

North Carolina Department of Transportation
PROJECT ENVIRONMENTAL CONSULTATION FORM
I.D. NO. R-2707C

I. GENERAL INFORMATION

- a. Consultation Phase: Construction
- b. Project Description: US 74 Shelby Bypass From East of NC 226 to East of NC 150, Cleveland County
- c. Federal Project: NHF-0074(152)
WBS: 34497.3.6
- d. Document Type: Draft Environmental Impact Statement 10/01/98
Date
Final Environmental Impact Statement 1/25/08
Date
Record of Decision 12/01/08
Date

II. CONCLUSIONS

The above environmental document has been reevaluated as required by 23 CFR 771. It was determined that the current proposed action is essentially the same as the original proposed action. Proposed changes if any are noted below in Section III. It has been determined that the anticipated social, economic, environmental impacts were accurately described in the above referenced document(s) unless noted otherwise herein. Therefore, the original Administration Action remains valid. The location of STIP Project R-2707C is shown in Figure 1.

III. CHANGES IN PROPOSED ACTION AND ENVIRONMENTAL CONSEQUENCES

Natural Systems – Water Resources:

The attached memorandum, dated January 17, 2017, addresses water resources and protected species potentially impacted by the project and serves to update the referenced Final Environmental Impact Statement (FEIS) and Record of Decision (ROD).

Water resource classifications for R-2707C have not changed since the FEIS and ROD were completed. The following water resources (with best usage classifications shown in parentheses) are located within the project area: the First Broad River and its UTs (WS-IV), Hickory Creek and its UTs (C), and a UT to Kings Mountain Reservoir

(WS-III CA). The project is located in the Broad River Basin, Hydrological Cataloguing Unit 03050105. Neither High Quality Waters (HQW), Water Supplies (WS-I or WS-II), nor Outstanding Resource Waters (ORW) occur within 1.0 mile of the project area. No surface waters in the project are designated as a North Carolina Natural or Scenic River, or as a national Wild and Scenic River. The First Broad River and Hickory Creek are not listed on DWQ’s 2014 303(d) list of impaired waters in North Carolina, nor are any such waters listed within one mile of the project. The project was re-verified (stream and wetland information) on August 31, 2016.

Seven wetlands will be impacted, resulting in a total of 0.94 acre of wetland impacts requiring mitigation. Twenty-two streams will be impacted, resulting in a total of 7126 linear feet of impacts requiring USACE mitigation. An Application for Modification to the Section 401 Individual Permit and Section 401 Water Quality Certification was submitted to USACE on 1-11-17. These permits were received on 3-31-17 and 4-4-17, respectively.

Natural Systems – Protected Species:

Plants and animals with federal classifications of Endangered (E), Threatened (T), Proposed Endangered (PE), and Proposed Threatened (PT) are protected under provisions of Section 7 and Section 9 of the Endangered Species Act of 1973, as amended. As of April 2, 2015, the United States Fish and Wildlife Service (USFWS) lists two federally protected species for Cleveland County (see Table 1).

Table 1. Federally protected species of Cleveland County.

Scientific Name	Common Name	Status	Habitat	Biological Conclusion
<i>Hexastylis naniflora</i>	Dwarf-flowered heartleaf	T	Yes	Not Likely to Jeopardize the Continued Existence of <i>Hexastylis naniflora</i> .
<i>Myotis septentrionalis</i>	Northern Long-eared bat	T	Yes	*

*May Affect – This project is in compliance with the USFWS 4(d) rule.

In 1998, Dwarf-flowered heartleaf (DFHL) was positively identified on the on the project site. A Biological Assessment (BA) from NCDOT was issued in January 2004, with a subsequent Biological Opinion (BO) issued by the USFWS in May 2004. Due to the project being delayed for a few years, the USFWS requested that NCDOT prepare an updated BA. NCDOT submitted a revised BA on 8-3-12, and USFWS issued an Amended BO on 11-9-12 (see attachment). The amended 2012 BO continued the call of Not Likely to Jeopardize the Continued Existence of the DFHL from the 2004 BO. Updates to the project commitments for the DFHL are presented in the attached project commitments list.

The Northern long-eared bat (NLEB) was added to the USFWS Cleveland County list on April 2, 2015. The entire project (R-2707A–E) was reviewed for effects on NLEB in a report issued June 15, 2016 by NCDOT’s Biological Surveys Group. The report determined that the nearest NLEB hibernacula record is 31 miles west of the project, and no known NLEB roost trees occur within 150 feet of the project area. NCDOT has determined that the proposed action does not require separate consultation on the grounds that the proposed action is consistent with the final Section 4(d) rule, codified at 50 C.F.R. § 17.40(o) and effective February 16, 2016. NCDOT may presume its determination is informed by best available information and consider Section 7 responsibilities fulfilled for NLEB.

The bald eagle has been delisted from the Endangered Species Act as of August 8, 2007. It is still protected under the Bald and Golden Eagle Protection Act. Habitat for the bald eagle (*Haliaeetus leucocephalus*) primarily consists of mature forest in proximity to large bodies of open water for foraging. Large, dominant trees are utilized for nesting sites, typically within 1.0 mile of open water. Suitable habitat for bald eagle does exist in the project study area along King’s Mountain Reservoir. A survey for nest trees was conducted on February 10, 2010 and December 18, 2014 within the study area and to a distance of 660 feet on all sides with no nests or eagles being observed.

Traffic Noise:

NCDOT adopted a revised Traffic Noise Policy on October 6, 2016. The revised policy applies to projects with a final environmental document approval date on after October 6, 2016. Because the ROD for R-2707 was approved on December 1, 2008, the revised policy does not apply.

Two Noise Sensitive Areas (NSAs) within the limits of R-2707C, NSA K and NSA L, were evaluated in the October 14, 2010 Design Noise Report (DNR).

- A noise wall was found to be feasible and reasonable at NSA K and was recommended for construction. However, the noise wall at NSA K is not currently included in the project design. Noise abatement was evaluated and determined to be feasible but not reasonable at NSA L. According to the 2010 DNR, NSA L will be evaluated for possible installation of a vegetative barrier during project construction.
- Due to the amount of time that elapsed since the 2010 DNR was completed, a new DNR will be prepared for the entire R-2707C project segment during final design. If it is determined a noise wall at NSA K, NSA L, or any other NSA within the project limits is feasible and reasonable in accordance with the 2011 Traffic Noise Abatement Policy, it will be constructed as part of this project.
- In areas of impacted noise receptors where abatement measures have been considered and found not to be reasonable, a vegetative barrier will be considered for psychological and aesthetic screening.

Proposed Design Changes:

Since the Final Environmental Impact Statement was approved by the Federal Highway Administration in January 2008 and the Record of Decision was accepted by the Federal Highway Administration in December 2008, the changes listed below have been made to the design of R-2707C. These design changes do not require the acquisition of additional right of way or increase project impacts beyond what was proposed at the time of FEIS approval, **except as denoted below in bold text** .

- Proposed US 74 bridges over First Broad River:
 - Both bridges have been lengthened by approximately 200 feet to span the floodplain.
 - The grade has been adjusted to remove low point from approach slabs.
 - The westbound bridge has been widened due to anticipated storm water spread.
- The project limits have been extended westward approximately 200 feet to accommodate the longer proposed bridges over the First Broad River (thus overlapping a small segment of adjacent Project R-2707B).
- **A hazardous spill basin has been added on south side of US 74 east of the First Broad River.**
- **An access road has been added between the First Broad River and SR 1850 to provide access to the proposed hazardous spill basin on the south side of US 74. Access will be provided to the basin from SR 1850 north of US 74.**
- The width of the proposed SR 1827 bridge over US 74 has been reduced based on updated traffic counts.
- The NC 18 temporary detour alignment has been shifted slightly.
- A wider bridge on NC 18 over US 74 is recommended to accommodate future sidewalk construction.
- The NC 180 alignment has been shifted to the southwest to accommodate future widening (STIP Project U-2221C).
- MSE walls have been added along NC 180 and CSX Railroad where those facilities cross US 74.
- NC 180 improvements have been extended northward to SR 1926.
- A diamond interchange now proposed at US74/NC 150 junction rather than SPUI design proposed at time of ROD approval.
- The vertical grade on NC 150 has been lowered to allow US 74 to cross over NC 150, rather than NC 150 crossing over US 74, as was recommended at the time of ROD approval.
- Roundabouts have been added on the NC 150 at ramp terminals at the proposed US 74 interchange.
- A roundabout has been added at the NC 180/NC 150 intersection.

- **A service road is now proposed on the north side of US 74 west of NC 150 to provide access to nearby properties.**
- **Dry detention basins are now recommended at two locations: (1) south side of proposed US 74 east of SR 1926 and (2) south side of proposed US 74 east of CSX Railroad.**

IV. LIST OF SPECIAL PROJECT COMMITMENTS

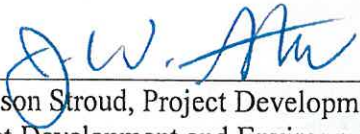
Please refer to the attached Project Commitments for a listing of and update to the environmental commitments developed during the planning and design phases of this project.

V. COORDINATION

PDEA personnel have coordinated with others with respect to the proposed improvements, as noted below.

Roadway Design:	<u>Kanchana Noland</u>	<u>4-6-17</u> Date
NES Project Management:	<u>Jeff Hemphill</u>	<u>4-5-17</u> Date
NES Biological Surveys:	<u>Tim Bassette</u>	<u>4-6-17</u> Date
GeoEnvironmental:	<u>Cyrus Parker</u>	<u>3-31-17</u> Date
Division 12 Construction:	<u>Larry Carpenter</u>	<u>4-10-17</u> Date
Traffic Noise and Air Quality:	<u>Tracy Roberts</u>	<u>4-7-17</u> Date
FHWA:	<u>Clarence Coleman</u>	<u>4-7-17</u> Date

VI. NCDOT CONCURRENCE



J. Wilson Stroud, Project Development Engineer
Project Development and Environmental Analysis Unit

4-13-17

Date



Beverly G. Robinson, Group Leader
Project Development and Environmental Analysis Branch

4-13-17

Date

VII. FHWA CONCURRENCE



Loretta W. Barren
Federal Highway Administration
For Division Administrator

4/13/17

Date

Project Commitments
US 74 Shelby Bypass
Federal-Aid No. NHF-0074(152)
WBS Number 34497.3.6
TIP Project No. R-2707C
Cleveland County, North Carolina

Current status, changes, or additions to the Project Commitments as shown in the environmental documents for the project are printed below in ***bold italics***.

In addition to the Section 404 Conditions, Regional Conditions, State Consistency, NCDOT's guidance for *Best Management Practices for the Protection of Surface Waters*, General Certification Conditions, and Section 401 Conditions of Certification, NCDOT has agreed to the following special commitments:

Project Development and Environmental Analysis Unit

1. Stream Relocations and Modifications. Stream relocations or modifications will be coordinated with the US Fish and Wildlife Service (USFWS), US Army Corps of Engineers (COE), the North Carolina Department of Environment and Natural Resources, Division of Water Quality (DWQ) and the North Carolina Wildlife Resources Commission (WRC) in accordance with the Fish and Wildlife Coordination Act [72 Stat. 563, as amended; 16 USC 661 et seq. (1976)]. An on-site stream mitigation review will be held with the COE, the USFWS, the WRC, and the DWQ. The assessment will determine where on-site stream mitigation is possible. Bioengineering techniques will be applied to relocated streams. These techniques will result in meandering streams with riffles and pools. Native vegetation will be used to stabilize banks and root wads will be used instead of rip-rap as appropriate. A 2:1 off-site compensatory mitigation ratio will be required unless an on-site stream is being relocated via natural stream design techniques; the latter will be at a 1:1 stream mitigation ratio. Stream mitigation (i.e., enhancement, preservation) adjacent to the project must still be completed at a 2:1 mitigation ratio if the mitigation is not an on-site natural stream design relocation. Based on the preliminary design for this project, two stream relocations will be required:
 - A stream relocation will be required for the tributary of Buffalo Creek between SR 2063 and the Light Oak community. An approximately 950-foot segment of this stream will require relocation, most likely to the east of its existing location.

Action: Stream relocation for the tributary of Buffalo Creek will be evaluated during the final design stage of R-2707D.
 - A stream relocation will be required just to the west of Lithia Springs Road for a tributary of the First Broad River. This relocation is approximately 1,100 feet in length, and will be to the north of the existing stream bed.

Action: *This proposed stream relocation is located within the limits of R-2707C, along the north side of proposed US 74 near Lithia Springs Road (SR 1842). The project has been coordinated with the regulatory agencies, and this stream relocation is included in the design of the project. Permit review meetings were held on 9-8-03 (CP4B) and 9-21-16 (CP4C). A mitigation acceptance letter for the project was received from the N. C. Division of Mitigation Services on 12-16-16. NCDOT submitted an Application for Modification to the Section 401 Individual Permit and Section 401 Water Quality Certification to USACE on 1-11-17. These permits were received on 3-31-17 and 4-4-17, respectively.*

2. Stream and Wetland Mitigation Plans. A comprehensive mitigation plan will be coordinated with the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, North Carolina Department of Environment and Natural Resources, Division of Water Quality, and North Carolina Wildlife Resources Commission.

Action: *See reply to Commitment 1 above.*

3. Sensitive Waters. *Sedimentation Pollution Control Act Design Standards in Sensitive Waters will be employed on WS-III stream crossings upstream of Moss Lake and on WS-IV First Broad River and its upstream tributaries crossed by the Preferred Alternative.*

Action: *The R-2707C design incorporates Design Standards in Sensitive Waters for the First Broad River and its tributaries, as well as for a tributary of Moss Lake (Kings Mountain Reservoir). Special design standards for Moss Lake (Kings Mountain Reservoir) and its tributaries will be evaluated under R-2707D.*

4. Future Air Quality. Any future air quality analysis for this project will include a review of vehicle-mix percentages, given the industrial nature of portions of the project area.

Action: *An Addendum to the Air Quality Impacts can be found in the 2008 Record of Decision. No additional air quality studies are required or warranted.*

April 7, 2017 update: *The prior finding on air quality remains valid. No additional air quality studies are needed.*

5. Transplant of Dwarf-Flowered Heartleaf Plants. ~~The North Carolina Plant Conservation Program (NCP) will be notified if or when dwarf-flowered heartleaf (DFHL) plants will be lost to construction. A qualified botanist from that organization or a designated representative will be allowed to transplant, if desired, any of the plants that would be lost to a different area of protection.~~

Action: *This commitment has been dropped as a Conservation Measure in the Amendment to the Biological Opinion (BO) issued by the USFWS on November 9, 2012 (attached).*

6. Dwarf-Flowered Heartleaf Monitoring. The dwarf-flowered heartleaf sites in the right-of-way will be monitored annually for five years to determine their stability and to detect any construction effects (positive or negative) which have not been anticipated (increased light, hydrology changes, etc.) and efforts will be made to control exotics.

Action: Conservation Measure 5 from the Amendment to the BO replaces this commitment. See pages 8 and 9 of this commitment list.

7. Dwarf-Flowered Heartleaf Report. A written report on dwarf-flowered heartleaf monitoring and management efforts will be provided yearly until the project is completed

Action: Conservation Measure 5 from the Amendment to the BO replaces this commitment. See pages 8 and 9 of this commitment list.

8. Dwarf-Flowered Heartleaf Conservation Easements. Written documentation will be provided to the US Fish and Wildlife Service and to the North Carolina Natural Heritage Program regarding any successful efforts to obtain conservation easements on dwarf-flowered heartleaf sites 8, 9, 12, 13, 24, 25, 26, 30, 32, 33, 34, 35, and 43.

Action: Conservation Measure 4 from the Amendment to the BO replaces this commitment. See page 8 of this commitment list.

9. Wetlands and Streams Re-Verification. Wetlands and stream information will be re-verified during the Section 404 permit application process.

Action: Wetlands and stream information was re-verified on August 31, 2016.

10. Indirect and Cumulative Effects Analysis. A supplemental Indirect and Cumulative Effects analysis will be performed prior to construction.

Action: An Indirect and Cumulative Effects and Land Use Scenario Assessment was completed on October 2, 2009. The 2009 ICE and LUSA are sufficient for the USACE Section 404 permit application, which NCDOT submitted on 1-11-17.

Project Development and Environmental Analysis Unit, Roadway Design Unit, Structures Management Unit, Hydraulics Unit, Division 12

1. Brushy Creek. The following measures will be implemented at the Brushy Creek crossing to minimize both short-term construction impacts and long-term impacts:
- Trees will be cut at the base to create root wads to help stabilize the banks.
 - During final design, the bridges will be designed with sufficient length to allow for wildlife passage. This will be coordinated with USFWS.
 - Deck drainage will not be released directly into the waterway.

Action: ~~Per January 2006 coordination with USFWS, the bridges provide sufficient length to allow for wildlife passage. Coordination with the USFWS will be conducted as part of the permitting process. This commitment applies to R-2707B, which is under construction.~~

2. First Broad River. The following measures will be implemented at the First Broad River crossing to minimize both short-term construction impacts and long-term impacts:

- A temporary causeway or work bridge will be constructed.
- A drainage system will be utilized on the bridge for stormwater runoff.
- Coordination will be conducted with the local water supply administrator.
- Hazardous spill basins will be utilized.
- Vegetation will be left in place as much as is practicable.
- Deck drainage will not be released directly into the waterway.

Action: A hazardous spill basin will be installed on the east side of the First Broad River south of proposed US 74 as part of R-2707C, and drainage will not directly flow into the river from the bridge. Although a final decision has not been made as to whether a temporary causeway or work bridge will be required at this location, the project design plans note temporary surface water impacts in the area between the two bridges, which would accommodate a temporary causeway or work bridge. Vegetation will be left in place as much as is practicable. Coordination with the City of Shelby Water Resources Director has been performed. Based on that coordination, NCDOT will include a special provision in the contract directing the contractor to immediately notify the NCDOT Engineer of any hazardous material spill or any equipment inadvertently entering the water during construction of the two proposed bridges over the First Broad River. The NCDOT Engineer will then notify the City of Shelby Water Plant Supervisor at 704-484-6885 (24/7 number) or 704-484-6840 (main office number).

3. Stream 4-13 and DFHL Sites 10, 11 and 12. During culvert design and construction, consideration will be given to minimizing disturbance of Stream 4-13 and dwarf-flowered heartleaf sites #10, 11, and 12 - including minimizing clearing, minimizing rip rap on the stream banks, and using native vegetation to revegetate the stream banks.

Action: DFHL Sites 10 and 11 and Stream 4-13 (USACE Permit Site 4) will incur direct effects from project construction. The project will not directly impact DFHL Site 12. Avoidance and minimization measures for DFHL Sites 10 and 11 and Stream 4-13, as stipulated in the Amendment to the BO, have been incorporated into the project design. These measures include reduced sloped stake limits and the use of native vegetation to revegetate the jurisdictional stream. See Conversation Measure 4 from the Amendment to the BO for a status update on obtaining a conservation easement for Site 12 (page 8 of this commitment list).

4. Cemeteries. Impacts to cemeteries will be avoided and/or minimized to the extent practicable during the final design phase of the project. If required, graves will be relocated according to state guidelines.

Action: ~~Human remains have been identified, removed, and relocated for impacted grave sites within the Wright-Bostic cemetery. Efforts are being made to avoid impacts to the Eskridge Grove cemetery. The Poston Cemetery will incur impacts.~~

The Wright-Bostic Cemetery was impacted by R-2707AB. All human remains from the cemetery were identified, removed, and relocated to the Double Springs Baptist Church Cemetery.

The Eskridge Grove Cemetery, located in proximity to R-2707B, was not impacted by that project.

The Poston Cemetery was impacted by R-2707B. All human remains from the cemetery were identified, removed, and relocated to the Zion Baptist Church Cemetery.

No cemeteries are anticipated to be impacted by R-2707C. If such impacts occur, any required relocations will be relocated according to state guidelines.

5. Hamilton-McBrayer Farm. Along the existing section of US 74 at the Hamilton-McBrayer Farm, widening will be to the north (away from the property). A service road will be added, extending from Broadway Road, all within existing right-of-way, to service the trailers in the mobile home park to the north and west of the Hamilton-McBrayer Farm. This will comply with the conditions set forth in the NC State Historic Preservation Office effects concurrence form for this historic property, and will ensure that the effect to the Hamilton-McBrayer Farm will not be adverse.

~~Action: A service road has been added extending from Broadway Road, within the existing right of way. A temporary easement is required on Broadway Road, resulting in No Adverse Effect on the property. This commitment applies to R-2707AA, which is under construction.~~

6. Wildlife Passage. During final design, the bridges over Brushy Creek will be designed with sufficient length to allow for wildlife passage. This will be coordinated with USFWS during design.

~~Action: Per January 2006 coordination with USFWS, the bridges provide sufficient length to allow for wildlife passage. Coordination with the USFWS will be conducted early in the permitting phase. This commitment applies to R-2707B, which is under construction.~~

8. Geodetic Markers. The North Carolina Geodetic Survey will be notified prior to construction to allow ample time for relocation of any affected geodetic markers.

Action: Coordination with the NCGS regarding the relocation of geodetic markers affected by this project is in progress.

Project Development and Environmental Analysis Unit, Division 12, Right-of-Way Unit

1. Dwarf-Flowered Heartleaf (DFHL) Mitigation Plan. A plan to mitigate impacts to the dwarf-flowered heartleaf will be developed in consultation with USFWS and WRC. Mitigation efforts will be performed by qualified persons and could include transplanting the vegetative portions of plants from existing sites to preselected, approved alternate sites, dispersing seed, and/or acquiring existing sites for preservation.

Action: Conservation Measures 3, 4, 5, 6, and 8 from the Amendment to the BO replace this commitment. See pages 8-10 of this commitment list.

Division 12

1. Street Closings. Any street closings will be coordinated with fire, police, and EMS personnel.

Action: NCDOT will contact local agencies prior to any street closings.

Project Development and Environmental Analysis Branch, Roadway Design Unit, Division 12, Geotechnical Engineering Unit, Hydraulics Unit

1. Noise Barriers. In areas of impacted noise receptors where abatement measures have been considered and found not to be reasonable, a vegetative barrier will be considered for psychological and aesthetic screening.

Action: Two Noise Sensitive Areas within the limits of R-2707C, NSA K and NSA L, were evaluated in the October 14, 2010 Design Noise Report.

A noise wall was found to be feasible and reasonable at NSA K and was recommended for construction. However, the noise wall at NSA K is not currently included in the project design. Noise abatement was evaluated and determined to be feasible but not reasonable at NSA L. According to the 2010 DNR, NSA L will be evaluated for possible installation of a vegetative barrier during project construction. Due to the amount of time that elapsed since the 2010 DNR was completed, a new DNR will be prepared for the entire R-2707C project segment during final design. If it is determined a noise wall at NSA K, NSA L or any other NSA within the project limits is feasible and reasonable in accordance with the 2011 Traffic Noise Abatement Policy, it will be constructed as part of this project.

2. Farmland. Efforts will be made to minimize impacts to farmlands during final design, including crossing of farm fields along property boundaries wherever possible to avoid bisecting farm operations.

Action: Impacts to farmlands have be avoided and/or reduced to the extent practicable.

3. Lithia Springs. Impacts to Lithia Springs will be avoided and/or minimized to the extent practicable during the final design phase of the project. A study of the impacts to the underground water table due to road grading operations at Lithia Springs will be undertaken during final design.

Action: Potential impacts to Lithia Springs were evaluated and presented in a report dated 2-5-15. Based on the conceptual site model presented in that report, the project is not anticipated to result in a significant impact on the flow of groundwater to the spring, water flow from the spring, or the quality of water from the spring. Probable impacts to the spring (flow and water quality) from the project are low.

Geotechnical Engineering Unit, Right-of-Way Unit

1. Hazardous Materials Sites. Should the Selected Alternative impact any hazardous material site or UST, a Preliminary Site Assessment will be performed prior to right-of-way acquisition to determine the existence and/or extent of any contamination. These assessments will also be used by NCDOT to estimate the associated clean-up costs.

Action: Hazardous materials sites exist within the limits of R-2707C. All USTs have been removed. Petroleum-contaminated soil is present in the project area, and known areas of contamination are shown on the corresponding plan sheets. A Project Special Provision has been provided to instruct the contractor on the proper disposal of the contaminated soil.

Project Development and Environmental Analysis Unit, Roadway Design Unit, Division 12, Right-of-Way Branch

1. Protection of Dwarf-Flowered Heartleaf Sites. ~~Dwarf-flowered heartleaf sites outside of the construction limits of the project in areas where NCDOT owns the property or has a construction easement will be protected and will not be disturbed during construction. These sites will be left forested and will be protected in perpetuity. The sites will remain on the design plans and will be labeled as sensitive areas.~~

Action: Conservation Measures 2,3,4,6 and 8 from the Amendment to the BO replace this commitment. See pages 7-10 of this commitment list.

Project Development and Environmental Analysis Unit, Roadway Design Unit, Division 12, Right-of-Way Unit

1. 2012 Amended BO Conservation Measures. **The Conservation Measures for the Dwarf-flowered heartleaf (DFHL) as stated in the Amended BO issued by USFWS on 11-9-12 (attached) are as follows:**

- 1) Pre-construction meeting - **A [USFWS] biologist will attend the preconstruction meeting to discuss (a) the importance of avoiding [DFHL] plants and (b) other environmental commitments that are a part of the project.**

Action: NCDOT will invite the appropriate USFWS biologist to the preconstruction meeting, which will be scheduled after the construction contract is awarded.

- 2) [DFHL] protective barriers - **Before construction activities begin at [DFHL] Sites 7, 10, 11, 15, 16, 20, 22, 24, 25, 28, 31, 32, and 49, the portion of occupied [DFHL] habitat remaining intact from construction activities (i.e., adverse direct effects and indirect effects from drainage activities) will be protected by placing orange safety fencing or otherwise hardened barriers with appropriate signage along the construction limits. The signed fencing or barriers will protect the remaining plants from accidental disturbance**

during construction. The portions of [DFHL] sites that are protected will remain on the project's design plans throughout construction activities and will be labeled on the plans as "sensitive areas."

Action: This measure applies to DFHL Sites 10 and 11 for purposes of R-2707C. DFHL sites 10 and 11 have been identified on plan sheets 2B-8, 2B-9, and 7 with labels that state "environmentally sensitive area, do not disturb." These areas will be marked in the field prior to construction to protect them from accidental disturbance.

- 3) **On-site protection** - The portions of [DFHL] Sites 7, 10, 11, 15, 16, 20, 22, 24, 25, 28, 31, 32, and 49 not lost from project construction will be protected in perpetuity. A protective buffer of up to 400 feet out from the limits of preserved occupied [DFHL] habitat will be placed around these plant sites and also preserved in perpetuity. Final buffer widths will vary for each site. Design Plan Sheet Nos. 16-26 of 26 in the amended [BA] depict the area of occupied [DFHL] habitat to be protected and the approximate limits of the protective buffers. Final site configurations, including buffer limits, will be mapped and submitted to the [USFWS] when ROW acquisitions are complete.

Action: On the C section of the Bypass, the portions of Sites 10 and 11 not lost from project construction are protected in perpetuity within NCDOT right-of-way as of October 7, 2016. Most of the protective buffer around Site 10 and the entire buffer around Site 11 are also protected in perpetuity on NCDOT right-of-way as of October 7, 2016. Right-of-way for the remaining small portion of protective buffer around Site 10 is to be finalized in a recorded deed in April or May 2017. The expanded right-of-way protections for both sites are depicted on Permit Drawing Sheet 14 of 68 submitted as part of the project's Clean Water Act §404 Individual Permit as well as Plan Sheets 2B-8, 2B-9, and 7. Final site configurations, including buffer limits, are to be mapped and submitted to the Service upon completion of the sites' first dwarf-flowered heartleaf monitoring report.

- 4) **Conservation easements** - The NCDOT will attempt to enter into conservation easements with access points, where appropriate, for all or portions of [DFHL] Sites 1, 8, 12, 13, 14, 26, 29, 33, 34, 35, 43, and 48. The portions of Sites 25 and 32 remaining intact upon project construction and not already protected by ROW extensions will also be pursued for potential conservation easements. Written documentation will be provided to the [USFWS] and the [NCNHP] once easements are successfully obtained at any of these sites.

Action: Dwarf-flowered heartleaf Sites 12 and 13 fall within the limits of R-2707C. A conservation easement could not be obtained for either of these sites because their respective landowners were unwilling to enter into such an agreement with NCDOT upon being contacted by the Department.

- 5) **On-site monitoring** - For on-site conservation sites entered into a secured protective ownership, either through ROW extension via settlement/condemnation or through a conservation easement with a landowner, the NCDOT will quantitatively and qualitatively monitor occupied

[DFHL] habitat preserved in perpetuity. Monitoring efforts will begin with the acquisition of pre-construction/easement acquisition environmental baseline data. The preserved sites will then be monitored post-construction/easement acquisition once every 2 years over a 6-year period to ensure the protection, and detect trends in numbers, of [DFHL] plants that may or may not be due to project construction. Monitoring reports detailing the monitoring results and any appropriate management activities undertaken will be submitted to the [USFWS] at the end of each monitoring period.

Action: Pre-construction monitoring surveys of dwarf-flowered heartleaf Sites 10 and 11 are to be completed before the let date for Project R-2707C. A monitoring report documenting the findings of this pre-construction survey is also to be submitted to the USFWS after the monitoring survey is completed.

- 6) Management of nonnative, invasive species - For on-site conservation sites entered into a secured protective ownership, either through ROW extension via settlement/condemnation or through a conservation easement, adverse effects from biological pollution can be avoided and/or minimized on a case-by-case basis through effective efforts to manage the growth of nonnative, invasive species within the areas of occupied [DFHL] habitat that is preserved.**

Action: Nonnative, invasive species are to be assessed at dwarf-flowered heartleaf Sites 10 and 11 found within the limits of R-2707C on a case-by-case basis during each of the sites' monitoring efforts of the plant species.

- 7) Future anticipated adverse effects - The NCDOT has designated an expected 50-foot wide greenway corridor through [DFHL] sites 12, 14, 22, 23, 25, and 26. Future anticipated adverse effects (not counting biological pollution) associated with the planned greenway's footprint must remain excluded from the area of occupied [DFHL] habitat that the NCDOT can protect at these sites.**

Action: A conservation easement could not be obtained for Site 12 within the limits of R-2707C because the site's primary landowner was unwilling to enter into such an agreement with NCDOT. The site cannot, therefore, be protected in perpetuity by NCDOT.

- 8) Broad River Greenway Conservation Area - The NCDOT entered into a conservation easement on July 18, 2008, with the Broad River Greenway, Inc., of approximately 1,000 acres of land referred to as the Broad River Greenway Conservation Area (BRGCA). In accordance with the stated measures of the BRGCA's Conservation Plan, as well as additional monitoring requirements and guidelines provided by the [USFWS], the NCDOT will quantitatively and qualitatively monitor occupied [DFHL] habitat within the BRGCA. Monitoring efforts began with the acquisition of environmental baseline data prior to obtaining the conservation easement. The BRGCA is then to be monitored once every 3 years over a 9-year period to ensure the protection, and detect trends in numbers, of [DFHL] plants over time. Monitoring reports detailing the monitoring results and any**

appropriate management activities undertaken will be submitted to the [USFWS] at the end of each monitoring period.

Action: The third of three post-environmental baseline monitoring surveys on the BRGCA was completed in 2015, with a draft monitoring report for this survey completed in 2016. A final monitoring report for submittal to the USFWS is pending completion.

Project Development and Environmental Analysis Unit

- 1. The Northern long-eared bat (NLEB) was added to the USFWS Cleveland County list on April 2, 2015. The entire project (R-2707A–E) was reviewed for effects on NLEB in a report issued June 15, 2016 by NCDOT’s Biological Surveys Group. The report determined that the nearest NLEB hibernacula record is 31 miles west of the project, and no known NLEB roost trees occur within 150 feet of the project area. NCDOT has determined that the proposed action does not require separate consultation on the grounds that the proposed action is consistent with the final Section 4(d) rule, codified at 50 C.F.R. § 17.40(o) and effective February 16, 2016. NCDOT may presume its determination is informed by best available information and consider Section 7 responsibilities fulfilled for NLEB.***

R-2707 CLEVELAND COUNTY

US 74 - Shelby Bypass

PROJECT
BREAKDOWN
MAP



R-2707

L.D. NO. / D.S.R. NO.	LET	LET	LET	LET	LET	LET	LET	LET	LET
STATE PROJECT NO. (P.E.) / WBS*	R-2707 AA	R-2707 AB	R-2707 B	R-2707 C	R-2707 D	R-2707 E			
PROJECT ENGINEER	BRENDA MOORE	BRENDA MOORE	BRENDA MOORE	REKHA PATEL	REKHA PATEL	REKHA PATEL			
PROJECT DESCRIPTION	WEST OF SR 1162 (PEACH TREE RD) TO EAST OF SR 1318 (KIMBRELL RD)	EAST OF SR 1318 (KIMBRELL RD) TO EAST OF SR 1315 (PLATO LEE RD)	EAST OF SR 1315 (PLATO LEE RD) TO EAST OF NC 226	EAST OF NC 226 TO WEST OF NC 150	WEST OF NC 150 TO EXISTING US 74 WEST OF SR 2238	EXISTING US 74 WEST OF SR 2238 TO W. OF SR 1001			
COUNTY / DIVISION	CLEVELAND / DIV. 12	CLEVELAND / DIV. 12	CLEVELAND / DIV. 12	CLEVELAND / DIV. 12	CLEVELAND / DIV. 12	CLEVELAND / DIV. 12			
LENGTH	2.0 MI	1.9 MI	2.6 MI	5.3 MI	4.1 MI	2.6 MI			
TYPE OF CONTRACT	TURKEY	GRADING & STRUCTURES	GRADING & STRUCTURES	GRADING & STRUCTURES	GRADING & STRUCTURES	TURKEY			
REMARKS	R/W AA & AB TO BE ACQUIRED UNDER A	R-2707 F, PAVING FOR AB & B IN FY 10	R-2707 G, PAVING FOR C IN FY-20 (\$16,500,000)	R-2707 H, PAVING FOR D IN FY-20 (\$15,800,000)					
BEGIN R/W ACQUISITION (T.I.P.)	FY-10	FY-10	FY-11						
BEGIN R/W ACQUISITION (PRODUCTION)									
PROPOSED LETTING (T.I.P.)	5/21/13	5/20/14	5/20/14	FY-17	PY	PY			
PROPOSED LETTING (PRODUCTION)									
EST. COMP. DATE (T.I.P.)	3-17	1-18	1-18						
ESTIMATED R/W / UTILITY COST	\$ 2,920,000	\$ 17,200,000	\$ 11,000,000	\$ 19,700,000 / \$ 1,900,000	\$ 5,900,000 / \$ 650,000	\$ 8,900,000			
ESTIMATED CONSTRUCTION COST	\$ 2,920,000	\$ 20,600,000	\$ 39,600,000	\$ 58,000,000	\$ 28,000,000	\$ 32,800,000			

UPDATED 12/28/15

STIP Project R-2707C

PROJECT SCHEDULES AND COSTS ARE ACCURATE AS OF DATE SHOWN.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Asheville Field Office
160 Zillicoa Street
Asheville, North Carolina 28801

November 9, 2012

FHWA-NC DIVISION

REC'D NOV 18 /

Div ADMIN		
ASST DIV ADMIN		
CIV RIGHTS		ENG COORD
QUAL COORD		
MAJ ENGR		
STRUC ENGR		
PROJ ENGR		
FIN SPEC		FIN ASST
TRNSP ASST		COMP SPEC
PRD TEAM LEADER		
PL-1		PL-2
PL-3		ARCHT SPEC
CONSTR		
REGO STATE TEAM LEADER		
A-1		A-2
A-3		ROW OFFIC
ENV PROG SPEC		
PRO TEAM LEADER		
TE-1		TE-2
IE - SAFETY		P&S ENGR
AM PRGMGR		
TRN		TRN

Mr. John F. Sullivan, III
Division Administrator
Federal Highway Administration
310 New Bern Avenue, Suite 410
Raleigh, North Carolina 27601

Dear Mr. Sullivan:

Subject: Amendment to the Biological Opinion for the Proposed US 74 Shelby Bypass in Cleveland County, North Carolina, Federal Aid No. NHF-74(14), State Project No. 8.1801001, TIP No. R-2707

This document transmits the U.S. Fish and Wildlife Service's (Service) amended biological opinion (Opinion) based on our review of updated information for the proposed US 74 Shelby Bypass in Cleveland County, North Carolina, and its effects on the federally threatened dwarf-flowered heartleaf (*Hexastylis naniflora*) in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543) (Act). We received your October 16, 2012, request for reinitiation of formal consultation on October 17, 2012. This amendment is based on information provided in the October 16, 2012, amendment package and addresses specific changes from the 2004 Opinion.

The reinitiation of consultation was requested for the following reasons: (1) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in the Opinion and (2) the agency action has been modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the Opinion. More than 8 years have elapsed since the original Opinion was rendered. Resurveys of plant populations, coupled with more refined project plans, have changed the impacts considered in the 2004 Opinion. In addition, conservation of plants and habitat pledged within the rights-of-way (ROW) was reexamined since the North Carolina Department of Transportation (NCDOT) has not purchased the ROW or begun construction activities on this project.

AMENDMENT TO THE 2004 BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The NCDOT proposes to construct the Shelby Bypass (Bypass) to bypass the Town of Shelby, in Cleveland County, North Carolina, from existing US 74 west of Shelby to existing US 74 east of Shelby. The Bypass is proposed to be a four-lane divided, full control of access facility, primarily on new location to the north and east of Shelby, for about 18 miles.

Although the Bypass was studied in total, the project has been divided into five sections (A-E) for the purposes of funding and construction. At the current time, sections A, B, and C are programmed, and sections D and E are post-year (Table 1). Project details are much more refined for sections A-C than they were in 2004.

Table 1. Shelby Bypass Sections and Dates.

Section of R-2707	Location of Section	Length (miles)	Right-of-Way Date	Let Date
A	Existing US 74 (West Dixon Blvd) from west of SR 1162 (Peachtree Rd) to west of SR 1314 (Hoyle Rd)	3.93	June 30, 2010	February 2013 (AA Section) and August 2013 (AB Section)
B	West of SR 1314 (Hoyle Rd) to west of NC 226 (Polkville Rd)	2.62	July 15, 2011	August 2013
C	West of NC 226 (Polkville Rd) to west of NC 150 (Cherryville Rd)	5.34	December 21, 2012	January 15, 2019
D	West of NC 150 (Cherryville Rd) to existing US 74 (East Dixon Blvd) west of SR 2238	4.09	Post-Year	Post-Year
E	Existing US 74 (East Dixon Blvd) from west of SR 2238 to west of SR 1001 (Stoney Point Rd)	2.64	Post-Year	Post-Year

Conservation Measures

The following list of conservation measures have been updated primarily to reflect changes in the plant sites receiving protection in the project ROW. Other minor changes also are included. This list supersedes the previous list of measures in the 2004 Opinion.

1. Pre-construction meeting - A Service biologist will attend the preconstruction meeting to discuss (a) the importance of avoiding dwarf-flowered heartleaf plants and (b) other environmental commitments that are a part of the project.
2. Dwarf-flowered heartleaf protective barriers - Before construction activities begin at dwarf-flowered heartleaf Sites 7, 10, 11, 15, 16, 20, 22, 24, 25, 28, 31, 32, and 49, the portion of occupied dwarf-flowered heartleaf habitat remaining intact from construction activities (i.e., adverse direct effects and indirect effects from drainage activities) will be protected by placing orange safety fencing or otherwise hardened barriers with

appropriate signage along the construction limits. The signed fencing or barriers will protect the remaining plants from accidental disturbance during construction. The portions of dwarf-flowered heartleaf sites that are protected will remain on the project's design plans throughout construction activities and will be labeled on the plans as "sensitive areas."

3. On-site protection - The portions of dwarf-flowered heartleaf Sites 7, 10, 11, 15, 16, 20, 22, 24, 25, 28, 31, 32, and 49 not lost from project construction will be protected in perpetuity. A protective buffer of up to 400 feet out from the limits of preserved occupied dwarf-flowered heartleaf habitat will be placed around these plant sites and also preserved in perpetuity. Final buffer widths will vary for each site. Design Plan Sheet Nos. 16 - 26 of 26 in the amended Biological Assessment (BA) depict the area of occupied dwarf-flowered heartleaf habitat to be protected and the approximate limits of the protective buffers. Final site configurations, including buffer limits, will be mapped and submitted to the Service when ROW acquisitions are complete.
4. Conservation easements - The NCDOT will attempt to enter into conservation easements with access points, where appropriate, for all or portions of dwarf-flowered heartleaf Sites 1, 8, 12, 13, 14, 26, 29, 33, 34, 35, 43, and 48. The portions of Sites 25 and 32 remaining intact upon project construction and not already protected by ROW extensions will also be pursued for potential conservation easements. Written documentation will be provided to the Service and North Carolina Natural Heritage Program once easements are successfully obtained at any of these sites.
5. On-site monitoring - For on-site conservation sites entered into a secured protective ownership, either through ROW extension via settlement/condemnation or through a conservation easement with a landowner, the NCDOT will quantitatively and qualitatively monitor occupied dwarf-flowered heartleaf habitat preserved in perpetuity. Monitoring efforts will begin with the acquisition of pre-construction/easement acquisition environmental baseline data. The preserved sites will then be monitored post-construction/easement acquisition once every 2 years over a 6-year period to ensure the protection, and detect trends in numbers, of dwarf-flowered heartleaf plants that may or may not be due to project construction. Monitoring reports detailing the monitoring results and any appropriate management activities undertaken will be submitted to the Service at the end of each monitoring period.
6. Management of nonnative, invasive species - For on-site conservation sites entered into a secured protective ownership, either through ROW extension via settlement/condemnation or through a conservation easement, adverse effects from biological pollution can be avoided and/or minimized on a case-by-case basis through effective efforts to manage the growth of nonnative, invasive species within the areas of occupied dwarf-flowered heartleaf habitat that is preserved.
7. Future anticipated adverse effects - The NCDOT has designated an expected 50-foot-wide greenway corridor through dwarf-flowered heartleaf Sites 12, 14, 22, 23, 25, and 26. Future anticipated adverse effects (not counting biological pollution)

associated with the planned greenway's footprint must remain excluded from the area of occupied dwarf-flowered heartleaf habitat that the NCDOT can protect at these sites.

8. Broad River Greenway Conservation Area - The NCDOT entered into a conservation easement on July 18, 2008, with the Broad River Greenway, Inc., of approximately 1,000 acres of land referred to as the Broad River Greenway Conservation Area (BRGCA). In accordance with the stated measures of the BRGCA's Conservation Plan as well as additional monitoring requirements and guidelines provided by the Service, the NCDOT will quantitatively and qualitatively monitor occupied dwarf-flowered heartleaf habitat within the BRGCA. Monitoring efforts began with the acquisition of environmental baseline data prior to obtaining the conservation easement. The BRGCA is then to be monitored once every 3 years over a 9-year period to ensure the protection, and detect trends in numbers, of dwarf-flowered heartleaf plants over time. Monitoring reports detailing the monitoring results and any appropriate management activities undertaken will be submitted to the Service at the end of each monitoring period.

EFFECTS OF THE ACTION

As depicted in Table 2, changes in the effects of the proposed action are relatively minor. The total number of plants has increased by 24 percent, mostly on the BRGCA. Acres of habitat have decreased only slightly.

Table 2. Impacts 2004 vs. 2012.

Action Area or Effects	As Noted in the 2004 BA and BO		As Noted in this 2012 Amended BA	
	Occupied DFHL Habitat (ac)*/ **	Number of DFHL Plants	Occupied DFHL Habitat (ac)*/ **	Number of DFHL Plants
Preferred Alternative Corridor and Adjoining Areas	27.41	16,405	34.00	18,177
Broad River Greenway Conservation Area	54.26***	10,796	54.13	15,750
Action Area (Total)	81.67	27,201	88.13	33,927
Direct Effects	4.1	3,337	4.13	3,060
Indirect Effects	7.2	5,524	3.65	2,267
Cumulative Effects	2.4	1,460	9.24	4,458
Adverse Effects (Total)	13.6	10,321	17.03	9,785
On-site Conservation	11.2	4,798	9.28	4,104
Off-site Conservation	54.26***	10,796	54.13	15,750
Beneficial Effects (Total)	65.46	15,594	63.41	19,854

*For conservation areas, excludes any protective buffer or conservation easement areas not containing dwarf-flowered heartleaf plants.

**Acreage totals rounded to nearest 0.01 acre and, consequently, may not equate because of rounding.

***The BA and Opinion of 2004 both incorrectly reported approximately 47 acres of occupied dwarf-flowered heartleaf habitat occurring within what is now referred to as the BRGCA.

The following specifics explain the changes in adverse and beneficial effects to occupied habitat and numbers of plants from the 2004 Opinion:

1. More refined preliminary roadway design plans are used to depict adverse and beneficial effects at a greater precision and accuracy;
2. The number of plants within the action area is greater because field surveys were updated;
3. More refined preliminary roadway design plans now account for adverse indirect effects caused by drainage impacts anticipated to occur within areas of occupied habitat situated outside of the project's proposed ROW but within areas designated in a drainage easement;
4. Indirect effects via biological pollution from the growth of nonnative, invasive species is modified to exclude those areas of occupied habitat situated in the 400-foot biological pollution zone with an existing low threat from such species;
5. Portions of occupied habitat where the area of indirect effects from biological pollution intersects the area proposed for on-site preservation through fee simple ROW extension are now depicted as actually incurring those adverse effects before any management activities on nonnative, invasive species are implemented;
6. Occupied habitat situated within assumed areas of a planned greenway are excluded from areas to be preserved on-site in perpetuity; and
7. Occupied habitat and associated protective buffer areas to be preserved on-site in perpetuity are analyzed down to a more detailed parcel level rather than at a less detailed occurrence level.

CONCLUSION

Total rangewide numbers of dwarf-flowered heartleaf plants and known occurrences have not changed significantly since the issuance of the 2004 Opinion. Given that the total negative impacts in the action area have remained virtually the same as in 2004, the overall impact to the dwarf-flowered heartleaf across its range has not changed. While the number of plants protected in ROW on the project has decreased slightly, numbers of plants on the conservation site have increased since 2004. The updated data provided has helped to refine the impacts analyzed in 2004 with the overall result being very little change.

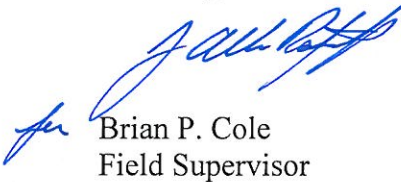
After reviewing the current status of the dwarf-flowered heartleaf, the environmental baseline for the action area, the effects of the proposed highway project, the cumulative effects, and the proposed conservation measures, it is our biological opinion that the project as proposed is not likely to jeopardize the continued existence of the dwarf-flowered heartleaf. No critical habitat has been designated for this species; therefore, none will be affected.

REINITIATION/CLOSING STATEMENT

This concludes formal consultation on the action outlined in your October 16, 2012, request for reinitiation of formal consultation. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary federal agency involvement or control over an action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded, (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this Opinion, (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this Opinion, or (4) a new species is listed or critical habitat is designated that may be affected by the action.

If you have any questions concerning this Opinion, please contact Ms. Marella Buncick of our staff at 828/258-3939, Ext. 237, or me, Ext. 223. We have assigned our Log No. 4-2-95-031 to this project; please refer to it in any future correspondence concerning this project.

Sincerely,

 Brian P. Cole
Field Supervisor