

APPENDIX F: Supplemental Natural Resources Technical Report – NCCU Station Refinement

Durham-Orange Light Rail Transit Project



November 2016

1. Summary

This memo discusses natural resources located within the impact areas associated with the D-O LRT Project North Carolina Central University (NCCU) Station Refinement and provides an assessment of the likelihood for changes in impacts from those disclosed in the Combined Final Environmental Impact Statement/Record of Decision (FEIS/ROD) of February 2016.

2. Methodology

Information regarding the relevant resource areas was collected from a review of United States Fish and Wildlife Service (USFWS) Threatened and Endangered Species databases, the North Carolina Natural Heritage Program’s (NCNHP) databases, Durham County’s soil surveys, aerial photography, topographic maps, and technical staff field investigations. The most current available data from local sources and recent aerial photography, supplemented by field work, were used in the analysis. Subsequent to the desktop review, a site field visit was conducted by an AECOM biologist on October 7, 2016.

3. Affected Environment/ Environmental Consequences

Below are discussions of existing conditions and likely effects for each natural resource topic.

3.1 Soils

Natural Resources Conservation Service (NRCS) data for Durham County identifies 5 soil types within the study area (Table 1). Soils were determined based on a one-quarter mile search range from the potential alignment. No significant adverse impacts to soils are anticipated.

Table 1: Soils in the Study Area

Soil Series	Mapping Unit	Drainage Class	Hydric Status	Bedrock Depth
Cartecay and Chewada soils; 0-2% slope	Cc	Somewhat Poorly Drained	Hydric*	>60"
Chewada and Wehadkee soils; 0-2% slope	Ch	Somewhat Poorly Drained	Hydric	>60"
Mayodan-Urban land complex, 10-15% slope	MrD	Well drained	Non-hydric	>60"
White Store-Urban land complex, 2-8% slope	WwC	Moderately well drained	Non-hydric	48-72"
White Store-Urban land complex, 10-25% slope	WwE	Moderately well drained	Non-hydric	>48"

3.2 Terrestrial Communities

The additional impact area associated with the NCCU Station Refinement will result in impacts to only one terrestrial community, maintained/disturbed. The NCCU Station Refinement will result in 18.1 additional acres of impact to this community. This community is similar to maintained/disturbed areas within the original D-O LRT alignment and consists primarily of residential and commercial development.

3.3 Terrestrial Wildlife

Due to the disturbed nature of the study area, all of the animal species expected to occur within this area are opportunistic species. The entire area associated with the NCCU Station Refinement is maintained/disturbed land, similar to other areas that the planned D-O LRT alignment passes through within the city of Durham. The extension is not expected to result in any significant impacts to terrestrial wildlife. Endangered Species Act – Threatened and Endangered Species

In a list updated on December 26, 2012, the USFWS lists two federally protected species for Durham County. In addition to these species, the northern long-eared bat was listed as Threatened on April 2, 2015.

The NCCU Station Refinement is not anticipated to result in significant impacts to federal or state-listed threatened or endangered species, or their habitats. Of the three federally protected species listed for Durham County, Michaux’s sumac and the northern long-eared bat have the potential to occur within the study area. A brief description of each species’ habitat requirements follows, along with the Biological Conclusion rendered based on survey results in the study area. Habitat requirements for each species are based on the current best available information from the referenced literature. Pedestrian field surveys for threatened and endangered species were conducted on October 7, 2016.

Table 2: Federally Protected Species listed for Durham County

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Echinacea laevigata</i>	Smooth coneflower	E	No	No effect
<i>Myotis septentrionalis</i>	Northern long-eared bat	T	No	No effect
<i>Rhus michauxii</i>	Michaux’s sumac	E	Yes	May affect; not likely to adversely affect

3.4 Michaux’s Sumac

USFWS optimal survey window: May through October

Habitat Description: Michaux’s sumac, endemic to the inner Coastal Plain and lower Piedmont, grows in sandy or rocky, open, upland woods on acidic or circumneutral, well-drained sands or sandy loam soils with low cation exchange capacities. The species is also found on sandy or submesic loamy swales and depressions in the fall line Sandhills region as well as in openings along the rim of Carolina bays; maintained railroad, roadside, power line, and utility rights-of-way; areas where forest canopies have been opened up by blowdowns and/or storm damage; small wildlife food plots; abandoned building sites; under sparse to moderately dense pine or pine/hardwood canopies; and in and along edges of other artificially maintained clearings undergoing natural succession. In the central Piedmont, it occurs on clay-like soils derived from mafic rocks. The plant is shade intolerant and, therefore, grows best where disturbance (e.g., mowing, clearing, grazing, periodic fire) maintains its open habitat. Suitable

habitat for Michaux’s sumac may exist along the existing power line easements and roadway rights-of-way observed within the study area.

Biological Conclusion: May Affect, Not Likely to Adversely Affect

A survey for Michaux’s sumac and its habitat was conducted on October 7, 2016. Suitable habitat for Michaux’s sumac was present in the study area along the roadside shoulders and utility easements. However, no individual specimens were found during the survey. A review of the NCNHP records, updated July 2016, indicates no known Michaux’s sumac occurrences within 1.0 mile of the study area.

3.5 Northern Long-eared Bat

USFWS optimal survey window: May 15 through August 15;

Habitat Description: On October 2, 2013, the USFWS proposed listing the northern long-eared bat as endangered after a decline in the bat’s numbers caused by white-nose syndrome, a fungal disease that this species is susceptible to. On January 16, 2015, the USFWS began a 60-day public comment period regarding the potential listing of the northern long-eared bat as a threatened species. The USFWS made a final listing determination on April 2, 2015, effective May 4, 2015. Northern long-eared bats spend winter hibernating in caves and mines, called hibernacula. They use areas in various sized caves or mines with constant temperatures, high humidity, and no air currents. During the summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities, or in crevices of both live trees and snags (dead trees). Males and non-reproductive females may also roost in cooler places such as caves and mines.

Biological Conclusion: No effect

A survey of potential habitat for the northern long-eared bat was conducted on October 7, 2016. Suitable habitat for the northern long-eared bat was not present within the study area. A review of the NCNHP records, updated July 2016, indicates no known northern long-eared bat occurrences within 1.0 mile of the study area.

3.6 State Endangered Species Act

The North Carolina Endangered Species Act protects all listed species from either taking or possession. All federally-listed species are included on the state list. The NCNHP currently lists 29 species (13 endangered, 16 threatened) for Durham County, which are noted in Table 3.

Table 3: State-listed Species for Durham County

Scientific Name	Common Name	State Status	Habitat Present
<i>Baptisia australis var. aberrans</i>	Prairie Blue Wild Indigo	E	No
<i>Buchnera americana</i>	American Bluehearts	E	No
<i>Delphinium exaltatum</i>	Tall Larkspur	E	Yes
<i>Echinacea laevigata</i>	Smooth Coneflower	E	No

Scientific Name	Common Name	State Status	Habitat Present
<i>Fusconaia masoni</i>	Atlantic Pigtoe	E	No
<i>Gaylussacia brachycera</i>	Box Huckleberry	E	No
<i>Lampsilis cariosa</i>	Yellow Lampmussel	E	No
<i>Lasmigona subviridis</i>	Green Floater	E	No
<i>Picoides borealis</i>	Red-cockaded Woodpecker	E	No
<i>Rhus michauxii</i>	Michaux's Sumac	E	Yes
<i>Ruellia humilis</i>	Low Wild-petunia	E	Yes
<i>Scutellaria leonardii</i>	Shale-barren Skullcap	E	No
<i>Scutellaria nervosa</i>	Veined Skullcap	E	No
<i>Alasmidonta undulata</i>	Triangle Floater	T	No
<i>Cardamine douglassii</i>	Douglass's Bittercress	T	No
<i>Carya laciniosa</i>	Big Shellbark Hickory	T	No
<i>Elliptio roanokensis</i>	Roanoke Slabshell	T	No
<i>Fleischmannia incarnata</i>	Pink Thoroughwort	T	No
<i>Gillenia stipulata</i>	Indian Physic	T	Yes
<i>Haliaeetus leucocephalus</i>	Bald Eagle	T	No
<i>Lampsilis radiata</i>	Eastern Lampmussel	T	No
<i>Lithospermum canescens</i>	Hoary Puccoon	T	No
<i>Noturus furiosus</i>	Carolina Madtom	T	No
<i>Panicum flexile</i>	Wiry Panic Grass	T	No
<i>Platanthera peramoena</i>	Purple Fringeless Orchid	T	No
<i>Strophitus undulatus</i>	Creeper	T	No
<i>Symphotrichum laeve var. concinnum</i>	Narrow-leaf Aster	T	Yes
<i>Tridens chapmanii</i>	Chapman's Redtop	T	Yes
<i>Trifolium reflexum</i>	Buffalo Clover	T	No

E – Endangered, T – Threatened
Source: USFWS 2015

3.7 River and Harbors Act Section 10 Navigable Waters

There are no surface waters identified as “Navigable Waters” under Section 10 of the Rivers and Harbors Act (33 U.S.C. § 403) in the study area. For this reason, no effects to navigable waters would occur as a result of the Station Refinement.

3.8 Bald Eagle and Golden Eagle Protection Act

Foraging habitat for the bald eagle consists primarily of mature forest in proximity to large bodies of open water, used for foraging. Large, dominant trees are utilized for nesting sites, typically within one mile of open water. Habitat within and near the study area does not constitute foraging habitat for the bald eagle.

The Bald Eagle and Golden Eagle Protection Act prohibits the taking of a bald eagle, including any activity that would disturb a bald eagle by interfering with normal breeding, feeding, or sheltering behavior. Because there is no habitat within the study area that might be considered suitable habitat for eagle nesting or foraging, no detailed surveys for eagle nests or nesting habitat are planned within the study area or within a 660-foot buffer. A review of the NCNHP records, updated July 2016, indicates no known bald eagle occurrences within one mile of the study area.

3.9 Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 prohibits one, unless permitted by regulations, to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention...for the protection of migratory birds...or any part, nest, or egg of any such bird." (16 U.S.C. § 703). A number of observed and expected bird species are located in the study area that fall under the purview of the Migratory Bird Treaty Act of 1918. However, migratory birds are mobile and transient and are not likely to be adversely affected by the proposed project.

3.10 Endangered Species Act Candidate Species

In a list updated on December 26, 2012, the USFWS identified no candidate species under the ESA for Durham County. For this reason, no effects to ESA candidate species would occur as a result of the NCCU Station Refinement.

3.11 Essential Fish Habitat

The National Marine Fisheries Service (NMFS) regulates Essential Fish Habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act (Public Law 94-265), as amended by the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act (Public Law 109-479). The NMFS identified no EFH located within Durham or Orange counties (National Oceanic and



Supplemental Natural Resources Technical Report – NCCU Station Refinement

Atmospheric Administration [NOAA]). For this reason, no effects to EFH would occur as a result of the NCCU Station Refinement.