading/shallow excavation. It is not anticipated that the project would have adverse effects on groundwater flow. This topic will be discussed at Concurrence Point 4C.

7 *Croatan National Forest and Terrestrial Forests:* Alternative 3 [Preferred Alternative] in the DEIS was noted to impact 240 acres within the CNF. Refined Alternative 3 [the new Preferred Alternative] in the FEIS is also anticipated to impact 240 acres of the CNF. Additionally , the proposed bypass also impacts the South Prong Flatwoods Priority Area and the Havelock Station Flatwoods and Powerline Corridor Natural Area. The FEIS notes (p. 4-33) that "most of the mammals documented within the project study area are conspicuous large and medium-sized species that have wide habitat tolerances and commonly occur ... highly mobile and wide-ranging species, such as black bears, are also susceptible to road mortality." Furthermore, p. 4-37 in the FEIS notes that "the location of the CWMB augments its benefits to include habitat connectivity to thousands of acres of black bear sanctuary and other natural areas within the CNF."

Considering the rural project setting, its proximity to the CNF and other wildlife corridors, and data from similar new location projects, the EPA believes that the proposed bypass project could substantially increase the likelihood for collisions with large mammals, and thereby, decreasing the safety of the new facility.

Recommendations: The EPA reiterates its previous environmental concerns and recommendations regarding proactive measures to minimize clearing in order to reduce impacts to terrestrial forest communities and wildlife habitat. In addition, the EPA also understands that such measures in combination with wildlife over- and/or underpasses and a fencing plan that would coincide with areas of wildlife habitat and movement patterns along the bypass would potentially reduce collisions. Prior to the completion of the final design, the EPA recommends that the aforementioned measures and issues be fully addressed with the Merger team.

Furthermore, the EPA encourages the incorporation of context sensitive design into the final roadway design. While the EPA would not anticipate a full fencing for the entire bypass corridor, fencing could be strategically applied through collaboration with the US Fish and Wildlife Service, the US Forest Service/CNF staff, and the NC Wildlife Resources Commission. Such measures would potentially benefit both wildlife and human safety. The EPA recommends that the inclusion of a wildlife management plan in the final design to direct wildlife to appropriate crossing areas and to prevent entry upon the roadways where collisions are most likely to occur. The EPA would recommend that the transportation agencies with the wildlife agencies gather appropriate roadkill data and conduct a landscape analysis to identify areas most in need of preventive measures. For example, the aforementioned agencies could help to identify all locations where animal fatality rates would likely be high, such as between wooded areas and open landscapes.

Response: NCDOT discussed this topic with the NC Wildlife Resources Commission; the NCWRC does not recommend fencing as it would facilitate animal passage into the urbanized areas of Havelock and Cherry Point, which is not desired.

8 Climate Change I Greenhouse Gas (GHG) Emissions: The FEIS did not address climate change/GHQ emissions. Climate change could have potential effects on transportation infrastructure.

Recommendation: The EPA recommends that the NCDOT and FHWA incorporate scenarios from the National Climate Assessment (NCA), released by the U.S . Global Change Resource Program 2 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. The EPA recommends considering climate adaption measures based on how future climate scenarios may impact the proposed project during final design, particularly with regard to hydraulic structures. The NCA contains scenarios for regions and sectors, including transportation. Using 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.

The EPA recommends that all impacts to the human and natural environment that have not been fully covered in the FEIS be addressed in the ROD or additional NEPA documentation. Dr. Cynthia F. Van Der Wiele of my staff will continue to work with you as part of the NCDOT Merger Team process. The EPA requests that the Merger team process be fully utilized by the transportation agencies to address remaining environmental concerns as outlined in this letter prior to the issuance of the ROD. The EPA also requests that a copy of the ROD be provided when it becomes available. Should you have any questions concerning these comments, please feel free to contact Dr. Van Der Wiele at vanderwiele.cynthia@ epa.gov or (919) 450-6811.

Response: The alignment crosses Slocum Creek, which may be impacted by sea level rise, however the bridge length established by wetland impact minimization efforts provides much greater hydraulic conveyance than required.

US Fish & Wildlife -

1 Email dated February 2, 2016 stating no comments.

NC Division of Coastal Management (DCM)

1 DCM would like to provide some clarification to the following statement on page 5-28 of the FEIS, which states: "a consistency determination was completed in accordance with the State's coastal management program." Although an informal review of federal consistency occurs throughout the NEPA/404 merger process to identify any potential conflicts, the final federal consistency determination will occur after final project design is complete. This is usually at approximately the same time that the NCDOT submits an application to the U.S. Army Corps of Engineers for an Individual Permit (CWA §404). This clarification also applies to pages 4-1,4-2, and 4-3 within Section 4.1.2 titled "Consistency with land Use and Transportation Plans," and page 4-123 within Section 4.14.7 titled "111.C. Coastal Area Management Act Areas of Environmental Concern."

NCDOT's certification of project consistency should be based on a review of the proposed project's conformance with the enforceable policies of North Carolina's coastal program, and the information and data required by 15 CFR 930.58. NCDOT's certification of project consistency should also be based on a review of the project's consistency with the most current CAMA and Use Plans that have been certified by the Coastal Resources Commission (CRC). The supporting information provided to DCM shall demonstrate how the proposed project is consistent. DCM will circulate the consistency certification to the network of state agencies that comprise North Carolina's Coastal Management Program. The statutes, rules and policies of each of these agencies must be considered in order for the project to be determined to be consistent with the state's Coastal Management Program. The consideration and incorporation by the N.C. Department of Transportation (NCDOT) of the comments received during the NEPA/404 Merger Process into the final project design will help to expedite the DCM federal consistency review process.

During the federal consistency review process, DCM may have additional comments after examining the more detailed environmental information that will be provided. DCM may require that certain conditions he met in order to achieve federal consistency. The comments provided in this letter shall not preclude DCM from requesting additional information throughout the federal consistency review process, and following normal procedures.

Response: Comment noted.

North Carolina Wildlife Resources Commission

1 On page 4 of the green sheet commitments under Roadside Environmental Unit and Roadway Design item #2 mentions the use of "rolled matting". WRC request that any rolled matting used for erosion control not include types that utilize plastic mesh. The plastic mesh has been found to entangle wildlife, natural fiber is preferred.

Response: Project commitment revised in the ROD to indicate that a natural fiber mesh will be used for erosion control.

North Carolina Division of Waste Management

1 The Hazardous Waste Section (HWS) has reviewed the subject Final Environmental Impact Statement for the proposed project which consists of the construction of a new, IO-mile, four lane divided, controlled- access freeway for US 70 Bypass around the southwest side of the City of Havelock in Craven County.

Any hazardous waste generated from the demolition, construction, 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, maintenance, and remediation activities conducted will most likely generate a solid waste, and the facility must determine if the waste is a hazardous waste. If the 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.

The following are active hazardous waste generators located adjacent to or within the proposed project study area in Havelock, NC.

Facility Name	Location	EPA JD Number	Hazardous Waste Status
CVS Pharmacy #7344	l03 Catawba Rd	NCR000165266	Large Quantity Generator
Merchants Tire DBA NTB Tire Ser Ctr #339	174 US Hwy 70 W	NC000! 02!575	Conditionally Exempt Small Quantity Generator (CESQG)
A & M Auto Body Repair	407 W Main St	NCD986215432	CESQG
Rite Aid #11534	101 W Main St	NCR000156877	Large Quantity Generator
United Parcel Service	20 l Belltown Rd	NCD986194603	CESQG
Quality Body Shop	1305 E Main St	NCD982134090	CESQG
Walmart Supercenter #3825	566 Hwy 70 W	NCR000144923	Small Quantity Generator

Response: Sites noted for evaluation during right-of-way acquisition phase.

2 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. The nearest permitted facility to the project is the CRSWMA Long Term Regional Landfill Permit Number 2509-MSWLF-1999. 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.

Response: Comment noted.

3 The Superfund Section has reviewed the proximity of CERCLIS and other sites under their jurisdiction to the proposed new US 70 bypass around Havelock, North Carolina, in Craven County. The proposed bypass will be a divided highway designed to improve traffic flow and operations along the US 70 corridor and enhance regional connectivity in eastern North Carolina,

Three sites were identified within a 1-mile radius of the proposed study area as noted on the map and in the table below. Since the sites lie within the proposed study area, the Superfund Section recommends that site files be reviewed to understand the potential impacts that the sites may

have on the project and vice versa. Site files can be viewed at:

http://portal.ncdenr.org/web/wm/sf-file-records

ID	Site Name	Status
NONCD0000261	Craven County	Open site on the Pre-regulatory Landfill Sites Inventory
NONCD0001350	Phoenix Recycling	Open site on the Inactive Hazardous Sites Inventory
NCNCD0000780	Belltown Road Dump	Open site on the Pre-regulatory Landfill Sites Inventory

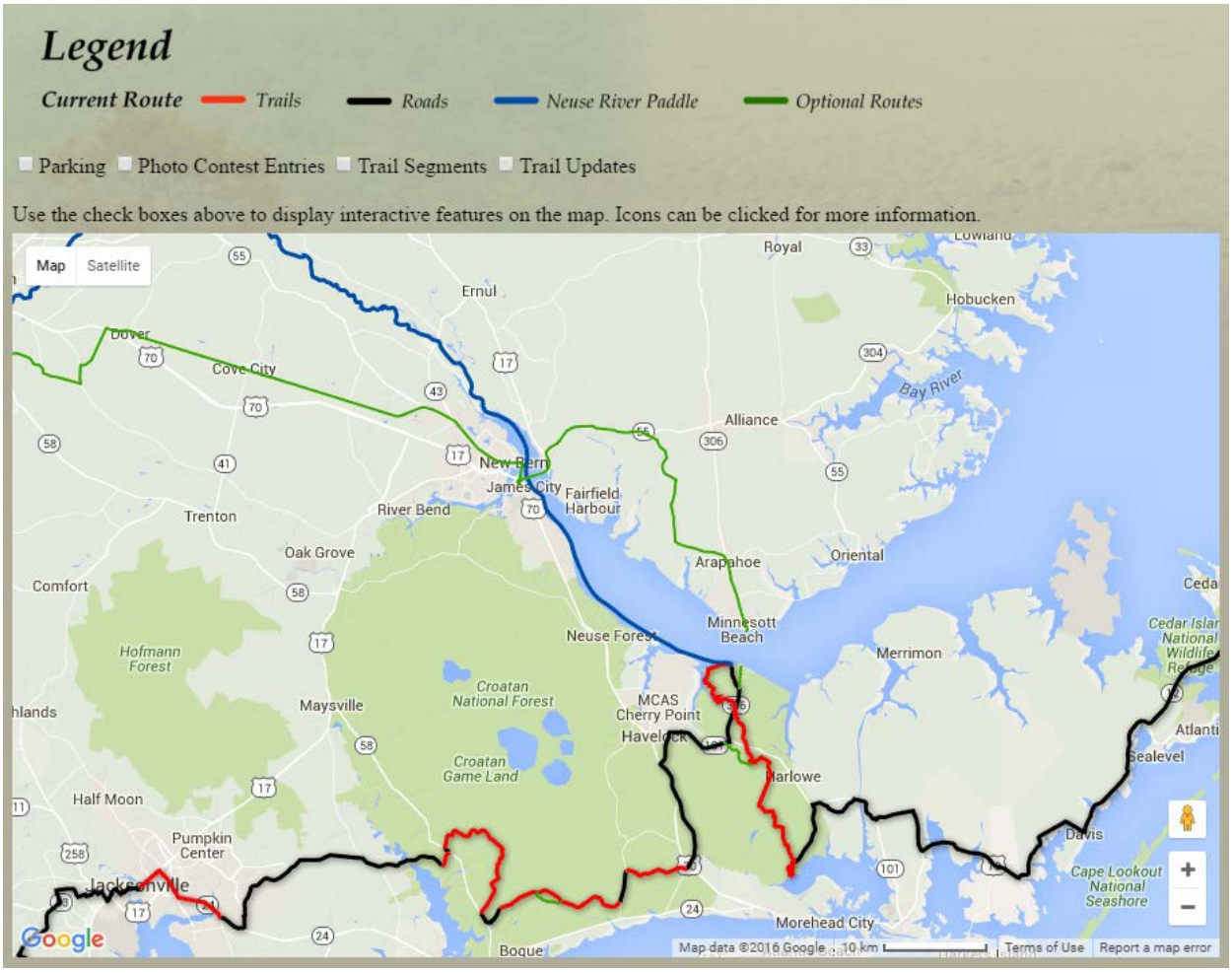
Response: Response: Sites noted for evaluation during right-of-way acquisition phase.

North Carolina Division of Parks and Recreation (DPR)

1 The North Carolina Department of Parks and Recreation (DPR) has conducted a review of Project #16-E-4220-0163, SHPO Project ER 91 -7033 in Craven County, North Carolina. DPR would like to note that there are plans for a section of the Mountains-to-Sea Trail to be located in the project area. In addition a portion of the trail is currently being constructed and will be dedicated as Mountains-to-Sea Trail on McCotter Boulevard, east of NC 70.

DPR requests that this trail construction be included in any planning documents and that the Department of Transportation (DOT) work with the State Trails Program to coordinate this effort. In addition DPR would request that DOT work with the State Trails Program to facilitate a safe crossing of NC 70 to connect the east and west sides of the trail.

Response: Comment noted. As shown below, the current Mountains-to-Sea Trail no longer traverses the area west of US 70. NCDOT will coordinate with the State Trails Program, local governments, and other stakeholders separate from this project regarding the trail along McCotter Boulevard and US 70.



Source: Friends of the Mountains to Sea Trail interactive map. http://www.ncmst.org/the-trail/interactive-map/

US Coast Guard

1 I noticed that on October 27, 2015, the Federal Highways Administration released the Final Environmental Impact Statement (FEIS) for the US 70 Havelock Bypass project. The last documented interaction with the Coast Guard concerning this project was in 1992. In reviewing the FEIS, it appears that there may be an impact to navigable waterways within the scope of this project.

In accordance with Section 9 of the Rivers and Harbors Act of 1899, a bridge permit is required for any structure that crosses navigable waterways. Both Slocum Creek and Tucker Creek have been determined to be navigable by the Coast Guard. Given that these waterways are navigable and the proposed bridges may alter the navigation on the waterway, further coordination with the Fifth Coast Guard District is required. Several factors impact the needs of navigation for any particular waterway. Enclosure one is a white paper outlining the types of information needed to determine whether a proposed structure meets the reasonable needs of marine navigation.

Response: NCDOT is currently coordinating with the USCG to determine permit needs and approach.

[Side note: There has been additional coordination with the USCG since 1992; see correspondence from 1998 contained in the DEIS. Also, the USCG was provided a copy of the 2011 DEIS but did not provide comments.]

Southern Environmental Law Center
February 20, 2016

1 **I. THE CROATAN NATIONAL FOREST PLAN PROTECTS IMPORTANT HABITATS AND SPECIES THAT WOULD BE SUBSTANTIALLY AND ADVERSELY AFFECTED BY THE PROPOSED BYPASS.**

To be permitted, the Havelock Bypass must be consistent with the Croatan National Forest Land and Resource Management Plan ("LRMP").[1] Specifically, the Bypass cannot lawfully "foreclose the opportunity to maintain or achieve any goals, desired conditions, or objectives, over the long term."[2] It must comply with applicable standards[3] and guidelines.[4] Finally, the Bypass can only be built, if at all, in an area "[t]hat the plan identifies as suitable for that type of project or activity."[5]

As reflected in the LRMP, but not carried forward in the FEIS, the portions of the Croatan that would be affected by any of the Bypass alternatives and Alternative 3 specifically, have critical ecological significance. The FEIS ignores the fact that much of the area that would be destroyed by Alternative 3 is dominated by longleaf pine, and that much of the longleaf pine is mature (75 years of age or older), is associated with relatively intact ground covers (i.e. wiregrass), and represents high-quality longleaf habitat associated with loamy soils. For example, the discussion under "Terrestrial Communities and Wildlife" claims a deviation from "natural" conditions in the project area and claims that a more natural condition would be for the area to consist of various different-aged seres resulting from severe, stand-replacing fires.[6] That discussion is completely at odds with current understanding of longleaf pine ecosystems (which are naturally uneven-aged systems, maintained by frequent, low-intensity ground fires) as reflected in the Reference Condition for pine savannas described in the current LRMP.[7] The EIS is especially deficient in its discussion of the ecological significance of the Southwest Prong Flatwoods Natural Area and the Havelock Station Natural Area. The Southwest Prong Flatwoods Natural Area is of major ecological and scientific interest, because of the presence of high-quality longleaf on several soil types, including soil types that today are rarely associated with longleaf. The Havelock Station Natural Area is also a cluster area for rare loamy soil savanna species. The value of these biological communities is not reflected in the EIS and, as a result, not protected in compliance with the LRMP.

Response No. 1:

The FEIS reference above is a broad discussion of mesic and hydric pine flatwoods; the longleaf pine savanna is one type of pine flatwood community. As shown on Final EIS page 3-101, the Southwest Prong Flatwoods Natural Area and Havelock Station Natural Area are entirely within the Croatan National Forest (CNF). The impacts to these longleaf pine habitats were evaluated in the biological studies prepared for the project and impacts are disclosed in the Final EIS.

The US Forest Service (USFS) has participated in all interagency meetings throughout the project development process. In addition, USFS is a cooperating agency for the Draft and Final EIS documents. USFS has reviewed the EIS documents and commented in full awareness of the potential effects of the highway on the CNF itself and with respect to implementation of the Land and Resource Management Plan (LRMP). In light of all project planning and project commitments, there is no indication that the Havelock Bypass will be inconsistent with the LRMP.

2 A. Each of the Bypass Alternatives Violates LRMP Goals, Desired Conditions, and Objectives.

The proposed Bypass forecloses achievement of goals, desired conditions, and objectives established in the LRMP. First, for reasons explained more comprehensively in our DEIS comments, building the proposed Bypass under any alternative would complicate prescribed burning such that additional habitat would be lost as an indirect effect.[8] Therefore, any of the alternatives would violate Goal/Desired Condition 2.5.2.a (use prescribed fire to restore and improve longleaf stands), Objective 2.5.2.1 (burn on 2-4 year rotation with growing season fire), and Objective 2.5.2.2 (use fire to improve habitat for threatened and endangered species).9 As a result, the critical RCW subpopulation that exists in the vicinity of the proposed Bypass would be lost, in violation of Goal/Desired Condition 2.1.1 (recovery of viable RCW population); Objective 2.1.1.1 (meet long-term RCW targets); and Objective 2.1.1.6 (maintain existing longleaf pine forest type).10

Response No. 2:

NCDOT and FHWA have worked with USFS, USFWS, and other agencies to develop project commitments to avoid and minimize direct and indirect impacts on natural resources, with the intent of facilitating USFS management goals and objectives. Responses were developed to similar comments submitted to USACE and NCDOT in connection with the DEIS. Please see Response No. 4 and Response 22 to SELC comments in Appendix D of the FEIS. As noted in those responses, this project includes several commitments to mitigate unavoidable impacts and facilitate USFS's future management activities, including NCDOT's agreement to close the bypass to facilitate prescribed burns, the commitment to a reduced corridor width through RCW habitat, the creation of 13 USFS access points along the bypass to facilitate habitat management, and the transfer of the Croatan Wetland Mitigation Bank (CWMB) to USFS.

3 In addition, even the inadequate rare species surveys demonstrate substantial impacts to other endangered, threatened, sensitive, and locally rare species on the CNF. Alternative 1, which has the least impact of the three alternatives, would impact 42.5 acres with 17 occurrences of 10 rare species.[11] Alternative 1 would also have indirect effects on 28 rare species and directly affect 4 sensitive species and 6 locally rare species. The appendices to the FEIS concede that Alternative 3 "may result in a loss of viability" of the liverwort, *Lejeunea bermudiana*,[12] in violation of Goal/Desired Condition 2.1.3.a.[13] The supporting documentation further concedes that, with respect to spring-flowering goldenrod (*Solidago verna*) the Bypass and improvements to US 17 will eliminate the two largest populations on the Croatan and threaten the viability of the species if extensive mitigation measures, including prescribed burning, are unsuccessful.[14] Similarly, the Bypass would directly or indirectly affect more than 15 acres of habitat for LeConte's thistle (*Cirsium lecontei*) eliminating the "three highest quality LeConte's thistle populations document on the CNF" unless extensive mitigation, including prescribed burning, is successful.[15] Alternative 3 would also destroy remarkable powerline corridor habitat for rare plant species, in violation of Objective 2.1.3.5 (maintain powerline corridors in a coastal prairie condition).[16] Moreover, because the FEIS provides no basis for determining viability, it cannot be used by the USFS to justify any permitting decision that would authorize such substantial impacts to rare species.

Response No. 3:

As stated in the same paragraph of the report cited above (FEIS Appendix C Memorandum to Rachelle Beauregard from Matt Smith addressing USFS Comments on the DEIS and PETS Analysis, dated January 18, 2013), an additional occurrence of Lejeunea bermudiana documented in 2012 on NFS lands outside the project area reduces the potential for a loss of viability for this species.

Project commitments related to spring flowering goldenrod and LeConte's thistle state, "Mitigation will include planting seeds and/or plugs as well as monitoring for successful survival. Planting failures will be replanted until USFS and NCDOT staff concur that further plantings would not be beneficial. Additional details will be finalized as part of ongoing coordination with the USFS." NCDOT will coordinate with USFS during and after project construction to help promote conditions favorable to these and other rare species.

4 Finally, the Bypass is not consistent with goals, desired conditions, and objectives for protecting black bear habitat. The USFS is to "minimize human disturbance and modification of black bear habitat" by, in part, "reduc[ing] disturbance from motor vehicles."[17] Each of the alternatives would bisect a portion of the CNF that has been specifically designated as a black bear sanctuary.

Response No. 4:

FHWA and NCDOT disagree that the bypass project is inconsistent with the goals, desired conditions, and objectives for protecting black bear habitat. Although some portions of the easement that would be transferred to NCDOT for the bypass are designated black bear sanctuary, the core black bear habitat on the Croatan National Forest lies south and west of the proposed bypass and existing US 70. The black bear population on the CNF is expected to have an upward trend over the next decade due to the large quantity of preferred habitat on the CNF and management of these resources by the US Forest Service and the NC Wildlife Resources Commission.

As well, the Croatan Wetland Mitigation Bank which will be transferred from NCDOT ownership to the US Forest Service in exchange for easement for the proposed bypass contains over 2,000 acres of suitable bear habitat. Habitat additions from the CWMB will allow greater connectivity throughout the CNF for black bear and facilitate the overall management of the species.

5 B. <u>Each of the Bypass Alternatives Violates LRMP Standards.</u>

The proposed Bypass does not comply with LRMP standards. Critically, the standards set forth in the LRMP "are limitations on actions or thresholds not to be exceeded."[18] For example, Standard 4.6.0.3 requires USFS to "[p]rioritize the closing of existing transportation system and non-system roads where the following conditions exist: open roads in bear habitat . .. open roads adjacent to RCW nest sites . . . roads near endangered or threatened species, SIAs, or wetlands."[19] Yet the proposed Bypass would introduce a major new highway in bear habitat, adjacent to RCW nest sites, and through rare species habitats and wetlands. Standard 4.6.1.5 requires USFS to "[p]rohibit construction of roads . . . in nest areas."

Further, Standard 4.7.0.1 requires USFS to "[d]eny applications for new special uses . . . when the proposed uses are inconsistent with the CNF LRMP, are in conflict with other forest management

objectives or applicable Federal statutes and regulations *or can reasonably be accommodated on non-National Forest System Lands*."[21] With reasonable traffic projections, upgrades to U.S. 70 can improve traffic flow without affecting any USFS lands, as discussed in more detail below. At a minimum, the USFS cannot approve Alternative 3 given that Alternative 1 reasonably accommodates much of the Bypass on non-National Forest System Lands.

***Response No. 5**:*

Please see Responses Nos.1, 2, and 4 above, and Responses Nos. 8-12 below (regarding traffic forecasting). FWHA, the US Army Corps of Engineers, USFS, NCDOT, NC Department of Environment and Natural Resources – Division of Water Quality, and other members of the NEPA/404 Merger Team re-affirmed concurrence on Alternative 3 as the Preferred Alternative and the Least Environmentally Damaging Practicable Alternative (LEDPA) on April 10, 2012. At that meeting, the team also agreed to re-initiate the Merger Process at Concurrence Point 3, thereby affirming the selection of the detailed study alternatives presented in the September 2011 Draft EIS. Upgrading existing US 70 was eliminated from detailed study as discussed in Chapter 2 of the FEIS. The project commitments contained in the Final EIS were developed in coordination with USFS to mitigate project effects with a view towards safeguarding USFS's ability to implement the CNF LRMP.

6 C. <u>The CNF Is Not Suitable For The Proposed Bypass.</u>

Finally, the LRMP makes clear that the portions of the CNF that would be affected by the Bypass are not suitable for a four-lane divided highway. The LRMP directs the USFS to aggressively implement prescribed burning, reduce barriers to burning, and to avoid burning near developed areas; 22 the Bypass creates a new impediment to prescribed burning, fragments land to be burned, and promotes development that will make burning more difficult.23 The LRMP directs the USFS to invest in maintaining and restoring habitat for RCW and other rare species; 24 Alternative 3 would remove at least 57 acres of longleaf pine habitat more 60 years old and adversely affect dozens of rare and sensitive species.25 The LRMP directs the USFS to protect black bear habitat by reducing impacts from automobiles; 26 the Bypass would introduce a four-lane highway into a black bear sanctuary.[27] In sum, the LRMP requires USFS to avoid introducing new impacts from any roads (much less a highway) to the habitats in the Bypass corridor.

***Response No. 6**:*

Please see Responses Nos. 1, 2, 4, and 5 above. In addition to the avoidance and minimization measures developed in the NEPA/404 Merger Process, NCDOT has committed to provide monetary compensation for the loss of longleaf pine forest. USFS has indicated that this compensation will be used to enhance current habitat that is mixed loblolly and longleaf pine to improve the structure, reduced mid-story density and greater wiregrass/forb component, and provide more suitable habitat for RCWs. This compensation is in addition to the compensation USFS will receive for timber on NFS lands within the proposed right-of-way. Appendix B contains correspondence (dated June 22, 2016) from NCDOT to the USFS on the subject.

7 **II. THE FEIS TRAFFIC FORECASTS AND GROWTH ESTIMATES RELY ON UNSUPPORTED ASSUMPTIONS AND INCOMPLETE ANALYSES.**

The Transportation Agencies' analysis in the EIS hinges on several essential assumptions that are unsupported by the information provided in the document. Specifically, the FEIS relies on traffic forecasts that are arbitrary and capricious, uses a methodology that has been held illegal, and depends on erroneous growth assumptions. Each of these erroneous assumptions, which are discussed in more detail below, preclude approval and construction of the Bypass.[28] Reliance on "demonstrably incorrect assumption[s]" violates NEPA.

Response No. 7:

FHWA and NCDOT disagree with the commenter's assertions that the traffic forecasts are arbitrary and capricious, based on illegal methodology, and based on demonstrably incorrect growth assumptions. Responses are provided to the more detailed comments on these topics below.

8 A. The FEIS Used Flawed Traffic Forecasts to Dismiss Reasonable Alternatives.

The alternatives analysis in the FEIS is based on traffic forecasts that project increasing congestion on U.S. 70 in the study area through the design year of 2035. The traffic forecasts are based on 2008 base year traffic volumes and project traffic conditions for 2035 based on three different growth scenarios: 0.0% annual growth, 0.83% annual growth and 2.0% annual growth. The FEIS provides projections for all three scenarios, but assumes the 2.0% annual growth scenario for purposes of its alternatives analysis. The FEIS contends that this 2.0% annual growth scenario "account[s] for local growth (within the study area) and regional traffic with origins and destinations beyond the study area."

The resulting projections forecast massively deteriorating traffic conditions. Traffic speeds are projected to slow to 8-13 mph, and travel times are projected to increase to 38.7-60.8 minutes for the 8.4 miles of U.S.70 in the study area.[31] These forecasts are used by the Transportation Agencies to justify the purpose and need of the project,[32] and to support the selection of the proposed Bypass as the Preferred Alternative: "[t]he adequacy of the proposed project was evaluated based on its capacity to handle projected design year (2035) traffic volumes."

Response No. 8:

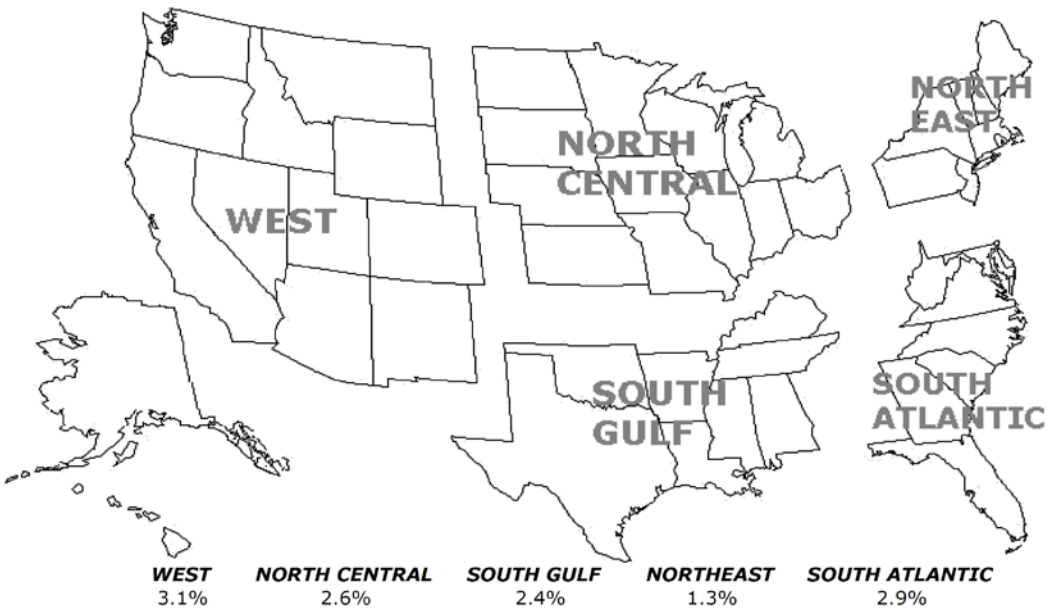
The traffic forecast developed for the project – namely, an approximate 2.0% average annual growth rate in traffic volumes – is based on standard methodology, best available data, and the professional judgment of traffic forecasting experts at NCDOT. It is important to keep in mind that it would not be surprising to observe, from year to year, deviations from the anticipated average rate or even periods of minimal or no growth. The objective of traffic forecasting is to reasonably estimate long-term traffic trends for a given horizon.

The process that led the agencies to identify a long-term trend of approximately 2% traffic growth was as follows. The agencies examined data showing historical traffic trends on US 70 in Craven County and within the Havelock city limits over an approximate 20-year period preceding the date of the forecast in 2008. The observed historical trends, depending on location along US 70, reflect slow to moderate annual traffic growth on US 70 ranging from 1.7% to 2.5%, as indicated in the methodology summary provided by the NCDOT Transportation Planning Branch as part of the traffic forecast for this project.

The agencies also received input from local planning staff, including the planning directors for Craven County and the City of Havelock, regarding estimated growth in housing and employment. The NCDOT Transportation Planning Branch also considered county census, housing, and employment data. After considering these various sources of data, the NCDOT Transportation Planning Branch relied on professional expertise and judgment to determine a reasonable average growth rate and arrived at 2%. For areas like Havelock that are outside the jurisdiction of a metropolitan planning organization (MPO), this method of traffic forecasting is considered standard by NCDOT and FHWA.

As information, the following figure is provided to note recent national travel trends for the last year.

Annual Percent Change in Vehicle Miles Traveled April 2015-2016



Note: All vehicle-miles of travel computed with Highway Statistics 2014 Table VM-2 as a base.
Compiled with data on hand as of June 09, 2016
Some historical data were revised based on HPMS and amended TVT data as of December 2014.

Travel Totals. http://www.fhwa.dot.gov/policyinformation/travel_monitoring/tvt.cfm Accessed June 29, 2016.

The commenter refers to the different growth rate scenarios described in the Travel Time Analysis of the Final EIS Chapter 2.8.3. It is important to note that the 0.0% and 0.83% rates were used solely for sensitivity testing and are not considered realistic expectations for traffic growth. The 0.0% rate provided a "floor" for the sensitivity analysis, but as described in the FEIS Chapter 2.8.3, it is "not considered likely for planning purposes because state population projections show growth ranging from a minimum of 0.83% inside Havelock to higher ranges regionally and statewide." A 0.0% rate would mean that there is no local or regional growth of any kind over a 20+ year horizon. The 0.83% scenario matches the expected population growth for the Havelock area, as forecasted by the North Carolina Office of State Budget and Management. A rate of 0.83% suggests that growth would only occur within the Havelock study area, with absolutely no growth occurring

regionally. Based on the data and trends described above, and the expectation for both local and regional growth, the agencies deemed that the approximate 2% rate is appropriate and reasonable for early screening of alternatives.

9 Specifically, the Transportation Agencies relied on the forecasts of gridlock to eliminate less damaging, cost effective alternatives from consideration prior to any detailed study.

For example, the FEIS states that while alternative solutions such as "[s]ignal coordination and optimizing signal timing would improve traffic flow . . . the benefits of this improvement would be limited due to the high volumes projected for the roadway."[34] Likewise, physical improvements such as median closures, service road extensions, the addition of turn lanes and intersection realignment were rejected in part because they could not "accommodate future traffic volumes" alone.[35] The FEIS goes on to reject passenger rail as an alternative, failing to even consider it as a component of a project, because "[d]ue to the level of forecasted traffic volumes and mix of regional through traffic, passenger rail was not deemed to be a feasible alternative to a bypass."[36] The "Improve Existing: Expressway Alternative" was similarly rejected based on a capacity analysis calculated using the 2035 forecast.

Likewise, in their response to our comments on the DEIS, the Transportation Agencies repeatedly cite the forecasts of rapidly increasing traffic congestion. For example, in response to our suggestion to look at alternative solutions, the Agencies state that "NCDOT maintains that there are . . . transportation . . . needs that support construction of the proposed Havelock Bypass," (and no other alternative) citing the travel forecasts in the FEIS.[38] They also explain that "an expressway design on the existing U.S. 70 alignment would not operate at an acceptable LOS due to high projected traffic volumes at intersections."[39] In asserting that the project addresses transportation needs, they again reference the growth scenario in their travel forecasting analysis,[40] and state that "[t]he . . . traffic analysis . . . demonstrates that additional through capacity is needed or the highway will fail in the design year."[41] The forecasts are thus instrumental to the Agencies' decision making process.

Response No. 9:

Traffic forecasting and capacity analyses were not used to arbitrarily reject viable alternatives. These tools were one of several factors in the process of selecting alternatives for detailed study. FHWA and NCDOT have answered similar comments from the same commenter as part of Appendix D of the Final EIS. In addition, the Final EIS in Chapter 2 discusses the various preliminary alternatives and the reasons why some alternatives were not carried forward for detailed study.

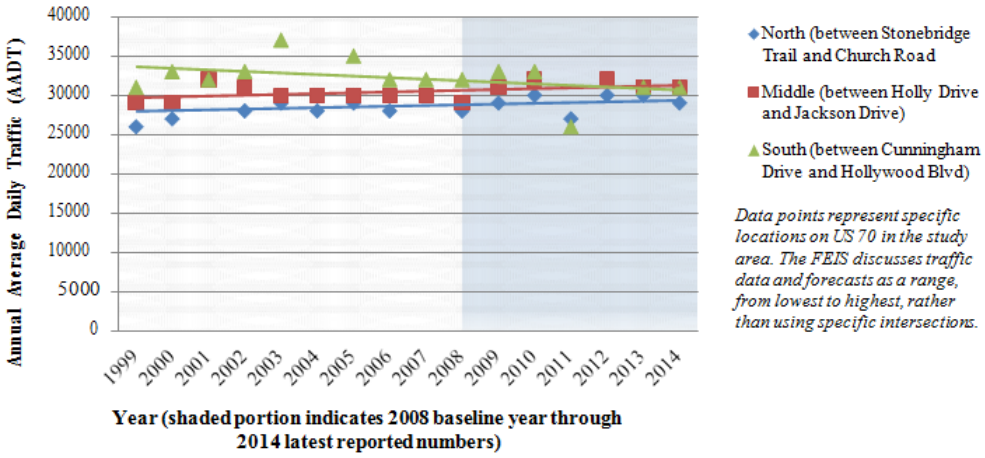
The traffic capacity analysis that was done to assess alternatives was based on the design year (2035) forecast discussed above in Response No. 8. Although capacity analysis can be a factor in determining whether to carry an alternative into detailed study, each preliminary alternative was compared to the primary purposes of the project. Chapter 1 of the Final EIS describes the primary needs and purposes related to the project. Information related to needs, purposes, and alternatives has been reviewed with the Section 404/NEPA Merger Process team. This interagency team of state and federal agencies has determined that an appropriate range of alternatives was studied in the DEIS and that it is not necessary to restart the process of screening alternatives.

Answers to similar comments related to preliminary alternatives and project purpose and need can be found in Response Nos. 1, 2, 11, 28, 29, 32, 33, 34, 35, and 36 from the same commenter in Appendix D of the FEIS.

10 Despite the traffic forecasts' central role in the alternatives analysis, the Agencies have not provided any rationale for selecting the 2.0% growth rate. The FEIS does not cite any data for rejecting the 0.0% or 0.83% growth rate. The choice of growth rate is fundamental to the NEPA analysis and must be supported.

The requirement to support the selection of the 2.0% growth rate is made more urgent here because real world experience since 2008 has demonstrated that the predictions used to eliminate alternatives and justify construction of the Bypass have no basis in reality. Annual traffic counts obtained from the NCDOT website—but not included in the FEIS—show that the Agencies' projections of 2.0% traffic growth and subsequent worsening of traffic conditions has not materialized. In fact, traffic volumes have remained stable for the past fifteen years, even experiencing a decline in some portions of the study area. Figure 1 below shows recorded traffic volume data in the study area from 1999 to 2014, with the shaded area representing the time period between 2008 (the year of NCDOT's traffic forecasts) and 2014 (the most recent data publicly available).

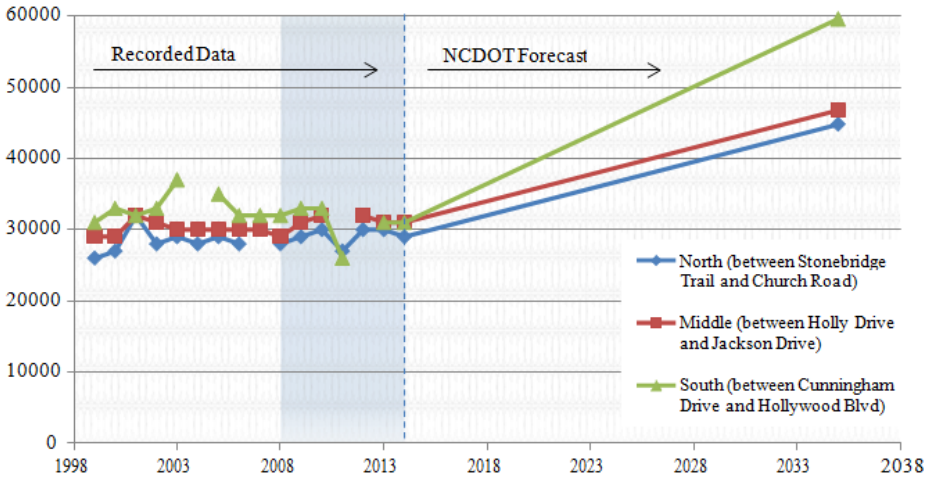
Figure 1: 1999-2014 Recorded Annual Average Daily Traffic (U.S. 70 around Havelock)[43]



In 2008, when NCDOT made their forecasts, traffic volumes ranged from 23,400 to 34,800 per day.[44] In 2014, traffic volumes ranged from 24,000 to 31,000 per day.[45] The FEIS quietly admits this, stating that "the average current traffic may be slightly lower than 2008 estimates," but then fails to reconcile this reality with its decision to continue using the 2.0% growth forecast to support its analysis.[46] Instead, the alternatives analysis continues to be based on the unsupported assumption, indeed, an assumption that has proven to be incorrect, that traffic volumes along U.S. 70 will skyrocket to 39,900 to 59,600 per day by 2035.[47] Figure 2 below shows recorded traffic volume data from 1999 to 2014, and then illustrates the enormous shift towards massive traffic growth that would be needed to achieve the levels that the Transportation Agencies project for 2035. In fact, because actual traffic volume between 2008 and 2014 has declined—not increased by 2% annually—traffic volumes would have to see an increase of between 51% and 92 % from 2014 levels to meet the forecast that underpins the FEIS's analysis.

The Transportation Agencies not only fail to disclose this data in the FEIS, they fail to offer any explanation for the great disparity between the Transportation Agencies' growth assumptions and actual traffic volumes that have been noted during the six years since the Agencies' 2008 baseline year. Moreover, the FEIS lacks any explanation to support the explosive growth (beyond 2.0% annually) that would be required to reach the forecasted traffic volume given the decline in traffic since 2008.

Figure 2: 1999-2014 Recorded Annual Average Daily Traffic (U.S. 70 around Havelock) and NCDOT's 2035 Traffic Forecast Assumptions[49]



Year (shaded portion indicates 2008 baseline year through 2014 latest reported numbers)

Data points represent specific locations on US 70 in the study area. The same data points are used to compare NCDOT's 2035 AADT projections. The FEIS discusses traffic data and forecasts as a range, from lowest to highest, rather than using specific intersections.

The continued reliance on the 2.0% growth rate is further called into question given the assertion in the FEIS that "[i]n summer 2014, NCDOT *verified* its traffic forecasts and analysis by re-evaluating both capacity and travel time. The updated traffic analysis . . . demonstrates that additional through capacity is needed or the highway will fail in the design year."[50] This so-called verification process was presumably the 2014 analysis of the traffic forecasts by Stantec used as part of FHWA's reevaluation process, but not included in the FEIS.[51] Where one might have reasonably expected this process to examine whether projections were in fact proceeding as expected, with six additional years of data available, the 2014 analysis simply looked at the 2008 data and reran those numbers. No updated data was considered as part of the analysis. All the analysis did, therefore, was attempt to confirm that the 2008 projections had been created using proper procedures. No attempt was made to verify that the forecasts were accurate or to reconcile the forecasts' failure to accurately project lack of growth between 2008 and 2014.

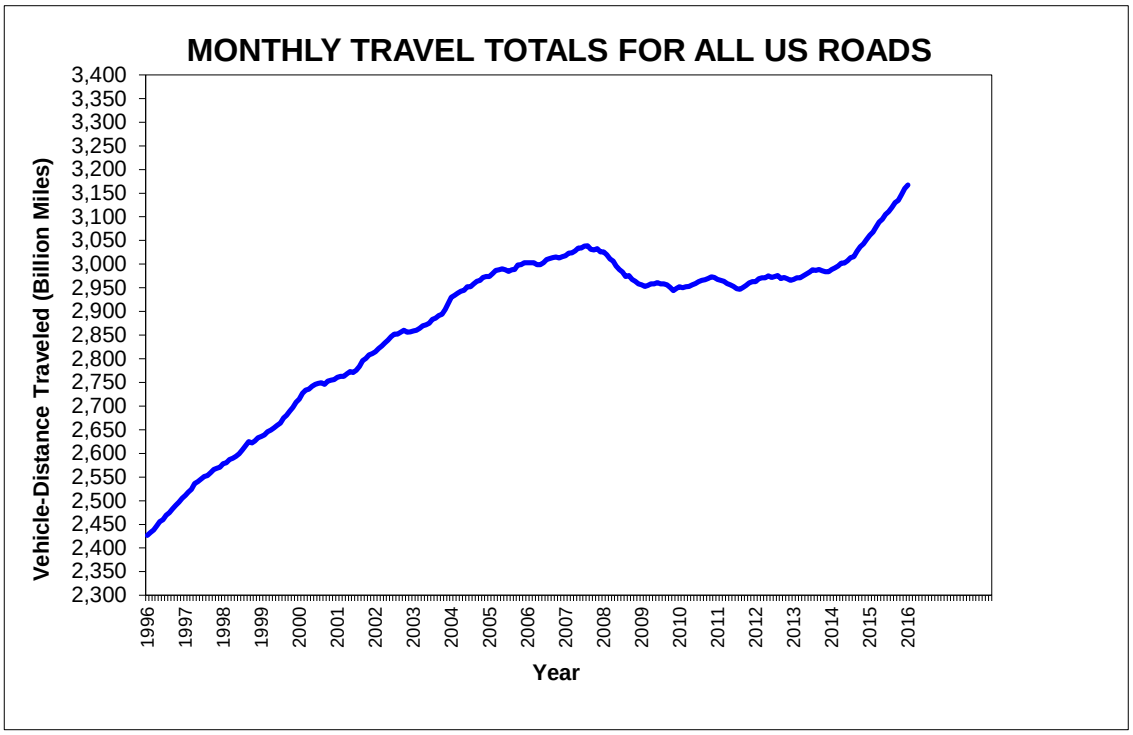
The fact that U.S. 70 traffic volumes in the study area are not increasing at the rate projected by the FEIS—or, indeed, at all—means that alternatives that were previously rejected as infeasible may now be reasonable and require study.[52] But the Transportation Agencies chose instead to ignore what has actually been taking place in the U.S. 70 corridor and continue to rely on inflated traffic forecasts to justify eliminating all non-bypass alternatives.

Instead of correcting their flawed forecasts, the FEIS uses them to eliminate reasonable alternatives, thereby failing to "[r]igorously explore and objectively evaluate all reasonable alternatives."[53] Furthermore, continuing to fall back on their original traffic forecasts and 2.0% growth assumptions despite evidence of the inaccuracy of those outdated assumptions "runs counter to the evidence before the agency" and is arbitrary and capricious.

***Response No. 10**:*

Contrary to the comment, the traffic forecasting efforts for this project are not arbitrary. See Response Nos. 8 and 9 above, and Response Nos. 11 and 12 below, for information related to the traffic forecast. The traffic forecast developed for the project – namely, an approximate 2.0% average annual growth rate in traffic volumes – is based on standard methodology, best available data, and the professional judgment of traffic forecasting experts at NCDOT.

It is important to keep in mind that it would not be surprising to observe, from year to year, deviations from the anticipated average rate or even periods of negative, minimal, or no growth. The objective of traffic forecasting is to reasonably estimate long-term traffic trends for a given horizon. For example, as shown in the figure below, it is noted that the relatively steady traffic conditions between 2008 and 2014 were substantively influenced by and coincided with a period of national economic disruption, especially in the housing and financial sectors, that is not evidenced in more recent years nor is it expected to continue through and beyond the year 2035 traffic forecast horizon.



SOURCE: Federal Highway Administration, Office of Highway Policy Information. Traffic Volume Trends: Monthly Travel Totals. http://www.fhwa.dot.gov/policyinformation/travel_monitoring/tvt.cfm Accessed June 29, 2016.

It is also noted that data collected from the South Atlantic region of the United States in 2015 and the first quarter of 2016 show a steady trend of positive growth in vehicle miles traveled. This data, as well as data from the years cited by the commenter back to year

2002 are published by the Federal Highway Administration and provided at http://www.fhwa.dot.gov/policyinformation/travel_monitoring/tvt.cfm. Relative short-term fluctuations in traffic volumes are expected and are not indicators that the long-term forecast for the Havelock Bypass is either arbitrary, capricious, or in error.

11 B. The FEIS Relied on a Methodology that has been Determined to be Illegal.

The traffic forecasts used to justify the need for the Bypass and to eliminate non-Bypass alternatives are further flawed because they were created using a methodology that the United States District Court of the Eastern District of North Carolina, the federal court with jurisdiction over this project, has ruled is illegal.[55] The FEIS purports to compare forecast traffic congestion in 2035 for "build" and "no build" scenarios, but in forecasting future traffic the FEIS relied on socio-economic data that assumed growth that would occur *with* the Havelock Bypass in place would also occur if the road was not constructed.[56]

The illegal approach has the effect both of making construction of the proposed highway appear more necessary, as well as making other, less damaging practicable 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 Havelock Bypass being one of them.57 The appeal was denied by the U.S. District Court, and thus the court's initial ruling declaring this method illegal stands.58

FHWA's apparent wide use of this flawed methodology does not make it any less illegal or misleading.59 The NEPA process for another highway on FHWA's list, the Illiana Expressway, was recently determined illegal by a federal court in Illinois.60 FHWA is not appealing that ruling.

Response No. 11:

Contrary to the comment, the methodology used to develop the traffic forecast for this project is not identical to the methodology at issue in recent litigation in the U.S. District Court for the Eastern District of North Carolina. The primary difference is that Havelock, unlike the regional areas involved in those other cases, is not within an MPO-jurisdiction and is not considered a "modeled" area. In a modeled area, traffic forecasting may rely on socio-economic projections, transportation analysis zones (TAZ), and travel demand modeling (TDM). By contrast, the forecast for this project is based on historical trend line analysis collected on US 70, among other factors, as summarized above in Response No. 8.

12 In the case of the Havelock Bypass, the use of the same data set[61] that assumed construction of the highway to create both "build" and "no build" traffic forecasts is particularly troubling. The FEIS predicts that if the Bypass is not constructed, travel speeds will drop to 8-13 mph, and travel times along U.S. 70 in the study area will increase to 38.7-60.8 minutes.[62] The FEIS goes on to suggest this level of congestion would lead to "regional and statewide effects.[63]" Yet, as discussed below, these dramatic changes to road conditions were not factored into projections of future land use. Thus, the traffic forecasts used in the FEIS assume the same level of growth (2.0% annually) whether the highway is constructed or not.

In the FEIS, the Transportation Agencies want to have it both ways. They emphasize the need for a new location Bypass by noting that U.S. 70 "must operate well to help North Carolina attract new businesses, grow jobs and catalyze economic development."[64] Yet they then illogically and unlawfully assume that growth that would continue at the same rate whether or not a Bypass is constructed. Such contradictory analysis is antithetical to informed decision-making and violates NEPA.

Response No. 12:

See Response to Comment 11 above regarding the standard methodology for developing the traffic forecast in a non-modeled area such as Havelock. Potential traffic and land use changes were evaluated for the future design year 2035, under both no-build and build conditions. Final EIS Chapter 1.9.3 and Exhibit 1.9.2 describe design-year (2035) estimated traffic volumes under no-build conditions. Final EIS Chapter 2.8.1 and Exhibit 2.8.1 describe design-year (2035) estimated traffic volumes under build conditions. As discussed in the Final EIS Chapter 2.8.1, in the future year of 2035 under build conditions, "[a]dditional trips are anticipated to be generated from origins inside and outside of the project area" and some traffic (5,000 vehicles per day) that would otherwise use other corridors would be expected to divert to the bypass if it is built.

The US 70 corridor connects the population centers of Raleigh, Smithfield, Goldsboro, Kinston, New Bern, Havelock and Morehead City, a fact which influences forecasted traffic volumes on US 70 through Havelock. Regionally, US 70 provides connectivity with commerce centers at the Port of Morehead City, Global TransPark (a 2,500-acre multimodal industrial park in Kinston, NC), industries in New Bern and Craven County, Cherry Point US Marine Corps Air Station, Camp Lejeune and other military facilities, and it functions as a primary route for seasonal beach traffic. US 70 is a regional facility that provides connectivity to coastal destinations, the capital region, and significant points in between.

As one of the few regional east-west routes, travelers will continue to use this route despite congestion. It is also a commuter route into MCAS Cherry Point. As noted in Final EIS Chapter 4.16.4, many military personnel live in New Bern or in Carteret County and commute into Havelock. This chapter also notes that this trend is likely to continue, as population projections show growth in other portions of Craven County, as well as in Carteret County. Even if congestion occurs, a certain amount of growth is still anticipated. It is not desired by FHWA or NCDOT to force regional or local travelers to navigate a congested route. Please see Responses Nos. 8, 9, 10 and 11 above, and Response No. 14 below, for additional related information.

13 C. The FEIS Presents an Arbitrary Projection of Induced Growth.

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."[65] 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."[66] The transportation agencies' analysis of induced growth for the Havelock Bypass, however, is superficial, based on flawed assumptions and inadequate to satisfy NEPA.

Response No. 13:

FHWA and NCDOT disagree with the comment that the study of this project is "inadequate to satisfy NEPA." Please see Response No. 2 and No. 14 below for additional related information.

14 ***1) Inaccurate Baseline***

To conduct an analysis of indirect growth, the agency necessarily had to project future conditions under the "No Build" condition. An accurate No-Build baseline is essential for a satisfactory NEPA review.[67] Yet, in its review of transportation projects, NCDOT fails to include accurate baseline scenarios with regularity.[68] As such, NCDOT frequently presents NEPA documents that fail to account for the full extent of indirect environmental impacts that are likely to result from major new highway construction.

The FEIS for the Havelock Bypass is no exception. The Agencies' analysis of induced growth begins with the assumption that under a "No Build" scenario Havelock will continue to grow at an annual rate of 0.83% for Craven County and 1.5% per year for Carteret County, resulting in an overall population growth of 16.7% and 29.3% between 2010 and 2030.[69] The EIS does not make clear what overall assumption was made for the precise expected growth rate within the study area, but presumably it was somewhere between 0.83 and 1.5%.

The unsupported growth rate assumes that growth will continue as it has done in recent years and is a replica of the similar unsupported assumption underpinning the Agencies' use of the same socio-economic data for "build" and "no build" traffic forecasts. Such an assumption, however, fails to take into account what the Agencies predict would be the result of a "no build" condition. As noted above, in their analysis of future traffic, the Agencies predict (without any support) that if the Bypass is not constructed traffic along U.S. 70 would become so congested that it would take as long as 60 minutes to make the current 11 minute journey through the corridor.[70] Where currently traffic speeds through the corridor are 42-47 mph, the agencies expect that if the Bypass is not constructed speeds will slow to as low as 8 mph.

Despite these predictions, the Agencies assume that this dramatic—hypothetical— increase in congestion and travel times would do nothing to stymie growth and development in Havelock. In other words, the Agencies assume that people will wish to move to Havelock whether it takes them 11 minutes to cross town or 60. The Agencies assume that 8 mph travel speeds within the City will be no deterrent at all to developers wishing to build new subdivisions. Yet nowhere in the Agencies' explanation of the "No Build" scenario for land use is there any explanation as to why it is reasonable to expect that with such hypothetical, extreme congestion, growth would continue unabated. In fact, the EIS repeatedly suggests the opposite; noting, for example, that improving travel time on the Bypass is necessary to help "attract new business, grow jobs and catalyze economic development."[71]

Response No. 14:

Regarding no-build population projections, the FEIS at page 4-132 states, "The Office of State Budget and Management publishes population projections by county for North Carolina (NCOSBM, 2013). The population growth rate published for Craven County at the time of the report was an approximate annual rate of 0.83%, which falls between the suggested rates cited by the City in the 2011/2012 report. Therefore, the state projection numbers were chosen to determine the projected population of the ICI study area. According to the Office of State Budget and Management, the percent increase expected in Craven and Carteret Counties between 2010 and 2030 is 16.7% (0.83% annually) and 29.3% (1.5% annually), respectively. These rates were applied to the ICI study area 2010 Census population to determine the projected No-Build population in 2030." These existing sources of data are considered to be reliable.

With regard to land uses associated in the no-build scenario, the attractiveness of specific areas may change in response to congestion along existing US 70, which has the potential to shift where people choose to live and work, but regional and local growth is still anticipated to occur based on NCOSBM projections. To the extent the commenter suggests that the transportation agencies should assume less or no population growth at all under the 2035 no-build conditions due to modeled traffic speeds, the transportation agencies do not believe such an assumption would be reasonable.

The commenter appears to take a quotation out of context. The quotation above in actuality refers to the regional function of US 70, not to the promotion of economic development specifically in Havelock or the ICI Study Area. The full text states, "The STC (formerly SHC) is a long-range planning effort that identifies a critical network of 25 multimodal transportation corridors considered the backbone of the state's transportation system. These 25 corridors move most of North Carolina's freight and people, link critical centers of economic activity to international air and sea ports, and support interstate commerce. They must operate well to help North Carolina attract new businesses, grow jobs and catalyze economic development."

Please see Response No. 12 for related information.

15 ***1) Unclear Analysis***

Without an accurate baseline that takes account of the impact of the Agencies' own projections of congestion under a "No Build" scenario, the Agencies are unable to accurately project the likely impact of Bypass construction on induced growth and changes to land use. In addition to this fundamental inadequacy, the land use changes that are projected in the EIS are not presented in a transparent fashion. The EIS includes two maps of "Build" and "No Build" land use patterns, but no similar map of current land use is included, making it difficult to determine which areas are expected to grow and which are currently developed.72 The EIS states that "graphical depictions of the Build and No-Build scenarios are presented in Exhibits 4.16.1a- b."73 Yet these exhibits do not appear to have actually been included in the EIS.

Response No. 15*:*

FEIS Exhibit 3.1.1 (Page 3-3) shows existing land use and is referenced in FEIS Chapter 3.1.1. FEIS Chapters 4.16.4 and 4.16.5 describe the methodology for and considerations involved in developing the build and no-build scenarios. Page 4-143 should reference

"Exhibits 4.16.1 and 4.16.2." These exhibits are initially introduced in FEIS Chapter 4.16.5 on Page 4-138. Section 8 of the ROD notes that the reference to Exhibits 4.16.1a-b on Page 4-143 should be changed to Exhibits 4.16.1 and 4.16.2, as contained on Pages 4-139 and 4-141 of the FEIS.

It is important to keep in mind that the build and no-build scenarios described in the Final EIS are estimates of future conditions. Using presently available data, accepted methodologies, and conservative assumptions, the transportation agencies have strived to develop a reasonable forecast of conditions in the distant future.

Please see Responses Nos. 12 and 14 above for related information.

16

1) Craven 38- Weyerhaeuser Development

Notably absent from the analysis of induced growth is any mention of the proposed new 1,700 acre mixed-use development by Weyerhaeuser (the "Development"). The project would be located down Lake Road, just south of Havelock and accessible by the proposed Lake Road Bypass interchange. The development is envisioned to accommodate "400 acres of light industrial use with rail and road access, commercial and neighborhood sites, huge tracts of single family and multi-family, high, medium and low density housing, medical facilities, a civic district, open spaces and community amenity sites."74

Plans for the Development make clear that it is integrally connected to the Havelock Bypass. The proposed development is said to be placed in a "strategic location along U.S. 70 corridor, just outside the proposed Havelock Bypass."75 It was noted that some of Weyerhaeuser's criteria in selecting a location "were to have rail, good transportation corridors and the standard utilities: electric, water, sewer and gas."76 Presumably then, Weyerhaeuser would not select Havelock if the 8 mph traffic speeds that NCDOT predicts in a "No Build" scenario would come to pass. And indeed, Taylor Downey, North Carolina operations manager for Weyerhaeuser Real Estate noted publicly that "[e]xisting rail and plans for the U.S. 70 Havelock Bypass with access to Lake Road appear to make the site ideal."77 Havelock Mayor Lewis underscored this point in December 2014, noting that the Havelock Bypass would bring growth and specifically citing the Weyerhaeuser development.78

In other words, the Development will not move forward without the Havelock Bypass, and is thus an indirect effect of the Bypass that must be considered in the environmental analysis.

With regard to the analysis of reasonably foreseeable indirect impacts of a project, NEPA guidance states that:

> [I]f there is total uncertainty about the identity of future land owners or the nature of future land uses, then of course, the agency is not required to engage in speculation or contemplation about their future plans. But, in the ordinary course of business, people do make judgments based upon reasonably foreseeable occurrences. It will often be possible to consider the likely purchasers and the development trends in that area or similar areas in recent years; or the likelihood that the land will be used for an energy project, shopping center, subdivision, farm or factory. The agency has the responsibility to make an informed judgment, and to estimate future impacts on that basis, especially if trends are ascertainable or potential purchasers have made themselves known. The agency cannot ignore these uncertain, but probable, effects of its decisions.79

This guidance makes clear that an analysis of the Weyerhaeuser development must be included in the Havelock Bypass EIS. The City of Havelock has been working with planners, consultants and

the developer to move the project forward and the Agencies' "informed judgment" should have led them to full consideration of "these uncertain, but probable, effects of [their] decision."[80] Among other impacts, the Agencies should have considered how a large development at the Lake road intersection might affect USFS's ability to perform prescribed burns necessary for the preservation of habitats.

Response No. 16:

When NCDOT conducted interviews for the ICI water quality modeling analysis, local planners did not have any information to provide on this development. According to Weyerhaeuser officials contacted in April 2016[1], the planned development and associated water/sewer extension is not dependent on the Havelock Bypass. The site is seen as appropriate for development based on proximity to rail and the future possibility of additional aircraft at Cherry Point. Although the development is not predicated on the proposed bypass, Weyerhaeuser acknowledged the makeup of land uses would vary depending on the presence or absence of the proposed bypass. There would be less commercial development without a bypass. With the bypass, light industrial would continue to be an appropriate land use. From a water quality modeling perspective, the water quality modeling results for the build and no-build scenarios would be similar because commercial and light industrial land uses are very similar with respect to impervious cover.

17

4) Outdated Assumptions Regarding Buffers

The analysis of induced growth is further flawed because it incorrectly assumes "that existing stream buffers as well as marsh and open water wetlands as depicted on the existing land use map would remain."[81] In making this observation, the FEIS fails to disclose the extent to which these riparian buffers were established or protected by local ordinance. 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 limits 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, unless none of the stream buffers noted are established by local ordinance, the assumption in the FEIS that existing stream buffers will stay in place is without merit. As a result, it is likely impacts to streams and water quality may be greater than disclosed in the FEIS.

Response No. 17:

The buffers included in this analysis are based on state, not local, regulations and would not change the project's water quality model.

[1] Phone conversation with Taylor Downey, NC Operations Manager for Weyerhaeuser Real Estate Development Company. Melissa Ruiz, Stantec. April 6, 2016.

18 III. ALTERNATIVE 3 IS NOT THE LEAST ENVIRONMENTALLY DAMAGING ALTERNATIVE AND CANNOT BE PERMITTED.

The FEIS erroneously conflates the legal standards governing selection of a Preferred Alternative and selection of the Least Environmentally Damaging Practicable Alternative ("LEDPA"). NEPA regulations do not dictate what must be selected as a preferred alternative. An EIS shall "[i]dentify the agency's preferred alternative or alternatives, if more than one exists, in the draft statement and identify such an alternative in the final statement unless another law prohibits the expression of such a preference."82 That analysis includes consideration of "effects" on the "human environment," which include not only ecological effects, but also "aesthetic, historic, cultural, economic, social, or health" effects.83

By contrast, the Clean Water Act ("CWA") mandates selection of the alternative with the least impact on the aquatic environment with limited exception. The LEDPA regulations state that "no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the *aquatic ecosystem*, so long as the alternative does not have other significant adverse environmental consequences."84 At the outset, only adverse impacts to the aquatic ecosystem can be considered. A practicable alternative that would have the least impact on the aquatic ecosystem can only be rejected if it has "other significant adverse environmental consequences." The preamble to the rule makes clear that this secondary analysis is intended to "take into account evidence of damage to other *ecosystems* in deciding whether there is a 'better' alternative."85 The Corps has recognized that the secondary analysis focuses on "substantial impacts to other *natural* environmental values."86 In short, the environmental impacts that can be considered in designating the LEDPA are significantly narrower than those that may be considered in selecting a preferred alternative. In short, the environmental impacts that can be considered in designating the LEDPA are significantly narrower than those that may be considered in selecting a preferred alternative.

The "Preferred Alternative" selected for the Havelock Bypass is not, however, the LEDPA. The FEIS confuses factors that may ordinarily be used by a transportation agency to suggest a preferred alternative with the legal strictures of the Clean Water Act. Specifically, the FEIS relies on a number of factors that are not relevant to a LEDPA determination to justify the selection of Alternative 3—a decision first made in 1998, prior to any environmental impact statement89—stating that "[t]he Preferred Alternative's alignment was designed to avoid and minimize impacts to the human and natural environments to the extent possible including the City of Havelock, MCAS Cherry Point, streams, wetlands, and RCW clusters on NFS lands."90 These factors can be categorized as (1) relating to the built environment; (2) relating to the aquatic environment, and (3) relating to the non-aquatic natural environment.

The first category of factors considered in the FEIS—which appears to have driven the analysis—relate to the human environment. Those factors include relocations and impacts to farmland.91 Although relevant for purposes of disclosure under NEPA, neither relate to the aquatic environment or natural ecosystems, which are the only lawful considerations when comparing practicable alternatives to select the LEDPA.92 The FEIS concedes that relocations— not impacts to the natural environment—were the basis for rejecting Alternative 2.93 Elimination of Alternative 2 as the LEDPA based on relocations, which cannot be considered, is arbitrary and capricious.94

The FEIS's limited analysis of the impacts to the aquatic ecosystem demonstrates that Alternative 3 is not the LEDPA. The FEIS admits that "Alternative 3 impacts the highest amount of wetlands."95 It also impacts the most wetlands on the CNF, the second highest stream footage

on the CNF, and the second highest square footage of buffers—both overall and on the CNF.96 Alternative 1, by comparison, impacts fewer wetlands overall and on the CNF, fewer feet of streams on the CNF, and fewer buffers overall and on the CNF.97 During the merger process, "EPA pointed out that the impacts table indicates that Corridor 1 has the least impacts and could be considered LEDPA."98 Given that Alternative 1 has a less impact on the aquatic ecosystem than Alternative 3 in nearly every category, Alternative 3 could only be the LEDPA if Alternative 1 has "other significant adverse environmental consequences" or is impracticable.

The FEIS makes clear that Alternative 1 does not have "other significant adverse environmental consequences." Compared to Alternative 3, Alternative 1 impacts fewer forested acres, fewer acres on the CNF, fewer forested CNF acres, and avoids the Southwest Prong Flatwoods Natural Heritage Area in its entirety. Alternative 1 is substantially more protective of longleaf pine ecosystems—it would have less impact to longleaf pine, to mature longleaf pine (older than 70 years), to longleaf pine associated with intact native ground cover, and to longleaf pine associated with loamy soils (which are especially difficult to restore). In fact, much of the forested acreage that is affected by Alternative 1 is currently pine plantation and is not a natural ecosystem whatsoever.

Because it is more protective of important habitat, Alternative 1 is also better for rare species. As summarized in Appendix C, in comparison to Alternative 3, Alternative 1 impacts fewer acres with fewer occurrences of rare species, affects fewer rare species, affects fewer sensitive species, and affects fewer locally rare species.99

The only argument against Alternative 1 that is stated in the FEIS—that it fragments a larger section of the CNF—has no support. The FEIS states:

Alternative 1 is not considered the least environmentally damaging alternative because it fragments a large amount of CNF habitat, and because the USFS has stated that conducting prescribed burns would be extremely difficult, resulting in considerable long-term habitat fragmentation effects on RCW populations within the CNF.100

That argument relies on two inexplicable, unsupported assumptions. The first assumption is that more land east of the proposed bypass necessarily means more habitat fragmentation. The FEIS contains no support for that assumption. To the contrary, it is clear that Alternative 1 would cause less fragmentation to USFS land. As demonstrated by comparing the alternative corridors and mapping of USFS lands in the FEIS, Alternative 1 avoids fragmenting USFS lands to a significant extent.101 Alternative 3 bisects not only the SW Prong Flatwoods SNHA, but also fragments CNF lands—and RCW habitat—between Sunset Drive and Lake Road, including substantial direct impacts to longleaf pines more than 80 years old.102 Alternative 1 avoids this fragmentation entirely and, instead, would primarily impact pine plantations that already fragment habitat on the CNF and provide no ecological benefit.103

Maintaining the continuity of USFS parcels under Alternative 1 is critical. As discussed in our DEIS comments, small populations are subject to extirpation due to random events.104 Alternative 3 would bisect USFS lands such that it would create fragments of habitat that provide little ecological function. The figure below,105 cropped to isolate the portions of Alternative 1 and 3 that are different, demonstrates the fragmentation caused by Alternative 3 that is avoided by Alternative 1. There is no question that Alternative 1, though it includes more USFS east of the bypass, causes substantially less fragmentation of meaningful habitat.

The second unsupported assumption—that USFS has deemed burning to be more difficult under Alternative 1—is similarly illogical. The FEIS states that "USFS staff indicated that Alternative 1

would . . . make prescribed burning *extremely difficult*."106 Similarly, the FEIS claims that "Alternative 3 is most conducive to conducting prescribed burns."107 Such key assumptions must be supported. Here there is no support. Alternative 3 would fragment USFS lands such that burning would be restricted to smaller, isolated pockets and in close proximity to the bypass at almost all times. The error in the FEIS's reliance on the bald assertion that burning would be more difficult is clearly demonstrated by looking at the potentially affected RCW territories.

Unlike Alternative 3, Alternative 1 would leave territories 12-44R and 58 almost entirely intact. Alternative 1 would divide territory 901, but would leave the majority of that territory— including known cavity trees—as part of a larger, contiguous parcel of USFS land with territories 58 and 12-44R. Alternative 1 also creates a larger buffer between cavity trees and the proposed bypass.

Under either alternative, the same territories would require burning. Alternative 3 creates five separate parcels that USFS would be required to burn to maintain habitat. Alternative 1 creates one very large parcel of land and one rather small parcel. There is no justification presented in the FEIS for concluding that burning two parcels is considerably more difficult than burning five.

Finally, the FEIS states that Alternative 3 is the "least cost alternative."108 In addition to being untrue based on the figures reported in the FEIS,109 it is irrelevant. In the LEDPA analysis, cost is a factor in determining practicability.110 The FEIS does not, and cannot, make any argument that Alternatives 1 and 2 are not practicable. In fact, Alternative 1 is the cheapest alternative.111

In sum, while Alternative 3 may be selected as NCDOT's Preferred Alternative under NEPA, it cannot be the LEDPA under the Clean Water Act. Alternative 1 has less impact on the aquatic environment, less impact on forested land, less impact on the CNF, less impact on rare species, fragments less CNF habitat, avoids the SW Prong Flatwoods significant natural heritage area, and has less direct and indirect impact on RCW habitat. In their unique sections, Alternative 1 traverses industrial pine plantations; Alternative 3 bisects irreplaceable habitats of great ecological significance. Moreover, Alternative 1 maintains more continuity between habitats that must be burned in order to avoid jeopardizing the RCW as well as reducing fragmentation of RCW habitat. There is no environmental factor that supports selecting Alternative 3 as the LEDPA over Alternative 1.112 Therefore, it must be rejected.

Response No. 18

The Federal Highway Administration, US Army Corps of Engineers, NC Department of Transportation, NC Department of Environment and Natural Resources – Division of Water Quality, and other members of the NEPA/404 Merger Team re-affirmed concurrence on Alternative 3 as the Least Environmentally Damaging Practicable Alternative (LEDPA) on April 10, 2012. The input received from the resource and regulatory agencies that comprise the Merger Team is instrumental in the transportation project development process in North Carolina. The DEIS and FEIS explain how input from participating federal and state regulatory and resource agencies informed the decision-making for this particular project.

19 IV. THE FEIS FAILED TO THOROUGHLY ANALYZE A REASONABLE RANGE OF ALTERNATIVES TO THE BYPASS.

Central to the NEPA process is the agency's analysis and disclosure of reasonable alternatives. After identifying the underlying purpose and need for their intended project, agencies must

"[r]igorously explore and objectively evaluate all reasonable alternatives" that could achieve that underlying purpose.113 An "informed and meaningful consideration of alternatives - including the no action alternative - is an integral part of the statutory scheme."114 The agency must "[d]evote substantial treatment to each alternative considered in detail, including the proposed action, so that reviewers may evaluate their comparative merits."115 Only those alternatives that are deemed to be unreasonable can be eliminated from study.116 Detailing all feasible solutions forces the agency to consider the environmental effects of a proposed project and to evaluate those against the effects of alternatives.117

Thus, an EIS for a highway project "should consider all possible alternatives to the proposed freeway, including changes in design, changes in the route, different systems of transportation and even abandonment of the project entirely."118 "Each alternative should be presented as thoroughly as the one proposed by the agency, each given the same weight as to allow a reasonable reviewer a fair opportunity to choose between the alternatives.

The DEIS described in detail only three variations of the same general concept, and the FEIS failed to remedy that failure. Each of the three alternatives considered in the FEIS involves construction of a new location bypass through the Croatan National Forest. Strikingly, the discussion of alternatives to a new location bypass occupies just 13 pages of the FEIS.[120] Without analysis, the FEIS prematurely rejects all alternatives that do not involve construction of a new highway, violating NEPA's requirement that all reasonable alternatives be considered.

Response No. 19:

A similar comment (number 28) was received from the same commenter and a response given in Appendix D of the Final Environmental Impact Statement.

As indicated in that response, reasonable alternatives were not prematurely rejected. Under the NEPA/404 process and CEQ regulations, it is appropriate to evaluate preliminary alternatives and eliminate the unreasonable ones before detailed study is conducted. The alternatives development process is explained in detail in the DEIS and the FEIS.

20 **A. <u>Focus on the Strategic Highways Corridor Plan Artificially Restricts the Consideration of Reasonable Alternatives.</u>**

NEPA regulations require agencies to provide a statement specifying "the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action."121 This "purpose and need statement" determines the range of reasonable alternatives that will be examined in the EIS.122 An agency may not "narrow the objective of its action artificially and thereby circumvent the requirement that relevant alternatives be considered,"123 in effect rendering the EIS a "foreordained formality."124

Like the DEIS before it, the FEIS highlights the following goals in its "Summary of Need for the Proposed Action": regional mobility, regional connectivity, and traffic operations.125 The statement of purpose, however, is much narrower. One of the two primary purposes of the proposed Havelock Bypass is to "enhance the ability of U.S. 70 to serve the regional transportation function in accordance with the Strategic Highway Corridors Plan." 126 The

Strategic Highway Corridors Plan ("SHC") is a "long-range highway planning vision" that in 2003 called for U.S. 70 to be upgraded to a freeway through Havelock, forming a portion of NCDOT's "Super 70" project.127 Notably, the "freeway" designation has very specific parameters: "high mobility, low access, a posted speed limit of 55 mph or greater, full control of access, no traffic signals, no driveways, and a minimum of four lanes with a median."128

In response to our initial comments on this matter, the Transportation Agencies further underscore this point. Where we had noted that "the stated project purpose is to simply build a freeway," the Agencies disagree, noting that in fact their predetermined design was far more specific: to build "a controlled access, median divided freeway."129 Such a narrowly tailored project purpose does not pass muster under NEPA. Because the outcome was essentially preordained from the start, the analysis that follows in the EIS necessarily restricts itself to just considering options that would result in a "controlled access, median divided highway, "circumvent[ing] the requirement that relevant alternatives be considered."130 To legally comply with NEPA, the underlying goals of increased mobility and safety should have been considered more broadly and reasonable alternatives such as upgrading the existing road should have been fully studied.

Importantly, the SHC was never subject to the public participation requirements of NEPA. Under the recent adoption of the federal FAST Act, such planning products must meet a set of requirements in order to be incorporated into an EIS.131 Planning products must, among other things:

- "include[] broad multidisciplinary consideration of systems-level or corridor-wide transportation needs and potential effects, including effects on the human and natural environment;"
- "include[] public notice that the planning products produced in the planning process may be adopted during a subsequent environmental review process;"
- "[be] documented in sufficient detail to support the decision or the results of the analysis and to meet requirements for use of the information in the environmental review process;" and
- [have been] approved within the five-year period ending on the date on which the information is adopted or incorporated by reference."132

Importantly, the SHC has recently been replaced by the Strategic Transportation Corridors Plan ("STC"), and a new draft STC policy specifically eliminates the "facility type designations" written into the old SHC.134 In fact, despite the assertion in the FEIS that "previous planning efforts under the SHC program remain valid" and "development of the new STC policy is not intended to alter ongoing or prior project development related to active SHC projects,"135 NCDOT's former Director of Strategic Planning, Susan Pullium, has explained that the decision to eliminate facility type designations was based on the recognition that doing so restricted the options the Department and local planning organizations could explore for addressing transportation needs.136

The phasing out of the SHC, in addition to the elimination of facility type designations in the STC because of the very flaw we assert here—the restriction of options for addressing transportation needs—is absolutely a "significant . . . new circumstance that has a reasonable likelihood of affecting the continued validity or appropriateness of the planning product." As such, the SHC does not meet the requirements for incorporation into the FEIS, and cannot be relied upon to justify the narrow purpose of constructing a "controlled access median-divided freeway."

Response No. 20:

As stated in FEIS Chapter 1.8.1, the SHC program established a consistent vision for each corridor, acknowledging that facility types for particular corridors may vary due to project-specific elements, but the SHC program did not predetermine the study or selection of alternatives for this project. The commenter has misinterpreted NCDOT Response No. 2 in the Final EIS (Appendix D) to mean that the vision for the facility is a "predetermined design." It is not. This is why supplemental planning and design studies, including public involvement activities, were subsequently conducted during the preparation of the DEIS and FEIS to determine whether SHC visioning was consistent with the overall project.

In response to previous comments from the same commenter on the DEIS and FEIS, as well as the response to comment 21 below, FHWA and NCDOT have explained that a non-freeway option to improve existing US 70 was studied as a preliminary alternative and subsequently eliminated from detailed study for multiple reasons most recently documented in Chapter 2.6.3 of the FEIS.

21 B. The FEIS fails to adequately consider upgrades to the existing highway infrastructure.

In our comments on the DEIS we suggested the Agencies consider a variety of alternatives to the new-location Bypass including upgrades to the existing roadway network, access management solutions, increased rail improvements. In addition, we noted that these alternatives should be considered in combination.

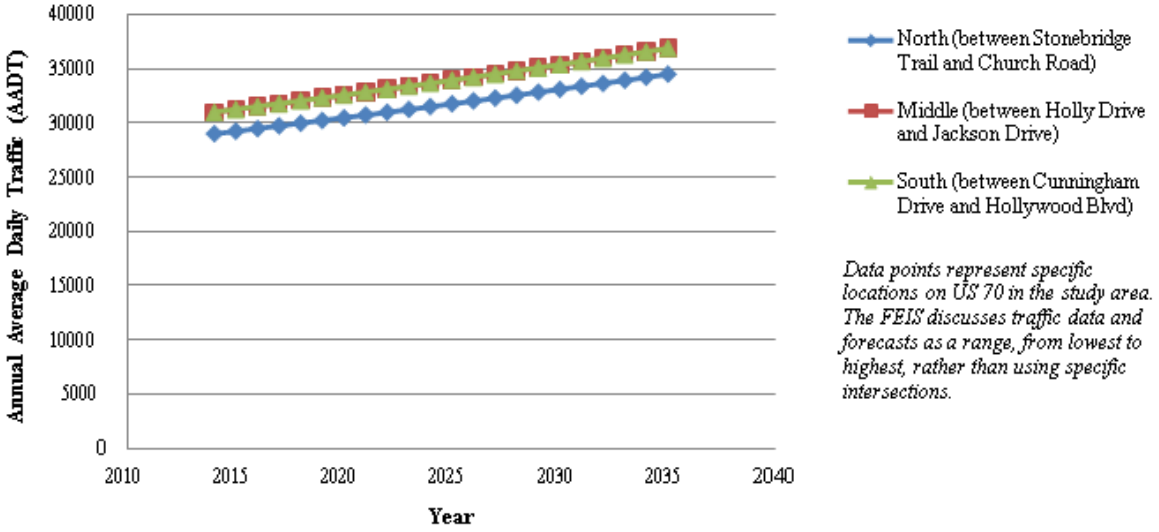
1) **Superstreets**

Superstreets, or "Synchronized streets" are becoming an increasingly popular tool in North Carolina to address traffic flow by providing efficient movement and increasing travel safety.[137] Superstreets are specifically designed to handle congestion caused by traffic signals and left-turning traffic,[138] and can "dramatically improve travel" with the end result of "smoother traffic flow, fewer collisions, and a more efficient use of public roadways."[139] NCDOT has emphasized that superstreets are "safer for vehicle travelers," with a 42% reduction in reported crashes compared with traditional intersections, and safer for pedestrians.[140]

Superstreets can provide traffic benefits when other alternatives are unavailable or unfeasible, and have been shown to reduce travel time in multiple situations.[141] A study commissioned by NCDOT concluded that superstreets are "a viable option for upgrading arterials . . . where low volume, two-lane roads meet a high-volume, divided, four-, six-, or eight- lane arterial."[142] The study noted that superstreets are "best suited for divided arterials with high through and left turn volumes on the major road."[143] That study also recommended "building superstreets as a corridor rather than a single, isolated intersection where possible."[144] In sum, the study concluded that superstreets are a viable option for roads such as U.S. 70 though Havelock.

Moreover, an April 2015 NCDOT fact sheet summarizing the benefits of superstreets states that four lane superstreets "can serve through volumes of 40,000—50,000 vehicles" per day.[145] Currently traffic volumes through Havelock are approximately 31,000 vehicles per day.[146] NCDOT has suggested that superstreets would not be a viable option in the future because of their expectation that traffic will skyrocket.[147] As noted above, however, NCDOT's expectation of 2% annual growth has no rational basis, traffic growth has been flat for the past fifteen years. It is not clear that traffic is likely to grow at all, but if a more reasonable rate of traffic growth is assumed—the 0.83% briefly considered in the EIS—traffic volumes will reach just 36,900 vehicles today, as shown in Figure 4 below.

Figure 4: Forecasted Annual Average Daily Traffic (AADT) Around Havelock with 0.83% Growth[148]



Moreover, if the 2% traffic growth did materialize starting at the last recorded year for traffic data—2014, traffic volumes would reach just 46,700 vehicles per day. 149 All of these volumes fall well below the 50,000 vehicle threshold NCDOT has recognized as being accommodated by a four lane superstreet.

Because a four lane superstreet would not impact adjacent businesses in the same manner as certain other upgrades, it would be less likely to cause the negative impacts associated with restricted access options or a bypass.150 Superstreets can also be built without traffic signals, although signals may be necessary in busy locations. At an approximate cost of $105,000 per intersection, superstreets are significantly less expensive than a bypass, placing a smaller burden on state taxpayers.151 As such, superstreets in combination with other upgrades should have been considered in the FEIS as an alternative upgrade to the existing roadway.

The transportation agencies, however, summarily excluded this low-cost, effective solution from consideration by briefly noting that superstreets did not meet NCDOT's "vision" for a new freeway.152 This singular focus on a predetermined vision again violates NEPA's purpose to explore and disclose alternative options to the public and decisionmakers.

Response No. 21:

See our previous Response Nos. 7, 8, 9, 10, and 11 regarding traffic forecasting. Two separate "upgrade existing" alternatives were studied; however their shortcomings and degree of impacts (when compared to other alternatives) led to their elimination from more detailed evaluation. The Steering Committee, which eventually transitioned to the NEPA/404 Merger Team, concurred with eliminating these options from detailed study in the DEIS for the proposed project. The NEPA process contemplates this type of progressive decision-making.

Superstreet designs fall under the Expressway category where side-street traffic is redirected from going straight through or left at a divided highway intersection. All side-

street traffic must turn right, but can then access a U-turn to proceed in the desired direction. Under some circumstances, the superstreet concept can provide an effective design along heavily traveled arterials such as US 70; however, the lower levels of access control associated with Expressway designs (i.e., driveways and sidestreet connections) are not compatible with the SHC vision for US 70, nor with the City of Havelock's 2030 Comprehensive Plan that envisions a Main Street aesthetic for the future of existing US 70.

A superstreet design on existing US 70 would eliminate the ability for the City of Havelock to implement its Main Street vision as presented in the City of Havelock 2030 Comprehensive Plan and would only be a partial step toward implementing the full SHC vision for US 70 in this area. The proposed bypass would allow for the implementation of both the City's vision for existing US 70 and the SHC's vision for the US 70 corridor.

22 ***2) Access Management***

In 2012, after the publication of the DEIS, the U.S. 70 Corridor Commission released a Draft Access Management Plan that included proposed access management measures for the segments of U.S. 70 located in Craven County and in the area of the proposed bypass. NCDOT completed a 1.5-mile median and signal improvement project in 2012, and as explained in the FEIS, additional improvements are planned in the area of the U.S. 70/Slocum Road intersection in Havelock as recommended in the 2005 Access Management Study and the Draft U.S. 70 Corridor Commission Access Management Plan.153 Those improvements include "median closures, directional cross-overs, service road extensions, signal removal, and improvements to the U.S. 70/NC 101 intersection."154

Access management measures, however, are summarily rejected without analysis by the transportation agencies. The FEIS lists a number of TSM measures including both operational and physical improvements, but then goes on to dismiss them as being incapable of reducing traffic congestion enough to improve the levels of service on U.S. 70 to an acceptable level.155 As noted above, this assessment assumes extremely high levels of traffic growth that cannot be reasonably expected to occur.

Moreover, the FEIS also fails to examine the success of recently implemented TSM improvements such as the median and signal improvement project completed in 2012. The EIS fails to include any recent analysis of current travel times in the corridor to determine how these improvements may have improved traffic flow. As such, the Transportation Agencies not only failed to assess and present the current baseline, but they also passed up an opportunity to determine the effectiveness of such measures.

Instead, the EIS simple states that "[t]he construction of these TSM improvements has not reduced traffic congestion enough to improve the levels of service on U.S. 70 to an acceptable level in the design year (2035)."156 This simple statement combines a number of the Agencies' repeat flaws. It relies on unreasonable projections of dramatic increases in traffic, it arrives at a conclusion without any real time data, and it fails to consider how projects that have already been implemented might combine with other solutions bring about the overall improvement noted in the statement of purpose and need.

Cursory rejection of TSM improvements in this manner also ignores the success that such improvements have had elsewhere in the state. 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."157 TSM improvements were applied to 23 intersections along US 74 and included measures such as signal timing optimization and directional crossovers.158 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 in 2013.159

U.S. 70 suffers from many of the same problems as U.S. 74 – too many driveways, intersections and stop lights leading to congestion and traffic delays. As such, there is no reason to suggest that solutions that have been effective along U.S. 74 would not be effective along U.S

Before NCDOT commits to moving forward with the Havelock Bypass, TSM strategies should be studied independently, as well as in combination with other concepts, such as superstreet improvements and expanded rail service. The Transportation Agencies should update and expand the U.S. 70 Access Management Study, and fully analyze the measures proposed by that study—as well as those proposed in the 2012 Draft U.S. 70 Corridor Commission Access Management Plan—outlining the costs and effectiveness of access management measures associated with more minor improvements such as closing median breaks and rerouting driveway access along U.S. 70. Combined with other measures, access management could improve mobility more than a bypass alternative and at a lower cost and with much less damage to the natural environment.

Response 22:

See Response Nos. 7 through 11 regarding traffic forecasting. The 2014 traffic capacity analysis update takes into account that most of the existing route is now a four-lane, median-divided roadway with service roads and consolidated, signalized intersections. A level-of-service analysis was conducted for existing US 70 in 2035 with these TSM improvements in place and found that signal coordination and optimizing signal timing would improve traffic flow; however, the benefits of this improvement would ultimately be limited due to the volumes projected for the roadway, even at mild to moderate average annual growth rates. The operating speed is already restricted due to the number of traffic signals along the roadway, and as traffic volumes increase the ability to maintain efficiency at the signals will further diminish. Both studies referred to by the commenter (2005 US 70 Access Management Study and 2012 Draft Access Management Study) were completed by a private engineering firm working for the US 70 Corridor Commission. Neither study assumed that TSM improvements would resolve the need for additional improvements such as the proposed Havelock Bypass.

23 ***3. Rail***

The NCDOT Rail Division's 2015 Comprehensive State Rail Plan lays out the economic and social benefits of freight and passenger rail, explaining that "[t]he state's rail network offers a relief to highway traffic by providing an alternative route for passengers and freight."160 The economic benefits of rail are substantial, and "[t]ransportation infrastructure is an investment with a long life that plays an important role in shaping the state's future economy."161 Freight and passenger rail networks boast lower shipping costs, lower pavement costs associated with wear and tear on roads, and lower congestion costs as highway travel is reduced.162 In fact, the annual direct economic impacts of freight rail services in North Carolina is estimated at approximately $1.75 billion, and the annual direct economic impacts of passenger rail services is estimated at approximately $121 million.163 Rail use also results in broader social benefits, with an estimated annual impact of $311 million in emissions and safety impacts.164

Rail alternatives, however, are dismissed from consideration as a component of a multi- modal transportation system with little discussion—the section on rail alternatives comprises less than two pages.165 As admitted in the FEIS, "[a] number of . . . rail improvement projects . . . are Rail has great potential, in combination with other reasonable upgrade alternatives, for achieving the project's underlying purpose of providing efficient movement and increasing travel safety. It is important, therefore, that the Transportation Agencies fully consider rail to reduce demand on U.S. 70, particularly for its ability to mitigate congestion and increase safety.

i) Freight rail

There are currently more than 3,200 miles of freight railroads in North Carolina and plans to expand.168 The 2015 Comprehensive State Rail Plan highlights future infrastructure improvements to facilitate increased freight travel by rail, designating the rail improvements from Selma and Global TransPark to Morehead City as a priority.169 The U.S. 70 Commission recognizes the need for rail service between Global TransPark and the port in Morehead City to avoid congestion on U.S. 70,170 and improved rail access for that route is a core aspect of the 25-Year Vision for North Carolina.171

Expanded freight rail in the U.S. 70 corridor could go a long way to taking truck traffic off of U.S. 70, reducing congestion and increasing safety. Indeed, as stated in the 2015 Comprehensive State Rail Plan, "[u]tilizing rail is a cost-effective way to gain travel capacity in high-use corridors," and increased rail capacity provides significant benefits in the way of congestion mitigation, safety, and reduced emissions.172 Because of the benefits of freight rail and its potential to be enhanced in the project study area, it should have been more thoroughly studied in the FEIS.

The FEIS, however gives short shift to freight rail alternatives, "a large number of rail improvements would be needed to considerably reduce truck traffic on U.S. 70 through Havelock," and "there is no single or specific set of rail improvements or combination of multimodal improvements that would reduce truck traffic on U.S. 70."173 Therefore, according to the FEIS, "there is no reasonable alternative that includes rail improvements."174 These vague statements and conclusion fail to comply with the rigors of NEPA, which requires the agencies to examine how expanded freight rail might combine with other reasonable upgrade measures to meet the underlying purpose of the project.

i) Passenger rail

The FEIS correctly notes that there are two railroads currently servicing Havelock and that neither offers passenger service at this time.175 Amtrak, however, expanded service into eastern North Carolina in 2012, providing a Thruway bus connection between Morehead City, Havelock, New Bern, Greenville and the Amtrak station in Wilson, North Carolina.176 Before settling on this Thruway route, Amtrak specifically cited the military population of eastern North Carolina as a reason for considering expansion into the area.177 As reported in Amtrak's FY 2014 report for its operations in North Carolina, the new route through Havelock "ha[s] experienced a steady growth in ridership."178 In sum, Amtrak operations in North Carolina reported nearly 1 million boardings and de-boardings in 2013 alone—almost double its 2001 ridership of 500,000.179 In addition, between 2011 and 2013, passenger rail activity at North Carolina stations has increased by 8.3%.180

Amtrak expansion has received interest from the Super 70 Corridor Commission and has been endorsed by local governmental agencies.181 NCDOT also continues to consider future expansion in eastern North Carolina, and "station planning is underway . . . to complement future passenger service in the region."182 The FEIS, however, rejects this alternative in part because "[d]ue to the level of forecasted traffic volumes and mix of regional through traffic, passenger rail

was not deemed to be a feasible alternative."183 Again, these overstated traffic volumes cannot be used to artificially eliminate alternatives in this manner.

Because Amtrak expansion is supported by the Super 70 Corridor Commission, because it could alleviate through traffic congestion on the existing corridor and because it could provide access for travelers to Morehead City and Carteret County beaches, passenger rail—both the Thruway service and potential future expansions—should have been considered in greater detail in combination with other upgrade existing alternatives.

Response No. 23:

The information in FEIS Chapter 2.4.2 provides examples of the improvements needed to create a rail alternative that could address freight transportation needs, including an intermodal facility and relocation of the rail line through Morehead City. This chapter of the FEIS also discusses the dominance of truck freight and the issues with rail freight being a competitive alternative.

Due to the level of forecasted traffic volumes (See Response Nos. 7 through 12 regarding traffic forecasting) and the substantial proportion of regional through traffic (vs. local traffic), passenger rail was not deemed to be a feasible alternative to a bypass. Implementation of future rail is also still uncertain with no defined programming.

24 **C. The FEIS fails to demonstrate that the detailed study alternatives actually meet the project goals of improved mobility and safety.**

The FEIS makes clear that NCDOT's real intent in pursuing this highway project is to realize the "vision" of a "controlled access, median-divided new location freeway." By contrast, the more substantive, general stated goals of improving mobility and safety are given short shrift. In fact, information in the FEIS suggests that the preferred alternative will likely not meet those goals.

1. Mobility

First, while the FEIS claims that levels of service are improved by selecting the preferred alternative over the no-build alternative, this claim is misleading. Level of Service ("LOS") is the effect of a number of factors such as speed, travel time, traffic interruptions, freedom to maneuver, driving comfort, convenience and safety. Six levels are defined, from A to F, with A being the most desirable level.184 Here, the data on levels of service at intersections should assist the decision maker in discerning how a particular intersection functions and provide a basis for comparing whether changes will allow it to function at a higher level of service.

The FEIS projects that "only five of the thirteen signalized intersections . . . will operate at an acceptable LOS" by the design year 2035 under a no-build scenario.185 First, as noted above, the projected LOS are all based on levels of traffic growth that cannot be reasonably expected to occur. In addition, the FEIS fails to provide projected levels of service for design year 2035 for those same intersections if the bypass is built. Instead, it only provides a LOS analysis for the new-location bypass itself, projecting that the bypass will operate at LOS A and B.186 Any analysis of existing U.S. 70 LOS after construction of a bypass was excluded from the FEIS.187 The FEIS simply admits, without explanation, that "[a]lthough the proposed bypass would reduce through traffic volumes on existing U.S. 70, projected traffic volumes on the existing route in 2035 would still exceed system capacity."188 Elsewhere in the FEIS, the transportation agencies note the desire of the City of Havelock to return U.S. 70 to "main street."189 Because the EIS fails to examine the conditions that will be present on U.S. 70 in the future if the Bypass is constructed there is no way to determine if this "main street" ideal is achievable.

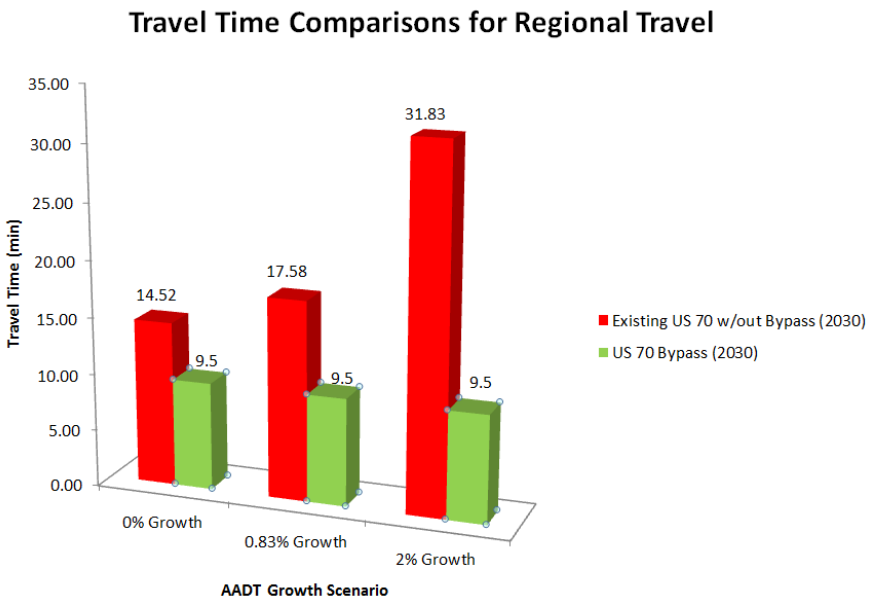
***Response 24**:*

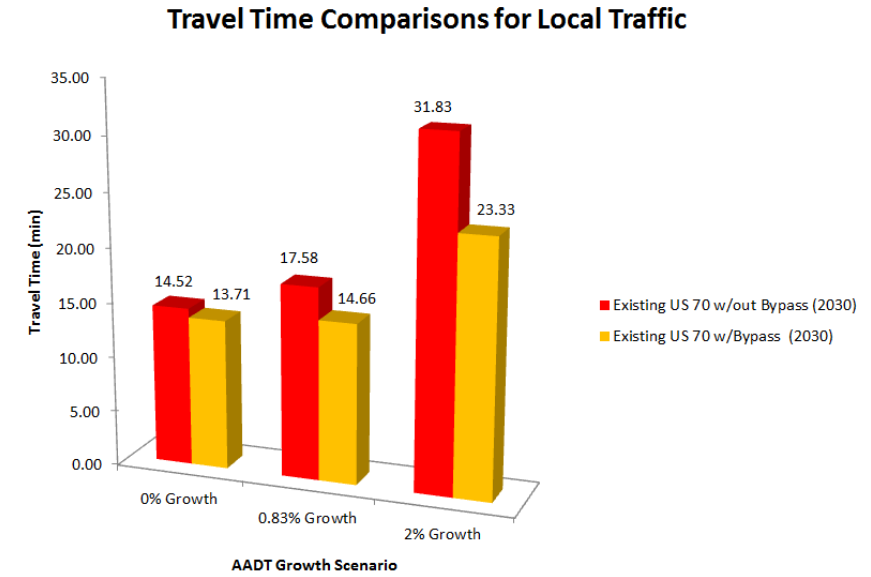
After considerable study, the agencies have determined and confirmed that the bypass will serve the primary purpose of improving regional connectivity and mobility. In stating that the FEIS suggests the preferred alternative will likely not meet the primary purpose of improving mobility, the commenter appears entirely focused on LOS analysis and fails to consider travel time analysis provided in Chapter 2.8.3 of the FEIS. The travel time analysis clarified mobility benefits that would be realized on both the bypass and existing US 70, collectively the US 70 corridor, if the preferred alternative were constructed.

Although the commenter continually characterizes the NCDOT traffic forecast (approximately 2% average annual growth through the horizon year 2035) as unreasonable, FHWA and NCDOT do not agree and have responded to this assertion originally made in Response No. 8. Even considering the commenter's concerns regarding the traffic forecast, the travel time analysis provided is a sensitivity analysis, meaning it evaluates the degree to which the expected benefits of the project would be sensitive to hypothetical rates of traffic growth less than the forecasted rate of 2%. The agencies selected two alternative scenarios to compare to the forecasted rate of 2%: a rate of no growth (0%) and rate of 0.83% growth in traffic. As stated in Response No. 8, the 0.0% rate provided a "floor" for the sensitivity analysis, but as described in FEIS Chapter 2.8.3, it is "not considered likely for planning purposes because state population projections show growth ranging from a minimum of 0.83% inside Havelock to higher ranges regionally and statewide." The 0.83% scenario was selected as a rough mid-way point between the hypothetical (albeit unlikely) assumption of no growth and the 2% forecast. The 0.83% scenario matches the expected population growth for the Havelock area, as forecasted by the North Carolina Office of State Budget and Management. A population growth rate of 0.83% was also used in the Water Quality Indirect and Cumulative Impact analysis for the Final Environmental Impact Statement. Reliance on projections and data produced by other expert state agencies is routine in the NEPA process. The intermediate scenario of 0.83% growth, as stated in the Final EIS, is intended to approximate the local growth and "does not account for regional growth that could occur outside the Havelock study area, and that would also be served by the bypass."

The analysis of projected year 2035 travel times was completed using traffic volume projections based on the forecasted 2% average annual growth as well as the hypothetical floor (0% growth) and midpoint (0.83% average annual growth) rates. The analysis illustrates that the Preferred Alternative improves mobility even if actual growth were to be lower than the forecast growth; however, NCDOT maintains that the forecast long-term 2% growth is reasonable despite recent short-term actual rates that are lower than 2%.

As reported in the FEIS, through-traffic will be able to traverse this section of existing US 70 a minimum of approximately 7% more quickly than without the bypass, even if the floor growth rate (0%) is used for analysis. The time savings increases to approximately 13% at a minimum if a 0.83% average annual growth rate is used for analysis. If the forecast growth of approximately 2% is used, through travelers on existing US 70 will save a minimum 33% travel time over the no-build scenario.





In the more likely event that through travelers use the proposed Havelock Bypass, they could individually save between 7.9 and 31.4 minutes dependent on the growth rate selected for analysis.

In addition to the traffic forecasting process, the agencies tested hypothetical rates of traffic growth less than the forecasted rate of 2% and gauged the level of travel-time savings expected under the different scenarios. The results of the sensitivity analysis (as described above and in Chapter 2.8.3 of the Final EIS) demonstrate that the bypass produces travel-time savings, as compared to no-build conditions, and improves mobility even under a zero growth assumption. As already stated, it is not considered likely that in the design year of 2035 there would be no additional traffic growth above base year conditions. The reduction in travel times results from traffic diverting off of existing US 70, with its many signals and intersections, to the controlled-access bypass.

As illustrated by Table 2.8.3 in the Final EIS and the graphs above, through-traffic motorists will realize progressively greater travel-time savings as traffic volumes increase. The agencies expect that, over the long-term, regional and local traffic will increase along the US 70 corridor. A Havelock Bypass will enhance corridor mobility and connectivity.

25 ***1. Safety***

Second, the selection of the bypass alternatives is not supported by data regarding safety in the project study area. The FEIS must consider alternatives to the proposed action that may partially or completely meet the proposal's goal and it must evaluate their comparative merits. [190] One of the underlying purposes of the project is to improve safety, but the Preferred Alternative has not been shown to significantly advance that purpose relative to other potential investments. Craven County had the highest number of crashes, 1,194, of all the U.S. 70 counties over the three-year period from 2004-2007.[191] From October 1, 2009 through September 30, 2012, the crash rate for the U.S. 70 project study area was 312.02 crashes per 100 million vehicle miles traveled.[192] While the FEIS notes that crash rates in the project area exceeded the state averages for four lane roads with partial or fully controlled access,193 the FEIS provides no quantifiable data that a new location bypass will actually reduce accident rates along this section of U.S. 70—it simply states that "the frequency of crashes would be lower than the no-build scenario because the proposed bypass is expected to divert a significant amount of traffic."194 Much like the discussion of Level of Service, the FEIS forgoes a data-driven analysis of accident rates on existing U.S. 70 under a "build" scenario, and focuses instead on the assertion that the bypass itself will experience a low accident rate. There is no data whatsoever to support the assertion that diverting a portion of traffic to a new bypass will reduce accident rates on existing U.S. 70 and thus accident rates overall.

Because increased safety is named as a key underlying purpose of the proposed project, the Transportation Agencies must provide a comparative, data-driven analysis examining the extent to which the various alternatives would actually result in safety improvements.

Response No. 25:

As stated in Chapter 1.4, enhanced safety is a secondary purpose of the proposed action, not a primary purpose. Secondary purposes are additional purposes that are desirable, but are not the core purpose of the project.

As stated in Chapter 1.10, a review of the accidents along the studied route shows the most frequent single type of accident involved a rear-end collision (51.6%). The large percentage of rear-end collisions indicates a congested roadway with numerous driveway access points and at- grade intersections. It stands to reason that the addition of a median-divided, fully access-controlled facility with uninterrupted flow would serve as an

attractive option for through traffic. A reduction in traffic volumes on the existing section of US 70 would reduce congestion and in turn would likely reduce the potential for rear-end collisions. This secondary benefit would be common to all detailed study alternatives, but not to the No Build option.

26 The Endangered Species Act ("ESA") imposes substantive requirements on each of the federal agencies involved in the consideration of the proposed Havelock Bypass and the management of RCW populations in the Croatan National Forest. Section 7(a)(1) of the ESA imposes "a specific, rather than a generalized duty to conserve species."[195] To conserve means "to use . . . all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary."[196] Therefore, FHWA, U.S. Forest Service ("USFS"), U.S. Fish and Wildlife Service ("FWS"), and the U.S. Army Corps of Engineers ("Corps") each have a legal obligation to advance the recovery of the RCW.

In addition, Section 7(a)(2) requires each federal agency to "insure 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."[197] As a result, FHWA and the Corps must affirmatively demonstrate that the proposed bypass will not jeopardize the continued existence of the RCW.

We appreciate that the Transportation Agencies have worked to reduce the width of the proposed bypass in consideration of its impact on the RCW, but narrowing the right of way in one territory of the many that would be affected by Alternative 3 is insufficient to meet legal requirements. Our 2011 comments on the DEIS describe the importance of suitable habitat to the recovery of the RCW, detail the importance of the CNF population to the species as a whole, and describes how the CNF population is falling behind recovery goals.[198] As discussed below, the FEIS fails to adequately address the potential impacts of the proposed highway on the RCW, particularly with respect to prescribed burning. Further, because of the status of the RCW as an endangered species, any action taken based on the information and analysis provided in the FEIS would violate the ESA.

Response 26:

FHWA and NCDOT disagree with the commenter's assertion that the proposed project would violate the Endangered Species Act and NEPA. Red-cockaded Woodpecker (RCW) assessments were first conducted for this project in 1996, with several subsequent updates. Most recently, NCDOT updated the potential impacts to RCW clusters in a Biological Assessment provided to USFS and USFWS in November 2013.

As the USFWS representative stated at the Concurrence Point 4A Merger Team meeting on August 20, 2014, the clearing limit was restricted to 200 feet in width for the refined 5,500-foot section of the Preferred Alternative so that habitat to the east can be counted toward the minimum basal area and acreage necessary to maintain an RCW foraging partition. This narrowed width facilitates RCW movement across the cleared corridor, minimizing habitat fragmentation effects. USFWS concurred with the biological conclusion that the proposed project may affect, but is not likely to adversely affect the RCW.

In addition, NCDOT performed a RCW Territory Analysis in 2014 on behalf of USFS to determine if the CNF would still meet standards under the Recovery Plan for the RCW. The study evaluates the acres of pine stands in seven RCW territories on CNF lands before

and after construction of the Preferred Alternative. Review by USFS biologists of this and other documents evaluating RCW habitat within the proposed project limits has led to the conclusion that the CNF will meet standards under the RCW Recovery Plan. The full analysis is included in Appendix C of the Final EIS.

27

A. The FEIS Fails to Provide a Specific, Enforceable Plan for Prescribed Burning

As discussed at length in our comments on the DEIS,199 the RCW is endangered because of, and continues to be harmed by, loss of suitable habitat. Fire is critical to each aspect of RCW habitat and resulting individual fitness,200 and fire suppression is a "profound threat" to RCW populations.201 Prescribed burning will become exceedingly difficult if the Havelock Bypass is built—particularly without a plan in place for regular burns. This conclusion is inescapable considering the difficulty of carrying out prescribed burns near highways and developed areas,202 the history of burning in the CNF203, and NCDOT's lack of definitive commitment to close the proposed bypass for burning. As explained in detail below, this failure to provide a specific, enforceable plan for prescribed burning violates NEPA.

It is important for the Transportation Agencies to understand their obligation with respect to prescribed burning. The entire EIS rests on an assumption that prescribed burning will occur—not simply that it will be possible. The RCW and PETS analyses accept as a foundational premise that prescribed burning will take place according to the LRMP. As the Fourth Circuit held in *Friends of Back Bay*, it is not enough to be "hopeful" that an assumed activity that is the foundation of an environmental analysis will occur, carrying out of the required action must be "assured." 681 F.3d at 589. Therefore, any agreement that the Transportation Agencies reach with USFS regarding prescribed burning must not only ensure that prescribed burning is possible, but that it will—in fact—occur in perpetuity.204

The Transportation Agencies fail entirely to demonstrate that sufficient burning *will* occur if the Havelock Bypass is constructed, and instead relies on vague promises and assumptions. Instead of committing to close the proposed bypass to allow for prescribed burning, NCDOT has formulated a "conceptual plan"205 that does not include any enforceable commitments. In fact, the FEIS simply relies on the same "conceptual plan," or "agreement" cited in the DEIS and derived in a March 2011 meeting between NCDOT and USFS, now summarized in a January 9, 2012 letter.206

The vagueness with which the FEIS discusses closing the road is critical because prescribed burning is essential to maintaining habitat, but also because NCDOT has previously refused to commit to doing so.207 In addition, it is not clear that, even if NCDOT closes the highway, the Forest Service will be able to burn east of the road. The DEIS describes NCDOT and the USFS' effort as attempting to "minimize the likelihood that the Bypass will further complicate prescribed burning in the project area."208 In the past, the Forest Service has stated that even if the highway were closed, it still could not burn between the Bypass and Havelock,209 which would result in the loss of suitable or potentially suitable RCW habitat. Therefore, a conceptual agreement to close the road is insufficient to demonstrate that prescribed burning would be implemented on forest land between the Bypass and Havelock.

Even the "conceptual" agreement fails to account for the additional difficulties NCDOT would encounter in closing an interstate with sufficient frequency to adequately manage RCW habitat. The U.S. 70 Corridor was recently listed as a High Priority Corridor, meaning there is an increased likelihood that NCDOT and FHWA will attempt to convert the proposed Bypass into an interstate in the future. 210 Local officials have noted their support of designating U.S. 70, including the proposed Bypass, as an Interstate. 211 Moreover, NCDOT has publicly noted its support for the

interstate designation yet offered no analysis of the impact that such designation might have on the agency's ability to close the Bypass periodically for burning.212 The effect of such a designation must be addressed.

As the Fourth Circuit has made clear, blanket reliance on unsubstantiated material assumptions violates NEPA.213 In *Friends of Back Bay*, the Fourth Circuit held that the US Army Corps of Engineers' assumption regarding the effectiveness of a mitigation measure, absent any evidence that it would be adequately enforced, was arbitrary and capricious.214 Specifically, the Corps claimed that a No Wake Zone would mitigate the impacts of motorized watercraft to Back Bay National Wildlife Refuge. The NEPA document prepared by the Corps, however, offered no indication that the No Wake Zone would ever be recognized or followed by the public, and thus provided no reasonable basis to conclude that the No Wake Zone would be an effective mitigation tool.

Just like the environmental documentation in *Friends of Back Bay*, the FEIS prepared for the Havelock Bypass operates under an unsubstantiated material assumption—that NCDOT will close the Bypass as needed to allow prescribed burning to take place in the appropriate season and at a sufficient level to sustain the habitat needed for the RCW population. The FEIS offers no detail about how and when future burning will occur and no binding commitment from NCDOT that the road will be closed to allow for prescribed burning in the future.

Terry Gibson's January 9, 2012 letter to Marisue Hilliard ("Gibson Letter") does not ameliorate this fundamental flaw. The letter restates the assumptions included in the DEIS, and later in the FEIS, and states that "[u]nder these general conditions" and the meeting minutes describing them,215 NCDOT agrees to close the Havelock Bypass "when necessary." The letter fails to provide any additional details about the scheduling of prescribed burns, avoids discussion of any of the practical issues involved with conducting prescribed burns, particularly during the construction of the bypass itself, which may take several years, and omits criteria and procedures that would be used to determine whether and how to close the road. Moreover, complete discretion as to whether closing the road is "necessary" lies with NCDOT and the agency does not face any repercussions if it never closes the road to allow for burning.

The assumption in the Havelock FEIS and the Gibson Letter that a sufficient level of burning will occur is no different than the assumption made by the Corps in the *Back Bay* case regarding the No Wake Zone. There, the Corps assumed that a No Wake Zone would protect habitat and relied on that assumption as the basis for its evaluation of environmental impacts. Here, NCDOT and USFS have assumed that NCDOT will close the Bypass and the USFS will carry out prescribed burning, and relied on that assumption when evaluating environmental impacts. Just as the No Wake Zone was a "foundational proposition" upon which the NEPA document was based, so is the assertion that NCDOT will close the Bypass to allow, and USFS will conduct, a sufficient level of prescribed burning to sustain essential habitat. As with enforcement of the No Wake Zone, commitments and details about the closure of the Bypass and prescribed burning are entirely absent from the FEIS.

Without specific, enforceable commitments and further details about the plan for prescribed burning, agencies and the public are helpless to comment on the impact and efficacy of the proposed bypass, and thus the purpose of NEPA is eviscerated.216 Eliciting that comment is an essential purpose of the Act, and for that reason, general conditions cannot satisfy NEPA. If the USFS and NCDOT contend that burning will occur east of the proposed bypass—and FWS is to rely on that assumption—the agencies must develop a specific, enforceable plan that both confronts the complexities of prescribed burning and transfers discretion to close the proposed bypass to

USFS. The mandatory nature of those requirements is at the heart of the Fourth Circuit's *Back Bay* decision, which rejected the Corps and FWS's plan because it "neither mandate[d] enforcement of the NWZ nor guarantee[d] funding therefore," but instead relied on the hope of compliance.217 NCDOT, USFS, and FWS are duplicating that exact error here by relying on vague, unenforceable assumptions regarding prescribed burning east of the proposed bypass and, as a result, join the *Back Bay* defendants in violating NEPA. Here, that error is compounded by the effect of relying on those vague assumptions for the protection of an endangered species.

Response No. 27:

USFS and NCDOT have cooperated to minimize the effect of the proposed Havelock Bypass on the USFS's habitat management program throughout the Steering Committee and Section 404/NEPA Merger processes since the 1990s. Additionally, USFS has been a cooperating agency in the EIS process. While there are other methods by which RCW habitat can be managed through mechanical means or selective use of herbicides, the preferred method of management is through prescribed burns.

The NCDOT has committed on numerous occasions to close the proposed Havelock Bypass for periodic burning. This commitment has been memorialized in several documents: minutes from the March 17, 2011 interagency meeting; the January 9, 2012 follow-up letter from the State Highway Administrator to the Forest Supervisor; the November, 2013 Biological Assessment for the RCW; the November 19, 2013 letter from the USFWS to NCDOT concurring with the Biological Assessment; minutes from the [2016] meeting with the USFS; the [June 27, 2016] letter from the NC Secretary of Transportation to the Forest Supervisor for National Forests in NC confirming the commitment; and the "green sheet" project commitments.

Notwithstanding all the discussion and documentation surrounding the commitment to close the proposed Havelock Bypass to allow prescribed burns, the commenter suggests that NCDOT's express commitment to close the road is not sufficiently concrete or enforceable. FHWA and NCDOT believe these concerns are unfounded. Nationwide, FHWA and USFS have worked cooperatively in the past to close roads as needed for prescribed burns, inclusive of Interstates, and there is no reason why such cooperation would not continue in the future for the proposed Havelock Bypass regardless of whether it eventually is designated an Interstate facility. Furthermore, neither FHWA nor NCDOT intends to jeopardize USFWS's concurrence under the ESA by refusing to close the Bypass.

By directive from the NC Transportation Secretary in June 2016, NCDOT has agreed to close the proposed Havelock Bypass to motorists until it is safe to re-open upon request from the USFS to conduct prescribed burns in the vicinity of the proposed Bypass. NCDOT shall be responsible for traffic control procedures in advance of, during and following prescribed burns. This will include providing variable message signs for notification of planned bypass closure in advance of the planned burn.

NCDOT understands that USFS will continue with its standard procedures regarding prescribed burns, including notification of the public and adherence to all laws, rules, policies, or forest plans that may relate to this activity.

If in the future the Bypass is designated as an Interstate Highway, NCDOT will continue to honor the terms outlined by the NC Secretary of Transportation. Per the Federal-Aid Highway Act of 1956, as amended, the States own and operate the Interstate Highways. As

such, NCDOT will continue to be responsible for establishing operating requirements of the Bypass in the event of Interstate designation. Further, FHWA has a stewardship role and will be promptly notified of proposed closure activities.

28 Rather than providing those details at a stage during which agencies and the public can provide comment, the FEIS improperly relies on the Record of Decision ("ROD") for such documentation.[218] In the FEIS, for example, the Transportation Agencies responded to earlier SELC comments on the prescribed burning plan by stating that "specific detail, beyond the letter and description included in the FEIS is currently being developed."[219] Similarly, in written correspondence with NCDOT in March 2015, USFS outlined several concerns to be addressed by Transportation Agencies in the ROD: "gates/enforcement, advance signing, advance notification, and timing windows."[220]

A specific, enforceable prescribed burning plan is central to the decisionmaking process at hand, and its absence from the FEIS cannot be remedied in a ROD. A ROD is meant to identify the decision that has been made, identify the alternatives that were considered, and state whether any means to avoid or minimize environmental impact have been adopted.[221] It is the final word in the decisionmaking process—a summary and explanation of the decisionmaking process that has already taken place. A ROD is *not* the appropriate place to provide new information and analysis.

One of the core purposes of NEPA is for the public to be involved in the decision-making process concerning large projects that will adversely impact the environment, and NEPA requires the opportunity for "the public and other government agencies to react to the effects of a proposed action at a *meaningful* time."[222] Importantly, while agencies and the public can comment on an EIS, there is no opportunity to comment on a ROD. The inclusion of significant new information and analysis in a ROD would therefore go entirely unscrutinized.

Instead, the information supporting an agency's decision must be in the EIS itself in order to ensure that "environmental information is available to public officials and citizens *before* decisions are made."[223] Indeed, "[w]hen relevant information 'is not available during the [impact statement] process and is not available to the public for comment[,] ... the [impact statement] process cannot serve its larger informational role, and the public is deprived of [its] opportunity to play a role in the decision-making process.'"[224] Putting off key concerns to a later stage is also inconsistent with the requirements of MAP-21 and the FAST Act, the purpose of which are to enhance interagency coordination and ensure that issues of concern are identified and dealt with early in the NEPA process.[225]

Accordingly, an EIS, and not a ROD, is required to provide "full and fair discussion of significant environmental impacts and . . . inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment."[226] Here, the details of the prescribed burning plan, once created, should be included in a Supplemental EIS.

Response No. 28:

The commitment to close the bypass was presented in the Draft EIS preceding a public hearing in 2011, as well as the Final EIS preceding a design public meeting in 2015. (Please see Response Nos. 26 and 27 above for additional information.) The overarching commitment to periodically close the bypass for prescribed burns has not changed such that a supplemental analysis would be required. The logistics of closing the bypass would not affect alternative selection, as closure would be a component of any bypass alternative selected.

29

B. Authorizing the Proposed Bypass Based on the Information and Assumptions Included in the FEIS Would Violate Sections 7(a)(1) and 7(a)(2) of the Endangered Species Act.

The ESA requires every federal agency to conserve listed species and prohibits any agency from jeopardizing the continued existence of any endangered species.227 The FEIS fails to provide the information and analysis necessary to satisfy those requirements. To be sure, it excludes perhaps the most critical piece of information—a detailed agreement between NCDOT and USFS that would allow prescribed burning to take place east of the proposed highway.

Without that agreement and an analysis of its impact on each alternative, the discussion of potential impacts in the FEIS is substantially incomplete. As the DEIS and FEIS recognize, whether or not prescribed burning can take place on the fragmented sections of forest land will substantially affect the impacts of the proposed bypass on the RCW as well as the remainder of the CNF population due to the role of Subpopulation 3 in unifying the overall population. The omitted prescribed burning assessment is, therefore, an essential part of the analysis.

To be sure, the FWS concurrence with Transportation Agencies' biological conclusion that the project "may affect, but is not likely to adversely affect," the RCW was based in part on NCDOT's agreement to allow periodic closures for prescribed burns.228 "With implementation of the prescribed burning of the [RCW] habitat . . . USFWS anticipates a finding that the proposed Havelock Bypass 'may affect, but is not likely to adversely affect' the species."229 On the other hand, "[w]ithout prescribed burning to maintain the RCW habitat, USFWS anticipates a jeopardy call for the species."230

Particularly relevant here, "reliance on the proposed actions of other agencies does not satisfy the FHWA's burden of insuring that its actions will not jeopardize the continued existence" of the RCW.231 Unlike the conceptual plan proposed here, "[m]itigation measures under the ESA must be reasonably specific, certain to occur and subject to deadlines or other forcible obligations."232 By comparison, the proposed plan to close the highway and implement prescribed burning on fragmented segments of forest land is not specified, certain to occur, or subject to any enforceable obligations.

Courts have made clear that federal agencies cannot gamble the continued existence of endangered species on "conceptual" plans like the one this FEIS relies upon. The ESA is "the most comprehensive legislation for the preservation of endangered species ever enacted by any nation."233 Thus, to meet its rigorous standards, "a far more subtle calculation than merely totaling the number of acres to be asphalted is required where the environmental impact of a project is at issue."234 Where, as here, federal agencies fail to demonstrate that an endangered species "can survive the additional loss of habitat caused by the indirect effects of the highway," they violate the ESA.235

Response No. 29:

Please see Response Nos. 26, 27, and 28 above.

30 VI. THE FEIS UNLAWFULLY EXCLUDES A SECTION 4(F) ANALYSIS.

Section 4(f) of the Department of Transportation Act, 23 U.S.C. § 138, prohibits the U.S. Department of Transportation ("USDOT") from approving a project that "requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State or local significance" unless "(1) there is no feasible and prudent alternative . . . and (2) such program includes all possible planning to minimize harm . . . ."236 The FEIS acknowledges this restriction, but then improperly determines that it does not apply to the proposed Bypass.237 As discussed below, DOT must conduct a 4(f) analysis before any impacts to the CNF can be approved because each of the proposed corridors, including the Preferred Alternative, would affect recreation and wildlife areas that are protected by the statute.

First, the proposed bypass would impact portions of the CNF that hold significant recreational value. Recreation is, in fact, one of the Forest Service's priorities under its current management plan for the CNF. The LRMP identifies increasing non-traditional recreational opportunities such as biking and equestrian activities, as well as expanding hunting, fishing, and wildlife-related recreational opportunities, as two issues to be addressed in management decision making.238 The FEIS recognizes these existing uses and states that "visitors to the CNF within the project study area are predominantly engaged in dispersed recreational activities such as hunting, hiking, fishing, and wildlife and bird watching."239 The FEIS also notes that camping is permitted in this portion of the CNF,240 and the 2011 DEIS described the CNF as "gameland open to fishermen and hunters with the proper licenses and permits."241

Second, the area that would be affected by the proposed highway is a designated wildlife area. The area functions as habitat for the RCW, and large portions have been designated by the Forest Service as Habitat Management Areas ("HMAs") for the future expansion of RCW populations. As noted in the FEIS, the proposed bypass would affect five RCW clusters and four recognized HMAs.242 These areas are critical to meeting the LRMP's long-range goal of "[r]ecover[ing] a viable population" and would directly affect the objective of "[m]aintain[ing] the existing 12,000 acres of longleaf pine forest type as pine savanna."243

In addition, portions of CNF lands are designated as black bear sanctuary by the N.C. Wildlife Resources Commission ("NCWRC"). In the current Black Bear Management Plan, the NCWRC reports that nearly a quarter of all black bear harvest on game lands in the Coastal Bear Management Unit occurred in the Croatan.244 The Forest Service has also identified a goal of providing "suitable habitat conditions for long-term viability of the black bear population on the CNF."245 This goal is included in the LRMP, which aims to provide "landscape linkages to other bear habitat and potential foraging areas on public and private land."246 The sanctuary land that would be affected by the proposed highway currently connects public and private land, providing this type of landscape linkage.

Lastly, as the FEIS acknowledges, the proposed bypass would impact two significant Natural Heritage Areas that have been specially recognized by the N.C. Natural Heritage Program. The Southwest Prong Flatwoods Natural Area is recognized as being state significant, meaning it is among the best occurrences of that type of wildlife community in North Carolina. The Havelock Station Flatwoods and Powerline Corridor Natural Area has been recognized as regionally significant, meaning that it is among the most outstanding examples of that wildlife community in the surrounding region.

Despite the recognized significance of these public lands as recreation and wildlife areas, the FEIS blithely asserts that Section 4(f) is not implicated. "Although the CNF would be impacted by the Preferred Alternative, no impacted areas are designated as recreational areas or national wildlife

refuge lands."247 It is not necessary, however, that the lands be *designated for* Section 4(f) purposes—just that they *function for* Section 4(f) purposes.

When it adopted Section 4(f), Congress recognized the importance of public lands and mandated the preservation of those areas.248 FHWA regulations further provide that the prohibition on impacts to public lands applies to "lands which *function for*, or are designated in the plans of the administering agency as being for, significant park, recreation, or wildlife and waterfowl refuge purposes."249 Federal Courts have likewise recognized that lands *functioning for* an enumerated purpose, in addition to those designated as such, fall under the protections of Section 4(f). Courts have noted that the plain language of the statute "contains no requirement that the public parklands to which [4f] applies be permanently designated as such" and have "decline[d] judicially to engraft such a requirement on the statute, given the Congressional policy expressed in the statute that parklands be afforded heightened protection."250

In other words, public land is a Section 4(f) resource if it is "'designated or administered, formally or informally[,]' for a purpose identified in section 4(f)."251 In *Arizona Wildlife Fed'n v. Volpe*, a federal court held that an area of national forest land was a Section 4(f) resource despite the Forest Service's determination that is was not a "proclaimed" recreation area.252 The court emphasized that the land in question was widely used for public recreation, and that the Forest Service therefore recognized and administered it as a recreation area of local, state, and possibly national significance.253 Indeed, as described above, any of the three proposed corridors studied in detail in the FEIS would significantly affect public lands that function for, or are designated as, recreation and wildlife areas protected under Section 4(f).

The Transportation Agencies hinge their conclusion primarily on correspondence received from USFS in 1998, which stated with little explanation that the proposed project does not implicate Section 4(f).254 In addition to predating the applicable regulation, this cursory determination has been contradicted by staff at both the FWS and FHWA. In 1998, the FWS criticized the Environmental Assessment as incomplete for failing to address Section 4(f) based on the "understanding that National Forests have been established using Federal funding and among their purposes are use and enjoyment of recreational opportunities by the public."255 Again in 2010, an FHWA engineer observed that "[t]here seem to be 4f issues associated with this project."256 "Given that the proposed bypass will destroy portions of USFS lands designated for recovery of the federally endangered RCW, how would this not be a 4f issue?"257 The FEIS, however, without explanation maintains that Section 4(f) is not implicated by the project.258

The proposed bypass would detrimentally impact public lands that function for and are designated for the purposes of recreation and wildlife, and that are designated as state and regionally significant natural areas. These are precisely the types of public lands that Congress intended to protect when it adopted Section 4(f) of the Department of Transportation Act, and DOT must fully evaluate the proposed project as required under Section 4(f).

Response No. 30:

FHWA recognizes that the CNF is designated for multiple uses under the Forest Management Plan. As such, the administration considered the applicability of Section 4(f) under 23 CFR 774.11(d). Section 4(f) applies only to those portions of a multiple-use public property that are designated by statute or identified in an official management plan of the administering agency as being primarily for public park, recreation, or wildlife and waterfowl refuge purposes, and are determined to be significant for such purposes. FHWA consulted with the USFS, who has jurisdiction over the lands mentioned by the commenter,

to inform the applicability of Section 4(f) to these lands. In 1998, the Forest Supervisor determined that consideration under Section 4(f) is not required.

FHWA agrees with the USFS's 1998 conclusion that a Section 4(f) evaluation is not necessary for the proposed project's effects on the CNF. As a cooperating agency in the EIS process and a member of the Steering Committee and the Section 404/NEPA Interagency Merger Team, USFS has reviewed the validity of the 1998 advisory letter from the Forest Supervisor regarding Section 4(f) applicability to affected portions of the CNF, and has not subsequently identified any change to this determination that would require further consideration under Section 4(f).

31 **VII. THE TRANSPORTATION AGENCIES MUST PREPARE A SUPPLEMENTAL EIS.**

The 2011 DEIS contained a range of substantive flaws in its analysis of impacts and alternatives and failed to contain significant information key to environmental concerns. SELC submitted comments on the DEIS on November 21, 2011, requesting publication of an SEIS to remedy these issues and provide the public and decisionmakers with the full array of information that NEPA guarantees. As pertinent information key to an environmental review of the proposed bypass continued to emerge, SELC submitted additional comments requesting the preparation of a SEIS on March 30, 2012 and October 30, 2012.

In June 2015, because more than three years had passed since the DEIS for the Havelock Bypass was published, the Agencies completed a reevaluation of the document as required under 23 C.F.R. § 771.129. 259 The purpose of such a reevaluation "is to determine whether or not a supplement to the draft EIS or a new draft EIS is required. A Supplemental DEIS is required

when either: " (1) Changes to the proposed action would result in significant environmental impacts that were not evaluated in the EIS; or (2) New information or circumstances relevant to environmental concerns and bearing on the proposed action or its impacts would result in significant environmental impacts not evaluated in the EIS."260

A reevaluation then, should look into whether there have been "changes to the proposed action" and whether there is "new information or circumstance" that require the publication of a SEIS. FHWA guidance notes that during a reevaluation "FHWA must assure that the environmental documentation for the proposed action" (in this case the DEIS) "is still valid, prior to proceeding with major project approvals or authorizations." 261 The guidance goes on to note that this task is accomplished by " an assessment of any changes which may have occurred in either the project's concept or the affected environment, and a determination of what effects these changes might have on the validity of the environmental documentation."262 The guidance further stresses that the written reevaluation "must demonstrate that the information presented in the Draft EIS is an accurate analysis of the anticipated project impacts."263

In its review of the Havelock Bypass FHWA disregarded both its own guidance and the law. In its reevaluation FHWA concluded that "[a] supplemental EIS is not required because there are no . . . significant new circumstances or information relevant to environmental concerns."264 This conclusion was entirely without basis. First, with regard to fundamental issues such as traffic data, the Agencies simply failed to look and see if there was any new information and thus failed to confirm if the data in the DEIS was still valid. There was therefore no possibility that the Agencies could have demonstrated that the information presented in the DEIS continued to constitute an "accurate analysis." Similarly, with regard to other key issues such as endangered species and wildlife habitat the reevaluation demonstrates that, contrary to FHWA's assertions, a great deal of significant new information *has* come to light since publication of the DEIS, again, making clear

that the DEIS was not an "accurate analysis." The Agencies' reevaluation and failure to prepare a Supplemental EIS was therefore arbitrary and capricious.

A. The Agencies Failed to Consider New Information.

The Havelock Bypass is a transportation project. Key to any assessment of impacts and alternatives therefore is an assessment of traffic conditions in the corridor. NCDOT looked at current and future traffic patterns in 2008 and included their assessment in the 2011 EIS. As noted above, these traffic forecasts were used to eliminate a number of alternatives that would have had significantly less impact on the natural environment. Once the EIS became stale and the Agencies began their evaluation it was imperative for them to evaluate how traffic conditions may have changed and whether trends were consistent with the previously published expectations. In their 2014 "updated traffic analysis,"265 however, the Agencies failed even to look at traffic counts between 2008-2014.266 Instead, the report just meaninglessly reran the same 2008 data that had been included in the original, now outdated EIS.

In the written reevaluation, rather than consider or include new information, the agencies simply noted that the "only notable change in project setting is the recently-completed median improvements on existing U.S. 70 through Havelock."267 No evaluation as to how this improvement might have improved traffic conditions was made. No data to confirm that traffic volumes were growing as expected at 2% per year was included. As such, neither the Reevaluation nor the FEIS acknowledge the straight-forward reality, demonstrated above, that traffic volumes have not grown as expected, but have remained flat. Because they failed to even acknowledge it, "the agencies do not discuss [this] updated data in the context of the traffic projections and the consideration of reasonable alternatives."268 There is, in sum, no evidence that the Transportation Agencies "made a reasoned decision" on whether to supplement the DEIS "based on [their] evaluation of the significance—or lack of significance—of the new information."269 The Agencies simply failed to collect the data and perform the required analysis.

B. The Agencies Failed to Acknowledge that New Information was Significant.

The purpose of producing a supplemental EIS when there is significant new information is to insure that "the public and other government agencies [can] react to the effects of a proposed action at a meaningful time," and play their role in the NEPA process.270 "When relevant information 'is not available during the impact statement process and is not available to the public for comment, . . . the impact statement process cannot serve its larger informational role, and the public is deprived of its opportunity to play a role in the decision-making process."271

The reevaluation included a vast amount of significant new information relevant to environmental concerns. Most striking is the list of studies conducted in the intervening years since the publication of the DEIS.272 For example, the RCW Biological Assessment, CNF RCW Territory Analysis and RCW Management Plan all contain new information that is essential to any assessment of the impact of the proposed Bypass on RCW habitat - a key consideration in planning where this road will be located. This information was absent from the DEIS, and is presented now only when the agencies have already determined that Alternative 3 is the Preferred Alternative. Because the Agencies determined not to present this information in a SEIS the public were deprived of their legal right to react to the information "at a meaningful time."273 Similarly, NCDOT's "Biological Evaluation", "Rare Plant Mitigation analysis" and "Updated rare species/ PETS report" all contained "significant new information" "relevant to environmental concerns" and should have been presented in a Supplemental DEIS in order to provide the public the opportunity to react to them at a meaningful time.

Similarly, the Reevaluation noted substantial errors in the DEIS that resulted in a dramatic underestimation of aquatic impacts. For example, a new analysis now shows that impacts to wetlands were underestimated by 25-31 acres.274 As a result, the estimated wetland impacts for Alternative 3, the Preferred Alternative, increased by 25 acres, or 22% of the original estimate.275 Likewise, total stream impacts for the Preferred Alternative have "increased by 433 feet as a result of stream and wetland delineations conducted in 2013."276 This information has significant implications for the selection of a "LEDPA" and should have been identified to the public in a Supplemental DEIS. Moreover, the information makes clear that "the information presented in the Draft EIS [***was not***] an accurate analysis of the anticipated project impacts."

Pursuant to FHWA guidance therefore, this major error alone demanded that a SEIS be prepared.277

On September 1, 2015, following the release of the reevaluation, we submitted a letter to the Transportation Agencies again urging the issuance of an SEIS.278 FHWA responded that the "[a]dditional studies, updates, and changes revealed no new issues of significance associated with this project."279 Shortly thereafter, the Transportation Agencies proceeded with the release of the FEIS. Disturbingly, documents obtained through the North Carolina Public Records Act and the Freedom of Information Act suggest that the transportation agencies predetermined from the outset that the reevaluation would conclude that there was no need for a Supplemental EIS, regardless of what the data showed. For example, a February 2015 email from FHWA to NCDOT instructed the agency to keep the section on additional studies since the DEIS "very brief," as "conclusions should indicate no new issues of significance."280 Likewise, a May 2015 email from NCDOT to FHWA referred to the approval of the reevaluation as a "done deal."281 These communications illustrate a conscious predetermination on the part of both Transportation Agencies to disregard NEPA's statutory scheme.282

By issuing an incomplete and inadequate DEIS and then issuing, four years later, such a large amount of significant new information in the FEIS with a preferred alternative already firmly in place, the Transportation Agencies have severely impeded the ability of agencies and the public to understand the potential impacts of proposed project alternatives and to comment in a meaningful and thorough fashion. A primary function of an FEIS is to provide a forum in which the lead agency responds to comments submitted by other agencies and the public on the DEIS283—a task that the FEIS is unable to perform because agencies and the public were not given the opportunity to comment on the significant information that appeared for the first time in the FEIS itself. A DEIS is the best opportunity "to react to the effects of a proposed action at a meaningful time,"284 and the Transportation Agencies here have stripped the public of that opportunity, granted by NEPA, to do so.

The range of new information that has arisen since the publication of the DEIS is without doubt "significant new . . . information relevant to environmental concerns and bearing on the proposed action or its impacts,"285 and its inclusion in the FEIS alone bypasses the NEPA- mandated opportunity for full and meaningful public review. As such, it is imperative that the Transportation Agencies comply with NEPA and prepare a SEIS that makes all significant new information available for a thorough review. Until this step is taken, the Transportation Agencies should refrain from any further action to move forward with the proposed bypass.

Response No. 31:

See Response Nos. 7 through 11 regarding the traffic forecast.

NCDOT considered all relevant information. The commenter raised similar issues with respect to the DEIS. Those issues were considered during the preparation of the FEIS and several studies and discussions were updated and/or expanded to include additional details in the FEIS. As stated previously in resolving comments to produce a supplement to the DEIS, an SEIS is similarly not required because there are no substantial changes in the proposed action nor are there significant new circumstances or information relevant to environmental concerns. Additions/changes are typical of ongoing work that occurs between the draft and final EIS. For example, updating the traffic forecast was considered, but the determination was that the mild to moderate growth rate projected would not change substantively to warrant a new traffic forecast The proposed project has been developed in coordination with a federal and state interagency team and subsequently through the Section 404/NEPA Interagency Merger Process, which requires a systematic evaluation of environmental impacts throughout the project development process.

The DEIS was signed in September 2011. After the DEIS comment period and public hearing were completed, all comments from the public, state and federal agencies, and non-governmental organizations were reviewed and considered. Follow-up studies soon began to fulfill project commitments identified in the DEIS, as well as to address comments received subsequent to the DEIS. Interagency coordination continued as well. It is common practice for follow-up studies (e.g. Biological Assessments) to be performed after alternative selection or in between the DEIS and FEIS. Although the studies were time and labor intensive, studies conducted after the DEIS have not identified any new issues of significance in the overall context of the project. Based on the results of the studies, NCDOT began to assemble the follow-up NEPA document in the format of a Final Environmental Impact Statement in 2012. A preliminary FEIS was completed by NCDOT on April 15, 2015 and a reevaluation prepared in June 2015. The decision to proceed with a FEIS was made by FHWA based on this reevaluation.

Alternatives for the proposed action have not undergone any substantial changes since all three build corridors were initially presented to the public in 1998, and the preferred alternative was again presented to the public in 2011. While environmental studies have been updated throughout the course of the planning process, the project study area has not been expanded or otherwise altered to indicate that there is significant new information relevant to environmental concerns.

A SEIS is not required because there are no substantial changes in the proposed action nor are there significant new circumstances or information relevant to environmental concerns (40 CFR 1502.9(c)(1)).

Southern Environmental Law Center
April 21, 2016

Via Electronic Mail and USPS

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Secretary
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Re: Draft Agreement on Closure of U.S. Highway 70 Havelock Bypass for Prescribed Burning

Dear Secretary Tennyson:

On behalf of the Sierra Club and Sound Rivers, the Southern Environmental Law Center writes to offer comments on the draft agreement on Closure of U.S. Highway 70 Havelock Bypass for Prescribed Burning ("Draft Burn Agreement" or "Agreement") between the North Carolina Department of Transportation ("NCDOT") and the United States Forest Service ("USFS") for the proposed Havelock Bypass. The Agreement was provided to us by attorney Tom Henry on April 8, 2016 and we were invited to review it and offer any comments and suggestions. For the reasons stated below, we find the Draft Burn Agreement to be wholly insufficient.

As you know, on February 20, 2016 we submitted comments on the Final Environmental Impact Statement ("FEIS") for the proposed Havelock Bypass. Our comments expressed significant concerns about NCDOT's reliance on a vague, undefined plan for prescribed burning which failed to provide specific, enforceable commitments, and entirely ignored the Agencies' ongoing efforts to convert U.S. 70 into an interstate highway. Our comments also highlighted the Agencies' promise to include "specific detail" on a prescribed burn plan in the Record of Decision, entirely circumventing one of the core purposes of the National Environmental Policy Act—to provide for public review and input at a meaningful time.

As discussed in our comments on the FEIS, prescribed burning in the Croatan National Forest is essential for the conservation and recovery of the endangered Red-Cockaded Woodpecker ("RCW"). The RCW is endangered due to loss of suitable habitat, and prescribed burns must take place with sufficient frequency to adequately manage the old-growth longleaf pine habitat upon which the RCW depend for foraging, nesting and roosting. As stated in the U.S. Fish and Wildlife Service's ("USFWS") Recovery Plan for the RCW, fire suppression is a "profound threat" to RCW populations. In fact, prescribed burning is so essential that USFWS concurrence with the determination that the project "may affect, but is not likely to adversely affect" the RCW was based on USFS' ability to conduct prescribed burns.

As we have noted, prescribed burning will become exceedingly difficult if the Havelock Bypass is built—particularly without a concrete, enforceable plan in place for regular burns that will continue in perpetuity. Unfortunately, the vague, unenforceable, time-limited Draft Burn Agreement does not encompass such a plan.

The Draft Burn Agreement is vague, ambiguous and lacks key details

- The Agreement includes almost no detail about the prescribed burns. No information is provided about where the burns will occur geographically or the area that they will cover. For example, it is unclear whether the Agreement pertains to burns on both the east and west sides of the proposed Bypass—either of which would necessitate closing the road.

- The Agreement is ambiguous with regard to the number of burn days that will take place. It states that the "duration of the burns will be approximately 6 hours on each of 3 days with 5 to 6 burn days needed in an average year." While we understand this phrase to mean that there will be 5-6 burn days each year and that burn days will take place in 3 day blocks, it is unclear whether that is in fact the meaning of the Agreement or if something different was intended.

- Further, it is unclear what the Agreement means by an "average year." The phrase suggests that in some years more than 5-6 burn days will be needed, however, there is no provision in the Agreement to ensure that NCDOT will close the Bypass for such additional days.

- Additional ambiguity arises where the Agreement states that attempts will be made to avoid "unique anticipated high traffic days." While "air show" is given as one example of such a "unique" day, it is unclear what additional days this vague, undefined phrase may include.

- The Agreement is ambiguous with respect to the time of year that NCDOT agrees to close the Bypass. It states that USFS shall plan burns "as growing season burns with a typical burning season from June through mid-July," but then adds "however, prescribed burns could occur during any time of the year." It is unclear whether NCDOT is committing to close the Bypass at any time, if it is committing to let USFS decide when is appropriate to burn, or if it is reserving the right to veto times in June or July in favor of lower traffic days during other times of year.

- It is also unclear whether NCDOT is committing to close the Bypass on weekends if it becomes necessary. The Agreement states that USFS shall "attempt to avoid conducting prescribed burns on Fridays, Saturdays, and Sundays," and "attempt to avoid weekends adjacent to holidays." In the event that USFS is unsuccessful in its attempt to avoid those dates, it is unclear as to whether NCDOT is committing to defer to that decision and close the road to allow a burn, or if it is reserving the right to veto burns planned for those weekend and holiday days.

Without more detail, specificity and clarity, the proposal to close the road for 5-6 burning days is insufficient.

The Draft Burn Agreement lacks any enforcement mechanism

- The Agreement contains no enforcement provision or penalty if either NCDOT or USFS fail to perform any terms of the Agreement such as closing the Bypass and conducting the necessary number of burns. Moreover, because the Agreement does not specify minimum annual burn quotas, it cannot be enforced.

- The only remedy provided under the Agreement is that "[i]f NCDOT materially fail(s) to comply with any term of the Agreement," USFS may suspend or terminate the Agreement. This remedy is confounding, as it would reward NCDOT's failure to perform under the Agreement with an abandonment of any duty to perform under the Agreement.

- While the Agreement would require NCDOT to submit annual performance reports to USFS, the Agreement is vague as to the content that must be included in these reports. It appears that the language used in the Agreement was lifted from a template form. More specificity about what these annual reports should include would be beneficial. For example, annual reports should specify when and where road closures and burns took place, and whether the goal of "5-6 burn days" was met. If the goal was not met, the performance reports should specify all actions taken to attempt to close the roads for prescribed burns, an assessment of why closure and burns did not take place, and strategies for ensuring that closures and burns take place in the future as required.

The Draft Burn Agreement fails to protect the long term health of RCWs

- If built, the Havelock Bypass will presumably exist in perpetuity. The Agreement, however, will sunset in 2021—the same year the road is scheduled to be open to traffic. While the Agreement notes an "intent to negotiate a renewal," there is no guarantee that such a renewal will take place and no guarantee as to what a renewal would consist of after negotiation. The stated "intent" is thus entirely insufficient to provide any assurance that NCDOT will continue to close the road for as long as it is in place, yet the health and survival of RCWs and their habitat depend on such burns continuing far into the future.

- Equally concerning, the Agreement allows NCDOT and USFS to terminate the Agreement, in whole or in part, for any reason, at any time. This blanket termination provision also renders the entire Agreement incapable of providing future long-term protection for RCWs and their habitat.

- The Draft Burn Agreement cannot serve as the basis for the USFWS's conclusion that the proposed Bypass "may affect, but is not likely to adversely affect" the RCW. As USFWS stated in 2013, its concurrence with NCDOT's biological assessment was based on "NCDOT's agreement to allow periodic closures of the Bypass in order for Croatan National Forest staff to conduct prescribed burns as management for the RCW." Letter from P. Benjamin, USFWS, to R. Hancock, NCDOT (Nov. 19, 2013). Critically, "**[w]ithout this agreement**, the U.S. Forest Service would be unable to conduct the necessary prescribed burns in the vicinity

of the Bypass, thus causing an indirect adverse effect on the RCW." *Id.* The Draft Burn Agreement not only expires in five years, it allows NCDOT or USFS to cancel the Agreement at any time, for any reason, and it actually rewards NCDOT for breach of the Agreement by allowing USFS to terminate it. Therefore, any reliance by the USFWS on the ephemeral Agreement to allow permanent impacts is arbitrary and capricious.

The Draft Burn Agreement does not address the conversion of U.S. 70 into an interstate

- The Agreement makes no effort to address the efforts of NCDOT to convert U.S.70 to an interstate and the additional difficulties NCDOT would encounter in closing an interstate with sufficient frequency for USFS to conduct adequate burns.

  U.S.70 through Havelock was recently listed as a High Priority Corridor, increasing the likelihood that it will be converted into an interstate in the future. Indeed, North Carolina Governor Pat McCrory recently unveiled a "Future Interstate" sign for the U.S. 70 corridor, and NCDOT has publicly supported the designation. The Agreement, however, fails to acknowledge U.S. 70's likely transition to an interstate. It is therefore unclear whether the Agreement, which as noted currently sunsets in 2021, would be renewed in the eventuality that the Bypass were designated an Interstate. Moreover, NCDOT has not addressed whether or not designation of U.S. 70 as an interstate would be a basis for revoking the Agreement pursuant to paragraph V(R).

In sum, the Draft Burn Agreement does nothing to address the concerns in our comments on the FEIS, and fails entirely to create a specific, enforceable plan for prescribed burns that will reliably protect RCW habitat in perpetuity—putting NCDOT, USFS, and USFWS in danger of violating the Endangered Species Act if the Bypass is approved. Before taking any further action to move forward with the proposed Bypass, it is imperative that the agencies revise the Agreement in consideration of the comments above. The Agreement must include substantially more detail about the frequency, location, duration and area proposed to be covered by the prescribed burns and offer more clarity about NCDOT's precise commitments. The Agreement must be fully enforceable, must continue in perpetuity and must contemplate reasonably foreseeable future changes such as the proposed transition of U.S. 70 to an interstate facility.

Response:

See Response No. 27 to SELC comments dated February 20, 2015, also contained in this appendix.

Southern Environmental Law Center
June 14, 2016

Via Electronic Mail and USPS

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Re: Request for a Supplemental Environmental Impact Statement for the Havelock Bypass

Dear Mr. Sullivan and Mr. Hancock:

In December 2015, the Federal Highway Administration ("FHWA") and the North Carolina Department of Transportation ("NCDOT") (collectively, the "Transportation Agencies") published a Final Environmental Impact Statement ("FEIS") for the proposed Havelock Bypass ("Bypass"). On behalf of the Sierra Club and Sound Rivers, the Southern Environmental Law Center ("SELC") submitted comments on that document on February 20, 2016.

Our comments expressed significant concerns about the absence of a concrete, enforceable agreement between NCDOT and the U.S. Forest Service ("USFS") to regularly close the Bypass and allow prescribed burning of the Croatan National Forest. This agreement is essential: the United States Fish and Wildlife Service ("USFWS") has indicated that the guarantee of regular prescribed burning is a pre-requisite for its conclusion that the Bypass "may affect, but is not likely to adversely affect" the federally endangered Red Cockaded Woodpecker ("RCW"). In addition, our comments noted that while NCDOT has recently expressed a desire to convert U.S. 70, including the Havelock Bypass, into an Interstate, it has failed entirely to analyze the impact that that an Interstate designation would have on the agency's ability to close the road for prescribed burns.

Our concerns about these issues continue to mount. On April 8, 2016, we were invited by NCDOT to submit comments on a draft burn agreement ("Draft Burn Agreement" or "Agreement") between NCDOT and USFS that would theoretically commit the agencies to future road closures and prescribed burns. We outlined the deficiencies of that Agreement in a letter to NCDOT on April 21, 2016.[1] We noted that the Agreement failed entirely to create a specific, enforceable plan for prescribed burns that would reliably protect RCW habitat in perpetuity. Later, on May 20, 2016, we met with NCDOT and USFS to discuss our concerns regarding the Draft Burn Agreement. In this meeting, USFS stated its position that:

- the Agreement cannot be legally binding;
- the Agreement must be able to be terminated by either party at any time;
- the Agreement cannot last longer than five years;
- the Agreement cannot contain a clause contemplating the future conversion of U.S. 70 into an Interstate; and
- the Agreement cannot provide any assurance that NCDOT would continue to close the Bypass in the event that U.S. 70 is converted into an Interstate.

On May 24, 2016, we sent a letter[2] to NCDOT and USFS requesting confirmation of the USFS position as stated during the meeting, but have not yet received a response.

In addition to our general concerns about the Agreement and USFS's commitment to conduct prescribed burns, we also note that evidence continues to grow regarding the proposal to designate the Havelock Bypass as an Interstate. When questioned about this issue, however, NCDOT has failed to articulate what impact the Interstate designation would have on the closure of the Bypass for prescribed burns.[3]

Federal regulations require that an agency "shall" prepare an SEIS when "significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts" arise.[4] As we have noted, the proposed conversion of U.S. 70 to an Interstate has not been acknowledged during the NEPA process and must be addressed in a Supplemental Environmental Impact Statement ("SEIS") in order to "permit[] the public and other government agencies to react to the effects of a proposed action at a meaningful time."[5]

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[1] Letter from Geoff Gisler, SELC, to Secretary Nick Tennyson, NCDOT (Apr. 21, 2016) (Attachment 1).
[2] Letter from Geoff Gisler, SELC, to Carr McLamb, NCDOT and Karen Compton, USFS (May 24, 2016) (Attachment 2).
[3] May 20, 2016 Meeting with SELC, NCDOT and USFS held in Raleigh, North Carolina.
[4] 40 C.F.R. § 1502.9(c)(1).
[5] *NC Wildlife Fed'n v. NC Dept. of Transp.*, 677 F.3d 596, 601 (4th Cir. 2012) (quoting *Marsh*, 490 U.S. at 371).

Significant New Information Relevant to Environmental Concerns

It is now undeniable that the conversion of U.S. 70 into an Interstate is the ultimate concrete objective of NCDOT and Governor Pat McCrory. The intent is to create Interstate access from I-40 to the Global TransPark, Marine Corps Air Station Cherry Point, and Morehead City Port.[6] Much of the support for this Interstate designation is based on theories of economic development and military connectivity.[7] Interstate access is touted as a key component for growth of the Morehead City Port.[8]

The Interstate designation is part of Governor McCrory's 25-Year Vision for transportation, which lists the conversion of U.S. 70 into an Interstate as a strategy for "enhanc[ing] freight movement and reduc[ing] travel time through the region."[9] Likewise,

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[6] *See, e.g.*, NCDOT Board of Transportation, April 2016 Meeting Minutes (Apr. 7, 2016) ("Improving the U.S. 70 corridor will not only enhance regional mobility, but it will also strengthen military connections and facilitate better freight movement to and from our ports and the Global TransPark.") (Attachment 3); NCDOT Board of Transportation, December 2015 Meeting Minutes (Dec. 3, 2015) (recording Secretary Tennyson's statement that he was pleased with the future interstate designation for U.S. 70, a "top priorit[y] for Governor McCrory") (Attachment 4); Press Release, Governor McCrory Unveils Future U.S. 70 Interstate Sign (Mar. 30, 2016) (stating that the future interstate will "better connect Seymour Johnson Air Force Base, the North Carolina Global TransPark, Marine Corps Air Station Cherry Point and the Port of Morehead City with the rest of North Carolina and the eastern seaboard") (Attachment 5).

[7] *See, e.g.*, Highway 70 Corridor Commission, January/February 2016 Director's Report (Feb. 2016) ("The interstate designation[] will benefit our military interconnectivity, aid in economic development, create jobs and stimulate growth in travel and tourism.") (Attachment 6); U.S. 70 Corridor Economic Assessment, Executive Summary (Mar. 7, 2014) ("An interstate quality highway could also help the region be more competitive in inducing additional business and populations.") (Attachment 7); Highway 70 Corridor Commission, September 2014 Meeting Minutes (Sept. 18, 2014) ("Lack of interstate-quality access to and from the Global TransPark limits the number and type of businesses we can attract to this facility.") (Attachment 8).

[8] *See, e.g.*, Highway 70 Corridor Commission, August 2012 Meeting Minutes (Aug. 23, 2012) ("Years ago the route of Interstate 40 was determined based on data from the Wilmington port. Now the Highway 70 Corridor Commission needs to utilize the Morehead City port data to help its case. The Morehead City port has growth potential.") (Attachment 9); DERPO Presentation to House Select Committee on Strategic Transportation Planning and Long Term Funding Solutions (Mar. 28, 2016) ("interstate grade highway access is a critical infrastructure component for ports") (Attachment 10); NCDOT Rail Division, Eastern Infrastructure Improvement Study Report (Jan. 2015) (noting the importance of highway improvements for access to Global TransPark and Morehead City Port) (Attachment 11); NCDOT Rail Division, Eastern Infrastructure Improvement Presentation (Jan. 27, 2015) (stating that "expanded rail and highway capacity will be required to accommodate significant growth" for the Morehead City Port) (Attachment 12); Maritime Strategy Presentation to the Joint Legislative Transportation Oversight Committee (Jan. 13, 2012) (discussing need to improve access between inland trade centers and ports) (Attachment 13); NCDOT, North Carolina Statewide Transportation Plan: 2040 Plan (Aug. 2012) (discussing the need for continued upgrades of U.S. 70 to improve access to the Morehead City Port) (Attachment 14); NC Maritime Strategy, Final Report at 83 (June 26, 2012) ("Morehead City . . . is at a significant disadvantage to its peers in terms of landside highway access.") (Attachment 15).

[9] Governor Pat McCrory, 25-Year Vision for North Carolina at 19 (Sept. 2014) (Attachment 16). *See also* Press Release, *supra* note 6 ("Improving the U.S. 70 corridor is a major part of Governor McCrory's 25-year Transportation Vision."); NCDOT Board of Transportation, April 2016 Meeting Minutes, *supra* note 6 (stating that the future interstate designation for U.S. 70 is "part of the Governor's 25-Year Vision and very important to the future of North Carolina"); NCDOT Presentation to Highway 70 Corridor Commission (Mar. 19, 2015) (listing long term strategies for NCDOT, including "[i]ncrementally upgrad[ing] US 70 to interstate standards as proposed in Governor McCrory's 25-Year Vision") (Attachment 17).

conversion of U.S. 70, including the Bypass, into an Interstate is integral to NCDOT's Strategic Transportation Corridors Vision, which "aims to provide North Carolina with a network of high priority corridors that will become part of the Interstate system once they are fully built and upgraded to interstate standards."[10] An Interstate designation for U.S. 70 is also actively pursued by the Highway 70 Corridor Commission, which works with local governments, state agencies, and Congress to promote upgrades of U.S. 70."[11]

As a result of the efforts of Governor McCrory, NCDOT, and the Highway 70 Corridor Commission, the conversion of U.S. 70 into an Interstate has recently taken strides forward.[12] U.S. 70 was listed as a High Priority Corridor in December 2015,[13] increasing the likelihood that the highway will be converted into an Interstate in the future and escalating the ongoing efforts of NCDOT to secure an Interstate designation for the highway. In March 2016, Governor McCrory unveiled a "Future Interstate" sign for the U.S. 70 corridor,[14] and shortly thereafter, FHWA approved the name "Interstate 42" and the installation of "Future I-42" signs along U.S. 70.[15]

Given NCDOT's active pursuit of an Interstate designation for U.S. 70, including the Havelock Bypass, it is imperative that the Transportation Agencies address how the designation will affect NCDOT's ability to close the Bypass for regular prescribed burns. The stated position of the USFS that any burn agreement between that agency and NCDOT cannot include safeguards to ensure that burning would continue once the Bypass transitions to an Interstate makes this analysis even more urgent. We urge the Transportation Agencies to draft an SEIS analyzing these issues as well as other concerns highlighted in our earlier comments.

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[10] NCDOT Board of Transportation, August 2015 Meeting Minutes (Aug. 6, 2015) (stating that the designation of U.S. 70 as a High Priority Corridor would advance NCDOT's Strategic Transportation Corridors Vision) (Attachment 18). *See also* NC Transportation Network and Strategic Transportation Corridors Framework (Aug. 2015) (Attachment 19).

[11] *See, e.g.*, Highway 70 Corridor Commission, January/February 2016 Director's Report, *supra* note 7 ("Although we have 25 years to upgrade the Corridors to Interstate standards, it is absolutely imperative that we commence the process and plan for the future Interstates now."); Highway 70 Corridor Commission, March 2013 Meeting Minutes (Mar. 12, 2013) ("It was decided to adopt resolutions stating as a unified region that our preferred interstate routes would be US Highway 264 and US Highway 70. . . . The resolution would allow North Carolina Department of Transportation Division 2 Engineer Neil Lassiter and North Carolina Department of Transportation Division 4 Engineer John Rouse to plan to build the US Highway 70 Bypasses to interstate standards now. The interstate process would be expedited.") (Attachment 20); Kevin Litwin, "Corridor of Possibility: Infrastructure Projects Extend Transportation in Eastern North Carolina, Eastern North Carolina Regional Economic Development Review" (Apr. 2016) (quoting Highway 70 Corridor Commission Director Durwood Stephenson as saying "[t]he goal for Highway 70 . . . is to eventually establish a nonstop freeway from I-40 in Raleigh to the Port of Morehead City.") (Attachment 21).

[12] *See, e.g.*, Highway 70 Corridor Commission, January/February 2016 Director's Report, *supra* note 7 ("After years of persistent urging and strong support from NCDOT leadership, the Governor's office and our Congressional delegation, we will soon be installing Future Interstate signs along U.S. 70 and 795 corridors.").

[13] Fixing America's Surface Transportation Act, PL 114-94 at 1416(a)(83) (Dec. 4, 2015).

[14] Press Release, *supra* note 6.

[15] Scott Nichols, WCTI News Channel 12, Highway 70 to Get Future Name of Interstate 42 (May 25, 2016) (Attachment 22).

Response:

See Response Nos. 27 and 31 to SELC comments dated February 20, 2015, also contained in this appendix.

APPENDIX B

ERRATA

1. Letter to USFS regarding NCDOT's Agreement for Periodic Road Closure (June 27, 2016)
2. Burn Plan & Bypass Closure Logistics Meeting Minutes (December 16, 2015)
3. Letter to NCDOT and USFS from Southern Environmental Law Center (May 24, 2016)
4. Biological Evaluation Report for the US 70 Havelock Bypass (March 30, 2015) [**DVD**]
5. Final Herbicide Evaluation Report Summary Table (June 2014)
6. Letter to USFS from NCDOT Regarding Longleaf Pine Compensation (June 22, 2016)

Transportation

PAT McCRORY
Governor

NICHOLAS J. TENNYSON
Secretary

June 27, 2016

Mr. Allen Nicholas
Forest Supervisor
National Forests in North Carolina
160 Zillicoa St., Suite A
Asheville, North Carolina 28801

Subject: Havelock Bypass – NCDOT's Agreement for Periodic Road Closure for Prescribed Burns

Dear Mr. Nicholas:

I write to reaffirm and again memorialize NCDOT's agreement to the periodic closure of the proposed Havelock Bypass (Bypass) during prescribed burns within the Croatan National Forest (CNF) by the U.S. Forest Service (USFS). USFS uses prescribed burns to restore and maintain suitable habitat for the red-cockaded woodpecker (RCW), a species currently listed under the federal Endangered Species Act (ESA). When requested by the USFS, NCDOT shall close the Bypass to ensure the safety of the motoring public while allowing the USFS to restore and maintain RCW habitat.

Similar to the many other efforts we undertake to minimize and mitigate the environmental impact of highway projects, our agreement to close the proposed highway during periodic burns evolved during the planning phase into a commitment and feature of the project itself. During this planning process, we met with your agency and the U.S. Fish & Wildlife Service (USFWS) on March 17, 2011, and as reflected in the minutes from that meeting, NCDOT agreed to close the proposed Bypass to facilitate prescribed burns. In addition, by letter dated January 9, 2012, NCDOT again committed in writing to close the Bypass during prescribed burns. The "green sheet" Project Commitments contained in the October 2015 Final Environmental Impact Statement further affirm NCDOT's commitment to "coordinate in future years with the USFS to allow for prescribed burns on [national forest] lands during construction and in the future."

Our commitment to close the road for periodic prescribed burning within the CNF is also documented in our coordination with USFWS pursuant to the procedures of Section 7 of the ESA. In November 2013, NCDOT released a Biological Assessment for the RCW, which again noted the commitment regarding road closure (page 72). The Biological Assessment reached a conclusion of "May Affect, Not Likely to Adversely Affect" with respect to the proposed Bypass's impacts on the RCW. By letter dated November 19, 2013, USFWS concurred with this conclusion "based, in part, on NCDOT's agreement to allow periodic closures of the Bypass in order for Croatan National Forest staff to conduct prescribed burns as management for the RCW." We understand that USFWS's reference to an "agreement" was a reference to the commitment expressed previously in writing in the minutes from the March 17, 2011 meeting, the follow-up letter of January 9, 2012, and the November 8, 2013 Biological Assessment.

In addition to concurring with NCDOT's biological conclusion – and doing so based on the commitment to close the road during prescribed burns – the USFWS letter of November 19, 2013 further stated that "the requirements of Section 7(a)(2) of the ESA have been satisfied for [RCW]." USFWS reminded NCDOT that the procedures of the ESA could be re-opened at a later time if new information arises or circumstances change. NCDOT understands these requirements of the ESA and, of course, will continue to cooperate with its federal partners for the protection of endangered species. In short, NCDOT believes that our agreement to periodically close the proposed Bypass, upon request of USFS prior to a prescribed burn for RCW habitat maintenance, has been sufficiently memorialized as a feature of this project.

Notwithstanding all the discussion and documentation surrounding the issue of road closure, three environmental groups – specifically, the Southern Environmental Law Center, Sierra Club, and Sound Rivers – have submitted comments to our agencies suggesting that NCDOT's express commitment to close the road is not sufficiently concrete or enforceable. NCDOT believes these concerns are unfounded. Our agencies have worked cooperatively in the past to close roads as needed, and there is no reason why such cooperation would not continue in the future. Furthermore, NCDOT has no intention of jeopardizing USFWS's concurrence under the ESA by refusing to close the Bypass.

However, in a well-intentioned effort to address these concerns, NCDOT worked in recent months with your agency to finalize a written instrument that would yet again reiterate the road closure commitment. You provided NCDOT with a draft "Non-Funded Challenge Cost Share Agreement," which outlined procedures for road closures and included a lengthy set of standard federal contracting clauses. I understand that reliance on a USFS agreement template would have certain administrative advantages, including the potential for expedited approval by your office. By contrast, attempts to modify standard terms, such as the agreement's 5-year duration, would likely invite protracted scrutiny by USFS officials and agency counsel at the regional or national level.

The environmental groups requested the draft document, reviewed it, and then submitted comments that again raised concerns that the plan was vague and limited to a 5-year term. As you know, NCDOT, USFS, and other interested parties met personally with the groups on May 20, 2016 to look for ways to address these concerns. The groups sent a letter dated May 24, 2016 reasserting their doubts about "a legally acceptable agreement" and the lack of "certainty that road closures will take place in the future to assure protection of RCW habitat."

Upon further review of the USFS agreement template and after serious consideration of the groups' concerns, NCDOT believes that the template may not be the best vehicle for reaffirming our commitment regarding road closures. Ultimately, we are not sure whether any document will fully satisfy the groups, but it became clear that the template document was perhaps raising new questions even as it sought to reaffirm a long-standing commitment.

So that the record is unambiguous, I now take this opportunity to once again assert and memorialize NCDOT's commitment regarding road closures for the benefit of RCW habitat maintenance. To be clear, NCDOT agrees to do the following:

1. Upon request from USFS to conduct prescribed burns in the vicinity of the proposed Bypass, NCDOT shall close the proposed Bypass to motorists until it is safe to re-open the road; and,

2. NCDOT shall be responsible for traffic control procedures in advance of, during and following prescribed burns. This will include providing variable message signs (VMS) for notification of planned bypass closure in advance of the planned burn.

It is NCDOT's understanding that the USFS will continue with its standard procedures regarding prescribed burns, including notification of the public and adherence to all laws, rules, policies, or forest plans that may relate to this activity. USFS will also evaluate smoke clearing and visibility conditions based on smoke modeling projections, visual observations, and weather conditions. Further, NCDOT understands that prescribed burns typically occur from June through mid-July, but could occur any time of the year. USFS typically conducts burns in 3 day blocks with a frequency of 2-3 times a year. Ultimately, the number and timing of burns is dictated by weather, natural conditions, and other factors, and NCDOT recognizes that implementation of prescribed burns must remain fluid based on these factors. To the extent possible, NCDOT requests that USFS attempt to avoid conducting prescribed burns on Fridays, Saturdays, Sundays, holidays, unique high traffic days (e.g., the air show), and weekends adjacent to holidays. NCDOT also asks that USFS provide as much advanced notice as possible of planned burns and update NCDOT on the likelihood of executing the planned burn. Additionally, if in the future the Bypass is designated as an Interstate Highway, NCDOT will continue to honor the terms outlined above. Per the Federal-Aid Highway Act of 1956, as amended, the States own and operate the Interstate Highways. As such, NCDOT will continue to be responsible for establishing operating requirements of the Bypass in the event of Interstate designation. Further, NCDOT acknowledges that the Federal Highway Administration has a stewardship role and should be promptly notified of proposed closure activities.

We trust that this letter serves to confirm NCDOT's agreement and commitment to cooperate with USFS on road closures, as our agency has done in the past, and to promote the safety of the motoring public during prescribed burns. If you have any questions or concerns regarding NCDOT's agreement to close the proposed Havelock Bypass, please do not hesitate to contact me. Thank you for your time and attention to this matter.

Sincerely,

Nicholas J. Tennyson

cc: J. Carr McLamb, Jr., General Counsel

Stantec

Meeting Summary

US 70 Havelock Bypass, STIP Project No. R-1015
Burn Plan & Bypass Closure, Logistics Meeting

December 16, 2015

Date:	December 10, 2015
Place/Time:	NCDOT Century Center Roadway Design Conference Room, Raleigh, 11:00 am
Attendees:	James Cherry, US Forest Service Karen Compton, US Forest Service John Conforti, NCDOT Project Development – Eastern Region Ed Eatmon, NCDOT Division 2 Rob Hanson, NCDOT Project Development – Eastern Region Paul Koch, Stantec David Nelson, US Forest Service Tom Parker, NCDOT ITS & Signals John Rouse, NCDOT Division 2 Amy Sackaroff, Stantec Brian Yamamoto, NCDOT Project Development – Eastern Region
Distribution:	Attendees, file

Members of the project team met to discuss logistics associated with controlled burns on USFS land between the proposed bypass and existing US 70. The discussion points for each of these elements are provided below:

The elements discussed in this meeting are specific to the US 70 Bypass closure to address coordination with NCDOT and other elements related to the bypass closure. These elements are in addition to USFS standard protocol and procedures for conducting prescribed burns. The following paragraphs include background information related to the USFS protocol/procedures that are incorporated into the prescribed burn plan for the closing of the US 70 Bypass.

USFS PRECRIBED BURN PROCEDURES: The USFS noted that their current standard procedure for conducting burns requires an extremely detailed burn plan that details a number of elements, including:

- Location, acreage, and cost estimates
- Goals and objectives for the burn with a range of quantifiable outcomes related to hazard reduction, wildlife habitat, insect and disease control, and other metrics
- Complexity and risk assessment
- Test fires
- Preburn considerations, fire prescription parameters, weather thresholds, and contingency plans
- Staff organization
- Methods of ignition, holding, smoke management, and special conditions

- Interagency/intra-agency pre-burn coordination, public involvement, and burn-day notification for adjacent landowners, power transmission line owners, and the general public
- Monitoring; and,
- Post burn activities

In addition, the USFS uses fire behavior models that consider inputs related to weather, fuel model, topography, and fuel moisture to assess the rate of spread, dire size, flame length, and fireline intensity.

Prescribed burn activities are incorporated into the Revised Land and Resource Management Plan (LRMP) for the Croatan National Forest (USFS, 2002), which notes that an expanded prescribed burn program is needed not only to restore the longleaf pine ecosystem and red-cockaded woodpecker habitat, but also to reduce fuel loading on the forest which in turn reduce the likelihood of uncontrollable fires. The ability to conduct prescribed burns was an evaluation factors for the alternatives considered in the Environmental Impact Statement prepared for the Revised LRMP (USFS, 2002) and the selected alternative was chosen based on, among other factors, its ability to best restore the longleaf pine/wiregrass community, expand populations of the red-cockaded woodpecker, and reduce wildlife risk.

AREA TO WHICH THIS DISCUSSION APPLIES: This discussion and associated recommendations apply only to the USFS land bounded by the proposed US 70 Bypass and existing US 70 in Havelock.

FREQUENCY & DURATION OF BURNS: The following reflects the team's discussion of the typical frequency and duration of controlled burns. All participants stated an understanding that the frequency and duration are flexible based on a variety of atmospheric and seasonal variables. This list serves as information for typical expected conditions.

a. Typical season, late June through mid-July which is the growing season (but could also occur in the dormant season, any time of year)
b. Attempt to avoid Fridays, Saturdays, Sundays
c. Avoid holidays and attempt to avoid weekends adjacent to holidays
d. Avoid any other unique anticipated high traffic days (e.g. air show, etc.)
e. Three days to burn each block
f. Start at 9 am and end around 4 pm (dependent on weather / smoke-clearing)

BYPASS CLOSURE: Based on the typical parameters above, the following elements are anticipated for typical bypass closures:

a. Duration – approx. 6 hours on each of 3 days, average about 5-6 days per year. Actual time is dependent on smoke-clearing.
b. Traffic Control Responsibility – NCDOT will be responsible for implementing traffic control procedures to close the bypass. Procedures will be initiated by NCDOT after USFS contacts NCDOT and notifies them of a planned burn.
c. Bypass Opening Determination – USFS will ride the closed bypass at the end of a burn day and evaluate the smoke-clearing/visibility conditions. Once deemed safe, USFS will notify NCDOT that the bypass can be re-opened to traffic.

ADVERTISEMENT / MEDIA: USFS will conduct public notification (website, newspaper, radio) of the planned burn activities per their standard procedures. Public communication for burns occurring in the area addressed by this agreement will also include notification that the US 70 Bypass will be closed to traffic. The advertisement will include the approximate days/times of the closure.

NOTIFICATION PROCEDURE: The points of contact throughout this process will be the USFS Fire Information Officer and/or Burn Boss (USFS) and NCDOT Division 2 (NCDOT). USFS will notify NCDOT, as soon as a burn is planned, with the intended dates of the burn. If favorable weather conditions continue, USFS will notify NCDOT seven days in advance of the planned date. USFS will continue to update NCDOT on the likelihood of the burn during the week prior, as weather forecasts are updated.

BYPASS CLOSURE (TRAFFIC CONTROL) PROCEDURE: NCDOT will be responsible for traffic control procedures in advance of and during burn activities. The following traffic control elements are planned:

a. Provide variable message signs (VMS) for notification of planned bypass closure several days in advance. NCDOT is developing an Intelligent Transportation System (ITS) plan as a component of the Havelock Bypass final design. The ITS plan will include permanent VMS installed along existing US 70, east and west of the termini interchanges, and along Lake Road (SR 1756) on either side of the Bypass interchange.
b. Install traffic control (drums, advance temporary signing, temporary barricades on ramp entrances) from approximately 9 am to 4 pm on each of the planned burn days.
c. As previously described, actual times will depend on communication from USFS. NCDOT will open the Bypass to traffic after the USFS notifies NCDOT that smoke has cleared and visibility is safe.

AGREEMENT DOCUMENTATION METHOD: USFS and NCDOT have determined that the best method for documenting the logistics and responsibilities of the controlled burn/bypass closure plan is to use USFS's Non Funded Challenge Cost Share Agreement. This agreement would be approved by the USFS Forest Supervisor and the NCDOT Chief Engineer. The agreement has a five-year duration after which time it would need to be renewed.

SUMMARY OF RESPONSIBILITIES: The following list presents the agency with primary responsibility for the main elements of the controlled burn / bypass closure activities. It should be noted that continuous coordination is anticipated between USFS and NCDOT during the days around a planned burn to enable quick response to changes in meteorological conditions.

Activity	**Responsible Agency**
Set controlled burn dates	USFS
Notification of planned burn	USFS
Public advertisement (media) of burn and bypass closure	USFS
Advance notice along US 70 and Lake Road (SR 1756) via VMS	NCDOT

Traffic control (temporary signing, VMS, temporary barricades, drums)	NCDOT
Determination of safe conditions for re-opening Bypass	USFS

ACTION ITEMS: The following is a summary of actions from the discussion above.

- Develop ITS plan by end of January 2016. ITS plan will include permanent VMS installations along Existing US 70, east and west of the termini interchanges, and along Lake Road (SR 1756) on either side of the Bypass interchange (*NCDOT – Tom Parker*)
- Develop Draft Non Funded Challenge Cost Share Agreement (*USFS – Karen Compton*)
- Incorporate the summary of this meeting and a description of the associated Non Funded Challenge Cost Share Agreement into the ROD (*Stantec*)
- Other (discussion not specific to Havelock Bypass project) – NCDOT Division 2 to coordinate with USFS and evaluate providing a median treatment/bulb-out on US 70 at the USFS office north of Havelock. The purpose of this improvement is to facilitate heavy equipment trailer (low boy) access at the USFS office.

JGC\prk

SOUTHERN ENVIRONMENTAL LAW CENTER

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May 24, 2016

Carr McLamb
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N.C. Department of Transportation
1501 Mail Service Center
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Karen Compton
Environmental Coordinator
N.C. Department of Transportation Liaison
U.S. Forest Service
160 Zillicoa St., Suite A
Asheville, NC 28801
kcompton@fs.fed.us

Re: Follow-up from May 20, 2016 Meeting to Discuss Havelock Bypass and Draft Burn Agreement

Dear Mr. McLamb and Ms. Compton:

Thank you for taking the time to meet with the Southern Environmental Law Center and the Sierra Club on May 20, 2016 to discuss the draft agreement on Closure of U.S. Highway 70 Havelock Bypass for Prescribed Burning ("Draft Burn Agreement" or "Agreement") between the North Carolina Department of Transportation ("NCDOT") and the United States Forest Service ("USFS"). The Agreement is of essential importance because the determination by the U.S. Fish and Wildlife Service that the proposed Bypass "may affect, but is not likely to adversely affect" the endangered Red-Cockaded Woodpecker ("RCW") is contingent on NCDOT's commitment to allow periodic closure of the Bypass for prescribed burns in perpetuity.

As noted at the meeting, our concerns about the Bypass are not limited to the road closure agreement. In our February 20, 2016 comments we outlined a number of concerns including whether NCDOT has demonstrated a need to construct a new-location Bypass at all and whether Alternative 3 is the least environmentally damaging alternative. Nonetheless, in response to your request during the May 20th meeting, we would be happy to draft sample language for an Agreement that would allay the concerns outlined in our April 21, 2016 letter.

Before we take the time to draft this language, however, we need to determine whether there is any path forward towards a legally acceptable agreement. As such, we wish to confirm the position provided by USFS during the May 20th meeting. We understand the USFS position as stated during the meeting to be as follows:

- the Agreement cannot contain a clause contemplating the future conversion of U.S. 70 into an interstate;

- the Agreement cannot provide any assurance that NCDOT would continue to close the Bypass in the event that U.S. 70 is converted into an Interstate;
- the Agreement cannot be legally binding;
- the Agreement must be able to be terminated by either party at any time; and
- the Agreement cannot last for longer than five years.

Given our understanding of the USFS position, it does not seem possible to achieve an Agreement that provides even a minor level of certainty that road closures will take place in the future to assure protection of RCW habitat. As such, it would not seem beneficial for us to prepare draft language. If, however, we have misunderstood the USFS position, please let us know.

Thank you, and please feel free to contact us with any questions.

Sincerely,

Geoff Gisler
Senior Attorney

Kym Hunter
Staff Attorney

Nadia Luhr
Associate Attorney

CC via e-mail:

Travis Graves, Lower Neuse Riverkeeper
John Fussell, Sierra Club
Michael Murdoch, Sierra Club
Brian Yamamoto, NCDOT

James Melonas, U.S. Forest Service
Gary Jordan, U.S. Fish and Wildlife Service
John Hammond, U.S. Fish and Wildlife Service

Biological Evaluation Report (March 30, 2015)

Provided on enclosed DVD due to report size

FINAL HERBICIDE EVALUATION REPORT SUMMARY TABLE (JUNE 2014)

RESOURCE	DIRECT, INDIRECT, AND CUMULATIVE EFFECTS ASSOCIATED WITH HERBICIDE APPLICATION	EFFECTS OF PROJECT RELATED TO NNIS	
		BYPASS WITH MITIGATION MEASURES TO MANAGE NNIS WITH HERBICIDES	BYPASS WITHOUT MITIGATION MEASURES TO MANAGE NNIS
Water and Soil Resources	Direct effects of water and soil resources from herbicide application include limited drift which can migrate in the soil to groundwater and surface water. Effects are anticipated to be limited as the treatment would be applied to the species and very little would come into contact with the soil. Indirect effects for herbicide treatment would include loss of ground cover due to decomposing vegetation and local soil erosion on individual sites. Water quality is not expected to be impacted as soil erosion would be local and the affected material would not reach the stream channel. Impacts are not expected to contribute to any measurable increase in cumulative degradation to soil or hydrological resources.	Impacts to water and soil resources are beneficial as native riparian vegetation reestablishes and streambanks stabilize.	Adverse impacts to water and soil would continue as native riparian vegetation continues to degrade.
Vegetative Communities	Native plant communities would be restored as a result of herbicide application for the NNIS. Adverse effects to non-targeted plants would be minimal as the applications would be target specific. Previous burning activities have proven affected on the spread of NNIS. Cumulative effects are beneficial as at risk habitats, degraded by NNIS, would be restored.	Increased native diversity over time.	Decreased native diversity.
Management Indicator Species	Direct effects on MIS are highly unlikely as the treatments will be performed manually and will be target specific. The reduction in NNIS would have a beneficial effect on the Longleaf Pine and Wire Grass communities, by improving habitat conditions. Negative cumulative effects are not expected as an increase in flora is anticipated.	Improved habitat conditions would benefit these species in the long term.	Potential negative effects as habitat quality decreases.
Terrestrial Wildlife and Terrestrial Rare	No direct effects to animal species are anticipated. Temporary movement of species are anticipated during application, but are expected to return quickly and not causing any impacts. Cumulative impacts are not anticipated.	Improved native forage would benefit wildlife in long term.	Decreased quality of native forage.
Aquatic Habitats and Rare Species	Mitigation measures, including streamside barriers, would reduce drift into the stream, diminishing any direct impacts. Indirect effects would provide long-term benefits as native vegetation would be restored to riparian areas.	Native riparian habitats would improve over time.	Adverse impacts to water and soil would continue as native riparian vegetation continues to degrade.
Botanical Rare Species	Direct impacts are not anticipated as control measures including specialized training of applicators and using triclopyr herbicide, will reduce any risk of impacts. Negative cumulative impacts are anticipated to federally listed species. Application would have a long-term beneficial impact on ten sensitive plant species and eleven locally rare species as improved habitat conditions would prevail.	Improved habitat conditions would benefit these species in the long term.	Could impact local populations with extirpations as a worst case.
Scenery and Recreation	Short term visual effects include seeing dead vegetation after treatment. Native vegetation would quickly revegetate causing the effects to be short lived. Cumulative impacts include minimizing the impacts to native plant populations and slowing the spread of NNIS. A desired landscape would be restored with native plant communities.	Long term benefit to scenic values as natural viewsheds are restored.	Potential decrease in scenic values where NNIS dominate the landscape.
Cultural Resources	Hand pulling or digging of the NNIS has potential to disturb archaeological resources in the upper six to twelve inches of the soil. Mitigation measures including a review of the area by a cultural resource specialist prior to pulling will be implemented to reduce impacts. Cumulative effects would be beneficial as sites would be transformed to realistic conditions with the removal of NNIS.	The natural environment would be improved over the long term by restoring native vegetation.	Cultural resource sites could be impacted by encroaching NNIS infestations.
Human Health and Safety	Commonly used herbicides are applied at rates below the maximum label rates, posing little safety risks to workers or the public causing no direct or indirect effects. No cumulative effects are anticipated.	Impacts to public health and safety are negligible.	None
Civil Rights	Treatment for NNIS are limited to Forest Service managed lands. Adverse impacts resulting from these activities would either not affect or would have limited short-term effects on residents bordering the Forest Service lands. The mitigation measure, including short-term closures during herbicide applications, should ensure that the proposed activities would have no impact on the health of minorities or low income individuals. No cumulative effects are anticipated with treating NNIS in the study area.	None	None

Transportation

PAT McCRORY
Governor

NICHOLAS J. TENNYSON
Secretary

June 22, 2016

Ms. Karen Compton
Environmental Coordinator/NCDOT Liaison
U.S. Forest Service
160 Zillicoa St, Suite A
Asheville, NC 28801-1082

Dear Karen,

In reference to the USFS letter of May 29th, 2015 and subsequent conversations between our agencies, the NCDOT agrees to pay the USFS the requested sum of $202,500.00 to implement enhancement work on existing loblolly/longleaf pine stands as mitigation for loss of mature longleaf pine associated with the construction of the proposed Havelock Bypass.

As outlined in your letter the sum of $202,500.00 will cover all expenses associated with this task including NEPA and overhead costs. It is our understanding that this will complete the last of our outstanding obligations with regard to long leaf pine mitigation.

If you have any questions, please contact me at (919) 707-6015 or Brian Yamamoto, Eastern Region Group Leader at (919) 707-6051.

Sincerely,

John G. Conforti
Project Manager – Eastern Region
North Carolina Department of Transportation
Project Development & Environmental Analysis Unit

cc: Brian Yamamoto, NCDOT
Jim Hauser, NCDOT
Ron Lucas, FHWA

APPENDIX C

PROJECT COMMITMENTS

PROJECT COMMITMENTS

US 70, Havelock Bypass
Craven County
Federal Aid Project No. NHF-70(49)
WBS No. 34360
STIP ID No. R-1015

The following Project Commitments are either updated or newly-added since distribution of the DEIS. Any clarifying or status comments are indicated by text in *italics*.

Project Development and Environmental Analysis Unit (PDEA)

1. After the selection of the Least Environmentally Damaging Practicable Alternative (LEDPA), NCDOT will refine the preliminary design for the selected alternative and complete a Biological Assessment (BA) concerning the red-cockaded woodpecker (RCW). The BA will be submitted to the USFWS to initiate formal consultation regarding Section 7 of the Endangered Species Act. The USFWS may request additional information and/or subsequent surveys to amend the BA before issuing their Biological Opinion (BO) to conclude formal consultation under Section 7. If an Incidental Take occurs, the USFWS will also issue an initial take statement, indicating terms and conditions, and/or reasonable and prudent measures it believes necessary to minimize the impacts to RCWs. Any such terms and conditions, and/or reasonable and prudent measures to minimize impacts to RCWs will be included in the Final Environmental Impact Statement (FEIS).

   An RCW assessment was performed, in conjunction with a NCDOT/USFS agreement of a Prescribed Burning Plan that would benefit RCW habitat. In addition, the highway footprint was reduced to less than 200-feet for 1.04 mile in the area of RCW habitat. As a result, USFWS determined that a formal consultation was not necessary. Appropriate coordination ensued with USFWS in accordance with Section 7 of the Endangered Species Act, and the USFWS concurred with the biological conclusions of "May Affect, Not Likely to Adversely Affect" for the red-cockaded woodpecker and rough-leaved loosestrife and that the project would have "No Effect" on any other federally-listed Endangered, Threatened, or Proposed plant species. Any future coordination with the USFS on red-cockaded woodpecker (RCW) will be documented in the Record of Decision (ROD).

2. Prior to construction, NCDOT will coordinate with the U. S. Forest Service (USFS) to collect spring flowering goldenrod seeds from areas to be affected by the project and distribute them in an area of the Croatan National Forest (CNF) where there is appropriate habitat but the species does not currently occur, in coordination with the USFS.

   Seed collection began in 2010 and will continue up to construction. Mitigation will include planting seeds and/or plugs as well as monitoring for successful survival. Planting failures will be replanted until USFS and NCDOT staff concur that further plantings would not be beneficial. Additional details will be finalized as part of ongoing coordination with the USFS.

3. NCDOT will collect seed from existing Leconte's thistle populations and coordinate with the USFS to develop a seed increase bed for augmentation in occupied or previously occupied habitat.

   Seed collection began in 2013 and will continue through 2016. Mitigation will include monitoring for successful be accomplished by NCDOT growing plugs from collected seeds then planting at locations identified by the USFS. Mitigation will also include monitoring for successful survival. Planting failures will be replanted until USFS and NCDOT staff concur that further plantings would not be beneficial. Additional details will be finalized as part of ongoing coordination with the USFS.

4. NCDOT will collect seed from existing awned mountain mint populations and coordinate with the USFS to identify sites to seed to establish new populations.

   Seed collection began in 2014 and will continue up to construction. Mitigation will be through planting seeds at locations identified by the USFS.

5. The final Memorandum of Understanding (MOU) between the Federal Highway Administration (FHWA), NCDOT, USACE, and USFS regarding the Croatan Wetland Mitigation Bank (CWMB) will be included in the ROD.

6. NCDOT will continue to coordinate appropriately with USFWS to determine if the project has the potential to affect the proposed-listed Endangered Northern long-eared bat (*Myotis septentrionalis*) and how to address these potential effects, if necessary.

7. The status of the Craven County Waste Transfer Facility relocation will be updated in the ROD to ensure that the USFS and Craven County coordinate to develop recommendations for a "site restoration plan" that return the current site to preexisting conditions. Any NCDOT actions related to the site restoration plan will be identified in the ROD.

8. Prior to construction, NCDOT will coordinate with the USFS to identify USFS Rare Plant Species on NFS lands occurring near the project's construction limits, including the powerline corridor area, and will install high visibility protective fencing to be removed after completion of construction.

9. During final design, NCDOT will coordinate with the USFS on the location of any staging areas on NFS lands to avoid impacts to USFS Rare Plant Species. Where practicable, NCDOT will require contractors to place staging areas 250 feet away from USFS Rare Plant Species occurrences. To avoid unintentional impacts to USFS Rare Plant Species within powerline corridors on NFS lands, specifications will prohibit the contractor from placing heavy equipment outside the project's construction limits without prior approval from the USFS.

PDEA Human Environment Section, Archaeology Group

Archaeological Site 31CV302 is approximately 300 feet away from the project limits and for added protection of the site during construction, the NCDOT will:

1. Before final design is completed, Roadway Design will verify that Site 31CV302 is avoided by any right-of-way or easement. If final design plans change, thereby causing an adverse impact to the site, then Roadway Design will immediately notify the PDEA

project manager and the NCDOT Archaeologist to initiate additional coordination to comply with historic preservation laws.

2. Final design plans identify the installation of high-visibility fencing around Site 31CV302, which is to be labeled as: "PROTECTED AREA." Final design plans will indicate the fence boundary and also provide an adjacent table of Northing and Easting coordinates. Project specifications should indicate that high-visibility fencing will be installed along the site boundary, prior to any clearing and grubbing operations. The contractor must pre-coordinate with NCDOT Archaeology (tel. 919-707-6000) so that an archaeologist field-verifies fence location or is on-site when the fence is installed. The fence will be maintained for the construction duration, and will be removed by the HES Archaeology Group only just before final project inspection. No construction equipment or personnel shall enter the fenced area.

Roadway Design & PDEA & Structures Management Unit

1. The Preferred Alternative includes a grade-separated crossing of the Camp Lejeune Railroad on NFS lands (operated by the Norfolk Southern Corporation). Final design will be developed to provide a 23foot vertical clearance and adequate horizontal clearances; however, should the railroad desire additional clearances, NCDOT will coordinate with the USFS, US Government, and Norfolk-Southern regarding the review of the final design plans for this crossing.

Right-of-Way Unit & Location and Surveys & Roadway Design & Construction

1. NCDOT will pay the USFS, or their approved contractor, to measure to USFS specifications, the volume of timber on NFS lands within the proposed right-of-way limits. NCDOT will then pay the USFS for the measured timber volume at which time the timber will become property of the NCDOT. The USFS and NCDOT will agree on the precise monetary value of the timber through appraisal at rates effective at the time of the timber sale contract.

2. No borrow or disposal sites related to this project are to be located on NFS lands without express written permission from the USFS and completion of all required environmental studies.

3. Before construction, a preconstruction conference will be held involving the contractor, pertinent local officials, the U.S. Forest Service, and NCDOT Division of Highways to discuss various construction procedures, including precautionary steps to be taken during construction that will minimize the interruption of public utility and traffic services.

Utilities & Right-of-Way Unit

1. NCDOT will coordinate with the USFS if previously undisclosed utilities are encountered during the right-of-way acquisition and construction phases of the project.

Roadway Design & Hydraulics Unit & PDEA & Construction & Division 2

1. As agreed upon by the NEPA/404 Merger Team [*Concurrence Meeting for Corridor Selection (Concurrence Point 3 Revisited) Meeting Summary, 10/23/2012*], the East Prong of Slocum Creek will be crossed with a 1,620-foot bridge. The Tucker Creek tributary will be crossed with a double 10-foot by 8-foot reinforced concrete box culvert that is 400 feet in length perpendicular to the proposed roadway. The Southwest Prong of Slocum Creek will be crossed with a 945-foot bridge. Existing triple 9-foot by 7-foot reinforced concrete box culvert on Tucker Creek will be extended approximately 25 feet

upstream and 78 feet downstream with a triple 9-foot by 7-foot reinforced concrete box culvert. Temporary work bridges will be required to construct the proposed bridge structures, which will be addressed in the Permit Application Package.

2. In order to minimize the fragmentation of red-cockaded woodpecker (RCW) habitat, plan sheets will show that the right-of-way limits (and clearing limits) do not exceed 200-feet wide for the 5,500-foot (1.04-mile) section from Station 338+00 to Station 393+00. In addition and to avoid clearing trees outside the 200-foot limits, only hand clearing will occur at the edge of the right-of-way limits of this section.

3. Project special provisions should indicate an in-water work moratorium for February 15 to June 15 for East Prong Slocum Creek, Southwest Prong Slocum Creek, and Tucker Creek at the proposed extension of the existing culvert at US 70. The unnamed tributaries within the project study alignments are not considered anadromous fish habitat and are not subject to anadromous fish moratoria. Design of these structures will adhere to Stream Crossing Guidelines for Anadromous Fish Passage (NCDOT, 2012).

4. "NCDOT will coordinate with the NEPA/404 Merger Team at Concurrence Point 4C to identify additional measures that would avoid, minimize, or otherwise mitigate direct and indirect project impacts to important groundwater resources within the project study area."

Roadside Environmental Unit & Roadway Design

1. NCDOT will continue to coordinate with the USFS to address landscaping, fencing, and access needs on NFS lands.

    - Detailed plans for these design elements will be included in the ROD.

    - The Landscaping Plan will, among other normal aspects, detail appropriate native seeding mixes for erosion control and site specific control methods for nonnative invasive species (NNIS), including a suite of acceptable herbicides for the corridor and adjacent natural habitats.

    - The Landscaping Plan will also outline a plan for ongoing coordination between NCDOT and USFS personnel to maintain vegetation diversity and ensure no long-term impacts to rare species along the bypass corridor.

2. NCDOT will utilize a natural fiber mesh or weed-free mulch for erosion control and revegetation on NFS lands. If erosion becomes problematic in any area post-construction, turfgrass may have to be judiciously utilized to limit soil disturbance.

5. No borrow or disposal sites related to this project are to be located on NFS lands without express written permission from the USFS and completion of all required environmental reviews. Contractors will coordinate with regulatory and resource agencies during the final permitting stage to ensure that other areas of non-disturbance (i.e., borrow pits, temporary access roads, staging areas, etc.) are set to minimize impacts to natural and cultural resources.

Roadside Environmental Unit & Division 2

1. Management of Non-Native Invasive Species (NNIS): NCDOT will work within adjacent NCDOT right-of-way to prevent the encroachment of NNIS onto NFS lands and commits to the following measures:

   - Native vegetation will be retained as much as possible. Exposed soils would be promptly revegetated to avoid re-colonization by NNIS or potential soil erosion. Only approved seed mixtures and weed seed-free mulch would be used. In consultation with the USFS, NCDOT will use seed mixes of native grasses and forbs or other non-native, non-invasive species on NFS lands for erosion control and revegetation.

   - To prevent the spread of NNIS on NFS lands, NCDOT will require contractors to pressure wash all off-road equipment, including cranes, graders, pans, excavators, and loaders, prior to being brought into the CNF construction areas. Equipment would be cleaned thoroughly before moving from treatment sites to ensure that seeds or other propagules are not transported to other sites.

   - To control the spread of NNIS on NFS lands, NCDOT, in coordination with the USFS, will locate and flag areas of targeted NNIS. If any of these areas are within areas of proposed fill, those areas will be cleared and grubbed, and the material disposed of outside the limits of the CNF. If NNIS are located in areas of proposed cuts, then the material and actual thickness of root mat or other defined amount will be disposed of outside the limits of the CNF.

   - Use of mowing as a control method for NNIS should be timed to avoid spreading seeds (e.g. before seed set) to the extent possible.

   - Herbicide Treatments:

     – NCDOT will only use herbicides in specific areas on National Forest System lands in consultation with the USFS. All guidelines and mitigation measures presented in Forest Manual 2150, Pesticide-Use Management and Coordination, and Forest Service Handbook 2109.14, Pesticide Use Management and Coordination Handbook, would be followed. If any new herbicides come onto the market, NCDOT will coordinate with USFS before using on NFS lands.

     – NCDOT will contact the USFS for non-routine maintenance and use of herbicides on NFS lands.

     – Prior to treatment, proposed actions will be reviewed by forest resource specialists in the areas of wildlife biology, botany, aquatics, soils, recreation, and heritage resources.

     – NCDOT will not use broadcast sprays for herbicides and pesticides on NFS lands. Herbicides and pesticides will only be used in specific areas on National Forest System lands in consultation with the USFS. In addition, NCDOT will coordinate with the USFS on any mechanical methods that would be allowed.

     – Along stream edges and banks, wide-angle cone tip nozzle guards will be used on the end of herbicide applicator wands. All herbicides will be sprayed away from any water in ephemeral and perennial streams, vernal pools, or lakes.

Aquatic-labeled herbicides will be used when within 150 feet of any live water. Only surfactants/adjuvants with low toxicity to aquatic species, such as Agri-dex, will be used in these areas.

- When conducting chemical control of targeted NNIS within 10 feet of any identified USFS Rare Plant Species populations, the following guidelines apply:
  - All the rare plant species occurrences would be flagged or marked prior to treatment to avoid any off-target effects.
  - No chemical treatment will occur within 1 foot of the rare plant.
  - Prior to applying herbicide within 1-10 feet of these plants cover the rare plants or place an appropriate barrier adjacent to them.
  - For vining species, pull the vines outside one foot of adjacent rare plants.
  - For larger woody stems, diameters 1 inch or greater, apply herbicide to cut stem surfaces. Apply herbicides to the cut stems with a small wick applicator if possible or with a small spray bottle to minimize drift.
  - For smaller woody NNIS stems, if broadcast treatment is the only feasible treatment, cut the stems and only treat after re-sprouting from 6-inches to 1 foot in height.
  - While spraying the re-sprouting foliage, place a barrier (such as an appropriately sized cardboard sheet) next to the rare plant species or cover the rare plant species with an appropriate container.
  - NCDOT will post "No Treatment" signs at rare plant sites along the roadway.

- When conducting mechanical control by hand, NNIS capable of starting new plants (seeds, rhizomes, root mats, etc.) require proper disposal outside the limits of the CNF. Plants should be bagged and moved off site. Bagged plants will receive standard garbage disposal. For large woody bushes that would be difficult to move, treatments will be scheduled prior to seed set as practical. NCDOT will coordinate with the USFS on any mechanical methods that would be allowed for NNIS.

- NCDOT commits to treating roadside NNIS in the CWMB prior to turning over the site to USFS. An initial treatment, followed by a second spot application, will address NNIS growing along or adjacent to the existing roads within the CWMB and will cover species on the USFS list of NNIS.

- NCDOT Division 2 will work with USFS staff on a periodic basis to control the presence of priority NNIS along the NCDOT right-of-way on NFS lands. In turn, USFS will work cooperatively with NCDOT to identify and effectively control prioritized NNIS. The current list of prioritized NNIS species is below; it is subject to change as new plant threats are identified.

- *Lespedeza cuneata,* Sericea Lespedeza
- *Lespedeza bicolor,* Bicolor Lespedeza
- *Albizia julibrissin,* Mimosa
- *Ligustrum sinense,* Privet
- *Rosa multiflora,* Multiflora Rose
- *Ailanthus altissima,* Tree-of-Heaven

- *Miscanthus sinensis,* Chinese Silver Grass
- *Lonicera maacki or morrowii,* Amur or Morrow's Honeysuckle
- *Lonicera japonica,* Japanese Honeysuckle
- *Sorghum halepense,* Johnson Grass
- *Arthraxon hispidus,* Basket Grass
- *Elaeagnus umbellata,* Autumn Olive
- *Pueraria montana var. lobata,* Kudzu
- *Hedera helix* var. *helix,* English Ivy
- *Vinca minor,* Periwinkle
- *Kummerowia striata,* Japanese-clover
- *Youngia japonica,* Asiatic Hawk's-beard
- *Wisteria sinensis,* Chinese Wisteria
- *Verbena brasiliensis,* Brazilian vervain
- *Imperata cylindrica,* Cogongrass
- *Persicaria perfoliata,* Mile-a-minute
- *Cayratia japonica,* Bushkiller
- *Pyrus calleryana,* Bradford Pear
- *Solanum viarum,* Tropical Soda Apple
- *Centaurea stoebe ssp. micranthos,* Spotted Knapweed
- *Commelina communis,* Common Dayflower
- *Baccharis hamlimifolia,* Eastern baccharis*

* Native but considered invasive

Geotechnical Engineering Unit

1. If excavation work is required at the Craven County Waste Transfer Site, NCDOT will collect and analyze background soil samples to confirm the presence or absence of soil impact from arsenic, in accordance with NCDOT Policy on hazardous materials.

Hydraulics Unit

1. The NCDOT Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), to determine the status of the project with regard to applicability of NCDOT's Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

Hydraulics Unit & Construction & Division 2

1. As this project involves construction activities on or adjacent to FEMA-regulated streams, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon the completion of project construction, certifying that the drainage structures and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

2. Fueling or oiling of mechanical equipment would occur away from aquatic habitats.

Division 2

1. NCDOT Division 2 staff will coordinate in future years with the USFS to allow for prescribed burns on NFS lands during construction and in the future, as detailed in Appendix A of this FEIS. Details of the prescribed burn plan will also be documented in the ROD.