

Type III Categorical Exclusion Action Classification Form

STIP Project No.	<u>I-4739</u>
WBS Element	<u>36595.1.2</u>
Federal Project No.	<u>IMF-40-4(122)313</u>

- A. Project Description: The North Carolina Department of Transportation (NCDOT) proposes improvements to the existing interchange at I-40 and NC 42 and has evaluated improvements to the surrounding roadway network in the vicinity of the I-40/NC 42 interchange. The project is identified in the State Transportation Improvement Program (STIP) as I-4739 and is located south of Raleigh in Johnston County, as shown in Figure 1. The length of the project study area along I-40 is approximately 4 miles.

The area surrounding the I-40/NC 42 interchange, including Cleveland Road (SR 1010) and Cornwallis Road (SR 1525), has experienced a considerable amount of commercial and residential growth which has resulted in a high level of traffic congestion on I-40 and the surrounding network. I-40 serves as the major east-west thoroughfare for the region and provides connections to both local employment centers and extra-regional tourist destinations. Continued growth is predicted in this area which will lead to a further increase in traffic congestion. The project study area is shown in Figure 2.

Although a range of options to improve congestion were evaluated as described in Section D of this document, the proposed improvements include access management measures along NC 42, a Diverging Diamond Interchange (DDI) at I-40/NC 42, and construction of a collector-distributor system between NC 42 and Cleveland Road.

- B. Description of Purpose and Need: The purpose of the I-4739 project is to improve the level-of-service (LOS) and travel conditions within the study corridor. A potential secondary benefit of implementing the access management strategy would be improved safety along the corridor. The need for the I-4739 project is based on increasing capacity and upgrading the existing roadway network to meet the transportation demands of the growing region.

- C. Categorical Exclusion Action Classification: Type III

- D. Proposed Improvements

Preliminary Build Alternatives – The preliminary build alternatives included combinations of the following improvements: access management improvements along NC 42, a Diverging Diamond Interchange (DDI) at I-40/NC 42, a Collector-Distributor (C-D) system between NC 42 and Cleveland Road, and a new diamond interchange at I-40/Cornwallis Road.

All preliminary build alternatives include the following improvements within the immediate vicinity of I-40: 1) construction of a roundabout at Glen Road and Technology Drive; 2) additional turn lanes on Glen Road at NC 42; access modifications along Cleveland Road; 3) and additional turn lanes on Old Drug Store Road.

The preliminary build alternatives evaluated include various combinations of improvements, summarized below.

Alternative 1 (shown in exhibit as Improvement A) Construct a DDI at the I-40/NC 42 interchange.

Alternative 2 (shown in exhibit as Improvement B) Construct a DDI at Cornwallis Road. Widen Cornwallis Road from NC 50 to just east of Shiloh Road and reconfigure the intersection of Cornwallis Road with NC 50 (Old Drugstore Road).

Alternative 3 (shown in exhibit as Improvements A & C) Construct a DDI at the I-40/NC 42 interchange, a new collector-distributor system along I-40, and a new Diamond Interchange at Cleveland Road.

Alternative 4 (shown in exhibit as Improvements A, B, & C) Construct a DDI at the I-40/NC 42 interchange, a new Diverging Diamond Interchange at Cornwallis Road, a new collector-distributor system along I-40, and a new Diamond Interchange at Cleveland Road.

Alternative 5 (shown in exhibit as Improvements A & B) Construct a DDI at the I-40/NC 42 interchange and a new Diverging Diamond Interchange at Cornwallis Road (SR 1525). Widen Cornwallis Road from NC 50 to just east of Shiloh Road and reconfigure the intersection of Cornwallis Road with NC 50 (Old Drugstore Road).

No-Build Alternative – The No-Build Alternative (the option of not constructing the project) was also studied. The No-Build Alternative only includes maintenance activities within the current right-of-way to ensure the safety and continued operation of the existing highway. The No-Build Alternative would avoid any adverse environmental impacts or residential relocations; however, adverse social and economic impacts could occur. Future traffic volumes will likely result in longer delays which would hinder the everyday social and economic functionality of the corridor.

The No-Build Alternative is not preferred because it does not meet the transportation goals of the State of North Carolina or the transportation needs of the region. Also, by failing to provide solutions to congestion in the area and improved connectivity to other traffic corridors, this alternative does not satisfy the purposes for this project. The No-Build Alternative does, however, provide a basis for comparing the benefits and adverse impacts of the Build Alternatives.

Detailed Study Alternatives – NCDOT, in coordination with the Federal Highway Administration (FHWA), evaluated the range of preliminary build alternatives and determined that the purpose of and need for the project can be adequately addressed by improving the I-40 and NC 42 interchange system without requiring a new interchange at I-40 and Cornwallis Road. As such, the adjacent collector-distributor (Alternative 3) was carried forward for additional study, along with Alternative 1, while an interchange at Cornwallis Road (included in Alternatives 2, 4, and 5) was not be retained for detailed study.

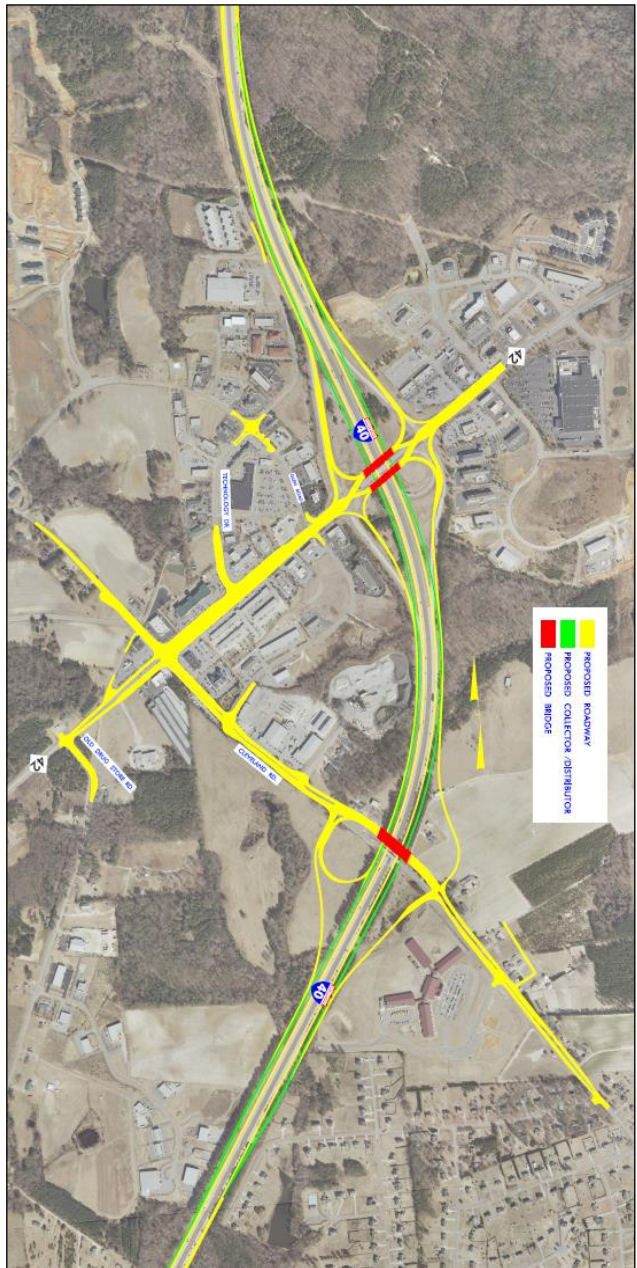
Recommended Alternative – NCDOT held two Public Meetings, the first on June 19, 2014 and the second on October 2, 2017. Public comments from local officials and project-area property owners were taken in to consideration during the alternatives analysis process. Upon completion of technical studies and public involvement, NCDOT, in conjunction with the FHWA, selected Alternative 3 as the Recommended Alternative. Alternative 3 provides the greatest congestion relief at the I-40/NC 42 interchange by dispersing traffic between the I-40/NC 42 interchange and the proposed new interchange at I-40 and Cleveland Road. Further details on traffic capacity for each alternative can be found in the Capacity Analysis Report in the project file.

Build Alternative Elements



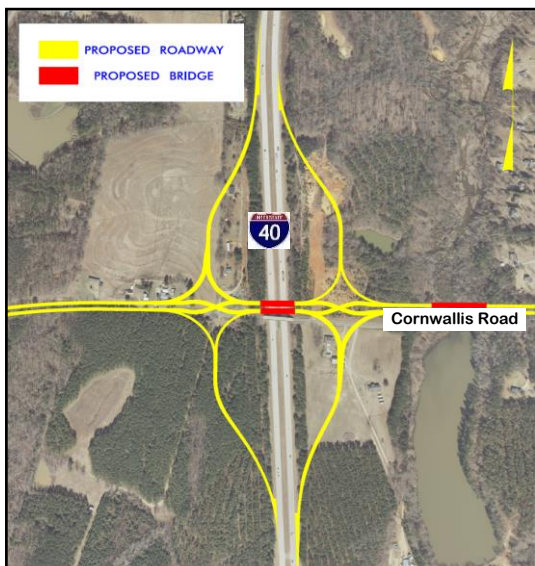
(A) Modify Existing I-40/NC 42 Interchange

A DDI is proposed at the existing I-40/NC 42 interchange and would also incorporate access management improvements along NC 42, Cleveland Road, and Technology Drive. With the DDI design, opposing lanes of traffic cross over at traffic signals at the ends of the interchange. Crossing the bridge oncoming traffic is on the right side of the road, accommodating left-turning movements without conflicting with oncoming traffic. Traffic signals, signs, pavement markings and concrete barriers guide motorists through the interchange.



(C) New Collector-Distributor System and Diamond Interchange at Cleveland Road (SR 1010)

A collector-distributor (C-D) system that works in conjunction with the I-40/NC 42 interchange is being evaluated as part of this project. The collector/distributor lanes are parallel to, but physically separated from, the lanes of a freeway that serve to keep merging traffic out of the flow of through traffic on the mainline freeway. The C-D lanes also reduce conflicts by minimizing entrance and exit points on the freeway. This would also incorporate access management improvements along NC 42, Cleveland Road, and Technology Drive.



(B) New Interchange at Cornwallis Road (SR 1525)

A DDI is proposed at the existing Cornwallis grade separation. Improvements also include widening Cornwallis Road from NC 50 to just east of Shiloh Road and re-configuring the intersection of Cornwallis Road with NC 50 (Old Drugstore Road).

Retaining Walls for the Recommended Alternative:

Retaining walls are recommended for all "high quality" rated streams (based on their NC SAM (Stream Assessment Method) classification). The exception is Stream "SEQ-DS", which is rated a medium quality stream. However, due to its' proximity to Swift Creek and to avoid and minimize stream and wetland impacts, a retaining wall was considered justified for this stream. This wall ties in to retaining walls associated with the I-5111 project. A commitment for the inclusion of the proposed retaining walls has been added to the Project commitments page. The streams recommended for retaining walls include Streams SEQ-DS, SJ, SK, SDD/SEE, and SDD-DS as shown on Figure 3.

Cost estimates for the Recommended Alternative are provided below in Table 1.

Table 1: Cost Estimates for the Recommended Alternative (Alternative 3)

Right-of-Way Cost	\$28,725,000
Utilities Cost	\$4,534,000
Construction Cost	\$67,921,000
Total Costs	\$101,180,000

Preliminary impacts for the Recommended Alternative are shown below in Table 2.

Table 2: Impact Matrix for the Recommended Alternative (Alternative 3)

Resources		Alternative 3
Length (miles)		4
Relocations ¹	Residential	11
	Business	4
	Non-profit	0
Total Relocations		14
Minority / Low Income Populations (Disproportionate Impacts)		0
Historic Properties (Adverse Effects)		0
Community Facilities Impacted		0
Section 4(f) Impacts		0
Noise Receptor Impacts		42
Prime Farmland (acres)		0 ³
Riparian Buffers (square feet)		Zone 1: 58,543 Zone 2: 38,472
Streams (linear feet)		1,000
Streams – Calculated 10' from back of Retaining Wall (linear feet)		7
Wetlands (acres)		0.04
100-Year Floodplain and Floodway Impacts (acres) ⁴		0.16
Federally Protected Species Michaux's sumac		No Effect
Dwarf wedgemussel		MA-NLAA ⁵
Yellow lance		MA-NLAA ⁵
Red cockaded woodpecker		No Effect
Tar spiny mussel		No Effect

NOTES:

1. The number of relocations shown above are conservative estimates of a worst-case scenario for each alternative. A smaller number of relocations are likely after the implementation of avoidance and minimization measures developed during final design.
2. Impact quantities are based on construction limits plus an additional 25 feet.
3. This project was confirmed as having no impact to farmland by the USDA Natural Resources Conservation Service in a letter dated April 20, 2017. See Appendix K in the project file.
4. 100-Year Floodplain and Floodway Impacts based on project construction limits.
5. MA NLAA denotes "May affect – Not likely to adversely affect."

E. Special Project Information:

Other STIP Projects: There are several other STIP projects prioritized by NCDOT in the vicinity of I-4409:

- I-5111: Widen 11 miles of I-40 from Exit 301 to Exit 312 in Raleigh. Right-of-way (ROW) Acquisition in Fiscal Year (FY) 2018 and Construction in FY 2018.
- R-3410B: Widen NC 42 from NC 50 to US 70 Bypass to multi lanes in Johnston County. ROW Acquisition in FY 2021 and Construction in FY 2022.
- R-2828: Future NC 540 freeway on new location from US 401 to I-40 (Southern Wake Freeway/Triangle Expressway Southeast Extension). ROW Acquisition and Construction in FY 2020.
- R-2829: Future NC 540 freeway on new location from I-40 to US 64/US 264 Bypass (Eastern Wake Freeway/Triangle Expressway Southeast Extension). ROW Acquisition and construction in FY 2027 with a portion being unfunded in future years.

Traffic: Interchange reconfiguration is considered a change in access even though the number of actual points of access may not change. For this project, proposed improvements include replacing the existing diamond interchange at I-40/NC 42 with a Diverging Diamond Interchange at I-40/NC 42, a new collector-distributor system along I-40, and a new Diamond Interchange at Cleveland Road. These improvements are considered revised access to the interstate and as such an IAR was required for this project. The Interstate Access Report (IAR) is in progress with an expectancy to be completed in Summer 2018.

The IAR will address FHWA Interstate Access Policy Points #3 & #4 in accordance with the memorandum dated May 22, 2017. The operational and safety analysis component will include the I-40 corridor including the upstream and downstream interchanges (I-40 & US 70 Bypass and I-40 & NC 210), the NC 42 corridor from Son-Lan Parkway to Cleveland Road, and the Cleveland Road corridor from NC 42 to the West View Elementary School (WVES) driveway.

The operational analysis includes three (3) scenarios: 2017 Existing, 2040 No-Build, and 2040 Build. The 2017 Existing model is calibrated to reflect current conditions and will be approved by FHWA and NCDOT. The 2040 No-Build includes all planned projects in the CAMPO 2040 MTP, with the exception of the subject project. These projects include I-5111 (I-40 Widening), R-2828 (I-40 & Complete 540 Interchange), and R-3410B (NC 42 Widening). The analysis will conclude that the proposed I-4739 project does not have a significant adverse impact on the Interstate facility or on the local street network based on both the current and the planned future traffic projections. The below Table 3 provides further details on intersection delay and level of service for the existing, no build, and build alternatives.

Table 3. Intersection Delay and Level of Service – Existing, No Build, Build Alternatives for General Purpose Lane Sections															
General Purpose Lane Alternatives LOS/Delay		2015				2040									
		Existing		No-Build		Alternative 1		Alternative 2		Alternative 3		Alternative 4^		Alternative 5	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
NC 42 & Son-Lan Pkwy	Overall	C (21.6)	B (15.9)	E (57.0)	D (49.3)	C (33.6)	D (40.4)	E (55.2)	D (49.5)	C (32.7)	C (31.1)	C (34.0)	C (30.4)	D (37.6)	C (31.0)
NC 42 & I-40 WB Ramps	Overall	B (14.8)	B (12.8)	C (20.3)	B (18.4)			B (19.6)	C (21.2)						
NC 42 & I-40 EB Ramps	Overall	D (38.9)	F (94.4)	F (172.9)	F (##)	A (7.6)	B (16.1)	F (125.7)	F (180.8)	A (5.8)	A (9.8)	A (5.6)	A (9.4)		
EB Ramp Merge	Overall					A (5.0)	A (9.0)			A (5.4)	B (10.3)	A (5.8)	A (9.9)	A (5.8)	A (7.4)
WB Ramp Merge	Overall					A (5.9)	A (5.5)			A (3.1)	A (3.2)	A (4.6)	A (4.4)	A (5.0)	A (3.7)
NC 42 Eastern DDI Crossover	Overall					B (17.0)	C (27.0)			B (17.5)	B (17.4)	B (18.1)	C (20.7)	C (22.0)	B (17.3)
NC 42 Western DDI Crossover	Overall					C (20.2)	C (20.1)			B (12.6)	B (11.6)	C (21.1)	B (19.2)	B (14.4)	B (14.0)
NC 42 & Glen Rd *	Overall Worst Appr	E (77.7)	E (67.4)	F (##)	F (##)	A (0.0)** A (0.0)**	A (0.0)** A (0.0)**	F (254.8)	F (##)	A (0.0)** A (0.0)**	A (0.0)** A (0.0)**	A (0.0)** A (0.0)**	A (0.0)** A (0.0)**	A (0.0)** A (0.0)**	A (0.0)** A (0.0)**
NC 42 & Technology Dr *	Overall Worst Appr	A (1.6) D (26.7)	A (1.5) D (25.4)	F (##) F (##)	F (##) F (##)	C (28.8)	D (38.2)	B (13.9) F (264.8)	F (##) F (##)	C (20.5)	C (20.6)	C (24.7)	C (26.2)	C (23.8)	C (21.2)
NC 42 & Cleveland Rd	Overall	C (34.2)	C (30.8)	F (167.3)	F (213.1)	D (40.2)	D (47.3)	F (84.2)	F (115.3)	D (37.5)	D (37.9)	D (40.9)	D (38.7)	D (47.5)	D (38.5)
NC 42 & Old Drug Store Rd	Overall	C (24.4)	B (15.7)	F (134.9)	F (116.9)	C (28.6)	D (45.6)	F (122.3)	F (90.4)	C (21.9)	C (20.1)	C (26.5)	C (29.0)	C (27.7)	C (33.5)
Cleveland Rd & Commerce Dr *	Overall Worst Appr	A (1.8) C (24.8)	A (0.9) C (15.6)	A (8.6) F (102.2)	A (1.4) C (24.3)	B (12.2)	B (12.2)	A (7.2) F (81.6)	A (1.4) C (22.9)	B (18.7)	B (12.6)	C (20.4)	B (13.9)	B (12.4)	B (11.7)
Cleveland Rd & I-40 EB Ramps	Overall	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	C (21.6)	B (19.0)	C (26.3)	B (17.8)		
Cleveland Rd & I-40 WB Ramps	Overall	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	D (44.2)	C (21.5)	D (42.0)	B (18.3)		
Cleveland Rd & WVES	Overall	B (18.1)	B (16.5)	C (31.0)	D (41.1)	B (19.8)	C (28.5)	B (18.5)	B (18.4)	E (55.0)	B (13.6)	D (46.4)	A (8.3)	B (18.1)	B (18.1)
Cornwallis Rd & Old Drug Store Rd	Overall Worst Appr	A (3.8) C (17.7)	A (3.6) C (18.3)	C (15.8) F (61.0)	B (14.4) F (62.3)	C (16.7) F (64.7)	B (15.0) F (65.5)	B (10.8)	B (12.3)	C (19.6) F (76.2)	C (18.4) F (80.9)	B (15.3)	B (18.8)	B (10.5)	B (12.4)
Cornwallis EB Ramp Merge	Overall							A (7.4)	B (13.4)			A (8.3)	A (9.3)	A (6.2)	B (12.5)
Cornwallis WB Ramp Merge	Overall							A (9.2)	A (5.8)			B (12.2)	A (6.8)	A (8.3)	A (4.9)
Cornwallis Eastern DDI Crossover	Overall							C (25.2)	C (24.4)			C (24.8)	C (25.8)	C (23.9)	C (25.1)
Cornwallis Western DDI Crossover	Overall							C (26.9)	B (19.3)			C (32.5)	B (18.7)	C (27.1)	B (17.8)
Old Drug Store Rd & NC 50/Branch Woods	Overall	C (22.2)	C (21.8)	C (30.7)	C (33.7)	C (29.9)	C (32.9)	C (24.4)	C (26.3)	C (29.5)	C (32.4)	D (37.2)	D (35.6)	C (26.1)	D (43.1)
Cornwallis Rd & Shiloh *	Overall Worst Appr	A (2.5) A (9.4)	A (2.4) A (9.3)	A (2.8) B (10.6)	A (2.8) B (10.4)	A (2.8) B (10.6)	A (2.8) B (10.4)	A (2.8) B (11.7)	A (2.7) B (11.4)	A (2.8) B (10.7)	A (2.7) B (10.4)	A (2.5) B (13.3)	A (2.3) B (12.9)	A (3.3) B (14.4)	A (3.0) B (13.6)
Glen Rd & Technology Dr *	Overall Worst Appr	A (2.8) B (12.5)	A (3.8) B (12.2)	A (4.0) C (24.6)	A (6.4) D (28.1)	B (12.1)	B (13.3)	A (4.0) C (26.8)	A (6.7) D (32.0)	A (9.7)	B (12.0)	A (9.2)	B (11.0)	B (10.7)	B (13.4)

*Overall intersection and highest approach delays are reported for unsignalized intersections only

**Free flow movements at intersections

^This alternative reflects performance utilizing reduced laneage along NC 42 and through NC 42 DDI

The project figures (Attachment A), Relocation Report (Attachment B) and USFWS concurrence letter (Attachment C) are appended to this document. The below technical reports and additional documentation can be found in the project file:

- Natural Resources Technical Report
- Public Involvement
- Combined Community Characteristics Report/Community Impact Assessment
- Indirect and Cumulative Effects Screening Report
- Land Use Scenario Assessment
- Air Quality Analysis
- Architectural Survey Report
- Hazardous Materials
- Capacity Analysis Report
- Traffic Noise Analysis
- Farmland Exemption Letter
- Biological Evaluation

F. Project Impact Criteria Checklists:

Type III Actions		Yes	No
If the proposed improvement is identified as a Type III Class of Action answer all questions. • The Categorical Exclusion will require FHWA approval. • If any questions are marked "yes" then additional information will be required for those question in Section G.			
1	Does the project involve potential effects on species listed with the US Fish and Wildlife Service (USFWS) or National Marine Fisheries (NMFS)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Does the project result in impacts subject to the conditions of the Bald and Golden Eagle Protection Act (BGPA)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Does the project generate substantial controversy or public opposition, for any reason, following appropriate public involvement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Does the project cause disproportionately high and adverse impacts relative to low-income and/or minority populations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	Does the project involve substantial residential or commercial displacements or right of way acquisition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6	Does the project include a determination under Section 4(f)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	Is a project-level analysis for direct, indirect, or cumulative effects required based on the NCDOT community studies screening tool?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8	Is a project level air quality Mobile Source Air Toxics (MSAT) analysis required?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9	Is the project located in anadromous fish spawning waters?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10	Does the project impact waters classified as Outstanding Resource Water (ORW), High Quality Water (HQW), Water Supply Watershed Critical Areas, 303(d) listed impaired water bodies, buffer rules, or Submerged Aquatic Vegetation (SAV)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11	Does the project impact waters of the United States in any of the designated mountain trout streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12	Does the project require a U.S. Army Corps of Engineers (USACE) Individual Section 404 Permit?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

14	Does the project include Section 106 of the National Historic Preservation Act (NHPA) effects determination other than a no effect, including archaeological remains? Are there project commitments identified?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15	Does the project involve hazardous materials and/or landfills?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
16	Does the project require work encroaching and adversely effecting a regulatory floodway or work affecting the base floodplain (100-year flood) elevations of a water course or lake, pursuant to Executive Order 11988 and 23 CFR 650 subpart A?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17	Is the project in a Coastal Area Management Act (CAMA) county and substantially affects the coastal zone and/or any Area of Environmental Concern (AEC)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18	Does the project require a U.S. Coast Guard (USCG) permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
19	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River present within the project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
20	Does the project involve Coastal Barrier Resources Act (CBRA) resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Type III Actions (continued)</u>		Yes	No
21	Does the project impact federal lands (e.g. USFS, USFWS, etc.) or Tribal Lands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
22	Does the project involve any changes in access control?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
23	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
24	Will maintenance of traffic cause substantial disruption?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
25	Is the project inconsistent with the STIP or the Metropolitan Planning Organization's (MPO's) Transportation Improvement Program (TIP) (where applicable)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
26	Does the project require the acquisition of lands under the protection of Section 6(f) of the Land and Water Conservation Act, the Federal Aid in Fish Restoration Act, the Federal Aid in Wildlife Restoration Act, Tennessee Valley Authority (TVA), Tribal Lands, or other unique areas or special lands that were acquired in fee or easement with public-use money and have deed restrictions or covenants on the property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
27	Does the project involve Federal Emergency Management Agency (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
28	Is the project considered a Type I under the NCDOT's Noise Policy?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
29	Is there prime or important farmland soil impacted by this project as defined by the Farmland Protection Policy Act (FPPA)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
30	Are there other issues that arose during the project development process that effected the project decision?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

G. Additional Documentation as Required from Section F

1. Although not listed for Johnston County, the US Fish and Wildlife Service has developed a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration, the US Army Corps of Engineers, and NCDOT for the northern long-eared bat in eastern North Carolina.

The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. The programmatic determination for the northern long-eared bat for the NCDOT program is “May Affect, Likely to Adversely Affect.” The PBO provides incidental take coverage for northern long-eared bat and will ensure compliance with Section 7 of the Endangered Species Act for five years for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Johnston County.

In North Carolina, the Dwarf Wedgemussel (DWM) is known to occur in the Neuse and Tar River drainage basins. The I-4739 project area overlaps with NCDOT STIP Project I-51111¹ and the Complete 540 projects (STIP Nos R-2721, R-2828, R-2829)².

A Biological Evaluation (BE) was prepared for this project and a copy of the final BE is included in the project files. Extensive coordination occurred between NCDOT and the USFWS during the preparation of the I-4739 BE. Per ongoing coordination and project meetings, the BE addressed only direct effects resulting from the construction of the I-4739 project. Project construction is not anticipated to have direct effects on the DWM and/or Yellow Lance populations in Swift and Middle Creek. The potential exists for indirect effects associated with the operation of I-4739, though such effects are unquantifiable. Therefore, it is concluded in the BE that the proposed action (construction of the I-4739 project), “**May Affect - Not Likely to Adversely Affect**” the Dwarf Wedgemussel and Yellow Lance populations. The BE also includes No Effect determinations for the Tar River Spiny mussel, Red-cockaded woodpecker, and Michaux’s sumac.

In a letter dated June 4, 2018, the USFWS concurred with the findings of the Biological Evaluation, noting that the project “May Affect, but is Not Likely to Adversely Affect” the federally endangered Dwarf Wedgemussel and the federally threatened Yellow Lance. The USFWS also concurred that the project would have “No Effect” on the Tar-River Spiny mussel, red-cockaded woodpecker, and Michaux’s sumac. USFWS correspondence is included as an attachment to this document.

5. As shown in Table 1, the estimated right-of-way cost for the Recommended Alternative is approximately \$28,725,000. The proposed project would relocate 11 residences and 4 businesses. It would also require the relocation of approximately 20 graves to a different area within the Simeon Gower cemetery. NCDOT will provide relocation assistance to residences and businesses displaced during acquisition of right-of-way in accordance with the Federal Uniform Relocation and Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646) and the North Carolina Relocation Assistance Act (GS-133-5 through 133-18). Most of the anticipated right-of-way costs are associated with the acquisition of undeveloped land in the area of the proposed interchange and collector-distributor system at Cleveland Road. This land is currently being marketed for commercial development. The Relocation Reports are appended to this document for reference.

7. An *Indirect and Cumulative Effects Screening Report* and *Land Use Scenario Assessment* were both completed for the project and can be found in the project file. The following paragraph summarizes the conclusions of these reports.

Given the pro-development atmosphere, supportive population and employment trends, and in consideration of the project’s construction schedule, it is unlikely that the proposed project would

¹ NC Department of Transportation. I-40 Widening – Southeast Raleigh to Clayton. Web. <https://www.ncdot.gov/projects/i40nc42/>

² NC Department of Transportation. Complete 540 Final Environmental Impact Statement. December 2017. Web. <https://www.ncdot.gov/projects/complete540/Complete540EIS.html>

have large-scale influence over the type or rate of development within the future land use study area (FLUSA). Qualitative analyses of the probable development patterns in the FLUSA indicate that these areas are likely to be developed regardless of the proposed project. Waterbodies within the FLUSA are protected by state and local regulations that manage water quality impacts associated with development. Water quality concerns are avoided/minimized through compliance with these regulations and as such, no further indirect and cumulative analyses are recommended. The current amount of active/planned development greatly limits the potential for any of the build alternatives to shift or otherwise alter land use patterns, types, or rates of development in this rapidly-changing area. By 2040, it is anticipated that the remaining available land in the FLUSA would be developed in both the build and no-build scenarios.

10. Riparian stream buffers within the project study area fall within the Neuse River Basin and are therefore protected under the provisions of the Neuse River Buffer Rules administered by NCDWQ. The Natural Resources Technical Report, included in the project file, details all streams subject to the Neuse River Buffer Rules. The Recommended Alternative would impact 58,543 square feet of Buffer Zone 1 and 38,472 square feet of Buffer Zone 2. Although impacts to protected stream buffers have been avoided and minimized to the greatest extent possible in the preliminary design, impacts may be further minimized during the final design phase.

The proposed project would impact streams within Johnston County's Environmentally-Sensitive Area (ESA) District where specific streams in this ESA are protected by a 100-foot buffer on each side. Exemptions to the ESA stream buffer rules include roads and bridges and other uses where no practical alternative exists. Although this exemption applies to the proposed project, final design of the Recommended Alternative may include further minimization of impacts to streams in the ESA.

12. The Recommended Alternative would create approximately 1,000 linear feet of stream impacts and approximately 0.04-acre of wetland impacts. These impacts are based on the construction limits of the preliminary designs with an extended 25-foot buffer. Although impacts to jurisdictional streams and wetlands have been avoided and minimized in the preliminary design, impacts may be further minimized during the final design phase. It is likely that the proposed project will require an Individual Section 404 permit from the US Army Corps of Engineers.

15. The Geo-environmental Report, included in the project file, includes details on the location and characteristics of underground storage tanks (USTs) found within the project study area along NC 42. There are nine (9) possible UST facilities in the project area. No other geo-environmental concerns were identified within the proposed project corridor. It is anticipated there will be low monetary and scheduling impacts are associated with these sites.

16. The proposed project would cross 0.16 acres of the Zone AE floodways (i.e., 100-year floodway) within the construction limits. The Selected Alternative would not result in a substantial encroachment to regulatory floodways and are not expected to increase the extent or level of flood hazard risk. NCDOT will coordinate with the Federal Emergency Management Agency (FEMA) and local authorities in the final design stage of the project to ensure compliance with applicable floodplain management ordinances.

22. Control of access would be extended along Cleveland Road approximately 1,000 feet eastward and 300 to 1,000 feet westward of the proposed interchange with I-40. No other changes to access control are proposed.

24. The proposed modifications to NC 42 and Cleveland Road would be constructed within an existing roadway network; as such, temporary delays associated with construction are anticipated. All construction operations would be scheduled to keep traffic delay minimized. All safeguards, safety devices, protective equipment, and any other actions reasonably necessary to protect the life and health of employees on the job, the safety of the public, and the property connected with performance of the work would be applied.

To minimize construction impacts, the new bridges on NC 42 and Cleveland Road (over I-40) would be built to the outside of the existing bridges. Traffic will be maintained on the existing bridges during construction. If temporary closure of Cleveland Road is needed for the construction of the proposed interchange and collector-distributor system, NC 42 will be signed as the official detour route. If NC 42 needs to be temporarily closed during construction of the interchange modifications, it would occur after construction of the new interchange at Cleveland Road and the new interchange will be signed as the official detour route.

28. A Traffic Noise Analysis was conducted for the project and can be found in the project file. For Design Year 2040, traffic volumes the Build condition are predicted to create 45 traffic noise impacts for Build Alternative 3, the Recommended Alternative. Furthermore, construction noise impacts – some of them potentially substantial – may occur due to the proximity of numerous noise-sensitive receptors to project construction activities. It is the recommendation of the traffic noise report that all reasonable efforts should be made to minimize exposure of noise-sensitive areas to construction noise impacts. Consideration for noise abatement measures was given to all impacted receptors. For the Recommended Alternative, a traffic noise abatement measure is preliminarily recommended as feasible and reasonable for NSA-5 (Leachburg Place Subdivision). -NW5- is likely for construction.

In accordance with the NCDOT Traffic Noise Policy, the recommended noise wall, -NW5-, for the Recommended Alternative, preliminarily meets feasibility and reasonableness requirements based on available information. The final decision on installation of the noise barrier will be made upon completion of the project final design in compliance with the NCDOT Traffic Noise Policy. This report completes the traffic noise requirements of the Title 23 CFR Part 772 and NCDOT Traffic Noise Policy (October 6, 2016).

H. Project Commitments

**Johnston County
I-40/NC 42 Improvements
WBS No. 36595.1.2
STIP No. I-4739**

NCDOT Design-Build Unit and Environmental Analysis Unit

- Noise Wall 5, which was found in the Traffic Noise Report to be preliminarily feasible and reasonable, will be further evaluated during final design, and recommendations regarding Noise Wall 5 will be presented in a Design Noise Report.
- NCDOT will incorporate Design Standards in Sensitive Watersheds [15A NCAC 04B .0124 (b) – (e)], regardless of the NCDWR stream classification. For this project, NCDOT will require Design Standards in Sensitive Watersheds throughout the entire project.
- Section 7 consultation measures include:
 - This project is within an area identified as “Environmentally Sensitive Areas” on the Sedimentation and Erosion Control Plans. By definition, the Environmentally Sensitive Areas will be identified as a 50-foot buffer zone on both sides of the stream measured from top of streambank. Within the identified 50-foot Environmentally Sensitive Areas, the following shall apply:
 - The Contractor may perform clearing operations, but not grubbing operations until immediately prior to beginning grading operations.
 - Once grading operations begin in identified Environmentally Sensitive Areas, work shall progress in a continuous manner until complete.
 - Erosion control devices shall be installed immediately following the clearing operation.
 - “Seeding and Mulching” shall be performed on the areas disturbed by construction immediately following final grade establishment.
 - Seeding and mulching shall be done in stages on cut and fill slopes that are greater than 20 feet in height measured along the slope, or greater than 2 acres in area, whichever is less.
 - USFWS, FHWA, USACE, NCDWQ and NCWRC will be invited to the preconstruction meeting and any preconstruction meetings associated with installation of structures within 0.25 mile of Swift Creek.
 - No borrow/waste site locations, staging areas, equipment storage areas, and refueling areas shall not be within 0.25 mile of Swift Creek without further coordination with NCTA and the USFWS during the approval process.

NCDOT Design-Build Unit and Structures Management Unit

- Retaining walls will be utilized along the Swift Creek bridge crossing to avoid and minimize adjacent wetland and stream impacts.

I. Categorical Exclusion Approval

STIP Project No.	<u>I-4739</u>
WBS Element	<u>36595.1.2</u>
Federal Project No.	<u>IMF-40-4(122)313</u>

Prepared By:

6/6/2018
Date

Andrea Dvorak-Grantz
Andrea Dvorak-Grantz, AICP
Consultant Project Manager
Stantec Consulting Services, Inc.

Prepared For:

United States Department of Transportation
Federal Highway Administration
and
North Carolina Department of Transportation
Division of Highways

Reviewed By:

6/06/18
Date

Robert Deaton
Robert Deaton, AICP
NCDOT Project Manager
Central Delivery Unit
North Carolina Department of Transportation

NCDOT certifies that the proposed action qualifies as a Type III Categorical Exclusion.

6/6/18
Date

Derrick Weaver
Derrick Weaver, P.E.
Environmental Policy Unit Head
North Carolina Department of Transportation

FHWA Approval:

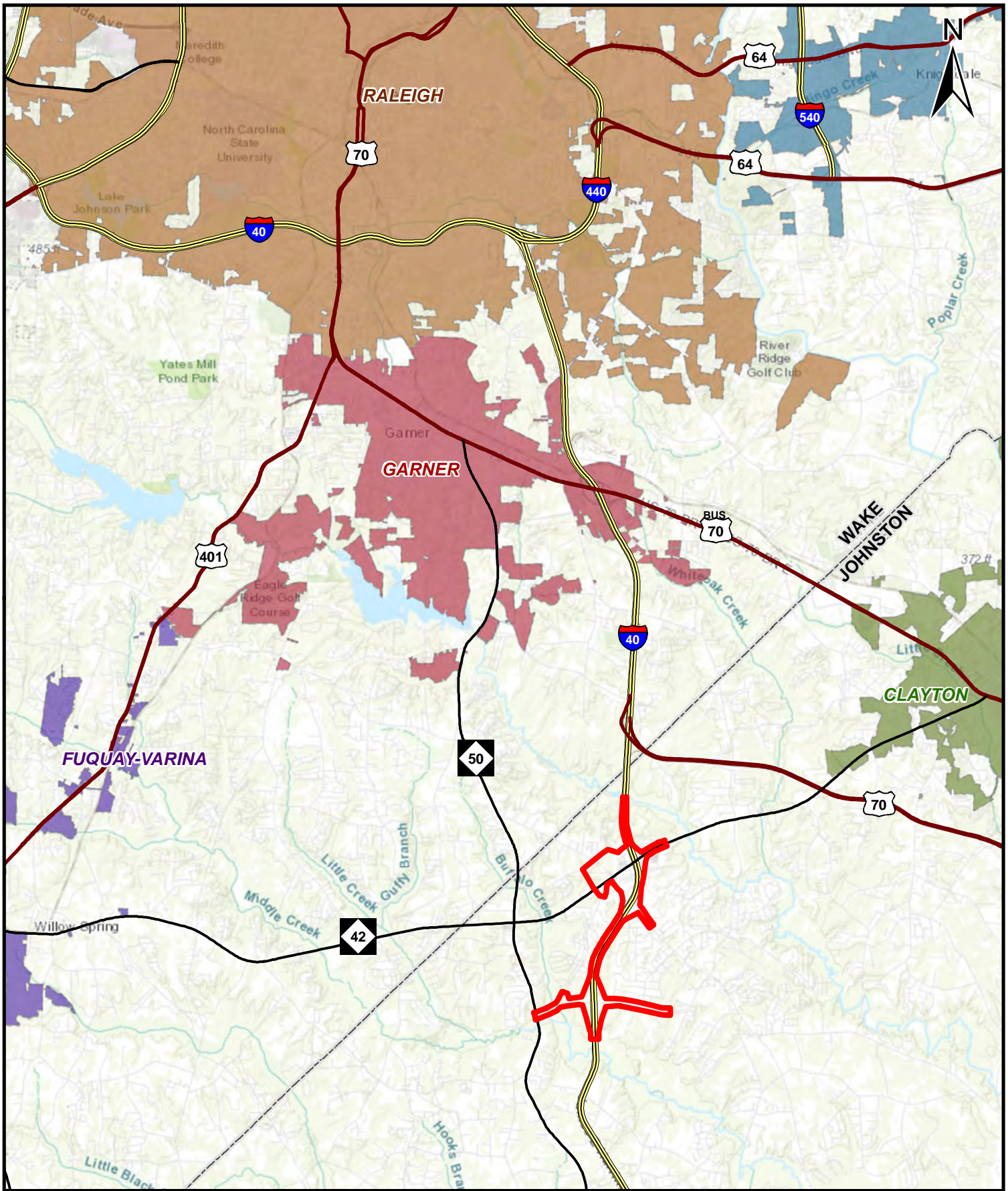
6/7/18
Date

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

Attachment A

FIGURES

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Revised: 2017-12-01 By: embove



North Carolina Department
of Transportation
Division of Highways

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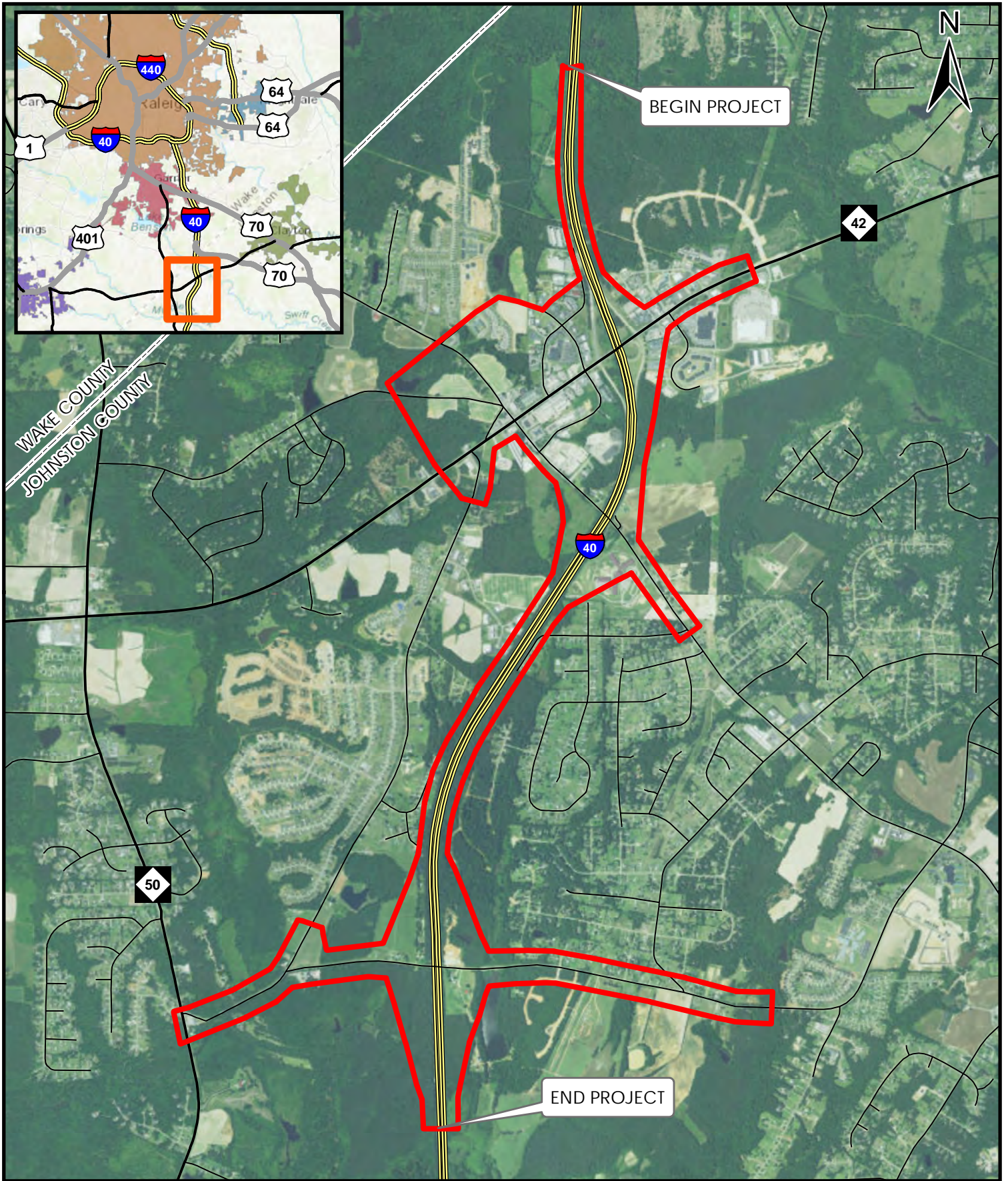
- Project Study Area
- County Boundary
- Interstate
- NC Routes
- US Routes

Client/Project
NCDOT
Categorical Exclusion
Johnston County, NC
STIP Project No. I-4739

Figure No.
1

Title
PROJECT VICINITY

0 11,000 22,000 Feet



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 Revised: 2017-12-01 By: emlove



North Carolina Department
 of Transportation
 Division of Highways

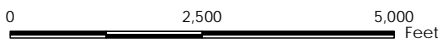
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- Project Study Area
- County Boundary
- Interstate
- NC Routes
- Secondary Roads

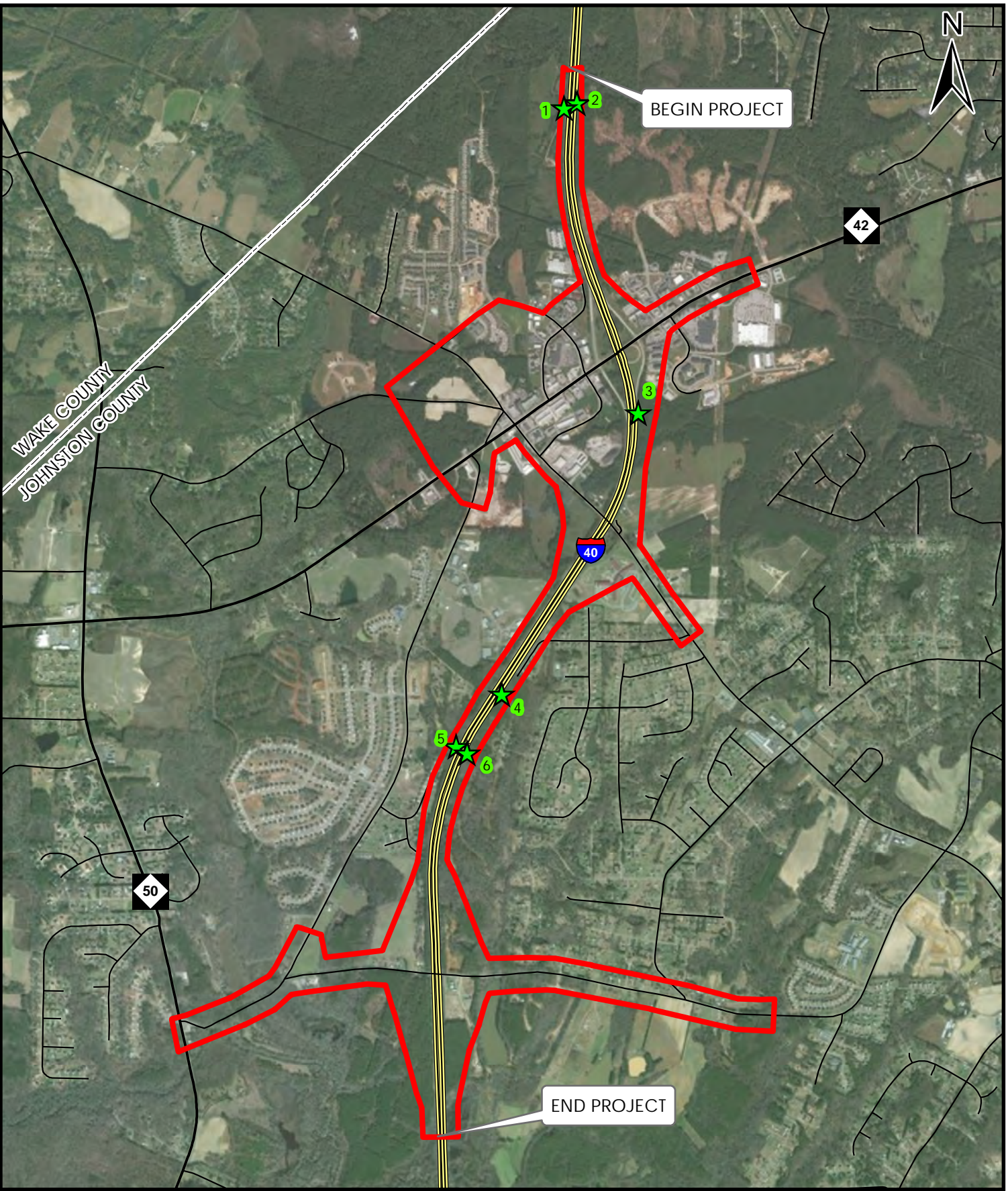
Client/Project
 NCDOT
 Categorical Exclusion
 Johnston County, NC
 STIP Project No. I-4739

Figure No.
 2

Title
 PROJECT STUDY AREA



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Revised: 2018-05-01 By: emblove



North Carolina Department
of Transportation
Division of Highways

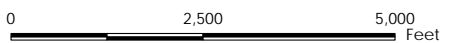
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- Project Study Area
- County Boundary
- ★ Retaining Wall
- Interstate
- NC Routes
- Secondary Roads

Client/Project
NCDOT
Categorical Exclusion
Johnston County, NC
STIP Project No. I-4739
I-40 & NC 42 Interchange Improvements

Figure No.
3

Title PROPOSED RETAINING WALLS



ATTACHMENT B

RELOCATION REPORT

EIS RELOCATION REPORT

**North Carolina Department of Transportation
RELOCATION ASSISTANCE PROGRAM**

E.I.S. CORRIDOR DESIGN

WBS ELEMENT:	36595.2.1	COUNTY	Johnston	Alternate	1	of	2	Alternate
T.I.P. NO.:	I-4739	Alt. Title:	ALT 1					
DESCRIPTION OF PROJECT:	NC 42 Interchange and I-40 Improvements							

ESTIMATED DISPLACED					INCOME LEVEL							
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP			
Residential	4	6	10	0	0	0	2	3	5			
Businesses	2	2	4	0	VALUE OF DWELLING				DSS DWELLING AVAILABLE			
Farms	0	0	0	0	Owners		Tenants		For Sale		For Rent	
Non-Profit	0	0	0	0	0-20M	0	\$ 0-150	0	0-20M	0	\$ 0-150	0
ANSWER ALL QUESTIONS					20-40M	0	150-250	0	20-40M	0	150-250	0
Yes	No	Explain all "YES" answers.										
X		1. Will special relocation services be necessary?										
	X	2. Will schools or churches be affected by displacement?										
X		3. Will business services still be available after project?										
X		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.										
	X	5. Will relocation cause a housing shortage?										
	X	6. Source for available housing (list).										
X		7. Will additional housing programs be needed?										
	X	8. Should Last Resort Housing be considered?										
	X	9. Are there large, disabled, elderly, etc. families?										
	X	10. Will public housing be needed for project?										
X		11. Is public housing available?										
X		12. Is it felt there will be adequate DSS housing available during relocation period?										
	X	13. Will there be a problem of housing within financial means?										
X		14. Are suitable business sites available (list source).										
		15. Number months estimated to complete RELOCATION? Twelve Months										
REMARKS (Respond by number)												
1.) Simeon Gower Cemetery, appx. 20 grave sites impacted (rough count, no probing was conducted)												
3.) Businesses will still be available.												
4.) Will any business be displaced? Yes												
1. Winston Rose Properties, LLC: Real Estate Mgmt. – Small Business – 1-5 employees - Owner 2. Triple Barrel Tavern: Restaurant/Bar – Small Business – 10-15 employees - Tenant 3. Cleveland Auto Spa: Full Service Auto Detailing – Small business – 10-15 employees - Owner 4. E-Zee Auto Sales: Used Car Lot – Small Business – 1-5 employees – Tenant												
6.) Source for available housing.												
1. Online Realtor websites, MLS, Rental Listings 2. Realtor publications and Classifieds												
8.) As required by law												
11.) Public Housing is available in Johnston County												
12.) There seems to be plenty of DSS housing in this area.												
14.) Are suitable business sites available?												
1. Various business sites and commercial lots are available around the project area. 2. Online Realtor websites, MLS, Rental Listings 3. Realtor publications and Classifieds												
Special Notes:												
- Walgreens, potential displacee (impact on parking uncertain)												
- CVS, potential displacee (impact on parking uncertain)												
- Cedar Grove Horse Boarding, miscellaneous move (building use unknown, but doesn't appear to necessitate the business becoming a displacee)												

	05/01/2017			5/2/17
C. James Coughlin Right of Way Agent	Date		Relocation Coordinator	Date


EIS RELOCATION REPORT

**North Carolina Department of Transportation
RELOCATION ASSISTANCE PROGRAM**

E.I.S. CORRIDOR DESIGN

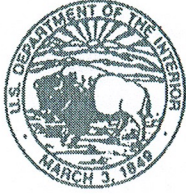
WBS ELEMENT:	36595.2.1	COUNTY	Johnston	Alternate	2	of	2	Alternate
T.I.P. NO.:	I-4739	Alt. Title:	ALT 3					
DESCRIPTION OF PROJECT:	NC 42 Interchange and I-40 Improvements							

ESTIMATED DISPLACED					INCOME LEVEL							
Type of Displacees	Owners	Tenants	Total	Minorities	0-15M	15-25M	25-35M	35-50M	50 UP			
Residential	5	6	11	0	0	0	2	3	6			
Businesses	2	2	4	0	VALUE OF DWELLING				DSS DWELLING AVAILABLE			
Farms	0	0	0	0	Owners		Tenants		For Sale		For Rent	
Non-Profit	0	0	0	0	0-20M	0	\$ 0-150	0	0-20M	0	\$ 0-150	0
ANSWER ALL QUESTIONS					20-40M	0	150-250	0	20-40M	0	150-250	0
Yes	No	Explain all "YES" answers.										
	X	1. Will special relocation services be necessary?										
	X	2. Will schools or churches be affected by displacement?										
X		3. Will business services still be available after project?										
X		4. Will any business be displaced? If so, indicate size, type, estimated number of employees, minorities, etc.										
	X	5. Will relocation cause a housing shortage?										
	X	6. Source for available housing (list).										
	X	7. Will additional housing programs be needed?										
X		8. Should Last Resort Housing be considered?										
	X	9. Are there large, disabled, elderly, etc. families?										
	X	10. Will public housing be needed for project?										
X		11. Is public housing available?										
X		12. Is it felt there will be adequate DSS housing available during relocation period?										
	X	13. Will there be a problem of housing within financial means?										
X		14. Are suitable business sites available (list source).										
		15. Number months estimated to complete RELOCATION? Twelve Months										
					REMARKS (Respond by number)							
					1.) Simeon Gower Cemetery, appx. 20 grave sites impacted (rough count, no probing was conducted)							
					3.) Businesses will still be available							
					4.) Will any business be displaced? Yes							
					1. Winston Rose Properties, LLC: Real Estate Mgmt. – Small Business – 1-5 employees - Owner							
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					3. Cleveland Auto Spa: Full Service Auto Detailing – Small business – 10-15 employees - Owner							
					4. E-Zee Auto Sales: Used Car Lot – Small Business – 1-5 employees – Tenant							
					6.) Source for available housing.							
					1. Online Realtor websites, MLS, Rental Listings							
					2. Realtor publications and Classifieds							
					8.) As required by law							
					11.) Public Housing is available in Johnston County							
					12.) There seems to be plenty of DSS housing in this area							
					14.) Are suitable business sites available?							
					1. Various business sites and commercial lots are available around the project area.							
					2. Online Realtor websites, MLS, Rental Listings							
					3. Realtor publications and Classifieds							
					Special Notes:							
					- Walgreens, potential displacee (impact on parking uncertain)							
					- CVS, potential displacee (impact on parking uncertain)							
					- Cedar Grove Horse Boarding, miscellaneous move (building use unknown, but doesn't appear to necessitate the business becoming a displacee)							

	05/01/2017			5/2/17
C. James Coughlin Right of Way Agent	Date		Relocation Coordinator	Date

ATTACHMENT C

USFWS CORRESPONDENCE



United States Department of the Interior

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

June 4, 2018

Philip S. Harris III, P.E., C.P.M.
North Carolina Department of Transportation
Environmental Analysis Unit
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Harris:

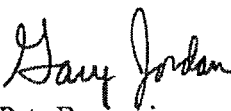
This letter is in response to your letter of May 31, 2018 and attached Biological Evaluation for the I-40 at NC 42 Interchange Improvement in Johnston County (STIP No. I-4739). The North Carolina Department of Transportation (NCDOT) has provided the U.S. Fish and Wildlife Service (Service) with the biological conclusion that the project may affect, but is not likely to adversely affect the federally endangered Dwarf Wedgemussel (*Alasmidonta heterodon*) and the federally threatened Yellow Lance (*Elliptio lanceolata*). In addition, NCDOT has determined that the project will have no effect on the federally endangered Tar River Spiny mussel (*Parvaspina steinstansana*), red-cockaded woodpecker (*Picoides borealis*), and Michaux's sumac (*Rhus michauxii*). The following response is provided in accordance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

The Dwarf Wedgemussel is known to occur in Swift Creek, and the Yellow Lance is known to occur in both Swift Creek and Middle Creek. Although this project does not cross either Swift Creek or Middle Creek, it does drain to both streams. Direct effects to Dwarf Wedgemussel and Yellow Lance are not anticipated. Although there is some potential for indirect effects to occur, these effects are discountable and/or insignificant. The Biological Evaluation lists several conservation measures that will further reduce the potential for any adverse effects.

Based on the information contained in the Biological Evaluation and other available information, the Service concurs with your conclusion that the proposed project may affect, but is not likely to adversely affect the Dwarf Wedgemussel and Yellow Lance. Based on the information contained in the Biological Evaluation, the Service concurs with your conclusion that the project will have no effect on the Tar River Spiny mussel, red-cockaded woodpecker, and Michaux's sumac. We believe that the requirements of Section 7(a)(2) of the ESA have been satisfied. We remind you that obligations under Section 7 consultation must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered in this review; (2) this action is subsequently modified in a manner that was not considered in this review; or (3) a new species is listed or critical habitat determined that may be affected by this identified action.

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

Sincerely,

for 
Pete Benjamin
Field Supervisor

Electronic copy:

Eric Alsmeyer, USACE, Wake Forest, NC
Travis Wilson, NCWRC, Creedmoor, NC
Jared Gray, NCDOT, Raleigh, NC